

Terms of reference: provision of consultancy services on the implications of technology and innovation for disaster risk management and financing

Please note that the following terms of reference provide an indicative overview of the scope of the work that the contractor may be asked to undertake and may be subject to change.

Background

Disaster and climate risks pose a significant threat across the Asia-Pacific region given the high-levels of exposure to a wide range of natural hazards, including earthquakes, tsunamis, floods, storms and landslides, amongst others. A changing climate, continued economic development and population growth are expected to increase the frequency and severity of disasters in the region posing a significant threat to socio-economic development and undermining hard-won development gains. Technology and innovation can offer opportunities for gains in the capacity of economies to manage disaster and climate risks (before, during and in the aftermath of disasters) and enhance the availability and affordability of financial protection tools, such as insurance. For example, increasing access to high-quality earth observation data offers significant opportunities to integrate risk information into development planning, enhance emergency preparedness and response including the development of new financial protection.

The Asian Development Bank (ADB) and the Organisation for Economic Cooperation and Development (OECD) are collaborating on a project that will include the development of a report to the APEC Finance Ministers' Process examining the implications of technology and innovation for disaster risk management and financing and the organisation of a policy dialogue on this issue.

Tasks (indicative)

A. The contractor will develop a report that will include, at minimum, the following elements:

1. Disaster and climate risks in APEC economies (approximately 3 pages)
 - Brief overview of disaster and climate risks in APEC economies (past events, losses, economic and social impacts)
2. Managing the social, economic and financial impacts of disaster and climate risks (approximately 4 pages)
 - Overview of the elements necessary for building economic, social and financial resilience to disaster and climate risks, including good practices and benefits of effective management of disaster and climate risks.
 - Brief discussion of some of the challenges in managing social, economic and financial impacts of disaster and climate risks (lack of information risk and exposure, limited risk awareness, insufficient integration of risk into planning and investment decisions, limited resources for emergency preparedness and response, limited financial protection for damages and losses to public and private assets)
3. Application of technology and innovation to disaster risk management and financial protection (approximately 20 pages)
 - Overview of technological developments and innovation with implications for disaster risk management and financial protection, focused on increasing capacity to collect, access, analyse and integrate data for risk assessment and awareness as

well as for damage assessment and recovery/reconstruction. This will include real-life examples of the application of technology and innovation as well as potential opportunities for technology integration that have not yet been tested (including, for example, opportunities for technologies applied in the insurance sector to be applied more generally in risk management). To the extent feasible, this examination should also discuss the potential costs and benefits that could be realised through technology and innovation in terms of improved resilience and avoided economic and social costs.

4. Leveraging the application of new technologies and innovation: some policy considerations (approximately 7 pages)
 - Brief discussion of some of the potential policy considerations in designing an approach to supporting the use of new technologies and innovation in disaster risk management, financing and insurance (such as the existence of needed ICT infrastructure and technical capacity, risks of catastrophic technology failure or faulty calibration, user acceptance, consumer protection and privacy considerations)
5. Preliminary conclusions and suggested next steps (approximately 5 pages)
 - Some examples of possible next steps could include: (i) the development of cross-country survey for the purposes of a more systematic review of technology application and constraints; and/or (ii) the development of guidance on the role of policymakers, regulators and supervisors in creating an enabling environment for the integration of technology and innovation into disaster risk management and financing.

The contractor may be asked to include additional elements as work on the report progresses.

B. The contractor will assist with the organisation of the planned policy dialogue, including the drafting of an agenda for the event, identification and invitation of speakers, the provision of guidance to speakers and moderators on topics to be covered and the development of any required background material.

C. The contractor will develop presentations for the policy dialogue and relevant APEC meetings providing an overview of the report and identifying questions for discussion at the event.

Deliverables and timelines (indicative)

1. Initial draft of report covering the elements above, a brief presentation providing an overview of the report and a draft agenda for the policy dialogue with a list of possible speakers – by 14 June 2019
2. Revised draft report, presentation and draft agenda, integrating comments from ADB and OECD – by 23 August 2019
3. Draft set of speaker guidance and background notes for the policy dialogue – by 4 October 2019
4. Draft final report, integrating outcomes of discussions at APEC and the policy dialogue – by 31 January 2020
5. Final report, integrating comments from ADB and OECD – by 28 February 2020

Travel

The contractor will be expected to travel, including for meeting(s) with OECD and ADB staff and to the policy dialogue and other relevant events.

Reasonable costs incurred for this travel will be reimbursed, in accordance with the policies, regulations and procedures of the OECD and/or ADB.

Qualifications

- Advanced degree (Masters or doctoral - completed or in progress) in a field related to disaster risk management or insurance
- A strong understanding of technological advances in areas relevant to disaster risk management or insurance, such as earth observation technologies, big data and connected devices, artificial intelligence, etc.
- Proven record of developing policy-relevant research and analysis, including in developing countries.
- Strong written and verbal communication skills in English
- Publication in refereed journals on relevant topic would be desirable.
- 5 or more years of practical experience in disaster risk management or insurance and access to a network of practitioners and experts