

**TRANSCRIPT OF PROCEEDINGS:**  
**NATIONAL INQUIRY ON THE IMPACT OF CLIMATE**  
**CHANGE ON THE HUMAN RIGHTS OF THE FILIPINO**  
**PEOPLE, AND THE RESPONSIBILITY OF THE “CARBON**  
**MAJORS,” IF ANY, SECOND HEARING, MAY 23 TO 24,**  
**2018**

ATTY. TRISHA ISABELLE F. FERNANDEZ (CLERK OF THE INQUIRY):

Good morning, everyone.

This public hearing is being held as part of the National Inquiry being conducted by the Commission on the impact of climate change on the human rights of the Filipino people. This proceeding stems from a petition filed before the Commission, docketed as CHR Case No. CHR-NI-2016-0001.

The solemnity of the public hearings shall be upheld at all times. Respect should be accorded to everyone present. The clapping of hands and unnecessary remarks shall not be allowed and may be regarded as direct contempt by the Inquiry Panel.

Cellphones should be turned off or put on silent mode while proceedings are going on. All rise.

The Commissioners comprising the Inquiry Panel are:

1. Honorable Commissioner Leah C. Tanodra-Armamento
2. Inquiry Panel Chairman of the NICC, Honorable Commissioner Roberto Eugenio T. Cadiz and;
3. Honorable Commissioner Karen S. Gomez Dumpit

Please remain standing for the national anthem and ecumenical prayer.

*[“Lupang Hinirang” and Ecumenical Prayer]*

Page 12

Everyone may now be seated. The Chairman of the Inquiry Panel has invited Father Pedro Walpole to assist the Panel in this Inquiry, which he has kindly accepted.

Pedro Walpole is a practitioner in sustainable environment and community land management in Southeast Asia and works mainly with local communities, universities, international organizations, and governments.

Pedro is responsible for establishing, in 1997, the *Environmental Science for Social Change*, or ESSC, a Jesuit research institute in the Philippines that promotes environmental sustainability and social justice through the integration of scientific methodologies and social processes. He is currently ESSC's director for research and has worked in communicating more widely a greater and more comprehensive understanding of the real causes of landslides and flooding as they occur in different areas of the country, analyzing the social justice implications of land use change in the Philippine uplands, upland watershed, and forest management, and the adaptations needed to respond to the impact of climate change and land use change.

Pedro has a Ph.D. degree in land use change from King's College in London, UK, and teaches a course on integrating human development in national resource management for graduate students of the UN-mandated University for Peace and the Ateneo de Manila University.

Pedro sustains global ecology discussions and responses as coordinator of *Ecojesuit*, the global ecology network of Jesuits and partners that includes the scientific community, business leaders, academic institutions, and social and environmental institutions that seek integral human development and an integral ecology.

In Northern Mindanao, Philippines, Pedro directs the *Apu Palamguwan Cultural Education Center* that operates an upland basic education program and technical training for indigenous youth, and that has its own culture-based curriculum, promotes multi-language education, and the use of the mother tongue. He continues to live with the *Pulangiyen*, an upland indigenous community in Mindanao.

COMMISSIONER CADIZ, CHAIR OF THE INQUIRY PANEL:

May we request the appearance of counsels?

Page 13

COUNSEL FOR PETITIONERS, ATTY. SORIANO:

Good morning, Your Honors. Zeld Soriano, respectfully appearing for the Petitioners.

COUNSEL FOR PETITIONERS, ATTY. MAYO-ANDA:

Good morning, Your Honors. Grizelda Mayo-Anda, respectfully appearing for the Petitioners.

COUNSEL FOR PETITIONERS, ATTY. PAUDAC:

Good morning, Your Honors. Hasminah D. Paudac, respectfully appearing for the Petitioners.

PANEL CHAIR CADIZ:

Thank you very much, Counsels. Are there other counsels in this room representing the Respondents who might want to formally enter their appearance?

There being none, we may now proceed to the presentation of evidence by the Petitioners.

ATTY. SORIANO:

Your Honors, before we proceed with the presentation of our witnesses and resource persons, we would like to manifest three (3) things.

PANEL CHAIR CADIZ:

Please go ahead.

Page 14

ATTY. SORIANO:

Thank you, and, first, we would like to manifest that the signatures identified by the following witnesses and resource persons in the last public hearing — namely, Ms. Rica Cahilig, Dr. Gerry Bagtasa, Dr. Peter Frumhoff, Mr. Felix ‘Ka Jun’ Pascua, Jr., Ms. Rosalina de Guzman, Ms. Lerissa Libao, Mr. Ernesto Cruz, and Dr. Victorio Molina — were electronic signatures.

Unless the Honorable Commission directs otherwise, may we respectfully request the Honorable Commission to accept those e-signatures, considering they were duly identified and confirmed by the signatories during the first public hearing and obtaining the new signatures would be difficult given the time and distance constraints. That’s for our first manifestation, Your Honors.

PANEL CHAIR CADIZ:

The validity of e-signatures are recognized. They are now widely practiced and accepted in our courts.

ATTY. SORIANO:

Thank you, Your Honors. So, Your Honors, in compliance also with the Honorable Commission’s directive, during the first public hearings, we would like to manifest that we also submitted the transcription from Filipino to English translation - or it includes a Filipino to English translation - of testimonies of the following Petitioners/witnesses: Ms. Rica Cahilig, Mr. Felix Jun Pascua, Ms. Lerissa Libao, Ms. Elma Reyes, and Mr. Ernesto Cruz through an ex parte manifestation and submission dated eight of May 2018. That’s for our second manifestation, Your Honor.

PANEL CHAIR CADIZ:

The manifestation is noted, with further note that the accuracy of the translation will be compared with the translations made by the Panel.

Page 15

ATTY. SORIANO:

Thank you, Your Honors. And, finally, we would like to manifest that the study entitled “Impact of Climate Change on Human Health” by author Jinky Leilanie D.P. Lu, published in pages 91 to 98, Vol. 50, No. 2, Year 2016 of *Acta Medica Philippina*, consisting of eight (8) pages—which was asked from Dr. Victorio Molina, one of our Petitioners’ witness, during the last hearing on March 28 — was already submitted to the honorable Commission through a manifestation dated 24<sup>th</sup> of April 2018, and was duly marked as Exhibit RR to RR-7 during the pre-marking of exhibits on the 21<sup>st</sup> of May 2018.

PANEL CHAIR CADIZ:

The manifestation is duly noted.

ATTY. SORIANO:

Thank you, Your Honors. We are now ready to present our first witness.

PANEL CHAIR CADIZ:

May we know who this first witness is?

ATTY. MAYO-ANDA:

Good morning again, Your Honors.

PANEL CHAIR CADIZ:

Good morning.

Page 16

ATTY. MAYO-ANDA:

Our first witness for today is Mr. Carroll Muffett. He'll be on Skype. So the presentation will be made through Skype.

PANEL CHAIR CADIZ:

Alright.

ATTY. MAYO-ANDA:

He is there. Good evening, Mr. Carroll Muffett. Good evening to you and good morning here. Your Honor, will he be sworn in.

PANEL CHAIR CADIZ:

Before he provides his testimony, may we request Attorneys Jose and de la Cruz... who among you will swear-in the witness?

ATTY. JOSE DE LA CRUZ:

*(indicates he will swear-in the witness)*

PANEL CHAIR CADIZ:

Okay, can you please swear-in the witness? Please wait for him to appear on the monitor.

Mr. Muffet, we cannot see you here. Is the connection...

Page 17

MR. MUFFET:

I am sharing my video but there does appear a problem. Are you seeing my screen share?

PANEL CHAIR CADIZ:

Yes, we are. But we first have to swear you in as a witness. Can we see you first, your face, on the monitor?

MR. MUFFET:

Yes, I am trying that. I don't know why I'm not visible; my camera is on.

PANEL CHAIR CADIZ:

Alright, we can wait.

MR. MUFFET:

I will restart my camera to see if that helps.

PANEL CHAIR CADIZ:

Alright.

MR. MUFFET:

I've restarted my camera.

Page 18

TECHNICAL STAFF:

Mr. Carroll, please click the ellipses and stop first the share of the presentation. Okay, thank you very much.

PANEL CHAIR CADIZ:

We can now see you.

MR. MUFFET:

Okay.

PANEL CHAIR CADIZ:

Can we now have the witness sworn in?

ATTY. JOSE DE LA CRUZ:

Mr. Witness, kindly raise your right hand. Do you swear to tell the truth, the whole truth, and nothing but the truth in this hearing under the penalties provided for by law?

MR. MUFFET:

I so swear.

PANEL CHAIR CADIZ:

Thank you very much. Counsel, you may now examine your witness.



Page 19

ATTY. MAYO-ANDA:

Mr. Carroll Muffett is the President and Chief Executive Officer of the *Center for International Environmental Law*. He is the principal researcher and editor of CIEL's *Smoke and Fumes* research project. We are presenting him as an expert and resource person to discuss, in greater detail, the legal and evidentiary basis of CIEL's *Smoke and Fumes* project, and the liability or accountability of the Carbon Majors beginning 1957 up to the present. Before we proceed, Your Honors, may I ask preliminary questions in relation to the documents he has submitted?

PANEL CHAIR CADIZ:

Please go ahead.

ATTY. MAYO-ANDA:

Mr. Carroll Muffett has submitted through email, Your Honors, twenty-two (22) documents, and I'd like to start- there are two (2) important documents that I'd like his confirmation (for).

Good evening there again, Mr. Muffett, and good morning from us. Do you confirm and affirm that you submitted to the Commission on Human Rights, through your counsel, twenty-two (22) documents as part of your testimony today?

MR. MUFFET:

I do.

ATTY. MAYO-ANDA:

The first document that you submitted refers to your curriculum vitae, consisting of eight (8) pages. Do you confirm and affirm the statements contained in this document?

Page 1/10

MR. MUFFET:

I do.

ATTY. MAYO-ANDA:

The second document that you submitted is the PowerPoint presentation on the legal and evidentiary basis for holding Carbon Majors accountable for the climate crisis, consisting of fifty-six (56) pages, but at the moment, the printout is twenty-eight (28) pages. Do you confirm and affirm the statements contained therein and the fact that this has been submitted to the Commission?

MR. MUFFET:

I do, with one (1) minor correction. One citation included on a slide in that record presentation referred to the incorrect document. I've corrected that in my presentation for today.

ATTY. MAYO-ANDA:

Thank you. And you attached twenty (20) documents as references to your PowerPoint presentation. Do you confirm and affirm that these twenty (20) documents were submitted through email and are now with the Commission on Human Rights?

MR. MUFFET:

I do.

ATTY. MAYO-ANDA:

Now, in the interest of time, Your Honors, we would not have to go through the twenty (20) documents individually. I would like to manifest, Your Honors, that we have pre-marked these twenty-two (22) documents last May 21<sup>st</sup> 2018.

Page 1/11

PANEL CHAIR CADIZ:

Excuse me, Counsel. Can you tell what the markings are? Pre-marked as what?

ATTY. MAYO-ANDA:

Yes.

PANEL CHAIR CADIZ:

Exhibits what?

ATTY. MAYO-ANDA:

For the curriculum vitae of Carroll Muffett, consisting of eight (8) pages, this has been pre-marked as Exhibit SS and series up to SS-7. And then the next important document is the printed PowerPoint presentation of Carroll Muffett, consisting of twenty-eight (28) pages, pre-marked as Exhibit TT and series, TT-27.

Now, on the twenty (20) documents, Your Honors, attached and referred to in Mr. Muffet's PowerPoint presentation, these have been pre-marked as Exhibits UU and series up to Exhibit NNN and series, NNN-45. Those are the markings of the twenty (20) documents which have been used as references to his PowerPoint presentation. And, in the interest of time, Your Honor, may we skip stating every document, Your Honor?

PANEL CHAIR CADIZ:

Yes, that was the whole purpose behind the pre-markings, so that the submission is facilitated.

So you can now proceed to other matters.

ATTY. MAYO-ANDA:

Thank you, Your Honors. And, at this juncture, Your Honor, we would now give the floor to Mr. Carroll Muffett for his presentation.

PANEL CHAIR CADIZ:

Good morning, Mr. Muffett. You may now proceed to give your testimony.

MR. MUFFETT:

Thank you, Your Honor. Mr. Chairman, honorable members of the Commission, I am pleased and honored to share with you today this testimony on behalf of myself and the *Center for International Environmental Law*. CIEL is a non-profit organization that uses the power of law to protect the environment, promote human rights, and ensure a just and sustainable society.

Before beginning my presentation, I would like to note that I have simplified my presentation today. Please refer to my full record presentation as the official presentation. There are no major substantive differences aside from the correction that I noted earlier and which I will point out during the presentation.

To understand the potential responsibilities of the Respondents in the present Inquiry, it is important to begin with the basic links in the climate litigation chain, which are the links that exist in any litigation chain. That chain requires three (3) essential elements. It requires identifiable claimants with particularized harms. And those harms must be fairly traceable to the actions of an identifiable group of defendants. In recent years, the science of attributing climate impacts has grown increasingly precise. Whether the plaintiff is a Peruvian farmer affected by glacial melt in the Andes, or communities on either side of the United States, affected by rising sea levels, or communities in the Philippines affected by catastrophic impacts of more intense, more severe typhoons, the evidence linking their harms to climatic change and human-caused climatic change grows more robust with every day, with every year, and indeed, with every month.

With this greater precision in our attribution of specific harms to climate change itself comes an expanding universe of potential plaintiffs, whether they are present victims of climate impacts, persons exposed to increased future risk, consumers, workers, investors, states and cities responsible for protecting their citizens, their consumers, and their investors or, as in the present case, national governments responsible for respecting, protecting, and upholding the human rights of their citizens. So as that universe of plaintiffs expands, the question arises: who are the appropriate defendants?

And here, too, the science of attribution has made quantum leaps in recent years. In 2014, a researcher by the name of Richard Heede of the *Climate Accountability Institute* released a landmark study that traced nearly two-thirds (2/3) of global historic industrial greenhouse gas emissions to ninety (90) entities worldwide. Significantly, of those ninety (90) entities, fifty (50) were investor-owned companies, including major producers of fossil fuels such as Chevron, Exxonmobil, Royal Dutch Shell, British Petroleum, and Peabody, many of the Respondents that sit before the Commission today. I will note that I am currently a member of the board of trustees of the *Climate Accountability Institute*, but I was not a member of the board when this research was initially done.

Significantly, in the wake of the original Carbon Majors study, other researchers have built on that work to extend its conclusions and apply them to the real world impacts we are seeing all around us. In 2017, researchers from Oxford, the *Climate Accountability Institute*, and the *Union of Concerned Scientists* collaborated on a study - a peer-reviewed study that traced not only historical sea-level rise to individual carbon majors and to the carbon majors as a group, but, indeed, was able to demonstrate how it is possible to attribute changes in global mean surface temperature to those same companies and historical rises in global sea level and, indeed, increase in mortality attributable to certain extreme weather events.

With this rising scientific ability to identify, not only our plaintiffs, but our potential clause of defendants, the question arises: can we and should we hold that clause of defendants accountable?

There's a fundamental answer that lies in the basic elements of responsibility in multiple domains of law. Whether evaluated in human rights law, in the law of common law torts, or the law of civil liability in civil law countries, we hold someone responsible for an outcome when three (3) things occur: they have the capacity to see a potential harm, they had the opportunity to avoid it, and they failed to take reasonable measures to do so. In the words of French jurist Antoine Loysel in 1607, "He who can but does not prevent, sins."

The *International Commission of Jurists* reached a similar conclusion in its 2013 treatise on corporate complicity and legal accountability in the context of grave human rights abuses. The *International Commission of Jurists* concluded that, to determine responsibility, it must determine four basic questions. Was harm inflicted on an interested victim that is protected by law? As the Commission has previously heard and as future witnesses will attest, the citizens of the Philippines, including the Petitioners, have experienced profound impacts to their human rights from an array of climate change impacts. Next, did the companies' conduct/contributed to the infliction of the harm? As suggested by the Carbon Majors study and subsequent studies, the answer is it did and in a very fundamental way. But for fossil fuels being brought to the market by the Carbon Majors, they would not have been burnt. Did the company know or would a prudent company in the same circumstances have known that its conduct posed a risk of harm to the victim? And, considering this risk, did the company take the precautionary measures a prudent company would have taken in order to prevent the risk from materializing? The balance of my presentation will address those questions.

But, before beginning, I want to highlight that, in determining what are foreseeable risks with respect to products, courts hold manufacturers and marketers of those products to an expert standard, recognizing that they should be experts in every aspect of their product. And, for the petroleum industry, carbon was their product. This led us at CIEL to ask: What did the oil industry know about climate change? When did they know it? And what did they do with that information? What we found over the course of five (5) years of investigation and counting, is that fossil fuel companies have been aware of the risk of climate change and their products' role in exacerbating those risks for at least six (6) decades.

This shouldn't be surprising in retrospect, given that climate change has been a subject of scientific hypotheses, scientific theory, and scientific debate since the 1850s. And it has been actively debated in peer-reviewed journals since no later than the 1930s. Unsurprisingly, therefore, in our investigations, we determined that oil companies were on notice, clear notice, of climate risks by no later than the 1950s.

In 1957, four (4) scientists, five (5) scientists from Humble Oil, now Exxonmobil, published a study in the *Transactions American Geophysical Union* that directly and deeply engaged in the most important climate science of the time and indeed responded to what was at the time, a then month-old breakthrough study by Roger Revelle that is considered the start of the modern climate science debate.

By 1958, the *American Petroleum Institute's* Smoke and Fumes Committee was demonstrably funding climate research, and we know this from reports of the committee's funding and its work prepared by industry sources themselves. Significantly, this research was undertaken in the context of a Committee whose express objective was to fund and actively disseminate such industry research to influence the public and limit unnecessary regulation of the industry in the context of air pollution. Equally significantly, that Committee was founded with an explicit focus on informing the public to help prevent "unsound legislation." It did so through placement in magazines articles, leaflets, authoritative statements, reactive lines on public complaints received by the companies, the circulation of pertinent articles, and active outreach to the press. The goal, as one (1) industry report noted, was to avoid the problem of panicky people, because passing a law is, in many cases, the wrong way to start about solving an air pollution problem.

Equally significantly and in the same year, 1958, an oil industry report to the government submitted by the same Smoke and Fumes Committee acknowledged that the oil industry's responsibility extended not only to pollution caused from its production and manufacturing operations but, just as importantly, from the use of petroleum and its products. The companies, therefore, recognized the responsibility did not end when their product left the store shelves and ended up in someone's car.

In 1959, eminent scientist Edward Teller expressly warned a high-level meeting of executives that a temperature rise corresponding to ten percent (10%) in carbon dioxide increase would be sufficient to melt ice caps and submerge the city of New York. He further warned that all coastal cities would be covered since the considerable percentage of the human race lives in coastal regions. This chemical contamination could be far more serious than most people believe.

By 1969, we can document that the chief geologist for Shell Oil was also reporting on and aware of climate risks, noting that analyses indicate that the CO<sub>2</sub> content of the atmosphere since 1900 has increased by ten percent (10%) and further noting that this could lead to long-term changes in the temperature of the planet, with potentially profound effects both on weather and on ecology.

The question arises, however: why should we anticipate that any one (1) oil company would be aware of the scientific information available to another oil company? And here is where internal documents from the *American Petroleum Institute*, secured through unrelated litigation, provide a significant insight because those documents demonstrate a strong presumption that scientifically relevant data and articles relating to the impact of pollutants

would be actively shared by any company acquiring them with other members of relevant API committees.

Who were those members? That same litigation exposed the membership lists for *API* that allow us to begin piecing together when companies might have been on constructive notice of climate risks. We can demonstrate that, by 1957 and 1958, many of the current Carbon Majors or their predecessors or subsidiaries were already actively involved in the *American Petroleum Institute*, including predecessors of ConocoPhillips, Phillips 66, Chevron, Exxonmobil, and British Petroleum, and Shell, of course. These companies and still others would also have been *API* members.

In 1968, when *API* received its first truly stark warning of the risks of climate impacts and the soundness of climate science, that warning came from *API*'s own consulting scientists at the *Stanford Research Institute*. In the course of a comprehensive report spanning more than a hundred pages, the *SRI* analysis spent many of those pages looking in depth at the issue of CO<sub>2</sub>. It cautioned that rising levels of CO<sub>2</sub> would likely result in rising global temperatures and could lead to melting ice caps, rising sea levels, warming oceans, and serious environmental damage on a global scale. It further noted that fossil fuel burning provided the best explanation for the rising CO<sub>2</sub> in the atmosphere. And it emphasized that, while there were uncertainties, existing science was detailed and seem to adequately explain the present state of CO<sub>2</sub> in the atmosphere. And, despite those uncertainties, the Robinson report further recommended that the highest research need was into systems in which CO<sub>2</sub> emissions from fossil fuels could be brought under control. Thus, by no later than 1968, the petroleum industry as a whole was on notice of climate change, its most probable causes, its potential risks, and the pressing need to research technologies to reduce CO<sub>2</sub> emissions.

The following year and at *API*'s request, the authors did a supplemental report which revisited and buttressed their earlier analyses with new and more extensive evidence. While the authors again acknowledged uncertainties, they concluded that it is ironic, in air pollution technology (terms), that the industry was so focused on small-scale, local events such as smog when abundant pollutants such as CO<sub>2</sub>, which are generally ignored, could be the cause of serious worldwide environmental changes.

What did the industry do with that information? Three (3) years later, while acknowledging the Robinson report and the supplement, and highlighting in a submission to the government that Robinson and Robbins, the authors, were eminent scientists and their work comprehensive, they nonetheless disregarded that report with respect to its findings on climate change, and directly contradicting their own earlier findings from their consultants, argued



with the US government based on scientific studies on a global aggregate basis: air pollution is not a serious problem.

CIEL analyzed the membership of the task groups and steering committees that authored that report. The members of the task group included Mobil Oil Corporation and Humble Oil, both now part of Exxonmobil, Gulf Oil Corporation and Texaco, both now part of Chevron, Phillips Petroleum, now part of ConocoPhillips, Standard Oil of Indiana, now part of British Petroleum, and Shell Oil.

By 1978, Exxon scientist James Black was warning the company that man has a time window of five (5) to ten (10) years before the need for hard decisions regarding changes in energy strategies might become critical. Four (4) years later, another Exxon scientist, Roger Cohen, noted that, in summary, the results of our research are in accord with the scientific consensus on the effect of increased atmospheric CO<sub>2</sub> on climate.

In the ensuing years, the industry began to recognize that climate threatened, not only the world as a whole and people within the world, but the industry's own operations, with scientists from both Exxon and Shell recognizing that climate change proposed a risk to any long-lived infrastructure investments. As a consequence — and the following year, in 1989 — Shell Oil took the first steps to actually raise one (1) of its oil rigs to protect it against the long-term impacts of climate change.

In 1988, in a recently disclosed confidential internal report on the greenhouse effect, Shell also demonstrated the ability of these companies to account for and calculate their own individual contributions to global CO<sub>2</sub> emissions. Shell calculated in 1988 that, in 1984, Shell Group Companies had, through their sales, accounted for four percent (4%) of CO<sub>2</sub> emitted worldwide. What's remarkable about this figure is it's not unlike, (and) in fact quite close to, a similar figure calculated for the same company for the same year by Richard Heede for *Climate Accountability Institute* several decades later, demonstrating that the fundamental methodology used by Rick Heede is not unlike the methodology that companies have applied themselves internally.

By 1991, we can demonstrate that the companies were well aware of climate risks. How can we do so? In '91, Royal Dutch Shell released a video, "Climate of Concern," in which it acknowledged that climate might change too fast perhaps for life to adapt without severe dislocation. It acknowledged the increasing frequency of abnormal weather, the increasingly destructive storm surges that are likely to result with warmer seas that can make such destructive surges more frequent and more ferocious. It acknowledged sea level rise, the displacement of people living on low-lying islands, and the potential for

greenhouse refugees displaced by shifting climates. Shell cautioned that global warming is not yet certain, but many think that to wait for final proof would be irresponsible. "Action now," Shell said in 1991, "is seen as the only safe insurance."

The question is: what action did the companies take? And, here, a document discovered from Imperial Oil, Exxonmobil's Canadian subsidiary, from 1980 is instructive. A senior Imperial Oil scientist said in 1980, "There is no doubt that increase in fossil fuel usage and decreases in forest cover are aggravating the problem of increased CO<sub>2</sub> in the atmosphere. More importantly, technology exists to remove CO<sub>2</sub> from stack gases but removal of only fifty percent (50%) of CO<sub>2</sub> would double the cost of power generation. Thus, we can demonstrate from the 1980s onward, more and more oil companies had the technical capacity and the opportunity to reduce risks associated with greenhouse emissions but chose not to do so for commercial reasons.

What did they do instead? Here, the documentation is far more abundant and far more robust. Through multiple exposés published by non-profit organizations, by scientific researchers, by historians, and by media outlets, multiple media outlets, it has been demonstrated that the oil companies undertook a decades-long, multi-million dollar campaign to persuade the public that climate change was not a serious risk, that human conduct was not to blame, or that climate simply was not changing at all.

This was most emblemized by a 1998 statement by the *American Petroleum Institute* that victory will be achieved in its campaigns when average citizens understand that the uncertainties in climate science and recognition of those uncertainties become part of the conventional wisdom. That same document which API dubbed its "Communications Roadmap" with respect to global climate change went on to say that one (1) goal was to present supporters of the Kyoto Protocol as out of touch with reality.

We don't have API membership lists for 1998 but we do have them for 1990. And those membership lists demonstrate that the members of API continued to grow during that period and extended to include Aramco and Statoil and Total, among others.

Why is this significant? Because we now have significant evidence that Exxonmobil, Shell, BP, and other major producers of fossil fuels actively promoted climate misinformation efforts that contradicted their own understanding of climate science. This matters because it establishes dates when different companies knew or should've known the risks of their products.

The American Petroleum Institute's deep involvement implicates the entire industry and puts the entire industry on constructive notice of this underlying science, and creates a strong presumption that many other API members were involved in these efforts, not just Exxonmobil or Shell. More importantly, attribution science is getting more precise by the day, meaning that the timeline is important in understanding issues of fault and how to apportion damages over time.

In CIEL's analysis, and evaluated under the laws of tort, the law of non-contractual responsibility in civil jurisdictions, and international human rights law, there are ample and increasingly abundant grounds to hold fossil fuel companies responsible for the climate crisis. As a result, we are seeing investigations extending far beyond the Philippines. What began in the Philippines with this landmark Inquiry now includes active investigations by two (2) US states. It includes an investigation that was begun by the United States' Securities and Exchange Commission — an ongoing active litigation in Germany, in thirteen (13) jurisdictions in four (4) US states, in other states in suits brought by investors, and, most recently, with a notice before action brought by the non-profit, [Friends of the Earth Netherlands] /Milieudefensie against Shell Oil in the Netherlands.

Much more fundamentally and as an ending note, I want to highlight that the Commission has taken a leadership role in this process but it is not alone. Courts around the world are increasingly asked to consider these issues and to examine the implications of climate change for human rights and human liberties and human lives and to consider the responsibilities of governments and of corporations in light of those impacts.

The decisions you take, the opinions you reach, will inform those cases and help move not only the Philippines but the world forward on climate. Thank you.

ATTY. MAYO-ANDA:

Thank you very much for your presentation, Mr. Carroll Muffett. Your Honor, please, may we be allowed to ask a few questions for purposes of elaboration?

PANEL CHAIR CADIZ:

Please proceed.

ATTY. MAYO-ANDA:

Mr. Carroll Muffett, will the corporations' action, omission, or denial of responsibility, make these corporations liable? What would be your legal basis?

MR. MUFFET:

I think the liability begins with the recognition of those elements that I spoke to. We can demonstrate that, from a very early stage, decades before anyone really recognized, leading oil companies were well aware of climate risks and the potential risks inherent in their products. And so the question arises: what did they do in light of those risks? Did they warn the public? Did they warn consumers that there were climate risks associated with the use of gasoline and other fuels? Did they deploy, at scale, the technologies that would've been needed to slow the climate crisis and dramatically reduce emissions when they could have done so? Did they support action to regulate this problem nationally or globally? And, over and over, the evidence in each case points the other way. And, much more fundamentally, we can demonstrate that these companies, even if they knew the risks of their products, continued to expand their production of oil to ever greater levels over time. It's important to recognize that more than fifty percent (50%) of all CO<sub>2</sub> emitted into the atmosphere was emitted after 1988, by which point the companies had already been on notice for decades of these risks.

ATTY. MAYO-ANDA:

Thank you. Our next question is: based on your research and evidence of earlier corporate knowledge of climate risks, what actions could the corporations have taken that you believe they did not?

MR. MUFFET:

Yes, and to repeat, I think the first and most immediate actions would've been to seek and deploy alternatives to their products. Even before that, the companies could've begun to actively acknowledge the potential climate risks and to warn consumers, investors, and the general public about those risks.

This is not only CIEL's opinion. In 1988, a landmark conference was held in Toronto, Canada. That conference brought together three hundred (300) leading scientists, economists, diplomats, lawyers, and business executives from around the world to announce the first climate plan, the climate plan that ultimately led to the creation of the IPCC and the UNFCCC. One element of that plan was an urgent call to action for governments and for corporations to immediately begin labelling their products to acknowledge the climate risks associated with them.

ATTY. MAYO-ANDA:

Thank you again, Mr. Carroll Muffett.

Your Honors, that would be all for Mr. Carroll Muffett. Our resource person is now ready to answer your questions, if there are any.

PANEL CHAIR CADIZ:

Thank you very much for the information that you shared, Mr. Muffett. I will now invite members of the Panel to field their questions if they have any.

Let me start with Comm. Leah Armamento. Yes, please go ahead.

COMMISSIONER TANODRA-ARMAMENTO:

Mr. Muffett, I'm interested with that landmark summit in Canada. Can you elaborate further on that? And what was the action taken after there was a plan?

MR. MUFFET:

Yes, the summit was the Toronto Conference on Climate Change. The conference outcome was a plan of action that included a number of elements, among them the need to immediately convene what would become the Intergovernmental Panel on Climate Change and, ultimately, it laid the

foundations for negotiation of the UN Framework Convention on Climate Change, which was completed in 1992.

COMM. TANODRA-ARMAMENTO:

Thank you very much, but can I have a follow-up question? Because this plan of action, were the Carbon Majors given notice or information of their obligations based on that plan of action that came out of that summit? Thank you.

MR. MUFFET:

From my perspective, I think that the Carbon Majors had notice of their obligations far earlier. And I think that is inherent in the 1958 document from *API's* Smoke and Fumes Committee, authored by Shell Oil executive(s) in which the oil industry acknowledged, in a submission to the government, that the industry was actively engaging on and treated itself as responsible for the air pollution resulting from the use of its products.

I think that the fact that Shell was, in 1988, calculating its contribution to global climate impacts from its sold products is another evidence that companies were well-aware of the potential risks. And, indeed, other documents disclosed recently from Shell demonstrate that, if they did not take action on climate change, they could and would be sued.

COMM. TANODRA-ARMAMENTO:

Thank you. May I know who were the participants in this Summit?

MR. MUFFET:

In the Toronto Summit, there were three hundred (300) participants. We have searched for a participants list, we have not found a participants list. So which of the oil companies were at the summit, I cannot speak to.

Page 123

COMM. TANODRA-ARMAMENTO:

Thank you very much.

PANEL CHAIR CADIZ:

Fr. Walpole, would you have questions?

FR. WALPOLE:

I have no questions at this stage. I just appreciate how he has identified where the information started and where, if you like, the shift occurred, and the misinformation. So this requires, yeah, further reading, further investigation, and exactly what was asked at the beginning: how does this make companies responsible for individuals, by what individuals said in the past? But this transition in the corporate dynamic is very important and very helpfully documented. Thank you.

PANEL CHAIR CADIZ:

Comm. Gwen Gana will have some questions, Mr. Muffett, for you.

COMMISSIONER PIMENTEL-GANA:

Just a clarification, probably. Now, because you were tracing the history of, you know, when knowledge was actually gained by these companies, at what point in time, and you have actually been saying that it has always been recommended and realized at that point that there has to be something done and the research further needed to be made. And yet, are you saying that at no particular point did any of the companies actually engage in any further research and made such research into action in order to quell whatever the threat there was to the environment?

MR. MUFFET:

Yes, it is clear that several of the oil companies funded or directly engaged in climate science. A relevant analysis that was recently done by Naomi Oreskes of Harvard University and her colleague Geoffrey Supran actually compared Exxon's publications of climate science with the public communication and advertisements that it was doing to non-scientific audiences. And what that analysis found — and it looked at more than one hundred eighty-six (186) documents over a period of decades — was that, yes, Exxon was engaging in one (1) debate with the scientific community while simultaneously and very actively emphasizing very different realities to the broader public, whether it was consumers or investors. And, generally, the wider the publication, the simpler — you know, the wider the reach of the communication, the more Exxon emphasized that the science was fundamentally uncertain in ways that were inconsistent with what the company was saying internally.

COMM. TANODRA-ARMAMENTO:

Are you saying, therefore, that there was actually a concerted effort of these companies to misinform the public? Or mislead the public.

MR. MUFFET:

Yes, I think there is an abundant evidence precisely on that and I'll say that we didn't put as much of that in our presentation precisely because so much of it was brought to public light over a period of years by so many other researchers. And so we can demonstrate, for instance, that the oil industry funded denial efforts through an array of funding groups, whether it was the *Global Climate Coalition* in the 1980s, the *European Science Environment Forum*, more recently the *Heartland Institute*, often in ways that concealed or understated its own reason for funding the efforts but all of which tended to promote climate denial, climate uncertainty, and an undervaluation of climate risk in contradiction and in contrast to what the companies knew to be the case.

PANEL CHAIR CADIZ:

Mr. Muffett, again, thank you for testifying today. I hark back to your reference to the study made by Richard Heede and the Climate Accountability



Institute. Earlier, one of the members of your organization also testified before this Panel about this study made by Mr. Heede and I asked if this was subjected to peer review, and she answered in the affirmative. But I would want, now, to ask details from you.

When was this subjected to peer review? Were there responses by the scientific community regarding this study? And could you explain to us the methodology that was used by Mr. Heede in conducting his study?

MR. MUFFET:

Yes, I'll attempt to do so. And I'll note that Heede's original analysis that was published in 2013-2014 has subsequently been updated and expanded on three (3) occasions. The first update came from Heede himself. Subsequent updates were done in collaboration with *CDP*, which is a globally-recognized and widely-respected organization that works directly with companies to calculate their climate impacts. *CDP* incorporated Heede's findings and its methodologies and now has an ongoing database that reaches an even larger number of companies.

More recently, Heede's underlying data and the methodology were incorporated into the paper by B. Ekwurzel et. al, which is a peer-reviewed paper that was published by the journal *Climatic Change* in September of 2017.

With respect to the underlying methodologies involved, I will do my best to summarize it. I am, unfortunately, not Rick Heede. But what he did was, quite systematically, he went through the annual reports of the companies involved. He went through SEC filings, government filings from other countries where companies were headquartered. And he looked at when mergers happened, when acquisitions of assets happened. And, in so doing, he was able to essentially trace the underlying production of major fossil fuels, coal, oil, gas, and cement — all of them primary sources of methane and CO<sub>2</sub> as I noted, ninety (90) entities, of which fifty (50) were investor-owned companies. That list has now been expanded, as I said, to one hundred (100) entities but the fundamental findings haven't changed.

PANEL CHAIR CADIZ:

Thank you very much for that answer. I'm interested in the science of attribution which you earlier attributed to. Could you explain to us more how these studies are able to attribute their respective contributions to climate change?

MR. MUFFET:

Absolutely. And I want to distinguish two (2) categories of attribution science, which are distinct but related. The first is the science of attributing impacts from individual events to climate change. And there we've seen a dramatic acceleration of that science beginning in approximately 2008, 2009, with the works of Myles Allen of Oxford, and others who began to identify direct quantifiable links between the amount of CO<sub>2</sub> in the atmosphere and the amount of warming that would occur in the planet. And once you can do that, link the amount of CO<sub>2</sub> that is in the atmosphere to a direct consequence for the planet, additional avenues for attribution science were opened up. Building on that research from Myles Allen and others, we have seen growing precision in tracing specific impacts to climate change.

The science underlying the case brought by Saul Luciano Lliuya against Carbon Major RWE in Germany is emblematic of these developments. With his case, Saul Luciano Lliuya is a Peruvian farmer who lives outside a city of a hundred thousand people that is downstream and a very short distance from a glacial dam in Cordillera Blanca. That dam has increased in volume (by) many thousands of percent since the 1970s and that increase is entirely attributable to climate change. This is not an assertion that's made by Saul Luciano Lliuya himself but it's an assertion that's supported by studies from Peruvian universities, the Peruvian government, the US government agencies, and US universities. And it's supported with very specific geospatial data that would show supporting evidence of the severity and speed of the potential impacts. That's one example of how attribution science is working.

You know, in similar ways, we are now able to quantify, much more precisely, the role of climate change in sea level rise in individual places, the role of climate change in increasing the energy to storms, the role of climate change in increasing incidents of drought and wildfire in key areas, and the severity of those droughts and wildfires. And all of that is allowing us to better separate people who are victims of natural disasters from those many millions who are increasingly victims of unnatural disasters caused or enhanced by climate change. So that's the attribution side on the impact side.

On the accountability side, the attribution science built on the work that was done by Rick Heede? Combine that with the work that was done by Myles Allen and others that traced the role of individual quantities of CO<sub>2</sub> in specific climate impacts, and then connect (with) the CO<sub>2</sub> emitted or produced by individual Carbon Majors, to the predictable consequences of that as a result of climate change.

PANEL CHAIR CADIZ:

Thank you very much. Could you enlighten us on... if studies have been made distinguishing manmade contribution and natural contributions to climate change? If you were to be asked regarding the percentages of contribution between natural and manmade causes, would you be able to give us an answer now?

MR. MUFFET:

I have to acknowledge that I'm not a climate scientist and I would prefer a climate scientist to answer that. What I can say as a lawyer is that the human contribution to specific climate impacts is sufficiently significant that it can be quantified and that the role of climate change in making specific events more likely, making specific impacts more severe, is increasingly traceable.

I'd like to give you an example. When New York and other US cities were struck by a major hurricane a few years ago, the difference between the water from the storm surges rushing up to a street and retreating harmlessly into the sea and that same water advancing a few more centimeters and rushing into a subway was literally a matter of centimeters or fractions of a centimeter. And that difference was a difference of billions of dollars in impact. And science is increasingly able to sort out those differences — the difference between what would've been in the realm of a natural occurrence and what is so far outside the norm that it can and should be considered an unnatural occurrence and a consequence of a human-caused climate change.

PANEL CHAIR CADIZ:

Thank you very much. Are there other questions from the Panel?

Page 128

Mr. Muffett, would you be willing to make yourself available on another date to testify before this Panel after we have gone through all the documents that have been presented to us?

MR. MUFFET:

I would be very happy to make myself available and, whenever possible, to travel to the Philippines to testify in person.

PANEL CHAIR CADIZ:

Thank you very much. We understand.

What time is it there in your place?

MR. MUFFET:

It is 10:30.

PANEL CHAIR CADIZ:

In the evening?

MR. MUFFET:

In the evening.

PANEL CHAIR CADIZ:

Alright. Thank you very much for taking time out to testify before this Panel.

Counsel, do you have other questions for your witness?

Page 129

ATTY. MAYO-ANDA:

No more, Your Honors. Your Honors, may we respectfully request that Mr. Carroll Muffett be excused now?

PANEL CHAIR CADIZ:

Alright. Thank you very much, Mr. Muffett, for taking time out to contribute to this dialog on climate change.

MR. MUFFET:

Thank you. It was a privilege to contribute to your work.

PANEL CHAIR CADIZ:

Counsels, you may now proceed to your second witness.

ATTY. PAUDAC:

Good morning, Your Honors. Your Honors, may we call our second and third witnesses, Mr. Pablo R. Rosales and Mr. Jonathan B. de los Reyes.

PANEL CHAIR CADIZ:

So this is an unusual process that we have adopted in this Panel, where two simultaneous witnesses are sitting on the witness stand to... sort of... support each other and corroborate each other's testimony.

This is not a regular court with strict rules of procedure and, in order to facilitate the receiving of information, we have acceded to the request of counsels.

So please present your witnesses now.

Page 130

ATTY. PAUDAC:

Thank you, Your Honor.

PANEL CHAIR CADIZ:

May we request our lawyers, Atty. de la Cruz or Atty. Jose, to swear-in the witnesses?

CHR Legal Officer:

*(swears-in witness)*

PANEL CHAIR CADIZ:

Alright, Counsel, you may now examine your witnesses.

ATTY. PAUDAC:

Your Honors, Mr. Pablo R. Rosales is a fisherfolk and chairperson of *Pagkakaisa ng mga Samahang Mangingisda, "Pangisda Pilipinas."* On the other hand, Mr. Jonathan de los Reyes is a small business owner who buys directly from fisherfolk, what we call *konsignasyon*.

Your Honors, we are calling Mr. Rosales and Mr. de los Reyes for the following purposes. For Mr. Rosales, to share his experience as a fisherman since eight (8) years old up to the present and how climate change impacted his life and livelihood, including that of his fisherfolk organization. For Mr. de los Reyes, we're offering his testimony to share his experience as a small business owner buying fish directly from fisherfolk and selling the same and how climate change impacted his small business.

Your Honors, before we proceed, Your Honor, may I make a manifestation or request, Your Honor? May we be allowed to ask questions in the vernacular, Your Honor, and the language which is more known to the witnesses and they're more comfortable with, and for the questions and answers to be recorded verbatim in that language, Your Honor?

Page 131

PANEL CHAIR CADIZ:

Of course, but may we know what language they'll be using?

ATTY. PAUDAC:

Filipino, Your Honor.

PANEL CHAIR CADIZ:

Alright. Please go ahead.

ATTY. PAUDAC:

And, Your Honors, since we learned that we do have an official translator, Your Honor, may we request that the official translator, Your Honor, translate after considerable amount of statements have been uttered or testified to by the witnesses in order to not to unduly interrupt the narration? And, also, we would also request the witnesses and resource persons to speak slowly, with pauses, so that the official translator can correctly translate the statements.

PANEL CHAIR CADIZ:

Where is your translator? Where is our translator? May we request you to come here in front and sit beside or stand beside the witnesses?

Can we provide a chair for the witness, probably here on the right side of the witnesses so that you can also be seen on the camera?

Counsel, you may now begin with your questioning.

ATTY. PAUDAC:

Your Honors, before we proceed, Your Honors, there are two (2) documents that we have, submitted by the witnesses, Your Honors. May we be allowed to ask preliminary questions regarding these documents?

PANEL CHAIR CADIZ:

Please go ahead.

ATTY. PAUDAC:

*Magandang umaga ho, Ginoong Pablo Rosales at Ginoong Jonathan de los Reyes. Mayroon po ako ditong- pinapakita ko po sa inyo ang isang dokumento na may pamagat na "Salaysay ni Ginoong Pablo R. Rosales," anim na pahina. Maari nyo po bang suriin at pakisabi po kung nakikilala nyo po ang dokumentong ito?*

(Good morning, Mr. Pablo Rosales and Mr. Jonathan delos Reyes. I have here... I am showing you a document denominated as Statement of Mr. Pablo Rosales, consisting of six [6] pages, can you please examine this document and say if you recognize this document?)

PANEL CHAIR CADIZ:

Counsel, can you provide another microphone to the witness because we're not capturing his response to the questions?

*Ah, pakilakas lang po ng boses nyo para ma-record po natin. (Please speak louder so that we can have it recorded.)*

OFFICIAL TRANSLATOR:

Yes, I can identify the document.



ATTY. PAUDAC:

*Sa ika-anim (6) na pahina ng dokumentong "Salaysay ni Ginoong Pablo R. Rosales," mayroong pirma o lagda sa itaas na 'Pablo R. Rosales,' 09 Mayo 2018. Pakisuri po. Nakikilala nyo po ba ang pirmang ito?*

(On the sixth page of this document Salaysay ni Pablo R. Rosales, there is a signature over the name Pablo R. Rosales, 09 May 2018. Please examine the same. Do you recognize this signature?)

MR. ROSALES:

*Opo, pirma ko ito.*

OFFICIAL TRANSLATOR:

Yes, this is my signature.

PANEL CHAIR CADIZ:

Excuse me. Please also translate the question, not only the response.

So, Counsel, after you ask your question, can you allow the translator to first translate before asking your witness to respond?

ATTY. PAUDAC:

*Yes, Your Honors. Ginoong Rosales, inyo po bang pinapatotoo ang mga nakasalaysay sa "Salaysay ni Ginoong Pablo Rosales" na naglalaman ng anim na pahina?*

Page 134

OFFICIAL TRANSLATOR:

Mr. Rosales, do you attest to the truthfulness of this document consisting of six (6) pages?

MR. ROSALES:

*Opo, pinapatunayan ko po.*

OFFICIAL TRANSLATOR:

Yes, Ma'am, I attest to that.

ATTY. PAUDAC:

Your Honors, for the record, "*Ang Salaysay ni Ginoong Pablo R. Rosales*" was pre-marked during the scheduled pre-marking last May 21 as Exhibit zero-zero-ay, OOO to OOO-5. May we request that the signature which was just identified by the witness be marked as our Exhibit OOO-5A?

CLERK OF THE INQUIRY:

For the record, Your Honor, the testimony of Mr. Rosales consisting of six (6) pages was pre-marked as Exhibit OOO up to OOO-5.

ATTY. PAUDAC:

*For the second document, Ginoong Jonathan B. de los Reyes, meron po akong dokumento dito na pinamagatang "Salaysay ni Ginoong Jonathan B. de los Reyes," apat na pahina. Maari nyo po bang suriin ito?*

OFFICIAL TRANSLATOR:

I have here a four (4) page-document denominated as “The Affidavit of Mr. Rosales- de los Reyes.” Can you identify this, Sir?

MR. DE LOS REYES:

*Opo, sa akin po yan.*

OFFICIAL TRANSLATOR:

Yes, Ma’am, this is my affidavit.

ATTY. PAUDAC:

*Sa ikaapat na pahina, mayroong lagda sa taas na pangalang ‘Jonathan B. de los Reyes,’ nilagdaan noong Mayo 15, 2018. Maari nyo po bang kumpirmahin? Maari nyo po bang tignan ang pirmang ito at pakitukoy kung kaninong pirma ito?*

MR. DE LOS REYES:

*Sa akin pong pirma ito.*

OFFICIAL TRANSLATOR:

On the last page, there’s a signature. Can you identify this signature? Answer was “This is my signature.”

ATTY. PAUDAC:

*Pinapatotoo nyo po ba, Ginoong de los Reyes, ang laman ng salaysay na ito?*

OFFICIAL TRANSLATOR:

Do you attest to the truthfulness of the contents of this document?

MR. DE LOS REYES:

*Opo.*

OFFICIAL TRANSLATOR:

Yes, Ma'am.

ATTY. PAUDAC:

Your Honors, for the record, "*Salaysay ni Ginoong Jonathan B. de los Reyes*," consisting of four (4) pages, was pre-marked on May 21 as Exhibit PP to PP-3. May we request that the signature of Mr. Reyes- de los Reyes on page four (4) be marked now as Exhibit PPP-3-A? Your Honors, at this juncture, Mr. Rosales will now present the highlights or summary of his statement. Mr. Rosales, please proceed.

OFFICIAL TRANSLATOR:

*Pwede na po kayong magsalita, Mr. Rosales. (You may speak now.)*

MR. ROSALES:

*Una sa lahat po, bumabati ako ng magandang umaga sa ating mga kagalang-galang na commissioner, sa ating mga kasama na nasa loob ng bulwagang ito, ganun din po sa mga nanunuod sa atin sa ating ginagawang pagtitipon. Magandang umaga sa inyong lahat.*

PANEL CHAIR CADIZ:

*Magandang umaga rin.* (Good morning, as well.)

OFFICIAL TRANSLATOR:

First of all, I would like to greet the Honorable Commissioners in this Panel and also our viewers and audience good morning.

MR. ROSALES:

*Ang hirap ng humihinto eh. Sige po. Sisimulan ko po yung aking salaysay kangnay noong aking buhay sa pangisdaan. Nagsimula po akong mangisda ng-*

*Ako nga po pala si Pablo Rosales, taga-pangulo ng Pagkakaisa ng mga Samahan ng Mangingisda sa Pilipinas na ang acronym nya ay Pang-isda Pilipinas. Itinatag po ito noong 1998 at ako ho ay naging bahagi nito sa buong panahon hanggang sa kasalukuyan. At ako ho ang tumayong taga-pangulo dalawang (2) taon na makalipas po noong naging pangulo ako, nitong 2016.*

*Sisimulan ko po yung aking kwento noong ako ay bata pa na nagsimulang mangisda, walong taong gulang kasama ng tatay ko. Doon po ako isinilang sa Catbalogan, Samar at ang amin pong kabuhatan ay nagmumula sa pagbubungkal ng lupa o pagsasaka at sa tabing dagat din po kami kaya pangisingda, pangisingda at magsasaka po ang aming buhay.*

*Ako po noon ay nag-aral hanggang grade two (2). Tapos, noong sumama na po ako sa pangisingda, nahinto na po ako sa pag-aaral. Ayun, nahinto na ko sa pag-aaral at sumama na lang ako sa pangisingda sa tatay ko. Makalipas-Ah, ang haba pala.*

OFFICIAL TRANSLATOR:

Let me inform everybody that I am a fisherman. My name is Pablo Rosales. I was born in Catbalogan. I started with the association (*Ano na nga po yung pangalan? Pagkakaisa ng mga Samahan ng-*) Pagkakaisa ng mga Samahan

ng *Mangingisda* with acronym *Pang-isda*. I headed the organization and I have been with the organization from the start in 1998. I, now, am the head of the organization for the past two (2) years already. I was born in Catbalogan. My parents and I lived near the shore. I started fishing at the tender age when I was in grade two (2.) By then, I had to stop studying already.

(I will start my statement in relation to my life as a fisherman. I started fishing when.... I am Pablo Rosales, President of *Pagkakaisa ng mga Samahan ng mga Mangingisda* with acronym PANGISDA. It was formed in 1998, and I have been a part of this organization all these years until now and I became its President two years ago. I became President in 2016. I will start my story when I was still a child. I started fishing with my father when I was eight (8) years old. I was born in Catbalogan, Samar and our livelihood came from digging the soil or farming and we live near the shore, hence, fishing and farming are what we do. I went to school up to Grade 2. Then, when I joined my father to fish, I stopped school and went with him fishing.)

MR. ROSALES:

*Sumama po ako sa pangingsda. Ang amin hong gamit pangingsda ay di-sagwan lang. Lumalaot kami, umaalis kami alas kwatro(4) ng madaling araw, dumadating kami sa laot ng magliliwanag at, pagdating ng tanghali, unuuwi din po kami dahil, di-sagwan, hinahabol naming makarating ang isda ng maaga pa sa gabi. Di-sagwan lang kami ng tatay ko sa panahong yun sa Samar.*

OFFICIAL TRANSLATOR:

We, me and my father, used paddle boats only when we went fishing. We usually start at four (4) in the morning and make sure we are there already before dawn. And we make sure that the catch will be available by noontime.

(I joined my father in fishing. We only use paddle boat for fishing. We go to the sea at 4:00 early morning. We arrive in the sea before sunrise and at noon time, we go home with our paddle boats, trying to be there early to get more fish catch. At that time, my father and I only used paddled boat in Samar.)

MR. ROSALES:

*Marami na ho kaming nahuhuli noon, sa ganung kaikasing oras na malapit lang, sa di-sagwan lang na boat. Pero hindi ho kami nagtagal doon kasi ang aming pamilya ay syempre naghahanap ng pag-unlad at nagkaroon ho kami ng balita na sa Luzon o Manila ay medyo makipagsapalaran para sa pag-unlad. Kaya noon ding taong yun, ay lumipat kami papuntang Luzon. Ang una ho naming tinirhan sa Luzon ay sa Cavite, sa Binakayan, Cavite.*

OFFICIAL TRANSLATOR:

We can only catch very small amounts in a very short time. Not long after, since we heard that there could be a better life for us either in Manila or Luzon and since we were looking for a better life, we decided to move to Luzon, particularly in Cavite.

(We catch a good amount in a very short time in nearby areas, even with just paddled boats. But we did not stay there long because our family is looking for a better life and we heard news that in Luzon or Manila we can have better life if we try our luck. That's why on the same year, we moved to Luzon and first lived in Binakayan, Cavite.)

PANEL CHAIR CADIZ:

Excuse me, Counsel. The translator is having a hard time. In fact, I noticed that the translation was not very accurate. The first part was not accurately captured. May you signal the witness to stop at a certain point so that the translator would not have a difficult time translating?

ATTY. PAUDAC:

Thank you, Your Honor. Yes, Your Honor, we will do as requested.

MR. ROSALES:

*Ayun nga, lumipat kami galing sa probinsya at napunta kami sa Luzon sa paghahangad na magkaroon ng kaunlaran pero dumating ho kami sa Cavite*

*ay sa usapin pa rin ho ng pangisdaan kami. Nangunguha ho kami ng talaba at saka naninisid po kami ng arorosep o yung halamang dagat.*

OFFICIAL TRANSLATOR:

Because we wanted a better future, we moved to Luzon and sought a better life. And we went to Cavite, fishing was still our main source of income. We gathered oysters and seaweeds.

MR. ROSALES:

*Halimbawa kung masama ang panahon, naoobliga ho kami, ako particular — maglinis ng dyip at pumasok na pinboy sa isang bowlingan para lang ho kumita ng kaunti at pandagdag doon sa aming pangangailangan.*

OFFICIAL TRANSLATOR:

And, in times when the weather is bad, I would clean jeepneys and act as a pinboy in bowling *ba, Sir?* In bowling alleys.

MR. ROSALES:

*Oo, bowling, sa bowling. Ayun, yun. Di rin kami nagtagal. Almost isang taon lang ho ang buhay namin sa Binakayan. Mayroon ho kaming kakilala na nakapagbalita na maganda ang panghuhuli ng isda sa Bataan. Kaya ho lumipat din kami sa Bataan.*

OFFICIAL TRANSLATOR:

Not long after, particularly about a year after, we heard from a friend that there is better fishing in Bataan, so we transferred to Bataan.

(We did not stay there long, we lived in Binakayan only for a year. We have heard from someone we know that fish catch in Bataan is better, thus, we moved to Bataan.)



MR. ROSALES:

*Sa Mariveles po kami bumagsak, bahagi ho ito ng Manila Bay, 'no, itong partikular na bayang ito. Dun ho kami nagsimulang mangisda at di-sagwan ho uli ang aming ginamit sa pangingsda.*

OFFICIAL TRANSLATOR:

We went to Mariveles, which is a stretch from the Manila Bay, and we also did paddle fishing in that area.

(We ended up in Mariveles, which is part of Manila Bay. In this particular municipality, we have started fishing and used paddled boat in fishing.)

MR. ROSALES:

*Ang aming paraan ng pangingsda ay hook-and-line o kawil, pangangawil ng isda, tapos ang amin hong pag-alis, ganun din. Kung madaling-araw, bago pumutok ang araw nandoon na kami sa lugar naming gustong pangisdaan.*

OFFICIAL TRANSLATOR:

We used hooks and lines as fishing implements. And, just like before, we would be very early before dawn. (We used hook-and-line as a mode of fishing. Like before, we leave early morning before the sun rises, and we go to our favorite spot for fishing.)

MR. ROSALES:

*Ang aming hinuhuli ay magandang isda, mga talakitok at iba pang mga commercial na isda dahil selective ho yung paraan ng panghuhuli namin, kawil kasi. Sa tanghali pa lang, umuuwi na ho kami. Nakakapagbenta na kami ng isda sa napakamurang halaga noong taong 1970. (Mil nobesyentos sitenta?) Seventy po. 1970.*

OFFICIAL TRANSLATOR:

We were able to catch good kinds of fish like *talakitok* and other commercial fish. And, by lunchtime, we are able to go home already and sell our produce and the price for produce was very low then in the 1970s.

(What we catch were good kinds of fishes, bigeye jack and other commercial fishes, because of our selective way of fishing, that is, hook-and-line. By noon time, we already go home, and we were able to sell fishes at very cheap prices in the 1970s.)

MR. ROSALES:

*Itong pangingsida namin, hindi na ho ako nakapag-aral. Ito na ho yung naging buhay ko. Sumama na nang sumama sa tatay ko. At kaya yung buong panahon ko ay naigugol sa pangingsida. Nasubaybayan namin kung paano ang naging takbo ng ating pangisdaan.*

OFFICIAL TRANSLATOR:

I was not able to go to school anymore. I spent life with my father as a fisherman and, all this time, I have known how the fishing industry has become.

(Because of fishing, I was not able to go to school anymore. This has been my life, I just go with my father, hence, I spent all my time in fishing. We were able to follow the trends in the fishing industry.)

MR. ROSALES:

*Noong una, ang paraan namin napakalapit lang pero unti-unti hong lumalayo ang aming pangingsida at unti-unti hong tumatagal ang aming pag-istay sa dagat hanggang sa, isang panahon, dumadayo na kami sa malayo. At ng tumatagal na kami ng isa (1) hanggang tatlong (3) araw sa laot at tinatakbo ang lugar na yun sa halos tatlo (3) hanggang anim (6) na oras bago ka makarating.*

OFFICIAL TRANSLATOR:

It was easier before. The manner was easier. But, now, we have to go farther. Sometimes, we have to go to other places and spend one (1) to three (3) days fishing.

(Before, fishing was just near, but now, we gradually go farther and stay in the seas longer. Until it came to a point that we go to farther places and stay there for one [1] to three [3] days to fish, and it took us almost three [3] to six [6] hours to reach these places.)

MR. ROSALES:

*Resulta ho yun ng paghahangad namin na makahuli kasi hindi na kami nakakahuli sa malapit kaya lunalayo na kami. Pagdating namin sa bandang laot po ay nandoon naman ang iba naming kakompetensya. Andyan ang commercial fishing na malalaki.*

OFFICIAL TRANSLATOR:

And because we want to get good catches, we have to go farther into the sea, but, as we go farther, that's when we see already the commercial fishers.

(That is the result of our desire to catch fishes because we were no longer able to catch fishes nearby; hence, we have to go farther. When we reach the sea, our competitors are already there, these big commercial fishing companies.)

MR. ROSALES:

*Kaya sa panapanahon noon, nasa malayo kami pero - ang kadalasan naming pinangingisdaan ay ang Manila Bay kasi noong panahong yun marami pa rin hong nahuhuli sa loob ng Manila Bay.*

OFFICIAL TRANSLATOR:

We would go far, but at that time, we were also fishing within the Manila Bay and, at that time, there was still good produce from the Manila Bay.

(That is why during that time, even if we were far, we would still go to Manila Bay to fish because there were still plenty of fishes to be caught in Manila Bay.)

MR. ROSALES:

*Noong panahon ho kasi ng mga 1975 hanggang 1980s ay napakarami pa hong isda sa loob ng Manila Bay dahil meron pa hong mga bahura. Ang mga bahura o mga coral reefs kumbaga.*

OFFICIAL TRANSLATOR:

From 1975 up to the 80s, there was still a good catch in the Manila Bay because there were still corals, coral reefs.

(During the time of 1975 to 1980s, there were plenty of fishes in Manila Bay because there were still the coral reefs there.)

MR. ROSALES:

*Ang tinutukoy ko hong coral reefs, ito yung mga barkong lubog na resulta noong digmaan sa Manila Bay, Second World War. May mga barkong lumubog dyan na nagsilbi nang tirahan ng isda. Kaya yun ang aming pinupuntahan. Doon kami nangangawil.*

OFFICIAL TRANSLATOR:

I refer to the sunken ships or vessels during the World War II as the coral reefs.

(The coral reefs that I was refeering to were the sunken ships during World War II. There were ships that sank which served as home to fishes, that is why we went there. We go there to fish.)

MR. ROSALES:

*Kaya lang, sa pagsulong din ho ng panahon, ang mga coral na ito ay naubos. Ginawa hong hanap-buhay, ini-scrap ng mga iskraper o 'di syempre dinidinamita ang ilalim para maghiwa-hiwalay yung bakal, ikinakarga sa barge, ipinapakilo sa tabing-dagat.*

OFFICIAL TRANSLATOR:

In time, these coral reefs were already used as scrap and sometimes, they blow up down under using dynamite to able to get the scrap.

(However, as time progresses, these corals were gone. They became a source of livelihood; they were scrapped by the scrappers. They used dynamites to blow these up so the steel scraps will disintegrate, they board them unto the barge and sell them near the shore.)

MR. ROSALES:

*Sa ganoon po hanggang sa naubos po yung mga corals natin. Tapos kung titingnan po natin, kami, sa aming karanasan, doon din sa Manila Bay, kahalo namin ang iba't ibang klase ng mangingisda kasama ang mga small commercial fishing na mas mabilis manghuli kumpara sa amin.*

OFFICIAL TRANSLATOR:

So there were no more coral reefs. They were lost already by that time. And by my experience, we were able to fish also with some small commercial fishermen.

(It was so, until the corals were gone. Then, if you would look at our experience there in Manila Bay, we were mixed with different fisherfolks,

including small commercial fishing vessels, which can catch fishes faster than us.)

MR. ROSALES:

*Commercial fishing, ibig sabihin vessels, mga vessels.*

OFFICIAL TRANSLATOR:

With some small commercial fishing vessels.

MR. ROSALES:

*Bilang kakompetensya po ng mga maliliit na mangingisda, iisang lugar na pinangingisdaan, maliit kami, malaki sila, nag-uunahan kami dun sa ano, eh di talo ho kaming maliliit na mangingisda.*

OFFICIAL TRANSLATOR:

These commercial fishing vessels were competition to us being small fishermen.

(The commercial fishing vessels are the competitors of small-scale fisherfolks in the same fishing area. We are considered small, they are big, we compete and are defeated because we are just small.)

MR. ROSALES:

*Ito ay mga problemang kinaharap namin kasabay ng aming pagtingin at pagkatuklas at sa aming pagsubaybay sa pangisdaan at pagdumi na ng dagat, pagkalason ng maraming isda. Tulad halimbawa noong 1990s, unang nagkaroon ng fish kill na malakihan dito sa Manila Bay.*

OFFICIAL TRANSLATOR:

Those were some of the problems we were able to observe and discover, including the pollution of the seas, and other issues, including the fish kill in the 1990s.

(These were the problems we faced concurrently with what we observed and followed in the fishing industry, including the pollution of the seas which caused poisoning, like what happened in the 1990s when the first massive fishkill happened in Manila Bay.)

MR. ROSALES:

*Dito rin lumitaw ang red tide sa panahong to. Nagugulat kami, noong una, wala namang red tide sa Manila Bay. Pero, pagdating ng 1990s, akala namin isang simpleng kalamidad lang ito sa Manila Bay kaya medyo nagkaroon pa ng relief operation ang gobyerno noon para tulungan yung mga biktima.*

OFFICIAL TRANSLATOR:

That was when red tide also became an issue. There was no red tide before. And then we- (*Paki-* please repeat your last statement, Sir.)

(That was also the time when red tide became an issue. We were surprised because, before, there was no red tide in Manila Bay. But when 1990s came, we thought it was just a simple calamity in Manila Bay. There were some relief operations done by the government to help the victims.)

MR. ROSALES:

*Yung red tide, wala naman yan dati. Tapos akala namin isang pangkaraniwang kalamidad lang o pangkaraniwang insidente at nagkaroon din naman ng relief operation ang gobyerno para sa mga naapektuhan ng red tide.*

OFFICIAL TRANSLATOR:

We thought red tide was just a simple calamity or problem and there was even an investigation as regard to relief operations as to that problem.

(That ride tide did not happen before. We thought it was just an ordinary calamity or normal incident and the government conducted relief operations for those affected by the red tide.)

MR. ROSALES:

*O, yun. Kaya lang, itong red tide na ito ay naging taon-taon na, parang normal calamity na ang nangyari. Kaya ang ginagawa ng gobyerno, "maghanda na lang kayo". Dahil may red tide, wag kayong kakain ng tahong, wag kayong kakain ng talaba, wag kayong kakain ng hipon, wag kayong kakain ng alimasag.*

OFFICIAL TRANSLATOR:

And, eventually, red tide became an annual problem in the seas, and there was only some warnings from the government for people not to eat sea produce if there is a red tide.

(However, red tide came annually, like a normal calamity. That is why what the government did was to give warnings. We were told to prepare because there is red tide. Do not eat mussels, oysters, shrimps, and crabs.)

MR. ROSALES:

*Yun ang bahagi ng aming naging problema. Tapos yung pagkaron ng regular na tinatawag na pagbabago ng timpla ng tubig. Yung taon-taon, merong tinatawag na laginlin o fishkill na nagaganap sa Manila Bay. Fishkill at tsaka yung laginlin ang tawag sa amin, eh, yung pagbabago ng timpla ng tubig. Laginlin.*



OFFICIAL TRANSLATOR:

The regular testing of the waters, and there's one thing we call *laginlin*, which is fishkill.

(That became part of our problems. And the issue on the regular change of the character of the water. Every year there is what we call *laginlin* or fishkill in Manila Bay. We call this change in sea water character as fishkill or *laginlin*.)

MR. ROSALES:

*Kapag nangyayari yun, nagkakaroon ng lagilin at fishkill, ibig sabihin mamamatay yung mga isda, mababagal tumakbo kasi nagbabago ang tubig. Yung mga isda na matulin, nakakaiwas, nakakapaghanap ng mas malinis. Pero ang madadaanang tahong, talaba, at iba pang mga klase ng isda ay namamatay.*

OFFICIAL TRANSLATOR:

So, whenever there is a fish kill, some kinds of fish can escape the area. The problem is when there's a fish kill some fish can't escape and they get killed. So, sea produce, particularly oysters, clams, and mussels, are the first ones to die.

(So when there is change in the character of the water, *laginlin* and fishkill occur. Those fishes which were slow moving die if sea water character changes. Those fishes which are fast moving survive, having found cleaner water. But other sea creatures, like mussels, oysters, and other kinds of fish die.)

MR. ROSALES:

*Ito ho, pagkatapos ng ganitong klase ng tubig, walang mahuhuling isda ng halos isang (1) linggo. Ang sabihin zero (0) ang mangingisda sa paligid na yon dahil doon sa pagkamatay ng mga isda at paglayo noong ibang isda.*

OFFICIAL TRANSLATOR:

About a week after there is a change in the waters and there is a fish kill, there aren't any fish in the area because they avoid (it) after the fish kill.

(After having this kind of water, we cannot catch fish for almost a week. It means, no fisherman will go there to fish because of the fishkill and the migration of fishes.)

MR. ROSALES:

*Hindi po. Pagka tapos ng fish kill, halos one (1) week naglalaho ang isda. Walang mahuli ang mangingisda. Babalik lang yun nang unti-unti makalipas ang isang linggo.*

(No. After the fishkill, there are no fishes for almost a week; fishermen could not catch a fish. Fishes would return gradually after a week.)

PANEL CHAIR CADIZ:

Excuse me, Counsel. Can you have shorter cuts? Because, as you noticed, the translator is having a hard time. It's too long. You should cut him quicker. It's not facilitative. Maybe, can I suggest now that you just allow him to continue with his testimony because it's not being translated accurately anyway.

(To the Official Translator) No, no, it's not your fault.

The Counsel is not able to properly guide and pace the witness, and it's difficult for the translator. So, at this point, I would just suggest that he be allowed to proceed with his testimony without any translation, and we will just come out with an official translation later on.

It's confusing even to the Panel. If you cannot control the testimony of the witness such that we will have a good translation, we'll just allow him to proceed with his testimony. What is your preference?

Page 151

ATTY. PAUDAC:

Yes, Your Honor, we submit to that suggestion, Your Honors.

PANEL CHAIR CADIZ:

That he will just be allowed to proceed with his testimony?

ATTY. PAUDAC:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Without any translation? And the records later on will just reflect the translation?

ATTY. PAUDAC:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Alright, thank you.

ATTY. PAUDAC:

Thank you, Your Honor.

Page 152

MR. ROSALES:

*Diretso na?* (I can speak continuously?)

PANEL CHAIR CADIZ:

The translator is now excused.

MR. ROSALES:

*Bahagi po ng pagbabagong napansin namin sa Manila Bay ay yung sa pangisda. Yung pagbabago ng timpla ng tubig na lumilikha ng pagkamatay ng isda at paglayo ng mga isda. Ito ay nagaganap taon-taon sa tuwing sasapit ang buwan ng Mayo. Ang Mayo ay matapos ang tag-init. Tapos biglang bubuhos ang ulan, magsasanib ang tubig tabang mula sa ilog patungo sa dagat, lilikha ito ng fish kill. Pagkamatay ng mga isda dahil yun sa timpla ay nagbabago, magkaron ng epekto sa mga organismo na nabubuhay dun sa lugar na yun. Isa itong taon-taon na naming nararanasan, partikular sa Manila Bay. Nakikita rin namin ang mabilis na pagdami ng basura na halos minsan, mas marami pa ang nahuhuling basura kaysa sa isda ng mga mamamante, ng mga miyembro nating mamamante dahil sa ang basura kung sa Manila Bay natin titignan yan, pag naglakad kayo sa National Capital Region sa Coastal, wala kayong maaapakang lupa, puro basura. Pag gumanun ka naman papuntang Bulacan hanggang Bataan, medyo matindi ang mga basurang nandyan.*

(Part of the change that we have noticed in Manila Bay, in regard to fishing, the changes in the water condition caused the death of fishes and their migration. This happens yearly during the month of May. In the month of May, after the hot season, heavy rains will pour, fresh water will flow from the river to the sea, creating fishkill. After the death of fishes due to the changes in the water condition, it will have an effect on the organisms that also live in the area. This is an occurrence we experience yearly, particularly in Manila Bay. We also noticed the rapid increase of garbage that, sometimes, there were more garbages than fishes to catch. If we look at Manila Bay as basis, if you walk along the National Capital Region in Coastal, you cannot step on soil, because of the litter of garbage. If you go towards Bulacan until Bataan, the garbage there is also worse.)

*Pangalawa, ang iba pang kapansin-pansin ho sa Manila Bay ay yung paglubog ng mga bahay, partikular sa bayan ng Obando at ng iba pang area. Ang Navotas, kahit ang Navotas po, high tide pa lang lumulubog na. Tinutubig na ang Malabon at Navotas. Ang Obando, ang dati nilang mga second floor ngayon ay first floor na kasi kinain na ng tubig ang dati nilang first floor. Kaya ang ilalim noon ay tubig na at ang mga kalsada, nagtataasan. Naiiwan ang mga tahanan. Kaya ibig sabihin, pagtaas ng kalsada, mapupunta ang tubig sa ibaba noong mga bahay.*

(Secondly, what is noticeable in Manila Bay is that houses were submerged, especially in the town of Obando and other areas. In Navotas, high tide alone can cause the submergence of houses. Malabon, Navotas, and Obando areas are now prone to flashflood. The then second floors of their houses become their first floors because the lower floors were already flooded. When the roads get elevated, floodwater will easily go to the lower parts of the houses.)

*Itong pagbabagong ito ay nasundan natin dahil doon sa buhay natin ay nandyan na sa pangangisda. At nakita rin natin ang malalang polusyon na mula sa iba't ibang industriya sa paligid ng Manila Bay. Halimbawa ho sa Bataan, nagsimula po ang polusyon noong mag-boom ang Bataan Export Processing Zone at tumaas na patungong Limay—patungo sa itaas ang mga pabrika na ang tanging tapunan ho nila ng tubig, ng dumi ay ang ating Manila Bay. Itong sitwasyong ito ay nakita namin na nag-contribute ng pagkunti ng aming huli, pagliit ng aming kita, at paghinto ng aming mga anak.*

(We were able to track these changes because our lives depend on fishing, and we also witnessed the worsening pollution caused by different industries around Manila Bay. For example, in Bataan, pollution started when the Bataan Export Processing Zone flourished, going towards Limay. Manila Bay became the sole waste disposal of factories. We saw this situation as contributor to lesser fish catch, lesser earning, and our children having to stop from schooling.)

*Maraming mga anak ng mga mangangisda ang hindi na nakakapag-aral. Sumasama na lang sa laot para makatulong sa pamilya. Minsan, dahil lang bangka ng isang mangangisdang mahirap ay di-sagwan lang o di-motor, yung ama at saka yung anak at yung iba pang anak ay sumasama naman sa mga small commercial fishing. Ito yung mga nagkakaedad ng thirteen (13) hanggang sixteen (16,) sumasama na doon sa mga mga small commercial na ang paraan ng partihan ay pag may huli, may parte, pag wala, wala.*

(There are many fishermen's children who do not go to school. They join in fishing to help their families. At times, because the boat being used by a poor

fisherfolk is just paddled or motorized only, fathers and their children opt to go with small commercial fishing vessels. They are ages thirteen (13) to sixteen (16) who join small commercial fishing where the manner of profit-sharing is when there is catch, there is a share; if there is none, there is no share.)

*Ang partihan ho sa mga commercial fishing ay tatanggalin ang gastos, tapos hahatiin nang biyak— 50-50. Ang fifty (50) mapupunta sa may-ari, ang fifty (50) paghahatian ng halos animnapung katao (60). Sa animnapung (60) katao na yun, magkaka-iba ang parte. Ang pinaka-maliit ay isang parte, minsan may kalahati pa. Kasi nagsisimula po sa tatlo (3), tatlo't kalahati (3.5), dalawa't kalahati (2.5), dalawa (2), isa't kahalati (1.5), isa (1). Syempre mayroon hong ranking yun. Ang kawawa yung mga mangingisdang mga bata na sumasama sa ganung klase ng paraan. Ma-oobliga sila dahil wala naman hong pagkakataan.*

(Sharing in commercial fishing goes like this – the expenses are deducted from the gross, then shared by half, 50-50. The first half goes to the owner; the other half is shared by almost sixty [60] people. From the 60 people, their shares vary. The smallest being one (1) share, sometimes just half of it because sharing starts at 3, 3 ½, 2 ½, 2, 1 ½, 1. Of course, there is ranking. Those who were at the losing end are the children who join said system. They are forced to join because there is no other means to earn a living.)

*Ang isa pang hinahabol nila doon, pag wala silang labas, mayron silang malalapitan, mahihingan ng tulong para sa bigas kahit ito ay utang. Pero tatanggalin din sa kanila sa panahon ng makahuli sila. Itong karanasan sa pangisdaan ay nagtuloy-tuloy. Sa Manila Bay ho halos isang daang libo (100,000) ang mangingisdang umaasa dyan sa ating pangisdaan. Pero yung katangian ng isda na hinuhuli ay hindi na sasapat para sa mga mangingisda. Kaya nga ang isang pagtingin namin, kailangang lutasin talaga ang problema sa pangisdaan tulad ng illegal fishing, commercial fishing, tapos yung malalang polusyon, yung malalang mga basura at saka yung pagtukoy doon sa epekto ng pagbabago ng klima.*

(They abide by the scheme because in case they cannot go fishing, they have someone they can go to and ask for help to buy rice, even if on credit. This, however, will be deducted the next time they have fish catch. These experiences in fishing continued. In Manila Bay specifically, almost 100,000 fishermen depend on fishing, but the kinds of fish caught are not enough for the fisherman. So, as we see it, there is a need to address the problems in fishing like illegal fishing, commercial fishing, pollution, worsening garbage situation, and climate change.)

*Yung pagtaas ng tubig, pag-init ng dagat, at yung pagkakalbo ng ating mga bakawan. Sa Manila Bay po, mayroon pong fifty-four thousand (54,000) hectares noong 1920 sabi ng datos, pero ngayon nasa isang libo (1,000) na lang o mga one hundred (100+) plus na lang. One hundred (100) hectares na lang ang natitira sa Manila Bay nga mga bakawan. Kaya nga ho itong sitwasyong ito ay kapag dumadating ang mga sakuna na hindi naman pangkaraniwan, sabi nga namin, bakit ba ngayon may signal number four (4) na? Samantalang noon yung signal number three (3) bihirang tumama sa Pilipinas. Pero ngayon pag tumama ay halos maubos ang mga kabahayan sa tabing-dagat at pati ang mga kagamitan ng mangingisda ay nasisira dahil ang mga mangingisda nakatira naman talaga sa tabing-dagat at katabi nya rin ang kanyang kagamitan sa pangingsda. Kaya pag lumalakas ang bagyo, lumalaki ang alon, masisira si bangka, masisira si bahay, mawawalan kami ng hanap-buhay.*

(The rise of water, seas getting warmer, and the deforestation of mangroves. In Manila Bay, there used to be 54,000 hectares of mangroves back in 1920, according to data, but now, there are only one thousand (1,000) or one hundred (100) plus hectares left. That is why this situation... when unusual calamities occur, we used to say, why is there signal number 4, when before signal number 3 seldom hit the Philippines. But now, if it hits, almost all houses near the shores are washed away, and even the implements of fishermen get damaged, because fishermen generally live near the shores and they have all their implements near them. Thus, when the typhoon gets stronger, waves go bigger, fishing boats get damaged, houses are also damaged, and we also lose our livelihood.)

*Ang isang mabigat pa nga, dahil kami ay mga mangingisda, wala naman kaming tiyak na tirahan. Ang sinasabing danger zone yung kinalalagyan ninyo kaya ang tendensiya linisin kami, dalhin kami sa malayong lugar sa ngalan ng pagliligtas diumano sa amin sa kapahamakan dahil sa danger zone yan at nagbago na ang klima, malalakas ang bagyo, malalakas ang alon, dapat unalis kayo dyan. Ang problema, mangingisda kami. Marami na ho kaming karanasan na ang iba naming kasama ay na-evacuate na po. Napunta sa paanan ng bundok ng Bulacan, sa bundok ng Cavite. Ang tendensiya bumabalik sa coastal, nakatira sa mga bangka, doon nagbububong, dun sila natutulog tapos, pagka ano, uuwi din sila doon sa kamilang bahay sa Cavite or sa Bulacan.*

(One of the major burdens we are facing is we do not have permanent houses because we are fishermen. They said our residential lots are considered danger zones, that is why the tendency is to clean us up, we were moved to far-flung areas for the sake of what they say keeping us away from danger. Because it is a danger zone and climate changes, typhoons are stronger, waves are stronger, we were told to leave our houses. The problem is we are

fishermen. We have many experiences that some of our members were told to evacuate. Some were transferred at the foot of mountains in Bulacan, mountains in Cavite. But still, they return to the coastal areas, live in their boats, find shelter and sleep therein, then, they go home to their houses in Cavite or Bulacan.)

*Minsan, di natataganan, ibinebenta na lang si bahay na nasa Bulacan at saka si bahay na nasa Cavite para lang mangisda. Ito pong tingin naming, ang paglala ng kahirapan sa mangisingda ay resulta ng paglala ng pagbabago ng klima. Tinatangalan kami ng tahanan, mapagkakaitan kami ng kabuhayan dahil doon sa pag-init ng tubig, pagkakaran ng laginlin, pagkakaroon ng fishkill. Eh di syempre yun ang aming kabuhayan, kapag may mga ganun, ay medyo may problema kami.*

(Sometimes they cannot take it any longer, they sell their houses in Bulacan or their house in Cavite for them to fish again. We think the worsening poverty experienced by fisherfolks, one of the biggest factors is climate change. Our homes were taken away from us, we were deprived of our livelihood because the water becomes warmer, which resulted in fishkill. Of course, that is our livelihood, and if these occur, that is a problem to us.)

*Ako nagsimula na ho akong mamulat na mag-organisa ng mangisingda ng 1984. Hindi ako nahirapan. Yung nag-organisa sa akin dahil nasubaybayan ko yung aming kalagayan ng pangisdaan, nasabi nya sa amin kung ano ang tunay na problema, sino ang may dulot nito. Noong panahong iyon, hindi pa ho namin pinag-uusapan ang climate change eh. Basta nakakaranas kami ng iba't-ibang problema sa pangisdaan, minsan ang nasisisi namin yung kapwa namin mangisingda na gumagamit ng ilegal na paraan ng pangisingda.*

(I started to become aware of organizing fisherfolks in 1984. The one who recruited me did not have a hard time because I was able to track the situation of the fishing sector. He was able to tell us the real problem in the fishing sector, and who caused it. During that time, we were not discussing climate change. We were experiencing different issues in the fishing industry. Sometimes, we blame our fellow fishermen who resort to illegal ways of fishing.)

*Lilitaw nitong mga 90s hanggang 2000, ang bagong usapin ay ang pagbabago ng klima. Yun na yung pagtaas ng tubig, pag-init ng dagat, pagkamatay ng isda na regularly taon-taon na, kaya medyo ang amin hong organisasyon ay nagco-contribute sa ganitong pagsisikap. Minsan, tumutulong ho kami sa pagtatanim ng mga bakawan at minsan nalulungkot kami dahil maraming programa ang gobyerno sa reforestation sa Coastal pero nakokorap lang. Napupunta ho ito sa hindi tamang pangangasiwa. Itatanim pero hindi mapapangalagaan, mamamatay. Pero kung ito sana ay maibigay sa mangisingda, dahil ang mangisingda naman*



*ay seryosong pangangalagaan ang kanyang karagatan dahil yun ay pinagmumulan ng kabuhayan nya, matitiyak ho na mapoprotektahan ang mga proyektong may kaugnayan sa pagpigil diumano o pagbabawas man lang ng pag-init ng klima o yung pagbabago ng klima.*

(In the 1990s until 2000, the new topic was about climate change. This is the sealevel, change in the temperature of the sea, the death of fishes, regularly, yearly. That is why our organization contributes to these efforts. Sometimes, we help in mangrove reforestation. We are dismayed sometimes because the government has a lot of programs on reforestation along the coastal areas but the budget were corrupted, programs were mismanaged. The trees that have been planted were not taken cared of, and, eventually, they will die. But if these programs were given to fishermen, since fishermen are serious in caring for the seas because that is the source of their livelihood, it can be assured that the projects pertaining to lowering the warming climate or climate change will be sustained.)

*Ngayon ho, sa totoo lang, pag titingnan namin, napakaliit ng aming kontribusyon doon sa pagbabago ng klima. Marami pa nga sa amin mga gumagamit pa ng di-sagwan. At mayroon pa nga na ang bangka ngayon na sinasakyan lang ay balsa. Nangingisda sa laot, nakabalsa. Gumagamit ng motor pero, kung ikukumpara ang maliliit na mangingisda sa malalaking mangingisda, mas malakas ang kanilang ginagamit na mga makina. At, kung ikukumpara ang carbon o yung tinatawag na carbon dioxide na binubuga ng aming mga makina doon sa mga tambutso ng mga industriya sa Bataan na pagkabalaki—kanina ang banggit nga ang mga malalaki naman talaga ang nagcontribute ng usok. Sa Bataan makikita nyo, ang lahat ng mga pabrika doon nagbubuga ng usok.*

(In truth we have very little contribution to climate change. Many of us are still using paddled boats, and some boats are even using rafts. They were fishing in the seas using their rafts, using motors, but comparing these small-time fisherfolks to bigger ones, the latter use stronger engines. And if we are going to compare their carbon emissions, or what we call carbon dioxide emitted by our motors, specifically those emitted by big industries in Bataan, earlier it was said that they really have a big contribution in Bataan. You will see that all factories there emit smoke.)

*Parang, kung kailangan- kung seryoso ho lutasin natin ang problema sa pangisdaan dahil patuloy ang pagliit ng huli, patuloy ang pagtangga ng mga maraming anak ng mangingisda na ayaw na nilang mangisda. Tulad ko nga, may anak ho akong dalawang (2) lalaki. Ayaw hong mangisda, ginugusto pag mag-construction boy. Hindi rin naman nakapag-aral, mas construction boy ang gusto dahil ho doon sa napakahirap ng buhay ng mangingisda at walang katiyakan ang pangingisda.*

(If need be, we have to be serious in solving the problems in the fishing sector because our catch continues to decline, our children continue to refuse to be fishermen. Like in my case, I have two (2) sons, they do not want to be fishermen, they prefer to be construction workers. They were not able to go to school, and they would choose to be construction workers because the life of a fisherman is hard, there is no sure income in fishing.)

*Pero sa tingin ho namin, kung malulutas ang problema sa pangisdaan, tulad-halimbawa, mare-rehabilitate natin, mapapanumbalik natin ang yanan ng pangisdaan, kung ngayon nga po ay mayroon tayong—ayon sa BFAR—mayroon tayong mga one point eight (1.8) million na rehistradong mangingingisda, kapag nagpatuloy ang pagresolba sa problema ng pangisdaan at magiging productive uli ito, hindi kami magiging problema ng pamahalaan at hindi kami magiging dagdag sa mga walang hanap-buhay sa ating lipunan.*

(We believe that if the problems on fishing are solved, say, if we will rehabilitate, we will bring back the wealth found in the seas. Now we have, according to BFAR, we have 1.8 Million registered fishermen. If the problems in the fishing sector will continue to be solved, fishing will once more become productive, we will not be a burden to the government, and we will not be added to the roster of unemployed people in society.)

*Kasi ang maunlad na pangisdaan sya mismo ay kabuhayan namin at mapapakain namin ang aming pamilya, mapag-aaral namin ang aming mga anak, mapapakain pa namin ang mga mamamayan kasi magdadala kami ng isda sa ating merkado. Kami ang magdadala ng isda sa mga konsignasyon. Kung titignan ho natin, nakakatakot kapagka hindi naharap ang problema sa pagbabago ng klima na sumisira sa ating kalikasan dahil baka mawalan na tayo ng likas-yaman, mawala na yung mangingingisda. Ang nakakatakot ho doon yung isdang kakainin natin—dahil hindi naman maiwasang hindi tayo kumain ng isda—ay ang tagahuli Taiwanese, Chinese, o Vietnamese, o kaya Koreyano. Ibig sabihin, mga imported na isda na ang kakainin natin na malaganap naman na ngayon sa Pilipinas.*

(Because with a progressive fishing industry, our lives will be improved, we can feed our families, send our children to school, and we can feed the people because we will bring fishes to our markets. We will deliver fishes to the Consignacion. If we are going to look at it, it is frightening if we cannot address the issue on climate change, which destroys our nature. Because we might lose our natural resources, lose our fisherfolks. What is frightening is that the fishes we will be eating will come from the Taiwanese, Chinese or Vietnamese or Koreans. It means we will eat imported fishes, which is already prevalent in the Philippines.)

*Kaya ho kami nakikipagkaisa kami doon sa pagtulungan nating resolbahin ang isyu ng pagbabago ng klima. Kung hindi natin kaya sa Pilipinas, eh di singilin natin, ibig sabihin dapat pagbayarin naman yung dati nang nakinabang, yung mga sumira sa kalikasan na ngayon ay pagkayayaman batay sa presentation. Pagbayarin natin sila at pangunahan nila ang pagresolba sa pagbabago ng klima, suportahan nila ang effort ng sektor—halimbawa, ng mangingisda—na magkaroon ng mga proyekto para makapag-ambag man lang sa pagbabawas ng carbon na nagpapa-init sa ating mundo.*

(That is why we are cooperating in working together in resolving the issue on climate change. If we cannot do it in the Philippines, then let us hold those who benefited from it accountable. Those who destroyed nature who are now rich based on the presentation, let us have them pay and they should be the forerunners in resolving climate change. They should support the efforts of the sector; for example, for fishermen to have projects that can help in lessening the carbon that causes the warming of the planet.)

*Kaya ho nagpapasalamat kami sa pagkakaroon ng ganitong mga pagtitipon para mai-voice out namin yung aming pagtingin doon sa pagbabago ng klima, iba pang problema sa pangisdaan, at masabi namin na handa kaming tumulong, handa kaming makipagka-isa sa anumang pagsisikap na itutulak natin doon sa pagresolba sa problema sa pagbabago ng klima. Yun po. Kung mayroon hong kulang, itanong na lang po natin kung ano yung kulang na gusto nyong malaman. Salamat po.*

(That is why we are thankful for this kind of gathering because we are able to voice out our opinions on climate change and the other problems that beset the fishing industry. And we can say that we are willing to help and cooperate with any efforts in solving climate change. That's it. You may ask questions if there is anything else that you need to know. Thank you.)

ATTY. PAUDAC:

*Maraming salamat, Ginoong Rosales.* (Thank you, Mr. Rosales.) Your Honors, may we proceed with the second...third witness before we ask questions later on?

PANEL CHAIR CADIZ:

Please go ahead.

ATTY. PAUDAC:

*Ginoong de los Reyes, maari na po kayong mag-umpisa magsalaysay. (Mr. de los Reyes, you may now start your testimony.)*

MR. DE LOS REYES:

*Magandang araw po sa ating lahat. Ako po si Jonathan de los Reyes, namamahala po ng maliit na negosyo ng aking pamilya kung saan po ang itsura po ng negosyo ay binabagsakan po kami ng mga mangingisda ng isda gaya po ng kwento ni Ka Pabs. Mangyari po, kapag bumagsak sa amin po ang wholesale, nagkakaroon po ng bidding dyan kung saan po yung mga biyareho na mga taga sa amin or taga ibang lugar, ibabyahe papuntang Malabon, papuntang Navotas, papuntang Cavite, papuntang Pampanga. At ganun na rin po doon sa lokal naming merkado—yung mga tindera po namin doon o kung tawagin po namin ay regaton, namumulong din po sila, nagbibid doon sa papaano mo inaassume na mabibili, magkano mo inaassume na mabibili o magiging mabili sa araw na yun.*

(Good day to all. I am Jonathan delos Reyes, I manage a small family business where fishermen deliver and consign fish/sea produce like what was narrated by Ka Pabs. What happens is that, upon delivery of the fishes, we get them wholesale. A bidding takes place and they have it from our place, others would travel to Malabon, going to Navotas, going to Cavite, going to Pampanga. It is the same in the local market wherein our vendors, whom we call rigaton, meet and bid to ascertain which kind of fish or sea produce will be saleable.)

*So parang, sa amin, kami as consignee, pinapautang namin yung mangingisda. Yung mangingisda, pagka may mga utang yan dahil minsan, halimbawa, wala po silang panggastos, pambili ng gasolina, pambili po ng yelo o nasira po ang kanilang lambat, tumutulong po ang konsignasyon doon dahil hindi naman po gumigiina ang gobyerno para riyan. Ngayon po, kapalit po nun, sa amin po sila magdadala. Bali ang extension po ng aming negosyo yung mga tindero sa loob ng palengke at saka yung mga biyareho. Kukuha po yun doon, hindi naman po sila namumuhunan, bubulong lang po yun doon.*

*Pagka nanalo sila sa bidding, dinadala na po nila yun tapos kinabukasan na po ang bayad noon pagka nakapaubos na po sila ng mga kalakal nila.*

(And for us, the consignees, we give fishermen credit lines. They take loan from us because there are times, for example, when they do not have available funds, for gasoline, to buy ice, or when their fishnets are damaged. Consignacion helps because the government does not assist them. Now, in exchange, they will deliver fishes to us. Our business extends to the vendors in the market and to travelling businessmen, they are not capitalists. They just simply bid, and if they win in the bidding, they will bring the produce and pay the next day or if they were able to sell all their produce.)

*Ayun po, bali palilitin ko lang rin po muna yung scope nung ano namin. Ilalagay ko lang po muna sa usapin ng huli sa dagat kasi mayroon din pong dinadala sa amin sa tabang, yung mga cultured, yung mga tilapia, bangus. Bibigyang diin ko po yung sa huli sa dagat. Ang una po kasi - si Papa po ay nanggaling po ng abroad tapos mga naki-side line side line ng mga negosyo bago pa kami magkaroon ng pwesto ng konsignasyon.*

(I will shorten the scope of our work. I will focus on the topic of fish catch or produce gathered from the sea because there are also cultured produce from fresh waters that are delivered to us like tilapia, milkfish. My father worked abroad then he did sideline jobs before we had a post in Consignacion.)

*Palagay ko kasama si Papa dun sa sinasabi ni Ka Pabs na nagpapalutang ng mga bakal kasi parang nagte-treasure hunt yun. May mga dating plato ng mga Intsik na dinadala sa amin noon, mga lumang chessboard po na nanggaling po sa dagat. Palagay ko nasira yung bahura doon, yung mga coral reefs. Pero parang ganun po, sosyo-sosyo po sa mga politiko ganun po.*

(I think my father was part of what Ka Pabs mentioned about letting metal scraps float because he seemed to do treasure hunting. We have old Chinese plates being delivered to us before, old chessboards gathered from the sea. I think the coral reefs there were destroyed. It was like that, politicians also contribute.)

*Tapos po nag-ahente po sya ng soft drinks, eh ayun nga po, kung hindi po kakinisan yung mukha ko, minsan po mga tama po yan nung mga boteng pumuputok. Doon po sa likuran kasi ako ng trak. Sumasama po ako pag Sabado-Linggo. "Papa, paalisin mo na yung tagahakot." Ako na lang kako ang magbubuhay kasi po, sa sobrang init naman po at nasa likuran ako ng trak, pag pumutok po yung boteng ganun, basag yung bote, tumama sa mukha ko, tumama po sa balat ko, eh ganun talaga.*

(Thereafter, my father also became a softdrinks agent. If my face is not that smooth, it was sometimes due to broken bottles that erupted, I rode at the back of the truck, I accompany my father every Saturday, Sunday. "Dad, tell your loader not to report for work, I will just load things for you." Because it is so hot and I sit at the back of the truck, when the bottles explode, the bottles will break. It hits my face, it hits my skin, that's life.)

*Si Tatay ko naman po nai-stroke po. Inatake sa sobrang init. Kaya nag-shift po sya ng negosyo kung saan uupo na lang po sya. Later, hindi na rin po nya kinaya so ako na po yung nagma-manage nung konsignasyon. Ang status po ng konsignasyon, hinawakan ko po ito 2003. Ang pusit po noon namumuhunan lang. Ang pusit tunay po, ito po yung masarap na i-adobo, maliit na pusit ito. Marami po kasing klase ng posit — pusit panghe, pusit royal, may pusit lumot, may pusit tunay, may pusit ballpen, ayan po, may pusit Bisaya.*

(My father had a stroke due to extreme heat. That is why he shifted to business where he will just sit. Later, he can longer do it; hence, I took over and managed the Consignacion. The status of the Consignacion then, I handled it in 2003. The squid before, I invest in real squid, this kind is best cooked adobo-style. It is a small squid. There are different kinds of squid: urine-smelling squid, royal squid, mossed squid, ballpen squid. There is also Visayan squid.)

*Yung pusit tunay po, at that time, yan po yung masarap. Ngayon po, two hundred eighty (280) ang kilo noon sa amin. Yung dati po, 2003, inabot ko po yung price na eighty (80.) Halimbawa po, sa isang (1) araw, bebenta kami ng forty thousand (40,000,) ang presyo. Mas mura ang bultuhan. Hindi po kagaya ng ngayon na per kilo dinadala. Dati parang bulk. Yung bultuhan. Yung, halimbawa po, yung isang cooler na naglalaman ng sixty (60) to seventy (70) kilos, pabubulungan yun, nakukuha ng three thousand (3,000.) Nagpaprice na ngayon po ng fifteen thousand (15,000) yun isang ganun po.*

(The real squid at that time was the best. Now, it costs two hundred eighty pesos (PhP280.00) per kilo. Before, in 2003, I witnessed its price then at eighty (PhP80.00). For example, in one day, we are able to sell forty thousand pesos (PhP40,000.00), the volume of that PhP40,000.00 is cheaper. It is not the same anymore if sold per kilo. Before they used to be in bulk. For example, one cooler contains sixty to seventy (60 – 70) kilos, there will be whispered bidding, and that can be sold for PhP3,000.00. But now, one cooler like that, costs fifteen thousand pesos (PhP15,000.00.)

*So yung comparative po doon halimbawa po, yung nagiging benta namin nung 2003 at tsaka yung volume po nung ngayon po, 'pag ka nakita mo, nagpapang-abot lang po yung kanilang value pero yung volume nung nadala nung araw at tsaka yung ngayon, ibig sabihin po kakaunti yung ngayon, medyo mataas po ang presyo. Yun po. Dun ko po uumpisahan. Noong araw po kasi, sabi nila tatay ko, lahat daw po ng mga bundok na nakikita ko na may subdivision, dati nilang sinasaka. Ngayon, mga subdivision na po sila. Dati daw po, sa kasaganaan ng Mariveles, lumakad ka lang ng konti, kapag nag-angat ka ng bato, may lobster na po. Kaya totoo po yung sinasabi ni Ka Pabs na maunlad po talaga ang hulihan ng isda sa Mariveles area. Hindi po nagugutom ang mga taga-Mariveles.*

(Comparing the sales we had in 2003 and the volume today, you can see that its value is almost the same, but the volume of what we had before than now is different, it is smaller now because the price is higher. I will start from there. Before, my father told me, all mountains where subdivisions were built were farmlands that they tilled. Now, they are subdivisions already. Before, during the glory days of Mariveles, when you walk a bit and lift a rock, there is already a lobster. That is why what Ka Pabs mentioned earlier about an abundant fishcatch in Mariveles area is true. People in Mariveles will not starve.)

*Ngayon po, dahil dinevelop po siya para maging economic zone, actually ang naging pabrika niya ay nakatuon sa manufacturing. Basta ang naging problema lang po namin yung waste na industrial. Hindi pa po siya industrial waste- maari na po siyang industrial waste pero hindi po yun kagaya nung industrial waste na kagaya po sa Limay ngayon, mga industriya ito, hindi manufacturing. Magka-iba po yun kaya iba yung waste nila sa waste namin. Mas sa amin yung mga goma, yung mga plastik, yan po.*

(Now, since Mariveles was developed as an economic zone, actually, the factories there were geared towards manufacturing, and industrial wastes had become our bigger problem. It is not yet an industrial waste, it might be industrial waste, but not the same industrial waste like the industrial waste in Limay now, because in Limay now, these are industries, not manufacturing. That is different, thus, their wastes are different from our wastes. In our case, they are rubber and plastics. That's it.)

*Tapos yung dati po gumagamit kami ng banga, ngayon plastik na. Dati gumagamit kami ng mga kawayan o yung mga karaniwan nating ginagamit na iyan naman ay kinakain din ng lupa. Pinapalitan na po natin 'yan dahil nga syempre pinapagaan naman po ng kaunting kaalaman sa teknolohiya at siyensya yung ating pamumuhay. Akala natin maganda so gamit tayo ng plastik, gamit tayo ng ganyan, gumamit din tayo syempre ng elektrisidad na*

*gumagamit din ng gasolina o ng anupamang mga fuel, energy. Kaya nga po dumami rin po yung tao sa Mariveles so naging problema po diyan ang basura at polusyon. Sa pagdami din po nung tao, kailangan niyo pong kalibuhin yung bundok para gawing daanan, gawing zigzag, gawing kabahayan.*

(We used to use jars before, we use plastics now. We used to use bamboo or other items that can decompose. We have changed that now, since we also try to promote our knowledge in technology and science, we thought it was fine, so we have used plastics. We have also used electricity, gasoline and other fuel energy. With the increase of population in Mariveles, garbage and pollution became problems. Mountains were converted into zigzag roads and residential areas.)

*Dumating din po kami sa point na pati po itong mga nakakabalita na maunlad ang Mariveles so nagkaroon din ng mangingisda. Dati po wala naman ho gaanong mangingisda sa Mariveles e. Ang tao lang po diyan, malalakad lang, meron na hong makukunan. Hindi naman po talaga sila mangingisda. Mas ano po sila, talagang farmers. Ngayon dumating po nga yan, yang mga- kung tawagin po nila Papa yan noong araw, “mga Bisaya yan, yang mga Bisaya.” Yun, ganun. Kaya po may culture sa amin na kapag taga-Mariveles, hindi po yan tatanggapin sa pabrika basta-basta. Kasi yan po, sumakit ang kuko, hindi na papasok. Kasi po katwiran nila, may nanay silang lalapatan. Yung mga dayo, yun ang kinukuha sa pabrika dahil yan masipag dahil walang tatakbuhan yan e, walang mga lupa yan doon. Papasok at papasok yan sa oras ng pabrika. So yun po ang culture ng Mariveles, kung mapapansin niyo. Kaya halimbawa po kami, nag-settle po kami sa ganyang mga business, yun laging nasa sentro. Soft drinks kasi yan po yung sa pag-aano po ng isda, pag-buy and sell, parang ganun po.*

(When people learned of the improvement of Mariviles, fishermen started to come. There were no fishermen in Mariveles before. Most of the people were farmers, not fishermen. When the fishermen, whom my father said they called Bisaya, arrived in Mariveles, they were not accepted as factory workers because at the slightest pain they feel, they will skip work. Their reason is that they have mothers to go to for help. The migrants are the ones taken in factories because they are the more industrious ones and they have no other refuge, they do not have properties there. They will report to work in the factories no matter what happens. So that is the culture in Mariveles. We have settled for businesses like softdrinks, then buy-and-sell of fish.)

*Ang kapansin-pansin po dito, noong mula 2003 hanggang po sa ngayon, yung mga anak po ng mangingisda, hindi na po mangingisda kasi yung iba nagpapabrika na lang po dahil hindi nga po regular ang kita. Yung iba naman*



*po, halimbawa po, nalaot pa ang mga yan ng signal no. 1, signal no. 2, panis yan noong araw. Eh ngayon po parang humangin nang kaunti, takot na yan, di na maglalautan. So ang kahulugan po sa amin noon, wala kaming kita dahil walang magdadala. Yun din pong usapin ng coastline po namin ngayon na pinagbibibili po ng San Miguel, pinagbibibili ng mga coal plants, ay nagpapasikip din po doon sa kalagayan ng mga mangingisda. Kasi nga po, yung mangingisda gaya po ng sabi ni Ka Pablo, saan mo dadalhin yan kapag binili mo ang isang coastline na doon sila naninirahan eh mangingisda yan. Ang dugo niyan, mangisda. Tapos dadalhin mo sa isang resettlement area na wala namang isda, ang nandoon ay batuhan. Sa amin ho, naiintindihan ko yung kalagayan ng mangingisda pero kung sa amin naman ho, sumisikip din ho ang mundo namin noon dahil nawawalan din po kami ng kita.*

(Since 2003 up to the present, children of fishermen do not fish anymore. Some work in factories because income is not regular in fishing. Some still go fishing, even when there is signal number one (1) or two (2). These days, even light winds stop them from going to sea, and, to us, that means no income because there is no delivery. Our coastlines have also been bought by San Miguel, by coal plants, which is detrimental to the situation/condition of fishermen. Like what Ka Pabs has said, where do you place fishermen who reside by the coastlines when coastlines are sold? Fishermen are brought to resettlement areas where there is no place to fish, only quarries. We understand the situation/condition of fishermen.)

*Bukod nga po doon sa mga naging natural na kagaya ng sinasabi ni Ka Pablo kapag may red tide o kapag may lumubog na barko dahil sumama ang panahon. Seven (7) years ago po yata yun nung nabalita ang Mariveles, yung parang may nagkaroon ng mini Yolanda doon. Parang tinangay po doon sa loob ng baybayin namin ang isang napakalaking barko. Sumudsod po doon sa may amin tapos lahat po ng mga kinukwento niya rin na mga maliliit na commercial fishing vessel, yung mga maliliit na pahulbot, taksay kung tawagin, taksay na bangka, mga trawl. Winarak lahat noon yung mga payaw. So ibig sabihin ho noon sa amin, warak na rin po yung utang mo.*

(We also get affected by their condition because we also suffer from loss of income. I think it was seven (7) years ago when Mariveles suffered from a mini Yolanda. It looked like a large vessel entered our fishing area. Small commercial fishing vessels, trawls and fish aggregating devices were destroyed. That resulted to unpaid loans.)

*Yung kinukwento niya rin po na mga tao na mga anak-anak na dati ay may mga utang sa amin dahil sa kawalan po ng huli ay sumanib na lang po sa mga maliliit na commercial fishing vessel. Kung nangamatay po yun doon, sa amin po ang kahulugan dun, patay na rin po yung utang nun. So isang hindi pabor*

*sa amin at nakakatakot na sitwasyon yung mangyayari pa. Kahapon po meron akong tatay ng mangingisda, tinamaan ng kidlat. Pumunta sa Hulo, kukuha ng mga prutas, tinamaan po ng kidlat. Walang kaabog-abog. Mga hindi karaniwang pangyayari pero naging karaniwan na po.*

*Dati po ang Habagat at Amihan, may tiyak na panahon. Ngayon po sa kalagitnaan ng Amihan, nagkakaroon ng Habagat. Sa kalagitnaan ng Habagat, nagkakaroon po ng Amihan. Dati po pagtatayain lang po namin iyan, sa ganitong panahon, darating ang espada, magkakaroon ng influx ng pusit, magkakaroon ng kulita, kaya alam na po namin saan idi-distribute ang mga kalakal.*

(He also said something about children who obtained loans from us then joined the small commercial fishing for lack of good catch. If they die fishing, it also meant unsettled debts, and their debts are also dead. Just yesterday, a father of a fisherman was hit by lightning, an unusual occurrence. Before, Southwest Monsoon (*Habagat*) and Northeast Monsoon (*Amihan*) winds happen in specific periods. Now, *Habagat* can occur during *Amihan* or *Amihan* can occur during *Habagat*. Before, in such times, we have *espada* (swordfish), there is an influx of squids, octopus, we know already where to distribute them.)

*Sa ngayon po, yung mga exporter, hindi na po nila alam kelan sasapulín yung tiyak na dami ng panahon kasi ano po yan, - ang sa amin po dahil perishable goods po yan at dahil seasonal po yan, yung amin pong mga regular na buyer na parang inaabangan nila na ito season ito ng ganito, kailangan ready tayo sa ganyan. Halimbawa po, octopus. Ang octopus po, makikita niyo po yan sa noodles niyo, ang nakalagay po doon squid. Dinadala ko po dati yang octopus sa FTI, sa Food Trade diyan po sa Taguig. Tutuyuin po nila yun, gigilingin po, kapag nagiling po, squid na po tawag nila doon. Pero binili po nila yan sa amin sa presyong octopus. Ayun po. Kasi nga po, nagiging pamalit po kasi hindi na po regular nga po yung dating nung squid. Iyon po.*

(The exporters now do not know how to schedule...because those are perishable goods, seasonal even. Our regular buyers wait for the seafood in season, and we have to be ready for that. For example, the octopus. You can see octopus in your noodle dish although it is indicated as squid. I used to bring octopus to FTI, at the Food Trade in Taguig. They will dry the octopus, grind it, and, once ground, they call that squid already. But they bought that from us at the price of octopus. Octopus has become an alternative to squid which had become scarce.)

*Ngayon po, yung mga exporter na yan, hindi na po regular ang kanilang pamamamakyaw so ang kahulugan ho noon, hindi nagiging regular na rin ang presyo. So kapag biglang dumami ang isda, biglang bumuhos ang isda, halimbawa, tatlong araw nawala, medyo mataas. Kung kelan nagpapanghuli ang mga mangingisda na dapat sana masaya sana at merong regular na namamakyaw at regular yung presyo, bababa din po ang presyo nun. So hindi po pabor sa amin yun, hindi rin po pabor sa mangingisda. Iyon po yung kalagayan ng mangingisda ngayon na nagiging suki po namin. Sa bahagi po namin, kahit po sabihin ninyong bumebenta kami ng kaparehas ng benta noong 2003, yung value naman po noong 2003 at saka yung 2018, medyo malayo na po yun. Ang titingnan po natin diyan yung volume na dinadala. Kaya po inaabot yung ganung presyo kasi po napakamahal na po ngayon ng mga kalakal.*

(The wholesale exporters no longer buy on a regular basis and that means the price had become irregular, too. When there is an influx of fish, let us say there wasn't any for three (3) days, the prices are higher. Fishermen should be happy when there is lots of fish and there are regular wholesale buyers and regular prices of fish. But when the prices drop, that is not favorable to us, neither to fishermen. That is the situation now of fishers who are our regular clients. Even if we can able to sell what we used in 2003, the value in 2003 compared to 2018 is a far cry. What we consider is the volume, prices are higher because goods are more expensive now.)

*Ang Mariveles po ngayon, ang coastline niyan napapaikutan na po ng kung hindi coal plant, basta mga naka-ready na ang mga pier, kung anuman ang gagawin nila sa mga pier na yan, like the likes ng San Miguel. Yung pino-promote po namin na Five Fingers, ngayon nanganganib po na mawala sa turismo yun dahil po binili na rin po ng San Miguel yung Five Fingers. Ang balita, tatayuan daw po ng hindi po namin alam kung coal plant o ano. Basta yun po, nabili po yan, yung nakaharap po yan sa West Philippine Sea. Kung kami po ay nagsu-supply sa neighboring areas, ang Manila po, pansinin niyo po. Meron po siyang dagat pero di niya kayang i-sustain ang kanyang sarili. Mangyayari po sa amin yan dahil nangyayari na po ngayon.*

(The coastlines in Mariveles are now surrounded by coal plants and by whatever plans San Miguel has for the piers. The Five Fingers that we promote for tourism is endangered to be lost. San Miguel has bought the area of the Five Fingers. It is facing the West Philippine Sea and they have bought it. The rumor is that they are going to construct a coal plant there. We supply to neighboring areas, and, in Manila is a coastal area but it cannot sustain itself. It will happen to us as it is already happening now.)

*Sa amin po ngayon dahil hindi na kaya ng lokal na komunidad yung presyo ng pusit, yung pusit po na sariwa, yung kahuhuli po, umaangkat po kami*

*ngayon dito po sa NCR. Aangkat po kami frozen, naka-box po, may sulat ng Instik. Yung mga kababayan ko, kakain po noon. Hindi po namin alam bakit walang tinta yun. Ganoon po ang kalagayan namin sa Mariveles. Wala na pong pera ang mga tao. Ang business po namin, lahat po kami doon, nanganganib na mawala dahil po nga hindi lang po ang pagbabago ng klima ang nangyayari, ang pagbabago ng klima rin po na yan ang magtatanggal po sa amin ng aming kabuhayan.*

(The local community can no longer afford the price of squids, the freshly caught squid. We get squid from the NCR, already frozen and boxed, with Chinese labels. My townmates will eat those. We do not even know why that squid does not have the usual ink. That is our situation in Mariveles. People do not have money anymore, our businesses are on the verge of closure because it is also climate change that will take our livelihood from us.)

*Kaya dito po, ang laki po ng pasasalamat ko dahil sa pagkakataon po na ito, yung sentimyento ko, sinamahan po ako ng aking asawa, mailabas ko po yung pangamba ko. Kasi po lagi akong nangangamba diyan sa kinabukasan, syempre po may mga anak tayo, ano po? Kami, tabing-dagat pa kami, mantakin ninyo, umaangkat pa kami ng frozen na tulingan, yung nakikita ko po sa palengke na binebenta ko po. Ako po nagbebenta e, sa akin po dinadala from Malabon. May mga permit pa po yan. Bebenta ko po yun doon. Kapag binaklas po sa yelo yun, yung pusit po na yan ang tawag namin diyan, pusit washing machine kasi po tutunawin namin sa tubig yan, hahaluan po yan ng gin, ng Ajinomoto, at saka Sprite. Makintab na makintab po yan. Salamat na lang po. Yun lang po masasabi ko. Basta yun nga po. Sana po yung pag-uusap na ito, pagpupulong na ito ay maging makabuluhan po sa ating lahat. Yun po.*

(I am so thankful for this because I am able to air my sentiments. My wife accompanied me in coming here. I want to tell you about my worries, we have children and I am worried about their future. We live near the shore and yet we buy frozen *tulingan*. The *tulingan* I see in the markets, I used to sell those to Malabon with permits. The squid we call washing machine, we soak that in water, mixed with gin, Ajinomoto seasoning and Sprite. They become very shiny. Thank you, this is all I can say. I hope that this dialogue, this meeting, will be beneficial to all.)

ATTY. PAUDAC:

*Maraming salamat, Ginoong de los Reyes, sa iyong emosyonal na salaysay. (Thank you, Mr. delos Reyes, for your emotional testimony.) Your Honors, may we be allowed to ask some additional questions for clarification?*

PANEL CHAIR CADIZ:

Of course, please go ahead.

ATTY. PAUDAC:

*Ginoong Rosales, kanina nabanggit niyo po yung pag-iba ng uri ng mga isda, dami ng isda, at yung presyo. Pakibalikan ho natin, kung ikukumpara natin po noon at ngayon. Anong porsyento po- gaano po naiba ang uri, ang dami, at ang presyo noon at ngayon bilang isang mangingisda?*

(Mr. Rosales, you have mentioned earlier about the different kinds of fish, the quantity and the price of fish. How can you compare the past to the present? What is the percentage of the difference in the kinds of fish, the quantity and the price, from your view as a fisherman?)

MR. ROSALES:

*Noon ang kapansin-pansin po, hello, parang mahina, malakas na ba? Kung titingnan natin yung mga isda na matatagpuan noong 1970 na nahuhuli namin, halos hindi mo na makita ngayon. At yung mga isda na hindi naman pinapansin at hindi kilala noong nakaraang panahon ay siya ngayon ang makikita natin sa mga dagat. Marahil ito ay dahil sa pagbabago na ng klima, ng pagbabago ng timpla ng tubig, o kaya naman nawala na yung mga bahay-tirahan nila kaya yung kanilang lahi ay unti-unti nang nawawala. Pero mayroong nakakapag-adapt na mga bagong matatayang ang sikmurang isda na nabubuhay sa maruruming bahagi. At kung titingnan din naman natin, yung huli ng mga mangingisda, sabi nga kanina ni Jonathan ay mas kaunti ngayon ang nahuhuli pero kahit paano, mataas ang presyo.*

(If we have a comparative observation, the kinds of fish that we used to catch in the 70s are no longer available. The kinds of fish unknown to us that we have ignored before are the ones we can see now. Maybe this is because of climate change, of the changes in the temperature of the waters, or maybe because the fish habitat are slowly getting lesser because they lost their fish shelters already. But there some fish that can already adapt to the situation. They are the species that are stronger, the kinds that can survive in dirty waters. Like what Jonathan has said, the catch may be lesser now but, at least, they sell at higher prices.)

*Dati kasi ang huli namin, ilang oras lang sa laot, nakaka ten (10) hanggang fifteen (15) kilos ng malalaking isda. Yung tinatawag na talakitok. Pero ngayon, makikita mo ang talakitok, bibihira na. Doon na malamang sa gawing Mindanao at Visayas meron, pero dito sa Manila Bay, wala ka na halos makita, wala ka na masyadong mahuli. At, ngayon, nag-aaverage na lang ang mangingisda ng huli na limang (5) kilo kada araw. Kasi meron hong tinatawag na jackpot at mayroong wala. Kaya kapag sinuma mo yung huli niya sa pinakamarami at dinibayd mo into one (1) week, one (1) month, tig-iisang araw, nag-maximum siya ng five (5) kilos. Ibig sabihin, napakaliit, maliit na ang kaniyang kita. Ibig sabihin para lang sa panggastos niya, para lang sa pang-araw-araw na pagkain niya ay kulang pa. Kaya ano ho yun, parang malaki na ang pagkakaiba ng ating karagatan at ang supply ng isda na nakukuha ng mga mangingisda.*

(Before, with only few hours at sea, we are able to catch ten to fifteen (10 – 15) kilos of the big kinds of fish like *talakitok* (bigeye trevally), but now, *talakitok* has become scarce, maybe they can be caught in Mindanao or the Visayas, but in Manila Bay, they have become scarce. The average catch for a fisherman these days is only five (5) kilos per day. There is something we call “jackpot”, and sometimes, none. So if you compute the catch to include the biggest volume, divide that into a week or a month, the maximum would only be (5) kilos, which means that would not even be enough for daily food sustenance. There is a big difference/discrepancy now in our seas and the supply of fish that fishermen are able to catch.)

ATTY. PAUDAC:

*Maraming salamat, Ginoong Rosales. Kay G. de los Reyes, maaari mo bang ipaliwanag kung ano talaga itong sistema ng konsignasyon at paano naapektuhan kayo, bilang miyembro ng konsignasyon, kapag ang mga mangingisda, sa pagkakaintindi ko kanina, nangungutang sa inyo di ba? Kapag di nakakabayad, paano yung sistema ninyo at paano naapektuhan ang personal ninyong kabuhayan dahil dito sa sistemang ito?*

(Thank you, Mr. Rosales. Mr. de los Reyes, can you please explain how Consignacion actually works and how you are affected as members. As I understood it, members obtained loans from you. If they cannot pay, how does your system work and how is your personal livelihood affected by the system?)

MR. DE LOS REYES:

*Normal po kapag wala po silang huli, hindi po natin makakaltas yung prinsipal na utang. Kapag sumud-sunod na walang huli, utang po uli sila. Nagkakaroon po sila ng patung-patong na utang. Imbis na nabubuhay sila dahil ang tawag nga natin diyan kabuhayan e. Eh di hindi sya kabuhayan, kautangan. Kasi ang nangyayari po, kung ang papel po nga kasi namin, hihingi po sila ng tulong sa amin para lang kapag may huli sila, magdadala po sila. So minsan, "Sir, baka po pwede niyong pondohan yung lambat ko kasi sir meron na akong bangka pero wala akong means para sa produksyon." Pauutangan po yan ng lambat. Kapag po paulit-ulit po na walang huli, utangin pa ho uli yan. Yun po ang sitwasyon nila.*

(It is normal that when there is no catch, we cannot deduct the principal amount of the loan. In times when there is no catch for several days, or when their implements need repair, they will, again, request for a loan, so their loans get bigger. Instead of being able to live, we call this livelihood, anyway, they get loans. Sometimes they would say, "Sir, you might want to lend us money for our fishing nets. We have the fishing boat but no fund for the means of production." We will lend them money for the fishing net. They ask for our help so that they can deliver to us when they are able to fish and get a good catch. If repeatedly they do not have catches, they also take out loans repeatedly. That is their situation.)

*Tapos po syempre, kasama po sa konsumo kasi nila kaagad antemano, bago lumaot po yung gasolina at saka yung yelo. Minsan iuutang pa ho sa amin yun dahil hindi naman po sila pwedeng magdala ng walang yelo. Pangalawa po, sabi nga po natin, wala na pong isda sa tabi so mas maraming gasolina, mas maraming puhunan. Lalaot sila ng medyo malayo. Hindi na yung... meron kasing mga cove doon sa amin na kayang abutin ng sagwan. Ibig sabihin, safety pa sila doon dahil kaya ng sagwan. Pero wala na nga pong mahuli doon tapos commercial na nga po yung karamihan doon sa gilid so kailangan na po nilang lumaot, mas marami po yung uutangan na pang-gasolina.*

(Gasoline and ice are also part of their provisions before they sail. Sometimes, they even borrow for ice because they cannot sail without ice. Since there were no fish anymore in the nearby areas, they sail to farther areas. It means they need more gasoline, more capital. There is a cove in our place that can be reached by paddled boats only. They are safe there, but they have a hard time to catch any fish. Since commercial fishers are also in that area, they need to go farther. This means they will consume more gasoline and obtain bigger loans.)

*So, kung huhuli po sila ng limang (5) kilo gaya po ng sinasabi ng Ka Pablo, kapag ang presyo po ng alumahan ay one hundred fifty pesos (Php 150), araw-araw po kung ang paglaot nila, mamumuhunan sila ng walong (8) litrong gasolina. Sa singkwenta (50) po, four hundred (400). Ganoon lang po ang kwentahan nun. Di four hundred (400) tapos po ang kinita mo, kung limang (5) kilo a day sa one fifty (150) ay seven fifty (750). Bali ang matitira lang po sa yo ay three hundred fifty (350). Sumusugal ka pa po ng buhay. Ang isang paa niyo po nasa lundo ng kamatayan po dahil nasa dagat naman po kayo. Kapag nasiraan kayo ng makina, kumatok si makinang segundo mano mong binili, iyun, medyo wala na po yun.*

(So, if they able to catch five (5) kilos as what Ka Pablo said the price of alumahan (mackerel) is one hundred fifty pesos (PhP150.00), they will have a total of seven hundred fifty pesos (PhP 750.00). If for a day's sail, they consumed eight (8) liters of gasoline which is fifty pesos per liter (PhP50.00/liter), they they will spend four hundred pesos (PhP400.00). To deduct the expenses from their capital, they are left with three hundred fifty pesos (PhP350.00) only. It is like risking your life with one foot on the verge of death because you are at sea. When your 2nd-hand motor conks out, that will be it.)

ATTY. PAUDAC:

*Maraming salamat, Ginoong de los Reyes. Sa inyo po. Kanina po nabanggit niyo po ang red tide na nagiging annual na. Hindi na tulad dati na minsan lang. Balikan natin po, anong personal na epekto nito sa inyo bilang mangingisda lalo na sa naririnig niyo rin po sa organisasyon niyo at kayo rin po sa inyong konsignasyon?*

(Thank you, Mr. delos Reyes. You have said earlier that red tide has become an annual occurrence, not like before that it seldom happens. What is the effect on you, as a fisherman, especially on your organization, and also the Consignacion.)

MR. ROSALES:

*Ang kagyat na epekto ng announcement ng red tide, no? Kasi minsan parang may pagsusuri naman marahil ang nag-announce na may red tide. Ang maapektuhan kaagad, yung presyo at yung mga umaasa sa tahong, talaba, alimasag at minsan nag-eextend hanggang sa humuhuli ng isda. Babagsak ang presyo at hindi mabibili ang iba. Yung iba naman, bagsak ang presyo.*



*Ang iba, di na mangunguha, di na manghuhuli. Ibig sabihin, walang kita ang epekto noon sa mga mangingisda. Tapos hindi na nakakapagbigay ng suporta ang gobyerno dahil hindi na ito calamity. Ibig sabihin, normal na na taun-taon meron na. Kaya ang panawagan nila "sa buwan ng Mayo, maghanda na kayo. Bago dumating ho ang buwan ng Mayo, maghanda kayo dahil may red tide diyang sa panahong yan." Ibig sabihin, magkakaroon ng bagsak-presyo o kaya naman hindi mabibili.*

(The direct effect of the declaration of the occurrence of red tide? Those who announce have performed tests. What is affected immediately is the price, and those who expect to get oysters, mussels and crabs. The effect sometimes extends to those who fish/gather them. Prices drop, sometimes they cannot be sold anymore, or else, they do not catch or gather anymore. It means no earning for those who fish, and yet, the government does not extend help because it is not considered a calamity. It has become a normal, an annual phenomenon. What the government did was to simply warn people to prepare for red tide that usually happens in the month of May. That means dropping of prices, or else, no sales.)

*Kaya parang ang tanong namin "ganun- ganun na lang ba talaga?" Ang tanong namin "ano ba talaga ang ugat ng red tide?" Ang sinasabi ng pag-aaral, pollution. Bakit hindi lutasin ang pollution para mawala ang red tide? Parang ganun naman ang sinasabi namin. Kaya tuluy-tuloy ang aming ano na sana...kaya nga parte ito ng mga panawagan namin na solusyonan ang usapin sa polusyon para yung red tide, ma-minimize man lang. Hindi na lang ho sa Manila Bay ang red tide eh, nationwide na. Mayroon na sa Visayas, mayroon na sa Mindanao, mayroon na sa Luzon- sa gawing Pangasinan, La Union, at iba pang mga lugar na dati nag-originate lang yan sa Manila Bay.*

(Our very question, what is really the cause of red tide? Some say, it is because of pollution. Why can't the government address the problems on red tide? Being part of our plea, we are still hoping that the issue on pollution will be addressed soon so that red tide could at least be minimized. Red tide is not confined to Manila Bay anymore. It is happening already nationwide. There is also red tide in the Visayas and Mindanao, also in Luzon, near Pangasinan and La Union and in other places. It originated in Manila Bay only before.)

MR. DE LOS REYES:

*Sa Mariveles po, may dalawang (2) coastline - yung isang coastline na nakaharap po sa Manila Bay, at isang coastline po na nakaharap sa West*

*Philippine Sea. Ang madalas pong nagkaka red tide dito, ito pong nasa coastline na nakaharap po sa Manila Bay. Kapag nag-declare po ng red tide ang gobyerno: "Mariveles: kasama sa red tide" kahit po magdala ng talaba itong nasa West Philippine Sea na walang red tide dahil nandito lang naman po sa Manila Bay ang pag-aaral, damay na po yun dahil Mariveles po ang sinabi. So ang kahulugan po noon sa mga mangingisda, bawal silang magdala ng kalakal nila na mga talaba, tahong, o anumang shellfish. Minsan po kapag malala ang red tide, inaabot din po yung gumagalaw gaya ng alimasag, ng hipon, ng pusit. Ang kahulugan po noon sa amin, hindi po mabibili ang mga kalakal. Ang kahulugan po sa amin noon, wala rin kaming kikitain. Ang mga tahong po sa amin ngayon, sa coastline po ng Mariveles, madalas po kinukuha yan sa mga pier. Minsan po nadadala sa amin amoy gasolina kaya minsan pinagbabawal na po yung panghuhuli ng tahong. Medyo malalaki po siya kasi hindi nabubulabog eh. Bawal nga po hulihin. Ang problema nga po, minsan amoy gasolina na, minsan hindi mo maintindihan kung ano na yung lasa.*

(There are two (2) coastlines in Mariveles – one facing the Manila Bay and the other in West Philippine Sea. The one facing Manila Bay is the part that usually experiences red tide. When red tide is declared, including Mariveles, the produce gathered from that part facing the West Philippine Sea are also affected. That means fishermen cannot bring oysters, mussels and other shellfish. In times of severe red tide, even the moving creatures like shrimps, blue crab, squid, get affected. That means there is a loss of income for us. Sometimes, mussels are gathered from the pier. When they are delivered to us, they reek of gasoline and the taste is unusual.)

ATTY. PAUDAC:

*Maraming salamat, Ginoong de los Reyes.* (Thank you, Mr. delos Reyes.) Your Honors, that will be all for the witnesses unless you do have questions.

PANEL CHAIR CADIZ:

Thank you very much, Counsel and Witnesses. I now invite Panel members to ask their questions.

Okay, Comm. Leah?

COMM. TANODRA-ARMAMENTO:

Thank you, Chair. *Magtatanong lang ho ako kay Ginoong Pablo Rosales. Kailan ho ninyo na-notice, napansin yung effect ng climate change? (I will just ask, Mr. Rosales, when did you notice the effects of climate change?)*

MR. ROSALES:

*Okay na ho? Parang pagpasok ho ng eighties meron ng mga ilang mahahalagang bagay na kakaiba tulad ho nga ng paglitaw na ng pag-init, ng pagtaas ng tubig at saka pagkakaroon na ng hindi maipaliwanag na mga kalamidad. Sabi nga kanina ni Jonathan ay mayroong tag-init sa tag-araw at mayroon ng tag-araw sa tag-init. May tag-ulan sa tag-araw, tag-ulan sa tag-init, tag-init sa tag-ulan, parang ganun. Kaya kahit na yung aming mga traditional na knowledge, yung pag-unawa, pagkapa doon sa galaw ng karagatan ay nagbabago. Hindi na uniiral.*

(During the 1980s, there had been some unusual things like the rise of the sea level and the warm temperature, and also the occurrence of unexplained calamities. Like what Jonathan has said earlier, there is dry season during rainy season, vice versa. Our traditional knowledge and simple understanding cannot explain the movement and the changes of the sea, they are not applicable anymore.)

*Kasi kami dati bituin lang at saka ano, pwede na naming sabihin anong oras na, ano - anong darating na parang ganun. Yung mga traditional na paraan ng kalikasan - hangin lang, alon lang, pwede naming sabihin saan papunta yan at saan nanggagaling yan. Ito ho, noong eighties,) nagsimula na yun. Mas lumala na yan noong pagpasok na nung nineties. At saka lalo na nitong papadulo na ng papasok na ng 2000. Talaga namang yung amin hong mga tahanan, madalas, kapagka andyan na yung masamang panahon, kung anu-ano na ang maitali at maidagan sa bubong para hindi man lang tangayin ng malakas na hangin pero ganoon pa man, minsan nabubunot pa rin. Yung mga bahay natin sa tabing-dagat nabubunot, bumabaliktad dahil sa malaking alon at malakas na hangin.*

(Before, we can forecast the time and know what to expect by looking at the stars. We can detect occurrences with the movements of wind and tide alone. This issue started in 1980s and worsened by the 1990s up to the onset of 2000. By then, whenever there are calamities, we need to reinforce our homes to keep them safe from strong winds, although sometimes, our roofs still get

damaged. Our houses near the seas are uprooted, sometimes even overturned.)

COMM. TANODRA-ARMAMENTO:

Thank you. Follow-up questions *lang*. *May alam ho ba kayo na programa or activities na ginagawa ng gobyerno para ito ay matugunan, itong climate change na ito?* (Are you aware of any programs or activities of the government to address climate change?)

MR. ROSALES:

*Ang alam ko po mayroong mga tinatawag na mangrove reforestation sa Coastal, tapos pagtatanim ng punong-kahoy sa tabing-dagat. Tulad nga ho ng nabanggit ko kanina, medyo mahirap maka-avail ang sektor ng mangingisda dahil mayroong mga mahuhusay sigurong mag-avail at sila ang nangangasiwa sa mga reforestation na ito. Makikita namin sa panahon ng pagtatanim pero hindi na namin makikita na inaalagaan ang tinanim. Kaya yun ho ang sinasabi namin kaya gusto rin naming kami ang magtanim, dahil alam namin na ang bakawan, itlugaan yan, diyan nangingitlog ang isda, diyan tumitira ang iba pa at dahil kabuhayan namin ang lilikhain ng pagtatanim na yun, matitiyak naming mababantayan namin at titiyakin naming ligtas yan sa mga basura, kasi ang karamihan ng pumapatay sa mga bakawan yung basura. Kapag humangin ang Amihan, yung galing NCR pupunta sa Bataan, pupunta sa Bulacan. Kapag humangin ang Habagat, yung basura sa Bulacan at Pampanga pupunta sa NCR. Parang nagpapalipat-lipat. Kaya kung walang depensa yung mga reforestation na itinatanim, madadapa at madadaganan ng mga basura.*

(As far as I know, there is what we call mangrove reforestation in the coastal areas, and also planting of trees near the shores. Like what I have said earlier, fisherfolks have a hard time availing of the programs because there maybe some who are better and who can manage reforestation. We see them during the reforestation but we do not see them taking good care of the plants. We also want to plant because we know that the mangroves are breeding places for fish, where they lay eggs, and where others live. And because we will benefit from reforestation, we are sure that we can monitor and make sure they will be free from garbage because one of the causes of destruction of the mangroves is garbage. When there is *Amihan* (northeast monsoon), from the NCR, garbage is flown to Bataan, to Bulacan, while during *Habagat* (southwest monsoon), the ones from Bulacan are flown to Pampanga to the

NCR. It is a repetitive process. When there is no proper handling of the reforestation, garbages may drown those mangroves.)

COMM. TANODRA-ARMAMENTO:

*Maraming salamat po. Wala na akong tanong.* (Thank you. I have no other question.)

PANEL CHAIR CADIZ:

Commissioner Dumpit?

COMMISSIONER DUMPIT:

*Magandang tanghali po. Itatanong ko lang po kay Ginoong Rosales, madalas ninyong sabihin yung basura. So gusto ko lang pong alamin at tinanong na rin po ni Comm. Leah kung may alam kayong mga aktibidades ng gobyerno tungkol dito. Nabanggit niyo rin po sa Manila Bay ang concentration rin ng basura. Aware po ba kayo na may desisyon ang korte para linisin ng tuluy-tuloy ang Manila Bay dun sa Continuing Mandamus ng Korte Suprema? Aware po ba kayo doon?*

(Good afternoon. I will just ask Mr. Rosales, you often mention about trash. I just would like to know, as Comm. Lea had also asked, are you aware of any activities of the government about this? You have mentioned also that most of the trash is concentrated at the Manila Bay. Are you aware that the Supreme Court issued a decision to clean the Manila Bay per a continuing Mandamus?)

MR. ROSALES:

*Opo. Alam ho namin yon kasi minsan nga nakikipag-usap kami, dahil kami, hindi rin namin gustong maruni ang pangisdaan natin kasi ang gusto namin isda ang mahuli, hindi basura. Ang problema po minsan, tinututulan din po namin ang implementation ng continuing clean-up ng Manila Bay sa bisa ng Mandamus dahil ang unang tinatangal, yung mga mangingisda. Kami hong mga mangingisda nasa tabing-dagat ang aalisin dahil parang ang tingin sa*

*amin, kapareho kami ng mga basurang plastik na nagkalat. Hindi, ganun talaga ang kahulugan noon. Ang punto ho namin, sana naman eh may konsiderasyon ang Continuing Mandamus sa kabuhayan at karapatan ng mga mangingisdang ang buhay ay nakaasa sa pangisdaan. Kaya nga ho maraming mangingisda sa Manila Bay na nalipat sa bulubundukin ng Bulacan at saka bulubundukin ng Cavite. Ang ginamit na reason, Writ of Mandamus. Yun ho ang ginamit na rason. Ay di, kawawa naman. Samantalang ang plastik na dumadaloy mula sa ilog Pasig sa iba't ibang ilog sa palibot ng Manila Bay - yung ilog ng Meycauayan, ng Marilao, at ng iba pang mga ilog ay patuloy na mabaho, patuloy na maruni. Bakit hindi yun ang unahing lutasin? Parang kami, ganoon ho ang aming reaksyon doon. Katulong kami sa pagpapanibago, pagbalik ng yaman at kalinisan ng Manila Bay pero sana naman magsilbi sa amin ang paglilinis ng Manila Bay. Hindi sa kung kanino pa man. Magsilbi man yan sa turismo, magsilbi din sa mangingisda, magsilbi din sa pagkain ng mamamayan. Ang problema, sino pa ang mangingisda kung ang mga mangingisdang nasa paligid ng Manila Bay, dahil sa bisa ng Writ of Mandamus, ay tatanggalin? Hindi, wala na ho. Kaya nga ho ngayon, kung papasyal kayo sa may harapan ng Parañaque at Las Piñas, wala na hong bahayan doon pero maraming basura. Ang mga mangingisda na nasa Cavite, nakatira sa mga bakawanan para mabuhay, na inalis dahil sa Writ of Mandamus.*

(Yes, I am aware of that. We are also involved in talks because we want clean waters where we can sail and catch fish, not garbage. We sometimes object to the implementation of the clean up of the Manila Bay by virtue of the Writ of Continuing Mandamus because the fishermen are the first to be removed. The fishermen living near the seas are the ones being removed and we feel like we are likened to garbage sprawled all over. That is how we understand it. We hope that in the continuing implementation of the Writ of Continuing Mandamus, they will consider the lives of people involved in fishing.)

COMM. DUMPIT:

*Hindi po ba kayo hinikayat o ni-recruit ng mga ahensya na nangunguna doon sa clean-up na tumulong po kayo para mabigyan din po kayo ng additional livelihood para maglinis din po sa Manila Bay?*

(Were you not encouraged or recruited by agencies heading the clean up of the Manila Bay for you to help so that you can be given additional livelihood?)

MR. ROSALES:

*Hinihikayat po kami. Meron nga po kaming mga kasama na tinuruan ng livelihood para yung mga basura ay gawing isang proyekto, project para kumita. Yun ho, kaya lang hindi ho siya magiging ano... parang ang ini-aalok ho sa amin ay alternatibo. Ang tingin ho namin walang alternatibo sa mga mangingisda kumpara sa pangingisda. Ang alternatibo po, ang kahulugan ay pag-alis bilang mangingisda.*

(We are being encouraged. Some of our members are trained in some livelihood projects to convert trash and earn from it. But what they are offering us is an alternative way. I think there is no alternative to fishing because alternative means we have to stop being fishermen.)

*Ang hinihingi ho namin, suplementaryo dapat. Kaya nga ho yung mangrove reforestation ay suplementaryo yun tapos ilang mga livelihood project ay suplementaryo pero related po sa ating karagatan, sa ating mga mangingisda. Yun ho. Mayroon naman ho. Nakikipag-usap naman yung LGU. Kahit ho yung BFAR, meron naman silang programa na na-aavail ng iba kaya lang syempre hindi ho makabubuhay kapag ang layunin ay pahintuin ang mangingisda sa pangingisda.*

(What we hope/ask for are supplementary actions like mangrove reforestation and some livelihood projects related to fishing and fishermen. There are talks with the LGU and BFAR, they have such programs that some already availed of but those are not enough to sustain our lives, especially if the purpose is to stop fishermen from fishing.)

COMM. DUMPIT:

*Salamat po. Balik po tayo doon sa klase ng basura. Nabanggit po ninyo yung mga solid waste na nakikita natin sa dagat. Yung liquid waste din po ba napapansin po din ninyo kapag kayo'y nangingisda? At saan po ito nanggagaling sa tingin ninyo kung nakikita ninyo? Anong industriya? Anong klaseng industriya?*

(Thank you. Let us go back to the kinds of wastes. You have mentioned about solid wastes that we see in the seas. Did you also notice liquid wastes when you fish? Where do you think liquid wastes come from, what kind of industry?)

MR. ROSALES:

*Marami pong halimbawa. Kung sa ilog ng Navotas at ilog ng Malabon, yung sa ilog ng Pasig, iba't ibang mga establishment po. Mga hotel yan at saka iba pang mga malalaking mga laundry. Ang tapunan niyan ay ilog. Yung mga kemikal. Kung titingnan naman ho natin yung ilog ng Meycauayan, kahit nakapikit ka, kapag dumaan ka doon, alam mong nandoon ka na. Kung hindi ka naka-aircon, ha? Pero kung nakasakay ka sa aircon, hindi mo mapapansin. Kapag naka-jeep ka, tumawid ka ng ilog ng Marilao, nakapikit ka, alam mo na kung nandoon ka na. Ibig lang sabihin, maitim ang ilog, malapot ang daloy ng tubig. Nanggagaling yan sa mga palibot na maaaring mga piggery at iba pang mga pagawaan o mga pabrika.*

(There are many example. The rivers in Navotas, Malabon and Pasig, there are different kinds of establishments surrounding them like hotels and laundromats, their chemical wastes were thrown in the rivers. At the Meycauayan River, you know you are there even with your eyes closed, unless you are in an airconditioned vehicle. Also in Marilao, in a jeepney, with eyes closed, you will also know you are there. The waters are the murky and think. Those came from piggeries ang other factories.)

*Dati meron hong pagawaan ng balat diyan eh. Yung mga balat ng hayop, yung mga tanning. Ang liquid ay madali hong mapansin dahil binabago nito ang kulay ng ating karagatan, pinalalapot ang tubig kahalo na yung mga plastik na ang pinakamarami ay yung mga isang gamit lang. Yung nakalutang sa dagat, yung mga sachet ng kape at iba pang mga iba't ibang klase ng basura. Yun po ang makikita natin na pollution.*

(There used to be a tanning factory in the area. The liquid waste is easily noticeable because it changes the color and thickens the water, together with the plastic wastes, the single use ones, you find them floating in the river, like coffee sachets and other/different kinds of wastes. Those are the kind of pollution that we see.)

COMM. DUMPIT:

*Marami pong salamat. Siguro magtatanong po ako maya-maya. Mayroon lang akong titingnan na notes. (Thank you very much. I will ask again later, I will just check something.)*



Page 181

MR. ROSALES:

*Opo.* (Yes, maam.)

COMM. DUMPIT:

Thank you.

PANEL CHAIR CADIZ:

*Ginoong Rosales, doon po sa komunidad ninyo, ilan pong pamilya ang apektado? Simula noong napansin ninyo na nag-iiba yung klima. May estimate po ba kayo? (Mr. Rosales, in your community, how many families have been affected from the time you noticed that the climate was changing? Do you have an estimate?)*

MR. ROSALES:

*Wala pong ganoong saktong estimate pero halimbawa, kung titingnan sa Navotas at saka sa Malabon, ang mangingisda po ng Navotas umaabot ng mga dalawang libong (2,000) mahigit pa, yung aktwal na nangingisda ngayon po. Dati ho mas marami.*

(We do not have an exact estimate. For example, in Navotas and Malabon, there are around 2,000 fishermen in Navotas, or maybe more.)

PANEL CHAIR CADIZ:

*Ngayon po yun?* (What about now?)

MR. ROSALES:

*Ngayon po.* (Now, sir...)

PANEL CHAIR CADIZ:

*Dati po? (And before?)*

MR. ROSALES:

*Kasi halos wala na rin pong nakatira ngayon sa tabing-dagat ng Navotas dahil na-wash-out na ho ng bagyo at saka ng sunog. Kung titingnan naman ho sa iba pang mga area, halimbawa, sa Obando o dun sa Binawangan, sa Barangay Binawangan, halos buong community po apektado ng paglubog o pagtaas ng tubig. Lahat ho ng bahay nila doon, yung second floor nila dati, first floor na ho ngayon. Ibig sabihin, yung usapin ng pagkawasak ng kanilang ari-arian, tapos yung paglala nung kahirapan kaugnay noong pagkasira ng pangisdaan ay silang lahat tatamaan. Marahil hindi lang ho magkaka-level kasi mayroon naman hong ibang mga kasama natin sa community ng mangingisda na nagtatrabaho yung pamilya sa iba o kaya may anak na nasa abroad. Pero tingin ko ho marami-rami ho yun. Wala lang ho kami pang saktong bilang kung ilan po ang apektado.*

(There used to be more... there are less residents near the river in Navotas because the houses had been either washed out by typhoons or burned down. In other areas like Obando, or in Barangay Binawangan, almost the whole community was affected by the receding or the overflow of water. The second floors of all the houses there have now become their first floors. The discussions about the destruction of their properties and the worsening poverty affect them. The destruction might not be of the same level, though, because some of our members in the community either have work/other surces of income or have children working abroad. But I think, the number is relatively high, we just do not have an estimate of how many are affected.)

PANEL CHAIR CADIZ:

*Kung gagawa po kayo ng estimate, yung porsyento po, ilang porsyento po ng mangingisda ang natira kumpara doon sa mga mangingisda nung mga eighties (80s) kanyo?*

(If you are to make an estimate/percentage, how many percent of fisherfolk do we still have compared to the 1980s?)

MR. ROSALES:

*Sa kabuuan po ngayon, mas malaki ang bilang ng mangingisda sa Manila Bay ngayon kumpara noong 1980s. Noong binuo ho namin ang organisasyon namin nung 1998, ang amin pong estimate na bilang ng kabuuang mangingisda sa Manila Bay ay one hundred thousand (100,000.) Pero ngayon, nababawasan ang bilang na yon dahil nga sa nadi-displace na. Ngayon, kung ikukumpara ho sa 1980 o yung paatras pa, mas kakaunti po ang mangingisda noon. Mas dumami po ang mangingisda ngayon kung ang pagbabasehan ay yung paglaki na ng populasyon natin, kasi ang pangisdaan naman po ang hindi mo kailangan ng diploma para mabuhay. Marunong ka lang mangapa, makakapa ka ng pwedeng maging pera. Marunong kang mangawil. Yung iba nga po sa Manila Bay, maraming sakay sa balsa. Yung styropor kabit-kabit, nakasakay sa balsa, may lambat, nangingisda na sila.*

(As of now, there are more fishermen in Manila Bay than in the 1980s... when we organized in 1998, our estimated number of fishermen at the Manila Bay was 100,000, but now, that number has diminished because some are displaced but compared to before the 1980s, there are fewer fishermen then. There are more fishermen now. If population growth is a basis, in fishing, we do not need diplomas to survive. For as long as you know how to touch the fish, how to use hook and line... some at the Manila Bay use rafts, they connect styropor pieces and sail with their nets and fish.)

PANEL CHAIR CADIZ:

*Paano ninyo po, Ginoong Rosales, paano ninyo po ipapaliwanag na kumokonti ang isda pero dumadami yung mangingisda? (Mr. Rosales, how can you explain the diminishing quantity of fish against the growing number of fishermen?)*

MR. ROSALES:

*Tuwang-tuwa nga kami sa datos eh, na pangtatlo tayo o pangsampu tayo sa international na nagbibigay nag-contribute ng produksyon ng isda. Pero ang nakakalungkot, lumaki din, umabot ho ng thirty-nine percent (39%) ang itinaas ng kahirapan ng mga mangingisda at idineklara na pinakamahirap sa lahat ng mahirap ang mga mangingisda. Ang laki ng produksyon in terms of dollar pero lumaki din ang bilang ng mga naghihirap. Ang ibig lang hong sabihin, mabilis na nauubos ang likas na yaman dahil ang kumukuha ay yung efficient na paraan ng panghuli, commercial.*

(We are happy with the data because we are on third spot or tenth internationally that contribute to the production of fish. What is sad is that the poverty among fisherfolk increased by thirty-nine percent (39%) and it was declared that fishermen are the poorest of the poor. Production is good in terms of dollars but the number of poor increased. That means our natural resources are depleted because those who get them are the ones with efficient means.)

*Commercial fishing ang humuhuli ng malaki. Doon pa lang sa laot, hinuhuli na ang papatabi. Dito pa lang sa tabi, hinuhuli na rin ng mga commercial fishers ang papalaot kaya ho wala na hong natitira sa maliliit na mangingisda. Mabilis na nauubos. Hinuhuli ang nanay, hinuhuli ang anak. Wala na hong manganganak, wala na ring lalaki. Ganun ho ka-massive, kabilis ang pagkuha ng mga maliliit na isda tapos hinuhuli ang malalaking isda, wala na hong ano. Tapos wala na hong bahura, limitado na ang bahura kung saan dapat silang mangitlog. Wala na ring bakawan kung saan sila dapat mangitlog. Ang tendensiya mamamatay sa normal ang isda kapag walang tahanan katulad ho ng mangingisda na pag tinanggal sa dagat, patay din siya dahil para siyang isda. Ganun ho kabilis yun.*

(Commercial fishing catches a lot. They are the ones that catch the big ones, even the ones near shore, so it leaves none for the small fishermen. They catch the mother fish, the baby fish. They cannot lay eggs anymore, it will not even grow anymore. There is massive catching of the big and small fish. The coral reefs where the fish lay eggs are destroyed. Mangrove areas where they also lay eggs are also destroyed. Eventually, fishes will die for lack of habitat. Just like fishermen, pull them away from the seas, they will die like fish do. That is how fast it can happen.)

*Ang commercial kasi, sa kanila ho ang pinag-uusapang huli, tonelada eh. Sa amin po ang pinag-uusapang huli, piraso. Ilang piraso huli mo? Kapag commercial, ilang tonelada huli mo? Yung isang aryanan nila, isang buwang huhulihin ng isang daang (100) mangingisda, araw-araw. Eh di gaano kabilis mauubos talaga kaya lang yun ata ang kalakaran. Parang pahunayan sa paghuli. Kaya nga ho yung mangingisda natuto na rin paramihin ang huli. Gumamit na ng dinamita eh. Ihagis mo, kapag namatay, pinupulot mo na lang. Parang para makasabay, ibig sabihin makipagkompetisyon. Pero kaming mga mangangawil, manlalambat, kung ano ho yung ilinaglag na lambat, kapag binangga lang ng isda, makakahuli ka. Yung mangangawil, kapag kinabitan mo ng kawil ang pain, kung ano ang kumain, yun ang mahuhuli mo. Selective na selective. Pero dahil nga doon sa ganun, dagdag pa yung ating panahon na nagbago na, lalong pinahihirapan ang sektor ng pangisdaan.*

(In commercial fishing, they talk about tons of catch. With us, we talk only of pieces. One fishing outing for them is equivalent to a month's catch for one hundred (100) fishermen. But that seems to be the process. It is like a competition between us, who can do better. That is why some fishermen already learned to use dynamites. They simply throw the dynamite and once the fish are dead, you just have to get them. For us who use nets, when you throw your net, you can get some catch. For hooks and lines, if you put a bait on your hook, that is what you can catch. Very selective. In addition, climate change worsened the situation of the fishing sector.)

PANEL CHAIR CADIZ:

*Maraming salamat po.*

*Father, may tanong po kayo? (Thank you. Father, do you have any questions?)*

FR. WALPOLE:

*Salamat ho, Ginoong Rosales. Gusto ko magtanong lang dahil may tatlo (3) o apat (4) na punto na sabi mo kanina. Para yung una ay yung mga fish kills. Yeah? Ayon sa timpla ng tubig, diba? Because yan talaga galing sa ganyan, ang tawag eutrophication at talagang nag-bloom yung red tide. So yan ay isang problema talaga. Yeah? Yung ikadua na problema na sabi mo, yung ikalawang problema, yung commercial fishing. At saka dagdag din yung mga mahihirap diyan. Yung ikatlo ay tungkol sa bagyo. Yeah? Yung bagyo na yun na mas malakas, mas mahaba yung epekto lalo na sa bahay ng mga tao. At meron din yung iba na nangyari na tawag subsidence pero yan ay more sa agham. Sa tatlong bagay na ito, sa commercial fishing na madami, sa timpla ng tubig at yung red tide at sa bagyo, ano yung pinakagrabe diyan? Ano yung mas grabe ang epekto sa yo?*

(Thank you, Mr. Rosales. I would like to ask... there are three (3) or four (4) points that you have mentioned earlier. First, fishkill. Because of eutrophication, the red tide really bloomed. So that is one of the problems. The second problem that you mentioned was commercial fishing. The third one was about typhoons. The stronger typhoons have longer effects in the lives of people. There is also an occurrence that is called subsidence, but that is more related to science. Among the three (3) – commercial fishing, the condition of waters, red tide and typhoons, which one is the worst, or which one has more effect on you?

MR. ROSALES:

*Kung ako ang titingin, usapin ng epekto sa kabuhatan nung kawalan namin ng pang-sustain sa pang-araw-araw na pangkabuhatan dahil sa kawalan na namin ng huli. Dahil naandyan mentinado pa rin ang illegal fishing. Commercial at illegal. Kasi ang commercial nagiging legal naman ho siya kapag sumunod siya sa batas. Yung ilegal, nagiging ilegal lang siya kapag pumasok siya sa ipinagbabawal na lugar. Pero marami pa hong ilegal tulad ng maliliit na trawl, maliliit na sudsod, maliliit na mga active at tsaka destructive. Mayroon naman hong batas na dapat ipatupad. Kasi tingin namin, ang rason at bakit kami nasa tabing-dagat, kahit guray-guray ang bahay namin, ay dahil andun po ang kabuhatan namin.*

(From my view, what affects our lives is the lack of means to sustain our daily lives because of the lack of fish to catch. Commercial and illegal fishing have been maintained. Commercial fishing becomes legal when the laws are followed. Illegal fishing becomes illegal if fishermen enter banned places. There is still illegal fishing like in small trawls, the small active and destructive fishing gears. There are laws that need to be implemented. We will stay near the seas because the source of livelihood is situated there.)

*O di kung maayos ang ating pinagmumulan ng kabuhatan, malamang unti-unti naming mapapahusay, mapapatibay ang aming kabuhatan. Hindi namin gugustuhin na kapag dumating ang bagyo sa panahon ng Agosto ay mabubuwal ang bahay namin. Ang problema, saan kami kukuha ng pampatibay ng aming bahay kung ang aming kabuhatan ay hindi na kayang mag-supply. Dahil sa illegal fishing. Eh di dagdag ho pa yung ibang mga problema kaya, kung batay po doon sa tanong na yan, malaking problema ho talaga yung kawalan namin ng nahuhuli. Yung pagtanggap ng aming batayang mga karapatan bilang mangingisda na gamitin ang ating likas-yaman sa karagatan. Kami naman ho natural, kami kung mayrong abusado sa hanay namin, gumagamit ng mapanirang paraan, survival yun.*

(If our lives are better, we can gradually repair our houses. When typhoons come in August, we do not want our houses to be toppled. But, our problem is the source where we can get the means to reinforce our houses. Our sources cannot be sustained anymore because of illegal fishing. The lack of good catch is actually a big problem – the deprivation of our rights as fishermen to use the natural resources from the seas. We are just only practical. If there are abuses in our ranks, it is just only for survival. They resort to such way to survive.)

*Gumagawa siya ng paraan para mabuhay pero mayroon namang batas na dapat sumupil, dapat supilin at suportahan yung gumagawa ng ganitong klase*

*ng problema. Sa ngalan ng preserbasyon ng ating kalikasan. Kaya ho ilegal yun, magagawa na namin kapag marami na kaming huli, magagawa na namin ng maayos ang bahay namin, makakapagdependa na kami sa mga bagyo. Hindi ganun lang naman ho yun kasi ngayon papatungan namin ng gulong yung bahay namin sa tabing-dagat tapos ang haligi namin ay kawayan na nakababad sa dagat. Marami pa ngayong ganung klase ng bahay. Kung nasa tabing-dagat ka naman, una, bihira kang papayagan na magkaroon na sementuhin mo ang bahay mo kasi hindi naman pwedeng patituluhan daw ang coastal pero may mga beach resorts na pag-aari ng mga mayayaman. Na kapag mangingisda, ayaw bigyan ng tenure o karapatan sa paninirahan pero yung mga resort, nagkakaroon ng katibayan sa mahabang panahon. Nasagot po? Sorry.*

(There are laws that need to be supported against those who create problems in the preservation of nature. When we have better catch, we can build better homes and guard our homes against typhoons. For now, we put used-tires on our roofs, the foundations of our houses are bamboos submerged in water, there are still houses of this kind. If your house is at the shoreline, concrete houses are not allowed because the properties cannot be titled. But there are beach resorts owned by the rich, but fishermen are not given tenure or given the right to live there, but for the resort owners, they get the proof in time. Did I answer you, Sir?)

PANEL CHAIR CADIZ:

Are there other questions from the members of the Panel?

Counsel?

ATTY. PAUDAC:

Your Honor, can I have a redirect to a question asked by Fr. Walpole?

PANEL CHAIR CADIZ:

Alright.

Page 188

ATTY. PAUDAC:

To Mr. Rosales.

PANEL CHAIR CADIZ:

Please go ahead.

ATTY. PAUDAC:

*Ginoong Rosales, nabanggit niyo kanina na isa sa pinaka-nakakaapekto sa inyo nga ay itong illegal fishing at commercial fishing. Kasi nakikipagkumpitensya ho kayo dito sa mga ito at nawawalan ho kayo ng mga isda na mahuhuli. Sa inyong palagay, gaano naman po ba, anong porsyento naman po kung maeestima ninyo naman yung epekto naman sa inyo ng pagbabago, matinding pagbabago ng klima?*

(Mr. Rosales, you have mentioned earlier that illegal fishing and commercial fishing greatly affect you because you compete with that and you do not get any catch anymore. In your opinion, how much, what percent, in your estimate, is the effect of climate change on you?)

MR. ROSALES:

*Sa ngayon kasi parang halos yung binabanggit kanina na malakas na malakas na bagyo ay resulta ng pagbabago ng klima. Tingin namin, mahalaga itong harapin pero napakaraming problemang kinakaharap namin lalo na yung day-to-day na araw-araw namin nakakahalubilo ay pangkabuhayan. Tapos ang tingin namin, sa pangkalahatan malaki ang ambag o porsyento ng kontribusyon sa paglala ng aming kalagayan ang pagbabago ng klima. Bagamat syempre ang sa amin, ang kagyat naming haharapin, ano yung kitang-kita ng aming mga mata na sagabal sa aming pag-unlad, sagabal sa aming pag-angat ng kabuhayan. Pero syempre yung pagbabago ng klima ay isang malaking factor sa mga mangingisda.*

(Given what was said earlier, the strong typhoons were results of the climate change. For us, we need to face this problem. We are facing many challenges especially our day-to-day source of income. We think, as a whole, climate



change has been a big contributory factor to the detrimental change of our status. For us, the ones that we will confront immediately are the hindrances that we see that prevent us from improving our lives and livelihood. Of course, climate change is one of the primary factors to the fisherfolk.)

ATTY. SORIANO:

Your Honor, one last one from the Petitioners. Just for Mr. de los Reyes. You mentioned in your statement an estimate, let me speak in Filipino.

*Nasabi niyo po sa inyong statement na nag-estimate kayo ng dami o iniliit ng bilang ng mga mangingisda na nagdadala ng isda o huli sa inyong konsignasyon. Maaari po ba ninyong ibahagi para makatulong sa pagbibigay-linaw nung ilang porsyento ang nawala o pagliit ng nangingisda at ang huli na pino-produce ng mga mangingisdang ito?*

(You said in your statement that you made an estimate of the number of fishermen that deliver to the Consignacion. Can you share with us, for clarity, how many percent has the number of fishermen and quantity of produce dropped?)

MR. DE LOS REYES:

*Siguro po una yung presyo, kapag titingnan natin, napakalaking bagay yun. Yung eighty (80) tapos two hundred eighty (280.) Mahigit isang daang (100) porsyento yung tinaas. So, kung titingnan natin, kaya umaabot siya ng ganun kasi mas malaki na yung demand, kakaunti yung ating nai-susuplay. Sabi ko nga sa inyo, kami po hindi kami kumakain dati ng pusit na walang tinta na nasa karton. Ngayon kumakain na kami dahil wala nga pong mahuli.*

(First thing is the inflation of the prices. There is a big discrepancy between the prices now and before. The then P80 is now P280. There is more than one hundred percent (100%) inflation. It is because there is higher demand and lesser supply. As I have said before, we used not to eat inkless squid in a box. But we are now eating those because we catch nothing.)

*Kung idudugtong po yun doon sa mangingisda, hindi po talaga mangingisda ang mangingisda kung sunud-sunod po silang walang huli. Mafifrustrate po ang kanilang mga anak. Yung mga anak na gusto pa ring mangisda, sasama po yan sa mga commercial fishing vessel na basically, lalo lang hong magpapalala ng kalagayan nila. Yung iba naman po, sa amin, namamabrika*

*naman po sila. So bahagi po nung pagbabago ng kanilang kalagayan, nagbabago na rin po sila ng mode of production. Kung dating sa dagat, ngayon sa pabrika. Parang ganun po. Tapos yung huli, ayun, kaya nga po yung pagdedeliber, nagiging kaunti bukod sa walang mahuli, kumokonti na rin po yung nagdadala.*

(Fishermen cannot be considered fishermen if we will continue to catch nothing. Our children will be frustrated. Our children who want to pursue fishing, they join the commercial fishing vessel but it would just worsen their status. Others would work in a factory. As their status changes, their mode of production also deviates from fishing. Before, they were working in the sea, now in a factory. That was the reason why the number of deliveries are now decreasing aside from the no-catch days, the number of people of deliver are decreasing.)

ATTY. SORIANO:

*Ilan po dati ang miyembro ba ng inyong konsignasyon? Ikumpara ninyo noon at ngayon.*

(How many members do you have in Consignacion, please compare the past and the present.)

MR. DE LOS REYES:

*Parang ganun pa rin po. Halimbawa po, kung limang daan (500) noon ang mangingisda mo, gaya nga po ng sinasabi ko, ang nagdadala na lang po sa akin ngayon, isang tao kasi ang kausap mo halimbawa po yung biyahero ng boss tsip ng isang trawl. So kapag nagdala yun eh aariin nilang hindi huli ng basta ng mga mangingisda na tauhan niya. Isang kompanya lang ang humuli nun. So yun, huli nila yun as a company.*

(Like what I have said, I used to have 500 fishermen but now, I deal with only one. For example, if the delivery man of the chief of a particular trawl will bring fish, he will claim that the fish was not caught by their fish workers. He will claim that his company caught them. So it is the catch of just one company. They claim that they caught those fish.)

*Yung mga mangingisda na direktang nanghuhuli kagaya ng sinasabi ni Ka Pablo yung namamante, ang tawag kasi diyan yan yung mga naglalambat,*

*Yung mga nangangawil. Kung ang dati humuhuli yan ng sampu (10) hanggang bente (20) kilos per day na mga pusit, na mga alumahan, o kaya yung talakitok. Ngayon, kapag nagdala sa akin, kung ang kilo ng talakitok noon ay fifty (50) o eighty (80) o one hundred (100) o one hundred and twenty (120,) ang kilo ng talakitok ngayon nasa three hundred (300.) Kaya lang kapag nagdala ang mangingisda ngayon, ang isang mangingisda dinadala isang kilo. So ang mawawala, nineteen (19) kilos po. Kung araw-araw po ganyan yung magiging kalagayan ng mangingisda, talaga pong magsasabi siya sa anak niya mag-construction na lang. So imbis na maging legacy yung pag-aalay ng ulam sa ating hapag-kainan, hindi na ho magiging legacy yun kasi na-fustrate po sila. Wala po silang nagiging huli.*

(In reality, like what Ka Pablo has said, the fishermen who used nets really caught those fish. They caught 10-20 kilos of squids, mackerel, and *talakitok* per day. Before, the prices of *talakitok* were fifty (50), eighty (80), one hundred (100) or one hundred-twenty (120) per kilo, but it is now three hundred (PhP 300) per kilo. Today, the fishermen will only bring one (1) kilo instead of the then twenty (20) kilos. If this happens to the fishermen everyday, this will force their children to work in construction. The legacy to serve the people to have viands in their dining table will not be feasible. The children are frustrated because of the irregular catch.)

ATTY. PAUDAC:

*Ginoong de los Reyes, ang tanong ni Atty. Soriano: gaano karami ngayon yung mga maliliit na mangingisda na pumupunta, kung kukumpara niyo po doon sa dati sa dami ng nagbibigay sa inyo na mangingisda at sa ngayon po? Ilan po kung alam niyo po?*

(Mr. de los Reyes, this is the question of Atty. Soriano: if you will to compare it before, how many ordinary fishermen who still go to you and deliver fishes?)

MR. DE LOS REYES:

*Kung sa nagdadala po, halimbawa, ang regular na nagdadala po, meron po kasing mga tatlong (3) araw bago darating yung mga nagpupunta ng Kislap kung tawagin namin yung area na yun ng Zambales at saka yung laot ng Bagac. Minsan po two (2) days, three (3) days po yun. Mga nangangawil po yan. Kung ang regular po na nagdadala dati ay limang daan (500,) ang regular na nagdadala na lang ngayon isang daan (100).*

(For regular fishermen, it will take them three (3) days before from Kislap we call it from the area of Zambales and in the sea of Bagac, it will take them two to three (2-3) days. Those are the fishermen who use nets. Before there were five hundred (500) fishermen, but now there are one hundred (100) only.)

*Pero hindi pa ho regular na may huli yun. Kaya nga sabi ko nga po sa inyo, kapag tatlong (3) araw kang nabasyo, e di wala ka nang panlaot. Hindi ka na rin pauutangin ngayon ng konsignasyon, so construction ka muna, sideline ka muna, kung magkaroon ka ng kaunting ipon, saka ka nalang uli makakalaot. Hindi na rin po regular ang kanilang kabuhayan.*

(To clarify it, their catch is not regular. Like what I have said, if you have no catch in three (3) days, you will have no resources to be used in the next fishing outing. The Consignacion will not lend you money. Before going to fish again, you will work in construction in order for you to have savings. Their source of income is really irregular.)

ATTY. PAUDAC:

*Maraming salamat po.* (Thank you.) Your Honors, at this point, may we request or may we move that the witnesses be excused? Yes?

PANEL CHAIR CADIZ:

Two (members of the Inquiry Panel would like to field some more questions.

ATTY. PAUDAC:

Oh, sorry, sorry.

PANEL CHAIR CADIZ:

We will start with Comm. Pimentel-Gana.

COMM. PIMENTEL-GANA:

*Just one very quick question. Sa madaling salita po, Manong Pablo, sino ho ba talaga ang may kasalanan sa mga pangvayaring ito na kumonti ang isda, sumama ang ihip ng hangin? Sino ho sa tingin niyo ang may kasalanan talaga?*

(Just one very quick question, in simplest terms, who is really liable why fish in the sea are decreasing? In your view, who are liable?)

MR. ROSALES:

*Kung hindi ho mamasamain, yung enforcement, yung gobyerno natin. May mga batas na isinulat para lutasin ang problema ng illegal fishing, hindi ipinapatupad. Kung pinapatupad man, may kinikilingan. May mga bantay-dagat tayo, may mga Maritime tayo, may Coast Guard tayo kaya lang hindi ho nila bitbit ang diwa ng batas bagkus ang bitbit nila- marami sa kanila, ang diwa ng kaniyang sariling kagustuhan. Mayroon hong ganun. Hindi na kami naghahanap ng bagong batas. Naandyan na po kasi eh. Ang pangisdaan natin, binalikan lang nanin yung batas ni Marcos, PD704, sa unpisa ng paglutas sa problema ng pagkasira. Nagkaroon ng Republic Act 8550 nung 1998. Naamyendahan, ginawang 10654 ngayong 2015. Pareho pa rin ang problemang pinag-uusapan. Ibig sabihin, kung sa panahon pa lang ni Marcos at saka ni Ramos nung 1998 ay pinatupad na yung mga batas, ibig sabihin na-minimize na sana ang problema sa illegal fishing. Eh hanggang ngayon po, apat (4) na dekada na mayroong batas na gustong magproteka at mag-rehabilitate. Problema, ang pinag-usapan noong 1975, pinag-uusapan pa rin ngayong 2015 noong likhain ang amendments ng Republic Act 10654.*

(If you will not take it wrongly this is because of the lack of enforcement by the government. There are existing laws against illegal fishing but are not fully implemented. If it has been implemented, it has prejudices. We have sea patrol, Maritime, and Coast Guards, but they are not implementing the essence of the laws. Instead, they only protect their personal interests. For us, we do not clamor for new laws because it is already existing. With regards to fisheries, we just used the law during the Marcos regime, the PD 704. Republic Act 8550 was enacted in 1998 and it was amended to RA 10654 this 2015. The same problems in fisheries are being discussed. If the law has been implemented during Marcos and Ramos administrations, illegal fishing will be minimized by now. For four (4) decades, the problem last 1975 is still the problem this 2015 when the RA 10654 was enacted. )

*Kaya kung tatanungin po, paano ba talaga ipinapatupad ang ating mga batas? Kasi para sa amin, mabawasan lang yang commercial, mawala yung illegal fishing, mawala yung dynamite fishing, mawala yung cyanide fishing, mawala yung destructive fishing, kapag nawala ho yun, hindi naman kami kontra sa kanila. Dapat suportahan ng gobyerno kasi madi-displace sila eh. Bigyan sila ng kaukulang pangpamalit o suplementaryo habang pinagpapahinga natin ang ating karagatan. Problema doon, hindi ho ganun ang linya. Kung mayroon man, napakapili na mga area. Hindi ho komprehensibo ang pag-iimplement ng batas para sa komprehensibo sanang rehabilitasyon ng ating pangisdaan.*

(If we ask, how is the law really executed? To us, laws are considered executed when there are less commercial fishing, no illegal fishing, dynamite fishing, cyanide fishing, and destructive fishing. The government should support our cause because those who resort to illegal fishing will be displaced. Instead, the government should give alternative or supplemental ways in order for the sea to rest and recover. If there is an existing policy, it is selective to a particular area. The law is not comprehensive in implementing the rehabilitation of fisheries.)

PANEL CHAIR CADIZ:

Comm. Dumpit?

COMM. DUMPIT:

*Tanong ko lang po ulit, Ginoong Rosales, yung sa organisasyon ninyo ba, may tala ba kayo ng kung ilang araw kayong di nakakapalaot sa sama ng panahon at saka may tala din ba po kayo kung kailan po nagkakaroon ng red tide? Sa inyo pong organisasyon lang po, hindi po sa gobyerno, no? Gusto ko lang pong tanungin itong mga ito kasi nasabi din ninyo na dahil nga rin po dito sa mga dahilan na ito ay nauubusan po kayo ng huli o hindi po kayo nabibigyan ng oportunidad para manghuli po sa laot.*

(I would like to ask again, Mr. Rosales, in your organization, do you have a record of how many days you have not been able to sail to fish and how many times red tide has occurred? In your organization, not per the government. I want to ask this because you said that it is one of the reasons why there were not any potential catch or you are not given the opportunity to sail.)

MR. ROSALES:

*Kapag may kalamidad po o kadalasan naman kapag may bagyo, pinakamahaba ang tatlong (3) araw kaya sa loob ng ikaapat na araw, makakalaot na po ang mga mangingisda. Depende po kasi din. Ang sa mangingisda po kasi halos mahigit isang libo(1,000) po kasing klase ang paraan ang pangngisda. Halimbawa, sa amin, pante at saka yung hook and line. Kapag hook and line po, lumalayo yan, kaya kapag bagyo talaga, hindi lalaot yan hangga't hindi tiyak na kalmada. Kaya 'pag anunsyo pa lang ho ng signal no. 2, yung eryang pupuntahan nila o yung lugar niya, hindi na ho lalaot yun hanggang sa makalabas ang bagyo. Doon pa lang lalaot yun. Kaya ang pinakamahaba niyan, mga apat (4) na araw. Tapos doon naman ho sa - ano pa po yung isa?*

(Whenever there is a calamity, usually a typhoon, which lasts, at most, for three (3) days, on the 4th days, we are already able to go to sea to fish. It actually depends... there are more than one thousand (1,000) ways of fishing. For us, we use *pante*, and hook and line. Fishers using hooks and lines do not go to sea during a typhoon, until they are sure the sea is calm. When there is an announcement of signal number 2, they will not sail until the typhoon has left. So, the longest period is four (4) days.)

COMM. DUMPIT:

*Red tide. Or fish kill. Yung gaano kadalas, ilang araw po kayo nawawalan ng karampatang huli. (Regarding fishkill, its frequency, how many days do you miss out on good catch because of fishkill?)*

MR. ROSALES:

*Ah, sa red tide po. Dalawa (2) ho kasi ang nagaganap na fish kill. May fish kill po na naggagaling sa mga aquaculture, yung overfeeding at saka yung sobra yung volume ng inaalagaan at mayroon din hong fish kill na nagaganap mula sa pagsasanib ng tubig-tabang, tubig-alat dahil sa dumi. Kapag ganoon po, yung fish kill na naggagaling sa pagsasanib ng tubig-alat at tubig-tabang, umaabot po ng isang (1) linggo. Isang (1) linggo pong malinis yung dagat. Ibig sabihin, malinis, wala kang nahuhuli pero ang mga isda ay bumabaho doon sa paligid dahil may mga nangamatay o yung iba lumayas kaya naubos. Pero nag-rerecover po yan after one (1) week.*

(There are two (2) types of fishkill, one from aquaculture, overfeeding and the over stocking. There is also fishkill caused by the merging of sea and fresh water. For fishkill caused by the merging of sea and fresh water, that usually lasts one (1) week. For a week, the sea is clean, meaning there are no fish in the sea. The fish in area either die or go elsewhere. That usually recovers after a week.)

*Halimbawa, yung naganap na fish kill sa Obando noong nakaraan. Ito po ay resulta ng pag-init ng tubig sa palaisdaan, namatay yung mga bangus at mga tilapia dahil sa pag-init na yun. Hindi ina-anticipate na tataas yung lebel nung temperatura, mamamatay yung mga isda. May mga ganun po sa palaisdaan, private kasi yun. Ang mas concern namin yung mga fish kill na nagaganap sa municipal water.*

(Recently, in Obando, there was a fishkill which was caused by the warming of the water in the fishpond, which resulted in the death of milkfish and tilapia. They did not anticipate that temperatures will rise. But that is a private fishpond. We are more concerned with fishkill in municipal waters.)

COMM. DUMPIT:

*Gusto ko rin lang po ibahagi sa inyo kung bakit ko naitanong ito kasi gusto po siguro nating makwenta kung gano karami ang nawawala. Sa pamamagitan ng pagkwenta ng mga araw na hindi kayo nakakapalaot o di kaya yung mga araw na talagang hindi kayo makapangisda dahil sa fish kill, nakukwenta rin po natin yun at nacoconvert po natin sa kabuhayan, sa kita ng isang mangingisda at madalas niyo nga rin pong sabihin na kapag hindi po kayo nakapalaot, wala po kayong kita doon sa araw po na yun. So maaari po nating makwenta po yun.*

(I just would like to tell you why I asked that. Maybe we would want to compute the losses. By counting the days that you are not able to sail or when there is fishkill, we can compute and convert that, to what a fisherman gains, since you said that if you are not able to go to sea, you did not earn for the day. That may be computed.)

PANEL CHAIR CADIZ:

Counsel?



ATTY. PAUDAC:

Yes, Your Honor. Last question, before the witness would be excused, Your Honor.

PANEL CHAIR CADIZ:

Alright.

ATTY. PAUDAC:

*Ginoong Rosales, kanina sa tugon niyo kay Comm. Gwendolyn Pimentel-Gana, nabanggit niyo na isa sa pinakamalaking problema talaga ay ang enforcement o sa gobyerno. Sa inyong salaysay, nabanggit niyo sa pahina anim na, “Ang amin lang, gusto naming malutas ang problema. Pagbayarin o panagutin ang may sala. Itong malalaking industriya na nagbubuga ng karbon.” Maari niyo ho bang paki-explain o bakit niyo nasabi itong salaysay na ito?*

(Mr. Rosales, in your reply to Comm. Gwendolyn Pimentel-Gana, you have mentioned that one of the biggest problems is the enforcement on the part of the government. In your Affidavit, on page six (6), you mentioned that what you prayed is a solution to the problem, to have those at fault to either pay or answer for the damages, those big industries that emit carbon. Can you explain why you said this?)

MR. ROSALES:

*Hello? Kung titingnan kasi ang pagkasira ng kalikasan na lumikha ng mga malalakas na bagyo, ng pagtaas ng tubig, pagtaas ng alon ay may mga pag-aaral naman na nagsasabi na dahil yan sa mga malalaking industriya, malalaking bansa na mabilis na umunlad mula sa kanilang pag-extract sa likas-yaman ng mga bansa tulad ng Pilipinas na ngayon ay napakayaman. Tapos ang mga bansang nakatulong para sila ay yumaman ay naapektuhan dahil sa epekto na idinulot ng pagbabago ng klima. So dapat ang sa amin, sila naman ang nakinabang at nagpasasa sa likas-yaman na naging dahilan ng kawalan ng kakayanan ng ating kapaligiran na i-absorb ang ilinalabas*

*nilang mga usok na nagdala sa kanila ng limpak-limpak na kita, dapat managot sila doon sa pagkasira ng kalikasan.*

(Looking at the destruction of nature – causes of typhoons, the rise of sea level and storm surge – there are studies that say these are caused by the big industries. There are countries that continue to improve but are destructive to nature, like here in the Philippines. They were the reasons why there are changes in climate. They have taken the benefits, abused the natural resources. The smoke they belched gave them abundance of profits.)

*Managot sila sa epektong idinulot nito sa kabuhayan ng mga mangingisda, sa kabuhayan ng mga magsasaka, at ng mga mamamayan. Ngayon, kung mangunguna sila, dapat panguhanan nila ang ano. Magbayad sila sa pinsalang nilikha nila sa kalikasan at kabuhayan ng mamamayan. Panguhanan nila ang pag-aambag ng pagbabawas ng karbon na ibinubuga nila tapos pondohan nila ng libre ang paggamit ng mga renewable. Kasi marami namang pwedeng gamitin para mabawasan yung paggamit ng ano. Kanina nababanggit naman ng mga pag-aaral na maraming pwedeng pagmulan ng enerhiya na hindi sisira sa kalikasan. Pero ang ginagawa nila, paiwas. Kaya kami, nanawagan-sasama kami at kaisa kami sa panawagan na pagbayarin itong mga malalaking multinational corporation. Kasi tama na, nagpayaman na sila. Tumulong naman sila sa pag-rerehabilitate ng ating kalikasan. Wag naman ding gawing negosyo pati ang rehabilitasyon ng kalikasan.*

(Thus, they need to be liable for the destruction of nature. They need to be accountable to the effects they brought to the fisherfolks, farmers and the community. As early as now, they need to be aware of the effects of their actions. They need to know how to lessen the use of carbon and they need to fund the use of renewable. I have also said earlier that there are other sources of energy that will not destroy the environment. What they are doing is to keep safe. We pledge to join in calling for the big multi-national companies to be liable. This is enough. They have enriched themselves already.. This is the time when they can help the rehabilitation of the natural resources, not to use rehabilitation as source of profits.)

ATTY. PAUDAC:

Your Honors, there are no further questions for the witnesses. If they may be excused, Your Honors. Unless you do have further questions.

COMM. PIMENTEL-GANA:

*Isa na lang. Gutom na ba?* (One more. Are you hungry already?)

MR. ROSALES:

*Di pa. Di pa ho. Kaya pa ho.* (Not yet, not yet, ma'am. I can manage, ma'am.)

COMM. PIMENTEL-GANA:

*Anyway, manong, kasi di ba kayo, marami kayong mga areas na nangingsida kayo. Ang sabi ninyo may kasalanan yung Carbon Majors sa ganyan, ano po? Ano ho kaya yung area ninyo na kung saan kayo nangingsida na sa palagay ninyo ay nakita ninyo na itong mga rason na binigay niyo, na sila ang may kasalanan? Mayroon ho ba kayong ebidensya na kung anuman partikular na lugar na kung saan kayo'y nangingsida na, ganito nga, dahil sa kanila kaya nasira ang ating environment? Lalo na doon ho sa inyong pangingsida. Meron ho ba kayong direct experience na nakita or anong lugar sa inyong mga pinangingsidaan?*

(According to you, there are many areas where you fish. Do Carbon Majors have anything to do with the problems in the areas where you fish, do you see the causes you already mentioned to be the reasons? Do you have evidences for a particular place where you fish, that because of them, our environment suffered damages, especially in areas where you fish? Do you have actual or direct experience that you saw or in which of the places that you fish?)

MR. ROSALES:

*Sa area ho ng Manila Bay at saka sa gawi ng papuntang China Sea. Yung sa may Mariveles, madaling makita sa mga bahura yun eh. Ang sinasabi namin, kapansin-pansin ang mga bahura na parang nagbabago ang mga kulay nila at nagresulta ng pag-alis ng mga isda. Ang tawag nga, naririnig ko na ho ang tawag diyen. Sabi nila yung coral bleaching daw, yung pamumuti ng bahura. Masasaksihan po yan sa area ng Mariveles, doon sa mga area na may corals. Sa Manila Bay kasi wala na hong corals, maliban sa bunganga ng Corregidor. Sa Mariveles, sa dulo ng Mariveles at saka sa Corregidor at saka sa dulo ng Batangas, Cavite, may matatagpuan tayong mga corals doon. Pero*

*papasok ka ng Pampanga, Bulacan, NCR hanggang Parañaque, Las Piñas, wala na hong makikitang corals diyan. Bundok ng basura ang meron diyan. Napakararami. Kaya yun po. Parang kung sa tanong po, doon namin makikita yung ganoong epekto at kahit ho yung fish kill at kahit ho yung laginlin na tinatawag namin, epekto po ng init ng panahon yun.*

(At the Manila Bay area and at the area going to the China Sea, in Mariveles, those can be seen from in the coral areas. It is noticeable that the change in the color of the corals, which is called coral bleaching, causes the fish to veer away, that can be seen in the area where corals are in Mariveles. There are no corals anymore in the Manila Bay, except near the mouth of Corregidor. There are still corals near the tip of Mariveles, in Corregidor, in Batangas and in Cavite, but towards Pampanga, Bulacan, the NCR up to Paranaque and Las Pinas, there are no more corals but there are mountains of garbage. To answer your question, that's how we see the effects, even with fishkill or laginlin. That is the effect of global warming.)

COMM. PIMENTEL-GANA:

*Salamat po.* (Thank you.)

PANEL CHAIR CADIZ:

Are you intending to redirect your witness again?

ATTY. PAUDAC:

Don't worry, Your Honor. That would be all, Your Honors.

PANEL CHAIR CADIZ:

Alright. Thank you very much, Counsel.

I notice in our schedule that you're supposed to present another witness before adjourning for lunch, but, in view of the fact that we're already almost an hour

in delay, may I suggest that we break for lunch already and then proceed later on today to your next set of witnesses?

ATTY. PAUDAC:

Yes, Your Honor. We agree.

PANEL CHAIR CADIZ:

Alright. Thank you very much. Just another administrative matter... We would like to inform the people here in this hall that lunch has been prepared by the Commission for everyone.

Where is the lunch? Okay, you will be directed to go there. So we will adjourn and be back in an hour. Alright. Thank you very much. Session is adjourned.

*[bangs gavel]*

*[lunch break]*

CLERK OF THE INQUIRY:

Good afternoon, everyone. All rise.

The Honorable Inquiry Panel Chairman Commissioner Roberto Eugenio T. Cadiz, still presiding.

PANEL CHAIR CADIZ:

*[bangs gavel]*

Page 1102

CLERK OF THE PANEL:

Please be seated.

PANEL CHAIR CADIZ:

Attorney Trisha, do you have any announcement?

CLERK OF THE INQUIRY:

None, Your Honor.

PANEL CHAIR CADIZ:

Or are we proceeding already?

CLERK OF THE INQUIRY:

Your Honor, we will be proceeding.

PANEL CHAIR CADIZ:

Alright. Counsels, are you ready to present your next witness?

ATTY. SORIANO:

Yes, Your Honor, and good afternoon again.

Page 1103

PANEL CHAIR CADIZ:

Good afternoon.

ATTY. SORIANO:

Commissioners, we would like to call our first Witness for this afternoon, Dr. Mudjekeewis D. Santos. Dr. Santos?

PANEL CHAIR CADIZ:

May we have our legal person to swear-in the witness? Attorney Jose?

ATTY. DE LA CRUZ:

*(indicates intent to swear-in the witness)*

PANEL CHAIR CADIZ:

De la Cruz. Alright. Please swear-in the witness.

Counsel, you may now examine your witness.

ATTY. SORIANO:

Your Honors, Dr. Santos is a Scientist Level Two (2) working with the National Fisheries Research and Development Institute as its focal person. Or let me correct that: he is the focal person for the Bureau of Fisheries and Aquatic Resources' Adaptation and Mitigation Initiative in Agriculture. He is being presented to share information on the impacts of climate change on the fisheries sector. May I proceed with preliminary questions?

Page 1104

PANEL CHAIR CADIZ:

Please proceed.

ATTY. SORIANO:

We received, Your Honors, one (1) document from Dr. Santos via email, and it is entitled 'Curriculum Vitae of Mudjekeewis D. Santos,' consisting of forty-three (43) pages and bearing a signature of the same name. This document was pre-marked on the 21<sup>st</sup> of May, 2018 as Exhibit EEEE to EEEE-42 and specifically on the signature as Exhibit EEEE-42-A.

PANEL CHAIR CADIZ:

Do you confirm that, Attorney Esguerra?

ATTY. ESGUERRA:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Alright. Proceed, Counsel.

ATTY. SORIANO:

We have additional documents, though, Your Honor, that we would like to present here. And they were pre-marked just a few minutes ago in preparation for this presentation. And these documents, if I may just enumerate. These are, one, 'The Statement of Mudjekeewis D. Santos' consisting of one (1) page and pre-marked as Exhibit FFFF with a signature of the same name as FFFF-A. Another document is the PowerPoint presentation of Mudjekeewis D. Santos consisting of fourteen (14) pages, pre-marked a few minutes ago as GGGG to GGGG-13. Next is the "Fisheries Vulnerability Assessment Tool", authored by Angela Aguila and Mudjekeewis Santos consisting of thirty-two



(32) pages, pre-marked as Exhibit HHHH to HHHH-31. Another document, “Department of Agriculture Climate Change RND 2016 to 2022”, authored by Dr. Maria Paz Perez, Dr. Laura David, Dr. Mudjekeewis Santos et al consisting of fifteen (15) pages pre-marked as IIII to IIII-14. Next is ‘The Possible Effects of El Nino on Some Philippine Marine Fisheries Resources’, by Amor M. Damatac II and Mudjekeewis Santos, published in *Philippine Journal of Science*, dated September 2016, consisting of thirteen (13) pages, pre-marked as Exhibit JJJJ to JJJJ-12. And last is a document entitled, “Development and Application in Fisheries Vulnerability Assessment Tool, enclosed in parentheses ‘(Fish vool)’ to Tuna and Sardine sector in the Philippines”, by Melchor Jacinto, Mudjekeewis Santos, et al consisting of eight (8) pages, pre-marked as Exhibit KKKK to KKKK-7.

For your confirmation, through Attorney Martin, Your Honors.

PANEL CHAIR CADIZ:

Alright. Pre-marking of the exhibits has been confirmed. You may now proceed to present your witness.

ATTY. SORIANO:

Yes, Your Honors. We just would like to ask Dr. Santos if he would confirm and affirm the contents of all the documents that I just recited, as well as the delivery of those documents yesterday and today, this morning. Dr. Santos, please. Thank you very much. Dr. Santos, We are now ready to hear your presentation.

DR. SANTOS:

Okay. Good afternoon, Your Honors, ladies and gentlemen. First of all, I’m here as a resource person on invitation and as instructed by BFAR management to present today about our work on climate change and fisheries.

First slide, please. Okay, as mentioned, I’m currently a career scientist to the National Fisheries Research and Development Institute. NFRDI is the research arm of the Bureau of Fisheries and Aquatic Resources as per RA 8550 — and as a focal person of the BFAR Adaptation and Mitigation

Initiative in Agriculture Program. And I'll be presenting the impacts of climate change on Philippine fisheries.

But, before I go into that, please allow me to share some insights on what is the status of the fisheries resources right now in the Philippines to sort of contextualize my talk when we go into the part where we are going to talk about climate change. Okay.

Next slide. Well, the Philippine fisheries is among the world's top. FAO has been documenting this, that we are one of the top fish-producing countries in the world. *Palagi po tayong nasa* top ten (10) (we are always at the top 10), although, recently, *nasa* (we're at) top twelve (12) *na lang yata* (I guess). We are the third largest producer of seaweeds. About three (3) years ago, actually, we're the second largest producer but now *nasa* (at) third. Second is Indonesia. We have the fifth longest coastline in the world. We're one of the few distant water fishing nations. Those DWFNS are very few. These are countries which can fish in international waters and our large commercial fishing fleets can do that. In fact, we're in international waters right now, fishing. And contribution to GDP is one hundred fifty (150) billion, although this might be a little bit underestimated.

Next. Just recently, last year, there was a paper that was published by Asansa et al valuating the Philippine marine resources and conservatively they said that the monetary value of our marine resources is almost about a trillion dollars or nine hundred sixty-six point six billion U.S. dollars (US\$ 966.6). So *marami po tayong benefit na makukuha* (we can get a lot of benefit) in terms of economic benefit from our marine resources.

Next. And, as of today, under the municipal fisherfolk registration system or Fish-R of BFAR, there are 1.9 million fisherfolk registered in BFAR right now. 1.9 million *po*.

Okay. Those are all good and great — but, unfortunately, we are also beset with threats and challenges. One would be, if you see this graph, *yun pong pula*, the red one, is actually the ratio of catch per unit effort o *yung* manner *po nung pangangisda* (or the manner of fishing). Simply saying, what this graph is saying *yung share ng huli ng mangangisda po* (the share of the fish... the share of the fisherfolk), from the 1950s up to 2000, as you can see, it's declining. And population growth is that green line there. I think I don't need to expound what the disparity on this one and where we're heading.

Next. And the status of the fisheries - there are a lot of studies already showing that even in the early 1980s that there are some crises involved already. For

example, we've submitted a report to the Convention on Biological Diversity in 2009 that ten (10) out of thirteen (13) major fishing grounds in the country are overexploited.

Next. A while ago, this morning, there was a lot of interest and talk about Manila Bay. Fortunately or unfortunately, we were actually tasked by the Supreme Court Mandamus and FRDI to do the fisheries resource and ecological assessment of Manila Bay. So *yun po yung* assignment *namin sa* (that is our assignment in) Mandamus. We don't do the management, we do the DTR, the research on the status of the bay. And, as you can see in that graph — and actually this corroborates what Ka Pablo has mentioned in Manila Bay — is that based on 1947 baseline — mind you *po*, this was the time *na nandito po yung mga Amerikano* (When the Americans are here) - Warfel and Manacop *ang nag-* (are the ones who did the) trawl survey — and this has been repeated by different scientists and up to now, to this day, we also repeated that methodology, *at kung mapapansin nyo po* (and if you can notice), based on 1940 baseline above - about four point eight (4.8) tons per square kilometers *ay* it's around point four (0.4), meaning we've decimated the biomass of the demersal fishes, meaning *yung mga isda po na nasa ilalim* (the fishes are at the bottom). We've decimated the demersal biomass of fishes in Manila Bay by about ninety percent (90%). So ten percent (10%) *na lang po yung nakikita natin* (we only see about 10%) right now.

And, as you can see in the lower graph, *yung pong kulay red*, that's the species composition, meaning *ito po yung klase ng isda na nahuhuli sa* (these are the types of fishes we catch in) Manila Bay. And, if you can see, there's a lot of species being caught in Manila Bay during that time in the 1940s. But, right now, *karamihan ano na lang po, sardinas, minsan may galunggong, minsan may hasa-hasa. Pero masyado nang iba yung species composition* (most of it were Sardines, you can catch round scad or short mackerel, but the species composition is so varied). Okay.

And, if I may add, one of the things that we actually, we published this book already, one of the things that we did see, one, of course, there's the issue of overfishing and some illegal fishing there, *pero isa pong malaking nakita namin is yung pollution* as a cause of the decimation of Manila Bay because there's initial evidence to say that biologically dead *na po yung ilalim ng Manila Bay* (the bottom surface of Manila Bay is biologically dead). So it cannot support life anymore.

So, next slide. The catch per fisher, as per data — again, this corroborates what Ka Pablo, the resource person this morning said — that *yung huli po ng mangingisda, paunti na po nang paunti*. They fish farther, they fish longer, but they catch a lot fewer fish than compared twenty (20), thirty (30), forty

(40) years ago. *Kahit sino pong mangingisda na kausapin nyo*, we don't need rocket science to say that, really, there's problem in our fisheries.

Next. The Philippines is also said to be the epicenter of marine biodiversity in the world, meaning we have the highest number of marine organisms per square area *sa buong mundo* (worldwide). We are called the counterpart of the Amazon forest in terms of diversity. And this has been published in 2004 by Ken Carpenter. This has been proven by a number of studies after that, as you can see in that figure over there. The red one is stating that we have the highest number of organisms.

That's the good news. Next is, of course, the bad news. A lot of these species are under threat. Corals are in (a) degraded state. Seaweeds, we're losing out to Indonesia because we cannot get a lot of propagules already. Sea grasses are heavily stressed. Or mangroves, how many mangrove areas we have. Invertebrates, *ito po yung mga* (these are the) shells. *Yung mga* (those) demersal fishes, *ito yung mga lapu-lapu* (for example Lapu Lapu), *yung mga* (the) small pelagic fishes, *ito po yung mga sardines, galunggong. Lahat po yan* (for example sardines and round scad. All of which are) on a declining trend *kaya po kabi-kabila yung ating pagsasara* ng fishing to sustain this. Sharks and rays, a lot of species are being now listed under CITES appendices because they are already declared as endangered. Marine turtles and marine mammals have been established already as endangered a long time ago *kaya fully protected na po sila* (That is why they are already fully protected). And even international journals are saying, the Philippines is one of the hottest of the hot spots in terms of threats and endemism.

Next. And I think this scenario is not only in the Philippines, but actually it's happening in the whole world. Daniel Pauly, one of the leading fisheries expert in the world, they published a paper in Nature saying that- *kasi* before *po nitong* (because before this) publication, FAO, the Food and Agriculture Organization, is saying that the catch production of the world is plateauing. It's a straight line. When they recomputed with new data, new evidence, they said that the fisheries of the world peaked in the 1980s and it's rapidly declining. That's the data. And he said — although this is controversial — but by 2050, if we don't do anything drastic about taking care of our fisheries, the fisheries of the world will collapse by 2050.

Okay. Next. Now, as I've said, many of what I've shown actually have been happening before historically 1950s, *ano po* (like that). So meaning a lot of threats are already happening to Philippine fisheries. We have illegal, unreported, and unregulated fishing. We have problems of overfishing, habitat degradation, meaning *pinapaputukan po natin yung mga* (we blast our) reef areas, reclamation *kabi-kabila* (here and there), pollution, as we've seen in

Manila Bay. I mean, how do you revive a bay where the bottom is already dead? So I don't know how. They asked me how; I don't know. And then there's an issue of invasive species. *Baka di nyo po alam na may tilapia na po sa Manila Bay.* We did not introduce that. It just came out. It's the *Sarotherodon melanotheron*, *si Arroyo, yung mayroon pong nunal ditto* (Arroyo, the one with mole here). It's an invasive species. It just came out around five (5) years ago, and it's sort of wreaking havoc to the fishpond operators in the area. *Kinakain po sya. Kaya lang kumakain din po sya ng maliliit na mga* (it's edible however, it eats) fingerlings. And of course, and part of what we've seen by the way, this is the publication that we developed and published during the UNDP Sulu-Celebes Sea Project. It's a Regional Strategic Action Plan by Indonesia, Malaysia, and Philippines, and there was a consensus that these are the threats to the fisheries of the region. And, as you may see there, the final one is climate change.

If I may, a while ago we were talking there, the Facebook live. If I may- these things — *yun pong illegal - yung IUU fishing, overfishing, habitat degradation, pollution, invasive species* — have been happening. *Kung baga, ito po yung uric acid, ito po yung high blood, ito po yung mga bagay na tintry po natin sagutin* (It's like we're trying to solve uric acid, high-blood pressure) and then suddenly, very recently, *malalaman natin mayroon po tayong cancer* (we will discover that we have cancer) *dahil may climate change.* So *mayroon pong* (there is a) multiplier effect. And, *sa totoo po, ang status po ng* (and to be honest, the status of) Philippine fisheries is very complicated.

So, next. Going now to climate change and Philippine fisheries. Well, the Philippines has been- *palagi po tayong nasa* (we are always in) honor roll in terms of vulnerability *sa* (in) climate change. *Lagi po tayong nasa top ten* (10) (We are always in top 10). Any index you would visit in terms of comparing countries and their vulnerability to climate change, (the) Philippines is always in the top ten (10). Why? Because, I think, one, about seventy percent (70%) of our people live in coastal areas. And *alam po natin* that in the climate change- impacts *ng* (of) climate change, *mauuna yung sa* (will happen to coastal areas first) coastal areas — storm surges, typhoons. About seventy percent (70%) of our protein requirement comes from fish. The status of the fisheries is declining. And, now, you put in low levels of socio-economic capacities in many of our coastal communities. *Kaya talaga pong pong* (that is why it is) very vulnerable *yung Pilipinas, lalong-lalo na po yung* (the Philippines especially the) fisheries sector and *yung* (the) coastal communities.

Next. And it has also been said that — and may studies po actually *ito, hindi po ito parang binanggit lang ni Ka Pablo kanina* (there are actually studies of this, it is not just the opinion of Mr. Pablo a while ago) — that the Filipino fisherfolks are considered (the) poorest of the poor in our communities. *Sabi*

*nga nila, mas mahirap pa daw po sila dun sa nangangalakal, yung nagbabakal-bote, mas mahirap pa sila dun kasi* (As they said, they are poorer than those who are collecting recyclable items because), once they don't have any more sources of food, livelihood, *wala na silang ibang pupuntahan* (they do not have anywhere to go). And climate change — I guess especially in the Philippines — *may konting* (there's a little) recognition *na* (already) even with Philippine media. So may awareness in that sense. *Nababanggit yung* (that they mention) Philippine fisheries and climate change.

And next. And, in fact, what I'm saying is that there's actually already recognition on our part that we need to address climate change issues. In our case, non-issue *na po yung* is climate change occurring or not. I think in our case, we're already sort of looking at it and preparing for it. Even the Fisheries Industry Plan, for example, *nakalagay po yung mga strategies na dyan* (they have stated strategies) on how to address the impacts of climate change.

Next. Such that even in our official organizational plans and organizational mandates, the BFAR has already mainstreamed its Climate Change Disaster Risk Reduction Management Strategic Framework. *Pinagsama na po namin yung* (we already combined) CC and DRRM. The basis of this one came from, of course, the fishery plan and, of course, because of Climate Change Law and our DRRM law. And so this is our means of trying to address climate change issues.

Next slide. And, as you can see, this is the strategic framework. In terms of climate change, we are in the mitigation and prevention part. This is where we do studies so that, if and when the effects of climate change would translate into disasters, we will know what to do. And so, in this part, and especially in our case as a research institution, we're trying to help in terms of understanding the effect and is it happening? Where? When? How many? Et cetera, et cetera. So that we can help out in terms of planning for that strategic framework that BFAR would be able to implement on the ground.

Next. And I would like to start with this one. By 2010, actually, there have been already predictions on what will happen to the fisheries if climate change and its impacts would occur. *Napredict na po yun na may warming, may sea level rise, may salt water intrusion*. And a lot of those are sort of symptoms of climate change- or the effects of climate change. *Yun po yung ating actually inaaraal at binabantayan* (That is what we are actually studying and watching out for). And, on the lower part, there is a prediction that there are extreme weather events that will happen, meaning, *ano ba yung mga nababanggit* (what are those that was mentioned), fewer storms, *pero* (but) *super typhoon ang* levels. And one thing is *yung* there will be increase in El Nino events.

Increase in El Nino events and increase in the intensity of El Nino events. *Yun po yung* (that is the) prediction that will be brought about by climate change.

Okay. And, in our case, we're not looking at the warming to correlate with fisheries, not yet, salt water intrusion. In our case, we zero in on the effects of El Nino because, this one, we're trying to monitor at the Department of Agriculture.

So, next. So that's why we've started trying to understand the possible effects of El Nino, again, as a function of climate change. *Kung dumami yan at mas malalakas*, then affected *tayo* (If it's going to increase in number and intensity, then we are affected) and we can sort of measure that. And, based on this review, we say that, *sa mga* (in) plankton, *napag-usapan po kanina yung red tide* (we discussed a while ago about red tide), it has been predicted that red tide occurrences will increase due to climate change and increase in El Nino events. In terms of the resources themselves, like the sardines and *galunggong* (round scad), there will be displacement in terms of distribution *kasi po kung mainit na dito, pupunta po sila dun sa mas malamig na mas conductive sa kanila* (Because if it's hot here, they will go to cooler and more conductive areas for them). So, *eh dahil po migratory sila* (and because they are migratory), they will migrate elsewhere. So *may* (there's) displacement. And then, there will be some fish kills that will happen because of changing temperatures. And, of course, there's lesser available food. Coral bleaching will occur because of El Nino events *dahil nga mainit po ang tubig* (because the water's temperature is hot). *Seaweeds magkakaran po ng sakit* (will develop disease). *Yun po ang mga* (Those are the) predictions. And marine mammals, even *yung* (the) whales and dolphins, will have to move elsewhere because it's not conducive anymore. So *marami pong effects sya* (there are lots of effects).

Next. And so, in our case, *tinitingnan*, we look at whether these predictions could happen or is it happening in the Philippines. In 1997, there's the one big El Nino event and Lehodey et al published in *Nature* that the tunas- *sa taas po ng* (at the topmost part of the) graphs, *yung dots na yun, ay yung* (those dots are the) concentration *ng tunas*, where they are located. They got this data from fishing companies because *may* (there are) actual location *po yun*. *Kung mapapansin nyo* (If you can notice), under normal conditions, *nandito po sa may malapit-lapit po ng kaunti sa Pilipinas* (they are still here near the Philippines), but, by the time El Nino struck in 1997, *tingnan nyo po yung dots kung nasaan na yung mga tuna, medyo lumayo na* (look at the dots where the tunas are, they moved farther). Now, that's a big problem. How can we now access tuna resources there when it's so far? *Baka sa gasolina pa lang po ay hindi na kaya* (The gasoline supply won't even reach that far). So this happened already when El Nino struck in 1997. So *pwede po bang mangyari*

*yun kapag tumaas yung temperature ng tubig* (So is that possible when the temperature of the water increased)? I think so, we think so, because it already happened during an El Nino event.

Next. *May thinking po na yung mga isda na nasa fishpond, hindi daw po maapektuhan* (There are people thinking that the fishpond in the fishes, rather the fishes in the fishponds won't be affected). It's because they will just swim under *kung mainit na yung sea surface* (if the sea surface is hot). But, unfortunately, in the El Nino of 2010, *nagkaron po ng fish kill sa Magat Dam* (there was a fish kill in Magat Dam). It's basically because *lumangoy nga pababa yung isda, naubos naman yung tubig kasi wala na po - drought eh, El Nino eh*. So *nawalan na rin sila ng dissolved oxygen, kulang na yung tubig, cramped na sila doon, so namatay na sila* (they were able to swim to the bottom but the water evaporated because it was drought, El Niño. So they had insufficient dissolved oxygen, insufficient water, they became trapped, so they were killed). So it can happen, *yung ganitong klaseng* (the type of) scenario for inland fisheries.

Next. This one is an ongoing study where, fortunately, we were asked by then Director Asis to look at bangus fry, bangus fry assessment collection. *Alam nyo po - ayun po yung - that person, sumusudsod sya, sya yung nangongolekta ng* (You know the one scouring the ocean floor, that's the one collecting) bangus fry. And those bangus fry are sold to grow out *para palakihin po, ng bangus na malalaki to grow out*. So *mayroon po tayong mga kababayan na ang livelihood nila is on that* (so that fishermen will grow them. So we have countrymen whose livelihood is that). And, in 2015, we started monitoring that. We saw that, during summer, *lumilitaw po yung bangus fry, nawawala po yung ibang species. Pero, nung 2016, nagkaroon ng El Nino, tumaas yung temperature doon, parang hindi na po bumalik yung bangus. Puro by-catch na lang ang nandun* (The bangus fry appears, and the other species are not there. But in 2016, after El Niño when the temperature increased, we noticed that the bangus fry didn't seem to return. All that was left was bycatch). Although this one we needed to stretch *pa* the study but, in that information, we think that the increase in temperature will have an effect in this fry fishery that many of the fisherfolk are depending upon. So, *kung wala na pong bangus fry, ano pa pong kukunin nila? Wala na* (So if there's no more bangus fry, what else would they get? Nothing.).

Next. And, just this one, we also started looking at whether, traditionally, people have been doing some adaptation to climate variabilities — and we've found out that, for example, in Batanes, *may mga traditional practices sila* (they have traditional practices) — in the hopes that we will be able to get experiences from this one that we can use to help out in other areas.



Next. And, this one, we're actually conducting these, what we call the vulnerability assessments of the different sectors in the fisheries in terms of climate change impacts.

Next. So what we did, we developed a tool which we call Fish Vool, which we published in *Fisheries Research* — it's an international peer-reviewed journal — and applied this tool to the sardines and tuna sectors down south. Basically, we followed the model of trying to measure exposure, sensitivity, and adaptive capacity to come up with the vulnerability of the communities. This is an IPCC framework. And so what we've found out in this paper is that the tuna and the sardine sector, although many of them are commercial in scale, they're actually, medium *yung kanilang* (when it comes to their) vulnerability. And I will tell you why later on medium vulnerability and not low.

Next. And this one showing *yung mga* rubrics. I'll not dwell into that, the parameters that we tried to score during the interviews. *Alam nyo naman po kasi kailangan medyo* (You know, because it needed to be) scientific. So we had some measures, one to five, et cetera.

And next. And we conducted this one, although at the initial phase, together with the help of BFAR regional offices, and see which areas are vulnerable to climate change in terms of the tuna fishers, for example. And, as you can see, some areas have no vulnerability and some are high, medium vulnerabilities. What this is saying is that, actually in the Philippines, it's again, our country is very complicated. You really have to go down to certain locations. One location will not have the same character as another; the north would be different from the south in terms of species, in terms of vulnerabilities, et cetera. So but we're trying to analyze that.

Next. I will just give examples. That's the tuna fishery. We look at the seaweeds fishery here. And, as a summary, what we found out is that many of those communities that have medium vulnerabilities, *ito po yung mga nakita namin naka-pull down ng kanilang score is yung* annual income, that would be one, very low *yung kanilang* score. In terms of adaptive capacity, *wala pong masyadong* income (These are the things that we saw that pulled their scores down, one is annual income. They get very low scores instead of adaptive capacity since they do not have much income). The organizations that support climate change, based on their perception, *kulang* access to information, and then adaptive strategy, precautionary measures.

Now, these things are telling us that *ito yung mga bagay*, if we want to help them. These are the areas that we can support so that we can better their

vulnerability index in a way. *Hindi na sya medium kundi low na lang kasi* well-informed sila, ready *silang magplano*, et cetera (They will get a “no” instead of a medium rate because they are well-informed, and that they are ready to plan, et cetera). And one thing that we see are Filipinos are very resilient. You just give them the tools to be able to really blossom in a way and then they will take care of themselves.

Next. I guess that’s it, final slides. In our case, *hindi po kami tumitigil* (we are not stopping) in government - we know what to do, we know how to do it, and, in fact, it’s written here, based on our Climate Change RND Extension Agenda, the things we need to develop. I guess the question is actually who will implement these things. We need more people in terms of trying to help out in doing these things. So, with that, Your Honors, thank you very much.

PANEL CHAIR CADIZ:

Excuse me, Counsel. Before you proceed, I noticed that this Exhibit GGGG, consisting of thirteen (13) pages... or fourteen (14), does not have the same number of pages that were just put on the screen. I think there were three (3) more pages... slides that are not here. Could you please update the Panel and then maybe we can...the series marking will also change, but three (3) pages, I think, were not included in the exhibit.

ATTY. SORIANO:

That’s a correct observation, Your Honor. And may we request Dr. Santos to explain the update that he made this morning?

DR. SANTOS:

Actually, it’s my fault. Usually, when we prepare slides, until the last minute you would want to check and recheck and revise. So I had to put some slides there, specifically the valuation report and the number of fisherfolk registered. I think that was really important to be included there so (it’s) my fault, Your Honor.

PANEL CHAIR CADIZ:

No problem. We just want to be updated because the one presented by you now is different from the one that was marked in exhibit. Please proceed.

ATTY. SORIANO:

May we proceed now, Your Honor, with some clarificatory questions? Thank you very much, Dr. Santos, for that enlightening presentation. You mentioned earlier that El Nino is affected by climate change and red tide is basically caused or that climate change significantly contributed to the occurrences of red tide. Can you explain a little bit more about this incidence?

DR. SANTOS:

Well, I think a lot of experts already talked about the climate change as what is it. And it's yes basically, it's the increase in greenhouse gasses so that the Earth is warming. And the warming of the Earth, *kumbaga sya po, yun po yung sakit*. And *dahil sakit yan, mayroon syang* symptoms, and the symptoms are actually these things (It's like a person with an illness and because of that, there are symptoms present), where there is increase in temperature in the surface water, there will be increase in typhoons, and there will be increase in El Nino events. And, when you increase El Nino events, studies are saying that a lot of things can happen because the warming of the area, so there's drought and there's increased occurrence of red tides and increased flooding — ah, no, not flooding, that's La Niña — increased drought.

ATTY. SORIANO:

Thank you. You mentioned earlier that some are predictions. And, to clarify the predictions for what is actually happening now, can you explain if the impacts that you shared are already happening or are they predicted?

DR. SANTOS:

Yes, Ma'am. I've shown some publications where they predicted that these are the things that would happen if climate change would occur. And the

reason why I zeroed in on El Nino is because those are the things that we can measure.

The warming or increase in sea level rise or increase in sea surface temperature, you would require a decade or hundred years (of) data to have some clean correlation whether that would be the effect of that would be this, this kind of work. So that, what we tried to do is look at El Nino because in El Nino, there's a spike in increase in temperature and there's increase in drought, so that one, we can actually measure in a shorter period of time. We don't need like a hundred years (of) data to correlate. And what we've seen in the El Nino events, there's displacement of fishes, there's the disappearance of larvae of bangus in some areas, and there's increase in occurrences of red tides, at least some of the publications have shown that. And increase in drought that could occur - that would affect fish kills in certain inland bodies of water like a dam or a fish pond.

ATTY. SORIANO:

Thank you. I'll pick up the description you made earlier on climate change that it has a multiplier effect. So can you clarify what is a multiplier effect? Or how does it multiply the effects in relation to what you described as additional threats of climate change or the threats that climate change poses to fisheries sector in particular?

DR. SANTOS:

Yes, Ma'am. As I've mentioned a while ago, *parang mayroon a nang sakit na inaalagaan* and then suddenly you discover *mayroon kang cancer* (it's like you are taking care of a disease and then suddenly you discovered that you have cancer) because the fisheries is beset with a lot of issues already, problems — overfishing, in fact, 1980s, *pinapabawasan na yung ating fishing effort ng mga scientist* (the scientists are already telling us to decrease our fishing effort even during 1980s). So a lot of these have been occurring — habitat degradation, the issues that's being mentioned by Ka Pablo *kanina* (a while ago), these are all been happening. And I do believe that, for me, the symptoms or the effect of climate change actually *pinepredict* nila will be *mararamdaman pa lang* in 2050 or 2100 (Their prediction will be felt in 2050 or 2100). So, therefore, the symptoms of that climate change is relatively recent, supposed to be. *Hindi sya 1950s* (it's not 1950s).

So, what I'm saying is that, because the fisheries had a lot of issues already and then now comes climate change. For example, *wala na ngang mahuling tuna yung mga tao* because *nadeplete na* (fisher folks don't have tunas to catch because they're already depleted) and then here comes increase in sea surface temperature and then those remaining tuna will go to Canada, then what is left for us? It's really- I don't want to think about what will happen in the near future but there's this multiplier effect. Again, *parang may sakit na*, then *makadiscovers ka pa na mayroon ka pang isa pang sakit*, which is really *nakakalungkot* (just like there's already a present disease and then you'll discover that you have another disease, it's just really sad).

ATTY. SORIANO:

So you're saying, Dr. Santos, that climate change multiplies the effects, the bad effects of illegal fishing, overfishing, and other problems like pollution and things like that?

DR. SANTOS:

Yes, Ma'am. It can potentially add to those problems.

ATTY. SORIANO:

Thank you, Dr. Santos. That is all for now, Honorable Commissioners.

PANEL CHAIR CADIZ:

Thank you very much, Mr. Witness. Commissioner Armamento will have some questions for you.

COMM. TANODRA-ARMAMENTO:

Dr. Santos, you have testified earlier that one of the reasons of our vulnerabilities to climate change is because most of our people are living along the shoreline. But may I know if there is any specific or particular

geographic factor that makes us more vulnerable as compared to other nations in so far as climate change is concerned?

DR. SANTOS:

Yes, Ma'am. The vulnerability, one thing that would add to that would be, of course, our location. And by culture, we are a fish-eating country, so may tendency *po talagang doon sila magstay sa tabi ng dagat* (so there's a tendency for them to stay at the shoreline). And in addition to that, because the vulnerability is measured not only by the status of the resource and the location but also your capacity to adapt. And because the poorest of the poor are in these coastal areas, so that *talagang medyo mataas yung kanilang vulnerability* (their vulnerability is really higher) as compared to other countries where *makakabili po sila ng aircon anytime or makamove sila* (people can purchase air-con anytime or can move) to another place because they have money. So, I guess, in that aspect, that's why comparatively, we are more vulnerable than the other countries.

COMM. TANODRA-ARMAMENTO:

Follow up questions. Is our being an archipelago makes us more vulnerable than the countries that are in the landmass?

DR. SANTOS:

Yes, Ma'am. It's because we're subjected already to the elements — storm surges, typhoons, et cetera. So, in that aspect, there's already a sort of a minus in terms of how we cope up with this one. Although Filipinos are resilient. *Nabanggit na nga ng mga fishermen* (as mentioned by the fishermen), actually they like being in the coastal areas. It just so happened, I guess, if they have the capacities to adapt, income for example or means, I think they'll be able to do that. But, right now, based on our assessment, vulnerable *po sila* (they are vulnerable) because of the lack of capacities, plus, added to that, that they are living in areas where they are prone to natural disasters.

COMM. TANODRA-ARMAMENTO:

Thank you.

COMM. PIMENTEL-GANA:

Hello, doctor. Are we still considered the epicenter of marine biodiversity in the world? So we're still maintaining that? We're still number one?

DR. SANTOS:

Based on very recent publication, Ma'am, yes, we are. Although there are some scientists who are working in Indonesia that are trying to contest that Indonesia is also the center of marine biodiversity. But, based on the studies that have been published, I'm more inclined to say that the country is the center of marine biodiversity — not that I'm biased. Just in our fish market survey, we've been discovering new species of fish that are being sold in the market as we speak.

COMM. PIMENTEL-GANA:

So would you say that climate change in effect has not really impacted that much our marine world? I mean, yeah.

DR. SANTOS:

Well, that's a good point, Ma'am. But I think we need to look at the baselines because the baselines are moving.

COMM. PIMENTEL-GANA:

Yeah.

DR. SANTOS:

Meaning the center of marine biodiversity was sort of published based on the data we have right now compared to the data that other countries have. But whether time series-wise, meaning historically, there's a possibility that actually we're more diverse than we are right now. Yes, before. Case in point, for example, Manila Bay, again, we've decimated 90% of population in Manila Bay. And we think many of those species - I'm sure there were - they were not described but they were already decimated. So, I guess, in that case, climate change would have an effect on the biodiversity if you look at the historical data.

COMM. PIMENTEL-GANA:

But you did say that there are more actually species, new species that have been discovered?

DR. SANTOS:

Yes.

COMM. PIMENTEL-GANA:

So how would you explain that in terms of changes?

DR. SANTOS:

It just goes to show, Ma'am, that our country is really diverse, that even with these impacts, even with these threats — in fact, science is saying that around fifty percent (50%) of the species in the world are getting extinct without us knowing them. So I think that's the case. We're just really endowed with a lot of species, but if we can maybe have a time machine and go back like fifty (50) years ago, I would think we will have more number of species that we have as right now.



COMM. PIMENTEL-GANA:

So you're not actually saying that our environment, marine environment is actually helping to attract so many diverse fishes or what do you call this, marine, yeah, organisms. *Oo*. They would come to our country because the environment there is actually okay and healthy.

DR. SANTOS:

Well, there are hypotheses, Ma'am. Again, that statement that we are the epicenter of marine biodiversity is not in reference to now compared to before. It's (a) reference to what has been actually described from other countries. Okay, so compared with other countries, saying that we have a lot of species compared to other countries. But, again, there's a big possibility that actually when we look back and if we were able to study the species in more detail, we will have a lot more. So that to this day, we already actually decimated a lot of them, become extinct.

So, yes, ma'am, in terms of diversity, apparently the country...there's a magic in there. There are a lot of hypotheses that's being put forward to explain why we are the center. Like, some scientists are saying that we are the cradle of life where species are born in this county. And then there's this theory of center of overlap, meaning species in other areas, in the Central Pacific and species in the Atlantic Ocean, for example, are sort of overlaps in our area. So there are a lot of theories that's saying why the biodiversity of the country is very high. But we don't have any clear explanation yet, evidence why, and why, even with these threats, we can still see a lot of new species.

COMM. PIMENTEL-GANA:

Just one more. When did you first study this? What year can you establish the baseline, the first time you ever said that we are the epicenter.

DR. SANTOS:

Actually, it was not me, Ma'am.

COMM. PIMENTEL-GANA:

I mean, your organization - whoever-

DR. SANTOS:

It was published in, I forgot the journal, published by Carpenter and Springer in 2004.

COMM. PIMENTEL-GANA:

Okay, since 2004 up to now, you're saying that there have been changes.

DR. SANTOS:

Yes, Ma'am. We continue to study species and we can still identify, we can still describe new species.

COMM. PIMENTEL-GANA:

Okay. Thank you.

PANEL CHAIR CADIZ:

Dr. Santos, you said that new species are being discovered, but at the same time, you also were saying that a lot more species have been lost. And you ascribed this loss to climate change.

DR. SANTOS:

To a lot of threats in fisheries, Sir, which include illegal fishing, dynamite fishing, habitat degradation, pollution, and now climate change. The symptoms of climate change.

PANEL CHAIR CADIZ:

Are there other questions?

COMM. DUMPIT:

Just on the red tide and the fish kills. I'm sure you have data on the frequency, and if you say that there are more occurrences, could you enlighten us on that and to what extent is that caused by the factors that you've mentioned earlier?

DR. SANTOS:

Yes, Ma'am. I'm not a red tide person — I did not focus on studying red tides — but I did see a paper where they compared red tide occurrence in the region from like, I think, 1960s to 2000, and there they depicted that there was increases in occurrence, including the Philippines, in terms of red tide. Now, particularly on Manila Bay, for example, I don't have any sort of specific study on that. I think BFAR is monitoring that but I don't have the information right now. The funny thing is I do also know that, it's kinda crazy because, actually before, the cause of red tide is *Pyrodinium*, if I'm not mistaken, *Pyrodinium bahamense*. But now scientists are saying we don't see *Pyrodinium* anymore; we're seeing a different kind of species of bloom. So the thing is, there's a lot more things needed to be done to understand what's really happening.

The problem with studying ecosystems in the wild is, actually, you cannot predict things. That's why you need (a) hundred years of data to make certain some patterns because there's certain inter-annual variabilities *na hindi po pang* two (2) years, three (3) years lang, *pero* actually natural occurrence variabilities. We need (a) hundred years (of) data to show *talagang nag-increase*. Unfortunately, *sa atin kulang po yung ganoon pang* information (that it's not just 2 or 3 years of data that we need to know the natural occurrence variabilities, we need hundred years data to really show that there's an increase and unfortunately, we have scarcity of information).

PANEL CHAIR CADIZ:

Father Walpole?

FR. WALPOLE:

Just, I think, to clarify this. Red tide is primarily due to eutrophication of the waters and pollution from often (sic) runoff from the land or waste disposal in the rivers. Now, maybe water temperature might enable that to some degree. But, yes, in Philippine waters, red tide has been on the increase and that's shown and proven in terms of very clear waste and fluid going into the seas. So, we've got to keep that distinction. The other is the way scientific procedure goes, and with the technologies we have today, we're able to, as it were, dredge deeper and go further and find new species that have been there all the time. These species are here both because of tropical dynamics of where we are — we're including in that a lot of the corals, et cetera — and how the plates have moved. So there's a fair understanding of what's there.

Now, to try to ask how climate change is impacting that, plus one (1,) two (2,) three (3,) four (4,) five (5) other factors you have here, I think it's very important to try to see, is there any methodology that can illustrate the multiplier effect of climate change because like our earlier witnesses today, you know, we've problem one (1,) two (2,) three (3,) four (4) and then we have climate change which makes everything worse. So I don't know if there's any studies ongoing that help explain this multiplier effect.

DR. SANTOS:

Yes, Sir. For the red tide, yes, actually pollution and eutrophication can contribute to certain blooms. Although there are, I think, some complications where they tried to correlate El Nino events — not climate change per se — but El Nino events in the occurrence of red tides. That's what I'm saying. And then, with regards to multiplier effects, I don't know. Maybe some other scientist or some other groups would be able to do that. It's really difficult. Since 2012, they've been asking us, "Is it overfishing or climate change?" We haven't really answered that, methodology-wise. The thing is, climate change, you know, it's very new, very new to all of us. And everybody's just starting to try to understand and develop models on this one. And so I'm not sure if there's a methodology to measure multiplier effect, et cetera. I hope there is, but right now, Sir, I don't know any methodology on that aspect. But it would be good.

FR. WALPOLE:

Thank you.

PANEL CHAIR CADIZ:

I have a follow-up question. You were saying that it is not yet clear to you whether the effect is a direct cause of El Niño or climate change. Which of the two factors are affecting the situation?

DR. SANTOS:

Yes, Sir. We've anchored our studies on El Niño because we measure that and as a function of climate change, because as predicted, when you do have climate change now, you will get all these effects of climate change — symptoms, as I've said. And these are warming seas, et cetera. And one of the predicted things that will happen is (an) increase in El Niño events. And there will be more and they will be much stronger. And so that's why we looked at El Niño because that's the one we measure and that's the one we can sort of address in the meantime as a function of climate change. Because for me, again in the Philippines, for example, it's really difficult to correlate increases in the temperature slowly through a hundred years and say that this event would cause decrease in stocks of fish. It's kinda difficult that way. We need more models maybe, as Father suggests, to see that. But, yeah, in the absence of a time series, data that long is kinda difficult. That's why, in our case, we focus on El Niño because that one we can measure as a function of climate change.

Although, if I may add, Sir, actually - we are going to publish a paper with NOAA looking at the model spawning patterns of skipjack. And what will happen to skipjack spawning — *yung panganganak po* (giving birth) — if temperatures are increased. This is based on historical data, catch data, and what we saw is that with the current climate conditions right now, the temperature, we see some changes already in the spawning patterns of skipjack. And, eventually, they say, they predicted that they will go out of this area. Hopefully, not...but we are seeing...we're going to publish that soon. We're seeing some changes in the patterns of skipjack. And that one, Sir, is based on some time series information in the region and some modelling.

PANEL CHAIR CADIZ:

So climate change is causing El Niño... and that El Niño is affecting the spawning patterns of certain marine...

DR. SANTOS:

Yes, Sir. Yeah. That spawning, Sir, is actually anchored already, not on El Nino, but on the changes in the temperature already. It's already the increase in temperature due to greenhouse emissions. So it's like that. So it's a little bit different. The El Nino that I was saying, Sir, for example in the occurrence of fry, we saw that it did not come out anymore, the fry, because of temperature. That one is specific for El Nino because we only have, like, two- three (2-3) years data. But this prediction, this modelling we're doing in the spawning of skipjack is based already on time series data in the region.

PANEL CHAIR CADIZ:

Alright. Thank you.

FR. WALPOLE:

A point to add there: we need to be clear when we're talking of El Nino and ENSO because it is tied to a southern oscillation. And, while clearly climate change will, if you like, aggravate the occurrence of El Nino and probably make it stronger, it's not purely a climate change phenomena; it has always occurred. It's just occurring with greater extremity. So, scientifically, we refer to this as ENSO, yeah? So I think that it's very important to show that there is a history and a link in this occurring but now it's becoming, should I say, more, more aggravated. I'd certainly like to find out more about this study of the skipjack because this is the sort of information that ties to climate change.

DR. SANTOS:

Yes, Sir. Once it's published, we'll give you a copy of that publication in an international peer-reviewed journal. I think, Ma'am, it already got accepted two (2) weeks ago. There's just minor revisions. And then, I think it will be out very soon, maybe in a month's time. I'm going to ask the primary author to give me a PDF copy.

Page 1127

PANEL CHAIR CADIZ:

Counsels, are you redirecting your witness?

ATTY. SORIANO:

Not really redirecting, Your Honor, but maybe a couple more of clarificatory questions.

PANEL CHAIR CADIZ:

Alright.

ATTY. SORIANO:

Dr. Santos, is it costly to undertake research or study on identifying specific impacts of climate change on the fisheries and measuring them or quantifying those impacts? Is it costly?

DR. SANTOS:

What part of the impacts, Ma'am? You mean the socioeconomic impacts or changes in migration or changes in behavior or the productive ability?

ATTY. SORIANO:

All of them.

DR. SANTOS:

All of them?

ATTY. SORIANO:

Is it costly?

DR. SANTOS:

For the socioeconomic impacts, we're trying to do that right now. In fact, the DA Philippine Development World project, we're just waiting for the fund transfer to do an extensive vulnerability assessment of the communities, the fishery sector in terms of impacts of climate change to them and how they are ready or something.

But for the specific, let's say whether *yung galunggong ba natin ay pupunta sa* (will our round scad go to) Vietnam, for example. (For) that one we need, of course, data. We do have some satellite data there. There are some people who are willing to help but I guess, I think it's doable. We need some more investments but I guess, I think one thing that I'm always saying is that what we need now are more people, more expertise, more Filipinos to go into studying this because *sa tuna pa lang*, Ma'am, *ay di ko na kaya* (I am already having a hard time just with the tuna alone). *Mayroon pang sardinas, may galunggong. Lahat po nito may iba-ibang kwento. Tapos yung kwento ng galunggong sa north is different from the kwento ng galunggong sa south, sa east, sa west, sa center. Mayroon pang Philippine Rise. Forty (40) lang po kami sa NFRDI. Forty (40), yung iba nasa aquaculture, yung iba nasa post-harvest. So again, there (is a) need (for) some investments, we need more expertise, but I think we can do it. A lot of people outside are willing to help. It's just a matter of trying to, I guess, operationalize.*

ATTY. SORIANO:

So you would say that undertaking studies and research to understand the specific impacts on fisheries, the climate change impacts on fisheries, is an additional cost for the agency. Is that correct?

DR. SANTOS:

Oh, yes, Ma'am, definitely. We need to develop more expertise. You need to get data, satellite data, for example. We need to get that data from fishing



operators, for example. We need all of these things and it requires additional investment, of course.

ATTY. SORIANO:

So, for your agency in a developing country like the Philippines, it would be an additional expense? Is that right?

DR. SANTOS:

To study the effects and impacts of climate change? Yeah, definitely, *kasi*, Ma'am, in the Department of Agriculture where we are on food security, we try to breed fish, we try to close fishing — although we do understand we need to study them under the climate lens already right now — but, definitely, because we don't know much about the impacts of this one, we need to study them. And so, therefore, we need more people doing that.

ATTY. SORIANO:

And to wrap it up, so in your personal opinion, do you think those who contributed to climate change must invest on those research and studies?

DR. SANTOS:

Well, assuming these people or there are people or industries that caused this whole thing, I believe they should be responsible enough to pitch in and contribute to how we solve all these problems because they were the ones who caused it in the first place. So I guess it's just proper that they should chip in and chip in more. Problem is, unfortunately, the Philippines, although we do emit very little carbon compared to other countries, but actually we are bearing the brunt of the impacts of climate change because of our vulnerabilities, because of our communities. So, actually, unfair. But what do we do? We in government just do whatever we can to help out our clientele, which are the fisherfolks.

ATTY. SORIANO:

That is all, Your Honors. Thank you very much, Dr. Santos. May he be...

COMM. TANODRA-ARMAMENTO:

I'll just have an additional question because Dr. Santos, in an answer to your query if the one that has caused climate change, if ever there is one, will be responsible enough to pay for the research to be conducted. I want to ask Dr. Santos, as a scientist, what do you think or who do you think caused the climate change?

DR. SANTOS:

Well, as you know, there's been debate on whether climate change is occurring or not. There is still. Although, in terms of policy, I think in the Philippines, it is a non-issue because we do have a Climate Change Act. So meaning we're preparing for that.

And what I've seen is that there was the problem, the climate of the world is changing through time. There's these ups and downs. Apparently, there's already strong evidence to show that this surge in change in temperature, for example, is really very quick and very recent in terms of geologic events. And there's evidence to show pinpointing towards the increased emission of these greenhouse gasses. So, basing on that evidence, there is, we think, or I think that, really, that industrialization that boosts, in terms of emission of greenhouse gases, (is) likely to have caused this rapid increase in temperature that we're experiencing right now because it's very different. It looks like it's really man-made. If it's not, it should be like geologic times, thousands of years but apparently it's this one. So that's my personal opinion.

COMM. TANODRA-ARMAMENTO:

Thank you very much, Dr. Santos.

ATTY. SORIANO:

May Dr. Santos be excused, Your Honors?

PANEL CHAIR CADIZ:

And, also, we would like to remind you and the Counsel, when the paper that was adverted to earlier is done, to please furnish the Commission a copy of this study. Thank you.

So we may now proceed to your next witness.

ATTY. PAUDAC:

Yes, Your Honor. Good afternoon, Your Honor. May we call on our fifth witness, Undersecretary Sigfredo Roque Serrano?

PANEL CHAIR CADIZ:

Can we have Usec. Serrano sworn in? Counsel, you may proceed.

ATTY. PAUDAC:

Our fifth witness is the Undersecretary for Policy and Planning, Project Development, Research and Regulations of the Department of Agriculture. He was appointed as Undersecretary since 2005 and has been with the Department of Agriculture since 1992. Usec. Serrano also has a postdoctoral degree in Agricultural Economics.

Your Honor, we are offering the testimony of Usec. Sigfredo Serrano to share the impacts of climate change on the agriculture sector. But, before we proceed, Your Honor, may we be allowed to ask preliminary questions with respect to the documents that Usec. Serrano furnished the honorable commission and this counsel?

Page 1132

PANEL CHAIR CADIZ:

Please go ahead.

ATTY. PAUDAC:

Good afternoon, Usec. Serrano.

USEC. SERRANO:

Good afternoon, *po*.

ATTY. PAUDAC:

Usec. Serrano, I have here two (2) documents. First is what appears to be a curriculum vitae of Sigfredo Roque Serrano, consisting of three (3) pages and, also, the second document which appears to be a printed PowerPoint presentation entitled "Climate Change and Philippine Agriculture" by Sigfredo R. Serrano, Ph.D. I'll be showing you these documents, Dr. Serrano. Usec. Serrano. Do you confirm and affirm the contents of these documents?

USEC. SERRANO:

I do confirm and affirm the contents of the documents.

ATTY. PAUDAC:

Thank you, Usec. On your curriculum vitae, on page three (3) thereof, there appears a signature and a date May 20, 2018. Do you recognize this signature?

USEC. SERRANO:

Yes, most definitely, Counsel. Yes.

Page 1133

ATTY. PAUDAC:

Whose signature is that, Usec. Serrano?

USEC. SERRANO:

This is my signature in my beautiful handwriting, Counsel.

ATTY. PAUDAC:

Thank you, Usec. Serrano. Your Honor, for the record, the curriculum vitae of Sigfredo Roque Serrano was pre-marked as Exhibit TTT to TTT-2 consisting of three pages but the signature which was recently signed earlier by Usec. Serrano, we are requesting that this be marked as our Exhibit TTT-2-A.

And the other document, Your Honor, was pre-marked as Exhibit UUU to UUU-8 consisting of nine pages during the pre-marking of exhibits last May 21, Your Honor. With that, Your Honor, may we proceed?

PANEL CHAIR CADIZ:

Please proceed.

ATTY. PAUDAC:

Usec. Serrano, can you please enlighten this Honorable Commission and the audience with respect to your presentation that you submitted?

USEC. SERRANO:

Yes, Counsel. Your Honors, this presentation will not be a technical presentation. I'm going to present it at the policy level. This benefits from the previous testimonies before this Commission on this particular case, including

the more recent presentation. And, therefore, I would extend on what all of those facts and technical data actually mean for our people, more particularly in the agriculture and fisheries sector. Of course, I'll skip the fisheries part because my colleague from the Bureau of Fisheries and Aquatic Resources has brilliantly elucidated on the details for fisheries.

So, if I can start, Your Honors, just to establish the premise of this brief presentation, you'll note that we are archipelagic. That's 7,100 islands and that depends on whether it's high tide or low tide. And we are in the West Pacific. That means also that, if you look at this kind of geographical factor for the Philippines, that also partially answers your question on why so many people are vulnerable to climate change. It's because we are an island nation. We are archipelagic. And most of our people are actually in the coastline — a substantial proportion of the population would be on the coastlines.

Let me also describe the Philippines as being the jewel of the Pacific Ring of Fire and being the buckle of the typhoon belt. It's not a very nice distinction but that aptly puts how I would describe the Philippines in terms of weather, disaster, et cetera. And, of course, we are a very prolific people. We have more than a hundred million in terms of population. But I would tell you later, Your Honors, that, while the population growth and the number of our people seems to be the problem of many among us, I would tell you that it should not be a problem at all and that we could look at our people differently from how we view the Filipino people.

Recently, from the past administration and this current administration, we have relatively high economic growth. But it's also a fact that we still have very high poverty rates. Inclusivity still appears to be an elusive target that, I think, this administration is trying very hard to attain. But I'd tell you that, you might not have known it, but the poverty rate in the rural areas is actually higher than the urban areas, which is quite ironic because that's where all of the food, that's where the base of the economy would be. And yet something like forty percent (40%), I think the last figure I saw was forty-three percent (43%). It's quite tragic that more people are poor and more hungry people can be found in the rural areas. We are no longer a predominantly rural people; about forty percent (40%) of the population is now considered rural. And agriculture now contributes only less than ten percent (10%) of the Gross Domestic Product of this country.

Next. In terms of resources, we have something like ten (10) million hectares out of something like thirty (30) million hectares of the land area of the Philippines. Some say it's now different because the more precise imaging and satellite image could say that even the number of islands suddenly eight thousand (8,000) *na daw kasi lumubog na yung iba, naging dalawa na* (they

say that it became eight thousand [8,000] since some of the islands sunk and divided into two) because of some sea level rise. Most of our crops would be coconut. Fully one-third (1/3) or about three (3) million of those ten (10) million hectares would be on coconut. Of course, rice, corn, sugarcane, other plantation high value crops.

So, however, the biggest threat to (these) is this compounding climate change. And, by the way, the earlier presentations and testimonies here, Your Honors, have told you, particularly from PAG-ASA that there is no longer a debate on whether climate change has anthropogenic origins; it's caused by the activity of people. I could tell you that one other threat to agriculture is also anthropogenic in character, and this is conversion of agricultural lands.

So our output in agriculture is sluggish. We have lagging output and yield growth. And the major issues (originate) way back from the last century: infrastructure, rural finance, regulatory services, technology, and advisory services. And to cap it, we are a net food importer and we have very poor export performance. Now, what are the...next, please. I would actually identify three (3) principal challenges in agriculture and fisheries. One, attaining and sustaining food security at viable levels of sufficiency. And, when you say viable levels of sufficiency, this is primarily also triggered by recent developments on climate change. Before, they said, "Oh, we can just import all of the food that we need as long as we have the money and foreign exchange to buy it." But, now, if you see, if you study impacts of climate change, not just in the Philippines but from other countries that are affected by climate change, it's not a pretty picture. So, those economists who were saying that we can rely on international trade are actually standing on very thin ice on this particular argument.

Of course, even though a lot of the economies of the world have liberalized, I can tell you, as a trade negotiator and one who studies the trade patterns and the policies of other countries whom we negotiate with — the WTO on a bilateral basis, that there is more distortions now in the international markets, more particularly in agriculture. So, therefore, the challenge is not just being competitive in international markets for agricultural products but you want to be competitive in increasingly distorted international markets. I refer to these markets as the cesspool or the totally polluted international markets because of distortions. And, of course, the game changer, Your Honors, is you have to be resilient to climate change.

Now, next. This figure is just to show you there that in the copies that you have, Your Honors, that this is a 2014 index where it shows that the Philippines is one of those vulnerable countries. In some of the reports, as my colleague Dr. Santos from BFAR has said, various indices will always place

the Philippines on top or on the top ten (10). But I could tell you that, if we compare ourselves to countries from the South Pacific or Maldives, we are the most vulnerable regular sized country in the world. *Mayroon po kasi yung size na parang sako lang* (There are those that has just the exact size). We are a regular-sized country with a regular-sized population.

So, next please. So let me just run down some of the technical aspects that would be relevant to us in our discussion on agriculture. And these are actually, I'd like to commend, Your Honors, DOST-PAG-ASA for already localizing and simulating AR 4. I think they will be an AR 5, meaning Assessment Report of the Intergovernmental Panel on Climate Change. It's very important that, if our country is to plan and to prepare for climate change impacts, that we are able to localize this particular data. So, DOST PAG-ASA — against all odds, I should say — was able to do this for AR 4 and they're, I think, doing it, will do it for AR 5.

So these are the important ones. One, increases in annual mean temperatures. Those are very high numbers — point nine (0.9) to one point one (1.1) degrees Centigrade by 2020, and 2020 is upon us. And then one point eight (1.8) to two point two (2.2) degrees Centigrade by 2050. So, when we go later to impacts on what would these numbers mean to agriculture, you won't need every calculation to be able to deduce what would be the impact.

Extreme events. On ambient temperatures and precipitation, you are going to have more frequent hot days above thirty five (35) degrees. If you listen to your radio or your TV and PAG-ASA announcing the temperatures, they've resorted to things like "Well, it's thirty five (35) degrees but it's feeling forty one (41)." There would be more dry days of less than two point five (2.5) mm of rainfall and that is indeed already drought conditions, Your Honors. And the increase in heavy rainfall events of greater than three hundred (300) mm. Actually, what I've not included there is that this kind of an intensity is like what we had experienced in Ondoy, when you have that much precipitation that fell in so short a time, when, in fact, that volume of precipitation could account for the whole rainy season. So these are all very disturbing developments.

In terms of seasonal rainfall and precipitation, as you see, in the Philippines, we have two (2) distinct seasons. Of course, except for some areas in the Philippines where you have wet and very wet, which is like in CARAGA. You have increasingly dryer dry seasons, which is what we are experiencing now. And you're going to have increasingly wetter wet seasons.



In terms of tropical cyclones, these numbers, I think, are of, say, ten (10) to twenty (20) increase in intensity due to increased sea surface temperatures. I think these are average numbers. But we will begin to see, as what we have seen in Yolanda or Haiyan, Your Honors, the radical increase in the physical violence of extreme events.

So what are the impacts on agricultural productivity? Let me start with your favorite crop, which is rice. For every one (1) degree Centigrade increase in night temperatures, you're going to experience from the biophysical of the rice plant, something like 10% yield reduction. Why night temperatures? Let me just explain a little technicality, Your Honors. Most plants, particularly our crops, they make the food from photosynthetic activity, nutrient uptake from the soil, or supplementation. During daytime, with good weather, good ambient solar radiation, and good ambient temperatures, it manufactures food, okay. Of course, our interest for rice would be manufacture of biomass for grain instead of transferring, manufacturing biomass for just the stem of the leaves. Same is true for fruits, vegetables. Now, in order for this to happen in an optimal way, there must be an optimal difference between daytime temperatures, which need to be hot if you have solar radiation, and at night time, which needs to be relatively cooler. If you still have increase, if you have increasingly hot nights, Your Honors, there is a tendency for all of the biomass that had been manufactured during the day to be degraded. And it's one important cause of the decline in yields or yield reduction. Or, in the case of rice, maybe the material will just go into more leaves or more stem, okay.

Now, sea level rise, which is a slow onset event, Your Honors, it doesn't happen overnight. That's why I was pretty much concerned when people say, "Ah, it's going to happen beyond the term of this administration, so let's not do anything about it." There's just no basis. But we already know from one of the scientific evidence and from the studies and the trends from the past century up to now that sea level rise is going to happen. Now, sea level rise will increase the salinity in our agricultural lands. And it will not just be those lands that will be in direct contact with the sea water because, as we know, the soil is particularly an effective conductor of water as well through capillary action. So salinity in rice, Your Honors, will bring us back to the pre-green revolution levels, meaning to say, if the average yield now for rice is more than four (4) metric tons, we're going to go back to something like one point five (1.5) metric tons per hectare. And most of our productive rice lands are very near sea level, and these are relatively flat areas which enjoy irrigation, etc. Many of them can actually yield seven (7) to nine (9) metric tons. With increase in salinity, Your Honors, all of that is going to be obliterated and brought back to one point five (1.5) metric tons per hectare. And you don't need extensive calculation or thinking or inventing an algorithm to say that, that definitely is a very important and decisive threat to food security.

Flooding will increase crop losses. And, considering that rice is a water-loving crop — in fact, Your Honors, in an era of climate change and water scarcity, irrigated rice needs something like ten thousand liters of water to generate one (1) kilo of milled rice. However, while we are breeding varieties of rice that can survive under flooded conditions for a prolonged period of time, we're not yet there, because the floods that we are experiencing are not only getting longer, they're getting more violent in terms of water flows and water velocity.

Of course, water scarcity or drought will severely affect rain-fed areas, and rain-fed areas are particularly important, Your Honors, if you talk about poor people because the poorest rice farmers are the ones who tend the rain-fed areas. They do not benefit from the irrigation services of the government; they rely on precipitation. While it is possible for them to diversify crops, but because there is no good water resources, and the way to manage them and government has not reached them in so far as that service is concerned, they have to be content with one (1) crop of rice. And, I tell you, rain-fed rice with no control over water levels is not a very profitable crop. You're lucky with four (4) metric tons, but the average yield there, Your Honors, would be up to about one point five (1.5) or two (2) metric tons.

Now, climate change, Your Honors, will also exacerbate the pest problem, particularly bacterial as well as insect pests, especially with increasing temperatures. This is favorable to many of the pests of concern and pests, Your Honors, can really mutate very fast. With changing biophysical environmental conditions, your pests can actually evolve into more effective and more efficient pests, which is actually not very good news to many of our farmers nor to all of us because that means more losses from pests.

And, of course, high wind velocities, Your Honors. You'll note that, when Typhoon Pablo approached Davao, Davao Oriental, it was running at something more than two hundred (200) kilometers per hour. And, in the last administration, I was asked, "Why is it that Davao Oriental suffered less damage than Compostela Valley or Davao del Sur when the wind has already abated?" But I was telling them, "You know, even if most of what was hit in the coastline is coconuts — that's quite relatively resilient to high wind velocities — but after they have crossed the mountains and the coconut areas there, you're going to hit bananas, rice." Anyway, if you're still having one hundred kph, Your Honors, even us people would not actually remain standing with those velocities. So we are now experiencing these wind velocities very commonly. Just to provide you also information on losses, Your Honors, when I started at the Department of Agriculture way back in the 1990s, which was the last decade of the last century, if we lost thirty thousand (30,000) metric tons of palay to an extreme event like a typhoon, it's already big news and it's a big deal. And it triggers speculation for "*Siguro kailangan*

*mag-import na tayo.*” Do you know how much we’re losing recently, Your Honors? We’re losing anywhere from three hundred (300) to six hundred thousand (600,000) metric tons of *palay* (rice grains). If at just fifty percent (50%) milling rate, which is very low, just to simplify the calculation, we’re losing anywhere from one hundred fifty (150) to three hundred thousand (300,000) metric tons of milled rice due to extreme events. That is about how much we import on a regular basis, Your Honors.

One other thing I would like to *amo*, on crops, not just on rice, is that temperatures and the changes in the values of the biophysical parameters like water, changes the physicochemical properties of the soil. And, as you know, Your Honors, crops are anchored on the soil. So the efficiency with which crops can draw nutrients from the soil, the efficiency with which crops can be productive utilizing this soil resources, is also affected by the changes in the values of these biophysical factors in our environment like temperature, soil moisture, available water precipitation, and so on.

Next, please. On corn or maize, that’s a one point seven percent (1.7%) reduction in yield for each day above thirty degrees Centigrade under drought conditions. That is pretty much substantial. Although corn is a much more efficient crop because it’s what we call a C4 crop. Rice is a C3 crop, it’s a less efficient utilization of carbon in the photosynthetic activity. But, still, corn would have that losses. The losses from various vegetables and fruits would even be higher, Your Honors, particularly for succulents. Our studies already indicate that, even without climate change conditions, for perishables like fisheries, vegetables, and fruits, the average losses would already be forty percent (40%). With climate change impacts, with increase in temperatures, you might have noticed on NLEX or in the highways, *yung* vegetables, *nilalagay nila sa garbage bag na black*. *Baka dapat siguro lecturean natin yung mga naglalagay, kasi yung black actually mas mainit yan, so pagdating sa Divisoria nyan, talagang luto na po, luto na yung ano* because of the *ano*. *Kung mataas po yung temperatures dyan, eh wala talagang mangyayari* (...the vegetables are placed in a black garbage bag. Maybe we should give lectures to those who are doing that. Black is actually hotter so when the vegetables are delivered to Divisoria, they’re already cooked. If the temperature is higher, then that’s what’s really going to happen).

For livestock, although livestock production in this country is a little bit more controlled because *nakakulong yan at saka ano*, but the feed intake would be reduced by three (3) to five percent (5%) for every one (1) degree Centigrade above thirty (30) degrees Centigrade, Your Honors. When your animals will have reduced feed intake, you also have productivity losses. Not only that, Your Honors, there will be temptation for livestock producers to utilize more quick solutions that actually can have public health concerns like, *napansin*

*nyo po dati, forty-five (45) days ang manok. Tapos ngayon, thirty (30) days. Tapos they are talking about the two (2) week chicken. Mayroong nilalagay sa feeds. That's why I'm actually talking to our livestock people to have this evaluated kasi we have complaints na. Although wala pa namang nagsasabi na pag kumain ka ng commercial chicken, magkakaroon daw ng sex reversal or things like that. But we want our consumers, even though with all of these advancements in technology, we want our consumers to be assured, that the food that they eat and procure from the markets are totally safe. But, when you have these kinds of pressures on farm production, there is a temptation for profit-makers to really resort to these kinds of methods like steroids, etc. And, of course, Your Honors, people can adjust to temperature rise — you have your air conditioning — and, therefore, your fertility and your libido does not decline. And you need livestock to reproduce. You need them to produce eggs, you need your pigs to produce big litters. Most definitely, even your animal physiologist will tell you that there is definitely a substantial impact on the libido of animals and their reproductive ability, even on fish. Okay.*

I will skip the slides on marine and coastal habitats and just say that, Your Honors, our marine and coastal resources, our farmlands, and our forest are all interconnected. I'm not going to comment on why they separated DENR from DA but, Your Honors, the way to approach this, to mitigate or to reduce impacts or to prepare for a phenomenon that affects all of these without distinction. It doesn't distinguish between forest, et cetera., et cetera, is to really look at it from the point-of-view of— I'll just tell you that, as a nature and wildlife photographer, if I see the forest and I have an estimation of the birdlife, the wild birdlife there, I have a pretty good idea what kind of a forest that is, what are the likely problems and how much the forest can support. If you are an agriculturist and you don't have an appreciation of the watersheds and the forests, you have no business doing agriculture, you should be in the stock exchange.

Now, impacts. Next. One of the things that has not been really discussed much would be rural infrastructure. The increasing violence of extreme events, and even, you know, the slow developments on the biophysical front of our environment, will substantially increase losses in public infrastructure investments. And when you have a government that is BUILD, BUILD, BUILD, kami sa rural sector, *sabi namin kahit na yung BUILD, BUILD, BUILD ay small letters na lang, okay na kami. Kahit wala nang superhighway, ayusin na lang yung farm-to-market roads, yung bridges, yung market, ano* (We say in the rural sector, that even if we minimally build, even if there are no super highways just fix the farm to market roads, bridges, and market).

This is important, Your Honors, because, if typhoons, extreme events and the infrastructure we build are not in accordance, cannot survive the increasing physical violence of extreme events and climate change impacts, not only will they be a crime against taxpayers but it's going to make it difficult for our farmers to access their own markets. I have farmers complaining to me, saying, "*Eh mabuti pa yung farmers ng America, naa-access yung market natin* (The farmers of America are more fortunate because they can access our market)". I have a market just 15 kilometers away, because it's a bad road and the typhoon just washed out the bridge, I cannot physically access it now. We need to be very, very sensitive to these things. But rural infrastructure loss and damage is really an important impact that will have a strong effect on agriculture.

Rural investments. Your Honors. Next. Investments are the fuel of the engines of agricultural industry or any industry. Without investment decisions, you're not going to have growth. If you're running a store and you just maintain it, you don't invest in anything else, it's going to stay as is, it might even decline. So investments are the source of growth. But investments rely essentially on risk assessment. Now, many say that farmers are afraid or averse to risk. Even my professors in the University of the Philippines tell me that farmers are averse to risk. My exposure to our farmers and having to deal with them in my nearly forty (40) years in government, Your Honors, exclusively on agriculture, tells me that farmers are not averse to risk. Farmers have lived with risk all their lives. They've known how to deal with risk and they were able to calculate whether they will do this or they will do that. So farmers have always, in fact, all of us deal with risk. It is uncertainties that we cannot deal with. Farmers cannot deal with something that is dicey. When they are faced with uncertainty or uncertainties, this is when farmers go to the church or go for a novena or that is why *ngayon, hindi na nila alam, magfo Flores de Mayo na ba tayo o ano ba* (they do not know whether or not they are going to celebrate the flowers of May)? Therefore, Your Honors, one important impact on the minds of our people and the way they decide, particularly among our farmers, is a lot of the risks that they confront and they deal with successfully, and from which they learn their lessons, is the conversion and transformation of these risks into uncertainties. So, therefore, these uncertainties need to be reconverted back, you know, into things that they can discern, things that they can calculate. Not just, *eh siguro ipasa-Diyos na lang natin yan, mahirap po yan* (That's difficult so I guess we should just let God intervene), you cannot make business. So, therefore, these uncertainties deter investments and will severely constrain profitability and income, sector growth and development.

Why is this important, Your Honors? For our country, we seem to have been obsessed with FDIs and foreign investments. The investment of our farmers and the profitability of their investments will generate wealth that will not leave this country, unlike your call centers, your multinationals, or foreign

corporations, or your FDIs. So, therefore, the Department, we're very, very much concerned that we look at the impact of climate change on the psyche of our farmers, on whether it is blunting their will to invest or adopt technology, because most definitely, these will have not just a big impact on their own personal income and livelihoods but on sectoral growth and the growth of our country because, after all, all of these industries, their base is still agriculture and the rural sector.

On environment and agriculture. Next, please. New pests and diseases will rapidly evolve profiles. And, Your Honors, as I've said, what will endanger our forests in terms of pests will also endanger agriculture. Also, we have a BMB in the DENR. We will have suffered losses most definitely in the other precious but often ignored natural resource for agriculture, and this is our biodiversity resources and the endemic gene pool. We've often said that, you know, what dominates Philippine agriculture today are hybrids. These are the ones that have embedded terminator technology; you cannot save the seeds, etc. But we do have a rich, although unexplored, biodiversity and a genetic pool that we can use to develop our own, that will not heavily rely on what commerce is today. Okay.

Now, all threats to the forest and water sheds translate — and I should say this, Your Honors — in magnified manner, to threats to agriculture and fisheries. The increasing difficulties in recovering watersheds will leave irrigation systems, as I would describe them to be more precipitation-dependent, rather than watershed supported. *Walang kwentang* irrigation systems *po yan* (these are useless irrigation systems). And, therefore, this irrigation being an important factor in agriculture, if we have this situation and this persists, then this becomes the primary constraint to increase in productivity and technological change in agriculture. *Nakakita na ba kayo ng agriculture na hindi nangangailangan ng irigasyon* (Have you seen agriculture that doesn't need irrigation)? All of life needs water and it needs to be managed. We were telling a lot of the politicians who are demanding "We need irrigation systems in our areas." When you have only a seven percent (7%) forest cover, Your Honors, it's very difficult to make decisions on irrigation infrastructure. You can spend a trillion on irrigation and cover every farmland with irrigation, but if there is no watershed to support them, then it's sunk, sunk investment. And it's, I should say, a crime against the taxpayer.

Now, what is the impact of climate change on this? Your Honors, climate change further exacerbates and makes it difficult to recover the watersheds because of the increasingly adverse biophysical environment and conditions. So it's going to be very, very difficult to recover those watersheds and have the proper irrigation.

Now, on people, the general population. Therefore, Your Honors, with all of those that I have previously discussed, for the general population, it means general supply challenges. It's been a long time, the last time we had rationing or lines to buy rice was when I was an undergraduate in 1974, which would reveal my age, Your Honors. That was the last time. Now, if we are not careful, this is going to be...this might be the result. Food supply challenges are going to be a particular future - higher food prices because of higher production cost. Because of your difficulties and your damage to infrastructure — you're going to have higher logistic costs, and, because of this, you're going to have higher malnutrition and food insecurity risks.

Now, Your Honors, and of course this is on top of other serious impacts on public health, loss of life and property. How many did we lose in Haiyan or Yolanda? Some peg it at ten thousand (10,000,) probably more. Now, Your Honors, I'd like to say this — the impact of climate change, many say, is it doesn't spare anybody. *Sabi nila* (They say), "The great equalizer is climate change." I disagree because, whether we like it or not, climate change will further magnify the manifestations of unfairness and inequality in society. The rich will be more agile; they will have more resources to adjust and to adapt and to protect themselves. The poor will become increasingly vulnerable. So the poor will suffer the most and the less agile and have less resources. So let us not buy this very nice tagline about climate change being the great equalizer. It is the great game changer to governments, to people and communities.

Now, to farmers. You're going to have higher production and marketing costs. Next, please. And, therefore, this would lessen their cost and this will make them uncompetitive. Our government does not essentially provide adequate subsidies to our farmers just like what others — particularly, the developed countries — who virtually smother their agricultural sectors with subsidies. Anywhere from production subsidies to export and marketing subsidies — we don't provide those. They're not sexy in the appropriations process. There will be, of course, income losses from reduced productivity, reduced opportunities for income and livelihood and diversification.

So, Your Honors, even if other, especially the developed countries, who, by the way, Your Honors, I would submit because you had the question earlier on who do you think caused climate change? I think that's no longer in debate. Those developed countries that started this from the Industrial Age and continue to do so are the real culprits of climate change. But the other noxious thing that will happen, Your Honors, that they also protect and subsidize their farmers, and we are a market of one hundred (100) million or more and growing. And it is a consumer base that has a very high propensity to buy imports. So what do you think is going to happen to our farmers whose cost

of production have increased, whose cost of logistics and marketing has increased, whose bargaining power has declined? They are going to be obliterated out of their own domestic markets by foreign farmers. If there is anything that has spawned rebellions or revolutions in the past against the Spaniards, against the Spanish, against the Republic, it is this situation, Your Honors. So this is going to endanger even the state and the government, but the victims will also be the poor and those in the agricultural sector.

Of course, the fishers. You're going to have reduced catches and increase in costs, my colleague has also told us increased pressures for fishing effort to exceed carrying capacity of marine resources, and there is definitely going to be temptation for IUU fishing because, you know, we have followed our own IUU disciplines. We're trying to promote this program so that we are a responsible fishing nation because we are a major fisheries nation, and IUU fishing is something that is not consistent with our role as a major fisheries nation. But all of these impacts on our marine resources, even the coastal areas, even on aquaculture, will drive many people to flout their discipline on IUU fishing.

I would like to close, Your Honors, by saying the following: Your Honors, there are things that happen in the short term for climate change, like extreme events. They are sexy to the press, they are sexy for politicians. But there are things on climate change that happens way beyond the political life of our political leaders or even our tenures in government. And I refer to slow-onset events. We cannot wait. We have to use the insights from science, particularly climate science and the biological sciences, to be able for us to evaluate ahead and prepare for slow-onset events. We cannot wait to generate our own data here. We cannot wait for those researchers to finish so that we have an unequivocal conclusion. Because, as far as I'm concerned, Your Honors, when we talk about slow-onset events like temperature rise, *meron pa bang* argument *dyan na may problema tayo sa* agriculture, *may problema sa* public health? *Wala na eh* (will there be an someone who would argue that we have a problem in agriculture or public health? No one). We all know that from the experience of others who have their own string of data. We don't need to reinvent and wait because, whether we like it or not, we have to do our preparations and our adaptation to climate change now. So we have to make those decisions even if we are not exhaustive in the data. Okay.

Your Honors, climate change has prejudiced most definitely against agriculture and fisheries and its population. There is prejudice to the poor. In fact, Your Honors, I should say that in the face of the recent extreme events, extreme prejudice. Many of our fellow citizens have been terminated by climate change impacts with extreme prejudice.



Your Honors, while the Philippines adapts, while the Philippines will need to adapt to climate change, Your Honors, those who caused climate change — and I should say the industries and those countries and those governments that initiated this in the Industrial Revolution and did not institute environmental discipline so that they can have a mitigation program or mitigate their impacts on the environment, must perform mitigation in accordance with what climate science provides and demands. And not only that Your Honor, we are victims. A crime has been committed against the environment, and against our country and our people. And, therefore, it is my submission, Your Honor, that this party should make reparations to the victims of their actions.

I would stop there, Your Honor. And I would be happy to entertain any clarifications or questions. Thank you, Sir.

PANEL CHAIR CADIZ:

Thank you very much, Dr. Serrano. Counsel, do you have...

ATTY. PAUDAC:

May I, Your Honor, in the interest of time, since we still have one (1) more witness, Your Honor, who will be presented via Skype. This representation will just be having one question. I will submit to the honorable Commission if it has other questions to ask Usec. Serrano.

Usec. Serrano, thank you for that very enlightening presentation. Just one quick question, Usec. Serrano. Has the Department of Agriculture specifically identified agricultural sectors or areas that were severely affected or impacted and do we have data as to the number of the farmers affected?

USEC. SERRANO:

We have, in fact, used satellite imagery. As to the number of farmers affected by climate change impacts, that's 100% of the farming sector. No farmer in this country has been exempted from the impacts of climate change, and let me just provide you with a curious but less known fact. If you know the Agriculture and Fisheries Modernization Act, which was enacted in 1996, there is a section there that mentions the responsibility of the government and for the programs of the Department of Agriculture to address climate change

and global warming. Of course, at that time, they frequently used global warming but, as early as 1996, this is already in our minds.

Of course, we proposed these efforts for adaptation. I mean, I entered the Department of Agriculture Office of the Secretary in 1998. And it was only, I think, about three (3) years ago that we were provided appropriations to support climate adaptation because our contention, Counsel, Your Honors, is that every farmer in this country has already been affected. Some prejudice has already happened, and we need to be able to arm our constituency in agriculture to be able to adapt to climate change.

We don't prioritize mitigation. We're not going to reduce greenhouse gasses for those who have caused this. We will clean up and mitigate what we emit. That's it. But, since this is already happening, Your Honors, our primary concern is adaptation of our people to climate change. So you can go to the DA website and you can see there the emergence of...we have these maps, Your Honor. You click it, you want to know what crop is viable in this particular municipality, even *barangay*, it will show you. This is based on our satellite images and how we process the maps. We also use the maps that have been generated and the layers from DOST, from DENR, *kasi walang ano eh* (Because there is none). Then we just generated those that are of particular interest to the Department of Agriculture, so like water hazards, storm surge. *Ito yung ano eh* (this is, umh...). You will see there, if you go to Tacloban, for example, it will identify to you what areas in Tacloban where you need to put human settlements, where it is not safe to put this because the land is already classified in terms of vulnerability. Sadly, Your Honors, I observed that the developments in Tacloban have more or less followed the old, so, as they say, history repeats itself but the next experience is usually much more painful than the last.

ATTY. PAUDAC:

Thank you, Usec. Serrano. Your Honors, that would be all for the witness. If you do have questions, Your Honors.

PANEL CHAIR CADIZ:

Thank you very much, Usec. Serrano. There's a witness who will be testifying via Skype and, in the interest of time, for now we will have no more questions for you, but we might request you to come back at a later date for perhaps more testimony or information or questions. Thank you very much.

Page 1147

USEC. SERRANO:

We will be at your service, Your Honors. Thank you.

PANEL CHAIR CADIZ:

Alright. Thank you.

ATTY. PAUDAC:

Your Honor, may the resource person, Usec. Serrano, be excused?

PANEL CHAIR CADIZ:

Witness is excused. Thank you. Thank you very much, Usec. Serrano. Can we have a five (5) minute break for everybody before we proceed to the next and last witness? Okay. Thank you.

*[break]*

CLERK OF THE INQUIRY:

All rise. The Honorable Inquiry Panel Chairman Commissioner Roberto Eugenio T. Cadiz still presiding. Everyone may be seated.

PANEL CHAIR CADIZ:

*[bangs gavel]*

Thank you very much. We shall now resume the public hearing.

Counsel, are you ready to present your last witness for today?

ATTY. SORIANO:

Ready, Your Honors. May we call on our last witness and resource person today, Mr. Michael Addo? He will be presenting via Skype.

CHR LEGAL OFFICER:

Mr. Witness, can you please raise your right hand? Do you swear to tell the truth, the whole truth, and nothing but the truth under the provisions and the penalties as provided by law?

MR. ADDO:

I do.

CHR LEGAL:

Thank you.

PANEL CHAIR CADIZ:

Okay. Thank you very much. Counsel, you can now proceed to present your witness.

ATTY. SORIANO:

Your Honors, we are presenting Mr. Michael Addo. He is a professor of law at the University of Notre Dame, a director of the law program at the London Global Gateway, and a member of the United Nations Working Group on Business and Human Rights. He is requested to present here to explain the issue of human rights responsibility of transnational corporations and business enterprises. For preliminary questions, Your Honor, may I proceed?

PANEL CHAIR CADIZ:

Please proceed, Counsel.

ATTY. SORIANO:

We have several documents, Your Honors, and two (2) documents rather, one (1) document has been submitted and pre-marked on 21st of May 2018. It's "The Profile and Statement of Michael K. Addo", consisting of nine (9) pages, which we received via email from Mr. Addo. It is pre-marked as Exhibit QQQQ to QQQ-8. The same document, Your Honor, bears the signature of Mr. Michael Addo, which was pre-marked on the same date as QQQ-8-A. For confirmation of Atty. Esguerra, Your Honors.

PANEL CHAIR CADIZ:

Alright, proceed... the exhibits have been confirmed.

ATTY. SORIANO:

We received additional documents and we submitted the same this morning and it is entitled "PowerPoint Presentation of Michael K. Addo," which was also pre-marked just a few hours ago and it was pre-marked as Exhibit SSSS to SSS-20. For confirmation of Atty. Esguerra, Your Honors.

PANEL CHAIR CADIZ:

Thank you. Your witness can now start testifying.

ATTY. SORIANO:

Mr. Addo, can you please confirm and affirm the contents of all the documents that I just mentioned, as well as the sending of those documents via email to us, the legal representatives of the Petitioners?

Page 1150

MR. ADDO:

Yes, I confirm and affirm that these are documents that I prepared and sent to you for submission to the Commission.

ATTY. SORIANO:

Thank you very much. Mr. Addo, you may now start your presentation.

MR. ADDO:

Thank you very much. Your Honors, I appear before you as a witness for the Petitioner to present before you the United Nations Guiding Principles on Business and Human Rights and the responsibilities that these Guiding Principles set up for business enterprises, and to also assess the implications of these Guiding Principles for climate change. In order to do this, I have prepared a presentation, a copy of which, Your Honors, has been submitted as (an) official document. But I'd like to go through the presentation by sharing my screen with you, if that is okay.

PANEL CHAIR CADIZ:

Please proceed. That's perfectly alright.

MR. ADDO:

Now, I'd like to start by a snapshot statement. So the Guiding Principles on Business and Human Rights were unanimously endorsed by the United Nations Human Rights Council in 2011. They are the very first normative set of standards on the global level on human rights and business, and they provide, to the best of my knowledge, the most authoritative reference point for states and companies. They provide clear normative standards, clear operational guidelines, and establish a clear platform for action. And it is on these actions that we will then discern the human rights responsibilities of private corporations.

If it pleases Your Honor, I'd like to start with a little bit of a background to the United Nations Guiding Principles. Now, the United Nations, fairly early on, have, as far back as the 1978 with a lot of challenges involving adverse human rights impacts caused or contributed to by companies, especially transnational corporations. And the United Nations since that time has embarked on a campaign to set for effective standards. And these standards have gone through a whole gamut of campaigns and exercises, none of which has been successful. And the last unsuccessful effort was in 2003, when the then-Commission for Human Rights tried to discuss the subject of the United Nations norms on business and human rights, which were then rejected. As part of that failure, the Human Rights Commission subsequently became the Human Rights Council, invited the Secretary-General of the United Nations to appoint a special representative to be able to explore the scope of business in human rights.

And it was in 2005 that the Secretary-General nominated a special representative in the form of Professor John Ruggie with a very specific mandate: to identify and clarify existing standards and practices with regard to business and human rights. Well, to cut a very long story short, after three (3) years of multi-stakeholder consultation, the kind of consultation that involved discussions with business enterprises, business associations, victim groups, civil society and advocate groups, as well as government experts, John Ruggie came up in 2008 with a framework, and the framework was on business and human rights, (and) was referred to as the protect, respect, and remedy framework.

Now, the essence of this framework was essentially a number of things. Number one that no particular, single, individual stakeholder on their own could settle all the issues and difficulties arising from business and human rights, and that it required a cooperative, shared responsibility. It was also very clear that the standards have to be flexible enough to take account of the different kinds, sectors, and sizes of companies. Now, this idea of shared responsibility and the flexibility and, as well as taking account of all the various standards that have previously come before the protect, respect, and remedy framework, made the United Nations Guiding Principles quite unique. And I shall explain the uniqueness in a moment.

This [audio cut] which then accepted it and then extended to write its mandate for another three (3) years with the specific mandate to find ways of operationalizing these standards. Well, in 2011, he came up with what is now known as the UN Guiding Principles on Business and Human Rights, in which he articulated the clear duties of states, and the clear responsibilities of companies, and the expectations of the victims or civil society groups.

Of course, so as to realize the standards, the Human Rights Council also set up the UN Working Group on Business and Human Rights with the mandate to disseminate and implement the Guiding Principles. This working group, Your Honor, is the one on which I have had the honor over the last six (6) years to serve as a member and, for part of the term, act as its chair. This then concludes my introductory background to the Guiding Principles.

I'd like to talk a little bit more about the Guiding Principles themselves. And they're a very compact set of thirty-one (31) guidelines broken into three (3) clear parts, the three (3) parts of which we call pillars — Pillar 1, Pillar 2, and Pillar 3. Now, the three (3) pillars look separate but they are actually interrelated. The first of these pillars is state duty to protect against human rights abuses by third parties, including business. Again, I will come down to explain a little bit more detail of these three pillars. And the second pillar relates to the responsibility of all businesses including transnational corporations to respect human rights and, as part of this, to undertake or they are expected to avoid causing harm that undermine human rights. And then the third pillar states that government and businesses must ensure access to remedy for victims of business-related human rights. As I mentioned, these are three (3) separate pillars but (they) are actually very interrelated. In other words, one without the other is unlikely to make the process successful.

Now, here is another representation of the three (3) pillars, this time from the point of view of actors. So the three (3) pillars indicate who the main actors are under each particular pillar, even though other actors have interests. So we identify here three (3) main actors: the state, the businesses, and the victims. And what each of these need to do or to expect. So the state is expected to protect human rights. And the businesses are expected to respect all human rights. And the victim expects, in the event that the state is unable to protect them or in the event that a company does not respect human rights, a remedy.

Now it then goes on to talk exactly about what does 'to protect' mean. Well, again, I will have the opportunity to explain a little bit more as I proceed with my presentation, and now the question that arises is how different are the Guiding Principles? What value do they add to everything else that we have known prior to the Guiding Principles?

Well, the Guiding Principles have this extra character of developing a common understanding between the different stakeholders of their roles and their responsibilities, and the expectation of how each role or each actor will deliver their responsibilities and their roles. So that common understanding was something that had been missing from previous iterations of business and human rights.



The second added value of the UN Guiding Principles is to try and draw on the strengths and the benefit of all previous platforms and frameworks and activities and standards. So, of course, it does not create the standards; it tries to draw together all our understanding of expectations of businesses and corporate social responsibility and the business ethics and the sustainability, labor standards, and OECD standard. It is, by all means, not an internationally binding law in itself; it's a "soft law" platform. But the beauty of the United Nations Guiding Principles is the idea that it draws on binding legal obligations that states and companies are required to follow. The binding obligations in international law for states that have ratified treaties or are bound by customary law and binding expectations in national law for corporations, therefore, provides a very clear platform for companies, governments, and civil society organizations to define clearly how to act and how to advocate for change.

If I may, Your Honors, I have two (2) other aspects of what makes the UN Guiding Principles special, and, of course, some of these are fairly obvious and I may have referred to this. And this is the provenance of these Guiding Principles: how they were created. They were created as part of a very global-wide consultation with every and any stakeholder. So this allows for every stakeholder to have this in their contributions, to accept that their standards have also been taken into account.

Similarly, the Guiding Principles recognize the flexibility of the business landscape or what we can expect of transnational corporations may be different for small and medium sized enterprises. It also recognizes the value of what already exists in the activities of companies in terms of CSR and corporate sustainability, and these it puts together into what we call the smart mix of standards. But, above everything else, the strength of the UN Guiding Principles lies in the recognition of the shared responsibility between actors, that government has a clear role, that businesses have a clear role, and so society would have a very clear role.

And, with this, I would like to explain a bit more of the details of the Guiding Principles. Now, a little misunderstanding often is to separate the Guiding Principles on the role of states from companies. But, actually, the point that I would like to emphasize in this presentation is the interrelated role and responsibilities of companies and the states. Now, we understand that both the state and the company are required to respect human rights — both government agencies and private actors must avoid infringing on human rights — but we often think then that only the state has the duty to promote, and to protect and fulfill. There may be instances where we refer to the leverage of companies, where using the leverage to ensure the respect of human rights in its business relationship, thus creating a certain sense of promotion and a certain sense of protection. But we will talk about that in a

little bit more detail. But the point I want to make is the idea of the intermingling of responsibilities in order to achieve effectiveness.

So a very quick snapshot that all states are bound by the Guiding Principles, all companies regardless of size, regardless of sector, and regardless of country of operation have to follow the Guiding Principles which are based on all the internationally-recognized human rights. And my next slide will explain this in a little bit more detail. No new legal obligations, and this is understandable that the Guiding Principles does not craft obligations but only elaborates on the implications of existing obligations that are all brought together to a coherent system. But, of course, we also take the view that effective respect for human rights involves meaningful engagement across all the stakeholders that cannot be offset by good deeds. So the fact that you built a school, the fact that you have built a hospital for local communities, does not exempt you from respecting all the other human rights.

Now, I did mention that the Guiding Principles apply to all human rights. And I thought I'd take some time to explain a little bit more. Now, the UN Guiding Principles indicates that the necessary rights for companies to respect are based in the international bill of human rights and the ILO declaration on fundamental principles of rights at work. Between these two (2) broad areas of rights, the Guiding Principles captures every known human right because the International Bill of Rights covers the Universal Declaration of Human Rights, it covers the International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social, and Cultural Rights. Similarly, the ILO declaration covers the core aspects of ILO work relating to business, including forced labor, freedom of association, non-discrimination, and child labor.

But there is a little bit of a sting in the tail, which is not so evident in express terms in the Guiding Principles. And the Guiding Principles indicate that these are the baseline of human rights standards, that in particular circumstances certain additional standards may be necessary. So, for example, in the conversation about climate change, we may look beyond the International Bill of Rights and look to environmental standards. Similarly, in conflict-affected areas, we will want to look specifically at international humanitarian law as additional sources of standards that companies would be expected to apply. So the discussion goes beyond the International Bill of Rights and ILO Declaration and the UN Guiding Principles.

So the fact that the United Nations Guiding Principles were endorsed by the UN Human Rights Council means something fairly subtle and yet significant. Number one, it means that the UN Guiding Principles have very strong global political support. There was no objection, no rejection, during the

endorsement of the Guiding Principles. The second part or the second important factor in the endorsement is that it's the first time that an externally-generated set of standards have been endorsed by the political institution without change. It, therefore, affirms its independent character; in other words, it distances the Guiding Principles from the political differences and, often, negotiations of the United Nations. So we can then say that (it is) a solid global point of reference, a common standard or obligation for every actor, including states and including businesses.

Now, if I may, Your Honors, I want to take a step into a little bit of a depth on the individual pillars on the Guiding Principles. I will focus slightly on Pillar 2, the responsibility of companies to respect human rights, and Pillar 3. But I thought I should introduce a little bit more context of the state duty to protect.

Now, the state duty to protect is based on the understanding that the state is the ultimate authority for protecting everyone in its territory and within its jurisdiction from human rights abuses, and this creates a set of practical expectations within the governments, within the state. And I'm thinking of four (4) broad areas: in its general regulation, state as an economic actor, the issues of intrastate agency relationships, and conflict-affected areas. These are just four (4) policy areas that I want to refer to. There may be other policy areas included, as a specific policy area, the subject of climate change but I think a subsequent presentation will bring that up.

Now, in the regulatory area for the state duty to protect, the expectation is that the state will pass adequate laws to ensure that everyone's rights are protected. Not just that, that these laws will be enforced, but also, in addition, as set out by Guiding Principle 2, that the state will provide clear guidances to all actors including businesses of what the state expects of them as far as the respect of human rights is concerned.

On the next square or the next quarter of policy areas that I have identified, it is quite important to acknowledge that the state does trade, the state does act as an economic entity in many ways, either through state-owned enterprises or through private-public partnerships or through joint ventures, and so on. And here the Guiding Principles, it's very, very clear that the state as an economic actor has to take additional steps and lead by example for other private actors to follow. So, in its procurement of economic facilities, for example, it can expect that most of its partners will respect human rights. In fact, there are a number of countries, including Canada and other countries, where the states or foreign private entities cannot bid for a government contract unless they have made a commitment to the UN Guiding Principles to respect human rights.

On the third quarter to the right on policy coherence, this is quite important as part of the state duty to protect because we often get tensions between government departments and government agencies. So you'd get tension between a ministry for human rights and women, a ministry for the protection of children, a ministry for foreign affairs, and the ministry of commerce or ministry of trade, a ministry of finance. While the ministry of trade or ministry of commerce often believe that their responsibility is to encourage business and free market, they don't feel that they are bound by the respect for human rights. Now, the Guiding Principles suggest that there's going to be this internal consistency in the recognition of government duties in terms of creating policy coherence across these agencies.

At the international level, you often see government departments and the Human Rights Council advocating for the respect for human rights, and then they take a step back in Washington before the Washington institutions, of the IMF and the World Bank, all in the negotiation of multi-lateral investment agreements where they soon forget human rights. So, again, the Guiding Principles proposes that, as part of the state's duty to protect, they will ensure there is coherence at the international level as well.

Finally, in conflict-affected areas and because of the heightened risk of human rights violations in conflict-affected areas, the Guiding Principles set out the expectations that will be clear guidance to actors, including businesses, on the respect of human rights. It will also create opportunities for access to remedy. Again, this is just a short summary of the state duty to protect.

I would like, if I may, move on to the corporate responsibility to respect because this is the core area where I have been invited to share my own reflections. Now, to start with, the corporate responsibility to respect is not new and includes no new standards in that no matter the context, no matter the sector, companies must refrain from violating human rights. If this statement were reversed and were put in the form of a question to the company, whether any company believes that it is its duty or its responsibility or it's part of its business to violate human rights, you'll find the answer is always no. Companies acknowledge that their task is not to violate human rights but actually to increase the welfare. So we understand that this is not a new obligation. And that all it requires is that they do no harm, including human rights harm. They must not do harm themselves but they must also not contribute to harm. They must also take clear steps to prevent harm or, where prevention is not possible, to mitigate impacts on human rights. In addition, where harm has already occurred, it must address these impacts. And, again, to emphasize the point, to do no harm, not to contribute to harm, to prevent harm, to mitigate harm or address harm, applies to all companies regardless of size, sector, location, and it applies to all human rights that I have

previously referred to in the International Bill of Rights and in the ILO Declaration.

Now, how do companies prevent harm? How do companies mitigate harm? Well, fairly simply. To do it in exactly the way they would've done in any financial or trading context: to be able to know and show that they do not cause harm. And, to do this, the Guiding Principles propose that they should undertake human rights due diligence. It is through human rights due diligence that any enterprise can understand the exact nature of the harm and its contribution to harm. In this case, its contribution to climate change, and so define exactly how each enterprise can prevent, mitigate, or remedy any harms. Not knowing your role, your contribution, of course, means you are unable to address the harm. Due diligence, therefore, is the key to corporate respect for human rights.

How then do you set out to identify and prevent or mitigate or undertake human rights due diligence? Well, I have set out here five (5) clear elements. They are not exhaustive but they are clearly indicative. Number one, every company has got to commit expressly at the highest level to respect human rights, and most companies appreciate this. They must also take steps to assess the impacts of their activities. This must include real impacts and potential impacts. Once they have undertaken this assessment exercise, hopefully this will reveal the potential impacts their companies will have. But they must then integrate the lessons of these assessments into their activities, where they know that a particular activity will cause adverse harm, particularly for human rights is that they will avoid doing or causing this harm. Where evidence from the assessment suggests that not them, but that somebody in their supply chain is contributing to harm, including climate change, they will be expected to use their leverage and their support to be able to mitigate or prevent such harm. They must, therefore, be able to say that they know that their expected human rights, be able to track all the harms that they have identified in their assessment and how they are responding to these harms. If they're able to track these and incorporate that into their policies, well then they should be fairly free enough to communicate how to do this and communicating via reports, via blogs, via minutes of meetings and it doesn't matter as long as they know exactly how they do this, hence the phrase "knowing and showing." A company that's not able to know nor able to show that it respects human rights cannot claim to respect human rights.

So, what are the expectations for climate change? Or what's the significance of this corporate respect for human rights for climate change? Well, there's expectation that companies will avoid causing human rights harm by not contributing or be linked to climate change. They can also do so by undertaking clear due diligence in order to know and show that they are not contributing to climate change or that they are not causing climate change or any harm that contribute to climate change. It is my clear understanding that

climate change poses serious human risk in a whole variety of ways to human rights, including life, liberty, and food. I heard the previous contributor from the Ministry of Agriculture indicate the impact of climate change on food security, but it also includes risks to housing, sanitation and water, freedom of movement, health, labor rights, issues of modern slavery, cultural rights, but, above anything else, threats to the right to self-determination. The Office of the High Commissioner has prepared a very detailed assessment on the impact of climate change on human rights.

Now, these adverse impacts can be especially acute for particular communities and vulnerable groups, including children, women, indigenous peoples, people with disabilities, minorities, migrants, and older people. Now these, of course, are fairly well-known risks. In addition, the Guidance Principles, in Principle 13, proposes that business enterprises should avoid causing or contributing to adverse human rights impact and to seek to mitigate this adverse impact. Just avoid causing adverse human rights impact but also they must not contribute to this adverse impact. But above everything else — and this is often overlooked — not only not to cause or contribute but they have that linkage which makes them have a role in avoiding, mitigating, and addressing human rights impacts across the supply chain. And this is quite a critical part of the responsibility to respect human rights.

In summary, just for the corporate social responsibility to respect human rights, is the idea that it must avoid infringing on all human rights, in this case human rights impacts, whereas they are contributing or being linked to climate change. And, to be able to do this, they must undertake human rights due diligence in order to be able to know and show that they respect human rights, they need to commit to respecting human rights in all their activities. They need to be able to assess the entire business landscape to ensure that they know the risks and the harms that their businesses cause. They take these lessons and integrate them proactively and positively into their business policies. They should track these changes in policy and to be able to communicate their policies to all stakeholders. If all of this fails to prevent and mitigate human rights and, as a consequence, we have human rights harm, they should be able to provide remedy or remediate.

And that provides, for me, an excellent segue to move into the third pillar of the UN Guiding Principles: access to remedy. This is the third but still primary pillar of the UN Guiding Principles because, without remedy, none of the other two (2) pillars will be significant. Access to remedy, Pillar 3, proposes that victims of human rights abuses by company and by governments or anyone else must have access to an effective remedy for grievance and redress. Pillars 1 and 2, as I said, will only be meaningful if they are combined with Pillar 3, and remedy covers the entire last stage of opportunities, including judicial and non-judicial remedies, but also opportunities to remove or reduce various barriers and I shall come to that in a moment.

Access to remedy is similarly important for business as well. It's not just the government providing remedy, but the businesses must address grievances that they have caused, contributed to, or are linked to. So I want to take these headings of remedies one after the other, but, in this instance, with emphasis on two (2) aspects only. And I want to emphasize effectiveness and barriers. So these are the two (2) aspects of remedy that really make them worthwhile.

On the question of effectiveness, particularly with judicial mechanisms, the Guiding Principles expects that there will be an impartial judicial mechanism that has integrity and relies on the rule of law and due process, that would not only be aware of the Guiding Principles and the respect for human rights but the courts themselves will be independent and free of corruption. Similarly, that the processes have to be legitimate and legitimate peaceful activities of human rights defenders will not be obstructed. And we have this in the context of the domestic courts or the regional courts with emphasis on effectiveness.

Similarly, we need, as part of the judicial mechanisms, to reduce barriers. Some of these barriers are inherent and structural in the legal systems that we have, and we have to find ways of redressing them. One of these is the law on corporations, which allows separate personality. It allows companies to take advantage of the activities of the subsidiaries which are, by law, separate entities and not sharing the responsibility. The Guiding Principles looks beyond that and asks for these barriers to be removed, that you should not allow companies to claim no knowledge, no association, no connection with their subsidiaries unless these are truly separate entities. Hence, the Guiding Principles suggest that we should ask companies to respect human rights throughout their business relationships.

They should also note that claimants should not face denial of justice in their home state because there is no access to the home state court. Now, here is an intractable difficult situation which the United Nations is currently grappling with the Intergovernmental Working Group on Binding Instruments to try and provide opportunities for shared responsibility between states, so that if a remedy does not exist in the home state, somehow there's going to be a way with which the home state can come up and support it. So this is still about protection using judicial remedy. Indigenous peoples, women, non-citizens, migrants, and so on are totally vulnerable.

There are, beyond the legal barriers, some practical and procedure barriers as well, such as the cost of bringing claims that could put people off. There's also difficulty of securing legal representation. I mean, the courts may be open and everyone may come to them, but sometimes the issues are so complex and complicated that you need a legal representation that cost money and most

countries have now begun to take away legal aid. It often makes sense, too, that these claims should be aggregated in terms of group claims or communal claims, but not all jurisdictions allow for that. And state prosecutors should at least be given adequate resources if judicial remedy is going to be effective. Again, this conversation is about effectiveness and the reduction of barriers.

I'd like to move on very quickly to other non-judicial but state-based mechanisms. And, now, the Guiding Principles provides (for) the state appropriate non-judicial grievance mechanism, because not every kind of grievance will be effectively redressed through a judicial mechanism. So the idea is to provide other forms of remediation, such as mediation, cultural sort of dispute settlements, or arbitration, are also very useful. Similarly, as I will draw examples in a moment, national human rights institutions can provide effective remedy or the national contact points or OECD.

Hereto, all or any barriers should be removed or should at least be reduced so as to allow effective remedy. And the examples that I have in my mind include labor tribunals, national human rights institutions such as Your Honorable Commission, state-run ombudspersons, and national contact points, (which) are very good examples to supplement and support judicial mechanisms; not to replace them but to supplement them.

Finally, states must facilitate access to non-state-based grievance mechanisms and these we have in the back of our mind. Company or business association grievance mechanisms are very useful. And this may apply to an individual company or through an industry association mechanism.

It is a critical part of the corporate responsibility to respect human rights through due diligence that we should have a grievance mechanism and any grievance mechanism to be effective as we follow the effectiveness criteria that's set out in Guiding Principle 31: that it has to be legitimate, it has to be accessible, it has to be predictable, it has to be fair, it has to be transparent, human rights-compatible, and have to be based on dialogue.

These three (3) pillars, therefore, protect human rights. Some operational level-grievances are company-based. Some are also based on multi-stakeholder industries, such as the Oxfam, mining ombudsman, or the Fair Labor Association mechanism on supply chains. Some are also based on regional banks, such as the European Investment Bank, and from the regional human rights mechanism, the Inter American System of which you have here an expert presentation. The ILO, the International Finance Corporations, Compliance Ombudsman, and the Global Compact Integrity Measures are



examples of grievance mechanisms that are out there that may be used by companies.

A few key points, if I may, Your Honor: that the Guiding Principles on Business and Human Rights is a key tool for everyone — governments, businesses, civil society, victim groups — on how to implement respect for human rights. And it sets out clearly each person's contribution. It is fairly simple: because it's essentially about treating people with respect and dignity, and it's based on how you create a sustainable business and market. It does not undermine businesses at all; it's meant to create businesses that are sustainable and a key tool for other stakeholders to promote implementation and accountability.

The Guiding Principles, therefore, are useful because it provides a blueprint with concrete and well-tested steps for managing human rights impact. It creates policies and processes that signal to stakeholders that a company takes responsibility to respect human rights seriously. It moves beyond the law. It looks beyond the legal license to operate because that's often not adequate. It looks to a moral license to operate as well. And not addressing human rights involves risks, serious risks to the company itself. Some of these risks may be reputational, it may be financial, and they may be legal or even operational. It is, therefore, in the interest of businesses to respect human rights.

While I have heard it said often that human rights is good for business and I have looked for a little bit of evidence, it's not so easy to find evidence that says human rights is good for business. But I do know that there is a lot of demonstrated evidence of no human rights is bad for business.

And I should say that none of this is being done in empty space. As part of the consultation to create the Guiding Principles and also since their endorsement by the Human Rights Council, a number of businesses - individual businesses, but more importantly, industry associations, have adopted the Guiding Principles and have set up clear guidance for the International Chamber of Commerce, the International Council for Mining and Metals, the International Finance Corporation, the OECD, the ISO 2600, and have adopted the Guiding Principles to close the government gap.

Your Honors, I want to thank you for your very kind attention to my presentation, and I'm therefore now happy to receive any sort of questions that you may have. Thank you.

Page 1162

ATTY. SORIANO:

Thank you, Mr. Addo. Can you show your face again, Mr. Addo?

MR. ADDO:

Okay.

ATTY. SORIANO:

We are looking at a different window.

MR. ADDO:

Screens.

ATTY. SORIANO:

Excellent. Thank you very much, Mr. Addo. Just one clarificatory question from us, Your Honors. Mr. Addo, you mentioned earlier that the elements of a human rights due diligence would be commitment to respect, as in commitment. The second one is assessing the impacts of the business operations. Third, integrating and acting on findings. Fourth is tracking responses. And the last element, communicating the impacts.

So would you say, then, being guided by these principles, the UN Guiding Principles, that if corporations — fossil fuel corporations, for example — would not have an expressed commitment, would not have an assessment specifically on climate change or how it is impacting the climate, and if it has not shown any action, not tracked responses, and not communicated the impacts, would you then say that those corporations violated the human rights responsibility that you just explained?

MR. ADDO:

I thank you for that question. But there's so much else that a company can do that is not in the public domain, and judgments can often be made about a company on account of that. I wouldn't be able to say that the company that has not made an express commitment or an assessment of the five (5) elements that I've set aside necessarily will have violated human rights. It's just that I wouldn't know that it is not. I wouldn't be able to know that it has not violated human rights. So it's always in the interest of the company that it knows it is not good enough. To be able to show it, is what rounds the circle that we all agree that it has at least respected human rights.

So, yes, the answer to your question is that not committing is often an indication that the company has no idea and that, if you search further, you could see the clear risks. In other words, a company that commits and undertakes due diligence and communicates is more likely to be respecting human rights. So you can't say I did not do that because by not doing it you don't respect but I think chances are that not committing and not undertaking due diligence suggest the company has no idea what to do.

ATTY. SORIANO:

Your Honors, may we just ask Mr. Addo to repeat in summary, maybe, his answer? Mr. Addo, we missed several parts of your answer because of silent, yeah, gaps maybe due to the WiFi signal. Can you repeat in summary your answer, Mr. Addo? Thank you.

MR. ADDO:

Okay. Thank you very much. And please do stop me if you're missing anything. Your question to me was whether a company that does not demonstrate the five (5) elements of due diligence necessarily means it is violating human rights. Was that the question?

ATTY. SORIANO:

That's right, Mr. Addo.

MR. ADDO:

Yeah. Okay. My answer to you was that there are two (2) parts to the due diligence standard, and that's to know and to show. Now, it is possible that a company, by not showing, does not necessarily violate human rights. It may be doing all the right things but the rest of us do not know it.

So my answer to you is that a commitment to the five (5) elements is a clear indication that the company respects human rights. And non-performance of due diligence either suggest the company is unaware of its risks and therefore risks of human rights violation or it may very well be that non-public commitment, non-public communication, may be that it's doing some good stuff but we don't know it. Now, my feeling is that the company that has no clear human rights due diligence policy also has no idea what its risks are, and if it doesn't know its risks, chances are it will commit adverse human rights impacts.

So the answer to your question is it is not so clear, but that chances are, if a company doesn't respond to the five (5) elements....violates, it's very likely to be at risk of committing adverse human rights impacts.

ATTY. SORIANO:

So if a corporation knows the impacts, the harms, it has now the responsibility to have a commitment, to assess, integrate, take action, communicate and all these things? Is that correct, Mr. Addo, from what we understand? What we heard from you.

MR. ADDO:

That is the expectation, that the value of assessing — and not when you can have this assessment even before the business is launched — so the value of assessing is to know where your activities will impact and you then take steps to prevent. If already some of those activities have moved on, you then take steps to mitigate. And if they've already gone out of your hands, then you take steps to redress.

So, yes to your question; a company that knows its harms and its risks but does not take steps to prevent them or mitigate them or redress them is not respecting the rights. And, yes, it will be violating the rights.

Page 1165

ATTY. SORIANO:

Thank you, Mr. Addo. Your Honors, for your questions now.

PANEL CHAIR CADIZ:

Thank you very much, Mr. Addo. Would any of the commissioners have a question for Mr. Addo?

Commissioner Karen Dumpit will have some questions for you, Mr. Addo.

MR. ADDO:

Okay.

COMM. GOMEZ-DUMPIT:

Good afternoon, Mr. Addo. I just wanted you to elaborate on what you mentioned earlier about state-based non-judicial mechanisms, and you did mention national human rights institutions that would be able to provide an effective remedy. What kind of effective remedy can NHRIs have but, particularly, could you provide us instances where national institutions have indeed provided some remedy to victims of corporations and their activities?

MR. ADDO:

Right. Thank you very much for your question, Commissioner. I mentioned national human rights institutions as part of the state-based non-judicial remedies as a supplementary source of remedy, because the primary source would be judicial. So the idea is that certain remedies are more suited to non-judicial remedies, like national human rights institutions. And some of these are often mediation, for example. It's an excellent sort of mandate or even, as we sit here and want to participate in a commission of inquiry, just so we can inform ourselves of these events, that's another of those opportunities for a remedy. You could also have much more compelling remedies such as, you

know, requests for compensation, given the mandate allows for it. So, yes, NHRIs can actually undertake some of these.

But I have in the back of my mind the Kenyan National Human Rights Commission with the mandate to hear complaints or investigate complaints and compile information, which is then the basis for prosecutors or government authorities to take action. I also know of the Ghana National Human Rights Commission with a very specific mandate to hear cases and come to conclusions, the sort of quasi-judicial mandate to hear and award compensation, and at the end of it, you can issue cease and desist orders. Now, these results can be enforced through courts, and the courts will uphold the decisions unless judicial review allows for these to be set aside. So a number of NHRIs do have different sorts of mandates to complement the work of judicial bodies.

COMM. GOMEZ-DUMPIT:

Thank you. That's all for now. Thank you, Mr. Addo.

PANEL CHAIR CADIZ:

I have a follow-up question to that, Mr. Addo. Could you elaborate more on Pillar 3, in regard to state-based, non-judicial remedies, such as NHRIs, such as our Commission? In regard to, first, trans-boundary issues, and in regard to Respondents outside of the jurisdiction of the NHRI, which is the case here.

MR. ADDO:

Right. That's a very interesting question. By nature, most NHRIs are territorial based to their jurisdiction. And I get the feeling that the essence of the question is the very transboundary nature of environmental harm and so the issue "Does the NHRI have the jurisdiction to hear instances of Petitioners from outside the jurisdiction?"

I imagine that it depends on the mandate of the NHRI and how the Commission will interpret its mandate, particularly if some of their harms are local. And if the harms are local, perhaps my understanding is the harms affect local people and the Commission, if its mandate allows it, should, on its own

motion, interpret its authority to redress national human rights issues even if the Petitioner is not a national. It may only be that the Petitioner has brought to the attention of the Commission harms within its jurisdiction, which its own people may not have brought to its attention. And I think [audio cut] in my very humble opinion, the Commission should at least want to know the harm caused within its jurisdiction, even if the harm has been brought by somebody from outside the jurisdiction.

That seems to me to fit very well within the mandate to protect human rights within the jurisdiction. And, otherwise, we should not be too strict on the nationality and the identity of the Petitioner. And I imagine this is some of the issues raised by environmental harm. I would be a little bit skeptical if the Petitioner was non-territorial, referring to harms that are outside of the Commission's jurisdiction, with the Commission having no connection whatsoever with the basis of the complaint.

Now, I say this with great caution because what if the cause of the complaint was from a foreign [audio cut] complaining about harm caused outside of the jurisdiction but by a local company. Now, there my sympathies will lie with the victim, to say; if a company from within our jurisdiction has caused harm outside with the government's commitment to protect human rights and not to contribute to human rights harm, I think a Commission should at least get to the bottom of it and get to understand whether the government is completely without linkage, without contribution, without involvement, at least to investigate the basis of that complaint.

In other words, I will not turn down an application from somebody outside of the jurisdiction simply because they are an outsider. I will look at it a little bit more.

PANEL CHAIR CADIZ:

We have no problem in regard to Petitioners, even if they are not within the jurisdiction of the local NHRI. But could you comment on cases where the Respondents, not the Petitioners, the Respondents, are not within the jurisdiction of the NHRI?

MR. ADDO:

Okay. Sorry, I missed that. So it's when the Respondents are not within the jurisdiction of the NHRI?

PANEL CHAIR CADIZ:

Yes, could you comment on that?

MR. ADDO:

Yes. Well, there's a very simple phrase in the Guiding Principles: "cause-contribute-links." My question then is: could we explore whether the Respondent, who is under the jurisdiction, is linked to a local entity or has a local entity contributed to the external Respondent? Because if there's no contribution from a local entity, if there is no linkage between a local entity and an external Respondent, I think it will be a little bit difficult for a local NHRI to assume jurisdiction over an entirely foreign Respondent. But I think with the nature of globalization and the nature of interlinkages of businesses, it may not be impossible, probably not even difficult, to find a link or contribution through the supply chain.

PANEL CHAIR CADIZ:

But what if the NHRI is not exercising a function that is related technically to jurisdiction? As you would normally define jurisdiction in terms of court proceedings, but the process being engaged in is that of investigation or inquiry. Would your opinion still be the same - that the NHRI should not be dealing with or handling that case?

MR. ADDO:

Oh, no. I think my opinion would be a little bit more relaxed if it's a fact-finding process, it is an inquisitorial process trying to get to the bottom of a set of circumstances. So inviting a witness to contribute to your investigation probably is much easier to do. Of course, as it is, as you say, you cannot compel them to appear but you invite them to share their views on a particular matter and it's within their discretion to want to do it or not to do it. I'd like to think that, where it is an inquisitorial process like the commission of inquiry, it's always helpful that the Commission will reach out to anyone who has relevant information, whether or not [audio cut] should be able to. Otherwise, you would never get to the bottom of the reality unless you share that information.



PANEL CHAIR CADIZ:

So, we can inquire on acts involving entities outside of the jurisdiction of the Commission, but we cannot compel them, for example, to pay damages, hypothetically, based on the results of our Inquiry? Is that what you're saying, Mr. Addo?

MR. ADDO:

Well, I wasn't going so far. I was saying you can invite them to share their knowledge on the facts. The facts may very well lead you to confirm or affirm that there has been clear human rights violations. You can then propose that there should be remedy. I'm not so sure that without an effective due process with an opportunity to be cross-examined in a quasi-judicial form, where it's appropriate to sort of compel compensation. I think you can- it can be very general in terms of saying, "Well, look, thank you for your contribution. The evidence seems to suggest that there's been human rights harm. The evidence suggests that you have contributed to this and so x, y, z have all contributed to this harm." We think there should be an effective remedy, and the remedy could come up with recommendations on how this can be either a grievance mechanism or, you know, quasi-judicial mechanism or mediation, arbitration, or, if necessary, with the facts that you have in front of you, propose that this be taken before a judicial entity.

I'd be a little bit concerned that the entity was never invited to defend themselves and then you come up with a sort of a package that they should pay something. I think that will be a little bit difficult.

PANEL CHAIR CADIZ:

So, your concern more is in regard to principles of due process... that, before an NHRI comes up with any finding of responsibility, the Respondent should be given an opportunity to present its side.

MR. ADDO:

If the NHRI is looking beyond facts and expecting to make certain recommendations, I think due process would be very valuable.

Page 1170

PANEL CHAIR CADIZ:

Thank you very much, Mr. Addo.

Commissioner Pimentel will have questions.

COMM. PIMENTEL-GANA:

Hello, Sir. Thank you for your patience for waiting for us to get to you. Anyway, I was just wondering, based on the Guiding Principle number 13, wherein it says that business enterprises should be held or avoid causing or contributing to adverse human rights impacts and seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products, or services by their business relationships, even if they do not contribute to those impacts. Does it have, as you earlier said, something to do with the supply chain?

MR. ADDO:

It does, indeed.

COMM. PIMENTEL-GANA:

Okay.

MR. ADDO:

That's exactly what it is about and we have the phrase "to cause, contribute, or be linked." When you've caused it, you have the responsibility to remedy it. If you've contributed to it, you also contribute to the remedying it. But where you haven't caused or contributed but you are only linked to it, the idea is that you use your leverage to make sure that the one who has contributed to it provides remedy. So, yes, it does cover the supply chain, and it's not just the single tier; it goes down the entire supply chain. So for those who are directly connected to you on the tier, you will obviously have contributed, so you have to remedy it. Then, as you approach further down the line, the links

are less strong. But that doesn't mean, therefore, you could ignore it because you are linked to it, and because you are linked to it, you use your leverage to make them provide the remedies. So, yes, it does cover the supply chains.

COMM. PIMENTEL-GANA:

Okay. Thank you for that. I was just wondering like if a company, for example, has a manufacturing firm in one country and that company now sells the produce in another country, and the the manufacturing firm of that same company actually impacts on climate change in that particular country; so you're saying that that company, the mother company can be held liable of human rights violation?

MR. ADDO:

Yes. I must be very careful and draw that clear line between climate change and human rights violations because I am focusing on human rights violations, and, particularly, I know the difficulty of attribution of contribution to climate change. And that's one big science issue that I know is still on the table. But where there is clear evidence that a company, by its contribution to climate change somewhere, has caused adverse human rights impacts, if that link can be made, that company is either contributing to the human rights harm or is linked to it. So, for me, the difficulty is making sure that that connection is made.

Now, you gave the very simple example of producing a product. Well, with that product, there is traceability. If you can trace the product to the harm, then you either have contributed clearly or you have been linked with it. The trouble with climate change is that traceability between cause and harm. And that, I think, is a scientific question, but if that were convincing link established, we have a link. If we have a link and there's a [audio cut] been linked to the harm.

COMM. PIMENTEL-GANA:

Okay. I was just thinking. Hypothetically, if you are to use the argument or the concept of supply chain, can we therefore cross the transboundary issue considering that if you tie a company, if you find a company guilty of human

rights violation, example, in one part of the world, can we use the supply chain concept to go around the concept of transboundary?

MR. ADDO:

Now, from the point of view of the Human Rights Guiding Principles, there is very little difficulty with the transboundary issue because of what the Guiding Principles propose, and the Guiding Principles propose that, where there is harm, there's got to be a remedy. So if the harm is clearly linked to the company, you have no particular difficulty. You can always ask the company to redress it or get the right course or teach them to remedy it.

So, if you have a particular clear product made in one country that causes harm in another country and the mother company is somewhere else; just for argument's sake, a telephone. A telephone has many components. A lot of these components are made in different parts of the world. If it turns out that one of these components is faulty, we know that the company that made that faulty component is in another jurisdiction but the company that's using that faulty component is in our jurisdiction. Now, we can very comfortably say to the company, "You are linked to this faulty component." Now would you and we ask you to make sure that that company that's down your supply chain that has produced this faulty product should redress this product.

For human rights purposes, that's easy. For climate change purposes, that's not so easy. That much as it provides us with analogy, we will have that difficulty of establishing that connection — the causal connection. So a lot of companies produce harm into the environment that has caused weather or temperatures to rise. The question is, does everyone of these companies has contributed to it, and to what extent they must take due diligence to make sure that they do not contribute to temperature rises. But that's it. If someone says, well, then suddenly in the Seychelles, there's been excessive flooding, can we hold the company that's based in India for it [audio cut] therefore the flooding in the Seychelles? I think that's where it becomes a challenge for climate change. For human rights, it's easy to do. Climate change, that causal connection is very difficult. But I'm sure science would be able to make something of it. And, if we can, I mean, for your hypothetical analogy, it's worth making the argument. It is worth making the argument that we ought to look beyond causation and we ought to look towards harm because we know who has contributed to what, and everybody should make sure that it takes due diligence that they do not contribute to it. That's it. Once they do the due diligence, we have our answers to climate change.

COMM. PIMENTEL-GANA:

Thank you, Sir.

PANEL CHAIR CADIZ:

Counsel, do you have any redirect questions for your witness?

ATTY. SORIANO:

No more, Your Honors.

PANEL CHAIR CADIZ:

Thank you very much, Mr. Addo, for your very useful insights.

And we would ask you, where are you now? You're in London?

MR. ADDO:

Yes, I am in London.

PANEL CHAIR CADIZ:

We will actually be conducting hearings there in November, and we would appreciate it if you could make yourself available for longer conversation with the Panel on this issue. Thank you very much again.

MR. ADDO:

Thank you very much, Your Honor.

ATTY. SORIANO:

Good morning, Mr. Addo, and thank you.

MR. ADDO:

Thank you very much.

ATTY. SORIANO:

May Mr. Addo be excused, Your Honors? You are excused and thank you very much, Mr. Addo.

MR. ADDO:

Thank you very much.

PANEL CHAIR CADIZ:

Alright, thank you again.

Bailiff, do you have other administrative matters to bring up before we adjourn the hearing?

CLERK OF THE INQUIRY:

No, Your Honor.

PANEL CHAIR CADIZ:

There is no more? Alright.

Announcements as to changes in schedule for future hearings? Or tomorrow na?

CLERK OF THE INQUIRY:

Tomorrow, Sir, we will be having six (6) witnesses.

PANEL CHAIR CADIZ:

Six (6) witnesses and we start at 9:00AM?

CLERK OF THE INQUIRY:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Alright. Thank you very much. With no other matters to be tackled, this hearing is now adjourned. Thank you.

*[bangs gavel]*

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ATTY. TRISHA ISABELLE F. FERNANDEZ (CLERK OF THE PANEL):

Good morning, everyone.

This public hearing is being held as part of the National Inquiry being conducted by the Commission on the Impact of Climate Change on the Human

Rights of the Filipino People. This proceeding stems from a petition filed before the Commission, docketed as CHR Case No. CHR-NI-2016-0001.

The solemnity of the public hearings shall be upheld at all times. Respect should be accorded to everyone present. The clapping of hands and unnecessary remarks shall not be allowed and may be regarded as direct contempt of the Inquiry Panel.

Cellphones should be turned off or put on silent mode while the proceedings are going on. All rise.

The Inquiry Panel for today's proceedings are:

1. Honorable Commissioner Leah C. Tanodra-Armamento;
2. Inquiry Panel Chairman of the NICC, Honorable Commissioner Roberto Eugenio T. Cadiz;
1. And Fr. Pedro Walpole S.J.

Please remain standing for the national anthem and the ecumenical prayer.

*[National anthem]*

*[Ecumenical prayer]*

COUNSEL FOR PETITIONERS, ATTY. SORIANO:

Good morning, Your Honors. Zelda Soriano, same appearance for the Petitioners.

COUNSEL FOR PETITIONERS, ATTY. MAYO-ANDA:

Good morning, Your Honors. Grizelda Mayo-Anda, respectfully appearing for the Petitioners.



Page 1177

COUNSEL FOR PETITIONERS, ATTY. PAUDAC:

Good morning, Your Honors. Respectfully appearing, Hasminah D. Paudac, for the Petitioners.

PANEL CHAIR CADIZ:

Thank you very much. The appearances of counsels are duly recognized. Before we go into the formal presentation of witnesses, may we know if there are... other Parties here? Are there counsels who might want to manifest anything before the Panel?

Okay, we continue, nonetheless, to enjoin all interested Parties, whether as Petitioners or Respondents, to participate in this Inquiry. All our hearing dates have been published and we welcome their contribution... or participation in this Inquiry.

Counsels, are you ready to present your witnesses?

ATTY. MAYO-ANDA:

Good morning again, Your Honors. Our first witness for today is Dr. Vincent Hilomen.

PANEL CHAIR CADIZ:

All right. Can we have the witness sworn in by our lawyers? We invite you to sit in the witness stand.

You may now proceed.

ATTY. MAYO-ANDA:

Thank you, Your Honors.

Our witness, Dr. Vincent Hilomen, is the current project manager of the *Smart Seas Philippine Project*, which is funded by the *United Nations Development Program - Global Environmental Facility*, and implemented by the Biodiversity Management Bureau of the *Department of Environment and Natural Resources*. Dr. Hilomen has twenty-nine (29) years of experience as a marine reef scientist and biologist.

We are offering him and calling him as our resource person to be able to explain the impacts of climate change on fish and seaweed supplies, reef ecology, food chains, and ultimately, the country's food security.

Before we proceed, Your Honors, may I be allowed to ask him preliminary questions?

PANEL CHAIR CADIZ:

Please proceed.

CHR LEGAL OFFICER:

*[CHR Legal Officer gives oath]*

ATTY. MAYO-ANDA:

Okay. Dr. Hilomen, I have here three (3) documents. The first document refers to an abstract entitled "Effects of Climate Change on Food Chain Compromising Food Security." Do you confirm and affirm that this document, consisting of one (1) page, has been submitted to the Commission on Human Rights?

DR. HILOMEN:

Yes, I do. I emailed that.

Page 1179

ATTY. MAYO-ANDA:

And in this same document, there is a signature here. Could you identify this signature?

DR. HILOMEN:

Yes. This is my signature.

ATTY. MAYO-ANDA:

Now, the second document, Dr. Hilomen, refers to a curriculum vitae. Do you affirm and confirm that this one-page document has been emailed and submitted to the CHR?

DR. HILOMEN:

Yes, I do.

ATTY. MAYO-ANDA:

The last document, Dr. Hilomen, refers to a printed PowerPoint presentation consisting of thirteen pages. Do you confirm and affirm that you emailed this document, which was submitted later to the Commission on Human Rights?

DR. HILOMEN:

Yes, I do.

ATTY. MAYO-ANDA:

These documents, Your Honor, please, have been pre-marked. The first document has been pre-marked as Exhibit VVV and the signature as Exhibit

VVV-A. The second document, which is the curriculum vitae, has been pre-marked as Exhibit WWW and the signature as WWW-A. And the last document, consisting of thirteen pages, has been pre-marked as Exhibit XXX series until XXX-12. Do you confirm this, Atty. Esguerra?

And we would also further manifest, Your Honors, that, today, Dr. Vincent Hilomen signed (once) again the document entitled "Abstract" and his curriculum vitae. Having my last question, Dr. Hilomen, do you confirm and affirm the contents of all these documents that you emailed and which you later submitted to the Commission?

DR. HILOMEN:

Yes, I do.

ATTY. MAYO-ANDA:

Now, Your Honors, may we then request Dr. Hilomen to give his presentation?

PANEL CHAIR CADIZ:

Dr. Hilomen, you can now proceed.

DR. HILOMEN:

Thank you. Good morning, Honorable Panel of the Commission on Human Rights. This morning, I am asked to explain the effects of climate change on the food chain and how it can compromise our food security.

Next slide, please. On this slide, I am showing a diagram of the typical food chain. There are three (3) columns here. The first one shows the food chain for terrestrial environment. The second one shows the components of the food chain for each level. And the third one is an example of a food chain in the marine environment. It is important to note that man is always on top of this

food chain. A food chain is the transfer of energy from one component to another.

Firstly, at the base, we have the producers. These are the organisms which have chlorophyll or those bacteria that do not need sunlight. Those with chlorophyll need sunlight to create food. So they use water and carbon dioxide to produce food. Then the energy that they store in their body is used by the next group. So, in the next group, we have here what is known as the herbivores. They can be insects which eat flowers. They can also be cows that eat grass, and even hogs and chicken which comprise our meals. So the three (3) main items - beef, poultry, and fish. Well, fish is on the other side. Well, beef and chicken and hogs are on the second level.

When man eats vegetables, they are on the second level. But the nice thing about man is that it can also eat meat, so it also occupy the other food chains, the other levels. So this goes on and on until the top which I believe is also man.

On the right side of the figure, it starts with the unicellular and microscopic organisms we call plankton. They also have chlorophyll and they are also covered with a test. It's (called a) calcium carbonate test. Some of them, like the diatoms, capture light energy when they're floating in the sea and convert this into food. Since they're very, very small, they cannot be eaten directly by the bigger fish. So what you need is another level that can be eaten by fishes. And this is another group which is known as the zooplankton. So they occupy the second level and it is the zooplankton that forms part of the diet of the smallest fish. Then the smallest fish is the diet of a big fish. And the big fish is the diet of the bigger fish, and up the chain until the sharks and the orca, as you can see here, and then man.

So, at each level, the effects on the environment such as heat from manmade disasters or natural disasters, for this matter, that happens in a very, very wide area can compromise the food chain, and (so) the food security of man is compromised. I will explain it in this way. So how then does climate change trigger a natural disaster, and when exacerbated by man's behavior, affect the food chain and compromise food security?

Next slide, please. I'd like to emphasize that the effects of climate change on the marine environment are encapsulated in four (4) effects, namely: increase in sea temperatures from the effects of greenhouse gases; second, sea level rise because there is warming of the oceans; the ice caps at the polar north and south begin to melt and they increase the sea level. Third is ocean acidification. The cause of warming is actually the increase in greenhouse

gases emission, which are then absorbed by the oceans, and this carbon dioxide absorbed by the ocean is changed into ions like carbonic acid, plus the carbonate ion. When you have plenty of carbonic acid, that's the time you increase acidity in water. And I'll explain later how increase in acidity influences the food chain. And fourth, the last, is more intense weather disturbances from the accumulation of heat and interactions of oceans and land masses. A good example of this is Typhoon Haiyan. Usually, we do not have the Category 5 kind of weather disturbance but, for that very first time, we were hit by Category five (5,) *hindi lang sa Pilipinas* (not only in the Philippines) but also elsewhere.

Next slide, please. Alright, so, the first effect is increase in temperature. When the water temperature increases, the zooxanthellae housed in the corals, which are habitats of fish, are expelled because they're not used to increase in temperature. So you only need a three-degree (3) Celsius rise in the ambient temperature, and when it is prolonged for about three (3) days to more than a week you'd begin to see effects like coral bleaching. When there is coral bleaching, the corals die, and once the corals die, they begin to disintegrate if they cannot recover straight away. And what happens is the habitats of reef fishes, which man eats, are compromised. So if fishes do not have habitats, they are less likely to survive. Examples of these fishes would be the damselfishes, which are the food of the bigger fish like the snappers or the maya-maya, and they are also fed on by lapu-lapu or the groupers which occupies the top of the food chain on a reef. So if we have that, then food is compromised.

Next slide, please. The other effect of increase in temperature is by way of confusion among marine organisms. Marine organisms usually follow a biological calendar. And the cues of these marine organisms are the different seasons. So when the season changes, they say "it's time for us to spawn so that we can replenish our populations". But, because of climate change, they begin to be confused (on) when do they spawn and when do they not spawn, and the most aggravating thing here is that most of the organisms spawn in synchrony with other organisms, so that when the young is born, the abundance of food for the young is also plentiful. So when they are confused and they begin to spawn but there is no synchrony for the food of this young fish, then what you end up with is a disaster also for the particular spawning period. Alright, so it affects the reproductive cycle, et cetera, and the abundance (of population) also.

Next slide, please. Then, the other scary thing about being in the tropics is when we have a strong, intense climate change and the water begins to warm up. Because fishes have the ability to be mobile, they can actually escape the tropics and move to higher latitudes to seek cooler waters. But the coral reefs,

which are sedentary, cannot move. They stay there and they are affected by coral bleaching, et cetera, and they die off. But what is the impact of this? It means that the food security for tropical countries is being threatened because fishermen need to move further up in the higher latitudes to catch these fishes.

Next slide, please. Here, sea level rise is a good example here. Sea water intrudes higher into the land masses and can influence the water table in land, and this has great impact on our agriculture because, if you use ground water which is saline to water your garden, water your farms, then you don't get the production that you want. Our farms are also threatened later by another effect, no? When we go to the fourth one.

Next slide, please. By the way, when the water table is influenced by seawater intrusion, drinking water is also affected.

Next slide, please. Here, this is sea level rise, again. The habitats that are really vulnerable in the marine environment are the sea grasses and the mangroves. If you look at a mangrove forest, they really have this zonation. (In) the ones that are very near the sea, the species *Avicennia marina* are very, very dominant, plus *Stylophora*. And then, as you go inland, the species changes and those species that cannot tolerate higher salinity are located upland. When you have sea level rise, sea level will intrude into the land and affect those mangroves that do not have the capacity to tolerate salinity, and hence, they can die off, and if they die off then you lose an important breeding ground, spawning ground, and nursery ground of fishes, crustaceans, and many other food items for man.

Next slide, please. This is a slide showing the effects to agriculture and sedimentation, which affects corals. When you have a strong downpour, the sediments become loose, and then it brings the sediments to the sea and smother the corals.

Next slide, please. This is an example of ocean acidification. When the seawater becomes acidic, it's like the animals there are immersed in an acid solution. So, what happens is, all animals and even plants, particularly seaweeds which possess calcium carbonate, are being weakened and corroded. It is similar to a person suffering from osteoporosis but, this time, the entire body is immersed in an acidic solution. Over time, when the oceans become acidic, you will begin to see less organisms with calcium carbonate; these are fishes with skeletons, giant clams, or even the clams that we eat. Example of clams would be the simple *tahong*, the green mussels. The shell is made up of calcium carbonate. The coral reefs will also be affected because the entire skeleton of coral reefs are made of calcium carbonate as well. Even crabs and shrimps, their outer skeletons are composed of calcium carbonate.

Next slide, please. Those are the effects that I can explain about the effects of climate change on the food components, which will then affect food security of man. So the only way that we can prevent this from happening is we should significantly reduce the triggers of climate change, and the number one trigger of climate change is greenhouse gas emissions. Number two, we should promote technology that efficiently uses and converts energy. This includes the renewable forms of energy. Number three, we need to change the behavior of man because right now, even if we have the Clean Air Act, there's still plenty of people burning dried leaves. So the carbon dioxide captured during photosynthesis in the tissues of the leaves are sent back to the atmosphere when they burn it.

Second would be to invest in actions that sequester excess carbon from the environment. So restore our forest, our peatlands, mangroves, seagrasses, and coral reefs. The mangroves are two hundred fifty times (250x) better carbon dioxide sequesters than a tropical rainforest. Seagrasses are about two hundred times (200x) better than a tropical forest, and that's why quite recently, the DENR is looking at the marine environment because for a long, long time they have neglected the marine environment, but now they give plenty of attention to the marine environment.

Next slide, please. I think that's my last slide. Thank you for your attention, sir.

ATTY. MAYO-ANDA:

Thank you, Dr. Hilomen. Your Honors, please, may we be allowed to ask a few questions?

PANEL CHAIR CADIZ:

Please proceed.

ATTY. MAYO-ANDA:

In your presentation, Dr. Hilomen, you identified four (4) major effects of climate change on the coastal and marine ecosystems. Among the effects



you've identified here, which among these has or have the most profound effect on food security?

DR. HILOMEN:

For now, the first one, which is the increase in temperatures, and I think the fourth one. The first one, the increase in temperature, has really affected (the) vast majority of coral reefs in the country.

For example, the Bolinao Reef Complex was hit by the 1998 El Niño, and so ninety percent (90%) of the corals in the Bolinao Complex perished. If the Bolinao Coral Reef Complex was healthy, where you have plenty of herbivores there, they can clean the dead surfaces of the corals and allow new larvae of corals to settle and grow. But that did not happen because there's no more herbivores there. And so the coral reefs in Bolinao has been transformed from a coralling community, which is quite nice for fish that we eat, into an algal community, which, of course, as for now the algae that grows there are mostly *Sargassum* which are not eaten directly by man but they can be used as good fertilizers. So there is a change in community and habitat wherein they can no longer catch fish, the good and top carnivores in Bolinao.

The last one can be explained (through) when Typhoon Haiyan hit the country, (as) you could see the destruction and devastation. Even the farmlands in the region where Haiyan landed were damaged, and so food security (sources) there like the rice fields, et cetera, were also destroyed.

ATTY. MAYO-ANDA:

Just a quick follow-up: in relation to the increase in sea temperature that you mentioned, besides Bolinao, are there other areas in the country where you have seen these trends taking place?

DR. HILOMEN:

Yes. The southwestern side of Palawan from Aborlan down to Bataraza. The fringing reefs there are maybe eighty percent (80%) all covered with algae, and we know that they are the effects of coral bleaching because the reef skeleton is intact but it is dead and it's covered with algae. Corals that have been affected by dynamite blasting are different. They're all flattened because of the blast, but (for) this you can still see the branching corals standing, but

they are dead. In addition to Palawan, there are also other reports done by the *Coral Bleaching Watch* of the country, so I think it's all over the country except for the most remote parts, which we did not receive any reports (for) but we think they were affected as well.

ATTY. MAYO-ANDA:

So do I take it that coral bleaching is a common observation in all fishery areas?

DR. HILOMEN:

Yes, particularly for reef fishes.

ATTY. MAYO-ANDA:

Okay. That would be all, Your Honors, unless the Commissioners would have questions for Dr. Hilomen.

PANEL CHAIR CADIZ:

Thank you very much. Commissioner Armamento will field some questions to our witness.

COMM. TANODRA-ARMAMENTO:

Good morning, Dr. Hilomen. I'd like to ask: you have recommended that we have to reduce triggers of climate change. There must be some behavioral change in man. Do you have any specific recommendations on the changes that man should undertake to either abate, or if not, reverse climate change?

DR. HILOMEN:

Yes, Ma'am, but changing the behavior of man is a very, very tall order. Like, for example, for the Philippines, the use and production of plastics use energy using gas, and you have emissions as well. And the Philippines, right now, is the third (highest) plastic polluter globally, behind China and Indonesia. In the ASEAN region, there are five (5) countries that are in the top ten.

Now, if you look at the human behavior, they usually just throw plastics everywhere and these plastics find their way into the marine environment. And, well, the production of plastic triggers emission. The other thing is that the tendency of many people not to go into renewable forms of energy. Well, because it's very costly for now. Then they just probably, burn, and incinerate their garbage in the backyard but that's quite little (in terms of total emissions). But the biggest gas emission polluters really are not us but the United States and China. Those countries combined form the forty percent (40%) that are emitted for the entire planet. Again, if we just think on how we can conserve and use energy, like turning off lights just to save on burning of fuel, probably we can help but I'm not sure how big of a dent Filipinos can do for the entire country, for the entire world.

COMM. TANODRA-ARMAMENTO:

Thank you.

PANEL CHAIR CADIZ:

We have no further questions for the witness.

ATTY. MAYO-ANDA:

May we request then, Your Honors, that Dr. Hilomen be excused?

PANEL CHAIR CADIZ:

Thank you very much, Doctor.

Page 1188

DR. HILOMEN:

Thank you, sirs, ma'am.

ATTY. MAYO-ANDA:

Thank you very much.

PANEL CHAIR CADIZ:

I understand that you changed the sequence of presentation of witnesses, so is our second resource person here already?

ATTY. MAYO-ANDA:

Your Honor, may we request for a five (5) minute recess? We'll just check the arrival of our resource person.

PANEL CHAIR CADIZ:

Alright, if that's it, then maybe we can go to another witness first.

But yes, we can have a five-minute break. So, session is adjourned for five minutes.

*[break]*

PANEL CHAIR CADIZ:

Alright. We may now resume our session. The session is now in order.

*[bangs gavel]*

Counsels, are you ready to present your next witness?

ATTY. SORIANO:

Thank you, and yes, we are ready, Your Honors.

May we call on our second witness for today, Mr. Marcos Orellana?

PANEL CHAIR CADIZ:

Please swear-in the witness. Thank you.

Counsels, you may now proceed.

ATTY. SORIANO:

Your Honors, Dr. Marcos Orellana is the Director of the Environment and Human Rights Division of *Human Rights Watch*. We are offering his presentation today to share his views on the legal framework of human rights responsibility of corporations, including a summary and analysis of the opinion of the Inter-American Court of Human Rights recognizing an autonomous right to a healthy environment, and nations' extraterritorial responsibility for environmental damages under the American Convention on Human Rights. It should (be) set as an example, and that is the purpose. So may we now proceed for preliminary questions, Your Honors?

PANEL CHAIR CADIZ:

Please proceed.

Page 1190

ATTY. SORIANO:

So, we received several documents from Dr. Marcos Orellana, via email consisting of the following: one, profile of Dr. Marcos Orellana consisting of one (1) page and, on the same document, bearing a signature of the same name, pre-marked on 21<sup>st</sup> of May as Exhibit BBBB for the profile, and Exhibit BBBB-A for the signature. This morning, we asked the pre-marking of two (2) additional documents entitled "Statement of Dr. Marcos Orellana" consisting of seven (7) pages, and the PowerPoint presentation of Marcos Orellana consisting of 11 pages. They were pre-marked as CCCC to CCCC-6 for the statement, and Exhibit DDDD to DDDD-10 for the PowerPoint presentation. For Attorney Esguerra's confirmation, Your Honor.

PANEL CHAIR CADIZ:

Attorney Esguerra, the copies that we have do not bear the signature of Mr. Orellana. Okay. The original...

ATTY. SORIANO:

Yes, Your Honor, which is now in the marked exhibits folder.

PANEL CHAIR CADIZ:

Alright. And then, in the Exhibit CCCC, there is no authorship. No signature appears on the last page. Has it been properly signed?

ATTY. SORIANO:

It is properly signed, Your Honors.

PANEL CHAIR CADIZ:

May I see? Sorry, I just want to... Alright. Thank you. Thank you, Counsel.

You may now proceed to examine your witness.

ATTY. SORIANO:

Mr. Marcos Orellana, good morning. May you confirm and affirm to this hearing that you, indeed, authored said documents, and that you signed those documents, and also, on the authenticity, correctness, of all the contents of those documents?

DR. ORELLANA:

Thank you. Yes, I am in a position to affirm so.

ATTY. SORIANO:

Thank you very much. Our resource person is now ready to present his summary based on the statement that he submitted.

PANEL CHAIR CADIZ:

You can now proceed, Mr. Orellana.

DR. ORELLANA:

Thank you very much. Your Honors, good morning. I am honored to appear today before the Philippine Commission on Human Rights. My name is Marcos Orellana. I am the Director of the Environment and Human Rights Division at *Human Rights Watch*. *Human Rights Watch* is an independent, international organization that defends the rights of people worldwide. We investigate human rights abuses, expose the facts widely, and pressure those in power to respect rights and secure justice. *Human Rights Watch* has done research and advocacy on human rights issues in the Philippines for more than twenty-five (25) years. My area of expertise is public international law, having lectured and published in the field for more than twenty (20) years.

The case before you has great significance for millions of people who are and will be impacted by climate change. It also has great significance for humanity's sense of justice and responsibility towards the totality of life on the planet. In the time available to me, I will speak about two (2) questions that directly concern the responsibilities of Carbon Majors — the largest companies producing crude oil, natural gas, coal, and cement — who are also the world's biggest greenhouse gas emitters for human rights impacts resulting from climate change.

The first question: what are the responsibilities of business enterprises under the United Nations Guiding Principles on Business and Human Rights? The second: what are the key elements of the recent advisory opinion on human rights and the environment rendered by the Inter-American Court of Human Rights?

The first question- next slide, please. The first question concerns the corporate responsibility to respect human rights. Back in 2011, the UN Human Rights Council adopted, by consensus, the UN Guiding Principles on Business and Human Rights. These guiding principles reflect a high-level agreement after decades of debate at the international level over the human rights responsibilities of business enterprises. One of the key achievements of the guiding principles was precisely their ability to gather political consensus at the United Nations.

The UN Guiding Principles guide the implementation of the Protect, Respect, and Remedy Framework that the special representative of the Secretary General on Human Rights and Transnational Corporations and Other Business Enterprises, John Ruggie, presented to the *Human Rights Council* in 2008. Under this framework, governments have obligations to protect against corporate-related human rights abuses, business enterprises have responsibilities to respect all human rights, and victims are entitled to an effective remedy. Concise as it is, this framework reflects international legal developments in the field of business and human rights.

Next slide, please. The UN Guiding Principles firmly establish corporate responsibility to respect human rights. Corporations are expected to take proactive steps to ensure that they do not cause or contribute to human rights abuses within their global operations and respond to human rights abuses when they occur.

Next slide. For example, *Human Rights Watch* has investigated several instances where companies have been responsible for human rights abuses.



We have documented how illegal logging in Indonesia jeopardized the sustainability of forest use and global efforts to combat climate change.

Next, we have also reported how the Porgera mine in Canada's Barrick Gold Mining Company in Papua New Guinea dumped fourteen thousand (14,000) tons of liquid mining waste daily into a nearby river. Earlier this year, we exposed human rights abuses and forced labor in Thailand's fishing industry. These and many other cases of abuse highlight the importance of the corporate responsibility to respect rights.

The key tool in the UN Guiding Principles to operationalize the responsibilities of businesses with respect to human rights is due diligence. Human rights due diligence is a process to identify, prevent, mitigate, and account for companies' impacts on human rights. Companies are thus expected to establish and implement effective screening, monitoring, and response mechanisms that permit continual analysis of human rights risks. Specific steps that corporations should take to fulfill their human rights due diligence responsibility is to conduct a risk assessment, prevent or mitigate that risk, and ensure access to a remedy when they have caused or contributed to the harm. Corporate human rights due diligence should address all internationally recognized rights. This is because companies can and do interfere with the realization of a wide spectrum of human rights. That said, some rights will be more relevant than others depending on the particular industries or circumstances.

In the case at hand, the issue of the responsibilities of Carbon Majors for human rights impacts resulting from climate change particularly involves the right to a healthy environment, the right to life, the right to health, the right to property, and the right to food. The impact of a company's activities on human rights may relate to its direct operations, its supply chains, and its products and services. In the case at hand, Carbon Majors have conducted activities that result in the concentration of greenhouse gases in the atmosphere, which in turn causes global climate change.

The corporate responsibility to conduct adequate human rights due diligence extends beyond corporations' direct operations to include their global supply chains. Individual companies' global supply chains often involve large numbers of suppliers or subcontractors, including some who are part of the informal sector. Due diligence does not involve limitations based on nationality or location of suppliers.

Next, please. For more than two (2) decades, *Human Rights Watch* has documented human rights abuses in the context of global supply chains. We

have documented hazardous child labor in tobacco farming in the United States and Indonesia. Earlier this year, we exposed human rights and environmental abuses in the supply chains of jewelry companies, including forceful displacement of indigenous peoples from their lands and pollution of waterways and soils with toxic chemicals. Under the UN Guiding Principles, companies should ensure that their business activities, including through their supply chains, do not cause, benefit from, support, or engender human rights abuses.

Despite the importance of the UN Guiding Principles in articulating corporate responsibilities, they are not a panacea. Critically, they lack any mechanism to ensure compliance or to measure implementation. This flaw of the guiding principles underlines the importance of the efforts currently underway at the *Human Rights Council* toward a binding international treaty on business enterprises and human rights that can help secure human rights accountability.

What's clear is that the UN Guiding Principles set an important benchmark for the expectations of society on the conduct of corporations with respect to human rights. Many of the standards and the guiding principles, although not binding, are based on international human rights instruments. It is therefore incumbent upon national human rights monitoring mechanisms, such as the Philippine Commission on Human Rights, to ensure that the corporate responsibility to respect human rights is upheld. The role and importance of human rights monitoring mechanisms especially in cases involving emerging issues of international law, such as those raised by environmental threats, takes me to the second question.

The second question for me today concerns the advisory opinion on human rights and the environment published by the Inter-American Court of Human Rights in February. This opinion is highly significant for the case here because it addresses both the extraterritorial dimensions of international human rights law and the human right to a healthy environment. It bears recalling that the Inter-American Court, in addition to hearing cases of violations of the rights and freedoms guaranteed in the American Convention on Human Rights, can also provide opinions in response to questions presented by any member state of the Organization of American States. Advisory opinions by the Inter-American Court are legally relevant to all members of the Organization of American States. This includes the United States where several of the Carbon Majors are domiciled.

A good place to start the analysis of the Inter-American Court's opinion is with the basic facts. Well, technically, the advisory opinion is not a case and therefore does not have a factual platform. The reality is that Colombia requested this opinion from the court in 2016 expressing concerns about the

threat posed by large-scale infrastructure projects in the Caribbean to the human rights of the islanders of the archipelago of San Andres, located opposite Nicaragua in the Caribbean Sea.

In 2013, Nicaragua announced plans for a grand canal connecting the Pacific Ocean and the Caribbean Sea, though construction has not yet started. Serious questions have been raised about the potential environmental impact of the project. The relevance of this advisory opinion extends beyond this specific factual background, however. In fact, the court explicitly noted that the questions addressed in its advisory opinion are of importance to all the world's countries. That is because the questions before the court concerned cutting-edge issues of international human rights law.

One key question the court grappled with was this: since environmental harm often crosses state boundaries, does the American Convention protect persons affected by environmental harm coming from another country? The answer is yes. The court explicitly said that states' obligations under the convention extend to harms caused to people outside of their borders. To reach this answer, the court analyzed in detail the scope of application of the American Convention on Human Rights. The convention, in Article 1 entitled "Obligation to Respect Rights," establishes the duty of states — and I quote — "to respect the rights and freedoms recognized herein and to ensure to all persons subject to their jurisdiction the free and full exercise of those rights and freedoms". The key element that determines the scope of this obligation is the term "jurisdiction."

Jurisdiction is a multifaceted term in international law. It can refer to the legal competence of an international tribunal to hear and decide a case. It can also refer to the basis upon which a state may exercise power, control, or authority, such as the jurisdiction of a state to prescribe and enforce laws in its territory or in respect of its nationals. In the context of the American Convention, a human rights convention, jurisdiction is the key that defines and limits the obligation of the state which is responsible to respect and guarantee the rights and freedoms of persons under its jurisdiction.

The Inter-American Court reasoned that the term "jurisdiction" in the American Convention is not identical to territory. In its analysis, the court examined the case law of the UN Human Rights Committee, the European Court of Human Rights, and other international legal sources that have recognized instances in which extraterritorial conduct by the state involves the exercise of its jurisdiction. The court concluded that the term "jurisdiction" can encompass situations of extraterritorial conduct of the state. The court further established that, in respect of extraterritorial situations, a person is

under the jurisdiction of a state where it exercises authority over the person or when the person is under effective control, be it within or beyond its territory

Now, this is a highly technical and complex matter and the complications arise because of the multifaceted character of the terms in question. The Inter-American Court, having laid this principle of extraterritorial jurisdiction, next scrutinized when does a person fall under the jurisdiction of the state in situations of transboundary environmental harm. The court noted that environmental pollution of one country can quickly become the environmental and human rights problem of another.

In approaching the question of jurisdiction and transboundary environmental harm, the Inter-American Court relied on several grounds. First, it recalled the consistent case law of the International Court of Justice articulating the duty of states to avoid causing transboundary environmental harm. Second, it reaffirmed the duty of states to not pose obstacles to other states to fulfill their human rights obligations. In this regard, the court noted that activities within the jurisdiction of a state should not deprive another state of its capacity to ensure the enjoyment of human rights to persons in its jurisdiction. This analysis led the court to a crucial point: the state where the harm originates, and I quote, "is in a position to prevent transboundary harm that affects the enjoyment of human rights of individuals outside its territory," end of quote.

Perhaps I'll take a moment and repeat that quote because this is the crucial point of the court's advisory opinion on this matter. "The state where the harm originates is in a position to prevent transboundary harm that affects the enjoyment of human rights of individuals outside its territory." The conclusion of law that follows is plain: in a case of transboundary environmental harm that impacts on human rights, the persons whose rights have been violated are under the jurisdiction of the state of origin of the harm.

In other words, the principle laid out by the Inter-American Court is that a state may be responsible for extraterritorial human rights violations where there is a causal connection between an activity in its territory or jurisdiction and the transboundary environmental harm that impairs human rights. Before analyzing the legal implications of this principle for corporate activities, I think it is worth highlighting that the Inter-American Court received a good number of amicus curiae briefs that helped it approach the questions put to it.

The analysis on jurisdiction and extraterritorial human rights obligations laid out by the Inter-American Court has direct implications for corporate responsibilities in respect of human rights. In addition to reiterating earlier pronouncements that businesses should respect human rights and be accountable for the negative human rights impacts of their activities, the court's opinion explored the extraterritorial dimensions of corporate

responsibilities. The court examined decisions by the Committee on Economic Social and Cultural Rights and by the Committee on the Elimination of Racial Discrimination and noted that, in respect of businesses registered in one state but that carry out activities outside of that state's territory, there is a trend toward the regulation of said activities by the state of registration. This trend, the court opined, is positive because it would allow states to guarantee human rights of persons outside its territory.

In the end, the advisory opinion of the Inter-American Court of Human Rights makes an important contribution to clarifying human rights responsibilities for extraterritorial impacts. It explicitly underlined the notion that environmental degradation and the adverse impacts of climate change affect the effective enjoyment of human rights. Therefore, it comes as no surprise that the court also extolled the importance of the right to a healthy environment.

The Inter-American Court of Human Rights proclaimed that, and I quote, “a clean environment is a fundamental right for the existence of humanity”, end of quote. The court affirmed that the American Convention on Human Rights protects this right. And, for the first time, it explicitly outlined some of its components.

For example, the Inter-American Court explained that the right to a healthy environment has both collective and individual dimensions. That is, it expresses a universal interest that is due to present and future generations as much as its infringement also affects individuals. In that regard, the Court noted that the right to a healthy environment is connected to other rights, such as the right to health, personal integrity, and the right to life, among others. Notwithstanding these interconnections, the Court clarified that the right to a healthy environment is autonomous. In the Court's reasoning, the autonomous character of the right to a healthy environment means that its content is distinct from the environmental dimensions of other rights. In that sense, the Court highlighted that the right to a healthy environment protects the elements of the environment such as forests, rivers, and seas.

The analysis of the Inter-American Court on the right to a healthy environment has the potential to unlock novel forms of understanding and using the law to address and redress the grave inequities suffered by individuals and communities exposed to environmental degradation. Climate change is a clear expression of inequity as the most marginalized and vulnerable people on earth — the people who contributed the least to the climate problem — are those who stand to lose their lives and their hopes for a better future. It thus comes as no surprise that the UN Human Rights Council included climate

change in its agenda and warned that climate change poses an existential threat for some countries.

One reason for the attention to the relationship between climate change and human rights is the recognition that climate change is having an uneven impact across the world. Climate change is imposing an increasing burden on governments, especially countries with limited resources, in their efforts to protect vulnerable populations and realize human rights. As a shield against the inequity, the right to a healthy environment brings to light a sharper sense of human responsibilities toward our shared planet and its people. The right also builds on the synergies between human rights and the environment to establish a stronger framework for accountability for deleterious activities that compromise the planet's vital signs.

In the end, the right to a healthy environment is about who we are as humans. The right enhances the appreciation of how humans are not isolated from but depend on the environment. It also amplifies human awareness on the interrelatedness of the web of life. The right to healthy environment, aids in fostering human consciousness and identity and a culture of respect toward all living beings and nature, which ultimately translates into respect for one another. It is that basic moral truth, that we need to respect each other's rights, which lies at the heart of the human rights promise of a world free of want and fear.

Thank you for the opportunity to appear today to speak about the corporate responsibility to respect human rights, and about interactions in the law on human rights and the environment.

PANEL CHAIR CADIZ:

Thank you very much, Dr. Orellana. Counsels, do you have questions to your resource person?

ATTY. SORIANO:

A couple of clarificatory questions, Your Honor. Thank you again, Mr. Orellana. You mentioned something about jurisdiction not (being) identical to territory. Can you expound on that statement?

DR. ORELLANA:

Certainly. Thank you for your question. The starting point in that analysis is that the Inter-American Convention, like other human rights instruments, establishes that the state has an obligation to respect rights of persons within its jurisdiction. The Court considered that the term 'jurisdiction' goes beyond territory. It is not equivalent. Usually, the exercise of jurisdiction will be coterminous with territory because the state may exercise jurisdiction over its territory, but there may be instances where a state may exercise jurisdiction outside of its territory in specific situations. And those situations are permissible under certain grounds established in international law.

For example, a state may exercise jurisdiction over environmental issues in its exclusive economic zone which is, under the Law of the Sea, defined up to a maximum of two hundred (200) nautical miles from the baselines in the coast. That is not the territory of the state; it is a functional zone where the state exercises jurisdiction. Similarly, if a state is occupying another territory, that other territory is not an element of the territory of the state but the state nevertheless is exercising jurisdiction over that territory. It is controlling it and exercising authority over it. Another example is in respect of persons of the nationality of the state that may find themselves in other countries, the state may validly exercise jurisdiction over those individuals of its nationality in certain respect.

What's key in this decision is that the Inter-American Court examines an issue of first impression that had never come before an international tribunal before, which is: what happens in a situation where environmental harm originates in one country but affects people in another, are those people in the other country that are affected by this transboundary environmental harm under the jurisdiction of the country of origin? The answer to that question is quite important because, if they are, then those individuals have a remedy and can hold the country of origin accountable for that harm. But, if they're not within the jurisdiction, then the human rights systems do not provide for such a remedy, and so, therefore, the significance of the question.

ATTY. SORIANO:

Thank you for that. Next question is: can you first define in a simple way supply chain that you mentioned earlier as well?

DR. ORELLANA:

Certainly. We heard about supply chains yesterday from expert resource Professor Michael Addo. As I mentioned in my presentation, in a globalized business framework, corporations will integrate their business practices with many other participants in the value chain. They may, through procurement or purchase agreements, buy raw materials from companies located in other countries. They may employ contractors or they may employ intellectual property that is coming from other places. All of those steps in the value chain and the supply chain are relevant for the corporate responsibility to respect human rights because, as articulated by the UN Guiding Principles, a corporation, regardless of its size or location, is responsible to ensure that its operations across all its supply chain do not cause or contribute to human rights abuses.

ATTY. SORIANO:

And, as a follow up to that, in the case of the Carbon Majors, would you say then that it should conduct due diligence and assess whether the operations of the Carbon Majors and their supply chains have impacts, for example, in the Philippines? Would you say that Carbon Majors have that responsibility?

DR. ORELLANA:

One can look at the scope of activities and operations of the Carbon Majors - the impact of the direct activities such as drilling or the impact of its suppliers or the impacts of its products. What are the impacts of the burning fossil fuels? The application of the UN Guiding Principles — and, specifically, the issue of due diligence — allows for a focused scrutiny on the steps that Carbon Majors should have taken and should be taken to fulfill their corporate responsibilities to respect human rights.

For example, have they assessed these potential risks associated to their activities to climate change and human rights? Have they disclosed those potential risks? Have they disclosed truthful information or have they otherwise engaged in a campaign of systematic denial or misinformation? Have they adopted plans to prevent those risks or to mitigate them? Do they have policies in place in order to address these risks? More generally, have they applied their resources to the best of their capacity to prevent and address the risks associated to their activities?



These are the kinds of questions that, under a due diligence responsibility of the guiding principles, are relevant in a focused scrutiny over the relationship between Carbon Majors, climate change, and human rights.

ATTY. SORIANO:

That's very enlightening. Thank you very much. May we process a few more questions that we will ask later, Your Honors? So probably you can come in for questions.

PANEL CHAIR CADIZ:

So you would prefer the the panel to ask questions first before you proceed?

ATTY. SORIANO:

We have a few more questions. Yes, we will still-

PANEL CHAIR CADIZ:

What's the reason behind that?

ATTY. SORIANO:

Still processing the questions, Your Honor.

PANEL CHAIR CADIZ:

Alright. Then I think it would be better if we go into a ten-minute break.

Page 1202

ATTY. SORIANO:

Okay.

PANEL CHAIR CADIZ:

To allow you to process the information and formulate your questions.

The Commission can ask our own questions after you're done examining your witness. So we'll go into a ten-minute break.

ATTY. SORIANO:

Yes. Okay.

PANEL CHAIR CADIZ:

Would that be sufficient?

ATTY. SORIANO:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Alright. Thank you. So, the session is now in break.

*[bangs gavel for the break]*

*[ten-minute break]*

CLERK OF THE INQUIRY:

All rise. The Honorable Inquiry Panel Chairman Commissioner Roberto Eugenio T. Cadiz still presiding. Everyone may be seated.

PANEL CHAIR CADIZ:

*[bangs gavel]*

Session is now back in order. Counsels, are you ready to continue with your examination of your witness?

ATTY. SORIANO:

Yes, Your Honor.

PANEL CHAIR CADIZ:

Okay, please proceed.

ATTY. SORIANO:

Dr. Marcos Orellana, for continuation, our question is: can you elaborate on the significance of the advisory opinion of the Inter-American Court to this case before the Commission on Human Rights?

DR. ORELLANA:

In my view, the advisory opinion of the Inter-American Court of Human Rights is highly significant for this case for two reasons:

One, it demonstrates that human rights instruments in the human rights project is a living project. These are living instruments; they are not fossilized in time. At the time they were drafted, they are meant to address the current challenges

facing our generation, facing humanity, today. The Inter-American Court's decision shows that the American Convention provides protection for people that are experiencing harm as a result of transboundary environmental issues. This is a novel issue. It's an issue of first impression. It opens the door for thinking, for using the law, for understanding the law in novel ways and applying it also to situations of climate change. That's, I think, a first point regarding the significance to this case.

And a second point that I think is worth making is that the advisory opinion also shows that human rights mechanisms are well-placed to ensure the effectiveness of the instruments that they are mandated to apply. This is important because the human rights project — and human rights instruments — is meant to provide those who suffer human rights abuses, the victims of human rights violations, with an effective remedy. And, so, putting the question of effectiveness of those instruments and the mandate of human rights monitoring mechanisms is at the heart of the significance of the advisory opinion of the Inter-American Court.

ATTY. SORIANO:

Thank you. And a follow-up question on that: in that Inter-American case or you may call it a subject matter, how did that Court approach the science side or the environmental side, technical side, of the issue? Just, you know, maybe for learning purpose also of how it is to be approached in a human rights investigation like this.

DR. ORELLANA:

Thank you for that question. Given that the proceedings at the Inter-American Court were of an advisory nature in accordance with its advisory competence, there was no file, no contested issue of fact that would call for an application or a scrutiny of the science. The questions posed to the court were legal questions, and they were addressed by legal memoranda and the amicus curiae briefs that were submitted to the court which helped the court inform its analysis. And, so, in that specific instance, these issues did not arise.

There are other instances where international courts and tribunals have been confronted with issues of science, and there are various ways in which they have sought to learn more about the science. There is the issue of experts, for example, that are providing testimony and helping a court address the scientific basis. There are other figures of so-called masters of the court which

help a court address questions of contested science. But, in any event, those issues of scientific character, they may be quite relevant in a specific factual setting because they help determine — for example, in this context — the issues of attribution. When is an extreme weather event caused directly by climate change? Or, otherwise, when is a naturally-occurring event aggravated and by how much? What is the differential in magnitude? Those are questions where scientific evidence becomes very important in helping monitoring bodies establish the facts and then apply legal standards to those facts.

ATTY. SORIANO:

That's very helpful. Thank you. In a hypothetical situation, Dr. Orellana, that a corporation observed due diligence in the first stage, like it conducted, for example, risk assessment but failed to take action to address those risks, how would you describe due diligence performance of that corporation?

DR. ORELLANA:

Due diligence is a rather elastic concept which allows for a scrutiny over the specific factual situation, and so the question is very hard to answer in the abstract. General considerations include: what is the size of the company, what does the supply chain look like, what are the impacts and the risks involved.

In the scenario that you're putting forward where there has been a risk assessment — and so specific risks to human rights have been identified — and yet a corporation does nothing, then it is failing to undertake the steps that are required of it under a due diligence approach as established by the UN Guiding Principles because the due diligence responsibility requires companies not just to assess risks, not just to know what is going on, but also to act upon those risks in order to prevent or mitigate, as the case may be. It's not enough to know the guiding principles, establish corporate responsibility, to act in order to make sure that the corporation does not cause or contribute to or benefit from human rights abuses.

ATTY. SORIANO:

So as not to be abstract, then, if a corporation, for example, has made human rights statements already, has a climate change commitment already, but those statements and commitments were only in writing and we see, for example, a different thing happening on the ground or a different action being undertaken, how would you then describe due diligence performance of that corporation in that example?

DR. ORELLANA:

Yesterday, we heard Professor Michael Addo speak about statements and commitments as a first step in the five steps that he identified in order to discharge this responsibility of due diligence. It's the first step but it's only a first step. It is an important step, a significant step, because it reflects awareness and commitment, but if there's no action following that first step or if the action directly contradicts the commitment, then we enter not only the subsequent steps of the due diligence responsibility under the guiding principles but, as also Professor Addo mentioned yesterday, under Pillar 2 of the Guiding Principles, these expectations that are set upon corporations by society may find expression in the domestic laws of countries.

And, so, for example, if a corporation is putting information out in the public domain regarding its commitment of respect of human rights in the context of climate change and yet it is acting in a materially different way, that may be compromising or violating the internal laws of that country on securities, on the market, on providing information to investors or the public, as the case may be. More generally, one of the great advances in the last decade in international human rights law has been the recognition of the right to information. The right to information entitles every person to know, in the environmental context, what are the risks imposed on that person or that community as may be. And, so, if a corporation has committed to respecting human rights and has a policy on climate change and yet, in the hypothetical, it is acting in a different way, it's distributing materially false information that it knows to be false, arguably the content of the right to information is being infringed, and we can draw a link between human rights abuse as a result of that behavior, the conduct, of that company that is not in sync with its commitment.

ATTY. SORIANO:

Thank you. Maybe one last question from us, Your Honors: could you further explain what is the relevance to the National Inquiry of the Inter-American Court advisory, specifically the finding that there are specific situations in which a state can exercise jurisdiction outside of its territory; specifically this proceeding involves, as you know, companies operating and domiciled all over the world and causing and contributing to human rights harms in the context of climate change. So is there a role for the Philippines in ensuring the protection of human rights from activities that may not at all be occurring in our country, in the Philippines?

DR. ORELLANA:

One way of addressing that question is to, again, consider that the issue that was decided by the Inter-American Court of Human Rights is an issue of first impression where there was no precedent. So what does that tell us? What does that tell the Philippine Commission on Human Rights? What does that tell human rights monitoring mechanisms? That there are no obstacles in the discharge of its mandate in the interpretation of the legal instruments and standards that it needs to apply in order to uphold the rights in question.

Guided by the principle of effectiveness, the Inter-American Court was able then to propose and establish an interpretation that enhances the protection of people in the juridical space of the Americas in the face of quite new issues, such as transboundary environmental pollution or, in this instance, climate change. One can only be heartened by what could be described as a courageous approach, a novel approach, by this court in not shying away from understanding that the issues before it; they are novel, but they are also significant and they're relevant to the world we live in. They are highly relevant to millions of people that stands to suffer as a result of climate change.

The specifics of the ruling can be relevant for the facts at hand in this proceeding in a number of ways. They relate, for example, to the responsibility of those states where Carbon Majors are domiciled in respect of harm occurring to people in other states. There may be issues of recommendations to those states in regard to their state responsibilities to control what those corporations are doing when they affect people outside of their boundaries, in this instance, Filipinos affected by super storms. There may be other instances where activities occurring within the Philippines may have impacts outside of the Philippines. That is not apparently the case at

hand, but in the future this decision may be relevant for fact patterns of that character as well.

So that is why I was saying that it unlocks ways of thinking and using the law in order for the law to be able to provide an effective remedy to victims of human rights abuse. I think that that is one consideration. And, if I may, there is another one which rests on the right to a healthy environment because the duty for states to protect this right leads to an inquiry about corporate activities, corporate responsibilities, regardless of where those corporations are domiciled because the duty of the state and the duty of human rights monitoring mechanism to protect the right to a healthy environment of people under its jurisdiction is to determine where is that harm coming from, who is responsible, under what standards can that responsibility be established. All of that is relevant in the Inter-American Court's advisory opinion. The guiding principles and extraterritorial obligations, as I have presented earlier.

ATTY. SORIANO:

Thank you again, Mr. Orellana. That is all, Your Honors, from the Petitioners.

PANEL CHAIR CADIZ:

Thank you very much, Dr. Orellana.

All right. Attorney Armamento will be fielding some questions.

COMM. TANODRA-ARMAMENTO:

Okay. Thank you, Chair Cadiz. Mr. Orellana, I agree with your opinion that this inquiry is a performance of our mandate, so there is no problem with jurisdiction. I think the problem on jurisdiction will come only when we have to enforce certain remedies in a specific territory or state. My problem is: this petition is a petition against Carbon Majors. So I want you to teach us how we are going to connect the use of fossil fuels to a violation of human rights that can be ascribed directly to a specific person (that) may be natural or juridical. What are the elements that should be present in the presentation of the Petitioners? Thank you.



DR. ORELLANA:

Thank you very much, Your Honor, for your question. I think there are two elements to it as I heard it, and I would like to address them in turn. First of all, enforcing a decision in another state's territory would arguably be in contravention with the territorial integrity and equality of nations, which are principles established in customary international law and in the United Nations Charter. But my understanding of what this proceeding will result is that there is not necessarily an enforcement of a decision, but instead there are findings and recommendations. And, because of that, the issue of enforcement does not necessarily arise. It is an issue of how to craft recommendations that then can be effective and, in so doing, there is no obstacle. There's no jurisdictional obstacle to elaborating recommendations that have extraterritorial dimensions because there is no enforcement or exercise of state authority that would otherwise be in contravention with United Nations principles. So that is a first reaction to that part of the question.

Second part of the question concerned accountability and how to connect the responsibility of individual Carbon Majors with climate events. In order for that connection to take place, as we heard yesterday from other expert resource persons, the science will be critical. The science that is able to quantify the contributions that Carbon Majors have made to the accumulation of greenhouse gases in the atmosphere, on the one hand. So that connects Carbon Majors with the global climate problem on the one hand. And then the science of attribution — how to connect specific climate events with global climate change. And that is where again the science becomes key to show whether a specific event would not have occurred but for climate change — that's one possibility — or whether a given climate event has been made more likely than not as a result of climate change. Now, those are different causations standards and the science can help measure that, the science of attribution.

So, in terms of accountability of the individual Carbon Majors for this specific climate event, those two scientific pieces, they come together and can help inform that exercise in accountability.

COMM. TANODRA-ARMAMENTO:

Thank you very much.

Page 1210

PANEL CHAIR CADIZ:

Thank you very much, Mr. Witness.

Father Walpole?

FR. WALPOLE:

I want to go back and if you could kindly elaborate: I think you were speaking of the Thai fishing situation that involves slavery and entrapment of migrants, really, and this was tied to a major food chain or series of food chains in Europe. I don't know if that (was) legally preceded but I understand the company did change its practice, or companies. I wanted to understand this because I think also with Shell Petroleum in Nigeria, they were clearly linked to destruction of the source. So, many of these cases deal with the sourcing of materials, yeah, and how labor is involved and therefore human rights abuses occur.

What we're trying to do is look at the distribution end and how human rights or what looks like basic health is impacted. I don't know if there are any cases going on, when we look at this chain of production to consumption where we have examples in the, shall I say, the distribution. In this case, it's the distribution of waste, whether there are cases that would help us.

DR. ORELLANA:

Thank you, Your Honor, for that question. As you rightly point out, the corporate abuse can take place up the chain in the supply side of things. It can take place, for example, on the treatment of workers, also in the supply side. Or it can take place down the chain as a result of the impacts of products or as a result of the impacts of the company's operations on local communities.

There have been examples documenting both sides of this equation, of the corporate responsibility in respect of human rights, as it relates to the environment. The example of the Thai fishing industry is one where we look at the supply side of things and how is a product produced, in this case, caught or harvested, as you pointed out, abused migrants, forced labor, and the like. We have documented other instances where pesticides are affecting the health of workers. We have talked - and this is all up the chain, down the chain. We have documented how extractive industries have polluted waterways. They

have compromised the right to food of communities. They have displaced indigenous peoples from their lands. They have contributed to deforestation and, therefore, to upsetting carbon sinks that are very important in the fight against climate change.

And so, whether it's up the chain or down the chain, the corporate responsibility to human rights - to respect human rights requires corporations to act with due diligence and ensure that they do not cause, contribute to, or benefit from human rights abuses.

PANEL CHAIR CADIZ:

Doctor? You're a doctor, right? Doctor of Laws?

DR. ORELLANA:

Yes.

PANEL CHAIR CADIZ:

Okay. Dr. Orellana, thank you very much for coming here and sharing your expertise with the panel.

I'd like you to elaborate more on the distinction... because the fact that we are now here hearing this Petition means that we have decided that there is no issue concerning jurisdiction. We have resolved that and we have said that the rationale behind the conduct of this Inquiry is that we are mandated by our Constitution to investigate allegations concerning violations of human rights of the Filipino people.

But this is a court of first impression, in a sense, because the cause of violation is being attributed to climate change. This, in turn, is being attributed to the business operations of Carbon Majors. That makes it a bit complicated, because most of the Carbon Majors impleaded in this Petition do not even have a nexus - I mean, in the traditional sense - in the Philippines. Many of them do not even operate here. They do not even have branches here, or agents here.

What you said earlier, which is very interesting to us, is that the Inter-American Court... I mean the International Court of Justice, has repeatedly affirmed the duty of states to avoid causing trans-boundary harm. And did you say that part of that duty is to discipline companies within its territorial jurisdiction in a manner that would prevent them from causing trans-boundary harm? Part of that duty of the state is to discipline, right, the companies operating within its jurisdiction? Am I correct in trying to establish that part of that obligation is that it is duty-bound to prevent companies within its jurisdiction from causing trans-boundary harm? Mr. Witness, could you please elaborate?

DR. ORELLANA:

Certainly. Thank you, Your Honor, for your question. And the reference to the jurisprudence of the International Court of Justice in my presentation was made to illustrate the reasoning that allowed the Inter-American Court to reach its decision on law. And, in that reasoning, the Inter-American Court looked at how the ICJ — for the acronym — had approached questions of transboundary environmental harm and how it had reaffirmed that the duty to avoid transboundary environmental harm has become a norm of customary international law.

This is coming from, first, an advisory opinion on the legality of the use of nuclear weapons, and then in a contentious setting and in the so-called “pulp mills” case between Uruguay and Argentina where the Court made this pronouncement in an industrial setting in respect of pollution, which was then expanded to all kinds of environmental damage in a subsequent case between Nicaragua and Costa Rica.

And, so, the jurisprudence of the ICJ on this matter is now clear. The duty established in international environmental law that mandates states to avoid causing significant environmental harm is now part of the corpus of international law. So what does that mean then for what states must do in respect of companies within their territory or registered under its jurisdiction or domiciled? Because it is the state that allows, by virtue of its internal legal order, a corporation to exist under that legal order. The corporation would otherwise not exist if not allowed to register and have the nationality of that state. And, so, the state is required to control its territory in such a way as to ensure that it is not allowing its territory to be used in a way that harms another state, and, that way, it can abide by its obligation to refrain from causing transboundary environmental harm. That is in the control of territory, what happens physically, materially, in its territory. In that sense, it is obliged to,

as you put it, discipline companies to make sure that their operations do not cause transboundary environmental harm.

But I think we could even go beyond that physical dimension because of, as the Inter-American Court also elaborated upon, the fact that a state may allow a corporation to exist, be registered, and domiciled under its nationality means that it has the duty to control that corporation as well. And this is where the supply chain also comes into effect because a company's operations may have impacts outside of that state by virtue of its subsidiaries, by virtue of its operations, by virtue of its supply chains, or by virtue of the impacts of its products, in this instance, climate change.

In all those instances, as a legal matter, the Inter-American Court of Human Rights is telling us that the home state — in other words, the state of nationality of the corporation — should take measures to prevent the conduct of that corporation to result in human rights abuses. Now, these are important principles that are derived from this advisory opinion and that build on the ICJ's jurisprudence on the duty to avoid causing transboundary environmental harm.

PANEL CHAIR CADIZ:

Now, in regard to that duty... which we may consider as falling under the *erga omnes* doctrine, or the duty or responsibility of states toward other states to uphold international norms of, in this case, human rights, could you elaborate on how a state-based, non-judicial mechanism, such as our commission... Commission on Human Rights... invokes that right to compel... maybe not compel... to convince or persuade other states to perform such an obligation? For example, in our specific situation, we are conducting an inquiry regarding the alleged responsibility of certain companies for alleged violations of human rights of Filipino people. How can we invoke that to persuade entities within jurisdictions of other states to participate in this process? Would you have any suggestions?

DR. ORELLANA:

As you mentioned, Your Honor, this inquiry into the facts and alleged responsibilities is a first step in building an evidentiary base that can be used to reach out and engage the state of origin of these corporations and the corporations themselves in respect of the state responsibilities of the states of origin and the corporate responsibilities of the entities themselves. As you also

hinted, there is no possibility for this commission to compel because it cannot exercise jurisdiction outside of Philippines' territory. But that does not mean that it is impeded from crafting recommendations and reaching out in order for these states to observe their established obligations under international law or for these entities to observe their corporate responsibilities.

I think that there is a fundamental distinction there between compelling and recommending, and between exercising jurisdiction as an act of authority and a recommendation that invites corporations or states to uphold their responsibilities or obligations. That is in the character of a known judicial monitoring mechanism. If we were in the face of an international court, we would be in a different factual legal platform. But that is in the nature of these proceedings in my opinion.

PANEL CHAIR CADIZ:

I was wondering, just thinking along this idea of pushing the access to remedy a step further... can you envision a situation in the near future where invoking this obligation of states toward each other to uphold human rights, where another state can apply to another state to exercise its jurisdiction, as support to that original state's performance of its mandate to conduct an inquiry to compel that second state, you know, using perhaps its compulsory processes, subpoena, or whatever to participate in the inquiry?

DR. ORELLANA:

Yes, I think so. I think there are two angles to what you're asking, and I'll refer to them in turn. The first one is that, in a situation of transboundary environmental harm in relation to climate change where the evidence establishes causation, the origin, and the impacts. There is this established international law and so the state that suffers that harm can invoke and present a complaint against the state of origin of that harm.

These are general principles of international law, and so this Inquiry and the work of the Commission, for example, could help build an evidentiary basis for the Philippines as a state to invoke the responsibility of other states that have caused the climate problem by failing to control the corporations that are domiciled in their jurisdiction. So that's a first angle that is relevant to your question. Now, I must stress that there are evidentiary questions involved in determining causation, the issues of attribution that we were talking about,

and then the questions of the duty to avoid causing transboundary environmental harm. So that's one dimension.

The other, in respect of how could this Commission obtain other states to cooperate with it so that they could either compel or invite those entities within their territories to appear before it; now that's a matter of international cooperation between states. There may be questions of committee. If this were a court of law, again, there could be procedures for the taking of testimony of witnesses. But that's not the situation, and so how can national human rights institutes cooperate with one another, or can they get the cooperation of states when they need to conduct an inquiry in respect of nationals of those states? That's a very good question. In principles, there is no obstacle to effecting that cooperation. And so there's no obstacle for this Commission to approach either the entities themselves or the state in which they are domiciled, requesting that cooperation.

#### PANEL CHAIR CADIZ:

I'd like to get also your opinion, because the Commission is planning, in fact, to bring this Inquiry to other territorial jurisdictions. In fact, we're going to New York and have this set-up to encourage Respondents who are not inclined to come here to participate in this, what we also call... *dialogue* on climate change. And we're also planning to go to London, because many of the Respondents are also based in Europe. Do you see any jurisdictional issues or territorial issues for the Commission on Human Rights of the Philippines conducting an Inquiry within those jurisdictions?

#### DR. ORELLANA:

In principle, acts of authority of organs of state in another state would be in breach of the territorial integrity of that other state. And, so, there could be jurisdictional questions there.

For example, in the United Nations' Special Procedures, special rapporteurs — so these are Special Procedures that are established by the Human Rights Council to investigate, monitor, human rights situations either in a specific country or in a specific theme — they regularly conduct country visits. Before a Special Rapporteur decides to go to a country and enters that country, that country invites that special procedure. Otherwise, that fact-finding mission could be seen by that country as an intrusion into its sovereignty. The Special Procedures are not courts; they're not judicial bodies.

And so there's potential parallel in calling such an activity a hearing as if it were this setting in which it is an act of authority, that it's mandated by law, and takes place fully within the realm of the internal law of the Philippines. But that could not take place, in my opinion, in another State absent that State's consent, and that State's consent could be expressed in various ways. It could be by invitation. But there's no obstacle, I think, for the Commission or its members to engage in a dialogue and engage in academic discussion in other countries in respect of the issues that are appearing in this case or before the general pursuit of its mandate. And so, in that sense, having a roundtable of sorts or some other form of conversation or discussion, even with the Respondents in this case and with the Petitioners, might not constitute a hearing or an exercise of authority. There's a fine line there, but there is a line.

PANEL CHAIR CADIZ:

No, we've said from the very beginning that we see this Inquiry as more of a dialogue... a dialogue on climate change. That's why we have never invoked any kind of compulsory process, because we do know that we do not have compulsory processes over, in this case, the Respondents. So we see this more as a dialogue. And this set-up is just a formality. This could have very well been a round-table discussion. We consider you, in fact, more as resource person. And, in fact, we've been considering other processes where witnesses are combined in one session... where there is a discussion among peers, among academics, among stakeholders on climate change.

Our thinking is, if I, or two, or three Commissioners, or even staff members, can go request for a... discussion with anybody in the States concerning this issue, we do not see it as an impingement upon their jurisdiction. It is our conducting a... dialogue that will aid us in coming up with our recommendations later on. Is there any jurisdictional issue along that line?

DR. ORELLANA:

The way that you framed it, Your Honor, as a dialogue and as a conversation would not seem to implicate exercise of authority as if it were a fact-finding mission that were going to inquire on a specific reality and investigate facts, instead, as framed, it is more of a conversation about perspectives and views. And, in that sense, it is a much broader exercise that may not implicate jurisdictional questions.



But, having said that, at the same time, one could be mindful of how other countries may see it and that perspective may ultimately be quite relevant because these activities, as anticipated, are taking place in the territories of those other countries which are sovereign countries. And, so, the principles of international law are fluid in that respect in the sense that there is a margin where there can be a discussion, but, at the same time, there are also basic principles of sovereignty, equality, territorial integrity that underlie the world order as we know it.

PANEL CHAIR CADIZ:

Alright. Thank you very much, Dr. Orellana.

*(To counsel for petitioners)* Do you have other questions?

ATTY. SORIANO:

No more, Your Honor.

PANEL CHAIR CADIZ:

So it's exactly 12 noon.

ATTY. SORIANO:

So may we move for our resource person to be excused, Your Honor?

PANEL CHAIR CADIZ:

Yes. Mr. Witness, thank you very much for coming here as our resource person.

And you are based in?

Page 1218

DR. ORELLANA:

Washington, D.C.

PANEL CHAIR CADIZ:

Washington.

DR. ORELLANA:

And Human Rights Watch has its main office in New York.

PANEL CHAIR CADIZ:

And you hold office there? You, personally?

DR. ORELLANA:

Human Rights Watch has offices in Washington, D.C. and in many other countries. Its main office is in New York.

PANEL CHAIR CADIZ:

Okay, because since we'll be going there, we might have to request for a longer audience with you as a resource person.

DR. ORELLANA:

We'll be very happy to engage in further dialogue with you, Your Honor, and with Your Honors.

Page 1219

PANEL CHAIR CADIZ:

Okay. Thank you very much, sir.

DR. ORELLANA:

Thank you.

PANEL CHAIR CADIZ:

We can now adjourn for lunch. We'll have a longer lunch, no?

CLERK OF THE INQUIRY:

Sir, we'll resume at 1:30PM.

PANEL CHAIR CADIZ:

1:30. Alright. Session is adjourned. Thank you very much.

*[bangs gavel]*

*[lunch break]*

CLERK OF THE INQUIRY:

All rise. The Honorable Inquiry Panel Chairman Commissioner Roberto Eugenio T. Cadiz still presiding. Everyone may now be seated.

Page 1220

PANEL CHAIR CADIZ:

*[bangs gavel]*

Session is now in order. Counsels, are you ready with your witness?

ATTY. PAUDAC:

Good afternoon, Your Honors.

PANEL CHAIR CADIZ:

Good afternoon.

ATTY. PAUDAC:

For our third resource person: Attorney Efren Bascos, Chief Legal of the Climate Change Commission. Your Honors, we were just informed recently — thirty (30) minutes earlier — that he cannot make his presentation today, but he is here to explain that through a manifestation, Your Honor. May we call on Attorney Efren Bascos?

PANEL CHAIR CADIZ:

No, actually, we do not require an explanation why you cannot make it today but if you want to explain nonetheless, we will give you that opportunity.

ATTY. BASCOS:

Just a short statement on the matter, Your Honor. The stand of the CCC, okay. The CCC does not decline the challenge to appear and be a resource speaker of this Inquiry. The CCC will allow its experts to be invited and present the science behind climate change. However, Your Honors, the CCC would ask that they be presented as Commission witnesses, and not as resource speakers

of the Petitioner or the Respondent. In this regard, Your Honor, that's the only statement that we would like to make at this time.

PANEL CHAIR CADIZ:

Alright. As a matter of fact, we did send you a letter, signed by the Commission, inviting you as a resource speaker... and not to be presented as a witness of any Party. Have you received the letter?

ATTY. BASCOS:

Yes, Your Honor, but may we be given a clearer invitation as resource speakers of the Commission? Not as a resource speaker of the Inquiry.

PANEL CHAIR CADIZ:

Did it state in the letter, "as a resource speaker of the Commission"... not of the Inquiry?

ATTY. BASCOS:

Of the Commission, Your Honor.

PANEL CHAIR CADIZ:

Yes, because... I know. So you're trying to make a distinction between the Inquiry and the Commission?

ATTY. BASCOS:

Yes, Your Honor. Just being cautious, Your Honor, considering that we still belong to the Office of the President.

Page 1222

PANEL CHAIR CADIZ:

Alright, what we wanted to hear from you is just an explanation of your mandate, your programs, et cetera. Those are the only things that we were requesting from you.

ATTY. BASCOS:

Part of the invitation, Your Honor, was for a resource speaker- actually, it's a resource expert, Your Honor. The Commission has a national panel of technical experts. I had a meeting with them earlier before I came here for about two (2) hours, and they also presented the same position that they are willing, however, as a resource person of the Commission.

PANEL CHAIR CADIZ:

Alright. Obviously, that will no longer happen within this round of presentations. That will be already in the next round of hearings which will be on... Attorney Fernandez?

CLERK OF THE INQUIRY:

The next scheduled Inquiry hearing will be on June 27-28, but it might be moved to August.

PANEL CHAIR CADIZ:

Alright, so probably you will be requested to appear in August.

ATTY. BASCOS:

Yes, Your Honors. And, to be honest, the position of the CCC has already been drafted. We're just waiting for the timing within which to deliver it to the Commission.

PANEL CHAIR CADIZ:

Okay. Alright. We will just change the letter and, instead of putting there that you're being invited to an Inquiry, you're being invited by the Commission to what? To which Inquiry?

ATTY. BASCOS:

As the Commission's resource in the Inquiry, Your Honor.

PANEL CHAIR CADIZ:

Alright. So you'll be invited by the Commission as a resource of the Inquiry, instead of being invited to the Inquiry?

Okay. Thank you very much.

ATTY. PAUDAC:

Your Honors, because of that recent development, we actually provided a slot for an exhibit for the Climate Change Commission's position as Exhibit AAAA. Considering that development, Your Honors, in order not to disturb the order of the marked exhibits already, we are manifesting that there will be no Exhibit AAAA for the Petitioners. So, after Exhibit ZZZ, it will already be Exhibit BBBB up to Exhibit KKKK, Your Honors.

PANEL CHAIR CADIZ:

Sorry, I got lost somewhere there. There's a changing in the markings of the exhibits in view of the absence now of the Climate Change Commission?

Page 1224

ATTY. PAUDAC:

No, Your Honor.

PANEL CHAIR CADIZ:

I'm sorry. I was talking to Commissioner Gomez.

ATTY. PAUDAC:

Sorry, Your Honor. Yes, because of that manifestation by Attorney Bascos, Your Honor, previously, we submitted a list of exhibits and we allotted a slot, AAAA — although there was no document marked yet. In order not to disrupt the marked exhibits that we already have, we are manifesting that we don't have Exhibit AAAA on record. And, after Exhibit ZZZ, it will be already Exhibit BBBB.

PANEL CHAIR CADIZ:

Okay, no problem. So that, as of now, there's no Exhibit AAA, no?

ATTY. PAUDAC:

Four. AAAA, Your Honor.

PANEL CHAIR CADIZ:

Okay.

ATTY. PAUDAC:

Thank you, Your Honor.



PANEL CHAIR CADIZ:

So who will now be your next witness?

ATTY. SORIANO:

Your Honors, we have five (5) witnesses from the community, and we would like to present them in a panel type of presentation as they are going to share experience on the same topic. May we call now-

PANEL CHAIR CADIZ:

Excuse me, Counsel. But, in the previous hearings, although you would present the five (5) at once, they will, of course, be speaking one at a time?

ATTY. SORIANO:

One after the other, yes.

PANEL CHAIR CADIZ:

Since they will be speaking one after the other anyway, can you present them one by one and then, later on, for your examination... because I understand when you examine, you jump from one resource person to another... then you can have them all...

ATTY. SORIANO:

In one.

PANEL CHAIR CADIZ:

...in one. But, now, can we have them one at a time? Because that's what happened in the previous hearings anyway. Like yesterday, they didn't speak simultaneously anyway, unless they need each other to sort of build each other's confidence, in a manner of speaking. Would that facilitate the...

ATTY. SORIANO:

They're brave and courageous, Your Honor.

PANEL CHAIR CADIZ:

Alright, so...

ATTY. SORIANO:

They can do that one at a time.

PANEL CHAIR CADIZ:

Then can we have them present one at a time. And, during the examination, they can...

ATTY. SORIANO:

They can sit there- here-

PANEL CHAIR CADIZ:

They can stay together.

ATTY. SORIANO:

Before that, however, may we request, Your Honors, a moment of silence for one of our witnesses who was from the same community of the witnesses that we will present today. The last batch of witnesses to be presented today came from the same community and his name was Renato 'Ka Rene' Bormilla. His statement as a witness was taken last 10<sup>th</sup> of May. He was then in pain already but he insisted to finish his statement, so we have his written statement. But, the following day, he passed away from a respiratory disease. Again, his name is Mr. Renato 'Ka Rene' Bormilla. And we are requesting for a minute of silence as a gesture of respect and mourning for one of the Petitioners' witnesses, if you would grant that, Your Honors.

PANEL CHAIR CADIZ:

Okay. Do you want us all to stand up for one minute?

ATTY. SORIANO:

Yes, please, Your Honor.

PANEL CHAIR CADIZ:

May we request everybody to stand?

*[minute of silence]*

We can now proceed with the hearing.

*[bangs gavel]*

So who's your...

Page 1228

ATTY. SORIANO:

So the first one that we will call, Your Honor, is Ms. Francia Encinas.

PANEL CHAIR CADIZ:

Good afternoon, Ms. Encinas. Can you swear-in the witness? Thank you very much.

Counsel? Can you turn on your...

ATTY. SORIANO:

Your Honors, Ms. Encinas is being offered by the Petitioners to share her experience and struggle during the Super Typhoon Ketsana, or Ondoy, and how extreme weather events like that of Ondoy aggravate people's poverty and vulnerabilities in the context of an urban poor community in the Philippines. For preliminaries, Your Honor, I will proceed with some questions. The statement of Ms. Encinas is part of a document that is entitled "*Mga Salaysay ni Ginoong Manuel Abinales, Ginoong Pablo, at Ginang Francia M. Encinas*" bearing signatures of the three (3) and one of which is that under the name 'Francia Encinas.' This document was pre-marked as Exhibit ZZZZ up to ZZZ-2. For confirmation first by Attorney Esguerra.

Although it is a bit unconventional, Your Honors, may we be given a minute again just to show a video clip of news coverage of Ondoy when it happened in 2009, just to refresh the memory of the audience on what happened nine years ago?

PANEL CHAIR CADIZ:

Are you marking this video presentation as an exhibit?

ATTY. SORIANO:

Not anymore, Your Honors.

PANEL CHAIR CADIZ:

Alright.

ATTY. SORIANO:

And it was taken from publicly-accessible media coverage files anyway.

PANEL CHAIR CADIZ:

Okay.

ATTY. SORIANO:

Thank you, and may we request the...

*[video plays]*

That was it, Your Honors. I will be speaking in Filipino, Your Honors, as requested also by our witnesses. Ms. Encinas, *maari po ba ninyong ikumpirma na kayo nga po ay bahagi ng statement na ito at ang pirma na ito ay sa inyo?* (Ms. Encinas, can you confirm that you are one of the affiants in this Statement and that this signature is yours?)

MS. ENCINAS:

*Opo, sa akin po ang pirmang yan.* (Yes, Ma'am, the signature is mine.)

ATTY. SORIANO:

*Salamat po, Ms. Encinas.* (Thank you, Ms. Encinas.)

Your Honors, our first witness of the group of five (5) is now ready to share her brief story. Ms. Encinas, please-

MS. ENCINAS:

*Magandang hapon po sa ating lahat—mga kagalang-galang na Komisyoner.*  
(Good afternoon to everyone, to the Honorable Commissioners.)

PANEL CHAIR CADIZ:

*Pakilapit lang po at pakilakasan ang boses kasi minsan hindi daw nakukuha doon sa feed.* (Please come closer and speak louder, sometimes they can't capture it in the feed)

Thank you.

MS. ENCINAS:

*Magandang hapon po sa ating lahat dito. Ako po si Ginang Francia Encinas, fifty (52) years old, isang byuda at may tatlong (3) anak. At kasalukuyan po ako ay humahawak sa mga pinansyal na gawain sa aming organisasyon na Buklod Tao. Yun po.*

*Noon pong panahon ng Ondoy ay nasa isang seminar po ako sa De La Salle University sa Taft Avenue sa Maynila. Noong panahon pong yun ay talagang lubog na lubog na ang buong paligid ng De La Salle University at sa pamamagitan po ng mga upuan na pinagpatong-patong, kami po ay nakalabas. Tinulay-tulay po namin yung mga upuan na yun para po kami ay makalabas at makapunta po doon sa mga tuyong bahagi ng kalsada. At paglabas po namin ng De La Salle University, talaga pong wala na kaming masakyan. Kaya po ako'y alalang-alala kasi po, kung doon sa Maynila ay lubog na sa baha, iniisip ko po, doon siguro sa amin sa San Mateo, mas lalong lubog kasi po mababang bahagi ang aming lugar. Yun po.*

(Good afternoon to everyone. I am Mrs. Francia Encinas, 53 years old, a widow with three [3] children. I am presently in charge of the finances of our organization, Buklod Tao. I was at a seminar at the De La Salle University along Taft Avenue, Manila when Ondoy happened. The area around De La

Salle University was already flooded. We stacked layers of chairs to serve as makeshift bridges so that we can get out to a dryer part of the street. We could not get a ride then. I was so worried already for my children. If Manila was this flooded, what more in our place in San Mateo which is on low ground?)

*Nakalabas na po kami ng De La Salle, wala kaming masakyan na sasakyan kasi stranded na po lahat. Ang ginawa po namin ay naglakad na lang kami nang naglakad. Pero ang iniisip ko pa rin po noon alalang-alala po ako sa mga anak kong naiwan, kasi po iniisip ko sila kung ano nang nangyayari doon sa aming lugar. Noong panahon pong yun, naglakad na lang kami nang naglakad hanggang makarating kung saan-saan. Tapos naghahanap po kami ng masasakyan. Sa panahong yun, wala talaga kaming masakyan. Kasama na po doon yung tubig-ulan, tubig-baha, basang-basa na po kami, at maging yung ano po, syempre po umiihi na kami sa aming ano kasi wala po talagang maiihian. Syempre, umiiyak na po kami. Tapos alalang-alala na rin po ako sa mga anak ko kasi iniisip ko baka kung saan na po napunta ang mga anak ko. Nanginginig na kami sa lamig kasi po basang-basa na kami pero iniisip ko pa rin po yung mga anak ko noon—kumusta na kaya ang mga anak ko, ano na pong nangyayari? Tapos hanggang inabot na po kami ng gabi. Hatanggabi na, magmamadaling-araw na, wala pa rin po kaming masakyan. Lakad-lakad pa rin po, hangang nakarating na kami sa aming barangay.*

(We were able to get out of De La Salle, but we cannot get any ride because all vehicles were already stranded. We then decided to walk instead. I continued to worry about my children. We were soaked in rainwater while we witnessed the flood all over. We cried as we walked, we even relieved ourselves right there as there were no toilets around. We continued to walk, shivering, through the night up to the early morning until we reached our town [Barangay].

*Pagdating po namin doon sa aming barangay, sa evacuation center din po kami pinapunta kasi hindi na kami makadiretso papunta sa bahay namin kasi po yung buong barangay, lubog na lubog na. Tapos po, sa wakas ay nakita ko yung mga anak ko at ligtas naman sila, sa awa ng Diyos. Pero, pag naaalala ko po yung mga nangyaring yun, nakakaramdam po ako ng takot, nangangamba po ako, na sana po ay wag na muling maulit yung pangyayaring yun. Pero sa pag-aaral po namin nitong climate change na ito, siguro po ay may mga Ondoy pang darating na mas matindi pa doon at malalakas pa po. Tapos kasama po yun sa napag-aaralan namin sa Buklod Tao na noon ang bangka po namin ay tatlo (3,) aapat (4) pa lang, ginagamit sa pang-rescue. Ngayon po ay kailangan nang marami magagamit sa pang-rescue kasi po ay sa taas po ng mga pinansyal na gastusin namin sa pagre-rescue po. Dahil ako po humahawak ng pinansyal na gawain sa Buklod Tao, nakikita ko po yung gastusin na lumalaki talaga ang gastusin sa pagre-rescue,*

*kagaya po ng mga gastusin dyan sa gas, sa mga pagkain po, pang-first aid. Tapos iniisip ko po, pag di nalutas yung mga sanhi po ng climate change na yan, paano na po yung aming mga rescue operation na sobrang limitado lang po ang aming pondo para sa mga ganyang rescue operation. Yun lang po.*

(When we reached our Barangay, we had to proceed to the evacuation center because the whole Barangay was already flooded. I saw my children already and, with God's mercy, they were all safe. I get anxious and worried everytime I remember that situation. I hope it does not happen again. At Buklod Tao, we researched about climate change and we think it is possible that there can even be more of the likes of Ondoy, and stronger than such perhaps. We used to have three [3] or four [4] rescue boats at Buklod Tao, but we now need more. Being the finance officer, I am aware of the growing expenses for our operations, like we spend for gasoline, food, and first aid aside from the actual expenses we have incurred for rescue operations. I also thought, what if the problems on climate change are not addressed and resolved, how can we manage our rescue operations with very limited funds? That is all.)

ATTY. SORIANO:

*Salamat po, Ms. Encinas. Pakihintay na lang po yung iba dyan.* (Thank you, Ms. Encinas. Please wait for the others there.) We are now calling the next witness, and his name is RJ de Ramas. He's eighteen (18) years old. He's a resident of Barangay Nangka, Marikina. And he's currently a student. And, at the time of Ondoy, he was four (4) or five (5) years old.

PANEL CHAIR CADIZ:

Please swear-in the witness.

ATTY. SORIANO:

*Magandang hapon sayo, RJ.* (Good afternoon to you, RJ.)



Page 1233

MR. DE RAMOS:

*Magandang hapon din po.* (Good afternoon to you too, ma'am.)

ATTY. SORIANO:

*Maaari mo bang tignan itong document na ito at sabihin dito kung ito nga ba ang iyong salaysay at ang pirma rito ay sa iyong pirma?* (Can you please examine this document and tell us if this is your affidavit and the signature is yours?)

MR. DE RAMOS:

*Opo, sa akin po ito.* (Yes, this is mine.)

ATTY. SORIANO:

Your Honors, RJ de Ramos is ready to share his experience.

MR. DE RAMOS:

*Una po sa lahat, magandang hapon po sa mga naririto at sa ating mga hurado.* (First of all, good afternoon to everyone and to the Honorable Commissioners.)

PANEL CHAIR CADIZ:

*Magandang hapon.* (Good afternoon.)

MR. DE RAMOS:

*That time, grade four po ako, nine (9) years old. Yun po talaga ang pinakahinding-hindi ko makakalimutan na karanasan, lalo na sa mga kalamidad,*

*dahil sariwang-sariwa sa aking isipan hanggang ngayon. That time, buntis po ang nanay ko ng seven (7) months. Then, tatlong (3) tao lang po kaming nasa bahay—kuya ko, ako, at mama ko. At that time po, 5:00AM ng September 26, 2009 nakarinig kami ng wang-wang na warning signal number one na nagpapa-alalang mataas na ang tubig sa ilog. Naglalaba po kami noon sa labas, then, noong narinig po namin yun, alam na namin na signal na ito na pataas na ang tubig, kaya nagligpit na kami ng ibang gamit namin. Inaakyat na po namin sa second floor namin para, kung sakali mang abutin kami, hindi na po kami makakapagsagabal po dun sa mag-aakyat ng ibang gamit. Then, ilang minuto lang, nakikita na namin yung tubig-baha sa kalsada at segundo or minuto lang po ata ang bilang ng pagtaas ng tubig. Sobrang bilis po, kaya yung ibang gamit talaga sa ibaba ay kahit mabibigat, nabubuhat namin, pinipilit namin. Sobrang nagpa-panic kami that time, pero sinasabihan lagi kami ni Mama na kaya ito. Kaya, kahit takot na takot na kami that time, kinakaya pa rin namin para lang maka-survive.*

(I was in Grade 4, nine [9] years old at that time. That was one of my most memorable experiences and everything that happened is still fresh in my mind up to now. My mother was then seven [7] months pregnant. There were just three [3] of us in the house then – my mother, my elder brother, and I. At 5:00 in the morning, September 26, 2009, while doing the laundry, we heard a siren which was a warning signal. It means the rivers are starting to overflow. We immediately started to bring our belongings to the 2nd floor of our house. The flood waters rose so fast that is why we had to bring up even the heavy items we have. We were afraid of the situation already, but our mother told us that we can do it if only to survive).

*After thirty (30) minutes, bumaba kami para tingnan ang tubig kung hanggang saan na. Hindi kami makapaniwala kasi malapit nang umabot sa floor ng second floor namin. Kaya ang ginawa na lang namin—kasi umaakyat pa rin sya noong inoobserbahan namin—binutas na namin yung bubong ng second floor namin. Doon na namin inakyat yung mga ibang gamit, at inuna na kami ni mamang iakyat doon. Kung sakaling unakyat nang mabilis pa yung tubig, maka-survive kami. Iniakyat pa rin namin yung gamit doon, then unakyat na rin si mama. Then, ilang minuto lang din, kahit basang-basa kami sa taas ng bubong, umabot na rin ng second floor yung baha kaya ang ginawa po namin is pinagdugtong-dugtong namin yung mga kahoy hanggang maging tulay namin. Pumunta kami sa kapit-bahay namin na may mataas na lugar. Kaya nung tinumba namin ang kahoy, ginawa namin yung tulay para lang makatawid doon at maka-survive.*

(After about thirty [30] minutes, we went down to check the height of the water and we were surprised to see that the water has risen almost up to the floor of the 2nd floor of our house. As the water continued to rise, we gathered

wood to make a makeshift bridge that we can use to transfer to our neighbor's house which was on elevated ground.)

*Pero, mga bandang tanghali na, basang-basa pa rin kami noon. Halos nanginigini na kami sa gutom, sa lamig ng ulan, hindi pa rin namin inakalang tataas pa rin yung tubig. Halos kalahati ng third floor, kasi mas malapit kami sa ilog kaya masyadong mababa yung aming lugar. Kaya, nung nangyayari na yun, yung kahoy na ginawa naming tulay, dinugtong-dugtong pa rin namin. Hanap pa rin kami ng kahoy na binabaklas namin para mas lalong tumibay. Kasi that time, ano eh, malakas yung agos ng tubig- malakas yung ragasa ng tubig. Makapal na yung kahoy na inano namin pero rumagasa pa rin, inanod pa rin sya, kaya ang ginawa namin, nilagyan na lang namin ng lubid yung kahoy para hanggang sa kabilang bahay para kung sakaling anurin man, hindi maaalis doon sa pwesto. Yun ang ginawa naming tulay para makapunta sa fourth floor na may terrace at doon kami nag-istay hanggang sa umaga na. Inantay namin yung paghupa ng baha, walang tulog, nanginigini sa lamig at gutom. Kaya, noong kinaumagahan na, doon na kami bumaba kasi alam na namin na hanggang tuhod na lang yung puro putik. At doon na kami nagsimulang mag-evacuate sa eskwelahan. Yun lang po, Your Honor.*

(By noontime, we were all soaking wet, shivering from the cold and hunger. We did not expect that the water had risen up to the 3rd floor. We live near the river that is why our place is on lower ground. We gathered more wood and reinforced the makeshift bridge we made and used to cross to the neighbor's house. We stayed at the terrace at the 3rd floor until morning. We waited for flood waters to subside. We did not have sleep, we were shivering due to the cold weather and lack of food. By the morning, we went down and saw the place all muddy. That is when we started to evacuate and go to the school. That is all, your Honor.)

ATTY. SORIANO:

*Salamat, RJ. Maaring umupo ka dito, RJ? Thank you, RJ. You may sit here.)*

We are calling, Your Honors, our third witness, Mr. Isagani Molina. Mr. Molina is from Barangay Nangka, Marikina as well. He is a former farmer and a former factory worker and currently operating and driving a tricycle in his barangay. *Maaari po ba ninyong tignan itong dokumentong ito, Mr. Molina, at sabihin sa hearing na ito kung iyan ang inyong salaysay at pirma?* (Can you please examine this document, Mr. Molina, and tell in this hearing if this is your affidavit and signature?)

MR. MOLINA:

*Yes po, akin po.* (Yes, this is mine.)

ATTY. SORIANO:

Thank you, Mr. Molina. *Maaari na po kayong magsimula.* (You may start now.)

MR. MOLINA:

*Ako po si Isagani Molina, fifty-nine (59) years old, tricycle driver, nakatira sa Barangay Nangka, Marikina City. Aktwal ko pong naranasan noong humagupit sa amin yung Typhoon Ondoy. At, nung time na yun, matindi yung talagang mga pag-ulan na naganap, halos magdamag. Hanggang sa mabilis na mabilis yung pagtaas ng tubig hanggang sa umabot sa fifteen (15) feet ang taas, hanggang sa second floor ng bahay namin dahil medyo mataas yung bahay namin kumpara dun sa kila RJ. So, habang nandoon ang tubig, wala kaming pagkain, walang inumin, walang matulugan dahil puro tubig yung itaas namin.*

(I am Isagani Molina, 59 years old, a tricycle driver residing at Baranay Nangka, Marikina City. I actually experienced the wrath of typhoon Ondoy. That time, there were heavy rains which lasted the whole night. Flood waters rose so fast even up to 15 feet high. Waters reached even the 2nd floor of our house which is on higher ground compared to that of RJ's. During the flood, we did not have food, no water to drink, and no place to sleep at because there was water all over.)

*So, kinabukasan, after humupa na ang baha, andoon na yung naiwan na halos buong barangay balot sa putik, bumaho dahil sa mga nagkalat na yung ibang mga alagang hayop na nalunod, mga gamit na nalunod, nalubog. So, ganun ho ang nangyari sa aming barangay. At mabuti na lang may nagmagandang-loob, yung Tzu Chi Foundation, tumulong sa paglinis ng aming barangay. Pero halos, ano eh, halos ilang araw kami na umaasa sa relief na pagkain,*

*walang kuryente, walang tubig. Halos one (1) month yun na walang kuryente, walang tubig. At, sa mga sumunod pang taon, mas naranasan pa rin namin yung mga matitindi pang pagbaha. Kahit na walang bagyo, ulan lang, matitindi yung ulan, bumabaha talaga. At sanhi siguro ng climate change na ang alam kong pinanggagalingan nito ay yung mga malalaking pabrika na nagdudulot ng mga matitinding init. Kaya ang nagiging worry ko lang dito na pagdating ng mga susunod pang hererasyon, paano na lang yung mga bata, yung mga susunod pa? Yun lang po, Your Honor.*

(The next day, after the flood had subsided, almost the whole barangay got muddy. The place even stunk from the remains of the dead animals. Things were also soaked in water. That is what happened in our barangay. It was good that we received help from Tzu Chi Foundation. They helped us clean our barangay. We depended only on ourselves for food. We did not have electricity for almost a month, no water, too. In the next years, we also experienced floods even if there was no typhoon, just strong rains caused floods. This occurrence must have been caused by climate change and I know that big factories are the cause of extreme heat. I become worried for the future generations. How about the children and those who will come next? That is all, your Honor.)

ATTY. SORIANO:

*Salamat po, Mr. Molina. Maaari na po kayong umupo dito.* (Thank you, Mr. Molina. You may sit here.)

MR. MOLINA:

*Thank you po.* (Thank you, ma'am.)

ATTY. SORIANO:

We are now calling the fourth witness. He is Mr. Pablo Taon III. Mr. Taon, *maaari po ba ninyong tingnan kung ito ay inyong salaysay at ang pirma nariyan sa ilalim ng inyong pangalan ay sa inyo?* (Mr. Taon, can you please check if this is your Affidavit and the signature under your name is yours?)

Page 1238

MR. TAON:

*Kumpirmado po. Pirma ko po.* (I confirm; this is my signature.)

ATTY. SORIANO:

*Salamat po. Maaari na po kayong magsimula.* (Thank you. You may start now.)

MR. TAON:

*Magandang hapon po sa ating lahat. Sa mga hurado, magandang hapon po. Ako po si Pablo C. Taon III. May asawa at may dalawang (2) anak. Forty-seven (47) years old po. Sa kasalukuyan po, ako ay tagapangulo ng aming organisasyon, Buklod Tao Incorporated po. Sa isang iglap po, noong panahon ni Ondoy, isa yung pamilya namin sa nakaranas ng hagupit nito. Naglaho lahat yung aming nasimulan ng aking asawa—yung bahay namin nasira, yung makina na matagal nang hanap-buhay, namana ko pa sa aking mga magulang. Sa isang iglap, nawala lahat ito, nasira.*

(Good afternoon to everyone, to the Commissioners, good afternoon. I am Pablo C. Taon III, 47 years old, married with two [2] children. I am currently the President of our organization, Buklod Tao, Inc. During Ondoy, my family was one of those who have experienced its wrath. We lost all (the properties) that my wife and I have invested in a snap. Even the machines I have inherited from my parents were destroyed.)

*Kaya sabi ko sa aking asawa, “Magtulongan tayo para mabilis tayong makabangon.” Ginawa namin yun, sa tulong din ng mga kapatid ko at ng ibang tao at ng mga organisasyon na dumayo para magbigay ng tulong sa Barangay Banaba. Pinag uusaan naming mag - asawa paano na yung kinabukasan ng mga anak namin na noong panahon na yun ay maliliit pa. Wala na kami makina na gagamitin para sa paghahanap-buhay. Tinatanong ako noon ng asawa ko, “Paano na?” Ang sagot ko sa kanya ay “Lakasan lang natin ang loob natin. Talagang ganyan. Okay lang na naranasan natin yan, pagsubok yan.”*

(I told my wife that we will work together to recover fast. We also received help from my siblings, from friends, and the organization that came to help Barangay Banaba. My wife and I also got worried for the future of our

children who were still young at that time. When my wife questioned the circumstances, I only told her to stay strong and the experience was a trial given to us.)

*Kaya, after noon, bumangon kami. Talagang nagsumikap kami na makabangon. Bagamat, after Ondoy, may kaunti kaming pera pero wala naman kaming mabili na pagkain kaya awang-awa ako noon sa mga anak ko, sa asawa ko, maging doon sa mga kapit-bahay ko na gusto kong tumulong, lalo na doon sa pamilya ko. Bilang isang ama, napakahirap sa kalooban na uniiyak yung anak mo, humihingi ng pagkain, wala kang maibigay. May kaunti kang halaga na pambili, eh noong panahon na yun, hindi lang kami, yung iba sa atin, nakaranas nun. Walang pinili—mayaman, mahirap, pinerwisyo ni Ondoy.*

(After that, we worked harder to be able to recover. Although we had some savings after Ondoy, there were no available food, and I feel so bad for my children, my wife. Even for my neighbors, who I wanted to help. Especially for my family, because as a father, it is very disheartening to see your children crying, asking for food, and I cannot give anything though there is little left to buy something. During that time, it is not only us, it is not just some who experienced it; no one was spared, rich or poor, everyone experienced the wrath of Ondoy.)

*After po nun ay naging bahagi ako ng aming organisasyon kung saan sa tuwing may darating na kalamidad ay nagco-community kitchen po kami sa pamamagitan ng pagluluto. Mula doon sa aming center, dinadala po namin sa evacuation center doon sa Barangay Banaba na kung saan maraming evacuees, mga bata. Magdadala kami ng dalawang (2) malaking kaldero ng champorado. Sa dami po ng tao, ang hirap po sa kalooban yung huling sandok tapos may nakapila pa, wala ka nang maibibigay. Yun po. Kaya ang hirap maging evacuees. Ang hirap nung mga tao na laging nandoon. Kaya iniisip ko nga, hanggang saan ba yung paghihirap ng mga tao, nasaan na yung karapatan nila bilang isang tao dapat nakatira sa isang ligtas na lugar, may pagkain. Yung hindi na lang kada taon, nakakaranas ng kalamidad. Hanggang doon lang po, Your Honor.*

(After that, I became part of our organization wherein, whenever there is a calamity, we conduct a community kitchen. We cook and deliver food to evacuation centers at Barangay Banaba where most of the evacuees were children. We will bring two [2] big pots of chocolate porridge. A lot of people were there and it was disheartening when you see more people lined up for food and yet you have no more to give. That's it, it was hard. It is hard to be an evacuee; it is hard when people have to endure staying there. I was thinking, up to when will people suffer? Where, then, is their right as people

who should enjoy a safe place to stay in, with food, and not to experience calamities every year? That's all, your Honor.)

ATTY. SORIANO:

*Salamat po, Mr. Taon. Maari po kayong umupo dito.* (Thank you, Mr. Taon. You may sit here.)

We're calling our last witness from the community, Mr. Manuel 'Ka Noli' Abinales. Mr. Abinales, Your Honors, is a former church worker. He became a community organizer, rescuer, and founder of the organization *Buklod Tao*. He is a boat-maker and currently residing in San Mateo, Rizal. *Ka Noli, maari po ba ninyong tingnan ang dokumentong ito kung ito ay ang inyong salaysay at ang pirmang nasa ilalim ng pangalan ninyo ay inyong pirma nga?* (Ka Noli, can you examine this document if this is your affidavit and that the signature under your name is yours?)

MR. ABINALES:

*Opo, ito nga po ang aking pirma.* (Yes, this is my signature.)

ATTY. SORIANO:

*Salamat po, at maari na po kayong magsimula.* (Yes, this is my signature.)

MR. ABINALES:

*Magandang hapon po sa lahat, lalong-lalo na sa ating mga kagalang-galang na Commissioners. Ako nga po ay si Ginoong Manuel—kilala sa tawag na 'Ka Noli'—Abinales, seventy (70) taong gulang. Isinilang at lumaki sa lungsod ng Paco, Manila. Nagdesisyon po ang aming pamilya na umalis na sa Maynila sapagkat dumarami ang populasyon at madalas na ang baha dahil sa pag-apaw palagi ng Estero Tripa de Gallina. Napunta po kami sa Barangay Banaba noong dekada '70, pagbaba ng Martial Law. Nagunita ko na nandoon pala kami sa panulukan ng dalawang (2) ilog—Ilog Nangka at Ilog Marikina. Nabighani ako sa kagandahan ng tanawin, lalo na ng Nangka*



*na kaaya-aya po. Makikita mo ang mga bata na namumulot ng hipon, kumukuha ng mga tulya, pero sa pagkalad po ng panahon ay nawawala na.*

(Good afternoon to everyone, especially to our Honorable Commissioners. I am Mr. Manuel “Ka Noli” Abinales, 70 years old. I was born and raised in Paco, Manila. My family decided to move out from Manila because of the growing population and because an inlet canal [estero] often overflows. We went to Barangay Banaba in 1970s upon the declaration of Martial Law. We were situated in between two (2) rivers, the Nangka River and the Marikina River. I was smitten with the view and it felt good to see children gathering shrimps and clams.)

*Gayunpaman, gumawa pa po ako ng sariling bangka para magliwaliw doon sa ilog kasama yung mga barkada. Taon-taon po nagkakabaha kami roon dahil nga po sa umaapaw yung dalawang (2) ilog. Taon-taon, ganoon po yun kasi sabi nga ho ay flood plain kami, bahaing lugar. Pero natututo ho kaming makibagay kay Inang Kalikasan. Ano pa’t kami nga po ay nag-organisa ng isang samahan na ang pangalan ay Buklod Tao Incorporated nung 1994 pa hanggang sa kasalukuyan. Hanggang sa natuto ho kaming gumawa ng bangka pangsagip sa aming mga kapit-bahay. Kumbaga, praktisado na ho kami sa baha.*

(But, as years passed, that has changed. I even made my own boat to be able to sail on the river with my friends. We experience floods yearly because the rivers overflow and because we were situated on a flat plane, making our area a flood-prone one. We have learned to deal with Mother Nature; we have organized Buklod Tao, Inc. in 1994, where we learned to make rescue boats. We were already used to experiencing floods.)

*Pero, noon pong September 25, 2009, malakas ang ulan. Tulad ng nakagawian ng mga kasamahan namin, nagbantay ng ilog, ngunit matindi po pala itong si Ondoy. Hanggang kinabukasan po, ulan nang ulan nang ulan. Nabalitaan ko nga ho sa mga eksperto na itong Ondoy pala ay nagbigay po ng napakalaking buhos ng ulan na parang katumbas ng isang buwang buhos ng ulan na ibinuhos lang ni Ondoy sa loob ng sampu (10) hanggang labing dalawang (12) oras. Kung kaya nga po ang amin pong pamayanan ay nagulat. Praktisadong pamayanan sa baha, sanay na, may mga rescue teams na nga, pero nagulat po kami sapagkat ang Ilog Nangka ay unapaw, ang Ilog Marikina ay unapaw. Ang aming dalawang natutulog na sapa—ang Nangka Creek at Nangka Brook—ay unapaw din. Nagsalubong po ang daloy ng tubig-baha sa amin sa tatlong direksyon—mula sa kanluran, Marikina, mula sa timog, ang Nangka, at mula dun sa silangan, yung dalawang (2) creek. Nagsalubong po ito, lumikha po ito ng ipo-ipo sa ilalim. Kung sa Ingles ho kung tawagin ay undercurrent. Ang mga tao po hindi na makapaglakad sa*

*aming nakasanayang evacuation routes. Hindi na pupwede po. Ako mismo po naranasan ko ito.*

(But on September 25, 2009, there were heavy rains. We monitored the rivers, but Ondoy was too strong. The rains continued up to the next day. I learned from experts that the rains brought by Ondoy were equivalent to a month's rain, but Ondoy poured it out in just ten (10) to twelve (12) hours. Our community was surprised even when we were already used to floods. The Nangka and Marikina Rivers overflowed. Two (2) inactive creeks in our area, the Nangka Creek and Nangka Brook also overflowed. The waters from these bodies moved from the West in Marikina, from South in Nangka, and from the East, the two (2) creeks. That created an under current. People were not able to move to the usual evacuation routes. I personally experienced that.)

*Madaling-araw po ng Ondoy, nagkulong ako sa kwarto sapagkat mino-monitor ko ang aming mga teams sa galaw po ng pagsagip. Hindi ko namalayan na ang baha pumasok na sa aming bahay hanggang sa marinig ko ang katok ng aking pamangkin. Sigaw nya, "Uncle! Uncle! Labas ka dyan. Ito na ang baha sa loob ng ating bahay." At kasama ko ang aking pamangkin, kapit-bisig ho kami. Sa aking kaliwa, ang pamangkin kong si Arias. Sa aking kanan, ang aking bunsong kapatid na si Boying. Dala ko lang ang aking laptop at ang aking telepono. Lumabas kami ng bahay, unti-unti, hakbang-hakbang, sapagkat hindi kami pupwedeng sumalubong sa rumaragasang agos ng tubig-baha. Nakalabas ho kami ng bahay. Sobra po ang agos. Wala ho akong makitang nag-eevacuate sa kadalasang evacuation route sapagkat sobra nga po ang agos ng baha.*

(In the early morning when Ondoy happened, I locked myself up in my room to monitor our rescue teams. I did not notice the floods in our house anymore until my nephew told me to get out of the room because the house was getting flooded already. With my nephew, Aris, to my left and my youngest brother, Boying, to my right, I brought my laptop and cellphone, we moved hand-in-hand to get out of the house. We moved slowly, step-by-step, because we cannot control the flow of the flood waters. Once outside the house, I did not see any of the usual evacuation routes anymore because of the severe flooding.)

*Ginawa naming magkapatid, akyat kami ng bakod sa kabila at umakyat pa kami ng bubong sa kabila hanggang sa makarating po kami ng national road. May nakita po akong mga mayaman sa amin, nag-park ng kanilang mga behikulo sa national road. Ngunit, kinabukasan po, nakita ko ang mga sasakyang na dinala po ng agos, nagkapatong-patong sa loob po ng aming subdibisyon. Naalala ko po noong Ondoy, nag-eevacuate po kami ng mga tao ngunit ito po ang sasabihin ko: noong Ondoy, hindi na lang ang mga buhay*

*na tao ang nag-evacuate, pati patay po. Si Bayani na kilala ko, nakaburol sa kanilang bahay, inabot na ng agos ng Nangka River. Sumalangit nawa si Bayani—inakyat ang kabaong ni Bayani sa loob ng covered court sa may stage ng covered court. Patuloy ang pagtaas ng baha, inabot ang stage ng covered court. Ginawa ng mga kamag-anak ni Bayani, binuhat ang kabaong ni Bayani, isinama sa mga nag evacuate doon sa elementary school. Kaya yung mga buhay na evacuees kasama pati yung patay, nandoodon sa isang kwarto. Inabot pa rin ang second floor ng elementary school kaya ang mga tao ay nag-alisan din. Sinabihan, “Alis na kayo dyan! Malulunod kayo.” Ganun din sa aming kapilya. Si Bayani na nakaburol sa second floor ay inalis din sapagkat aabutin- lulating ang kabaong ni Bayani—sumalangit nawa—kaya inilipat sya sa kabila sa isang Baptist church.*

(What my brother and I did was to climb the neighbor’s fence up to the roof until we reached the national road. I saw the cars of the affluent ones in the community that were parked outside, but on the next day, those were carried by the flowing flood waters. I saw them one on top of the other in our subdivision. We evacuated people during Ondoy, not only the living ones, but also the dead. Even the remains of my friend Bayani, whose wake was being held at their house, was reached by the flow of the Nangka river. They had to bring Bayani’s coffin... may his soul rest in peace... to the stage at the covered court. But, then, the floods continued to rise and Bayani’s coffin was evacuated to the elementary school. The living ones and the dead were evacuated in one room. The floods even covered the ground floor and people were asked to leave. The situation was the same in our chapel. Bayani’s coffin was transferred to a nearby Baptist Church. May Bayani’s soul rest in peace.)

*Alam nyo po, ang aming lugar po ay laging binabaha. Maliban sa sinabi ko kanina na taon-taon binabaha kami, mayroon pong siklo na sampong (10) taong malalaking baha sa aming lugar. Napansin ko po ito magmula ng ako’y lumipat dyan noong 1971. Mga pitong (7) taon pa lang pong nakatira ako doon sa lugar, 1978, may malaking pagbaha doon sa amin. Inabot hanggang doon sa highway. Sumunod po, makalipas ang sampong (10) taon, 1988, malaking baha na naman. Pagkatapos ng sampong (10) taon, 1999, malaking baha na naman. At, right on time, 2009, ito pong si Ondoy, at doble pa naranasan namin. At itong Ondoy na ito ay hindi lang po one-shot deal kumbaga. Naalala ko po na pagkatapos ng Ondoy, bumabangon pa lang po kami mula sa pagkasira namin kay Ondoy, ay ito na naman ang Bagyong Falcon, 2010, buwan ng Hulyo. Ganoon din ang eksperyensya. Pagkatapos ni Falcon, sumunod na taon, bumabangon pa lang kami sa dalawang (2) malaking bahang ito—Ondoy at Falcon—ito na naman, 2011, si Pedring. Ganoon na naman ang binigay sa amin. Pagkatapos ni Pedring, ito pong kinakatakutan na. Banggitin nyo po ang Habagat sa aming lugar, takot na takot sa amin sapagkat, noong 2012, ito naman dumali sa amin. Yung*

*Habagat na kumbaga, ang mga tao ay hindi maintindihan ang galaw ni Inang Kalikasan.*

(Our place has been a flood-prone area. Aside from my statement that we experience flood every year, there was a time that we had big floods every ten (10) years. I noticed that since we moved in in 1971. In 1978, about seven (7) years after we moved in, our place experienced severe flooding. After ten (10) years, in 1988, there was another one. Then, in 1999, another one. In 2009, Ondoy happened, and the experience was more severe. Ondoy did not seem to be a “one-shot-deal” because, I remember, after Ondoy, we were still recovering when typhoon Falcon happened and, then, Pedring in 2011. Then in 2012, we had habagat (southwest monsoon). We did not understand the actions of the nature anymore.)

*Ulan, babaha, pupunta sa evacuation center, titigil si ulan. Ang mga tao naiinip sa loob ng evacuation center, lalabas, titingnan si langit, wala namang ulan. Titingnan ang ilog, wala namang masyadong baha, balik sa kanilang mga mga barong-barong sa gilid ng ilog. Maya-maya, uulan. Baha na naman ang ilog. Aalis na naman, eevacuate na naman. Pagkatapos, apat (4) na beses po nangyari sa aming pamayanan yan noong 2012 dahil kay Habagat. Kung kaya nga po nag-text sa akin ang isang kasamahan ko, “Ka Noli, pagod na pagod na po kami. Mamamatay na kami sa ganitong klaseng kaparaanan.” Mag-eevacuate, babalik, evacuate, parang patintero po ang nangyayari sa amin. At yun po ang aming masasabi sa inyo. Ako po ay hindi ko malaman kung papaano po ang aming kilos ngayon sa aming pamayanan. Nagsisikap po kami, patuloy ang paggagawa ng bangka.*

(This is the usual scenario: when it rains and will cause flashflood, we will evacuate to the evacuation centers. When the rain stops, people will get bored in the evacuation center and will decide to go out, then attempt to return to their homes near the rivers when the floods subside; then it will rain again, and people will evacuate again. That happened four (4) times in our community in 2012 because of southwest monsoon. I even received text messages about people getting tired of the repeated experience. We have evacuated, then returned home, then evacuated again. It’s like playing patintero [touch and tag game]. I do not know anymore how we are supposed to move in the community.)

*Hindi sa pagbubuhat ng sariling bangko, marami po kaming bangkang nagagawa. Ipinamigay sa mga pamayanang laging binabaha. Ngunit kulang po ang aming kilos. Dumarami po ang mga taong nakatira sa tabing-ilog. Lumalala ang bagyo. Lumalala ang baha. Papaano po kami? Kailan matatapos ito? Hanggang pagrescue lang ho ba kami? O dapat tuldukan na*

*ito? Bigyan ng matagalang solusyon ang problema namin sa baha at sa mga bagyo. Hanggang dito na lamang po. Salamat po sa panahon.*

(Modesty aside, we continue to make boats and we have given boats to those areas that are usually flooded. But our efforts are not enough. People living near the rivers are growing in numbers. Typhoons are getting stronger, floods are getting more severe. When will this end? What will happen to the people? Do we just need to undertake rescue operation or must this end? There must be a long-term solution to this problem. That is all. Thank you for your time.)

ATTY. SORIANO:

*Maraming salamat po, Ka Noli. Maari na lang po kayong tumigil diyán. (Thank you, Ka Noli. You may stay there.) Your Honors, for preliminary questions.*

PANEL CHAIR CADIZ:

Please proceed.

ATTY. SORIANO:

I stand corrected, for some clarificatory questions.

PANEL CHAIR CADIZ:

Alright.

ATTY. SORIANO:

*Unahin ko po ikaw, Ms. Encinas. Nasabi nyo po kanina na dahil humahawak kayo ng perang budget ng inyong organisasyon, Buklod Tao, at nasabi ninyo na parang ngayon mas magastos na kumpara noong nakakaraan ang pagre-rescue. Mayroon po ba kayong estimate kung ilang porsyento yung itinaas? Fifty percent (50%) Eighty (80%) One hundred percent (100%) Yung*

*itinaas ng gastos kumpara noong sinasabi ninyong noong 1990s ng una ninyong pagsama sa rescue.*

(I will start with you, Ms. Encinas. You have said earlier that since you are in charge of the finances for Buklod Tao, there are more expenses for rescue now than before. Do you have an estimate of how many percent it increased? 50%, 80%, 100%, the increase in expenses compared to the 1990s when you first joined rescue activities?)

MS. ENCINAS:

*Siguro po, mga seventy-five (75%) po yung laki nung itinaas nung gastos namin nitong pagre-rescue na po kasi marami po talagang kailangan, yung mga pagkain, mga gas sa aming lutuan kasi pag nagco-community kitchen, tapos yung mga pagkain po ng mga rescuer kagaya ng mga kape at saka tinapay.*

(Maybe the increase in expenses is around 75% because we need more for food, for gas we use to cook when we have community kitchens. And the food for our rescuers, like coffee and bread.)

ATTY. SORIANO:

*Sige po. Maraming salamat po. RJ, nag-aaral ka ba noong naganap yun?*  
(Thank you. RJ, were you studying when it happened?)

MR. DE RAMOS:

*Opo, kasalukuyan po akong grade four. (Yes, I was then in Grade 4.)*

ATTY. SORIANO:

*Ano ang nangyari sa iyong pag-aaral pagkatapos nun? Or during and after.*  
(What happened to your studies after that, or during and after?)

MR. DE RAMOS:

*Halos isang (1) buwan po, mga isa't kalahati (1.5), tumigil po ako sa pag-aaral dahil yung eskuwelahan kung saan ako nag-aaral ay ginagamit po bilang evacuation center. (I stopped schooling for a month or maybe 1 and ½ months because the school where I was enrolled was used as an evacuation center.)*

ATTY. SORIANO:

*Salamat, RJ. Ka Gani, nasabi nyo po kanina na parang nag-aalala naman kayo sa kinabukasan ng inyong mga anak at apo. Maari nyo po bang ibahagi kung may eksakto po bang nangyari o nawalang pagkakataon sa inyong anak o apo? Tumigil po ba? Nawalan po ba ng pagkakataon? Mga ganun pong halimbawa dahil diyen sa Ondoy.*

(Thank you, RJ. Ka Gani, you said earlier that you are worried for the future of your children and grandchildren. Can you specify if there was something that actually happened, or was there a lost opportunity for your children or grandchildren? Did they stop or lost an opportunity, examples like that, because of Ondoy?)

MR. MOLINA:

*Kumbaga po, wala pa naman po siguro kasi ang inaalala ko lang po yung mga darating pang panahon. Kapag hindi nacontrol itong mga malalaking kumpanya na nagiging sanhi ng climate change, paano na lang po yung mga susunod pang henerasyon?*

(There is none I think. I am just worried for the future. I worry for the next generations. If we cannot control the big companies that cause climate change, what will happen to the next generations?)

ATTY. SORIANO:

*Sige po. Salamat po. Ginoong Taon, yun pong patahian ninyo, pwede nyo bang sabihin kung ilang piraso ba yun ng makina o ilang tao ba ang gumagalaw diyen sa inyong maliit na negosyong yan?*

(Okay. Thank you. Mr. Taon, in your tailoring business, can you tell us how many machines you had or how many people worked in your small business?)

MR. TAON:

*Noong panahon po na iyon, mayroon po akong dalawang (2) di-kuryente na makina high speed po kung tawagin, at dalawang (2) di-padyak. Tsaka po isang edging machine na malaking bagay sana. Noong panahon na nagagamit ko sya, kahit nandoon lang ako sa bahay, katulong ng aking asawa, ay marami akong natatahi. Kahit yung mga pa-repair-repair, punda ng unan, at yung mga short. Yung kung ano yung kaya kong gawin. Pero naglaho po talaga lahat.*

(At that time, I had two [2] high speed machines that ran on electricity, two [2] manual [pedaled] machines and two [2] edging machines. It was a big help that I was able to help my wife even when I was just at home. I was able to finish a lot like repairs, pillow cases, short pants, and anything that I can make. But all that was lost.)

ATTY. SORIANO:

*Mga magkano po ang pangkaraniwang kita niyo noong panahon na yun bago kayo na-Ondoy?*

(How much was your regular earnings before Ondoy?)

MR. TAON:

*Sa pang-araw-araw po ay kumikita ako ng pinakamababa na po yung three hundred (300.) sa mga pagre-repair lang po yun. Pero pag nagkakaroon po ako ng puhunan, pumupunta ako ng Taytay, bumibili ako ng mga retaso na pupwedeng gawing short ng bata o punda. Yun medyo maganda po ang nagiging kita ko.*

(I earned, at the least, Php300.00 from doing repairs only. When I have enough capital, I go to Taytay to buy swatches that can be made into pillow cases or short pants for children. With that, I earn better.)



ATTY. SORIANO:

*Pagkatapos po ng Ondoy, ano po ang naging hanap-buhay ninyo, kung mayroon man?* (After Ondoy, what did you do for a living, if there is any?)

MR. TAON:

*Napilitan po akong mag-construction. Naging roomboy din po ako sa isang hotel sa Antipolo. Tapos nagpabrika.* (I was forced to do construction work. I also worked as a room boy at a hotel in Antipolo. I also worked in a factory.)

ATTY. SORIANO:

*Natatandaan nyo po ba kung ano yung pangkaraniwang kita naman ninyo bilang construction worker, roomboy, at iba pa?* (Do you remember how much you earned as a construction worker, as a room boy, etc?)

MR. TAON:

*Noong sa construction po ay medyo mababa pa ho ang bigayan sa mga labor noon. Nakakapag-uwi po ako ng halagang one thousand five hundred (1,500) sa loob ng isang linggo o one thousand eight hundred (1,800.) Yung sa pagro-roomboy po ay medyo maganda-ganda po yung kita gawa po ng mga tip ng customer.*

(In construction, the pay given at that that time was low. I was able to bring home PhP1,500.00 or PhP1,800.00 in a week. The pay as a room boy was better because of the tips.)

ATTY. SORIANO:

*Magkasabay po ba ninyong trabaho yan, pang-umaga't panggabi? O magka-ibang panahon?* (Did you do that simultaneously, in the morning and at night, or at different periods?)

Page 1250

MR. TAON:

*Magka-ibang panahon po.* (Different periods, Ma'am.)

ATTY. SORIANO:

Okay. *Salamat po.* (Okay. Thank you.)

MR. TAON:

*Salamat din po.* (Thank you too, ma'am.)

ATTY. SORIANO:

*At ang huli ko pong tanong. Para sa inyo naman, Ka Noli. Nasabi nyo po kanina na gumagawa kayo ng boat at nagre-rescue kayo.* (My last question is for you, Ka Noli. You said earlier that you made boats and did rescue?)

MR. ABINALES:

*Opo, nakagawa ang aming samahan kasi may programa po ang aming samahan, Buklod Tao, ang tawag po namin ay 'Community-Based Disaster Reduction Management'.* (Yes, we were used to that because we have a program in our organization which we call Community-Based Risk Reduction Management.)

ATTY. SORIANO:

*Baka gusto nyo pong ibahagi ano po ba muna yung Buklod Tao.* (You might want to share with us what Buklod Tao is?)

MR. ABINALES:

*Ang Buklod Tao po ay isang community-initiated organization. SEC registered po ito noon pang 1996. Ang aming bisyon ay magkaroon ng isang pamayanan na ligtas at malaki ang pagtingin, pag-unawa, pagmamalasakit kay Inang Kalikasan at binibigyan ng pagkakataon ang pamayanan na maging handa at bumangon sa kalamidad. Yun po ang Buklod Tao.*

(Buklod Tao is a community-based organization, registered with the SEC since 1996. Its vision is to have a community that is safe, with high regard, respect, and understanding of Mother Nature, and to give the community a chance to recover after a calamity. That is Buklod Tao.)

ATTY. SORIANO:

*So bilang Buklod Tao rescuer, maaari po ba ninyong idescribe yung dami at uri ng mga insidente ng pagre-rescue ninyo noong panahon na nagsimula kayo noong 1990s at saka sa kasalukuyan o mga recent na pangyayari?*

(As Buklod Tao rescuer, can you describe the number and kind of incidents of rescue operations that you have done from the time you started in the 1990s and in the recent occurrences?)

MR. ABINALES:

*Nagsimula ho kami ng aming kilos para sa pagsagip at pag-ayuda sa aming mga kapit-bahay sa larangan ng kahandaan at kaligtasan noong 1997 dahil sa pondong aming nakuha sa isang project mula sa Small Embassy Project ng Netherlands Embassy. Nakakuha kami ng kaunting pondo para sa aming component ng proyekto na ang tawag namin ay 'Establishment of Community-Based Disaster Management.' Mula sa pondong yun, gumawa kami ng sariling bangka kasi maliit lang ang pondo. Hindi kami makakabili ng rubber boat kasi balita ko seven hundred thousand (700,000) Pesos po yung isang unit.*

(We started with our rescue operations and assistance to the community in 1997. Because of the funds we were able to obtain from a project from the Embassy of Netherlands, we were able to fund the establishment of a Community-Based Disaster Management. From the same funds, we made our

own boats since we could not afford to buy boats, which we learned to cost PhP700,000.00 each.)

*Kaya ang sabi ko sa mga kasamahan ko, "Gagawa tayo ng sariling bangka, hindi gawa sa putol na kahoy, hindi po gawa sa plywood, kundi yung sarili nating kakayahan." Kaya nagtanong ako sa pamayanan namin, sa mga members namin, "Sino ba ang marunong gumawa ng fiber glass boat?" Mayroong isa sa amin, si Uding na gumagawa po ng fiber glass na bumper ng motorsiklo, mudguards. Tinawag ko po si Uding at ipinakita ko yung molde. "Kaya mong gumawa nyan?" "Oh, sige, gumawa ako." At sa maliit na halagang yoon mula sa Netherlands Embassy, nakagawa ho kami agad-agad ng tatlong (3) fiber glass rescue boats. Magmula noon, parami po nang parami yun hanggang ngayon ay mayroon na kaming dalawang (2) disenyo ng bangka, panay fiber glass po.*

(So, I told my co-members that we will just make our own boats, not made of scrap wood, not of plywood. I asked if there are people in the group who can help and we learned that we have a member, Udin, who makes fiber glass bumpers for motorcycles and mud guards. We called Udin and showed him the design and asked if he can help. From the small funding from the Netherlands Embassy, we were able to make three [3] fiberglass rescue boats. From then, we were able to make more, and we now have two [2] fiber glass designs.)

ATTY. SORIANO:

*Paparami po nang paparami ang bangka, dahil po ba sa lumalaki na ang inyong pondo o kailangang mas marami na ang bangka? (You're making more boats. Is that because your funds are bigger now or is there a need for more boats?)*

MR. ABINALES:

*Ang sagot ko sa pangalawang tanong nyo, ay kinakailangang mas maraming bangka. (First, to answer your second question, we need more boats-)*

ATTY. SORIANO:

*Dahil po sa?* (Because of?)

MR. ABINALES:

*Kasi napakarami po ang aming high risk families doon. Sa ulat po ng aming kapitan noong 2014, sa aming pagpupulong sa aming center, sabi nya, “Ka Noli, ang ating high risk families sa Barangay Banaba ay umaabot na sa three thousand (3,000.)” Samantalang noong panahon ng Ondoy, may anim (6) na mga bangka pa lang kami. Kaya kami nga po ay naghahanap ng kaunting mapagkukunan ng mga donasyon para gumawa pa rin, magpatuloy ang paggawa ng bangka. Sa ngayon ay naka-forty (40) mahigit na kaming bangka pero hindi lahat nasa Barangay Banaba. Yung iba ay pinapagawa sa amin.*

(-because we have lot of high risk families there. Per our Barangay Chairman’s report in 2014 during our Barangay assembly, he said, “Ka Noli, our high risk families in Barangay Banaba amount to 3,000 already.” At the time of Ondoy, we had six [6] boats only. We try to get some donations so that we can continue making boats. As of now, we have more than forty boats, but not all are in our barangay. Some were just commissioned work we do.)

ATTY. SORIANO:

*Sa dalas po ng pagre-rescue ninyo, maari po ba niyong ikumpara din yung dalas ng pagre-rescue?* (With the frequency of your rescue operations, can you make a comparison?)

MR. ABINALES:

*Oo, agad-agad yan, kapag tumataas ang dalawang (2) ilog ay ina-activate po namin ang sa ngayon ay mayroon na kaming walong (8) mga DRR teams na bawat team ay mayroon pong sariling bangka, may mga lubid, may mga life vest, at mayroon ding megaphone para sa early warning system namin. At, yan nga, kapag tumataas na ang baha, ayon sa obserbasyon ng aming mga teams, sila ay naa-activate at agad-agad nilalabas ang mga gamit pangsagip at tumutulong sa mga dapat unang sagipin—ang matatanda, mga buntis, mga*

*bata. Dinadala sila sa pinakamalapit na evacuation center sa loob ng aming komunidad. Yun po ang aming kilos sa mga peligrong panahon.*

(Yes, immediately when the two [2] rivers overflow, we activate rescue. As of now, we have eight [8] DRR teams and each team has its own boat, ropes, life vests, and a megaphone as early warning system. When flood waters rise, we activate them. And from the observation of our teams, they immediately get all rescue implements ready to help rescue and assist those who need immediate attention like the elderly, pregnant women, and small children, we bring them to the nearest evacuation center in the community. That's what we do in perilous times.)

ATTY. SORIANO:

*Salamat po, Ka Noli. (Thank you, Ka Noli.) Just one last question, Your Honors.*

*RJ, dahil ikaw ang pinakabata sa grupong ito, sa palagay mo ba ang rescue operations at ang kasalukuyang mga tumutulong sa inyo ay sapat na para maramdaman mo yung kaninang sinasabi mo na pag-aalala ay mapapawi na ba yan dahil may mga rescue operations? Sapat na ba yun para makaramdam ka na ligtas ka?*

(RJ, since you are the youngest in this group, do you think the rescue operations and the help you get are enough to appease you or make you feel safe?)

MR. DE RAMOS:

*Sa aking opinyon po ay hindi sapat dahil lalong lumalaki yung demand ng isang community kung saan naninirahan ang mga tao. Hindi magiging sapat kahit may oryentasyon tungkol sa pagre-ready doon sa kalamidad na yun, sa mga bangka, kagamitan pangligtas sa kalamidad hanggat may mga tulad noong experience natin ng Ondoy. Habang naglilinis tayo, may nakikita tayong mga industrial waste na humaharang sa mga floodway na siyang sanhi kung bakit nagkakaroon ng pagbaha sa bawat barangay. Hindi yun magiging sapat kahit kailan man hangga't may mga kumpanyang may mga maling ginagawa at patuloy sa pagsira sa kalikasan. Hindi magiging sapat ang ganung klaseng mga kagamitan kahit super hi-tech pa ito. Hindi noon matutugunan ang kaligtasan ng bawat tao sa isang komunidad.*

(In my opinion, the operations are not enough because the demands get bigger in the community. It is not enough that people are oriented with rescue, with the use of implements and preparations for calamities. When Ondoy happened, we saw industrial wastes along the floodway. These wastes are the cause of floods in every community. Operations will never be enough for as long as there are companies that continue to operate and contribute to damage the nature. No hi-tech implements will ever be enough to address and ensure the safety of each member of the community.)

ATTY. SORIANO:

*Salamat, RJ.* (Thank you, RJ.) That is all for now, Your Honors.

PANEL CHAIR CADIZ:

The witnesses may now be excused. Thank you very much to all of you.

Counsels, do you have other manifestations that you want to make before the Panel?

ATTY. SORIANO:

No manifestation anymore, Your Honors.

PANEL CHAIR CADIZ:

Alright. Inquiry Clerk, do you have announcements before we adjourn?

CLERK OF THE INQUIRY:

Your Honor, I would like to inform the panel that the Petitioners have already provided the PowerPoints of Dr. Santos yesterday from BFAR.

Also, Your Honor, we have previously provided the dates and the venues for all the succeeding hearings. The schedule may be seen on the Commission on Human Rights Facebook page. Please note, however, that the 19 and 20 June 2018 schedule shall be moved to 27 to 28 June 2018. Further, instead of it being a regular Inquiry hearing session, it shall be instead a consultation with the Commission's own resource persons. We will be reiterating these dates in our announcements and notices. All questions or inquiries may be sent to [nicc.chrp@gmail.com](mailto:nicc.chrp@gmail.com). That's all, Your Honor.

PANEL CHAIR CADIZ:

Before we adjourn, are there other Parties or lawyers within this hall who might want to manifest anything before this Inquiry Panel?

There being none, this session is now adjourned.

Thank you very much to everyone.

*[bangs gavel]*

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