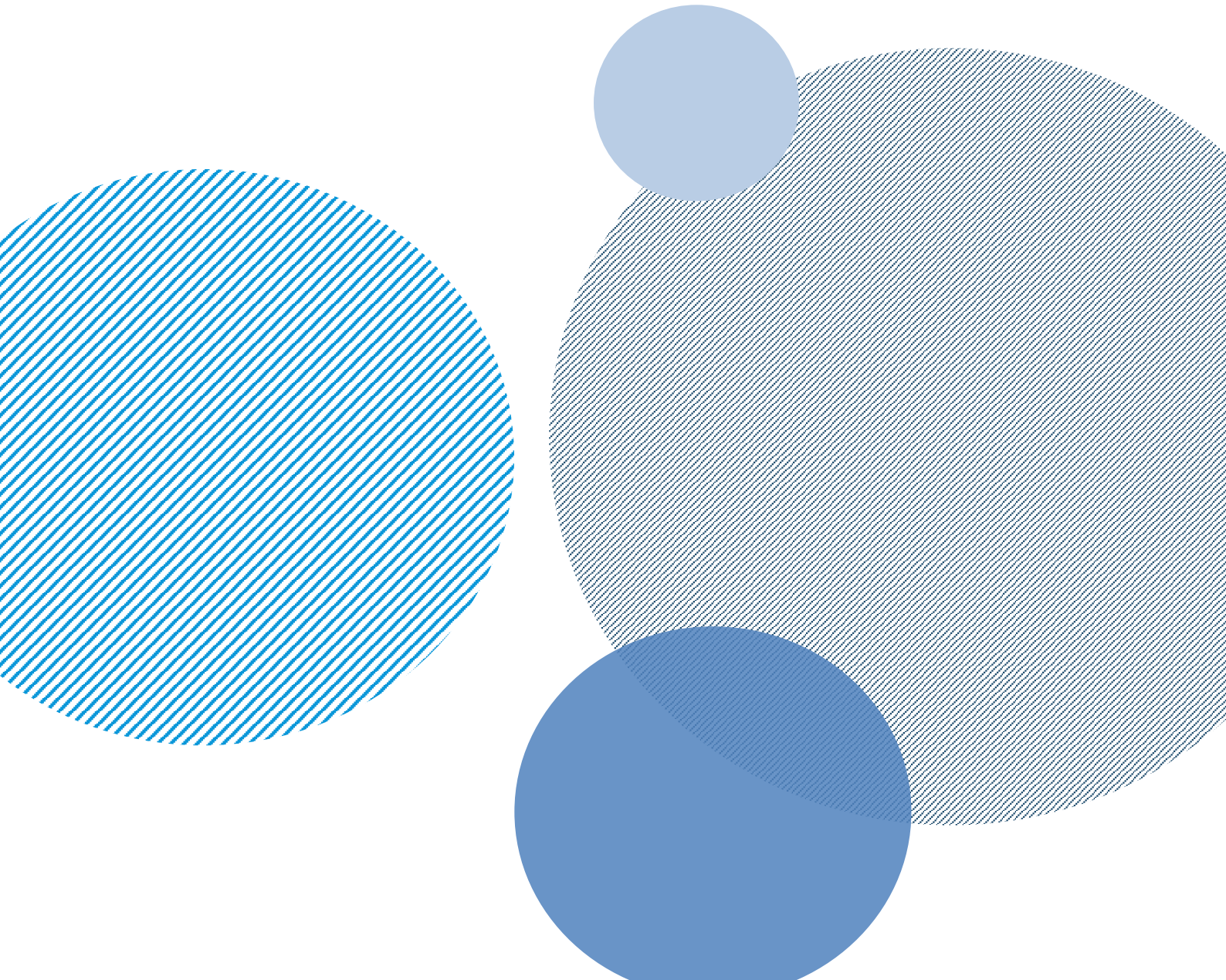
ESCAP
Economic and Social Commission for Asia and the Pacific

Evaluation of the project on Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific

Evaluation report | February 2024



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List of acronyms

APAN	Asia Pacific Advanced Network
APCTT	Asian and Pacific Centre for Transfer of Technology
AP-PLAT	Asia-Pacific Climate Change Adaptation Information Platform
APEC	Asia Pacific Economic Cooperation
APDRN	Asia-Pacific Disaster Resilience Network
APFSD	Asia-Pacific Forum for Sustainable Development
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
CIMP6	Coupled Intercomparison Model Project Phase 6
COP27	Conference of Parties 27
DA	Development Account
DiDRR	Disability Inclusive Disaster Risk Reduction
DRR	Disaster Risk Reduction
DSS	Decision Support System
EDD	Environment and Development Division
ESCAP	Economic and Social Commission for Asia and the Pacific
IBC	Issue Based Coalition
ICT	Information and Communications Technology
IDD	ICT and Disaster Risk Reduction Division
IGES	Institute for Global Environmental Strategies
MOU	Memorandum of Understanding
NAP	National Adaptation Plan
PRP	Pacific Resilience Partnership
RCM	Regional Coordination Mechanism
RDAS	Regional Resilience Data and Analytics Service

RIMES	Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
RRP	Risk Resilience Portal
SDG	Sustainable Development Goal
SPC	South Pacific Community
SPMD	Strategy and Programme Management Division
SPREP	South Pacific Regional Environment Programme
SSWA	South and South-West Asia
TOC	Theory of Change
TWG DR3	Thematic Working Group on Disaster Risk Reduction and Resilience
UNDRR	United Nations Office for Disaster Risk Reduction
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research
UNISDR	United Nations International Office for Disaster Reduction
UNOSAT	United Nations Satellite Centre

Executive summary

This project supports the implementation of ESCAP Commission resolution 73/7 adopted in May 2017 on enhancing regional cooperation for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Asia and the Pacific, which requested the Executive Secretary to accord priority to synchronizing multi-disciplinary support to member States in the mainstreaming of disaster risk reduction in their development strategies, in line with the Sendai Framework and the related SDGs and targets. The evaluation of this project complies with the requirements of Development Account (DA) projects. This evaluation seeks to determine as systematically and objectively as possible the impact, relevance, effectiveness, efficiency, and sustainability of DA12 DRR Project: *Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific.* It was undertaken from 15 August 2023 to 12 February 2024.

The evaluation has found evidence that the project has made a **highly satisfactory** impact on the target countries that goes beyond the confines of the project's specific outputs. The Asia-Pacific Risk and Resilience Portal is the primary output of the project. The Portal offers at-your-fingertips climate scenario and disaster risk analytics at the regional, national, sectoral, and subnational levels for adaptation and resilience building at multiple timescales. The Portal received the ESCAP Innovation Award.

The evaluation has found evidence that the project is **highly effective** in strengthening the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risks on the achievement of the SDGs, and in training national and sectoral policymakers on using the Portal for risk-informed development planning. The effectiveness of project delivery was evident in Portal analytics playing a pivotal role in several monsoon outlook forums by providing real-time and evidence-based insights and showcasing the power of advanced technologies in enhancing the ability to anticipate and respond to complex climatic events. In fact, the Portal analytics have been used to substantiate discussions towards monitoring the status of achievement of SDG Goals, especially towards the discussions of the Subregional SDG forums and the APFSD.

The evaluation has found evidence that the project is **highly relevant** to the needs of the target countries. The Portal has helped strengthen subregional cooperation and provided actionable and user-friendly information for the Asia-Pacific region by bridging the science and policy gaps that exist from the lack of translational science. The integration of Portal analytics into the monsoon outlook forums underscored the practical application of technological advancements in climate risk management and highlighted the Portal's role as a valuable tool in supporting collaborative efforts to enhance preparedness and resilience.

The evaluation has found evidence that the project is **efficient** in its implementation through partnerships, making use of comparative advantages and creating synergy**.** The project has strengthened partnerships with other organizations, extended the Asia Pacific Disaster Resilience Network, and enhanced efficiency of project implementation. The Portal is now part of a larger group of climate-risk products that provide risk- and resilience-based information to countries.

The evaluation has found evidence that the project is **sustainable**. It has established an institutionalized mechanism for championing risk-informed development and SDG implementation in the target countries; the Portal has been seamlessly integrated into the regular work of the ESCAP DRR section; and the knowledge products and services developed under the project have been made available online on the Asia-Pacific Disaster Resilience Network as a part of the ESCAP SDG HelpDesk, and with other existing networks and mechanisms of partners.

The evaluation has found evidence that the project has a **satisfactory** performance with respect to gender mainstreaming. Gender equality and disability inclusion have been consciously considered in the design and implementation of project activities.

Five recommendations are offered to ESCAP management.

Continue the development and updating of the Asia-Pacific Risk and Resilience Portal, including through the next phases of the Development Account, to fully cover all the countries in Asia and the Pacific. ESCAP should continue developing, updating, upgrading, and expanding the Portal to cover all countries in Asia and the Pacific utilizing the latest technology in line with the decision of the eighth session of the Committee on Disaster Risk Reduction to "deepen its analytical research, knowledge-sharing and capacity development." The upgrades/expansion may include expanding the Decision Support System and Portal storyboards to cover more countries; enhancing country data gathering using interactive charts and smart filtering; intensifying development of a mobile version of the Portal; and updating data automatically.

Develop programs to build national capacities for disaster preparedness, adaptation and resilience through effective and widespread utilization of the Asia-Pacific Risk and Resilience Portal as well as by leveraging innovations and sharing information, expertise, resources and good practices. The effectiveness and full utilization of the Portal will depend on the capacity building of the people in the country. ESCAP, through its subregional offices and in partnership with subregional organizations and other relevant UN agencies, should consider developing national capacities to conduct disaster risk evaluations, guide the subsequent development of disaster risk mitigation and management strategies, and enable governments to adopt strategies that move beyond the traditional focus on a hazard-by-hazard approach to a multi-hazard approach.

Use big data to measure and analyse the nexus between DRR and gender and disability in Asia and the Pacific. Big data could be used for producing appropriate indicators relevant to the DRR-gender-disability nexus. The collection and utilization of gender and disability disaggregated data is important in disaster statistics, which will also require technical capacity enhancement of relevant officials and stakeholders. Additionally, it would be useful to collect experiences of persons with disabilities in disasters, analysing root causes of such experiences, and identifying policy solutions.

Develop a regional strategy to support the achievement of early warnings for all by strengthening multi-hazard early warning systems in Asia and the Pacific in coordination with member States and relevant partners. This recommendation supports ESCAP's proposal that was endorsed to the Commission by the Committee on Disaster Risk Reduction at its eighth session on 25–27 July 2023. The secretariat proposed to further develop a regional strategy in support of the global and country-level implementation of the four pillars of multi-hazard early warning systems. The regional strategy is expected to enhance foresight planning through improved knowledge and data generated using the Risk and Resilience Portal as well as the Asia-Pacific Disaster Report and relevant subregional reports.

Develop a joint programme on incorporating digital technologies including AI into disaster response and management involving all IDD sections in collaboration with, among others, APCICT, APCTT, and APDIM. Digital technologies and AI have opened new possibilities for understanding and managing disaster risks, mapping flood events, and addressing various challenges related to achieving SDGs. By leveraging data analytics, real time monitoring, and advanced communication technologies, digital rescue systems can significantly enhance the effectiveness and efficiency of disaster relief operations and provide timely and targeted assistance to affected communities during emergencies.

1. Introduction

1.1 Overview of the project

In Asia and the Pacific, disaster risk continues to outpace economic growth and the ability of countries to address disasters. Thus, risk-informed implementation is a priority if Asia and the Pacific is to achieve the Sustainable Development Goals (SDGs). Governments can adopt various strategies to break the link between poverty, inequality, and disaster risks. One pathway is to implement a comprehensive portfolio of sectoral investments and policies as well as innovative technology solutions. This project aims to strengthen the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks on the achievement of the SDGs.

The project supports the implementation of ESCAP Commission resolution 73/7 adopted in May 2017 on enhancing regional cooperation for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Asia and the Pacific, which requested the Executive Secretary of ESCAP to, inter alia, accord priority to synchronizing multi-disciplinary support to member States in the mainstreaming of disaster risk reduction in their development strategies, in line with the Sendai Framework and the related SDGs and targets. The two major expected accomplishments are, at the regional scale, strengthened knowledge repository to enhance policy coherence for disaster risk reduction and resilience building in selected Asia-Pacific countries, and within the targeted high-risk countries, enhanced knowledge and capacity to operationalize policy coherence for disaster risk reduction and resilience-building.

1.2 Purpose and objectives of the evaluation

The evaluation policy of ESCAP requires selected projects to be subject to an independent evaluation. Recognizing the value of an independent evaluation in guiding efforts to improve ESCAP's overall performance and effectiveness, the ESCAP Commission mandates the secretariat to ensure that its programmatic work is evaluated periodically. This evaluation seeks to determine as systematically and objectively as possible the impact, relevance, effectiveness, efficiency, and sustainability of DA12 DRR Project: *Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific.* The evaluation aims to support accountability for results and to enable learning. The evaluation results will be used to improve the design and implementation of future projects facilitated through the formulation of an evaluation management response and follow-up action plan.

The objectives of the evaluation are to:

- Assess the project performance against the evaluation criteria: impact, effectiveness, relevance, efficiency, sustainability, and cross-cutting issues, including gender equality, human rights, disability inclusion, as deemed relevant.
- Formulate lessons learned and action-oriented recommendations to inform management decision-making and improve future project design and implementation.

The evaluation assessed the impact, relevance, effectiveness, efficiency, sustainability, and gender equality and disability inclusion of the project. It was intended to inform future programme design and provide lessons learned for possible future programming for relevant ESCAP capacity development work. The evaluation examined the level of achievement of project results, making use of the project's results framework, implementation processes and contextual factors, establishing as much as possible causal linkages guided by the evaluation criteria and questions.

The following evaluation criteria and questions to assess the project performance were considered and further refined following consultations with project management and other stakeholders during the evaluation inception period.

Evaluation criteria	Evaluation questions
Impact	• What have been the most significant achievements or impacts of the project at the regional and national levels? Describe the project activities/outputs that lead to the impact and present evidence of project's contribution to the impact. • How could the Division/Office enhance the impacts of its future projects?
Effectiveness	• How effective was the project's capacity-building activities? Provide evidence to demonstrate the effectiveness of capacity building activities. • How could the implementing division make its future capacity-building activities more effective?
Relevance	• To what extent was the project designed based on needs of the target beneficiaries? • To what extent has the project ensured that the needs of vulnerable and marginalized populations, including persons with disabilities, were taken into account in the design and implementation of the project? • What adjustments, if any, were made to the project activities and modality, in response to the new priorities/requirements of target beneficiary countries?
Efficiency	• To what extent did the project achieve efficiency in implementation through the combination of project stakeholders involved, making use of comparative advantages and the creation of synergy? • To what extent has partnering with other organizations enabled or enhanced reaching of results? • Was the project implemented in a timely manner and according to plan? If not, why?
Sustainability	• To what extent can results of the project be continued without ESCAP's further involvement?
Cross-cutting Issues	• To what extent were cross-cutting issues, including gender mainstreaming and disability inclusion, integrated into the design and implementation of the project?

The evaluation was conducted in line with ESCAP Monitoring and Evaluation Policy and Guidelines and the United Nations Evaluation Group (UNEG) norms and standards for evaluation. The main users of the evaluation results are ESCAP, particularly the ICT and Disaster Risk Reduction Division, and the Strategy and Programme Management Division. Other expected users include the ESCAP Committee on Disaster Risk Reduction, and ESCAP member countries and partners. The evaluation was undertaken from 15 August 2023 to 12 February 2024.

2. Description of the project

2.1 Background

The overarching objective of the project is to strengthen the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risk on the achievement of the Sustainable Development Goals. The project achieves this by providing enhanced access to data/information and tools, opportunities for knowledge exchange and learning; and support to national demonstration of how risk information could be used to design/update a risk-informed SDG implementation strategy, as well as national adaptation plans, through the establishment of the ESCAP Asia-Pacific Risk and Resilience Portal (herewith called the Portal). This Portal is a one-stop shop to ensure that the vast array of scientific information on hazards, climate change, social, economic and health data can be analysed in a way that can be used by countries to build efficient risk-informed decisions on climate and disasters that span across multiple sectors.

The project addresses the data, information, knowledge and capacity gaps through an already established regional network, the Asia-Pacific Disaster Resilience Network (APDRN). This network enhances the synergy and complementarities of the three elements of ESCAP secretariat's work in disaster risk reduction and resilience by linking the analytical, intergovernmental cooperation and capacity development aspects. The APDRN was formed by ESCAP's inter-governmental Committee on Disaster Risk Reduction at its fifth session in 2017 to promote greater policy coherence across the implementation of global development frameworks and enhance coordination among members of the Asia-Pacific Regional Coordination Mechanism and its Thematic Working Group on Disaster Risk Reduction and Resilience (TWG DR3). The Committee's sixth session in August 2019 recommended to operationalize the various work streams of APDRN, namely, multi-hazard early warning system, data and statistics, technology innovation and applications, and knowledge for policy.

The project enables the ESCAP secretariat to effectively respond to requests by member States for capacity development assistance in support of their efforts to implement the Sendai Framework for Disaster Risk Reduction, taking into account the Action Plan 2018–2020 in ESCAP Commission Resolution 75/5 adopted in May 2019. In addition, the project supports the implementation of ESCAP Commission resolution 73/7 adopted in May 2017 on enhancing regional cooperation for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Asia and the Pacific. This resolution requests the Executive Secretary of ESCAP to, inter alia, accord priority to synchronizing multi-disciplinary support to member States in the mainstreaming of disaster risk reduction in their development strategies, in line with the Sendai Framework and the related Sustainable Development Goals and targets. Resolution 73/7 further requests the Executive Secretary of ESCAP to continue to support and facilitate multi-hazard early warning systems, impact-based forecasting, and disaster risk assessment.

The primary evidence of the project's results manifests in two ways:

- First, incorporation of risk information into national plans that implement the SDGs (as a whole or specific plans to implement specific goals and targets). Climate and disaster related SDGs are also being monitored through the dynamic tool on the Portal SDG Action Tracker. For example, the integration of risk information into land-use plans and design standards for new public infrastructure such as roads, schools, and bridges, and to regulate construction in high-risk locations, would demonstrate coherence between efforts to address lack of access to infrastructure (SDG9) and prevent disaster-related deaths (SDG1.5/SDG 13.1.1).
- Second, application of geospatial-based hazard and socio-economic information to pinpoint the populations at risk of being left behind due to recurring drought and environmental degradation to provide further compelling evidence of the expected result by demonstrating coherence in

implementing SDGs 1, 13 and 15. The *Asia-Pacific Disaster Report 2019* reveals that those left behind in multi-hazard areas belong to the bottom 20 percent of the wealth distribution, and are likely to be farmers who lack access to education and medical care, and women who do not have the power to make decisions or own property. The project will endeavour to reach these populations first through innovative tools.

Consequently, the regional knowledge repository at ESCAP is strengthened through the establishment of the Portal. The capacity of national and selected local government officials in five countries to enhance policy coherence across sustainable development, disaster risk reduction and climate change is built with a focus on ministries/agencies which are responsible for development planning, budget and finance, hydrometeorological agencies, disaster management, and those responsible for managing climate-sensitive sectors (e.g., agriculture and poverty alleviation, infrastructure, water resources).

2.2 Theory of change

Theory of Change (TOC) is a manner of thinking about how different elements are linked and how they might affect each other. Its framework usually has five components: interventions, outputs, outcome, immediate impact, and long-term impact. In this evaluation we make use of a theory of change approach to understand the actual results achieved and the process of achieving results, guided by the results framework of the project and the actual implementation strategy and delivery of outputs. Through this approach, the precise link between activities and the achievement of long-term goals are more fully understood. This approach explains how the activities undertaken by the project contribute to a chain of results that lead to the intended or observed impacts, which are represented in a diagram.

There are generally four main options for representing a theory of change, namely, linear results chain, outcomes hierarchy, triple column/row, and set of principles. For this evaluation, we use the *linear results chain*, which is the most appropriate where activities are undertaken at the start and then consequences flow through in a linear fashion. We present a reconstructed TOC flowchart based on the reported programs, projects, and activities of the DA12 DRR project (see Annex 2). The flowchart presents the multifaceted interventions needed to enable the project to achieve its desired outputs and outcomes. The expected immediate result of the project is a strengthened capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks, and in the long-term, enable countries to achieve the SDG targets that are related to disaster risk reduction (Targets 1.5, 11.5, 13.1, 13.2, and 13.3).

It should be mentioned that four of ten interventions or project activities in the original project document had to be modified as a consequence of the limitations and restrictions resulting from the Covid-19 pandemic. These include OP1.1. [Covid Adjusted]: Identify hotspots of the disaster-climate-

Health nexus in the Asia-Pacific region; OP1.2. [Covid Adjusted]: Analyse and overlay the maps based on the disaster-health-climate nexus; OP1.3. [Covid Adjusted]: Develop tools and services that integrate climate, weather, hazard, and health risk variables into socioeconomic models; and OP2.3. [Covid Adjusted]: Organize an online consultation for representatives from five target countries. The reconstructed TOC flowchart in Annex 2 is based on the Covid-adjusted project document.

2.3 Project strategies

The project aims to strengthen the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risk on the achievement of the Sustainable Development Goals. The project achieves this by providing enhanced access to data/information and tools, opportunities for

knowledge exchange and learning; and support to national demonstration of how risk information could be used to design/update a risk-informed SDG implementation strategy.

The regional knowledge repository at ESCAP has been strengthened. The capacity of national and selected local government officials in five countries to enhance policy coherence across sustainable development, disaster risk reduction and climate change has been built with a focus on ministries/agencies which are responsible for development planning, budget and finance, hydrometeorological agencies, disaster management, and those responsible for managing climate-sensitive sectors (e.g., agriculture and poverty alleviation, infrastructure, water resources).

The primary evidence of the project's results manifests in two ways: First: through providing risk information that can be incorporated into national plans that implement the SDGs (as a whole or specific plans to implement specific goals and targets). For example, the integration of risk information into land-use plans and design standards for new public infrastructure (e.g. roads, schools, bridges) and to regulate construction in high-risk locations, would demonstrate coherence between efforts to address lack of access to infrastructure (SDG9), prevent disaster-related deaths (SDG1.5)/ (SDG 13.1.1). Second, an increasing knowhow on the application of geospatial-based hazard and socio-economic information to pinpoint the populations who are at risk of being left behind due to recurring drought and environmental degradation would provide further compelling evidence of the expected result by demonstrating coherence in implementing SDGs 1, 13 and 15. The *Asia-Pacific Disaster Report 2019* reveals that those left behind in multi-hazard areas belong to the bottom 20 per cent of the wealth distribution, and are likely to be farmers who lack access to education and medical care, and women who do not have the power to make decisions or own property. The project endeavours to reach these populations first through innovative tools.

In the long-term, the expected result will enable countries to achieve the SDG targets that are related to disaster risk reduction (Targets 1.5; 11.5; 11.b; and 13.1).

Through the project, ESCAP has formed partnerships with knowledge institutions, such as Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), APEC Climate Centre, IGES, and SPREP, and platforms, such as RCM TWG-DR3, APAN and Pacific Resilience Partnership, as a part of the Asia-Pacific Disaster Resilience Network. Using this implementing strategy, the aim is to sustain the knowledge base, data and analytical infrastructure for providing technical support and capacity development to high-risk, low-capacity countries beyond the duration of the project.

ESCAP has also deepened its partnerships with various regional and subregional organizations. An MOU was signed with UNITAR, a key development partner in establishing the Risk and Resilience Portal and an MOU with Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC). Through the project, ESCAP supported the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT) meeting on climate adaptation and collaborated with RIMES and WFP to co-organize an event with the project target countries at the Global Platform 2022. Finally, the project has enabled ESCAP to deepen its partnerships with UNDRR and UNDP under the Issue Based Coalition (IBC) on Resilience where ESCAP led the development of a key IBC knowledge project on building infrastructure resilience.

Because of the COVID-19 challenges for travel, funds were redeployed in order to deliver more innovative knowledge products to member States and deliver more efficient virtual consultations and workshops. With greatly reduced staff travel, the project used the funds to develop a comprehensive tool, ESCAP Asia-Pacific Risk and Resilience Portal, with regional and subregional level data and analytics for disaster and climate resilience as well as developing specific country level analysis and prototypes of decision support systems for resilience building.

There were no changes in the project design. However, a few indictors and outputs were adjusted noting the country requests and support needed to understand the impacts of the COVID-19 pandemic

from the resilience perspective, and to address the new disaster-climate-health nexus. The means of verification for the indicators remained the same. The budget was revised and redeployed to develop the Risk and Resilience Portal, the project's key application to support countries build resilience to the disaster-climate-health nexus.

2.4 Innovative elements

One of the core strategies of this project is to enable countries to capitalize on technological innovations that enable better understanding of the risk and generate actionable risk information in order to mainstream disaster risk into those countries' overall SDG implementation. Innovative risk information can support high-level policy decisions to achieve a cluster of SDGs which are inextricably linked to disaster risk reduction, such as poverty reduction, food security and inequality. Innovative applications of risk information can help in identifying the drivers and sources of risk and clarifying how those risks interact with vulnerabilities in and across sectors. Accordingly, the project interventions were innovatively designed with inputs from climate models, geospatial data, and social and economic models by:

- Leveraging the availability of new average annual loss datasets at ESCAP which included, for the first time, damage and losses from slow-onset disasters, such as drought. Additionally, the Portal leveraged the global IPCC AR6 climate models to demonstrate multiple scenario-based impacts of social, economic, and environmental indicators.
- Identifying opportunities from big data to supplement traditional data sources in developing various types of risk analytics that were relevant to the project.
- Applying open source disaggregated data from verified sources such as WorldPop, which were most relevant for the interventions in Mongolia, Pakistan, and Papua New Guinea as well as other target countries that required identifying the excluded populations in remote, high-risk areas.

In November 2022, the project's Asia-Pacific Risk and Resilience Portal was awarded the ESCAP Innovation Award as the best innovative tool in the category of innovative analytical tools, and the Aral Sea Story Board as an innovative communication product was a runner up in the Publication Category.

2.5 Beneficiaries, target countries and key partners

The project provided focused support to countries where building resilience to disasters assumes an added significance in the context of accelerating progress on the SDGs. While the project used a regional approach by providing common services and interventions, one country per ESCAP subregion was targeted to receive in-depth support, namely Armenia (Central Asia), Mongolia (North-East Asia), Myanmar/Lao PDR[1] (South-East Asia), Pakistan (South and South-West Asia), and Papua New Guinea (Pacific). Bhutan and Maldives were subsequently added.

Countries were selected according to the following criteria: (a) the disaster risk profile shows high levels of exposure from both climate variability and climate change; (b) there are high levels of convergence of disaster risk, poverty, and inequality; and (c) there are active ESCAP institutional contacts to support project implementation at the country level. The third criterion was crucial for the project to succeed within a relatively short timeframe.

[1] While the project had prepared the DSS system and in-depth country profile for Myanmar, it was not able to showcase this at any consultations due to the embargo on Myanmar. Thus, while work was initially done in Myanmar, it was later replaced by Lao PDR due to the embargo.

2.6 Resources

The project has an approved funding of USD 610,505. When the support staff hired under the project left on promotion in April 2022, a decision was made to not hire new staff due to time constraints. Thus, the unspent funds under the “other staff cost” budget line were reallocated to cover the costs of consultant recruitment.

Due to travel and other restrictions arising from COVID-19, funds were redeployed in order to deliver more innovative knowledge products to member States and deliver more efficient virtual consultations and workshops. More hybrid meetings/training took place requiring additional support from consultants to facilitate the organization of capacity development workshops. The project also reallocated grants and contributions for consultants to support the development of a comprehensive tool “ESCAP Asia-Pacific Risk and Resilience Portal” with regional and subregional level data and analytics for disaster and climate resilience as well as developing specific country level analysis and prototypes of decision support systems for resilience building. USD 40,000 was redeployed from Consultants and Experts and Contractual Services to UNITAR as a grant to support building DSS system for the Risk and Resilience Portal.

3. Evaluation scope and methodology

3.1Evaluation scope

The evaluation included the design, strategy, and implementation of the project over the entire period of its implementation and covered the implementation and results of the project in the participating countries. The assessment covered all modes of implementation of the project, including national and regional workshops, training and additional activities as agreed upon based on consultations with project countries.

The evaluation covered the full duration of the DA12 DRR project from April 2020 to December 2023 and all beneficiary countries, namely, Armenia, Myanmar/Lao PDR, Mongolia, Pakistan, and Papua New Guinea, as well as Bhutan and Maldives.

3.2 Evaluation approach

In assessing the results achieved, the evaluation made use of the theory of change (TOC) approach to understand the actual results achieved and the process of achieving results. The development of the theory of change was guided by the results framework of the project and the actual implementation strategy and delivery of outputs. The TOC flowchart followed the linear results chain method, which is the most appropriate where activities are undertaken at the start and then consequences flow through in a linear fashion.

The evaluation applied a mixed-method approach through a combination of quantitative and qualitative analysis to inform findings. The evaluation methodology relied primarily on desk review and remote data collection methods. The evaluation applied multiple methods, and cross-checked information and data from different sources to ensure confidence in the findings. The methodology was refined and finalized in the inception phase of the evaluation, reflecting the results of a preliminary desk review and initial consultations with key stakeholders. In developing a methodology that was as rigorous as possible under the circumstances, human rights and gender equality were integrated into all stages of the evaluation. In addition, disability perspectives were integrated into the evaluation process to the extent possible. The evaluation matrix is presented in Annex 3.

3.2Data collection and analysis

The data collection and analysis involved desk review of relevant documents, preparation of surveys and interview guides, administration of stakeholder survey, in-depth individual interviews with stakeholders, consultations with relevant ESCAP secretariat staff and Reference Group, and data compilation and analysis.

- Desk review of relevant documents
  A desk review of relevant documents and reports was made including, among others, the documents and reports listed in Annex 6.
- Preparation of surveys and interview guides
  Survey questionnaires and interview guides were prepared.
- Administration of stakeholder survey
  An electronic survey was administered targeting government officials, implementing partners, and participants in various DA12 DRR project activities. The selection of stakeholders for the evaluation survey ensured that there was equitable representation from the project participating countries, and that the views of both male and female stakeholders were equally represented.
- In-depth individual interviews

In-depth individual interviews via video/audio call were made with relevant ESCAP officers and government officials, and with other government stakeholders, development partners, and DA12 DRR project partners and cooperators. The selection of interviewees ensured that there was equitable representation from the project participating countries, and that the views of both male and female stakeholders were equally represented.

- Consultations with relevant ESCAP secretariat staff and Reference Group
  Consultations via audio/video call with relevant ESCAP secretariat staff and members of the Reference Group were conducted to get a better understanding of the various aspects of the evaluation including its design and implementation and provide a useful basis for collecting other relevant data. The consultant also regularly consulted with the Evaluation Unit, SPMD and the Disaster Risk Reduction Section, IDD.
- Data compilation and analysis
  The data were processed and compiled, adequately substantiated, balanced and reliable, and subjected to rigorous analysis to ensure that the findings were evidence-based and objective. The data were validated and analysed by triangulating the results of the interviews and the surveys with data obtained from the desk review of reports and relevant documents. Through data triangulation the findings were corroborated and any weaknesses in the data were compensated by the strengths of other data, thereby increasing the validity and reliability of the results. Whenever possible, the data collected were disaggregated by gender.

3.4 Stakeholder analysis

The different types of primary and secondary stakeholders, their role in the evaluation, and the nature of their interest are summarized in the table below.

Stakeholders	Role in the evaluation	Nature of interest
Policymakers and government officials from the ministry of planning in the target countries	Essential. Primary stakeholders. Main actors in multi-sectoral development planning.	Need to enhance better understanding and integration of disaster risk reduction and management measures in multisectoral development planning, in coordination with relevant ministries.
Policymakers and government officials from National Disaster Management Authorities	Essential. Primary stakeholders. They will be the project focal point in the target countries. Mandated to coordinate DRR and disaster management efforts at national and local levels.	Possess the expertise and experience in disaster risk reduction and management, which can be shared with others.
National hydro-meteorological agencies and other agencies involved in producing risk information	Essential. Primary stakeholders. Will serve as the project focal point in one target country (Papua New Guinea). Participate in collection and generation of risk information.	Possess the relevant expertise and mandate to produce risk information, which can be shared with others.

Policymakers and government officials from other sectoral ministries and departments	Important. Secondary stakeholders. Provide sectoral planning and development at national and local levels. Can help mainstream DRR into sectoral development planning.	Possess the expertise in sectoral planning and development, which can be shared with others. Need to enhance capacities to mainstream DRR and build resilience to disasters in respective sectors. Need to enhance capacity to develop policies and strategies for sectoral disaster-resilient development.
Relevant UN agencies (e.g., UNDRR), other ESCAP divisions (e.g., EDD), regional institutes (e.g., APCTT), subregional offices (e.g., ESCAP-SSWA), and relevant national, regional, and international organizations	Important. Primary (e.g., UNDRR) and secondary stakeholders. Provide relevant and supplementary expertise and experience.	Possess the experience in DRR, which can be shared with other (e.g., UNDRR). Need to share relevant information and enhance capacities in DRR, which are relevant or useful in their respective sectors or areas.

3.5 Sampling

To help ensure data availability and responsiveness, information concerning the DA12 DRR project's performance and results were obtained from the survey of participants in the project's activities and stakeholders selected by the project implementor (DRR, IDD). Through the ESCAP Evaluation Unit, the project team was requested to provide information on project impact at the regional and country level. This information was verified/triangulated and elaborated through the stakeholder surveys and interviews and supporting documents. A sufficient and representative number of survey respondents and individual interviewees were selected to ensure fair and unbiased evaluation by having even representation [2] from the participating primary and secondary countries (Armenia, Bhutan, Myanmar/Lao PDR, Maldives, Mongolia, Pakistan, and Papua New Guinea), DA12 DRR project cooperating partners, other UN entities, and relevant national, regional and international organizations.

The criteria for selecting the survey participants recommended by the DA12 DRR project implementor included: (a) equitable representation from the various project participating countries; (b) equal representation, to the extent possible, of male and female respondents; and (c) priority given to those who participated multiple times in DA12 DRR projects and activities. The selection process ensured geographical, gender and other cross-cutting issues consideration. The collected data were disaggregated by sex and other relevant demographic characteristics, whenever possible.

3.6 Gender equality, disability inclusion and other cross-cutting issues

The evaluation assessed whether the DA12 DRR project had consciously taken into consideration human rights, gender equality and disability inclusion perspectives in the selection of experts, resource persons and participants in the implementation of workshops and other activities. Primary focus of the gender and disability assessments was on the substantive consideration of gender and disability inclusion in the analytical work, and the degree to which these insights were considered. Secondary focus was on gender and disability participation in the various capacity building activities

[2] The actual number to be left to the project implementor (DRR, IDD).

as well as in the efforts to attain some degree of gender equality. Human rights perspective was also taken into consideration in the evaluation.

3.7 Risks and limitations

The success of the evaluation was contingent on the support and cooperation of the various informants and stakeholders during the conduct of the survey and the interviews. The selection of the various informants and stakeholders was of utmost importance to ensure that there was no bias and that all views (positive or negative) were heard for a well-balanced assessment. Some of the key limitations such as lack of face-to-face interviews and visits to collaborating institutions were mitigated by relying on extensive online surveys and interviews and consulting with a wide range of stakeholders, including other UN entities, cooperating and implementing partners, and by triangulating data collected from multiple sources. Although utmost care and diligence was exercised in the conduct of the evaluation, there could still be minimal risks that some minor aspects of project revisions were inadvertently overlooked.

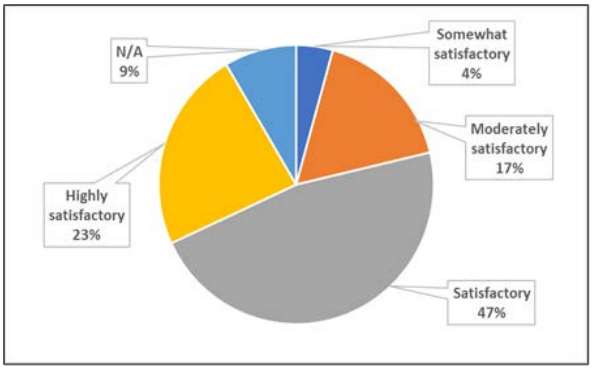
4. Evaluation Findings

These findings are based on the review of relevant documents and reports (Annex 6) and the results of the interviews (Annex 5) [3] and survey.

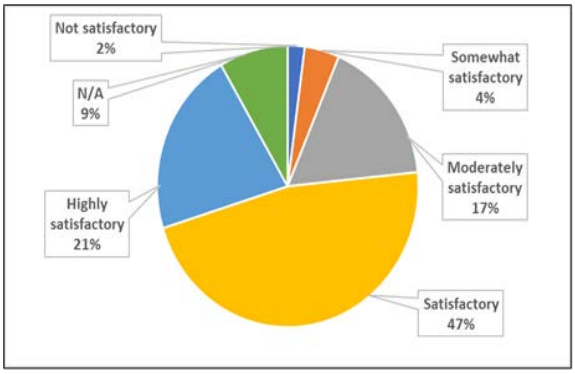
4.1Impact

The evaluation has found evidence that the DA12 DRR project has made a **highly satisfactory** impact on the target countries. This finding is reflected in the overall average score from the key informant interviews (Annex 8).

The results of the survey confirm the results of the interviews. When asked if the project had strengthened institutional arrangements and regional cooperation frameworks to produce actionable risk assessments, effective early warning systems and communicate the results for policy making, 70% of the respondents gave satisfactory (47%) to highly satisfactory (23%) ratings (pie chart 1). In addition, 21% and 47% of respondents gave highly satisfactory and satisfactory ratings, respectively, (overall 68%) (pie chart 2) when asked if the project had enhanced the capacities of their development planning, finance, and SDG implementation bodies to implement risk-informed SDG plans, programs and investments.



Pie chart 1



Pie chart 2

Finding 1: The project has made a significant impact that goes beyond the confines of the project's specific outputs.

On 24 July 2023, during the ESCAP 4th Regional Learning Platform, the Second Generation of the ESCAP Asia Pacific Risk and Resilience Portal (herewith called the Portal) was launched as the primary output of the DA12 DRR project. The Portal is a one stop shop to ensure that the vast array of scientific information on hazards, climate change, social, economic and health data can be analysed in a way that can be used by countries to build efficient risk-informed decisions on climate and disasters that span across multiple sectors. While it is undeniably the flagship product of the project, it is important to recognize that its impact goes beyond the confines of the project's specific outputs.

To gauge the true impact of the DA12 DRR project, it is imperative to consider the ripple effect of the Portal across various regions and its adaptability to diverse requirements. It has become a vehicle for delivering targeted solutions that extend beyond the outlined project outputs. Understanding the

[3] At the conclusion of the interviews, the interviewees were asked to give their ratings as follows: 1 – not satisfactory/not relevant/not effective/not efficient/not sustainable; 2 – somewhat satisfactory/somewhat relevant/somewhat effective/somewhat efficient/somewhat sustainable; 3 – moderately satisfactory/moderately relevant/moderately effective/moderately efficient/moderately sustainable, 4 – satisfactory/relevant/effective/efficient/sustainable; and 5 – highly satisfactory/highly relevant/highly effective/highly efficient/highly sustainable.

wider applications and contributions of the Portal provides a comprehensive insight into the tangible outcomes of the project.

At the regional level, the Portal risk analytics on hazards and climate change generated in-depth analysis of the impacts of climate change and the subsequent pathways for adaptation in key flagship publications. In particular, the Portal was used to inform data and policy analysis in the joint WMO regional reports in partnership with ESCAP State of Climate in Asia and State of Climate in Southwest Pacific which were launched at COP27 and were the key documents referred to in the Sharm el-Sheikh Implementation Plan. In addition, the analytics from the Portal provided evidence for risk informed planning in other key publications such as the 2022 Subregional Asia Pacific Disaster Reports,[4] Asia Pacific SDG Progress Report 2022, and Pacific Perspectives 2022: accelerating climate action.

At the country level, the following are among the most significant achievements:

- In Bhutan, Portal analytics on climate risks and customized adaptation policies have been mainstreamed in the 2022 Country Common Analysis Framework. On the strength of the analytics, ESCAP was invited to become a member of the UN Bhutan working group on Disaster Risk Reduction and Emergency Preparedness.
- In Pakistan, the prototype of the Pakistan Decision Support System was used to inform the first consultation of the country's new National Adaptation Process. Additionally, the Portal analytics have been further downscaled at the sub-national level to support the National Disaster Management Authority, Pakistan for forecasting of climate and natural hazards.
- In Armenia, the Decision Support System and the Portal were used and showcased by policymakers from the Ministry of Environment as a user-friendly digital access for the North and Central Asia subregion for forecast and risk information. Armenia's Ministry of Environment showcased how they were using the Portal at the UNDRR Technical Expert Forum 2022 held on 20-30 November 2022.
- Based on the Portal DSS prototype, the Ministry of Social Welfare of Lao PDR requested ESCAP to further develop a Decision Support System to support acceleration of disaster and climate related SDGs.
- Based on the Portal analytics, new country projects in Central Asia have been developed upon request.

The Portal also supported the following:

- 1st Consultation of the Pakistan National Adaptation Process for Pakistan's new National Adaptation Plan sensitizing disaster and climate change policymakers on risk hotspots of climate change and potential long-term adaptation measures for Pakistan.
- Bhutan Country Common Analysis 2022 where the analytics of the Portal were the key inputs to the document.

Lastly, the Portal was awarded the ESCAP Innovation Award as the best innovative tool in the category of innovative analytical tools.

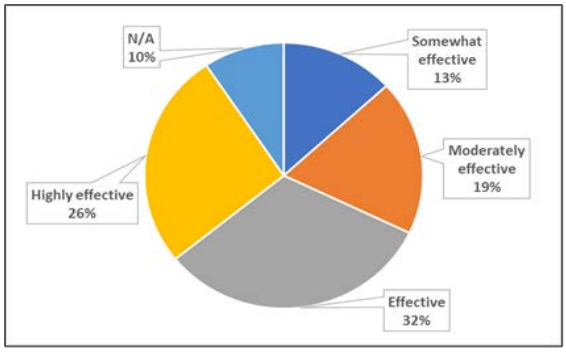
4.2 Effectiveness

The evaluation has found evidence that the DA12 DRR project is **highly effective** in strengthening the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risks on the

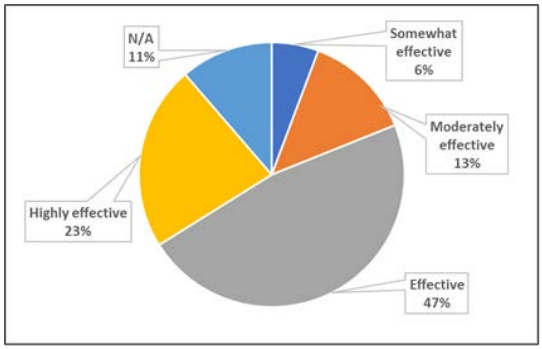
[4] UNESCAP, 2022, Pathways to adaptation and resilience in East and North-east Asia, Subregional Report; Pathways to adaptation and resilience in Pacific SIDS, Subregional Report; Pathways to adaptation and resilience in South East Asia, Subregional Report; Pathways to adaptation and resilience in South and South-west Asia, Subregional Report; Pathways to adaptation and resilience in North and Central Asia, Subregional Report, available at https://www.unescap.org/knowledge-products-series/asia-pacific-disaster-report.

achievement of the SDGs. The overall average score from the key informant interviews indicates that the project is highly effective.

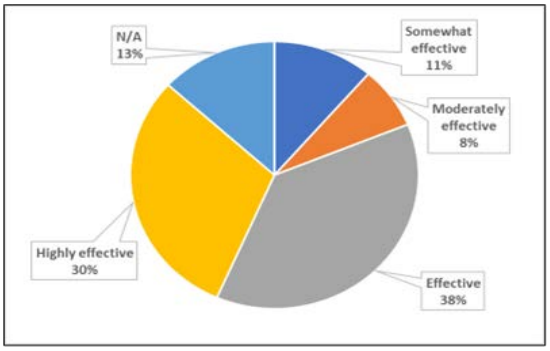
The results from the interviews are supported by the results from the survey. First, to the question of how effectively the project has strengthened the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks, 58% of the respondents said it is effective (32%) to highly effective (26%) (pie chart 3). Second, to the question of how effectively the project has strengthened knowledge repository to enhance policy coherence for disaster risk reduction and resilience building in selected Asia-Pacific countries, 60% of the respondents said it is effective (47%) to highly effective (23%) (pie chart 4). Third, to the question of how effective the project has enhanced knowledge and capacity to operationalize policy coherence for disaster risk reduction and resilience-building, 68% of the respondents said it is effective (38%) to highly effective (30%) (pie chart 5).



Pie chart 3



Pie chart 4



Pie chart 5

Finding 2: The project has effectively delivered the desired outputs.

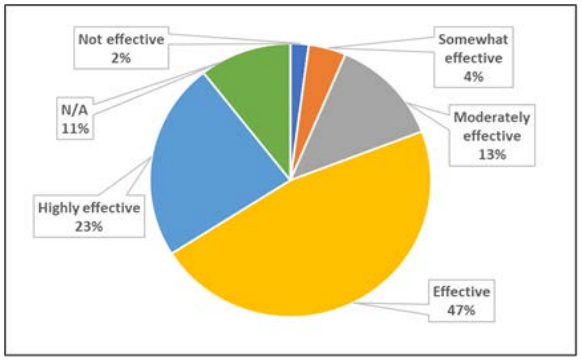
Two examples may be cited to support this finding. First, the Risk and Resilience Portal in its entirety (for the Asia-Pacific region) has delivered on the desired project output to identify hotspots of the disaster-climate-health nexus in the Asia-Pacific region drawing from existing scientific studies of observed and projected climate-related disasters and health indicators including those having cross border origins and impacts. Second, the project has also delivered on the desired project output to analyze and overlay the maps based on the disaster-health-climate nexus and data from preceding activities with a map of exposed populations and economic assets (e.g. farms, irrigation facilities, farm-to-market roads) to produce country-specific guidance for five countries on how to operationalize policy coherence across sustainable development, climate change and disaster risk reduction policy agendas. These outputs were delivered through the country storyboards of DSS systems and the country in-depth risk assessments.[5]

[5] Available online at https://rrp.unescap.org/decision-support-system.

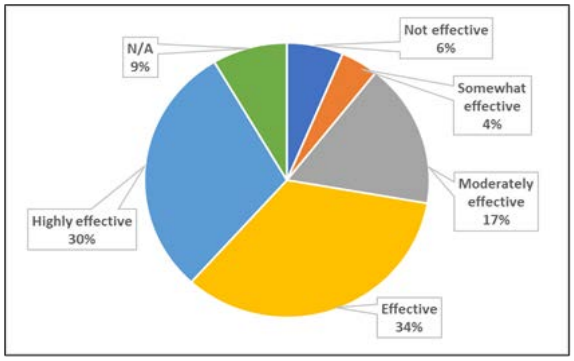
Additionally, the Portal and its analytics provided the research base for the Asia Pacific Disaster Report 2023, a flagship publication for the ESCAP Committee on Disaster Risk Reduction at its Eighth Session. This publication was instrumental in the member States mandating ESCAP to facilitate a regional strategy for early warning in Asia and the Pacific.

Finding 3: The project has achieved its objective of training national and sectoral policymakers on using the Portal for risk-informed development planning.

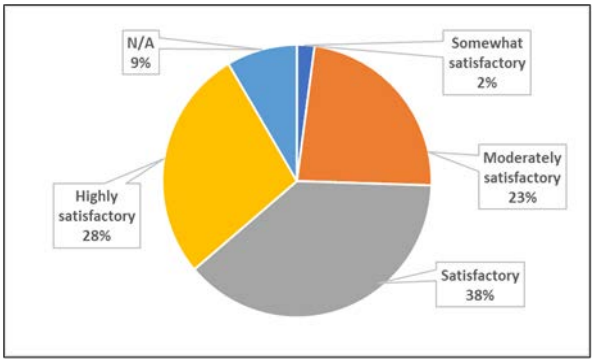
To the question of whether the project has effectively demonstrated how a specific risk-informed policy instrument could better contribute to "leaving no one behind", 70% of survey respondents said it is effective (47%) to highly effective (23%) (pie chart 6). To the question of whether the project has enhanced their access to emerging technologies and innovations in data and information including effective early warning systems and services, 64% of respondents said it is effective (34%) to highly effective (30%) (pie chart 7). Finally, to the question of whether the project has deepened their understanding of climate-related risks vis-à-vis the SDGs, 66% of the respondents said it is satisfactory (38%) to highly satisfactory (28%) (pie chart 8).



Pie chart 6



Pie chart 7



Pie chart 8

Under the project, ESCAP undertook capacity development workshops and joint training sessions to train national and sectoral policymakers on using the Portal for risk-informed development planning. Through the ESCAP Regional Learning Platform, national capacity development workshops as well as joint consultations with subregional organizations such as BIMSTEC, around 100 policymakers in Asia-Pacific were trained on the tools in the ESCAP Risk and Resilience Portal, with Bhutan, Lao PDR and Pakistan requesting additional development of more tools to focus on sectoral resilience such as energy and food systems.

The effectiveness of project delivery was evident in the Portal analytics playing a pivotal role in several monsoon outlook forums. These forums served as crucial platforms for forecasting and understanding the potential impacts of transboundary hazards in the Asia-Pacific region. The Portal's analytics not only provided real-time and evidence-based insights but also showcased the power of advanced

technologies in enhancing the ability to anticipate and respond to complex climatic events. The utilization of Portal analytics in these forums allowed for a comprehensive examination of the interconnected nature of hazards, especially during the monsoon season, which often brings about a range of climatic challenges. By leveraging the data-driven capabilities of the Portal, participants in these forums gained valuable insights into the potential outcomes of transboundary hazards, enabling more informed decision-making by policymakers, meteorological agencies, and disaster management authorities. In fact, the Portal analytics have already been used to substantiate discussions during the 2022 sub-regional consultations of the Asia-Pacific Forum for Sustainable Development (APFSD) towards monitoring the status of achievement of SDG Goals 6, 7, 9 and 11.

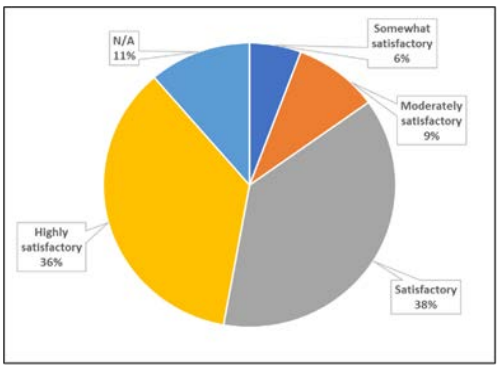
To further help enhance skills and knowledge, interactive maps and charts have also been developed under the Risk and Resilience Portal for various short-, medium- and long-term climate scenarios and these are being updated to CIMP6 data. A disaster- and climate-related SDG prototype simulator has been developed for countries in the Asia-Pacific using data from the SDG Gateway and launched at the 4th ESCAP Disaster Resilience Week in July 2023.

The effectiveness of the project's capacity building activities is evident in the statement of a participant [6] in the Regional Learning Platform: "Risk and Resilience Portal is exceptional tool for PNG and having DSS to help analyse at the provisional, district and eventually local government levels to make decisions, where the vulnerable populations are for certain risks and hazards will help us to be more targeted in our support moving forward."

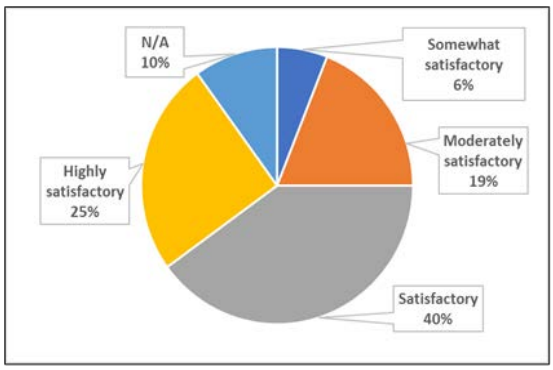
4.2Relevance

The evaluation has found evidence that the DA12 DRR project is **highly relevant** to the needs of the target countries. The overall average score from the key informant interviews indicates that the project is highly relevant.

This finding is consistent with the results of the survey of various stakeholders and participants in project activities where (a) 74% of respondents state that the project and its activities have been designed in a satisfactory (38%) to highly satisfactory (36%) manner based on the needs of the target beneficiaries (pie chart 9); and (b) 65% state that the activity/project followed in a satisfactory (40%) to highly satisfactory (25%) manner an inclusive and participatory approach to engage national stakeholders to ensure relevance to local needs and ownership (pie chart 10). These survey results are shown in the pie charts below.



Pie chart 9



Pie chart 10

[6] A senior official of a United Nations agency, Regional Learning Platform, 23–24 August 2021.

Finding 4: The risk and resilience portal is highly relevant as it provides actionable and user-friendly information for the Asia Pacific region by bridging the science and policy gaps that currently exist from the lack of translational science.

Through the integration of data from multiple existing and validated sources, the Portal can provide the Asia-Pacific region actionable and user-friendly information by bridging the science and policy gaps that currently exist from the lack of translational science. The integration of Portal analytics into the monsoon outlook forums underscored the practical application of technological advancements in climate risk management. It not only facilitated a better understanding of the regional dynamics but also highlighted the Portal's role as a valuable tool in supporting collaborative efforts to enhance preparedness and resilience. This successful application of analytics in a regional context demonstrates the tangible impact and relevance of the ESCAP Risk and Resilience Portal in addressing the challenges posed by transboundary hazards In the Asia-Pacific region.

The above findings are supported by the statement made by a participant [7] at the 4th ESCAP Regional Learning Platform in July 2023: "Decision support tools, such as ESCAP's Risk and Resilience Portal, are instrumental in helping countries cope with climate risks. These tools facilitate communication and knowledge sharing, enabling countries to better prepare for and respond to climate-related challenges."

An indication that the project has been designed based on needs of target countries is the fact that as of December 2023, Portal products have recorded over 20,000 unique views and each knowledge product downloaded over 1000 times with viewing time of 2-4 minutes. There was also a request from NEACOF in North and Central Asia to use the Portal analytics in their reporting. In the Pacific region, the Portal was used to support strategies like the 2050 Blue Pacific Strategy in multiple discussions including the ESCAP SDG Forums. Additionally, various blogs, reports, news articles and publications have used the tools and analytics of the Portal to report on resilience issues.

Two examples may be cited to further illustrate the relevance of the DA12 DRR project to the needs of countries in the region. First, during the country consultation with the Lao PDR Social Welfare Department on 10 November 2022, the Deputy Director General proposed to the minister that: (a) ESCAP present the system to a working group and gather data from key sectors for the system; and (b) a technical working group from relevant sectors be established to facilitate joint work and coordination with key sectors. The Minister encouraged the Department of Social Welfare to continue to coordinate with national stakeholders and ESCAP to collaboratively implement detailed activities. Second, at the Mongolia National Training on Digital Technologies for Disaster Risk Management held on 13-14 October 2022, the government supported the use the Portal data and analytics for the development of its National Adaptation Plans and disaster risk reduction strategies.

Finding 5: The project, through the Portal, has helped strengthen subregional cooperation efforts.

At the request of member States to support subregional cooperation for the Aral Sea, a unique tool was developed to translate ESCAP's technical publications on the Aral Sea into an easy-to-use, interactive page, the Aral Sea Storyboard. It integrates the key data and policy analysis for policymakers to visualize the climate change impacts and the subregional cooperation policy decision needed to mitigate future impacts. Using state-of-art visualization narrative, the Portal created an easy-to-understand storyboard on the Aral Sea for policymakers by aggregating historical and projected climate data and the impacts on the Aral Sea under one platform. The storyboard provides interactive maps, charts and data that have been used by policymakers in multiple ways including a draft resolution by Turkmenistan at the 79th ESCAP Commission Session stating that the Aral Sea Storyboard promotes "creating regional mechanisms to study, mitigate and minimize disasters in

[7] A senior climatologist from the Fiji Met Services, 4th Regional Learning Platform, July 2023.

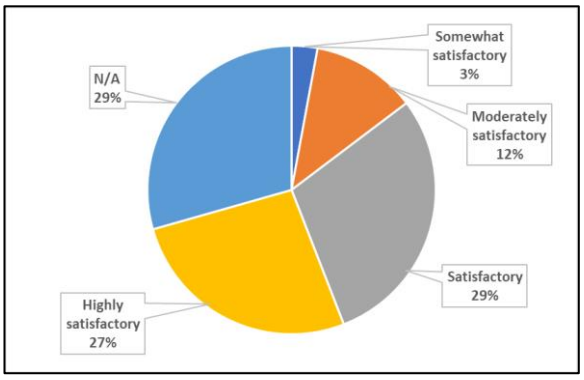
endorheic (inland) water basins and to prevent them, in particular considering modalities for the establishment of the United Nations special programme for the Aral Sea basin." The Aral Sea Storyboard was selected by ESCAP as a runner up in the Publication Category as an innovative communication product.

4.4 Efficiency

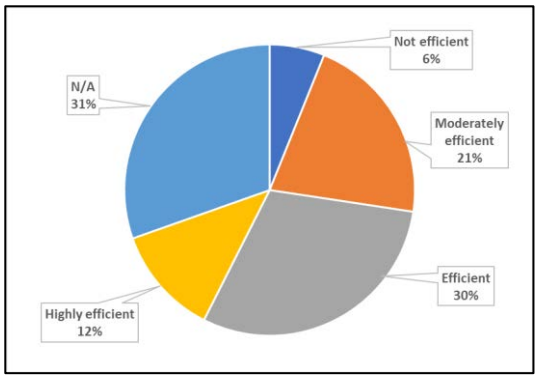
Overall, the evaluation has found evidence that the DA12 DRR project is **efficient** in its implementation through partnerships, making use of comparative advantages and creating synergy, although the overall average score from the key informant interviews indicates highly efficient performance.

This rating is consistent with the results of the survey of stakeholders and project participants where 56% of respondents state that the project has formalized in a satisfactory (29%) to highly satisfactory (27%) manner partnerships with knowledge institutions and platforms as part of the Asia-Pacific Disaster Resilience Network (pie chart 11).

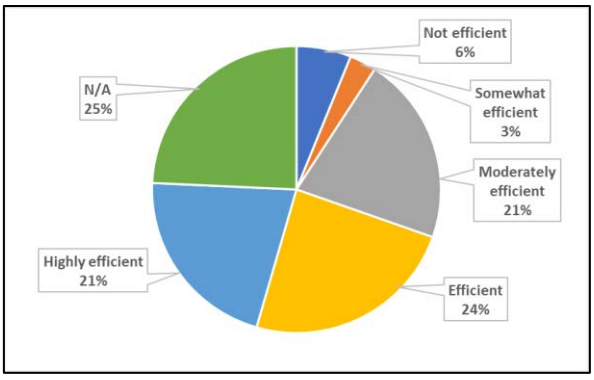
However, only 42% of respondents state that the project has achieved efficiency (30%) to high efficiency (12%) in implementation by making use of comparative advantages and the creation of synergy (pie chart 12) ; and only 45% of respondents state that the project is efficient (24%) to highly efficient (21%) in providing in-depth technical and advisory support and opportunities for regional knowledge exchange and learning (pie chart 13). In both cases, 21% state that the project is merely moderately efficient (pie charts 12 and 13), thus the overall rating of "efficient".[8]



Pie chart 11



Pie chart 12



Pie chart 13

[8] A highly efficient rating is given only if both the interview and the survey results, supported by the information from the desk review of relevant documents, give a unanimous rating of highly efficient. In this case, the survey results on two questions gave a rating of only efficient (pie charts 2 and 3), thus the overall rating of efficient.

Finding 6: The project, through the Portal, has strengthened partnerships and extended the Asia Pacific Disaster Resilience Network.

The project, through the Portal, has strengthened partnerships and extended the Asia Pacific Disaster Resilience Network. The Portal is now part of a larger group of climate-risk products that provide risk- and resilience-based information needed by countries. In particular, various products from the Portal have been integrated into the Regional Resilience Data and Analytics Service (RDAS) portal of RIMES and World Bank, and mainstreamed into the Asia Pacific Knowledge Management Hub, the Flood Resilience Portal, the UNFCCC APAN Adaptation Digest, and the UNDRR PreventionWeb. The project has strengthened its partnership with the Institute for Global Environmental Strategies and has used the Portal along with IGES AP-PLAT to deliver a seamless flow of climate and disaster data and policy analysis to the region, subregion and at-risk countries at all timescales.

Efficiency in project implementation has also been achieved through extensive consultations with multiple ministries from the target countries such as Cambodia, Lao PDR, Armenia, and PNG to facilitate policy coherence on climate and hazard resilience. These consultations extend beyond mere discussions on policy coherence for climate and hazard resilience but also encompass the integration of these policies into broader conversations surrounding the "Early Warning for All" initiative. The Portal's analytics have played a pivotal role in this process.

Finding 7: Partnerships with other organizations have enhanced efficiency of project implementation and enabled reaching of results.

MOU's have been signed with UNITAR and BIMSTEC to sustain the technical knowledge support for policy coherence built in the Risk and Resilience Portal beyond project duration. Partnerships have been strengthened with WMO, RIMES, SPREP, IGES-AP-PLAT. These MOUs and partnerships support our partner organizations and target countries to take ownership of the tools that have jointly been built under the Risk and Resilience Portal.

Under the project, and by the end of 2022, the following partnerships had been formalized and/or strengthened:

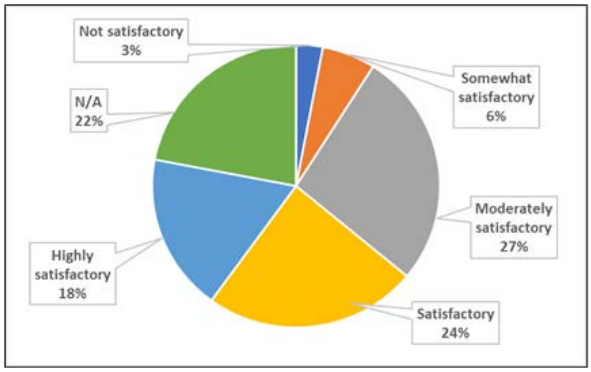
- UNITAR: The MOU signed with UNITAR extends the strategic partnership to include disaster risk reduction as a significant area of collaboration, focusing on building capacity development tools, trainings, and knowledge products to support countries for risk-informed development planning.
- BIMSTEC: The MOU with BIMSTEC has been signed to scale-up regional cooperation framework, particularly for the Ganga-Bramhaputra-Megna basin of BIMSTEC sub-region and to build pathways of integrating disaster and climate into health strategies and vice versa in response to the ongoing COVID-19 crisis.

ESCAP partnered with UNITAR to provide customized risk and resilience data at the sub-national level for five key countries (Papua New Guinea, Myanmar, Pakistan, Mongolia and Armenia) and through the development and building of sub-national risk-informed index for these countries. For example, the launching of the Risk and Resilience Portal in August 2021 was a joint initiative undertaken by the Asia-Pacific Disaster Resilience Network, ESCAP and the United Nations Satellite Centre (UNITAR-UNOSAT). Capitalizing on this joint partnership, the Portal provides regional, subregional, and country level policy analysis for risk-informed decision making in multiple sectors.

4.5 Sustainability

Overall, the evaluation has found evidence that the DA12 DRR project is **sustainable** although the key informant interviews rated the project as highly sustainable. When asked to what extent the project has promoted the establishment of an institutionalized mechanism for championing risk-informed development and SDG implementation in the target countries, only 42% of the survey respondents

gave a satisfactory (24%) to highly satisfactory (18%) rating and 27% gave a mere moderately satisfactory rating (pie chart 14).[9] When asked if a follow-up project should be developed and replicated in other countries in Asia and the Pacific to further enhance their capacities to mitigate the impacts of climate-related risks, 87.5% of survey respondents replied in the affirmative.



Pie chart 14

Finding 8: Established an institutionalized mechanism for championing risk-informed development and SDG implementation in the target countries.

A new tool developed under the Portal in 2023 is the SDG Action Tracker. This tool leverages data from the ESCAP SDG Gateway to monitor disaster and climate-related Sustainable Development Goals. The dynamically updated SDG Action Tracker shows each country's progress in achieving the disaster and climate related SDGs including SDGs 1, 2, and 13. By combining the SDG Action Tracker with the Portal's risk analytics, countries can make informed decisions in crafting their Disaster Risk Reduction strategies and National Adaptation Plan and can monitor how efficient implementation of these strategies can impact SDG achievement in the next 5 to 7 years.

In 2023, the Risk and Resilience Portal was made fit for purpose under the new IPCC AR6 climate scenarios. To ensure sustainability, the climate scenarios have been updated to the latest CMIP6 data at baseline, 1.5 and 2 degrees. Accordingly, users of the Portal can see not only the shifts in temperature and precipitation but also visualize how these changes translate into shifting risks of floods, droughts, heatwaves, and tropical cyclones for their subregions. Using this methodology, it is possible to identify areas where the intersection of multiple climate hazards presents the most significant risks, thus giving a multi-hazard risk profile of the region. With access to comprehensive IPCC climate data, coupled with socioeconomic and environment data, the Portal can support the evidence base for a sustainable transboundary cooperation.

Finding 9: The Portal has been seamlessly integrated into the regular work of the ESCAP DRR section.

The primary output of this DA12 DRR project is the ESCAP Risk and Resilience Portal. This Portal is not a standalone entity but rather it seamlessly integrates into the regular work of the ESCAP DRR section. Its role has extended beyond expanding analytics. Being integrated into the regular work of the ESCAP DRR section, it useful to consider the ripple effect of the Portal across various regions and its adaptability to diverse requirements. In fact, the Portal has become a vehicle for delivering targeted solutions that extend beyond the outlined project outputs. It has become a dynamic tool customized according to the unique requests and needs of countries. An example of this is ESCAP's collaboration with Maldives, where ESCAP was approached to develop a downscaled tool tailored to the specific challenges of a small country with distinct climate nuances. Noteworthy is the fact that, although

[9] A highly sustainable rating is given only if both the interview and the survey results, supported by the information from the desk review of relevant documents, give a unanimous rating of highly efficient. In this case, the survey results gave a rating of only sustainable (pie chart 1), thus the overall rating of sustainable.

funded by the SDG fund, this significant work was effectively executed through the Portal. The Portal is being used to take forward ESCAP's mandated work on developing a regional strategy for Early Warning in Asia-Pacific while providing value-addition to global discussions on the UN Early Warning for All Initiative.

Finding 10: The knowledge products and services developed under the project were made available online on the Asia-Pacific Disaster Resilience Network as a part of the ESCAP SDG Help Desk, and with other existing networks and mechanisms of partners to support wider dissemination and knowledge sharing on mainstreaming DRR into development planning.

The data repository in the Portal has been updated with better categorization methods for better navigation for policymakers on the website. The Portal has been made available online with other existing networks of partners to support wider dissemination and knowledge sharing. For example, the Portal is listed as a key product for building disaster and climate resilience under UNDRR PreventionWeb and the UNFCCC APAN Adaptation Digest. The Portal products are also integrated into the Flood Resilience Portal managed by the Zurich Flood Resilience Alliance and the RIMES/World Bank RDAS data Portal.

The project has also aimed to align policies within countries and to synchronize regional strategies for early warning systems in the Asia-Pacific region. By leveraging the analytical capabilities of the Portal, ESCAP has been able to provide valuable insights that facilitate the development of a coherent and robust regional strategy. This strategy not only addresses country-specific needs but also contributes to the global discourse on early warning systems through its alignment with the Global Pillars of Early Warning. By integrating these efforts with the Early Warning for All initiative, ESCAP is fostering a comprehensive strategy that not only anticipates and responds to hazards but also ensures that the information reaches those who need it most, namely, the communities at risk. In essence, the role of the Portal analytics underscore ESCAP's commitment to developing not just localized solutions but contributing to mainstreaming DRR into development planning and providing a broader, interconnected framework that enhances early warning capabilities across the Asia-Pacific region.

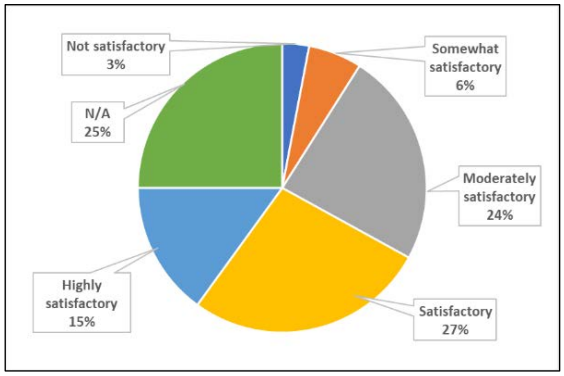
To further promote sustainability, the interim and synthesized knowledge gained from the project are captured in the 2021 and 2023 editions of the Asia-Pacific Disaster Report. There is an active effort to find opportunities to build the country-level activities on the achievements and activities of existing projects of ESCAP and partners and to raise extra-budgetary funds to make the tools and services developed under this DA12 DRR project available to more countries in the region. For example, the analytical work under this project may be utilized to build on the drought risk analysis being undertaken for Mongolia and other countries under the ESCAP DA11 project titled "Addressing the transboundary dimensions of the 2030 Agenda through regional economic cooperation and integration in Asia and the Pacific."

4.6 Gender equality, disability inclusion and other cross-cutting Issues

Overall, the evaluation has found evidence that the DA12 DRR project has a **satisfactory** performance with respect to gender mainstreaming although the rating from the key informant interviews shows a highly satisfactory finding.

On the issue of gender mainstreaming and disability inclusion, the result of the survey differs somewhat from the result of the interviews. When asked to what extent cross-cutting issues, including gender mainstreaming and disability inclusion, were integrated into the design and implementation of the project, only 15% of respondents gave a highly satisfactory rating, 27% a satisfactory rating, and

24% a moderately satisfactory rating (pie chart 15).[10] The result of the survey is consistent with the actual gender profile data from the two regional activities, which shows only about 40% female participation.



Pie chart 15

Finding 11: Gender equality and disability inclusion have been consciously taken into account in the design and implementation of project activities.

In the two large meetings convened by the project, namely, the 2021 and 2023 Regional Learning Platforms, there was significant presence of female participants. The Regional Learning Platform 2021 had a total of 270 participants 40% of which were female (108/270) and 60% were male (162/270) while the Regional Learning Platform 2023 had a total of 337 participants 41.5% of which were female (140/337) and 58.5% were male.

The Portal has endeavored to include persons with disabilities in all phases of disaster risk reduction. It offers basic and advanced online courses on incorporating disability perspectives into all phases of disaster risk reduction, prevention, preparedness, response and recovery, which is termed Disability-inclusive Disaster Risk Reduction (DiDRR).

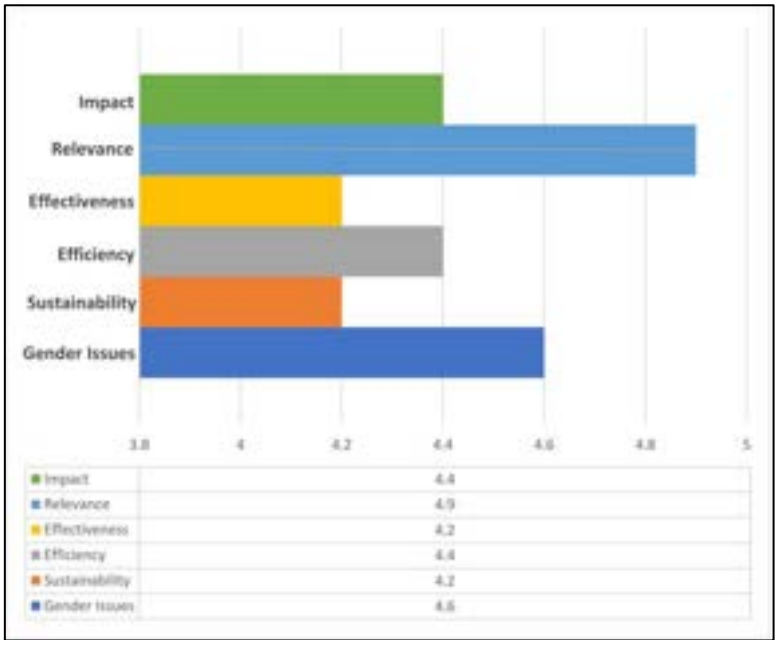
[10] A highly satisfactory rating is given only if both the interview and the survey results, supported by the information from the desk review of relevant documents, give a unanimous rating of highly satisfactory. In this case, the survey results gave a rating of only satisfactory (pie chart 1), thus the overall rating of satisfactory.

5. Conclusions

Based on the findings of this study, this evaluation makes the following conclusions on the six criteria:

- Impact – highly satisfactory
- Effectiveness – highly effective
- Relevance – highly relevant
- Efficiency – efficient
- Sustainability – sustainable
- Cross-cutting issues – satisfactory.

The results of the interviews (see chart below) are generally consistent with the results of the survey and the information gathered from the review of relevant documents and reports, except in the case of efficiency, sustainability, and cross-cutting issues, which received slightly lower but nevertheless satisfactory ratings.



It is thus concluded that the project has achieved its overarching objective of providing enhanced access to data/information and tools, opportunities for knowledge exchange and learning, and support to national demonstration of how risk information could be used to design and update risk-informed SDG implementation strategy through the establishment of the ESCAP Asia-Pacific Risk and Resilience Portal.

It is evident from the results of the interviews and survey and the findings from the desk review of relevant documents that the project has made a highly satisfactory impact both at the regional and country levels taking into consideration the ripple effect of the Portal across various regions and its adaptability to diverse requirements. In fact, the Portal has become a vehicle for delivering targeted solutions that extend beyond the planned project outputs.

The Portal is also highly relevant as it provides actionable and user-friendly information for the Asia-Pacific region by bridging the science and policy gaps that currently exist from the lack of translational science through the integration of data from multiple existing and validated sources. The portal is a one stop shop to ensure that the vast array of scientific information on hazards, climate change, social,

economic, and health data can be analysed in a way that can be used by policymakers, decision makers and development researchers to make efficient risk informed decisions that span across multiple sectors. Operationally, the Portal answers four key questions on the emerging disaster-climate-health riskscape: Where are the risk hotspots of cascading hazards? What are the current and future economic losses from cascading hazards? How much will it cost countries, the subregions, and the region to adapt to the new riskscape? What are the adaptation priorities for countries, sub-regions and the region?

The Portal is also highly effective in serving as a vital tool in translating global information on climate and disaster risks into actionable regional insights. The portal ecosystem goes beyond just predicting climate conditions as it also facilitates understanding the potential impacts and consequences of these conditions on various sectors. In transport, the Portal takes into account multiple hazard risks, including those to highways, railways, sea and river ports, and airports, under different climate scenarios. The Portal also addresses the resilience of social infrastructure, including education facilities and hospitals. These indicators are essential in assessing the region's ability to withstand and recover from disasters and climate-related challenges. To provide more localized insights, the Portal downscales climate projections to a 5x5 resolution for some countries thus allowing for a more detailed analysis of infrastructure resilience, with a particular focus on SIDS. The Portal also tracks the progress in disaster and climate-related impacts on the Sustainable Development Goals (SDGs). By pooling data from the ESCAP SDG gateway, countries can monitor and analyse the linkages between disasters, climate change, and progress towards achieving the SDGs. This information enables better-informed decisions on DRR and National Adaptation Plans (NAPs) in the region.

The Portal and the Asia-Pacific Disaster Report 2023 play a crucial role in providing regional insights into climate and disaster risks. By assessing transportation and social infrastructure resilience, downscaling climate projections, and tracking progress on SDGs, the Portal empowers countries to make informed decisions for disaster management and climate resilience in the Asia-Pacific region.

It is also evident that the project has efficiently delivered its projects and activities despite the restrictions arising from the COVOD-19 pandemic. This was achieved through robust partnerships with knowledge institutions such as RIMES, IGES, and SPREP, with platforms such as RCM TWG-DR3 and APAN, and various regional and subregional organizations.

Sustainability has also been achieved by the project by following an inclusive and participatory approach to engage national stakeholders from the initial stages till delivery of the outputs in order to ensure that the project activities are relevant to local needs and that there is local ownership. The project has promoted the establishment of an institutionalized mechanism for championing risk-informed development/SDG implementation in the target countries, which includes policymaker and experts from the ministries of science, planning, finance and disaster management, as well as other relevant line ministries. At the regional level, the knowledge products and services developed under the project are made available online on the Asia-Pacific Disaster Resilience Network as a part of the ESCAP SDG HelpDesk, and with other existing networks and mechanisms of partners to support wider dissemination and knowledge sharing on mainstreaming DRR into development planning after the project ends.

Finally, it is concluded that the project has endeavoured to mainstream gender and disability inclusion into its projects and activities.

6. Recommendations

A host of significant recommendations have already been brought to the attention of ESCAP for its consideration and possible actions. These come from the Committee on Disaster Risk Reduction during its eighth session held in Bangkok and online on 25-27 July 2023, the Regional Learning Platform for Multi-Hazard Early Warning Systems held at ESCAP on 24 July 2023, and the Workshop on sustainable and resilient port development to support sustainable maritime connectivity in the Pacific held in Suva and online on 7 December 2022. Based on the findings and conclusions of this evaluation and a trenchant analysis of these earlier recommendations, the evaluation offers the following action-oriented recommendations addressed to ESCAP management.

Recommendation 1: Continue the development and updating of the Asia-Pacific Risk and Resilience Portal, including through the next phases of the Development Account, to fully cover all the countries in Asia and the Pacific.

Almost 88% of the survey respondents replied that a follow-up project should be developed and replicated in other countries in Asia and the Pacific to further enhance their capacities to mitigate the impacts of climate-related risks. The Asia-Pacific Risk and Resilience Portal is an impressive tool that provides answers to key questions on the emerging disaster-climate-health riskscape. In line with the desire of a great majority of the survey respondents and with Findings 1, 3, 4, 8, and 9, ESCAP should continue developing, updating, upgrading, and expanding this Portal to cover all the countries in Asia and the Pacific utilizing the latest technology as it rapidly develops in line with the decision of the eighth session of the Committee on Disaster Risk Reduction to "deepen its analytical research, knowledge-sharing and capacity development."

Five possible upgrades/expansion may be considered. First, the Decision Support System, which explore sub-national data in some countries for evidence-based policy making, currently covers only five countries, namely, Papua New Guinea, Pakistan, Myanmar, Mongolia, and Armenia. This should be expanded to cover more countries in the region. Second, under regional cooperation, the Portal presents a storyboard on the Aral Sea catastrophe and announces that coming soon are two other storyboards on transboundary multi-hazard in river basins and Pacific SIDS. These storyboards are highly useful and informative and should be expanded to cover more areas. Third, the country analysis already covers almost all the countries/economies in the region, but some data/information are still missing for some countries. Efforts should continue to gather this data/information to further enhance what is already an impressive tool for exploring data and accessing policy information using interactive charts and smart filtering. Fourth, in some countries Internet connectivity is less reliable than mobile phone connectivity. In this regard, the current effort to develop a mobile version of the Portal should be continued and further intensified. Fifth, data will need to be continuously updated. For example, the SDG Tracker is one place where data are directly pulled from the statistics department's data explorer. But the data is changing, many annually. Every time a new data set comes out, updating requires a lot of work. This process can be automated using tools such as Phython scripts or Jupyter Notebook.

Recommendation 2: Develop programs to build national capacities for disaster preparedness, adaptation and resilience through effective and widespread utilization of the Asia-Pacific Risk and Resilience Portal as well as by leveraging innovations and sharing relevant information, expertise, resources and good practices.

The effectiveness of the Portal will depend so much on the training and the capacity building of the people in the country to be able to fully utilize the power of Portal. Led by ESCAP and implemented in collaboration with various partners, the Asia-Pacific Disaster Resilience Portal aims to strengthen the capacity of countries in Asia and the Pacific to mitigate the impacts of cascading risks on the

achievement of the Sustainable Development Goals (SDGs). Also in line with the desire of a great majority of survey respondents as well as Findings 3, 8, 9, and 10, ESCAP, through its subregional offices (SROs) and in partnership with subregional organizations (e.g., ASEAN, SAARC, etc.) and other relevant UN agencies, should consider developing national capacities for the effective and widespread utilization of the Portal and other tools to develop capability to conduct disaster risk evaluations, guide the subsequent development of disaster risk mitigation and management strategies, and enable governments adopt strategies that move beyond the traditional focus on a hazard-by-hazard approach to a multi-hazard approach. This is also in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 which calls for the "use and expansion of thematic platforms of cooperation, such as global technology pools and global systems to share know-how, innovation and research and ensure access to technology and information on disaster risk reduction". The recently completed training workshop in Maldives should be duplicated in other countries in the region. Training and capacity building will optimize the utilization of the Portal.

Recommendation 3: Use big data to measure and analyse the nexus between DRR and gender and disability in Asia and the Pacific.

ESCAP in partnership with UN-Women, UNEP, and IUCN has recently put forward a proposal to use big data to measure the nexus between environment and gender in Asia and the Pacific. ESCAP can take advantage of the synergy that would be created by concomitantly undertaking a similar project on DRR-gender-disability nexus in line with Findings 2 and 11. Big data could be used for producing appropriate indicators relevant to the environment-gender nexus, on one hand, and DRR-gender-disability nexus, on the other, in a cost-effective and sustainable manner, if gender and disability disaggregated data are provided by national statistical offices. The collection and utilization of gender and disability disaggregated data is important in disaster statistics, which will also require technical capacity enhancement of relevant officials and stakeholders. Additionally, it would also be useful to collect experiences of persons with disabilities in disasters and analysing root causes of such experiences and identifying policy solutions.

There are already many previous reports and activities related to this proposed activity. A few examples may be cited. Perhaps the most relevant is the 2022 ESCAP background paper for Regional Consultation on Facilitating Innovative Action on Disability-inclusive and Gender-responsive DRR entitled "Review of Disability-inclusive and Gender-responsive Disaster Risk Reduction in Asia and the Pacific." Then in April 2023, the Asia-Pacific Stats Café Series on "Using Big Data to Measure the Nexus Between Environment and Gender in Asia and the Pacific" was held virtually. In May 2-23, a side event on Women, Gender Equality and Climate Change in Asia and the Pacific was held during the 79th Commission Session organized by ESCAP, the Ministry of Gender, Family and Social Affairs of Maldives and the United Nations Population Fund, Asia-Pacific Regional Office.

Oxfam has developed a training pack on Gender and Disaster Risk Reduction to develop participants' skills and competencies in addressing gender issues throughout the project cycle, from assessment, analysis, and planning through to implementation, monitoring, and evaluation. The United Nations published in 2014 a document on Gender Responsive Disaster Risk Reduction, Version 2, leading to the Third UN World Conference on Disaster Risk Reduction. The United Nations Office for Disaster Risk Reduction published a policy brief on gender-responsive disaster risk reduction in March 2022, a thematic report on gender equality and social inclusion in disaster risk reduction in the Pacific in August 2023, and a report on accelerating action on gender equality in disaster risk reduction by 2030 in December 2023. The Asian Development Bank (ADB) and the International Research Institute of Disaster Science (IRIDeS) in partnership with APRU Multi-Hazards Program organized an international conference on big data for disaster response and management in Asia and the Pacific in Japan on 15-17 February 2024.

Recommendation 4: Develop a regional strategy to support the achievement of early warnings for all by strengthening multi-hazard early warning systems in Asia and the Pacific in coordination with member States and relevant partners.

This recommendation supports ESCAP's proposal that was endorsed to the Commission by the Committee on Disaster Risk Reduction at its eighth session held in Bangkok and online on 25–27 July 2023. Taking note of the discussions during the thematic expert meeting on "Regional learning platform for multi-hazard early warning systems" held on 24 July 2023, the secretariat proposed to further develop a regional strategy in support of the global and country-level implementation of the four pillars of multi-hazard early warning systems, namely, disaster risk knowledge and management, observations and forecasting, dissemination and communication, and preparedness to respond. This is in line with Findings 2, 6, 8, 9, and 10. The regional strategy is expected to enhance foresight planning through improved knowledge and data generated using the ESCAP Risk and Resilience Portal as well as the Asia-Pacific Disaster Report and relevant subregional reports. It could also serve as a basis for strengthened regional cooperation through existing mechanisms. In this regard, there is need to build member States' capacity for impact-based forecasting, in particular least developed countries, landlocked developing countries, and small island developing States, including targeted workstreams and capacity-building taking into account the existing regional cooperation mechanisms and the gaps identified under the four pillars.

Recommendation 5: Develop a joint programme on incorporating digital technologies including AI into disaster response and management involving all IDD sections in collaboration with, among others, APCICT, APCTT, and APDIM.

The advent of digital technologies and the availability of vast amount of Earth data have opened new possibilities for understanding and managing disaster risks, mapping flood events, and addressing various challenges related to achieving SDGs. These developments enable the use of nowcast, forecast, and hindcast methods to understand past events and build resilience for the future. By leveraging data analytics, real time monitoring, and advanced communication technologies, digital rescue systems can significantly enhance the effectiveness and efficiency of disaster relief operations and provide timely and targeted assistance to affected communities during emergencies in line with Findings 4, 6, and 9. A robust integration of digital technologies and AI with disaster response can help save lives and minimize damage caused by climate-related disasters.

ESCAP's initiative on Flood Hotspot Mapping Tool (FMHT) and the Flood Risk Prediction Tool (FRPT) utilizes big Earth data and Google Earth Engine as the cloud computing platform. ESCAP also offers courses on (a) satellite data analysis focusing on active and passive satellite data analysis for surface water flood mapping using cloud computing; (b) spatiotemporal drought assessment using the Google Earth Engine platform; and (c) geospatial data analysis with ChatGPT and Google Earth Engine. ESCAP also aims to establish the Virtual Satellite Constellation (VSC) for Disaster Response and Management (DRM) to facilitate sharing of satellite imagery within the Asia-Pacific region. APCICT has developed a comprehensive training module focused on digital technology for Disaster Risk Management which aims to introduce the basic concepts of DRM and the various ICT applications in DRM. The training modules are available on the APCICT virtual academy.[11] All this could be brought together to develop an ESCAP joint program to comprehensively incorporate digital technologies and AI into disaster response and management involving all IDD sections and the relevant ESCAP regional institutions as suggested by several participants at the ESCAP Regional Learning Platform for Multi-Hazard Early Warning Systems in July 2023.

[11] Available at https://elearning.unapcict.org.

ANNEXES

Annex 1: Evaluation TORs

Terms of Reference
Evaluation of Development Account Project

Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific

07 September 2023

ESCAP

1. INTRODUCTION

This project aims to strengthen the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks on the achievement of the Sustainable Development Goals (SDGs). The two major expected accomplishments are, at the regional scale, strengthened knowledge repository to enhance policy coherence for disaster risk reduction and resilience building in selected Asia-Pacific countries, and within the targeted high-risk countries, enhanced knowledge and capacity to operationalize policy coherence for disaster risk reduction and resilience-building.

ESCAP's evaluation policy[12] requires selected projects to be subject to an independent evaluation. Evaluation is an important function that seeks to determine as systematically and objectively as possible the impact, relevance, effectiveness, efficiency, and sustainability of its projects. Recognizing the value of an independent evaluation in guiding efforts to improve ESCAP's overall performance and effectiveness, the ESCAP Commission mandates the secretariat to ensure that its programmatic work is evaluated periodically.

2. EVALUATION PURPOSE, OBJECTIVES AND SCOPE

2.1 Evaluation purpose and use

The purpose of the evaluation is to support accountability for results and to enable learning. The evaluation results will be used to improve the design and implementation of future projects facilitated through the formulation of an evaluation management response and follow-up action plan. The main users of the evaluation results are ESCAP management and staff, particularly the ICT and disaster risk reduction division. Other expected users include the project participating countries and implementing partners.

2.2 Evaluation objectives

The objectives of the evaluation are to:

1) Assess the project performance against the evaluation criteria: impact, effectiveness, relevance, efficiency, sustainability, and cross-cutting issues, including gender equality, human rights, disability inclusion, as deemed relevant.

2) Formulate lessons learned and action-oriented recommendations to inform management decision-making and improve future project design and implementation.

The evaluation analyses the level of achievement of project results, making use of the project's results framework, implementation processes and contextual factors, establishing as much as possible causal linkages guided by the evaluation criteria and questions. The evaluation will be conducted in line with ESCAP Monitoring and Evaluation Policy and Guidelines and the United Nations Evaluation Group (UNEG) norms and standards for evaluation.

2.3 Evaluation Scope

The evaluation includes the design, strategy and implementation of the project over the entire period of its implementation. The evaluation covers the implementation and results of the project in the participating countries. The assessment covers all modes of implementation of the project, including national and regional workshops, training and additional activities as agreed upon based on consultations with project countries.

[12] ESCAP Monitoring and Evaluation Policy and Guidelines, 2023, available on the ESCAP webpage at http://www.unescap.org/partners/monitoring-and-evaluation/evaluation.

The evaluation is expected to cover the full duration of the project from April 2020 to December 2023 and all beneficiary countries, namely Armenia, Mongolia, Myanmar, Pakistan, and Papua New Guinea.

2.4 Evaluation Criteria and Questions

The following evaluation criteria and questions to assess the project performance will be considered and further refined following consultations with project management and other stakeholders during the evaluation inception period.

Evaluation criteria	Evaluation questions
Impact[13]	• What have been the most significant achievements or impacts of the project at the regional and national levels? Describe the project activities/outputs that lead to the impact and present evidence of project's contribution to the impact. • How could the Division/Office enhance the impacts of its future projects?
Effectiveness	• How effective was the project's capacity-building activities? Provide evidence to demonstrate the effectiveness of capacity building activities. • How could the implementing division make its future capacity-building activities more effective?
Relevance	• To what extent was the project designed based on needs of the target beneficiaries? • To what extent has the project ensured that the needs of vulnerable and marginalized populations, including persons with disabilities, were taken into account in the design and implementation of the project? • What adjustments, if any, were made to the project activities and modality, in response to the new priorities/requirements of target beneficiary countries?
Efficiency	• To what extent did the project achieve efficiency in implementation through the combination of project stakeholders involved, making use of comparative advantages and the creation of synergy? • To what extent has partnering with other organizations enabled or enhanced reaching of results?

[13] Impact criterion is defined by the OECD as the extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects. Impact addresses the ultimate significance and potentially transformative effects of the intervention. OECD suggests that impact criterion can be used loosely to mean "results" in the broadest sense. It also clarifies that the use of impact criterion should not be confused with the term "impact evaluation", which refers to specific methodologies for establishing statistically significant causal relationship between the intervention and observed effects. ESCAP uses the impact criterion to assess its contribution to changes in policies, strategies, norms, and standards in its member States in the medium term. Examples of impact include: (1) Five pilot countries adopted and implemented national strategies and programmes with assistance from the project; (2) Several countries put in place a new system or procedures with support from the project; (3) Countries increase the use of renewable energy sources for sustainable development.

	• Was the project implemented in a timely manner and according to plan? If not, why?
Sustainability	• To what extent can results of the project be continued without ESCAP's further involvement?
Cross-cutting Issues	• To what extent were cross cutting issues, including gender mainstreaming and disability inclusion, integrated into the design and implementation of the project?

3. PROJECT OVERVIEW

Description

The DA12 project aims to strengthen the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks on the achievement of the Sustainable Development Goals, in particular through the establishment of the ESCAP Asia Pacific Risk and Resilience Portal (herewith called the 'Portal')- a one stop shop to ensure that the vast array of scientific information on hazards, climate change, social, economic and health data can be analysed in a way that can be used by countries to build efficient risk informed decisions on climate and disasters that span across multiple sectors.

The project enables the ESCAP secretariat to respond to member States' requests for capacity-development assistance in support of their efforts to implement the Sendai Framework for Disaster Risk Reduction, taking into account the Action Plan 2018–2020 in ESCAP Commission Resolution 75/5 adopted in May 2019. Further, the project will support the implementation of ESCAP Commission resolution 73/7 adopted in May 2017 on enhancing regional cooperation for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Asia and the Pacific, which requested the Executive Secretary of ESCAP to, inter alia, accord priority to synchronizing multi-disciplinary support to member States in the mainstreaming of disaster risk reduction in their development strategies, in line with the Sendai Framework and the related Sustainable Development Goals and targets. Resolution 73/7 also requested the Executive Secretary of ESCAP to continue to support and facilitate multi-hazard early warning systems, impact-based forecasting, and disaster risk assessment.

The project addresses the data, information, knowledge and capacity gaps through an already established regional network, the Asia-Pacific Disaster Resilience Network (APDRN), that links the three streams of ESCAP secretariat's work in disaster risk reduction and resilience - analytical, intergovernmental cooperation and capacity development - enhancing their synergy and complementarities. The APDRN, which was formed by ESCAP's inter-governmental Committee on Disaster Risk Reduction at its fifth session in 2017, promotes greater policy coherence across the implementation of global development frameworks, as well as coordination among members of the Asia-Pacific Regional Coordination Mechanism and its Thematic Working Group on Disaster Risk Reduction and Resilience (TWG DR3).[6] The decision to establish the APDRN was followed up during the Committee's sixth session in August 2019 which recommended to operationalize the work streams of APDRN, namely, multi-hazard early warning system, data and statistics, technology innovation and applications, and knowledge for policy.[7]

Beneficiary countries

The project will provide focused support to countries where building resilience to disasters assume an added significance in the context of accelerating progress on the SDGs. While the project will adopt a regional approach, that is to provide common services and interventions, one country per ESCAP subregion will be targeted to receive in-depth support, namely Armenia (Central Asia), Mongolia (North-East Asia), Myanmar (South-East Asia), Pakistan (South and South-West Asia), and Papua New Guinea (Pacific). Bhutan and Maldives were further added at a later date.

Countries were selected according to the following criteria: 1) the disaster risk profile shows high levels of exposure from both climate variability and climate change; 2) there are high levels of convergence of disaster risk, poverty and inequality; and 3) there are active ESCAP institutional contacts to support project implementation at the country level. The third criterion is crucial for the project to succeed within a relatively short timeframe.

Implementing partners and implementing strategy

The overarching objective of the project is to strengthen the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risk on the achievement of the Sustainable Development Goals. The project will achieve this by providing enhanced access to data/information and tools, opportunities for knowledge exchange and learning; and support to national demonstration of how risk information could be used to design/update a risk-informed SDG implementation strategy.

The regional knowledge repository at ESCAP will be strengthened. The capacity of national and selected local government officials in five countries to enhance policy coherence across sustainable development, disaster risk reduction and climate change will be built with a focus on ministries/agencies which are responsible for development planning, budget and finance, hydrometeorological agencies, disaster management, and those responsible for managing climate-sensitive sectors (e.g., agriculture and poverty alleviation, infrastructure, water resources).

The primary evidence of the project's results will manifest in two ways: First: through providing risk information that can be incorporated into national plans that implement the SDGs (as a whole or specific plans to implement specific goals and targets). For example, the integration of risk information into land-use plans and design standards for new public infrastructure (e.g., roads, schools, bridges) and to regulate construction in high-risk locations, would demonstrate coherence between efforts to address lack of access to infrastructure (SDG9), prevent disaster-related deaths (SDG1.5) and (SDG 13.1.1). Second, an increasing knowhow on the application of geospatial-based hazard and socio-economic information to pinpoint the populations who are at risk of being left behind due to recurring drought and environmental degradation would provide further compelling evidence of the expected result by demonstrating coherence in implementing SDGs 1, 13 and 15. The *Asia-Pacific Disaster Report 2019* reveals that those left behind in multi-hazard areas belong to the bottom 20 per cent of the wealth distribution, and are likely to be farmers who lack access to education and medical care, and women who do not have the power to make decisions or own property. The project will endeavour to reach these populations first through innovative tools.

In the long-term, the expected result will enable countries to achieve the SDG targets that are related to disaster risk reduction (Targets 1.5; 11.5; 11.b; and 13.1).

Through the project, ESCAP further intended to formalize partnerships with knowledge institutions (RIMES, APEC Climate Centre, IGES, SPREP) and platforms (RCM TWG-DR3, APAN and Pacific Resilience Partnership) as a part of the Asia-Pacific Disaster Resilience Network to sustain the knowledge base, data and analytical infrastructure for providing technical support and capacity development to high-risk, low-capacity countries beyond the duration of the project.

4. OVERALL EVALUATION APPROACH

In assessing the results achieved, the evaluation will make use of a theory of change approach to understand the actual results achieved and the process of achieving results. The development of the theory of change should be guided by the results framework of the project and the actual implementation strategy and delivery of outputs.

The evaluation will apply a mixed-method approach through a combination of quantitative and qualitative analysis to inform findings. The evaluation methodology will rely primarily on desk review and remote data collection methods. The evaluation will apply multiple methods, and cross-check information and data from different sources to ensure confidence in the findings. The tentative methodology is expected to be refined and finalized in the inception phase of the evaluation, reflecting the results of a preliminary desk review and initial consultations with key stakeholders. In developing a methodology that is as rigorous as possible under the circumstances, human rights and gender equality should be integrated into all stages of the evaluation, upholding the principle of 'no-one left behind'. In addition, disability perspectives should also be integrated into the evaluation process to the extent possible.

The evaluation process will involve several phases as outlined below:

Phases
a) **Inception and scoping phase** • Preliminary review of documentations • Interviews with members of the reference group and other project stakeholders to understand their expectations and requirements • Preparation of an evaluation inception report detailing the evaluation scope, questions, methodology and workplan • Meeting with the evaluation reference group to present the inception report and seek clearance to proceed • Preparation of questionnaires and interview guides
b) **A desk review of project documents.** The following documentations will be provided to the consultant • Name of the project team members and their respective roles • List of stakeholders to be interviewed • Project publications, research papers, training materials • Press releases • Project meeting information (e.g., attendance lists, minutes/reports, agenda, handouts, questionnaire results) • Mission reports • Project document, including the work and monitoring plan, logical framework and budget • Relevant agreements (e.g., with the project partners) • Project revisions (if applicable) • Progress reports, including documents referred to in the report • Project terminal report, including documents referred to in the report
c) **Surveys of project stakeholders (electronic)**

• An electronic survey will be administered targeting government officials and implementing partners • Development and administration of the survey by the consultant • Data analyses
d) **In-depth individual interviews (video/audio call)** • Governmental stakeholders • Development partners • Project management
e) **Focus group discussions (video conference)** • If needed, the consultant may conduct in-depth discussions with selected stakeholders on certain specific topics or issues
f) **Preparation of the evaluation report and presentation of findings** • Preparation of a brief note containing the preliminary findings, conclusions and recommendations of the evaluation • Meeting with the reference group to present (using PowerPoint) and discuss the preliminary evaluation results • Preparation of a draft evaluation report and review of the draft report by the evaluation reference group • Finalization of the evaluation report along with an evaluation brief (2-page summary) following a standard format to be provided by ESCAP

Data will be disaggregated by sex and other relevant social categories. The evaluation will undertake a transparent and participatory evaluation process that will involve male and female stakeholders identified in the stakeholder analysis, including: the reference group, development partners and target beneficiaries in all key evaluation tasks.

In analysing the data, the evaluation will use qualitative and quantitative approaches, and provide charts and direct quotations. Using the data to assess evaluation against the selected criteria. Disability inclusion, as well as gender and human rights mainstreaming, are essential components of data analysis in all ESCAP evaluations and take place on three levels: 1) project design; 2) project implementations; 3) project outcomes. Data analysis will enable useful, evidence-based findings, conclusions, and recommendations.

The evaluation methodology will also take into consideration the ethical principles in evaluation as detailed in the UNEG ethical guidelines for evaluation.

5. ROLES AND RESPONSIBILITIES

5.1 Evaluation reference group

To support the independence of the evaluation, the Evaluation Unit, SPMD will manage and oversee the entire evaluation process. An evaluation reference group will be established to support the evaluation and will comprise the following members: the Director and/or Section Chief of the implementing division/office (Chair), project officer, evaluation officer from the Evaluation Unit, SPMD and, optionally, additional members from partner ESCAP division/office (internal) or organization (external).

The reference group provides technical and methodological guidance to the evaluation process; reviews and approves the selection of the consultant based on a short list to be provided by the Evaluation Unit/SPMD, terms of reference and inception report; provides quality control of the evaluation report and validation of recommendations; and ensures adherence to ESCAP Evaluation Policy and Guidelines and the use of evaluation outputs, including the formulation of the evaluation management response and follow-up action plan.

5.2 Evaluator

ESCAP's evaluation policy requires the selection of qualified evaluators with relevant professional competencies and experiences. In accordance with the UNEG Evaluation Competency Framework, ESCAP selects evaluators who have the following profile:

- Good professional and technical foundation on evaluation, including familiarity with the UNEG norms and standards for evaluation, solid knowledge of evaluation design, approaches and methods and analytical skills to interpret findings and formulate conclusions and recommendations demonstrated through several years of experience in conducting evaluations for UN entities and other international organizations and preparation of evaluation reports that meet the UNEG quality standards for evaluation reports.
- Evaluators must also have knowledge of the United Nations System and its principles, values, goals and approaches. ESCAP also seeks to find evaluators who have some experience in the subject matter being evaluated although they might be difficult to find at times.
- To avoid conflict of interest and undue pressure, evaluators must not have been involved in the design, management, and implementation of the project being evaluated, nor expect to be in the future.

The evaluator will assume overall responsibility for carrying out the evaluation. This includes, among other activities, managing the work, ensuring the quality of interviews and data collection, preparing the draft report, presenting the draft report and producing the final report after comments have been received in line with standard templates provided by ESCAP.

6. OUTPUTS

The following outputs will be delivered to the project manager at ESCAP:

1. Inception report detailing the approach of the evaluator, workplan and evaluation logical framework (see Annex 1)
2. Results of data collection exercise
3. First draft of evaluation report (see Annex 2 and Annex 3)
4. Presentation (PPT) on findings, conclusions and recommendations
5. Final evaluation report

The draft evaluation report will be shared with the evaluation reference group prior to finalization. The final evaluation report will be posted on ESCAP's public website.

ESCAP adheres to the UNEG Ethical Guidelines and Code of Conduct in evaluation and all staff and consultants engaged in evaluation are required to uphold these standards. To this end, ESCAP has developed a Consultants Agreement form (see Annex 4) that evaluators are required to comply upon signing the consultancy contract.

7. WORKPLAN

The evaluation will be undertaken from September 2023- January 2024. The evaluation budget includes a consultancy fee to be determined based on professional qualifications and the duration of the contract.

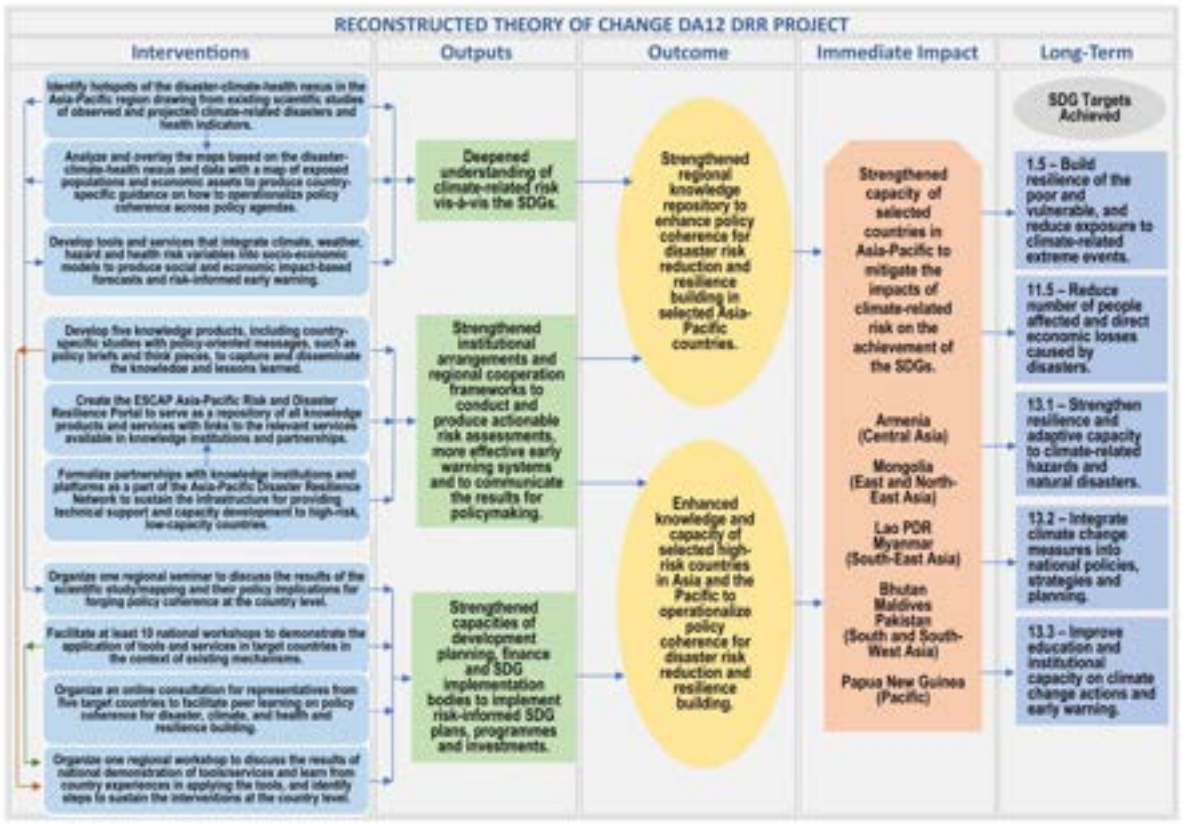
Phase	Timelines
1. Inception • Desk review of documentations • Interviews with members of the reference group • Preparation of an inception report for the evaluation • Presentation of evaluation methodology and tools to the reference group	September 2023
2. Data collection and analysis • Desk review of documentations • Preparation of surveys and interview guides • Administration of stakeholder survey • Interviews and focus group discussions with stakeholders • Data compilation and analysis	October – November 2023
3. Report preparation and conclusion • Submit a brief report containing the preliminary findings, conclusions, and recommendations • Meet with the reference group to discuss the preliminary findings and recommendations • Prepare a first draft evaluation report • Prepare a revised draft evaluation report • Final evaluation report and summary note	December 2023 – January 2024

Annex 2: Theory of change

Theory of Change (TOC) is a manner of thinking about how different elements are linked and how they might affect each other. Its framework usually has five components: interventions, outputs, outcome, immediate impact, and long-term impact. In this evaluation we make use of a theory of change approach to understand the actual results achieved and the process of achieving results, guided by the results framework of the project and the actual implementation strategy and delivery of outputs. Through this approach, the precise link between activities and the achievement of long-term goals are more fully understood. This approach explains how the activities undertaken by the project contribute to a chain of results that lead to the intended or observed impacts, which are represented in a diagram.

There are generally four main options for representing a theory of change, namely, linear results chain, outcomes hierarchy, triple column/row, and set of principles. For this evaluation, we will use the linear results chain, which is the most appropriate where activities are undertaken at the start and then consequences flow through in a linear fashion. We present a reconstructed TOC flowchart based on the reported programs, projects, and activities of the DA12 DRR project. As shown in Figure A2.1, the interventions are aimed at strengthening the capacity of selected countries in Asia-Pacific to mitigate the impacts of climate-related risk on the achievement of the SDGs.

Figure A2.1. Reconstructed Theory of Change of DA12 DRR Project



Annex 3: Evaluation matrix

Criteria	Key Question	Sub-Questions	Indicators	Source of Information	Methods	Assumptions
Impact	What have been the most significant achievements or impacts of the project at the regional and national levels?	What project activities/outputs led to the impact? How could the Division/Section enhance the impacts of its future projects?	Easily accessible tools and services are available to and customized for each of the five targeted countries. Sustained technical and knowledge support for promoting policy coherence are available for high-risk, low-capacity countries in Asia-Pacific. Awards or recognitions received by the project.	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Willingness to participate Significant response rate Availability of relevant reports and documents
Relevance	To what extent was the project designed based on needs of the target beneficiaries?	To what extent has the project ensured that the needs of vulnerable and marginalized populations, including persons with disabilities, were taken into account in the design and implementation of the project? What adjustments, if any, were made to the project activities and modality, in response to the new	Number of stakeholders in participating countries stating that project outputs and activities respond to their countries' needs.	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Willingness to participate Significant response rate Availability of relevant reports and documents

		priorities/requirements of target beneficiary countries?				
Effectiveness	How effectively has the project strengthened the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks on the achievement of the Sustainable Development Goals (SDGs)? How effective was the project's capacity-building activities?	How could the implementing division make its future capacity-building activities more effective? Within the targeted high-risk countries, how effectively has the project enhanced knowledge and capacity to operationalize policy coherence for disaster risk reduction and resilience-building?	Policymakers in five countries in Asia-Pacific have demonstrated capacity to apply tools to promote coherence in policy and practice. All five target countries have incorporated disaster risk information into policies, plans and strategies both in the medium and long-term. Evidence of government officials and technical staff attended relevant trainings, workshops, or activities.	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Willingness to participate Significant response rate Availability of relevant reports and documents
Efficiency	To what extent did the project achieve efficiency in implementation through the combination of project stakeholders involved, making use of comparative advantages and the creation of synergy?	To what extent has partnering with other organizations enabled or enhanced reaching of results? Was the project implemented in a timely manner and according to plan? If not, why?	Stakeholders in participating countries recognizing efficient project implementation. Documentary evidence that project was implemented within budget.	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Willingness to participate Significant response rate Availability of relevant reports and documents
Sustainability		To what extent has ESCAP	Level of utilization and number of			Willingness to participate

	To what extent can results of the project be continued without ESCAP's further involvement?	formalized partnerships with knowledge institutions and platforms as a part of the Asia-Pacific Disaster Resilience Network to sustain the knowledge base, data and analytical infrastructure for providing technical support and capacity development to high-risk, low-capacity countries beyond the duration of the project?	unique views of the Portal. Reports, news articles and publications have used the tools and analytics of the Portal to report on resilience issues	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Significant response rate Availability of relevant reports and documents
Cross-cutting Issues	To what extent were cross cutting issues, including gender mainstreaming and disability inclusion, integrated into the design and implementation of the project?		Percent of women participating the project activities, e.g., workshops, seminars, etc. Project meets the assigned GEM1 marker, as well as inclusion of gender disaggregated data in the Portal.	Available relevant documents and reports Government officials, representatives of member States, ESCAP staff, and other stakeholders	Desk review, interviews, and surveys	Willingness to participate Significant response rate Availability of relevant reports and documents

Annex 4: Data collection instruments

The data collection instruments include desk review of relevant documents, stakeholder survey, individual interviews with stakeholders, and consultations with relevant ESCAP secretariat staff and Reference Group.

- Desk review of relevant documents
  A desk review of relevant documents and reports was made including, among others, the documents and reports listed in Annex 6.

- Stakeholder survey
  An electronic survey was administered targeting government officials, implementing partners, and participants in various DA12 DRR project activities. The selection of stakeholders for the evaluation survey ensured that there was equitable representation from the project participating countries, and that the views of both male and female stakeholders were equally represented.

- Individual interviews
  Individual interviews via video/audio call were made with relevant ESCAP officers and government officials, and with other government stakeholders, development partners, and DA12 DRR project partners and cooperators. The selection of interviewees ensured that there was equitable representation from the project participating countries, and that the views of both male and female stakeholders were equally represented.

- Consultations with relevant ESCAP secretariat staff and Reference Group
  Consultations via audio/video call with relevant ESCAP secretariat staff and members of the Reference Group were conducted to get a better understanding of the various aspects of the evaluation including its design and implementation and provide a useful basis for collecting other relevant data. The consultant also regularly consulted with the Evaluation Unit, SPMD and the Disaster Risk Reduction Section, IDD.

Annex 5: List of individuals interviewed

The list of individuals interviewed is presented chronologically, in the order the interviews were conducted (18-31 January 2024).

Name	Title/Position/Organization
Ms. Leila Salarpour Goodarzi	Associate Economic Affairs Officer, SRO-SSWA, ESCAP
Mr. Masutomi Yuji	National Institute for Environmental Studies, Japan
Mr. Muhibuddin Usamah	Scientific Officer, DRR, MHEWS and Public Services Branch, Services Department, World Meteorological Organization
Dr. Niladri Gupta	Senior Water Resources Management Specialist, Asian Disaster Preparedness Center, Thailand
Mr. Sudip Ranjan Basu	Senior Officer, Sustainable Development, SRO-Pacific
Mr. Chimi Dorji	Senior Program Officer, Department of Local Governance and Disaster Management, Chang Olakha, Thimphu, Bhutan
Ms. Valentina Grigoryan	Senior Principal Adviser to Director, Hydrometeorology and Monitoring Center, Ministry of Environment, Republic of Armenia
Mr. Paul Janecek	Chief Executive Officer, Think Blue Data Co., Ltd.
Prof. Indrajit Pal	Assistant Professor and Chair, Disaster Preparedness, Mitigation and Management, Asian Institute of Technology, Thailand
Mr. Khaled Mashfiq	Program Specialist, Disaster Risk Management and Climate Resilience Section, UNITAR
Ms. Letizia Rossano	Director, Asian and Pacific Centre for the Development of Disaster Information, ESCAP

Annex 6: List of documents reviewed

Annual Progress Report, DA12 Project on "Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific," December 2020.

Annual Progress Report, DA12 Project on "Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific," December 2021.

Annual Progress Report, DA12 Project on "Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific," December 2022.

Asia-Pacific Disaster Report 2021, Resilience in a riskier world: managing systemic risks from biological and other natural hazards, 25 August 2021.

Asia Pacific Disaster Report 2022 for ESCAP Subregions: (a) Summary for Policymakers; (b) Pathways to Adaptation and Resilience in South and South-West Asia; (c) Pathways to Adaptation and Resilience in Pacific SIDS; (d) East and North East Asia; and (e) Pathways to Adaptation and Resilience in Southeast Asia.

ESCAP, Conclusions and Recommendations: Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific, Suva and online, 7 December 2022.

ESCAP, 4th Regional Learning Platform: Targeting transformative adaptation for riskier times, 24 July 2023.

ESCAP, Regional Learning Platform, 23 - 24 August 2021.

ESCAP, Tentative Agenda: Consultation workshop on capacity development in disaster and climate risk informed SDGs in Lao PDR, Vientiane, 10 November 2022.

ESCAP Blog, 2022: A year when disasters compounded and cascaded, 04 January 2023.

ESCAP Blog, Early warning for all: Saving lives in Asia and the Pacific, 12 October 2022.

ESCAP Blog, Managing riskier Asian monsoon is key to region's resilience, 27 September 2022.

ESCAP Blog, Five action points for a resilient future, 22 August 2022.

ESCAP Blog, Transitioning from risk to resilience with SDG localization, 18 July 2022.

ESCAP Blog, Cascading risks disrupting food supply chains: transformative adaptation is the way forward, 08 June 2022.

ESCAP Blog, 'Code red' for region's climate should increase focus on adaptation, 04 April 2022.

ESCAP Blog, Early onset of heatwaves in South Asia calls for a sub-regional action pathway of climate resilience, 13 May 2022.

ESCAP Blog, Promoting climate resilience through science: Critical for Asia and the Pacific, 06 October 2021.

ESCAP Blog, Tonga eruption: a reminder of the cascading risks and vulnerabilities of SIDS, 31 January 2022.

ESCAP/CDR(8)/6, Committee on Disaster Risk Reduction, Eighth session, Bangkok and online, 25–27 July 2023.

ESCAP/CDR/2021/3, Committee on Disaster Risk Reduction, Seventh session, Bangkok and online, 25–27 August 2021.

ESCAP Manuals and Training Materials, Adaptation and resilience to drought: from know how to do how, 29 December 2020.

ESCAP Press Release, New report highlights increased disaster risks for the Pacific, 13 September 2022.

ESCAP Policy Brief, Protecting the most vulnerable to cascading risks from climate extremes and the COVID-19 in South Asia, 14 August 2019.

ESCAP Policy Brief, When crises converge: responding to natural disasters in South Asia during Covid-19, 23 December 2019.

ESCAP Policy Brief, Investing in innovative solutions to manage cascading disaster risks in South Asia: key takeaways for stakeholders, 23 December 2019.

ESCAP Policy Brief, Disaster-responsive social protection in the Pacific small island developing states, 09 February 2020.

ESCAP Policy Brief, Pathways to manage cascading risks and protect people in South Asia: key takeaways for stakeholders, 25 September 2020.

ESCAP Policy Brief, Weaving a stronger fabric: managing cascading risks for the climate resilience, 30 April 2021.

ESCAP/UNDRR Policy Brief, Climate resilient infrastructure: building resilience to future uncertainties and shock, 2021.

ESCAP Working Paper, Scenario-based risk analytics for managing cascading disasters: a pathway to manage risks and protect people in South Asia, 13 November 2020.

ESCAP Working Paper, Seasonal outlook to socio-economic impact-based forecasting: proposed methodology and key results - building on the seasonal forecasts of South Asia Climate Outlook Forums 2020, 28 December 2020.

Project Document, Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific, 12th Tranche of the Development Account.

UN Bhutan, Terms of Reference: Disaster Risk Reduction and Emergency Preparedness Working Group, 12 July 2022.

Annex 8: Data and Other Relevant Information

Table A8.1. Ratings from online interviews

Interviewee No.	Impact	Relevance	Effectiveness	Efficiency	Sustainability	Gender
1	4.5	5	4.5	4.5	4.5	4.0
2	4.5	4.5	4.5	4.5	4.5	4.5
3	4.5	5	4	3.5	4	4
4	4.25	5	4	4	3.75	5
5	4	5	4	4	3.5	4
6	5	5	4	4.5	5	5
7	5	5	4.5	5	5	5
8	5	5	5	5	5	5
9	3.5	5	4.5	5	4	5
10	4	5	3.5	4	3	4
11[14]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Average of each parameter	**4.43**	**4.95**	**4.25**	**4.40**	**4.23**	**4.55**

n.a. – not applicable

Ratings:

1 – not satisfactory/not relevant/not effective/not sustainable

2 – somewhat satisfactory/somewhat relevant/somewhat effective/somewhat sustainable

3 – moderately satisfactory/moderately relevant/moderately effective/moderately sustainable

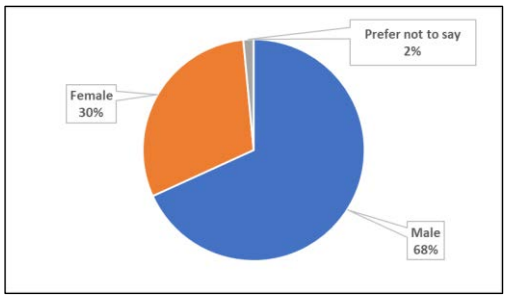
4 – satisfactory/relevant/effective/sustainable

5 – highly satisfactory/highly relevant/highly effective/highly sustainable

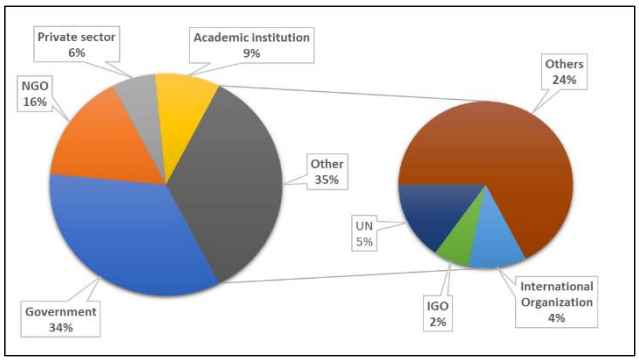
[14] Interviewee 11 stated that she was not involved with the project as a partner, collaborator, or participant in any project activity. During the interview, she expressed strong disappointment for not having been invited to participate in the project although the institution that she heads is a subsidiary body of ESCAP and is explicitly involved in disaster information management.

Table A8.2. Survey Responses

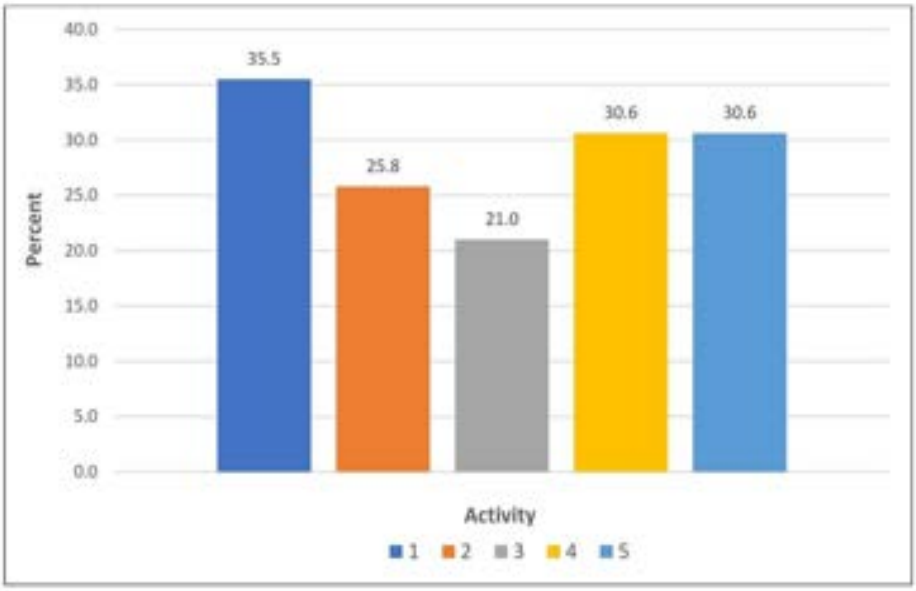
Gender profile of respondents



Type of organization of respondents



1. In which of the following project activities did you take part?



Activity

1 Regional seminar to discuss the results of the scientific study/mapping and their policy implications for forging policy coherence at the country level.

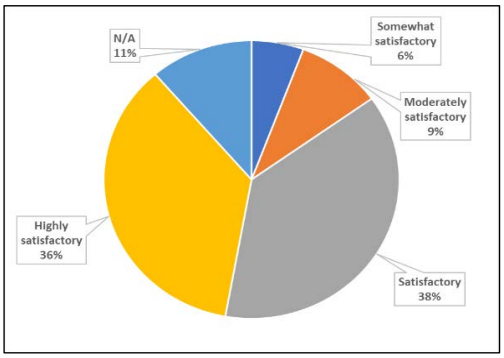
2 National workshop to demonstrate the application of tools and services in target countries in the context of existing mechanisms.

3 Online consultation for peer learning on policy coherence for disaster, climate and health and resilience building.

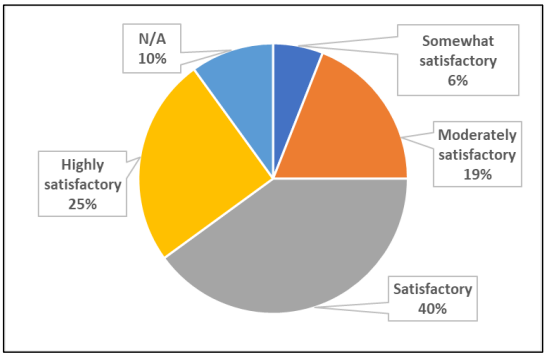
4 Establishment of the ESCAP Asia Pacific Risk and Resilience Portal for efficient risk informed decisions on climate and disasters.

5 Others

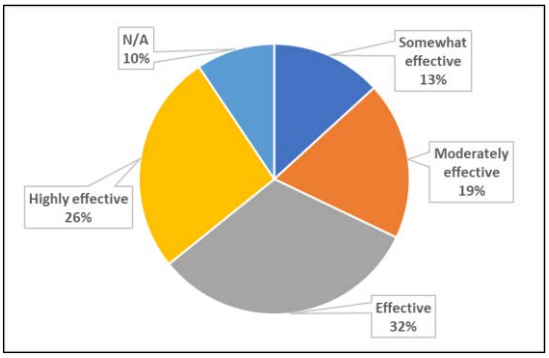
3. To what extent was the project designed based on needs of the target beneficiaries?



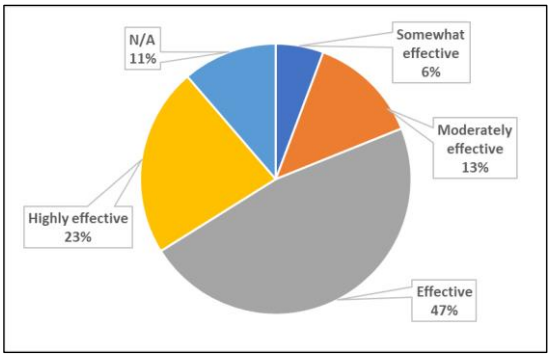
4. To what extent has the project followed an inclusive and participatory approach to engage national stakeholders to ensure relevance to local needs and ownership?



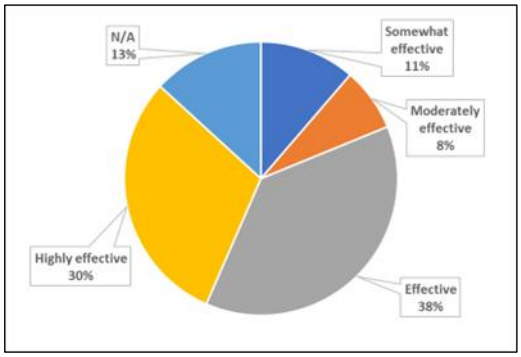
5. How effectively has the project strengthened the capacity of selected countries in Asia and the Pacific to mitigate the impacts of climate-related risks to achieve the SDGs?



6. At the regional scale, how effectively has the activity/project strengthened knowledge repository to enhance policy coherence for disaster risk reduction and resilience building in selected Asia-Pacific countries?

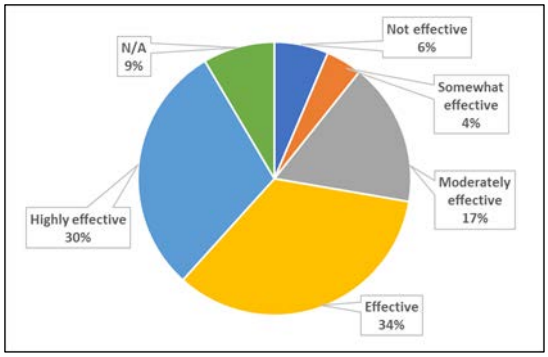


7. Within the targeted high-risk countries, how effectively has the project enhanced knowledge and capacity to operationalize policy coherence for disaster risk reduction and resilience-building?

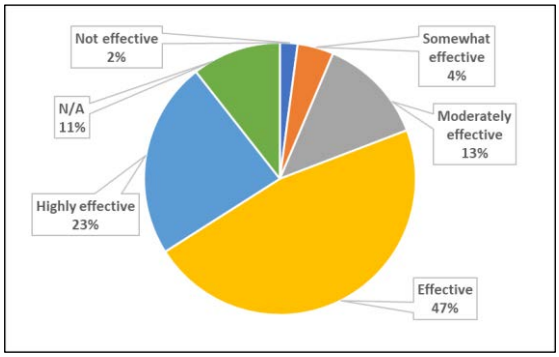


8. How effectively has the project supported countries in the following areas:

8.1. Enhancing their access to emerging technologies and innovations in data and information including effective early warning systems and services?

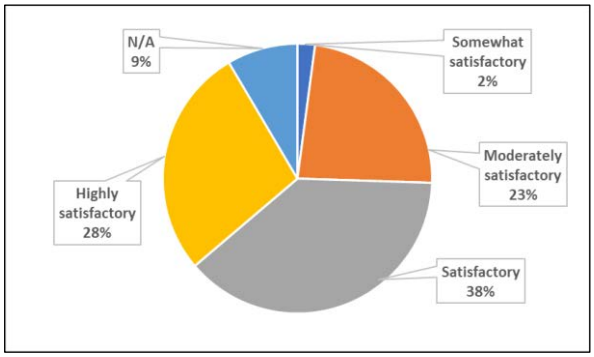


8.2. Demonstrating how a specific risk-informed policy instrument, tool, mechanism, or investment could better contribute to 'leaving no one behind'?

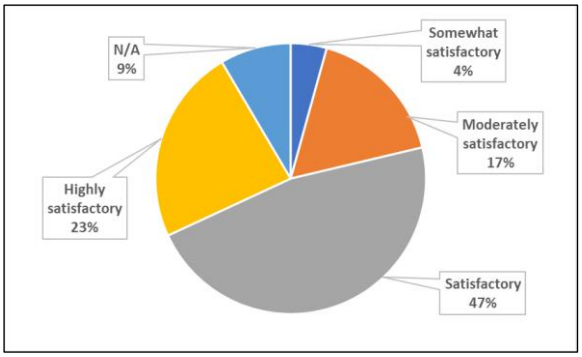


9. To what extent has the project contributed to any of the following:

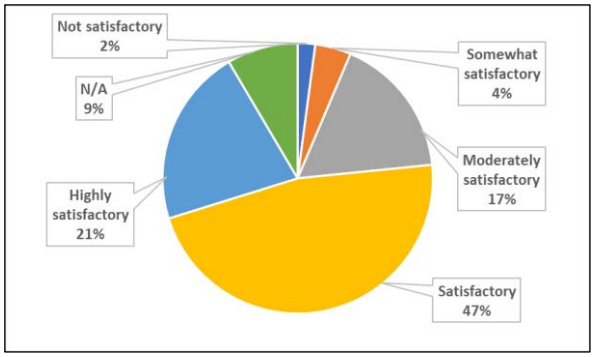
9.1 Deepening their understanding of climate-related risk vis-à-vis the SDGs.



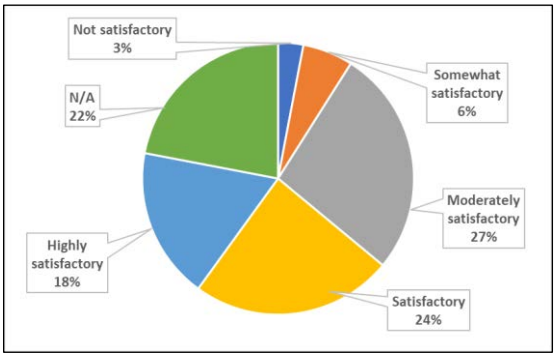
9.2 Strengthening institutional arrangements and regional cooperation frameworks to produce actionable risk assessments, effective early warning systems and communicate the results for policymaking.



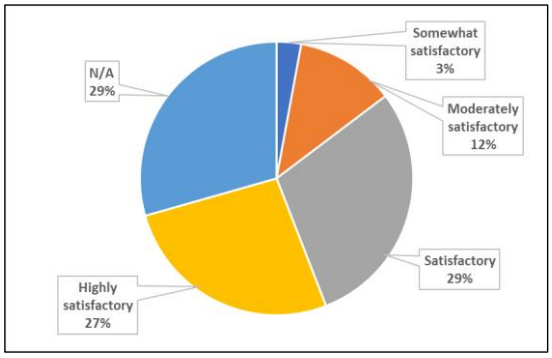
9.3 Enhancing the capacities of their development planning, finance, and SDG implementation bodies to implement risk-informed SDG plans, programmes, and investments.



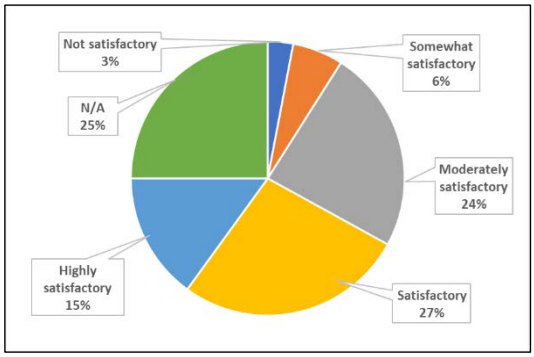
10. To what extent has the project promoted the establishment of an institutionalized mechanism for championing risk-informed development/SDG implementation in the target countries?



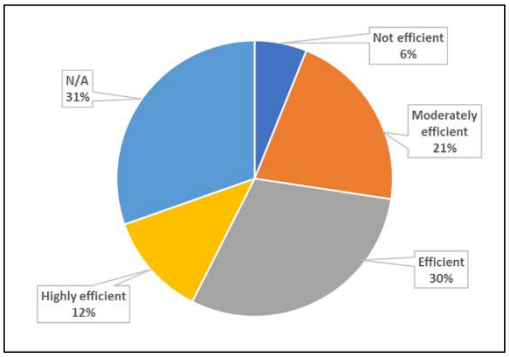
11. To what extent has ESCAP formalized partnerships with knowledge institutions and platforms as a part of the Asia-Pacific Disaster Resilience Network?



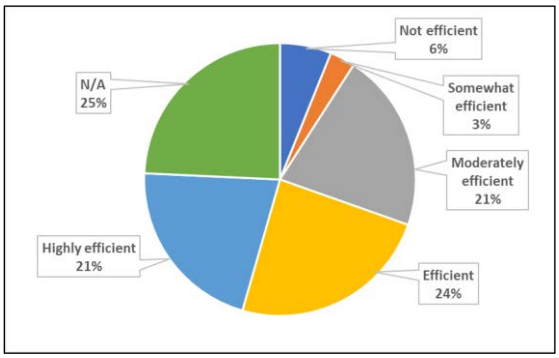
12. To what extent were cross cutting issues, including gender mainstreaming and disability inclusion, integrated into the design and implementation of the project?



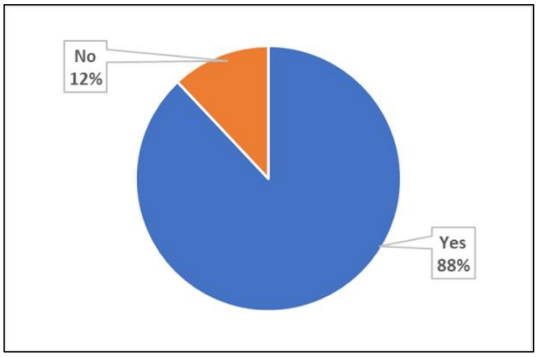
13. Has the activity/project achieved efficiency in implementation by making use of comparative advantages and the creation of synergy?



14. How efficiently has the activity/project provided in-depth technical and advisory support and opportunities for regional knowledge exchange and learning?



15. Should a follow-up project be developed and replicated in other countries in Asia and the Pacific to further enhance their capacities to mitigate the impacts of climate-related risks?



Annex 7: Management response

EVALUATION MANAGEMENT RESPONSE AND FOLLOW-UP PLAN

"ESCAP commits to addressing the findings and recommendations of each evaluation through a management response and follow-up action plan." (ESCAP Monitoring and Evaluation Policy and Guidelines 2023)

Title of Evaluation: Evaluation of the Development Account project on "Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific" **Date of completion: April 2024**
General Remarks by Management
ESCAP management appreciates the comprehensive evaluation conducted on the project, "Operationalizing disaster risk reduction and resilience-building in Asia and the Pacific." The evaluation's findings and recommendations are acknowledged as highly relevant and useful for guiding future initiatives. The management concurs with the overall positive assessment of the project's impact on enhancing disaster risk reduction (DRR) and resilience-building efforts in the region. While the evaluation highlights significant achievements, including the development and implementation of the Asia-Pacific Risk and Resilience Portal, it also underscores areas requiring further attention. The suggestions for expanding the Portal's coverage, enhancing data integration, and incorporating gender and disability disaggregated data are particularly valuable. Management recognizes the importance of these recommendations and commits to integrating them into the next phases of development of the Portal.

Recommendations	Management Response	Follow-up Actions	Indicator of Completion
1 Continue the development and updating of the Asia-Pacific Risk and Resilience Portal, including through the next phases of the Development Account, to fully cover all the countries in Asia and the Pacific. The upgrades/expansion may include expanding the Decision Support System and Portal storyboards to cover more countries; enhancing country data gathering using interactive charts and smart filtering; intensifying development of a mobile version of the Portal; and updating data automatically.	Agreement	The Portal development will continue under the next Development Account project (DA16) and expand the subnational level analysis to additional countries (Bhutan, Lao PDR, Nepal). Under the next DA project, the Portal will be further upgraded with downscaled climate analysis to inform decision-making processes and strategies in energy and food security.	Progress report of DA16 project describing the upgrade of the Portal.
2. Develop programmes to build national capacities for disaster preparedness, adaptation and resilience through effective and widespread utilization of the Asia-Pacific Risk and Resilience Portal as well as by leveraging innovations and sharing information, expertise, resources and good practices. ESCAP, through its subregional offices and in partnership with subregional organizations and other relevant UN agencies, should consider developing national capacities to conduct disaster risk evaluations, guide the subsequent development of disaster risk mitigation and management strategies, and enable governments to adopt strategies that move beyond the traditional focus on a hazard-by-hazard approach to a multi-hazard approach.	Agreement	Under the next development account project (DA16), the Risk and Resilience Portal will continue to be deployed at the national level, for National Adaptation Process and for Early Warning for All Roadmaps. National level workshops to build national capacities for disaster and climate analytics will be undertaken.	Progress report of DA16 project indicating completion of national level capacity programmes on the use of the Portal Tools developed at the country level downscaled and enhanced at a more granular level for both disaster and climate analytics at the local level

3. Use big data to measure and analyse the nexus between DRR and gender and disability in Asia and the Pacific. Big data could be used for producing appropriate indicators relevant to the DRR-gender-disability nexus. The collection and utilization of gender and disability disaggregated data is important in disaster statistics, which will also require technical capacity enhancement of relevant officials and stakeholders. Additionally, it would be useful to collect experiences of persons with disabilities in disasters, analysing root causes of such experiences, and identifying policy solutions.	Agreement	Under the next development account project (DA16), the Risk and Resilience Portal will add gender and disability disaggregated data, where available. Some follow up actions can also be further taken for the Disability inclusive DRR e-learning tool that DRS has developed in collaboration with SDD	Progress report of DA16 project indicating gender and disability data added in the Portal
4. Develop a regional strategy to support the achievement of early warnings for all by strengthening multi-hazard early warning systems in Asia and the Pacific in coordination with member States and relevant partners. The regional strategy is expected to enhance foresight planning through improved knowledge and data generated using the Risk and Resilience Portal as well as the Asia-Pacific Disaster Report and relevant subregional reports.	Agreement	ESCAP is already developing a regional strategy as the key mandate from the 8th Session of the Committee on Disaster Risk Reduction. Under the mandate, early warning for critical sectors such as food security and energy will also be a key component of the overall early warning initiatives in pilot countries.	Present a strategy roadmap at the 9th Session of the Committee on Disaster Risk Reduction

5. Develop a joint programme on incorporating digital technologies including AI into disaster response and management involving all IDD sections in collaboration with, among others, APCICT, APCTT, and APDIM. By leveraging data analytics, real time monitoring, and advanced communication technologies, digital rescue systems can significantly enhance the effectiveness and efficiency of disaster relief operations and provide timely and targeted assistance to affected communities during emergencies.	Management agrees with this recommendation- particularly the use of digital technologies and AI in disaster management. .	Under the DA16 project, ESCAP is developing a second-generation AI-based model for disaster and climate risk analytics under the ESCAP Risk and Resilience. In this context, IDD will collaborate with APCICT, APCTT and APDIM, including through presentations at their governing council meetings, on risk analysis as well as climate adaptation, with potential for further funding to advance these efforts.	Progress Report of the DA16 project describing the presentations delivered at governing council meetings