Statement of Glenn Stuart Hodes
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I am honored to appear today before the Philippines Commission on Human Rights on its 3rd public hearing (29-30 August 2018). The petitioners have invited me as an independent resource person as a climate policy and development expert on the subject of *valuing climate change impacts, its role as a risk multiplier for agricultural livelihoods, and policies for promoting more accountability to close gaps in financing and implementing appropriate responses*. A copy of my Curriculum Vitae is appended to this statement. The views expressed herein are mine alone and do not represent those of the United Nations Development Programme.

That climate change poses a real threat to sustainable development and social equality in the Philippines is irrefutable. Climate change represents a material risk confronting business and can be acknowledged as a multiplier of other risks. Various interconnected impact chains directly and indirectly link climate change to other factors that can challenge peoples' ability to work, their levels of income and productivity, and overall quality of life. In the most extreme cases, these impacts can impinge upon basic human rights such as the right to life, to health, and to food and water. Socioeconomic development indicators including multidimensional poverty are widely recognized by development economists to be very sensitive to negative impacts and shocks that climate-related hazards and disasters bring. These include those related to employment, food security, water access, physical health and psychological wellbeing.

The Philippines consistently ranks among the top ten countries most at risk to the adverse physical and socioeconomic impacts of climate change, taking into consideration its location, resource endowments, demographics, infrastructure and other factors.[1] Storms (and typhoons in particular), landslides, and floods present the primary hazards and climate-related risk factors facing the country. Reviews of scientific studies and climate models predict that heavy rainfall is likely to increase in both intensity and frequency under a changing climate, exacerbating flooding in flood-prone areas, increasing landslide and mudslide risk, and introducing risk to new areas. El Niño/Southern Oscillation patterns are projected to worsen, contributing to more frequent cyclones passing through Central Philippines.[2]

Valuing these impacts remains complex, due to multiple impact chains and mechanisms for both direct and indirect damage and losses. According to the 2018 World Economic Forum Global Risk Report, economic losses from natural and man-made disasters in 2017 are projected to increase from USD 188 billion in 2016 to USD 306 billion. Typhoon Yolanda in 2013 affected some 14.1 million people and caused more than USD 700 million in damage to the agriculture sector. Indirect losses from climate-related disasters, which are typically far more detrimental to economic activity than direct losses and damages, extend to disrupted flow and

[1]While rankings shift year-to-year, these indexes take into account multi-dimensional criteria. In the Germanwatch Global Climate Risk Index, the country ranked fifth with respect to long-term risks to climate change over the period of 1994 to 2014. National and urban indexes on climate change vulnerability compiled by Verisk Maplecroft also indicate a relatively very high degree of vulnerability to different climate change impacts. See: www.maplecroft.com

[2]For additional details on climate change impact scenarios, see: Oscar M. Lopez Center. *2017 Philippines Climate Assessment*. As well as data available in NASA and Columbia University Socioeconomic Data and Applications Center. CIESIN portal.

transport of goods and services and backward and forward linkages to processing and export activities.[3]

Mounting evidence shows that output and worker productivity can also be linked to the direct of effects of climate change as well as indirect effects on supply chain inputs. For example, economic analyses by Vivid Economics[4], The World Bank, and the Asian Development all show that heat waves and higher average temperatures would negatively impact GDP substantially through reduced worker productivity, especially in poor urban areas in Asia.[5] Heat stress and stroke from heat waves can also jeopardize the health and productivity of workers in various industries.

Climate change is also as key development risk due the important role that the agricultural sector plays in the Philippines' economy coupled with the inherent vulnerability of the sector and the ecosystems upon which it depends. Constituting 32 percent of the labour force and 11.3 percent of GDP, agricultural livelihoods and outputs are sensitive both to one-off climate related disasters as well as slow onset changes.[6] Agricultural crops, particularly rice, are very sensitive to water and temperature stress; production is being adversely affected by more highly variable rainfall patterns and distribution that has been observed in recent years.[7] Climate change is projected to have large negative impacts on maize production uniformly across the country.[8] Dry spells or heavy rainfall occurring immediately after seedlings are planted or seeds are sown cause plants to die due to water or heat stress.[9] Climate impacts can also directly reduce water availability for crops and contribute to increased incidence and severity of pests and diseases.

In general, climate change has a material impact on food security in all four major aspects: production and availability levels, access to adequate levels of nutrition, utilization to reach a state of well-being, and stability. Initial research shows the Philippines is no exception.[10] The impacts of climate change on poor farmers are more profound than those on rich farmers due mainly to their more limited sources of income, their higher share of disposable income spent on food, as well as their relative dependency on staple crops that are more vulnerable to climate impacts compared to export crops. Since food is a major expenditure in poorer households, and their consumption highly price elastic, rises in the cost of staple crops such as

[3] For example, for fisheries and aquaculture, an important agricultural sub-sector in the Philippines, climate change can directly affect the value chain and also indirectly reduce incomes and employment in related economic activity such as trade, processing, retail and the supply of goods and services to the industry. Food and Agriculture Organization of the UN. Addressing Agriculture, Forestry and Fisheries in National Adaptation Planning. April 2017.
[4] Vivid Economics, The Macroeconomic Costs of Climate Change. Report for DEFRA. 2013.
[5] Matthew E. Kahn. "Will Climate Change Cause Enormous Social Costs for Poor Asian Cities," *Asian Development Review*, Vol 34 Issue 2, 2017.
[6] Although this is projected to fall to 23.5 percent by 2050 as a result of a reduced importance of the sector to the economy, this will still be significant. Moreover, a large share of people dependent on the sector are likely to be among the most poor and socially marginalized groups. Thomas, Pradesha and Perez. "Agricultural Growth and Climate Resilience in the Philippines for IFPRI Policy Note. September 2015.
[7] Simulation models indicate that yields of rice and other crops tend to decrease from 8 to 14% for every 1°C increase in temperature depending on location in the Philippines (Comiso, Espaldon, Lansigan, Blanche, & Sarigumba, 2013). This could result in a decline in overall rice productivity yields by 2.2 to 4.3 percent by 2050 depending on model scenarios.
[8] Thomas, Pradesha and Perez, 2015. IFPRI Policy Note.
[9] Peñalba et al. "Climate Change Impacts and Adaptation for Food Security and Livelihoods." 2012.
[10] Food and Agriculture Organization of the UN. Climate Change and Food Security: Risks and Responses. Rome: FAO, 2016. And Reyes et. al, for Food and Agriculture Organization of the UN. Impacts of Climate Change on Household Food Security in the Philippines. December 2014.

rice—triggered by reduced supply linked to yield impacts from climate impacts—could keep or push households below the poverty threshold.

Communities that are highly embedded in vulnerable marine and coastal ecosystems and dependent on forest resources are also susceptible to displacement or forced migration as result of climate-related hazards and reduced ecosystem functioning and health including from reduced biological and genetic diversity. Total dietary protein from fish is also relatively higher in poorer, coastal households most at risk to climate-related hazards that threaten species loss and catch sustainability. Similar to other Asian countries, the farming population in the Philippines is aging. This exacerbates vulnerabilities to negative impacts. There is also evidence that climate change has a bearing on exacerbating gender equality, as women farmers and fishers face higher risk exposure levels by virtue of having less access to inputs, information, services, and resources to adapt to new circumstances and practices.[11]

The Government of the Philippines has taken several noteworthy steps to advance climate action, engaging all actors including the private sector. On 23 March 2017, the Philippines ratified the Paris Agreement. According to the Philippines' Intended Nationally Determined Contribution (NDC) to the Paris Agreement: "the basic foundation for prioritizing adaptation measures is to ensure that loss and damage from climate change and extreme events are minimized to ensure achievement of national development targets through building capacities and enhancing resilience to avoid and mitigate losses in a sustainable manner." The NDC also acknowledges that "public financing will prioritize adaptation to reduce vulnerability and risks to the community, at the same time providing a policy environment that will enable participation of the private sector to optimize mitigation opportunities and reduce business risks towards a climate smart development."[12]

At the same time, the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) also frames a context for an appropriate response by the Philippines. It recognizes the duty that governments and public institutions bear in ensuring accountability for the effective implementation of commitments including on climate action under SDG 13. It also acknowledges their key role "in providing essential services and public goods and in catalyzing other sources of finance [for sustainable development] … through their enactment of legislation and adoption of budgets. At the same time, businesses are called on "to apply their creativity and innovation to solve sustainable development challenges."[13] Working towards the SDGs gives businesses an opportunity to mitigate risks and build resilience at a time of growing uncertainty.

Potential policy solutions to close climate finance and implementation gaps include:

1) **Development of policies, regulations, subsidies and incentives** that fully account for and set the price for social and environmental externalities such as greenhouse gas emissions and short-lived climate pollutants. These can reduce investment barriers and opportunity costs to households and firms to invest in

[11] FAO, 2017.
[12] United Nations Framework Convention on Climate Change. See http://www4.unfccc.int/submissions/INDC/
[13] United Nations. Sustainable Development Knowledge Platform. sustainabledevelopment.un.org/post2015/

low-carbon technologies. Dedicated activity budgets for policy monitoring and enforcing compliance to emissions standards are a requisite.

2) **Integrating comprehensive risk management strategies** into local planning and public investment frameworks to promote synergies between climate adaptation and disaster risk reduction. Green growth and long-term resilience can be fostered by requiring that feasibility studies and appraisals take into account existing evidence of past climate change damages and losses when evaluating alternatives. For example, a recent analysis shows constructing rural roads in Cambodia would require an additional 20% in capital costs to be sustainable and meet required ADB investment return rates after taking into account climate risk and mitigation measures. However, in many cases integrating climate proofing measures can make good economic and business sense in the medium-to-long term. Land and forest management laws, building codes, and local government acts can mandate that specific climate adaptation relevant objectives are included in programme design, accompanied by pre-identified key target areas and beneficiaries including the disabled.[14]

3) **Installing systematic mechanisms and platforms for climate financing** linked to robust systems to track and reward private investment. Green fiscal reforms such as revenues from carbon taxes or allowances can subsidize programmes and climate-proofing of infrastructure. A detailed NDC investment plan and platform to monitor, report and verify fund flows including private investments could serve to realign future economic growth in a manner that promotes a safeguarding of life, livelihoods, and property against climate extremes. An example is the Climate Finance MRV system developed in Colombia, which helps to track and verify climate-friendly private investment. New platforms can provide instruments and incentives for risk pooling and aggregating private investment in low-carbon infrastructure and service delivery otherwise not yet immediately commercially bankable. These can also be tied to carbon mitigation output and related performance-based results and build upon existing crowd funding platforms for sustainable energy and carbon investment.[15]

4) **Setting minimum thresholds on budgetary spending and credit quotas by central banks** for climate action at various levels, including LGUs. Data from the CCC indicate a rising trend of budget allocations and expenditure for climate-relevant activities. As a share of GDP, however, spending could be more proportionate to the estimated value of economic damages and losses and aligned. Fiscal transfer criteria can also be shaped to better incentive performance to meet national SDG13 goals and other SDG targets with climate change co-benefits.[16]

[14] Under the SDGs governments are obligated to provide safe and accessible services to men and women who are differently abled. However, in practice, communities most affected by climate change and persons with disabilities are often excluded or not directly targeted in climate change and disaster management strategies or plans, despite provisions to equal access to protections.
[15] For example, UNDP and TRINE have partnered to scale-up investment in high-impact energy projects such as off-grid solar.
[16] For example, Brazil, India, and other countries have pursed various ecological-based fiscal transfer formula that can have a direct or indirect incentive on financing climate mitigation and adaptation action such as forest conservation.

Monetary policy tools can also be reformed to incorporate climate risks aimed at limiting systemic financial risk, or specific financial risks, as well as to promote low-carbon transitions. For example, Bangladesh Bank uses the instruments of 'mandatory credit quotas' and 'targeted refinancing lines' to incentivize green lending. As of 2016 every financial institution is obliged to allocate at least 5% of its loan portfolio to green finance. And BDT2 billion (US$25 million) was made available in concessionary lending on a refinancing basis to local banks under the category of green finance in 47 asset classes.[17] Other regulatory instruments and regulatory reviews are mainly being pursed in Europe.[18]

5) **Elaborating financial regulations that promote clearer climate-friendly standards for corporate citizenship and governance.** Financial regulatory authorities across the globe are increasingly elaborating legislation or other requirements for companies to conduct carbon foot-printing and climate risk and investment analysis as a pre-requisite for listings on stock exchanges or to engage in business operations. Mandatory filings could include provisions or guidelines for certain businesses to assess the risk of stranded assets when planning new brownfield investment or promoting integrated risk reporting. In this way, climate change may become mainstreamed in disclosures and shareholder communication as germane to many aspects of business risk beyond environmental, including political, market, supply chain, continuity, reputational, and liability risk.[19] Bangladesh Bank has issues guidelines for environmental and social risk management, with checklists and three risk rankings; as of 2018 compliance in their application will be enforceable under the Bank Company Act, 1991 and Financial Institutions Act, 1993.[20] Guidelines and regulations are also being developed for Government Owned and Controlled Corporations in the region. For example, corporate governance guidelines elaborated by the Royal Thai Ministry of Finance, State Enterprise Policy Office (SEPO) recommends that Boards have clear policies on environmental and social issues in place. In France and Sweden, institutional investors must disclose the carbon footprint of their lending and investment portfolios. The London Stock Exchange is moving toward requiring all listed companies by 2019 to have undertaken a carbon footprint analysis. The Johannesburg Stock Exchange has for many years required listed companies to include sustainability reports or integrated annual reports that incorporate environmental and social governance. South Africa's King Code of Corporate Governance, oft cited as good practice in emerging markets, stipulates that Boards have a duty of care to identify and adequately assess all direct and indirect environment, social, and governance risks.

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[17] *Monetary Policy and Sustainability: Case of Bangladesh*. Inquiry into the Design of a Sustainable Financial System Working Paper 15/02. UNEP: August 2015.

[18] Emanuele Campiglio et al. UW. Finance and climate change: what role for central banks and financial regulators? Manuscript.

[19] For example, see reporting framework guidelines as promoted by the International Integrated Reporting Council at: http://integratedreporting.org/wp-content/uploads/2015/03/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf

[20] Bangladesh Bank Sustainable Finance Department. *Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh*. February 2017.

6) **Corporate social responsibility policy frameworks** could not only stipulate total minimum thresholds as a share of pre-tax turnover but also specific percentages to be earmarked for allocations to programmes that directly address community climate adaptation and disaster prevention priorities. Principles and models can also be elaborated for promoting energy efficiency and emission reductions as part of sustainable business, such as in China.[21] Guidelines to increase the effectiveness of this investment source in India were developed.[22]

7) **Elaborating and strengthening transparency and accountability principles, systems, and mechanisms** for climate finance (both domestic and international) allocated through national and sub-national budgets, dedicated climate and disaster management funds such as the People's Survival Fund, state owned enterprises, and business investment. Mechanisms can include strengthening the capacity of existing environmental desk in the Ombudsperson Office, increasing participatory budgetary processes, undertaking more random auditing of programmes and expenditure tracking surveys that trace fund flows down to the beneficiary level by the Commission on Audit of the Philippines and other accountability actors. Already, climate change is mandated to be integrated into budget allocations and a sophisticated system for tagging climate-relevant expenditure exists. The public availability of spending information is commendable. Additional efforts by CCC may focus on incorporating incentives and guidelines to further prioritize areas where scientific evidence shows a higher degree of vulnerability. Cambodia for example reviews its climate budgeting priorities twice a year under its *National CC Financing Framework.*

8) **Respecting media and CSO roles in oversight**. An independent media serves as a watch dog for effective oversight of climate action and can play an indispensable role in informing the public on risks. The Human Rights Commission and other accountability institutions can support adherence to existing media freedom rights and freedom of information laws. They can also undertake efforts to educate media organizations and related CSOs on these topics and related journalism safety rights.[23]

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[21] UNIDO 2011. Guidelines on Climate Change and Corporate Social Responsibility.
[22] Action on Climate Today. Private Sector Approaches for Climate Change Adaptation October 2017.
[23] In Pakistan, for example, the Council of Pakistani Newspaper Editors has published a handbook on climate-smart reporting including a section on monitoring climate finance as well as a safety guidebook for journalists and media persons.