SUBMISSION BY THE NETHERLANDS AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES

Subject: **Submission to the Executive Committee of the Warsaw International Mechanism for Loss and Damage on best practices, challenges and lessons learned from existing financial instruments at all levels that address the risk of loss and damage associated with the adverse effects of climate change**

The Hague, 16 March 2016

I. Introduction

1. The European Union and its Member States welcome the opportunity to respond to the invitation by the Executive Committee and contribute through this submission to the progress in implementation of the Workplan.
2. This particularly applies to the Action Area 7 that aims to encourage comprehensive risk management by the diffusion of information related to financial instruments and tools that address the risks of loss and damage associated with the adverse effects of climate change to facilitate finance in loss and damage situations in accordance with the policies of each developing country and region, taking into account the necessary national efforts to establish enabling environments.
3. We are pleased to highlight some of our experiences, best practices, challenges and lessons learned from existing financial instruments at all levels that address the risk of loss and damage associated with the adverse effects of climate change.
4. We also note that this information could be useful to fulfil the mandate given by Parties in Paris to the Executive Committee to establish a clearing house for risk transfer that serves as a repository for information on insurance and risk transfer, in order to facilitate the efforts of Parties to develop and implement comprehensive risk management strategies.
5. This submission aims to provide an overview of different types of existing financial instruments at different levels, related challenges, and their potential to address loss and damage associated with climate change based on the engagement and experience of the EU in developing and implementing approaches for climate risk management.
6. In particular, this submission presents concrete initiatives and projects implemented by EU Member States that have the potential to close important gaps in comprehensive climate risk management. The tools presented are in the form of partnerships that include multiple actors, in particular developing country governments and regional organizations.
7. Recognising that the right policy environment is central to addressing the risk of loss and damage, the submission briefly highlights gaps in terms of knowledge on financial instruments and their implementation and their potential to address loss and damage, as well as gaps in terms of loss and damage that cannot be addressed by financial instruments.
8. The EU and its 28 Member States remain committed to contribute to the work of the Executive Committee to achieve progress in addressing the risk of loss and damage associated with the adverse effects of climate change.

II. Overview of different types of financial instruments that can be used to address the risk of loss & damage associated with the adverse effects of climate change

9. The following section outlines financial instruments that could be used to reduce negative, mainly economic, impacts from loss and damage associated with climate change. Instruments are categorized according to their suitability at different levels.

10. Many of these instruments are relevant for addressing multiple types of risk and barriers to growth and sustainable development, including risks and constraints that are not directly associated with climate change. Often the best solution to address climate related risks is to build on and expand the scope of existing financial instruments, tools and institutions.

11. An important step for the implementation of financial measures and instruments addressing loss and damage is the identification of appropriate (and potentially bankable) adaptation options and based on that the identification of suitable financial instruments, and finally the provision of or access to finance from either public or private sources.

12. The identification of adaptation measures for cities, regions and countries requires a rigorous risk management approach to assess local total climate risk including, inter alia, (i) today's and future climate risk, (ii) the economic development paths that might put populations and value at greater risk, and (iii) the additional risks expected due to climate change. Thorough risk assessments supply financial institutions, potential funders and insurers with the information required to identify suitable financial instruments and unlock and deepen global adaptation finance and risk transfer and insurance markets.

    The ECA-approach has been and is currently being tested as a possible tool to support decision makers in designing and executing climate adaptation strategies, plans, programs and projects and improve the preparation of (bankable) projects in developed and developing countries. ECA combines a risk approach with a systematic cost-benefit-analysis and could assist decision makers in the identification and rating of concrete adaptation measures in order to minimize the implied costs for society.[1]

13. It should be kept in mind that for most of the presented instruments evidence on their effectiveness in reducing or managing loss and damage is still lacking as the use of financial instruments to address loss and damage remains quite innovative. Further, the introduction of new instruments in developing countries, which often face tremendous market barriers in financial and insurance markets, may require additional technical assistance and capacity building as well as policies reducing market barriers and establishing favorable institutional framework conditions. Moreover, the identification of bankable adaptation options which lead to robust financing flows and payback streams is often challenging. The major challenges for each instrument are outlined in the table.

14. The Executive Committee, in the framework of its work on Action Area 7 of the WIM, could thus aim at collecting, analyzing and disseminating further input on success factors of specific instruments and action needed for their facilitation and application in developing countries and emerging economies.

[1] The Economics of Climate Adaptation Working Group – a partnership between the Global Environment Facility, McKinsey & Company, Swiss Re, the Rockefeller Foundation, ClimateWorks Foundation, the European Commission, and Standard Chartered Bank, supported by GEF and UNEP – developed a framework to guide decision-makers in understanding and addressing issues around potential climate-related losses to economies and societies, the options for averting such losses, and the investment that will be required to fund those measures. The report produced by the Working Group outlines a fact-based risk management approach that national and local leaders can use to understand the impact of climate on their economies – and identify actions to minimize that impact at the lowest cost to society.

Financial Instrument	Prevalence, Challenges and Potentials	Loss & Damage addressed
Individual Household level (Direct solutions with households or individuals as the target group)		
Micro-saving/ savings	Most common (usually informal) approach for individual households to tackle L&D related to income shocks, including shocks related to climate-related extreme events Challenging to implement for low-income, below the poverty line (BPL) households due to a lack of saving potential Suitable for relatively small income shocks Social Safety Nets/Social Protection bears potential for increasing a household's ability to save. Expandable safety net programmes may make linkages to sovereign insurance schemes (e.g. ARC) to enable rapid, funded scale-up when there is a disaster	Economic L&D associated with extreme events (incl. loss of agricultural yield, damages to housings and assets) Savings, insurance pay-outs or credit can be used for reconstruction or reacquisition of assets but also for consumption smoothing in case of income shocks (i.e. for food and articles for daily use) Savings and credit can also be used for adaptation or risk reduction measures (such as investments in crop diversification, irrigation technology, flood-resistant housing). However, this would require appropriate knowledge on climate change impacts and adaptation/risk reduction measures.
Micro-insurance/ direct weather insurance schemes	Yet limited prevalence as insurance has penetrated only around 5% of the potential market in developing countries[2] High transaction costs may make inhibit uptake by low-income families (if no subsidies are provided) Market barriers (information asymmetries causing moral hazard and adverse selection, transaction costs, enforcement constraints, and ambiguity aversion) constrain development of indemnity insurance markets, though parametric insurance overcomes some of these problems Basis risk is a major drawback of parametric microinsurance (due to an individual's experience differing from the index underlying the insurance product).Linking micro-insurance with social protection (e.g. payment of insurance through public employment schemes) could help addressing market barriers. Evidence suggest existing micro-insurance projects have had sustainability and scalability difficulties	
Micro credit/credit	Usually available at relatively high interest rates for shorter term Suitable for relatively small income shocks Some piloting and experimentation is being done on	

[2] OECD 2015: 9

Financial Instrument	Prevalence, Challenges and Potentials	Loss & Damage addressed
	recovery loans, which are larger loans provided post-disaster help livelihood recovery (not suitable for the very poorest). Credit may even increase vulnerability of households due to liabilities despite of income shocks Linking micro credit with (micro)insurance could prevent over-indebtedness due to extremes and bears potential for innovative and viable solutions MFI often reduce availability of micro-credit following a disaster as they seek to repair their balance sheet from the effects of the consequent bad debt. Insuring microfinance aggregators has potential to ease this constraint.	
Community Level (Direct solutions with the community as the direct target group)		
Group Savings	Common (usually informal) approach for Self Help Groups Leverage for community-based climate risk management faces risk that individual members may not prefer climate risk management options with their savings Usually address idiosyncratic and not catastrophic, covariate risks	Savings, insurance pay-outs and climate risk management funds at community-level, in addition to reconstruction and reacquisition, can be used for community-level adaptation or risk reduction measures addressing climate-related extreme and slow-onset events. However, this would require appropriate knowledge on climate change impacts and adaptation/risk reduction measures.
Group Insurance	Similar to micro-insurance in terms of prevalence and market penetration Lower transaction costs compared to individual insurance Usually addresses idiosyncratic and not catastrophic, covariate risks	
Community-level Climate Risk Management Fund	Yet not prevalent Mechanism needs substantial public funding Potential to link climate risk management funds with insurance and/or social protection to reduce (labour) costs for small-scale measures that could be implemented through public works	
National Level (Indirect solutions with national government as the policy holder)		
Disaster Relief Fund	Suitable and prevalent mechanism Usually funded by government funds Implementation often suffers from inadequate	Disaster Relief Funds explicitly address L&D from (climate-related)

Financial Instrument	Prevalence, Challenges and Potentials	Loss & Damage addressed
	budgeting and funding in developing countries Linking (national) disaster relief funds with insurance bears potential for improving efficiency and scale	extreme events and cover reconstruction as well as provision of food, medicine and other urgent needs
Social Security Scheme (including conditional and unconditional cash transfers, food and cash for work programmes)	Suitable and prevalent mechanism Usually funded by national government funds Often not explicitly linked to climate risks Often suffer from inadequate funding Well-designed social protection schemes can increase adaptive capacity, prevent and reduce risks, and enhance livelihoods Linking social protection with insurance can support rapid scale-up when there is a disaster and improve efficiency and cost-effectiveness of both financial instruments and bears potential for innovative and effective approaches for loss and damage	Social Protection can address both, L&D from extreme as well as slow-onset events Public work programmes (e.g. food or cash for work) in particular can implement adaptation and risk reduction measures, though efficacy has been mixed. They can further be linked to climate risk insurance (e.g. work for insurance as piloted by the World Food Programme in Ethiopia)
Contingent Credit	Pre-agreed lines of borrowing that can be drawn on rapidly when there is a disaster. Limited availability, mostly for middle income countries Loans may be less attractive to poorest countries. Increases debt. Possible limited capacity to borrow	Disaster Relief Funds explicitly address L&D from (climate-related) extreme events and cover reconstruction as well as provision of food, medicine and other urgent needs
Climate/ Catastrophe Bond	Market linked measure Low interest rate, long term but must be low risk High interest rate for vulnerable countries may limit its applicability Needs revenue streams for interest payment to bond holders Ideal to hold funds raised in a reserve and use them to pay for response and recovery costs if a disaster occurs; Catbonds may contribute to raising funds for climate change mitigation, adaptation and risk reduction	Climate Bonds can be used to raise finance for risk reduction and adaptation measures with revenue streams Cat bonds can be used for

Financial Instrument	Prevalence, Challenges and Potentials	Loss & Damage addressed
	measures with revenue streams if a disaster occurs. Need for revenue streams may limit its applicability for managing loss and damage	
Ex post bond	Governments can issue bonds after a disaster to raise funds. Difficult to do for highly indebted countries Relative cheap but slow form of financing	Can be used to meet L&D costs in the late recovery and reconstruction phases of a disaster response
National level insurance schemes	Limited but increasing prevalence Highly applicable to reduce and manage loss and damage from climate extremes National government paying insurance premium Often limited financial capacity for paying premiums in developing countries Linking national-level insurance with social protection schemes can reduce transaction costs, improve targeting and effectiveness	Explicitly address L&D from (climate-related) extreme events
Supra-national level (Indirect solutions with national government or region as the policy holder)		
Risk pooling mechanisms	High applicability but limited prevalence Group of countries contribute to a fund and withdrawal is need based Novel mechanism but needs high level of regional cooperation and solidarity	Explicitly address L&D from (climate-related) extreme events
Regional level insurance	High applicability but limited prevalence of the mechanism Group of countries pay a premium while insurance pays for the country facing disaster Countries to pay different premiums to take account of their differing risk profiles and desired coverage levels. If not, countries facing low risk may not prefer to join a group with vulnerable or high risk nations	
Climate/ Catastrophe Bonds	Includes investment opportunities for all countries in a region Terms similar to national level bonds but covers regional level risks Ideal to hold funds raised in a reserve and use them to pay for response and recovery costs if a disaster	Climate Bonds can be used to raise finance for risk reduction and adaptation measures with revenue streams

Financial Instrument	Prevalence, Challenges and Potentials	Loss & Damage addressed
	occurs; Catbonds may contribute to raising funds for climate change mitigation, adaptation and risk reduction measures with revenue streams if a disaster occurs. Need for revenue streams may limit its applicability for managing loss and damage	

III. Examples of Initiatives and Projects

Project title / scheme	**InsuResilience**
Partner country / region	Global (with rapid action focusing on Africa, the Pacific and Caribbean)
Term	2015 – 2020 with potential for extension
Donor	G7
Implementing agency	Various agencies from G7 countries; secretariat implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Objective and brief Project Description	InsuResilience aims at increasing access to insurance for an additional 400 million people in the most vulnerable developing countries (overarching goal). In order to achieve this ambitious goal, the G7 have already pledged 420 million USD of public funds through bilateral and multilateral co-operation and are working towards mobilizing additional funding from private sources. InsuResilience addresses important economic and non-economic losses and damages incurred by developing countries through climate-related extremes. A rapid action package estimated to enable risk insurance coverage of at least 180 million additional people intends to strengthen existing insurance related facilities and initiatives (including the African risk Capacity (ARC), the Caribbean and Central American Catastrophe Risk Insurance Facility (CCRIF), Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), Climate Insurance Fund (CIF), Climate Risk and Early Warning Systems Initiative (CREWS), as well as other bilaterally agreed schemes). By increasing insurance coverage, InsuResilience complements comprehensive climate risk management, spanning a continuum of prevention, risk reduction, risk retention and risk transfer such as insurance schemes. Generally, insurance can play numerous roles – at individual, community, country, regional

	(international) and global levels – in: • Facilitating the assessment of the risks of loss and damage as a prerequisite for identifying needs and policy priorities; • Providing security against the loss of assets, livelihoods and even lives in the post-disaster period; • Ensuring reliable and dignified post-disaster relief; • Setting incentives for prevention, risk reduction and adaptation (reductions of insurance premiums through such measures are an example how well-designed insurance can incentivize prevention, risk reduction, and adaptation); • Providing certainty for weather-affected public and private investments; • Easing disaster-related poverty; • Spurring economic development. • InsuResilience thus addresses important economic and non-economic losses and damages incurred by developing countries through climate-related extremes.

Project title / scheme	**African Risk Capacity (ARC)**
Partner country / region	Africa
Term	Established in 2012
Donor	UN World Food Programme, Rockefeller Foundation, UK Department for International Development, German Federal Ministry for Economic Cooperation and Development, Swedish International Development Cooperation Agency, Swiss Agency for Development and Cooperation, International Fund for Agricultural Development, United States Agency for International Development
Implementing agency	ARC Secretariat
Objective and brief Project Description	ARC offers a government-led risk management system to address the risk of drought and potentially outbreaks & epidemics and natural catastrophes other than droughts. Senegal, Niger, and Mauritania already received payouts in 2015, which were successfully used to deliver livestock fodder, food and cash to affected populations. Governments receive payouts based on pre-approved contingency plans providing detailed and timely information on how the payout will be deployed. This enables quick government response an effective spending of financial resources benefiting affected populations. Using the Replica Coverage, ARC opens its insurance products to international organizations and thereby aims at addressing the humanitarian funding gap, while doubling the coverage of climate risk insurance, and strengthening its government-led risk management system. Financing is needed to allow for increase of scope and scale

	of application of the ARC.

Project title / scheme	**RIICE (Remote sensing-based Information and Insurance for Crops in Emerging economies)**
Partner country / region	Asia (Cambodia, India, Philippines, Thailand and Vietnam)
Term	Initiated in 2012
Donor	Swiss Development Cooperation (SDC), German Federal Ministry for Economic Cooperation and Development (BMZ)
Implementing agency	Public-private partnership: GIZ, the International Rice Research Institute (IRRI), Sarmap - a Swiss satellite company, and the reinsurer Allianz Re
Objective and brief Project Description	RIICE aims at reducing the vulnerability of rice smallholders in Asia. Large-scale monitoring and quick loss assessments through remote sensing technologies accelerate insurance pay-outs to smallholders who are affected by climate extremes such as floods and droughts. The consortium provides technical expertise and capacity building to governments, their national technical and private partners such as insurance companies.

Project title / scheme	**Public Investment and Climate Change Adaptation**
Partner country / region	Peru
Term	2011 to 2015
Donor	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of Germany (BMUB)
Implementing agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Objective and brief Project Description	Peru's initiatives provide a good example for mainstreaming climate risks into development planning processes. In 2011, Peru began its efforts to link climate change adaptation with existing disaster risk management practice in the National Public Investment System (SNIP) with support from GIZ. The project worked together with national and regional partners and developed sets of criteria to facilitate climate-change adaptation in specific sectors. These criteria are successfully incorporated into the national approval procedure for public investments (SNIP). The criteria have been applied on a pilot basis in Piura and

	Cusco during the formulation of planned investment projects. More precisely, the criteria require performing vulnerability analyses, identifying adaptation measures, and to quantify and compare these using cost-benefit analysis. Databases of climate change-related information facilitate the decision-making process. Peru is thus advanced in assessing the options to integrate climate change adaptation into government planning in order to improve its resilience, working with both SINAGERD (Peru's National System for Disaster Risk Management) and the Ministry of Environment (MINAM), responsible for climate change affairs.

Project title / scheme	**Climate Insurance Fund (CIF)**
Partner country / region	Globally, with focus on Sub-Saharan Africa
Term	Initiated in 2015
Donor	German Federal Ministry for Economic Cooperation and Development (BMZ)
Implementing agency	KfW
Objective and brief Project Description	The Climate Insurance Fund (CIF) finances both direct and indirect climate risk insurance solutions for developing and emerging countries. The objective of the CIF is to improve the resilience to extreme weather events of micro, small and medium enterprises as well as low-income households. Since the beginning of 2015, the Fund Manager has been actively working on building up an investment pipeline and the fund recognition. Feedback from the insurance and reinsurance industry has been very positive. While CIF has been working on potential investment opportunities globally, the focus of attention has been Sub-Saharan Africa.

Project title / scheme	**The Disaster Risk Financing Analytics (DRFA) single donor trust fund**
Partner country / region	3 countries will be selected from a list of 12 having expressed the need and interest for technical assistance on DRFA: Pakistan, Bangladesh, India, Cambodia, Myanmar, Philippines, Indonesia, Lao, PDR, Fiji, Salvador, Nicaragua and Jamaica

Term	Initiated in 2016
Donor	European Union
Implementing agency	World Bank/ GFDRR
Objective and brief Project Description	The DRFA project will support the development of Disaster Risk Financing Analytics in selected developing countries. The specific objective of the proposed DRFA programme is to improve the understanding and the capacity of governments to take informed decisions on disaster risk financing (DRF) based on sound financial analysis. This specific objective will be achieved through four outcomes, which will support governments to: (1) understand their financial risk related to natural hazard; (2) employ efficient financial/actuarial analysis, such as cost-benefit analyses, in the development of DRF strategies; (3) effectively leverage private financial markets through market-based risk transfer solutions, when relevant in the DRF strategy; (4) monitor and evaluate DRF strategies and ensure appropriate links with EU-supported activities, with potential to replicate DRF strategies in the same region, such as through the EU Flagship initiative Global Climate Change Alliance plus (GCCA+).

Project title / scheme	**ACP-EU Africa Disaster Risk Financing (ADRF) Program**
Partner country / region	African States
Term	Initiated in 2014
Donor	European Union
Implementing agency	World Bank/ GFDRR
Objective and brief Project Description	The ADRF Program is a component (Result 5: 20 M€) of the Intra-ACP funded program (80 M€). Building Resilience of African Nations and Communities to Disasters caused by Natural Hazards implemented in joint management with the World Bank-led GFDRR

Project title / scheme	**Global Index Insurance Facility (GIIF)**
Partner country / region	African, Caribbean and Pacific Group of States
Term	Initiated in 2014

Donor	European Union
Implementing agency	World Bank/GIIF works both with private sector and public sector partners in order to build index insurance markets
Objective and brief Project Description	The Global Index Insurance Facility (GIIF) is a multi-donor trust fund supporting the development and growth of local markets for weather and disaster index-based insurance in developing countries. It covered more than 1,300,000 farmers, pastoralists & micro-entrepreneurs to date. Supports development & growth of local markets for weather and disaster index-based insurance in developing countries, primarily Sub-Saharan Africa, Latin America and the Caribbean and Asia Pacific. EUR 25 M, EDF 9 Intra-ACP, the EC contribution targets only ACP countries.

Project title / scheme	**Natural Capital Financing Facility**
Partner country / region	EU Member States
Term	Launched in 2015
Donor	European Union and European Investment Bank (EIB)
Implementing agency	EIB
Objective and brief Project Description	The Natural Capital Financing Facility is a pilot financial instrument implemented through the EIB to test and demonstrate innovative financing approaches for projects promoting the preservation of natural capital and adaptation to climate change (through ecosystem based approaches). The Investment Facility will provide € 100 – 125 million financing with the intention to invest the funds by-2017. The European Commission contributes € 50 million as a guarantee for the investments and finances a € 10 million support facility for capacity-building measures aimed at reinforcing the capabilities of the private sector in developing or engaging in biodiversity and climate adaptation projects. Recipients can be public and private entities, including public authorities, land owners and businesses. The NCFF envisages financing, directly and indirectly through financial intermediaries, some 9 to 12 operations, typically between € 5 and € 15 million. Currently, due diligence appraisal for two potential operations is ongoing: Rewilding Europe Capital[3] and Irish Sustainable Forest Fund[4].

IV. Gaps in Addressing L&D with Financial Instruments

Building on experience of the EU and the overview of financial tools and instruments that can (potentially) be used to address and minimize L&D, the following gaps are identified. It is suggested that the Executive Committee pays particular attention to generating knowledge on these gaps through its work:

- The demand side. There is a need to build the demand and capacity of governments to produce disaster contingency plans and integrate risk finance into these;
- There are a number of geographical areas and hazard types where there is limited or no availability of disaster risk finance solutions;
- Contingent credit has limited availability and is under-used;
- Thorough risk assessments and prioritization (such as the ECA approach) as a precondition for identifying suitable, cost-effective adaptation measures and financial instruments to finance these measures are often lacking;

[3] http://www.eib.org/projects/pipeline/2015/20150607.htm
[4] http://www.eib.org/projects/pipeline/2015/20150605.htm

- Loss and damage from slow-onset events is rarely addressed by financial instruments at the national or supra-national level, except by social security programmes; the Executive Committee could therefore focus on identifying solutions for addressing loss and damage from slow-onset events;
- Non-economic loss and damage is hardly addressed by most financial instruments; the Executive Committee could consider whether financial instruments are appropriate (including from an ethical perspective) to address non-economic loss and damage and how financial tools and instruments can integrate them in their approaches, e.g. as safeguards;
- The Executive Committee, through its work in Action Area 7, could further address the question of how to better link disaster financing and climate risk/adaptation financing (e.g. within the context of the UN Sendai Framework for Disaster Risk Reduction and measures contributing to UNFCCC) and by this also contribute to better linking disaster risk reduction and adaptation at national levels. If implemented in isolation, these approaches miss great potentials for synergies;
- Finally, due to lack of knowledge and experiences, financial tools and instruments addressing loss and damage are hardly integrated into the National Adaptation Plan (NAP) and other relevant processes. The Executive Committee could aim at developing recommendations for the LEG, the AC and other bodies under the UNFCCC for a better integration.