STRENGTHENING EARLY WARNING SYSTEMS IN THE CARIBBEAN
SOUTH-SOUTH COOPERATION STRATEGY

PRIOR KNOWLEDGE AND IDENTIFICATION OF RISK
MONITORING AND WARNING SYSTEMS
DISSEMINATION AND COMMUNICATION
RESPONSE CAPACITY
STRENGTHENING EARLY WARNING SYSTEMS IN THE CARIBBEAN
SOUTH-SOUTH COOPERATION STRATEGY

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ACRONYMS

AMA » Environmental Agency (Cuba)
CDEMA » Caribbean Disaster Emergency Management Agency
CDM » Comprehensive Disaster Management
CEWS » Community Early Warning Systems
DIPECHO » Disaster Preparedness Program of the European Civil Protection and Humanitarian Aid Operations
DRR » Disaster Risk Reduction
ECHO » European Civil Protection and Humanitarian Aid Operations
EU » European Union
EWS » Early Warning System
HIP » Humanitarian Implementation Plan
IFRC » International Federation of Red Cross and Red Crescent Societies
INRH » National Institute of Hydraulic Resources (Cuba)
INSMET » Cuban Institute of Meteorology (Cuba)
LAC » Latin America and the Caribbean
MHEWS » Multi-Hazard Early Warning Systems
SSC » South-South Cooperation
SVG » Saint Vincent and the Grenadines
TrC » Triangular Cooperation
UNDP » United National Development Program
1. INTRODUCTION

The Caribbean region is highly prone to natural hazards such as hurricanes, floods, volcanic and seismic activities, droughts and forest fires. The increasing impact of global climate change and the risk posed by a range of natural, environmental and technological hazards are among the Caribbean’s most critical development problems. The past decades have been marked by an intensification of the impact of disasters, such as destruction of livelihoods and communities, as well as a setback in development gains.

Due to the high levels of vulnerability, there is a broad recognition of the need to strengthen capacity for preparedness, response, and recovery, and integrate risk reduction measures into development paths to create safe, resilient and sustainable communities and states in the Caribbean. As one component to reducing risk, the Caribbean Comprehensive Disaster Management (CDM) Strategy 2014 – 2024 prioritizes integrated, improved and expanded community early warning systems. This focus is reinforced by the Sendai Framework for Action which calls for enhanced disaster preparedness.

Likewise, UNDP’s Strategic Plan 2018 – 2021 aims to strengthen resilience to crisis and shocks and support countries with assessments, planning tools and mechanism so that gender-sensitive and risk-informed prevention and preparedness solutions are available to limit the impact of natural hazards. Reducing risk and building resilience is a theme that cuts across the Sustainable Development Goals.

As identified in the ECHO Humanitarian Implementation Plan (HIP) 2017, preparation and response capacities in the Caribbean have improved. However, the need for further action to address preparedness capacities, reinforce Early Warning Systems (EWS) and foster exchanges between countries and linkages with regional institutions is crucial. The HIP specifically highlighted that “collaboration between countries on Early Warning Systems to exchange on good practices should be
fostered” and stressed that the “compilation of DRR tools and processes endorsed at national and regional level, led by national systems in coordination with the CDEMA, EU Delegations and other development actors” are priority areas for action.

Thus, Antigua and Barbuda, Dominica, Dominican Republic, Saint Lucia and Saint Vincent and the Grenadines (SVG) set out to improve their Early Warning Systems (EWS) through an 18-month project financed by European Civil Protection and Humanitarian Aid Operations (ECHO). The “Strengthen Integrated Early Warning Systems for more effective disaster risk reduction in the Caribbean through knowledge and tool transfer” project sought to strengthen EWS components and close priority gaps at a national level, contributing to the integration of national and community EWS, and addressing sustainability and national ownership of EWS.

The country level actions were supported by UNDP, International Federation of the Red Cross and Red Crescent Societies (IFRC), and the Caribbean Disaster Emergency Management Agency (CDEMA), who embraced a partnership approach and helped reinforce the efforts to realize a more integrated EWS and enhance disaster risk reduction at the regional, national and community level.

The project also aimed to increase access to tools and knowledge of EWS at the regional, national and regional level, through development of, improvement to, and translation of models, methodologies and toolkits. An emphasis was placed on ensuring knowledge transfer, documentation and communication. As part of this commitment, two key processes - EWS National Assessments and South-South Cooperation - and five country case studies have been systematized.

This document provides a systematization of the results, lessons, processes and tools used in the process of South-South Cooperation (SSC) between the five Caribbean countries and Cuba, given the latter’s experience and expertise in disaster risk reduction and early warning systems. The cooperation consisted of the selection of a priority action in the EWS Roadmap of the recipient country, the preparation of a Solution Package by Cuban experts to address it and transfer those capacities to the country, including the adaptation of their tools to the recipient’s context, and the implementation of proposed solutions themselves.
2. SOUTH-SOUTH COOPERATION STRATEGY

2.1 Principles and Standards of South-South Cooperation

There is now more than 60 years of experimentation and experience accumulated in the developing regions known as the global South. There is an enormous wealth of knowledge and data on a wide variety of models, policies, political and institutional arrangements, and technologies, many designed and sustained indigenously, while tailored specifically to the circumstances of a diverse set of countries. As more countries successfully test and find solutions, they substantially and progressively lower the marginal cost to other countries of trying the same options; in other words, they generate economies of scale.

Based on principles of mutual benefit, sovereignty, ownership, equality, non-conditionality and non-interference, SSC has its own role as a cooperation modality and is a complement to traditional development assistance.

According to the 2016 Framework of Operational Guidelines on United Nations Support to South-South (SSC) and Triangular Cooperation (TrC), SSC is defined as “a process whereby two or more developing countries pursue their individual and/or shared national capacity development objectives through exchanges of knowledge, skills, resources and technical knowhow, and through regional and interregional collective actions, including partnerships involving Governments, regional organizations, civil society, academia and the private sector, for their individual and/or mutual benefit within and across regions.”


SSC and TrC has been promoted and supported by UNDP in the last decade in over 127 countries and more than 3,500 projects, yet one of the main findings of its Evaluation of UNDP’s Contribution to SSC and TrC has been the lack of a systematic approach. This is in part due to insufficient methodological guidance on how to develop SSC projects and initiatives to ensure SSC goes beyond isolated events and information exchanges and achieves sustainable knowledge transfers and the development of capacities, based on measurable results. In other words, that the modality results in the acquisition of a new skill or capacity upon its completion, and not just in an exchange of information or partial transfer of knowledge.

UNDP outlines the following elements and considerations, to be adhered to when implementing SSC initiatives:

- Based on UN values and safeguards;
- Results-based, focusing on development results;
- Rigorously designed with attention to metrics, measurements and M&E protocols, including the use of independent verification, which can provide assurance on quality and performance;
- Contains clear governance arrangements for all partners outlining responsibilities of guidance, design and monitoring of the initiative;
- Sustainability-focused, staying with an effort till its completion to secure ownership and capacities to sustain the initiative after UNDP’s exit; among others.

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2.2 General Steps for SSC Transfers

From a procedural standpoint, SSC has six basic dimensions:

1) **Demand and Offer**: The offer is the knowledge and packages a country has that can be disseminated and transferred to other interested countries. The demand is the needs or gaps in capacity a country has and wants to address through a south-south initiative. Defining and refining the demand ideally entails an institutional capacity assessment of the recipient institutions, so the intervention can be targeted with more specific focus on the technical or functional capacities to be developed or reinforced.

2) **Adaptation**: This is the process where the knowledge of the offering country is adapted and tailored to the local context and needs, so that it is relevant and useful and takes into consideration the specificities, constraints and differences of the recipient country.

3) **Transfer**: This is the process through which the knowledge, skill and other capacities are transferred from the offering country to the recipient country who requested it. There is a diversity of methods that can be used to transfer capacities. These include scoping missions; guided visits; technical trainings and trainer of trainers; technical assistance missions; traineeships, exchange seminars; and knowledge fairs, among others.

4) **Implementation**: Implementation of newly acquired capacities, models, tools or methodologies can be tested during the transfer itself, to assess how well the knowledge was absorbed. A measure of successful implementation is the degree to which the capacity, model, or tool becomes part of the regular modus operandi of an institution, community or other mechanism.

5) **Measuring**: Any SSC initiative needs to have a solid results-based management approach to ensure it is effectively creating capacities and contributing to changes in development conditions. This entails having clear outcomes, outputs and measurable baselines, indicators and targets, as well as a monitoring and evaluation strategy to capture those results with evidence.

6) **Sharing**: Whenever possible, SSC initiatives should provide feedback into the national, regional and global knowledge pool, capturing lessons and good practices in its thematic area and fostering new and innovative ways to conduct south-south learning.

2.3 Applying a South-South Cooperation Strategy

The “Strengthen Integrated Early Warning Systems for more effective disaster risk reduction in the Caribbean through knowledge and tool transfer” project incorporated a SSC strategy that harnessed the offer of expertise in disaster risk reduction, and in EWS specifically, that the Cuban experience represented, connected this to the demand in Dominica, Dominican Republic, St Lucia, and SVG, and facilitated the transfer of knowledge and capacity to strengthen national and community level preparedness.

a. **Strengthening the Offer**

To strengthen the capacity of the offering country to transfer knowledge and capacities to others, three steps are essential:

- The knowledge that an offering country wants to transfer must be fully documented and developed into a **packaged model** that includes the conceptual framework of the model; the main components of the model; the methodological step-by-step on how to implement it (with tools, formats and guidelines); the considerations and success factors that optimize its effectiveness; the institutional and technical profile of the potential recipient entities; and a body of evidence supporting that the model is indeed an effective best practice that has produced results over time.
• Experts in the model’s different components must have the capacities to transfer the knowledge to others, which includes didactic and pedagogical skills; training in SSC to ensure the actions incorporate a capacity building approach; and user-friendly and results-based tools and formats to support the transfer.

• A SSC coordinating mechanism must manage the initiative, including coordinating the network of experts; guiding the organization, preparation and adaptation of each transfer; and managing and following-up its implementation.

In the context of this project, Cuba’s offer was strengthened through the following strategies:

**Systematization of the Offer:** One of the most positive aspects is that Cuba not only had the expertise but had also systematized and packaged that knowledge into the Cuban Early Warning Systems Toolbox. The Toolbox offered a series of methodologies, instructional tools, and publications that showcased the results, advances, and approaches used to strengthen EWS, with a total of 63 products divided into four pillars: risk knowledge, monitoring and warning systems, dissemination and communication, and response capacities.

This Toolbox was developed by a wide range of institutions under coordination of the Environmental Agency (AMA, Spanish acronym), the Cuban Civil Defence, the Cuban Institute of Meteorology (INSMET) and the National Institute of Hydraulic Resources (INRH), with the support of UNDP Cuba and ECHO. A National Validation workshop of the tools was conducted in March 2018; an EWS Experts SSC Committee was formed to take stock of all the different methodologies and tools that had been produced over the years and determine which ones should be included, revised and packaged for the Toolbox. The products were translated into English and, where relevant, French.

The Toolbox was launched at the “Regional Exchange of Experiences for Disaster Risk Reduction” in the Dominican Republic in April 2018.

**Coordinating Mechanism:** Cuba established a mechanism - the SSC Committee of EWS Experts - to coordinate its SSC activities. This Committee had two levels of participation:

1) The Operational Expert Committee, consisting of 12 experts at national level

2) The Extended Expert Committee, consisting of 30 specialists representing a broad range of disciplines from across the country

This Committee was tasked with coordinating SSC initiatives and carrying out the following activities:

• Reviewing and validating the Cuban Toolbox

• Receiving requests from countries for specific expertise and capacities

• Conducting scoping missions to the countries to understand the need of the recipient country

• Drafting Solution Packages that Cuba could offer to recipient countries

• Implementing knowledge transfers through trainings and other methods of capacity development
**Training in South-South Cooperation:** To strengthen the capacity of Cuban experts to transfer their knowledge, 30 experts were trained in SSC concepts, protocols and methodologies by the UNDP Regional SSC Specialist, through two webinars and a two-day presence-based training session in Cuba during the month of March of 2018.

** SSC Training Content & Tools **

- UNDP's approach to south-south cooperation: [Presentation of the Webinar](#)
- Minimum Criteria to carry out an SSC Exchange: [Checklist](#)
- Designing Solution Packages: [Presentation & Protocol Guide & Template](#)
- Cuba’s offer for EWS SSC
- SSC Planning Template

**b. Defining the Demand**

To define the demand, the countries requesting cooperation carried out an identification of needs, which included assessing gaps in their early warning systems and potential solutions.

**Initial Identification of Needs:** The participating Caribbean countries carried out national level EWS assessments, through the application of the MHEWS Checklist and a process to understand the major gaps in the country. This was a first input in defining the demand.

**Scoping missions and exchange meetings:** A scoping mission and exchange meetings were carried out by UNDP, CDEMA, and Cuban specialists with the recipient countries to capture the context, specific needs, and priority gaps; discuss how they matched with the offer in the Cuban EWS Toolkit; and reach agreements on potential areas of collaboration.

**C. Solution Packages**

To respond to the demand, a Solution Package was prepared. These are simplified formats used to delineate an initial south-south proposal and provide a starting point to then prepare a more detailed initiative that contains all or most of the 6 phases of SSC. The Solution Packages are composed of: 1) a brief summary of the context, 2) a brief summary of capacity gaps, 3) a work plan matrix with outputs, indicators and baselines, 4) Work team and description of roles and responsibilities of recipient and offering country, 5) List of Tools being transferred, 6) Schedule of Activities, and 7) Cost Estimate. A guiding document, the South-South Solutions Package Protocol, outlined the content of a Solutions Package and was shared in the SSC trainings carried out with offering and recipient countries. Cuba prepared the Solution Packages, each which proposed multiple choices of expertise and models that could respond to the need.

**Priority Action:** The recipient country then selected one of the solutions offered and prepared a priority action proposal based on the Gap Report, that contained:

- The tools to be adapted and transferred, and the desired result
- The activities, budget and other resources for its implementation

**Implementation:** Priority actions included volunteer river observer trainings; hazard, risk and vulnerability studies; DRR legislation review; and alert scripting and drills. The priority actions tested the newly acquired capacity for adaptability, relevance, and feasibility.

The implementing partners - UNDP, CDEMA, and the IFRC - each supported one of the recipient countries. UNDP supported Dominica, Dominican Republic, and SVG; CDEMA supported St. Lucia; and, IFRC supported Antigua and Barbuda. This support focused on:
- **Adaptation:** The implementing partners supported the adaptation of materials to the context, time available and language of the recipient countries.

- **Transfer:** The implementing partners supported the organization, facilitation and implementation of the transfer, including trainings, training of trainers, technical assistance, and procurement of equipment.

- **Implementation:** The donor financed the priority actions, with allocated budgets in the 18,000 – 22,000 USD range. The implementing partners helped facilitate discussions on sustainability.

One of the weaknesses in SSC to date is the lack of systematization of the knowledge and results that accompany this modality of cooperation. This document represents an effort to create and share knowledge, and to capture the different SSC initiatives and offer them to the region and beyond, illustrating the processes, lessons and recommendations.

EWS Priority Actions in four countries (Dominica, Dominican Republic, SVG, and St. Lucia) were supported through SSC, while Antigua and Barbuda was supported in its selected priority action through traditional cooperation.

The cases in the accompanying documents seek to showcase the work these five Caribbean nations have undertaken to strengthen their early warning systems.
**STRENGTHENING EARLY WARNING SYSTEMS IN THE CARIBBEAN**

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**SSC Strategy**

**DEMAND**
- Assessment of needs through EWS Gap Reports.
- Selection of Lead Recipient Institution.
- Selection of Communities.
- Selection of Offered Solution
- Preparation of Priority Action Proposals.

**OFFER**
- Systematization of the country’s offer into Toolkits.
- Establishment of SSC Expert Committee.
- Training in SSC methods.
- Reception of requests.
- Realization of scoping missions.
- Preparation of Solution Package for Recipient Country.

**ADAPT**
- Adaption of knowledge for training: learning modules, didactic tools, and practical exercises.
- Adaptation of tools to be put in practice by recipient country: manuals, protocols, surveys.
- Translation of all relevant material.

**TRANSFER**
- Definition of the combination of transfer methods to complete a full transfer of capacities, such as:
  - Guided Visits
  - Technical Trainings
  - Technical Assistance Missions

**IMPLEMENTATION**
- Test run of HVR Studies and test run of newly installed meteorological forecast products

**MEASURE**
- Monitoring and final evaluation of the regional project as a whole

**SHARE**
- Systematization of the process, the methods, the lessons and recommendations to generate and share knowledge from this SSC practice

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**Credits**

**Acronyms**

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**Conclusions**

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Three countries in the Caribbean have advanced in policy making for early warning systems, through analysis of gaps and planning a roadmap forward. In most countries, these efforts were supported by Cuban technical assistance, drawing on tested tools and methods as well as the wealth of expertise in early warning systems, preparedness, and risk reduction.

The South-South Cooperation activities undertaken in the Caribbean have rich lessons to add to the global knowledge pool. This includes the precise definition of the demand, the packaging of the offer or the “know how”, and the adaptation of the tools to the local context and needs. Possible challenges related to transferring new capacities and measuring impact merit a results-based planning approach. Likewise, the investment in providing solutions and transferring them should prompt discussion on how to promote sustainability and institutionalization of the transferred capacities. The experience highlights the importance of carefully considering the key steps for effective knowledge transfer.

Horizontal collaboration leverages the knowledge produced in a region sharing similar contexts and exposure to similar hazards and promotes an important and growing trajectory of coordination and harmonization. This systematization aims to make a fruitful contribution to improving the framework and practices required for successful envisioning, planning, coordination, and implementation of South-South Cooperation.