V.DRRM - 48

Using open-source programming language to Integrate earth observation, health and socioeconomic data for DRRM

Section 1: General Information (Activity 1)	
Summary	Countries need science, technology and innovation (STI) tools to address sustainable development challenges, for example, through adequate early disaster warning and water quality monitoring and control, which depend on quality data. Such data will also be helpful to improve their STI capacity and implement coherent and sustainable STI policies to make progress on SDGs, including SDG 6 on clean water and SDG 11 on sustainable cities. Geospatial technologies have recently gained much attention as a potential solution to fill data gaps and improve data quality, as well as to increase the SDG reporting rate of developing countries. This project aims to address sustainable development challenges by enhancing countries' capacity in STI, particularly in early disaster warning and water quality monitoring. By leveraging geospatial technologies and the Julia programming language, developed at MIT, the project seeks to improve data quality and accessibility. Julia is well-suited for earth observation due to its unique combination of high performance and user-friendly syntax. This project responds to the need to support STI experts in developing countries, in particular female scientists, in using geospatial technology (GST) as a catalyst for sustainable urban development and for SDGs.
Proponent Name(s)	UNCTAD, Atlantic International Research Centre
Proponent Type	UN organization (UNCTAD) and inter-governmental organization based in Portugal (Atlantic International Research Center)
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Region	Asia, Africa and Latin America

Section 1: General Information (Activity 2)	
Title	Harnessing science, technology and innovation for disaster risk reduction
Summary	Harnessing science, technology and innovation (STI) into disaster mitigation, response, and recovery can reduce losses, speed-up needed assistance, and enhance long-term resilience. Climate change, which has become a global issue, has increased the frequency and gravity of natural disasters that affect water resources. International cooperation is needed to address the challenges therefrom.

	Through annual workshops, countries will share knowledge and experiences, showcase success stories, assess STI needs, identify common challenges, and formulate recommendations for harnessing STI in disaster risk reduction. Such workshops will allow the countries: - Showcase their success stories in developing and utilizing STI in disaster risk reduction, including practical application of early warning systems; - Determine STI needs of Member States; - Determine common challenges within and among Regional Groups in harnessing STI for disaster risk reduction; and - Provide recommendations to help Member States effectively harness STI for disaster risk reduction.
Proponent Name(s)	UNCTAD and any interested member country
Proponent Type	UN organization (UNCTAD)
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Region	All continents, developed and countries countries

Section 2: Commitment	
Linkages to SDG 6	Activity 1: The project's emphasis on leveraging geospatial technologies and Julia programming language enhances data quality and accessibility, thereby facilitating progress towards SDG 6 by improving water quality monitoring and early disaster warning systems. Activity 2: The project's facilitation of international collaboration to enhance the utilization of science, technology, and innovation for disaster risk reduction will directly contribute to SDG 6 by bolstering resilience and response mechanisms for water-related disasters.
Target	6.3, 6.4, 6.5, 6.a
Linkages to other SDG	Activity 1: SDG 11 on urban sustainable development. Activity 2: SDG 11 on urban sustainable development and SDG 13 on climate change.

Section 3: Actions and Outcomes to Achieve Targets	
Relevant Sub-Theme	Disaster Risk Reduction and Management
Actions and Outcomes	Activity 1: The project will conduct workshops focusing on the use of the Julia programming language and geospatial technologies to equip participants with the necessary skills for effective data analysis and earth observation. Activity 2: Workshops on annual basis to share knowledge and experiences among countries are meaningful ways for effective international cooperation in this regard.
Implementation Period	Activity 1: January 2025 to December 2027 Activity 2: July 2025 to June 2027
Financial Commitment	No financial commitment provided. Estimated financial costs:

	- $250,000 for activity 1. - $200,000 for activity 2.