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Disaster risk transfer mechanisms

Disaster risk transfer mechanisms: issues and considerations for the Asia-Pacific region

Note by the secretariat

Summary

As the world's most disaster-prone region and accounting for over half of the world's absolute poor living under the international poverty line of $1.90 per day, the Asia-Pacific region and its ability to reduce impacts from and build resilience to disasters for its most vulnerable populations will have important implications on the achievement of the 2030 Agenda for Sustainable Development and the goal to leave no one behind. In the Sendai Framework for Disaster Risk Reduction 2015-2030, the promotion of disaster risk reduction through various risk transfer mechanisms to lessen the financial burden of disasters is emphasized.

The present document contains a brief review of various risk transfer mechanisms, such as innovative insurance schemes, risk sharing schemes and risk retention mechanisms, at the global, regional and national levels, and assesses the implications for Asia and the Pacific. Given the lack of an institutionalized insurance culture in many countries in the region, the development of cost-effective financing for disaster risk reduction will require considerable analytical research as well as capacity-building, with a focus on addressing the challenges and capitalizing on the opportunities, to enhance the deployment of insurance tools and products. In addition to the involvement of the private sector, the engagement of knowledge-based regional institutions to scale up disaster risk transfer mechanisms is key. On the basis of existing work at the national and regional levels by the World Bank's Global Facility for Disaster Reduction and Recovery, among others, a proposal is made in the document for a role for the Economic and Social Commission for Asia and the Pacific (ESCAP) in disaster risk transfer that leverages its strength as the region's most inclusive intergovernmental platform as well as its knowledge products and services delivered through regional cooperation and the ESCAP Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries. The Committee on Disaster Risk Reduction is invited to consider these issues and provide guidance to the secretariat.

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I. Introduction

1. Asia and the Pacific is the most disaster-impacted region in the world, with total regional economic damage from natural disasters between 1970 and 2016 reaching approximately $1.3 trillion (in 2005 United States dollars). Floods, storms, droughts and earthquakes, including tsunamis, were responsible for 96.7 per cent of the economic damage in the region.[1]

2. In-depth research by the World Bank shows that current post-disaster financing, including donor assistance and commercial insurance, covers only a fraction of disaster losses, creating a resilience gap. Costs from these disasters also disproportionately fall on poor and vulnerable populations.[2]

3. Mechanisms that promote risk transfer as a means of better managing disaster risk can close this gap and help build resilience among nations and their populations. Consequently, national and regional stakeholders have made considerable efforts to find and promote innovative solutions to reduce disaster risk and build resilience. There is a growing body of evidence that investments in risk transfer mechanisms have enhanced access to fast and cost-effective liquidity for disaster-affected people, especially poor and vulnerable populations.

4. This has culminated in international recognition of disaster risk transfer as a critical tool. For example, specifically under the Sendai Framework for Disaster Risk Reduction 2015-2030, risk financing, insurance and risk transfer are highlighted under priority 3 on investing in disaster risk reduction for resilience. In the Sustainable Development Goals, there are specific targets for which disaster insurance plays an important role, including targets 1.5 (reducing the exposure of the poor to climate-related extreme events and disasters), 2.4 (strengthening capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters) and 13.1 (strengthening resilience and adaptive capacity to climate-related hazards and natural disasters). Lastly, in article 8 of the Paris Agreement, specific action areas to enhance understanding, action and support with respect to disaster reduction are outlined, such as risk insurance facilities, climate risk pooling and other insurance solutions. These three international agreements underscore the value of risk transfer and financing for disaster risk management.

5. The issue also figured prominently in the Asian Ministerial Conference on Disaster Risk Reduction in 2016, which called for increased investment in disaster risk reduction through contingency planning. The Indian Prime Minister, in his address to the Conference, called for risk coverage for all, from poor households to small and medium-sized enterprises to multinational corporations to nation States, to act as the basic building blocks of resilience at the household level.

6. The terms used in innovative risk transfer mechanisms are further explained in box 1, in order to ensure a common understanding of frequently used language.

[1] *Asia-Pacific Disaster Report 2017* (United Nations publication, forthcoming).

[2] World Bank, "Sovereign climate and disaster risk pooling: World Bank technical contribution to the G20" (Washington, D.C., 2017).

Box 1
Terminology

Risk transfer

Risk transfer is the process of formally or informally shifting the financial consequences of risks from one party to another. Insurance, for example, is a well-known form of risk transfer, where coverage of a risk is obtained from an insurer in exchange for ongoing premiums paid to the insurer to cope with losses after major disasters.

Risk/resource pooling

Risk/resource pooling is an important disaster risk transfer mechanism. Under this system, groups of private or public actors, insurance companies or countries come together to form a pool, which can provide protection against catastrophic risks such as floods or earthquakes.[a] By aggregating risks, insurers can approach the international reinsurance market with a single, larger, more diverse portfolio, which also leads to lower reinsurance prices and reduced transaction costs. Further, risk pooling provides a point of entry for financial and technical support through which the international donor community or the Government can inject financial and technical capacity to support risk management.

Index-based or parametric insurance

Parametric insurance is a subset of insurance products that provides compensation when hazard-related parameters, such as rainfall, wind speed or heat, surpass a predetermined threshold. Payments are based on the intensity of an event rather than actual loss, and when compared to traditional indemnity-based insurance, parametric insurance products offer a scientific and more transparent determination of payments. Furthermore, because losses do not need to be estimated, payments are both administratively more cost-effective to manage and faster. Lastly, because payments typically happen within days of the loss occurring, the negative impacts can be avoided (for example, a failed harvest does not lead immediately to famine).

Risk retention

The risk retention approach involves retaining responsibility for the disaster risk through a planned acceptance of losses should the hazard materialize. Typically, this involves sovereign disaster risk financing through the national budget. Governments may use dedicated funds, domestic catastrophe reserves, loans or other off-budget instruments at their disposal to increase their financial capacity in the immediate aftermath of a disaster, while still protecting long-term fiscal sustainability. In a traditional insurance policy, risk retention is present in a deductible and/or via a co-pay mechanism.

Residual risk

Residual risk is the amount of risk that remains in unmanaged form; that is, the level of risk that remains after all disaster risk management measures have been put in place (for example, risk reduction and risk transfer).

Basis risk

In parametric insurance, basis risk is the difference between the amount paid and the actual cost; that is, it reflects the risk that a policyholder may not recoup their full losses from a disaster. In traditional insurance, basis risk is also present in the terms of coverage (the fine print).

Source: "Definition of 'basis risk'" *Economic Times* (Mumbai) (available from http://economictimes.indiatimes.com/definition/basis-risk; accessed 1 July 2017); Inter-Agency Secretariat of the International Strategy for Disaster Risk Reduction, "2009 UNISDR terminology on disaster risk reduction" (Geneva, 2009) (available from www.unisdr.org/we/inform/publications/7817).

[a] Such risks are said to be covariant, meaning that they affect multiple individuals or entities at the same time across a potentially large geographic area. Some key characteristics of risk sharing are different for covariant risk, so traditional informal pooling – such as within communities or families – does not function well.

7. There have been considerable efforts from both regional and national stakeholders in the Asia-Pacific region to move towards a more proactive and cost-effective approach to financing for disaster risk reduction to protect both national budgets and the lives and livelihoods of poor and vulnerable populations. These efforts have included dialogues on regional risk pooling and the scaling-up of data collection and risk assessments to support innovative solutions, such as parametric or index-based insurance.

8. Regional catastrophe risk pools, in particular, have proven to be an attractive and cost-effective strategy to cover disaster risk exposure. First, they can help overcome market failure in countries with financial markets that do not provide the wide range of financial instruments needed for risk transfer. Second, among smaller economies, the pooling can substantially reduce the cost of insurance and reinsurance premiums compared to when countries approach the markets individually.[3] Third, there is an increase in efficiency where data derived from satellite imagery for use in parametric insurance products is also used for payouts from the regional risk pool in case of disaster. Lastly, regional risk pooling can raise the profile of disaster risk financing where managing the fiscal impact of disasters becomes a priority not only for disaster management agencies but also for ministries of finance.

9. Scaling up disaster risk transfer in the region requires a two-pronged solution. First, regional catastrophe risk pooling requires a regional partner organization to facilitate policy dialogue, consensus-building and policy coordination between participating Governments, including in early warning and response planning. Second, while risk transfer mechanisms like parametric insurance solutions are cost-effective vehicles for rapid financing for disaster loss, they demand improved accuracy and standardization of hazard risk data collection systems because of the heavy reliance on objective measurement of weather and hazard parameters.[2] In both cases, the Economic and Social Commission for Asia and the Pacific (ESCAP) can play a supportive role, as discussed in section III below. In section II, the current state of play in the region is reviewed.

II. Status of disaster risk transfer mechanisms in Asia and the Pacific: challenges and opportunities

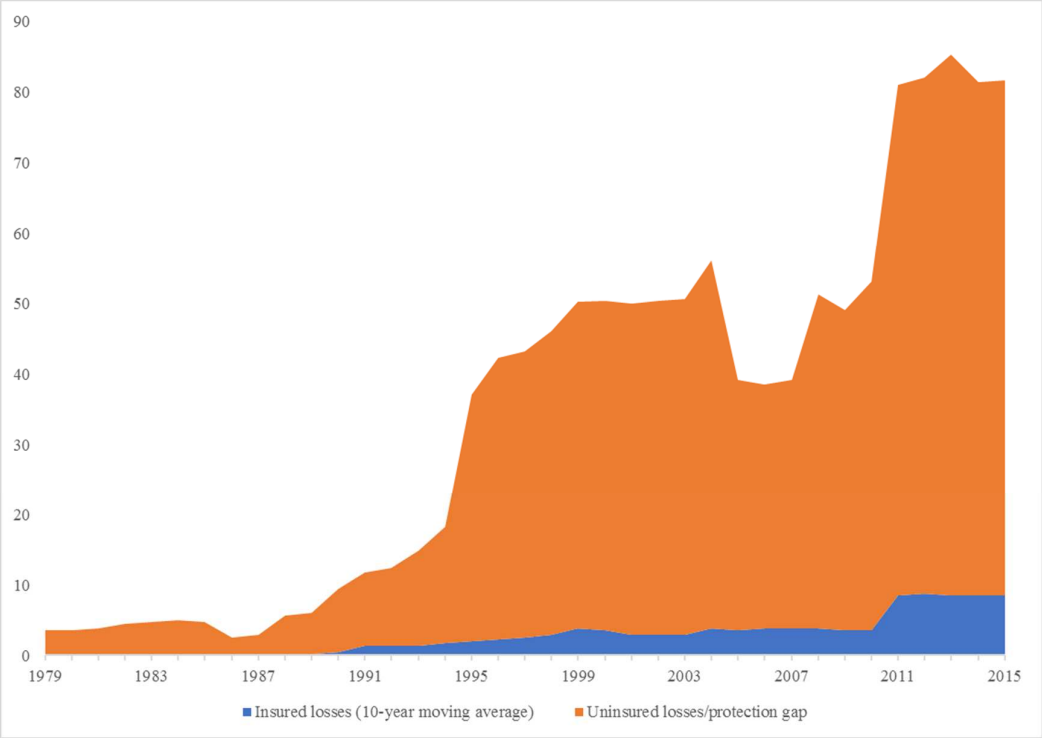
10. Currently, the percentage of insured losses in the Asia-Pacific region is substantially lower than that in Europe and North and Central America. While insured losses in the region have had a modest rise to about $10 billion, uninsured losses have skyrocketed from around $5 billion to $80 billion over the same period (figure I).

11. This reflects a combination of challenges on both the demand side and supply side. On the demand side, low awareness, insufficient understanding and a general mistrust for legal and regulatory enforceability in the event of a catastrophe have dampened uptake. On the supply side, constraints have been linked to limited product development and delivery channels, as well as a lack

[3] World Bank, "Implementation completion and results report (P108058) on a grant in the amount of US$ 70,997,902.39 to the Caribbean Catastrophe Risk Insurance Facility for a Caribbean catastrophe risk insurance project", 12 July 2012. Available from http://documents.worldbank.org/curated/en/733451468225588956/pdf/ICR23320P1080500disclosure070270120.pdf.

of technical capacity. These supply constraints have had spillover effects in further dampening demand and tended to work in a vicious circle in the region.[4]

Figure I
Insured losses versus uninsured losses in Asia
(Billions of United States dollars)



Source: Swiss Re, "Natural catastrophes and man-made disasters in 2015: Asia suffers substantial losses", sigma, No. 1/2016 (Zurich, 2016). Available from www.swissre.com/library/012016_Natural_catastrophes_and_manmade_disasters_in_2015_Asia_suffers_substantial_losses.html.

12. Instead, at its best, financial protection involves ex ante planning to better manage the costs of disasters and ensure predictable and timely access to much needed resources and ultimately mitigate long-term fiscal impacts. Considering the challenges outlined above, in this sense regional risk pooling can allow Asia-Pacific countries to pool risks in a diversified manner while also transferring residual risk to the international risk markets.

13. Risk pooling has had significant positive impacts in several regions worldwide. Box 2 provides an overview of some of the regional risk pooling mechanisms in existence and their impacts on increasing resilience, especially for the absolute poor and vulnerable populations in their respective regions.[5]

[4] World Bank, "Advancing disaster risk financing and insurance in ASEAN member States: framework and options for implementation – volume 1, main report" (Washington, D.C., 2012).

[5] World Bank, "Sovereign climate and disaster risk pooling".

Box 2
Summary of existing regional sovereign catastrophe risk pools

Caribbean Catastrophe Risk Insurance Facility

The Caribbean Catastrophe Risk Insurance Facility, established in collaboration with the World Bank, allows Caribbean Governments to purchase insurance coverage for events such as business interruption. Such payments provide immediate liquidity in case of a major disaster. The Facility also has two microinsurance products: the Livelihood Protection Policy for low-income individuals such as small farmers and daily labourers; and a loan portfolio cover designed for lending institutions such as credit unions and insurance companies. The Facility functions as a mutual insurance company controlled by the region's Governments and key donor partners, with countries having agreed to pool their emergency reserve funds. The pool retains some of the risks transferred by the participating countries through an allocation of its own reserves, and transfers some of the risks to more cost-effective reinsurance markets. It has been estimated that this pooling provides insurance policies at approximately half the price that countries could obtain if they approached the reinsurance industry on their own. Insured countries pay an annual premium commensurate with the type of coverage that they choose and their own specific risk exposure, and the parametric insurance products are priced for each country based on their individual profile. Annual premiums typically vary from $200,000 to $4 million, for coverage ranging from $10 million to $50 million per insured event. Since the Facility's inception in 2007, it has made a total of 21 payouts to 10 member Governments totalling almost $68 million, all within 14 days of the event.

Pacific Catastrophe Risk Insurance

Like the Caribbean Catastrophe Risk Insurance Facility, the Pacific Catastrophe Risk Insurance scheme is a regional risk pooling mechanism where five out of the 15 eligible countries (the Marshall Islands, Samoa, Solomon Islands, Tonga and Vanuatu) have purchased coverage amounting to $45 million for earthquake, tsunami and tropical cyclone catastrophes on the international reinsurance market at an attractive price. It is a joint initiative of the Pacific Community, the World Bank and the Asian Development Bank, with financial support from the Government of Japan, the Global Facility for Disaster Reduction and Recovery and the African, Caribbean and Pacific States/European Union Natural Disaster Risk Reduction Programme and technical support from other agencies.

Participating countries benefit from increased budget flexibility in the immediate aftermath of a disaster, because parametric triggers assure insurance payouts within weeks of an acute event. This also includes the provision of technical advisory services through ex ante budget planning and post-disaster budget execution. In addition to the Pacific Risk Information System, the Pacific Disaster Risk Financing and Insurance Programme and post-disaster budget execution guidelines were initiated. Pacific Catastrophe Risk Insurance payouts have included $1.27 million to Tonga (Cyclone Ian) and $1.9 million to Vanuatu (Cyclone Pam). Problems have arisen, particularly in the case of Solomon Islands, where the basis risk proved to be unacceptably high.

African Risk Capacity

The African Risk Capacity is an African continental risk pool that offers weather insurance to participating Governments through its financial affiliate, the African Risk Capacity Insurance Company Limited. It is a specialized agency of the African Union, and is supported by the Swiss

Agency for Development and Cooperation Agency, the Department for International Development of the United Kingdom of Great Britain and Northern Ireland, the United States Agency for International Development, the Rockefeller Foundation, the World Food Programme, the International Fund for Agricultural Development and the German Federal Ministry for Economic Cooperation and Development.

The pool considers the drought risk profile of the group rather than that of each individual country. This joint weather-indexed risk pooling mechanism applies lessons from national drought insurance mechanisms in Ethiopia and Malawi, and regional disaster risk pooling mechanisms from the Caribbean. The index-based insurance offers maximum coverage of $30 million per country per season for drought events that occur with a frequency of one in five years or less. It was triggered following the 2014 Sahel drought: payouts made to Mauritania, Niger and Senegal enabled these countries to respond to the drought and reach more than 1.2 million beneficiaries at an early stage of the crisis. So far, eight nations have taken out insurance and four – Senegal, Mauritania, Niger and Malawi – have received payouts totalling $34 million. The encouraging results so far have led to proposals for this insurance to be extended.

14. To date, no regional facility has been established that covers the entire Asia-Pacific region. While technical work is under way among several countries (for example, Cambodia, the Lao People's Democratic Republic and Myanmar), and while the Association of Southeast Asian Nations (ASEAN) has established a regional platform (the ASEAN Disaster Risk Financing and Insurance Programme) through which participating countries can put forward, assess and implement options for managing the financial impacts of disasters, large-scale implementation of these instruments via risk pooling has been mostly non-existent. In addition, the parametric insurance products on which risk pools mostly rely as the primary mechanism for risk transfer are underdeveloped in the region.

15. However, at the national level, there are several successful examples of implementation of parametric insurance among countries in Asia (box 3). Implementation of these schemes also have pro-poor benefits. The countries that have participated in such schemes have subsequently reduced the fiscal impact of disasters on their budgets, increased the efficiency of public financial management and strengthened not only overall economic resilience but also the resilience of the most vulnerable segments of society. Notably, weather-based index insurance has proven to be a cost-effective risk transfer mechanism in specific agroecological contexts.[6]

[6] World Bank, "Weather index insurance for agriculture: lessons learned" (2010). Presentation available from http://fsg.afre.msu.edu/aamp/sept_2010/aamp_lilongwe-4-1_arce-weather_insurance.pdf.

Box 3
Implementation of parametric insurance products in selected countries in Asia

Thailand

Since 2011, the Thailand Rice Disaster Relief Top-up Crop Insurance Scheme, using weather index insurance for rice, has been available to farmers. The "Remote-sensing based information and insurance for crops in emerging economies" project is a public-private partnership that is being implemented by the Swiss Agency for Development and Cooperation, the German Agency for International Cooperation and others to reduce the vulnerability of smallholder rice farmers. In cooperation with the Geo-Informatics and Space Technology Development Agency, the project is linking remote sensing technology to sophisticated crop yield modelling technology in order to build a rice production monitoring system that provides accurate and timely information on rice areas, yield and disaster-affected rice areas.

India

The National Agricultural Insurance Scheme, established in 1999, has used weather-based index insurance to cover 2.5 million farmers. The indexed approach based on parameters of the yield of insured crops mitigates moral hazard and adverse selection.

Philippines

Contingent credit for disasters is in place and insurance for public assets is in use. In addition, work on renewal of catastrophe drawdown options and sovereign catastrophe insurance is under way and a national financial protection strategy is already in place.

Mongolia

In 2006, the Government of Mongolia, with assistance from the World Bank, implemented a pilot programme in three provinces for an index-based insurance programme to address death rates in the livestock population. Shocks to the well-being of animals have devastating implications for the rural poor and for the overall economy.[a] The scheme combines self-insurance, market-based insurance and social insurance. Herders pay a premium rate for a commercial risk product (Base Insurance Product) which has specified trigger percentages for livestock mortality rates, while the Government finances and provides a social safety net product (Disaster Response Product). In addition, a syndicated pooling arrangement for insurance companies protects the domestic insurance market since the Government fully covers insured losses beyond the financial capacity of the pool through a reinsurance treaty with the World Bank.

[a] Olivier Mahul and Jerry Skees, "Piloting index-based livestock insurance in Mongolia", Access Finance, Issue No. 10 (Washington, D.C., World Bank, 2006). Available from http://documents.worldbank.org/curated/en/645731468773762224/pdf/389560MG0AF101Mahul1article01PUBLIC1.pdf.

16. While these products have clearly supported disaster impact mitigation and resilience-building, the use of parametric insurance is not widespread in Asia and the Pacific. Additional work is required to build countries' technical capacity to provide more accurate, multi-hazard risk assessments that can bolster a scaling-up of such products.

17. Parametric flood insurance, in particular, has been an elusive goal not just in the Asia-Pacific region but worldwide. Given the huge agricultural losses created by recurrent flooding and its devastating impacts on vulnerable small and marginal farmers, there is strong interest from Governments and the private sector alike to develop and promote parametric flood insurance products. This, however, requires data-intensive methodologies, technologies for accessing data, and capabilities to design flood indices that enable accurate prediction of inundation and timings of stage of crop growth to pinpoint trigger levels.[7] A pilot project is currently under way in the region to determine the feasibility of parametric flood insurance (box 4).

Box 4

Pilot project to create an index-based flood insurance product for farmers in developing countries

In collaboration with the Indian Council of Agricultural Research, the Disaster Management Department, the Institute of Water Modelling, Swiss Re and the International Water Management Institute have created an index-based flood insurance product that is specifically designed for smallholder farmers in developing countries. The project was funded by the Consortium of International Agricultural Research Centers' research programmes on climate change, agriculture and food security and on water, land and ecosystems.

The index-based flood insurance product combines hydrological modelling with the latest available 10-metre-resolution satellite images from the European Space Agency to improve accuracy and ensure that farmers who are eligible for compensation are correctly identified. Rainfall data for a river catchment area is first added to the model. When a trigger water level is reached (calculated using 35 years of hydrological data), satellite images are then used to verify the depth and duration of the flood. Furthermore, by relating the flood parameters to associated losses in paddy rice crops, agro-economists and insurance experts have developed a payout index for villages in each district.

The flood insurance product generates an automatic text message to the insurance company, bank and farmer policyholder when the predetermined threshold of flood depth or duration is breached and the insurance company awards payouts accordingly, crediting the money directly to each eligible farmer's bank account, thus ensuring timely compensation for the agricultural loss.

Source: Giriraj Amarnath, "High-tech insurance product boosts smallholders' resilience to floods and droughts". Available from https://wle.cgiar.org/thrive/2017/05/28/high-tech-insurance-product-boosts-smallholders%E2%80%99-resilience-floods-and-droughts (accessed 1 July 2017).

18. Establishing regional catastrophe risk pools in Asia and the Pacific and technically scaling up innovative insurance products can thus help countries in the region to shift financing of disaster risk away from a reactive post-disaster approach towards a more cost-effective proactive approach to fiscal planning. This approach can build resilience at the regional, national and community levels.

[7] Giriraj Amarnath, "High-tech insurance product boosts smallholders' resilience to floods and droughts". Available from https://wle.cgiar.org/thrive/2017/05/28/high-tech-insurance-product-boosts-smallholders%E2%80%99-resilience-floods-and-droughts (accessed 1 July 2017).

III. Role of the Economic and Social Commission for Asia and the Pacific in scaling up disaster risk transfer mechanisms through regional cooperation

19. Recognizing that ex ante risk assessments and risk transfer mechanisms are key components of regional resilience-building, member States requested the Executive Secretary in Commission resolution 71/12, paragraph 4 (d), to guide actions at the regional level through agreed regional and subregional strategies and mechanisms to strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard early warning systems, particularly those related to hydrometeorological issues, by deepening existing regional cooperation mechanisms. This was followed by Commission resolution 72/8 on fostering regional cooperation and partnerships to respond to the climate change challenge in the Asia-Pacific region. More recently, in resolution 73/7, the Commission specifically requested the Executive Secretary to accord priority to synchronizing multidisciplinary support to member States in the mainstreaming of disaster risk reduction in their development strategies and to explore innovative resource mobilization opportunities.

20. To deliver on these mandates, ESCAP is supporting the Asia-Pacific region in addressing the challenges of implementing disaster risk financing including risk transfer mechanisms. As a regional intergovernmental convening platform for Asia and the Pacific, ESCAP is exploring the possibility of setting up a region-wide risk pooling mechanism, the advantage being that the diversity in disaster risk profiles across the ESCAP membership can benefit countries by lowering the cost of premiums in the reinsurance and capital markets.

21. In addition, ESCAP has core strengths in analytical work and related technical capacity-building. ESCAP delivers a wide range of knowledge products that can support increased accuracy in parametric risk models, leading to more effective risk transfer solutions. These products range from downscaled global climate models, to risk assessments for drought and other slow-onset disasters, to near-real-time flood loss estimations, to data collection, analysis and modelling on hazard exposure. In particular, ESCAP supports the development of risk parameters for transboundary hazards. For example, ESCAP has adopted a river-basin-wide approach to modelling risk,[8] which can be extended to provide data for the design of parametric insurance products that involve all riparian countries affected.

22. Furthermore, through its multi-hazard and multidisciplinary approach, ESCAP is able to bring together key ministries – notably finance ministries, as well as sectoral ministries covering areas such as agriculture and disaster risk reduction – to engage in dialogue for planning, budgeting and costing disaster risk reduction. These multidisciplinary dialogues have already led to an expansion of vulnerability assessment mapping and climate modelling research, which play a crucial role in improving the accuracy of risk assessments and consequently the parameter thresholds that trigger payouts. Improved accuracy is also critical for scaling up implementation through risk pooling.

23. Further, ESCAP has several existing regional cooperation mechanisms that can be readily leveraged. For one, its 20-year-old Regional Space Applications Programme for Sustainable Development promotes the sharing of information and knowledge products that are based on satellites and

[8] *Asia-Pacific Disaster Report 2017* (United Nations publication, forthcoming).

geographic information systems, of particular use to high-risk, low-capacity countries. More specifically, the region's spacefaring countries – China, India, Japan, Thailand and others – share information with other countries, especially those perennially prone to drought. This service complements the World Meteorological Organization's Global Framework for Climate Services by providing more detailed, localized forecasts and monitoring that can be updated during the growing season. Typically, droughts in the region have distinct and diverse subregional specificity, primarily driven by the hydrology of snow and river basins, aridity anomalies and monsoon variability. Relatedly, therefore, a second regional cooperation mechanism – namely the Regional Cooperative Mechanism for Drought Monitoring and Early Warning – makes available a menu of tools, services and products that address these regional and subregional specificities and that can directly support index-based parametric insurance. Products of the Regional Cooperative Mechanism for Drought Monitoring and Early Warning in Mongolia, for example, synthesize a number of drought indices – such as the Normalized Difference Drought Index, the Vegetation Supply Water Index and the Thermal Condition Index – into one index. When regional risk pooling is combined with data that is generated through regional information-sharing mechanisms such as the Regional Space Applications Programme for Sustainable Development and its Regional Cooperative Mechanism for Drought Monitoring and Early Warning, efficiencies are augmented in mutually supportive ways.

24. Additionally, the ESCAP Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries provides donors with a single, regionally coordinated entry point that supports disaster risk financing in targeted ways across the Asia-Pacific region. It also provides a readily implementable mechanism that can be used for scaling up implementation of parametric index-based insurance.

25. To date, the ESCAP Multi-Donor Trust Fund has provided financial support for the development of risk analysis programmes in various partner institutions. In Myanmar, for example, there is a scenario-based earthquake impact forecast and assessment system; in South Asia, there is an Internet-based simulation platform for tsunami inundation and risk evaluation; and there are a number of regional climate models that draw from a coordinated downscaling experiment. As these innovative risk models deliver ever more accurate scientific information, the uptake of index-based parametric risk insurance among high-risk, low-capacity countries seems promising.

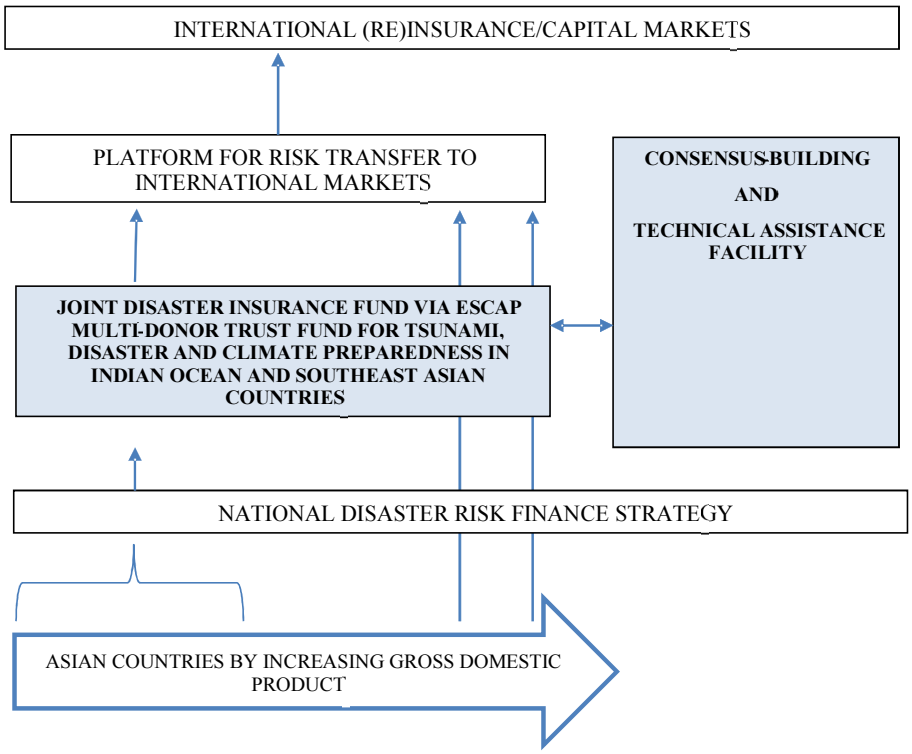
26. The new strategic plan of the ESCAP Multi-Donor Trust Fund is focused on funding regional initiatives that promote the development of risk analysis for parametric insurance through impact-based forecasting and risk-based early warning. The focus is on transboundary extreme weather events, such as slow-onset disasters, as well as geophysical disasters such as earthquakes and tsunamis.

27. With a view to expanding implementation of parametric insurance, ESCAP has commissioned an in-depth study to explore the possibility of setting up a regional facility for risk pooling by opening up a second financing window under the ESCAP Multi-Donor Trust Fund that can be seamlessly integrated to complement the current technical cooperation window. The study is also reviewing global good practices and lessons learned while assessing the benefits of regional cooperation in transferring risks. A case study is also being conducted on disaster risk transfer and financing as a means of enhancing social protection for drought-affected farmers, particularly in ASEAN countries where the number of rural poor is still high. Results will be available in early 2018.

28. On the basis of the above discussion, and building on existing work, in particular work undertaken through the World Bank's Global Facility for Disaster Reduction and Recovery, in figure II the proposed entry point for ESCAP as the region's most inclusive intergovernmental platform and as the administrator of the ESCAP Multi-Donor Trust Fund is highlighted in blue. The proposal accommodates both regional risk pooling and the aspects of technical cooperation and capacity-building that are needed to address the resilience gap through scaled-up parametric insurance.

Figure II

Conceptualizing the role of the Economic and Social Commission for Asia and the Pacific in a regional mechanism for disaster risk financing in the Asia-Pacific region



Source: Adapted by ESCAP from World Bank, "Toward a regional approach to disaster risk finance in Asia: discussion paper", May 2016. Available from http://documents.worldbank.org/curated/en/584961480930535198/pdf/110702-WP-DRFRockefellerFINAL-PUBLIC.pdf.

IV. Issues for consideration

29. In line with the provisions of Commission resolution 73/7, the secretariat will continue to deliver on its mandate on disaster risk reduction through a combination of normative, analytical and capacity-building work that is firmly anchored in the Commission's role as a convening platform for regional cooperation and aligned with both the Sendai Framework for Disaster Risk Reduction 2015-2030 and the 2030 Agenda for Sustainable Development.

30. The Committee on Disaster Risk Reduction may wish to invite the secretariat to further promote the scaling-up of disaster risk financing and transfer mechanisms and their integration into broader disaster risk reduction frameworks by:

(a) Using the role of ESCAP as a convening platform for regional cooperation to continue to explore ways of leveraging the ESCAP Multi-Donor Trust Fund on Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries by, inter alia, opening up a second window that could act as a regional risk pooling mechanism endowed with voluntary contributions to support scaled-up implementation of parametric insurance;

(b) Enhancing its normative and programmatic work, including through the Regional Space Applications Programme for Sustainable Development and its Regional Cooperative Mechanism for Drought Monitoring and Early Warning, supported by the ESCAP Multi-Donor Trust Fund on Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries or other sources as appropriate, with a focus on downscaled climate risk assessment models for drought and other slow-onset disasters, flood loss estimations and other hazard data collection and analysis to improve objective measurements of parameters that trigger payouts.