



Centre for Science and Environment (CSE)

CSE’s Proposal to the UNFCCC—Executive Committee of the Warsaw International Mechanism for Loss and Damage under the work plan’s Action Area 7 (AA7) dealing with financial instruments— for Constituting Globally Supported Agricultural Insurance Mechanism to Address Loss and Damage in Developing Countries.¹

About Centre for Science and Environment (CSE), New Delhi

CSE is Asia’s leading research and advocacy organization based in New Delhi. It researches into, advocates for and communicates the urgency of development that is both sustainable and equitable. It works on a wide array of environmental issues among which it closely engages in climate change issue at the global, regional and national level.

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¹ **Authors:** Chandra Bhushan and Vijeta Rattani 2016. *Proposal- Need for a globally supported agricultural insurance mechanism to address loss and damage in developing countries*, Centre for Science and Environment, New Delhi. This work has benefitted from the expert inputs and feedback from climate negotiators, corporate, researchers and civil society forums in Africa and Asia dealing in loss and damage, risk and agricultural insurance. For any queries, please contact: vijeta@cseindia.org

1. Introduction

There is growing scientific evidence that climate-related risks are unevenly distributed, with poor and developing countries bearing maximum loss and damage due to climate change.

According to Munich-based reinsurance company Munich Re, the impact of natural disasters is much greater on developing countries—currently around 13 per cent of their GDP—than on rich nations, where it is around 2 per cent.² In Asia and the Pacific region alone, over 2 million people died from natural disasters between 1970 and 2014, or 56.6 per cent of the fatalities globally, while over US\$ 1.15 trillion was lost from natural disasters during this 45 year period.³ While Asia is most exposed to disasters, Africa is most vulnerable. According to the Natural Hazards Vulnerability Index determined from risk analysts Verisk Maplecroft, nine out of ten countries ranked as most vulnerable to natural hazards in the index are in sub-Saharan Africa, and 23 of 25 are on the continent.⁴ Further, since most developing countries are largely dependent on agriculture for their livelihood, the impact is felt most on the agriculture sector. Though most of the data on loss and damage suffered by poor farmers goes unrecorded, the partial data available does indicate significant and growing impacts.

Food and Agricultural Organization (FAO) estimates that the agriculture sector, including crops, livestock, fisheries and forestry, absorbs approximately 22 per cent of the economic impact caused by natural disasters in developing countries.⁵ FAO findings show that of a total US \$140 billion worth of loss and damage caused by 78 disasters (2003–13), damage worth US \$30 billion was incurred on agriculture and its subsectors.⁶ Among the sub-sectors, crops incurred the most loss and damage, worth US \$13 billion. The livestock sub-sector incurred damage worth US \$11 billion (2003–13).⁷

Overall, Asia and Africa have been the most affected regions, with crop and livestock losses caused by natural disasters in 2003–13 worth US \$28 billion and US \$26 billion respectively.⁸ People affected were mostly poor and marginalized, and dependent on agriculture, forestry and fisheries.

This pattern is likely to continue. By 2020, UNEP projects that 75–250 million people in Africa would be exposed to increased water stress due to climate change. Further, rice yields are expected to drop by 50 per cent by the end of this century in South Asia.⁹ It is also estimated that climate change will lead to an equivalent of slightly less than 2 percent to 4 percent annual loss in GDP in Africa by 2040. Additionally, climate change will put around 49 million more people at risk of hunger by 2020.¹⁰ In particular, it is expected that crop yields could augment up to 20 per cent in East and South-East Asia while they could diminish up to 30 percent in

Central and South Asia by mid-21st century.¹¹

India, as other developing countries, would also face increasing due to climate impacts. The World Bank projects that under 2°C warming by the 2050s, India may need to import more than twice the amount of food-grain than would be required without climate change.¹² It, therefore, becomes crucial to address loss and damage within the United Nations Framework Convention on Climate Change (UNFCCC).

2. Importance of Climate Risk Insurance

To address loss and damage, a wide range of methods and mechanisms can be deployed, including risk management, policy and regulatory frameworks, risk insurance, finance and technology transfer. In this report we focus on a risk-transfer mechanism, agricultural insurance, which we believe can help farmers offset climate risks in the agriculture sector. This is not to undermine the importance of ways to reduce risk-enhanced climate change mitigation, adaptation and disaster-risk reduction (DRR). Such measures offer critical advantages to reducing climate risks as much as possible, before any residual risk can be managed and transferred through tools such as insurance.

Broadly, climate-risk insurance has the following potential benefits:

1. It helps promote guaranteed, timely finance, provides farmers with financial liquidity in the aftermath of extreme weather events and prevents the farmer from falling into the trap of poverty as a result of losses incurred due to climate impacts.
2. Agricultural insurance results in stabilizing income in the entire agriculture value chain, resulting in improved food security, secured future food production and secured financing options as a result of stable income. Revenues for agricultural businesses (seeds, fertilizers) are also stabilized by sales to farmers and elaborated customer base as a result of subsidized insurance.
3. It facilitates risk management practices.
4. It is also transformative in terms of promoting a planned, systematic and well designed approach to risk rather than ad-hoc crisis response.¹³

We advocate that application of climate-risk insurance and in particular agricultural insurance is vital to enhance resilience and coping capacity amongst poor and vulnerable farmers in developing countries. According to recent estimates, **only about 100 million people in developing countries and emerging economies are currently covered by climate risk insurance.** But there is a growing global focus on the need to collaborate and strengthen climate-risk insurance.

The G-7 group, which consists of world's wealthiest economies, launched in 2015 an ambitious risk-insurance initiative, *InsuResilience Initiative*. The initiative aims to cover 400 million people in developing countries by 2020.¹⁴

Many countries in Africa, including Ethiopia, Tanzania, South Africa, Mali and Mozambique are experimenting with agricultural insurance as pilot projects, while countries such as Nigeria and Kenya have comprehensive agricultural insurance programmes. Likewise, apart from China, Japan and India which have established agricultural insurance mechanisms, Nepal, Myanmar, Bangladesh, Vietnam and the Philippines have come up with pilot projects related to agricultural insurance within their domestic national structures.

Focus on risk insurance is also reflected in the growing emphasis on financial instruments, including insurance mechanism, to address loss and damage in global climate negotiations as explained below.

3. Loss and Damage in Climate Negotiations

Loss is defined in legal parlance as negative impacts in relation to which reparation or restoration is impossible, while damage is negative impacts in relation to which reparation or restoration is possible. These definitions have been drawn out only as late as in 2012. Developing countries had to push hard for loss and damage to be recognized as one of the core issues related to climate change. It took almost two decades for the creation of a mechanism for loss and damage within the framework of the UNFCCC.

The Warsaw International Mechanism (WIM) for loss and damage was established in 2013 under the Cancun Adaptation Framework.¹⁵ This mechanism fulfils the goal under UNFCCC of promoting the implementation of approaches to address loss and damage associated with climate change.

4. Functions and Objectives of Warsaw International Mechanism

The objectives of WIM are:

- a. Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow-onset impacts: This is to be achieved by facilitating and promoting knowledge and expertise to understand better the approaches to loss and damage, collecting, sharing and disseminating relevant data and information and providing and sharing best practices and approaches to address loss and damage.

- b. Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders, institutions, bodies, processes and initiatives outside the Convention.
- c. Enhancing action and support, including finance, technology and capacity-building to address loss and damage associated with the adverse effects of climate change: This includes providing technical support and guidance on approaches to address loss and damage and facilitating the mobilization and securing of expertise, and enhancement of support, including finance, technology and capacity-building, to strengthen existing approaches and to develop further additional approaches to address loss and damage.¹⁶

The work within the first two objectives has progressed in terms of synthesis reports regarding increasing knowledge and expertise to understand loss and damage and approaches to deal with the same. Similarly, there is steady work progressing with regard to the second objective.

Feasibility of Globally Supported Agricultural Insurance Mechanism within the UNFCCC

There is growing focus on risk insurance and transfer approaches under loss and damage within and outside UNFCCC.

Bali Action Plan, 2007

Decision 1/CP.13, Bali Action Plan talks of risk management and risk reduction strategies, including risk-sharing and -transfer mechanisms, such as insurance.¹

Cancun Adaptation Framework, 2010

Decision 1/CP.16, Cancun Adaptation Framework, mentions:

- (a) Development of climate-risk insurance facility to address impacts associated with severe weather events;
- (b) Options for risk management and reduction, risk sharing and transfer mechanisms, such as insurance, including options for micro-insurance.
- (c) Enhancing strategies for climate change related disaster-risk reduction, including sharing and transfer mechanisms, such as insurance, at the local, national, sub-regional and regional levels for enhancing action on adaptation.²

Durban Outcomes, 2011

The decision 2/CP.17 of the Durban Outcome text recognizes the importance of funding, insurance and transfer of technology to meet the specific needs and concerns of developing country Parties.³

Doha Outcomes, 2012

Decision 3/CP.18 invites all parties to enhance action on designing and implementing risk-transfer activities to address loss and damage and, on a significant note, talks of taking into account common but differentiated responsibilities and respective capabilities and specific national and regional development priorities.⁴

Warsaw International Mechanism, 2013

WIM developed as a full-fledged mechanism to address loss and damage and talked of various approaches to address loss and damage, including risk-transfer instruments. It called for mobilization of resources and support to such approaches as one of its objectives. The Executive Committee established to implement the objectives has the entire Action Area 7 dedicated to financial instruments and tools to address loss and damage under its two-year work plan

Action Area 7

This is dedicated to encouraging comprehensive risk management by the diffusion of information related to financial instruments and tools that address the risks of loss and damage. These financial instruments and tools may include comprehensive risk management capacity with risk pooling and transfer, catastrophe-risk insurance, contingency finance, climate-themed bonds and their certification, catastrophe bonds and financing approaches to making development climate-resilient, among other innovative financial instruments and tools.⁵

Paris Agreement, 2015

Loss and damage is covered under Article 8 of the Paris Agreement where cooperation on risk insurance facilities is clearly identified and under Paragraph 48-52 of the Decisions adopted by CoP also specifies the importance of addressing loss and damage.⁶

G-7 InsuResilience initiative of developed countries aims to increase the number of people having access to risk insurance in developing countries to 400 million by 2020.

Developing countries of Asia and Africa are increasingly adopting agricultural insurance as an important instrument to address loss and damage within their agriculture sectors.

At CoP-22 in Marrakesh, there would be a review of the two-year work plan of WIM and a five-year work plan would be devised in light of the Paris Agreement, providing an opportunity to push for a globally supported agricultural insurance mechanism.

5. Loss and Damage under Paris Agreement 2015

Loss and damage is covered under Article 8 of the Paris Agreement and under Decisions adopted by CoP, paragraphs 48–52 of the text where the importance of addressing loss and damage is recognized.

Article 8 of the Paris Agreement provides a legal basis for long-term action on loss and damage and anchors the Warsaw International Mechanism to the Agreement. It also clarifies that action on loss and damage shall be cooperative and facilitative and be undertaken in coordination with competent bodies inside and outside of the UNFCCC structure. Further, it outlines possible fields of cooperation in a non-exhaustive list. The recognized areas of cooperation under Article 8, para 4 are as follows:¹⁷

- Early warning systems
- Emergency preparedness
- Slow-onset events
- Events that may involve irreversible and permanent loss and damage
- Comprehensive risk assessment and management
- Risk-insurance facilities, climate-risk pooling and other insurance solutions
- Non-economic losses
- Resilience of communities, livelihoods and ecosystems

Further, Decision 1/CP21 clarifies that the Warsaw International Mechanism will continue in operation beyond 2016. The decision also requests the Executive Committee of the Warsaw International Mechanism to establish a clearinghouse 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 and to develop recommendations for integrated approaches to avert, minimize and address climate-related displacement.¹⁸

It clearly mentions that the inclusion of loss and damage in the Paris Agreement does not provide any basis for ‘liability and compensation’.¹⁹

For the ExCom meeting number 4 in 19–23 September 2016, a concept note of the ‘Clearinghouse on Insurance and Risk Transfer’ was drafted, which reiterates the objective and design of the clearinghouse. Accordingly, it says that the objective of the clearinghouse is to serve as a repository for information on insurance and risk transfer that facilitates the efforts of Parties to develop and implement comprehensive risk-management strategies. Further, on what this information is, the note says, ‘in order to have a catalytic effect in addressing loss and damage, this information needs to be demand driven and based on and linked to comprehensive risk management

needs, including processes of risk reduction and adaptation strategies at regional and national levels' This concept note was adopted at this meeting.²⁰

6. The Mandate for Marrakesh, COP 22

Loss and damage is a central issue for developing countries at the Conference of Parties (COP 22) at Marrakesh, Morocco, from 7 till 18 November 2016.

The mandate for the COP at Marrakesh, Morocco on 7–18 November 2016 is to review the loss and damage mechanism, including its structure, mandate and effectiveness with a view to adopting an appropriate decision on the outcome of this review. The review of the two-year work plan of the Executive Committee (ExCom) will also take place and a rolling five-year work plan would be devised.

7. Proposal for Globally Supported Agricultural Insurance Mechanism under UNFCCC

Our analysis shows that there has been insignificant progress regarding the third objective of the WIM, which is related to mobilization of resources and finance and technology to address loss and damage. Nevertheless, there is increasing recognition on the importance of financial instruments, such as insurance, to increase resilience and coping capacity and managing risks better against a backdrop of the adverse impacts of climate change at the global climate negotiations within WIM, particularly ExCom.

Our findings based on available literature highlight that the reason for low penetration of agricultural insurance in developing countries is primarily the fact that most farmers in developing countries cannot afford agricultural insurance. Further, the governments also lack the resources to provide subsidies to the farmers to secure their agricultural insurance. Government support to agricultural insurance is a prerequisite for greater penetration of agricultural insurance as observed in North America and Europe.

In view of this, we propose the establishment of a globally supported agricultural insurance mechanism to be established within the Warsaw International Mechanism for loss and damage by 2022. In the ensuing years, we propose that WIM should conduct pilot projects globally, mobilize resources and promote collating and collaborating towards the creation of a global agricultural insurance mechanism. We believe that such a mechanism can increase the resilience of farmers and help them cope with negative climate impacts.

8. Features of Globally Supported Agricultural Insurance Mechanism

- The globally supported agricultural insurance programme under loss and damage mechanism of UNFCCC should support the development of fair, affordable, simple, inclusive, transparent, effective and universal agricultural insurance (which includes crop, livestock, fisheries, forestry and allied activities) in developing countries.
- It should provide financial support, technological knowhow to countries to implement their domestic agriculture insurance programmes. The insurance mechanism in countries should be locally determined and consider the requirements of farmers at the local level.
- It should support local, regional and national agricultural insurance initiatives that recognize the unique circumstances of different countries. Funding for this mechanism should be pooled in from countries, based on their responsibility and capability. This funding should be separate from funding to adaptation. Eligibility for insurance should be linked with capability and requirement for finance.
- It should support sustainable agricultural practices, biodiversity and a wide diversity of agricultural practices and not push for standard practices in the name of simplicity of implementation.
- It should support premium subsidy, reinsurance, agricultural-insurance product design and development, information and data system, weather database, weather forecasting and early warning system, capacity development, awareness raising, regulatory reform, technology and institutional strengthening in developing countries.
- Aspirations and the needs of farmers, pastoralists and forest-dependent communities should be taken into account in establishing the mechanism.
- The global agricultural insurance mechanism should encourage diversity, innovation and genuineness of insurance product. Diversity of products should reflect diversity of practices.
- It should promote diversity of nationally applied insurance mechanisms comprising traditional and non-traditional insurance. Companies, cooperatives and micro-insurance firms must also be supported as functional agents of agricultural insurance.

- It should serve as a platform for knowledge and data sharing (including weather data etc.), expertise sharing and technology transfer related to good agricultural practices etc.
- It should support development of technologies for weather and crop loss estimation, along with quick disbursement using satellite, GIS, drones, mobile etc.

9. Principles to Make Globally Supported Agricultural Insurance Mechanism Workable for Developing Countries

- **Equity and climate justice** should be the cornerstone of the globally supported agricultural insurance mechanism. It is crucial that the costs of climate risks are not transferred to developing countries that have had no role in creating climate change.
- **Insurance is not the first response.** Countries must first work towards reducing risk and building resilience of vulnerable communities. Transferring risk in the form of insurance is the last response; focus on insurance should not reduce focus on adaptation and mitigation. Funding support to adaptation and mitigation should not be compromised because of funding for agriculture insurance.
- **Sustainable agricultural practices (that incorporate conservation, biodiversity and traditional cultivation) should be promoted.** The global agricultural insurance mechanism should actively seek to realize wider sustainable development benefits and must not be restricted to financial risk transfer.
- **Profit maximization should not be the motive.** There is a looming risk of profit maximization if private sector is given a free hand in agricultural insurance. Therefore, it is imperative that agricultural insurance programme is government-led, with transparent and accountable regulatory framework for determination of premium, estimation of losses and disbursement of payments.
- **Integration of insurance with other programmes.** Insurance schemes must align with other programmes such as social safety nets, early warning, awareness-raising programmes, disaster-proof infrastructure and investment in more sustainable livelihoods. It should also be integrated with services such as extension and training, inputs, financial inclusion and weather information.
- Synergies between risk reduction and insurance must be recognized.

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BOX: Feasibility of Globally Supported Agricultural Insurance Mechanism Within UNFCCC

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