EUROCLIMA+ Semestrial Report

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Programme:	**EUROCLIMA+ in Latin America**
Component:	**Disaster Risk Reduction**
Implementing agency:	**Agence Française de Développement - AFD**
Project name:	Disaster Risk Reduction and Adaptation to the effects of Climate Change against flood and drought hazards in north-central Ciego de Ávila and Camagüey in Cuba, affected by Hurricane Irma
Project code:	ATLAS / PNUD: 00103071 – 00105029 Agreement No.: CZZ 2203-22
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Acronyms

AHS	Automatic Hydrological Station
CBC	Capacity Building Center
CCA	Climate Change Adaptation
DRR	Disaster Risk Reduction
EMNDC (Spanish acronyms)	National Civil Defence General Staff
EWS	Early Warning System
GIAT (Spanish acronyms)	Terrestrial Water Management Group
HVR	Hazard, Vulnerability and Risk
INRH (Spanish acronyms)	National Institute of Water Resources
INSMET (Spanish acronyms)	Institute of Meteorology
MINCEX (Spanish acronyms)	Ministry of Foreign Trade and Investment
NRC	National Radar Centre
PMC	Provincial Meteorological Centre

EXECUTIVE SUMMARY

The project strengthens capacities in 14 municipalities in the provinces of Camagüey and Ciego de Avila to increase resilience to the effects of intense droughts and floods resulting from heavy rains and hurricanes. The impact of these extreme hydrometeorological events is exacerbated by the effects of climate change, as shown by the current complex situation faced in Cuba due to the impact of extreme drought in the east of the country, especially the increase in forest fires in hard-to-reach wooded areas. The project therefore focuses on relevant aspects of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) management. The project contributes to the strengthening of hydro-meteorological monitoring and surveillance with a significant increase in territorial coverage, improving the capacity of local governments and key sectors for integrated management of DRR and CCA. It will also support the transfer of knowledge acquired in previous interventions and capitalise on the new contributions that will be achieved with the results of the project. As part of this strengthening, technologies and management tools will be transferred and technical training of territorial, community, decision-making and technical actors will be supported.

The expected results will directly benefit around 50 institutions at different levels (national, provincial and municipal) linked to hydro-meteorological surveillance and monitoring, disaster risk management and climate change adaptation. A total of 718,781 people (including 352,202 women) in the intervention areas where the coverage of Early Warning Systems (EWS) is being expanded, including the monitoring of the hydrological cycle to improve drought or flood risk management, will benefit indirectly.

During the reporting period, the main activities focused on updating management, diagnostic and planning tools: Bilateral workshops and exchanges were held with national counterparts to update the Operational Procedure for Integrated Drought Management; progress was made in updating the Hazard, Vulnerability and Risk (HVR) flood studies in both intervention territories, in synergy with the EU-funded project "Building coastal resilience in Cuba through natural solutions for adaptation to climate change" (hereinafter "Coastal Resilience") implemented by UNDP; meetings were held with national and provincial partners involved in risk studies to organise workshops for starting drought HVR studies; and exchanges were facilitated for the revision of instructions and manuals related to risk management. At the same time, the Guidance for the Implementation of the Strategic Tool for Integrating DRR and CCA Management into Local Development Strategies (hereafter DRR+ CCA Guidance) was piloted. The Guidance, promoted by UNDP at regional level, was adapted to the Cuban context and validated in this project, in synergy with Coastal Resilience. It should be noted that Cuba was selected as a pilot country in the Caribbean region for the development of this tool, along with three other countries in the continent: Ecuador, Bolivia and Chile. In the case of Cuba, the validation stage has been reached and it is expected that the tool will be adopted as a working tool by the government.

At the same time, progress was made in the import of goods (specialised equipment) and in the construction of the civil works undertaken by the Government, which will guarantee the conditions for the installation and set-up of the equipment to be transferred. As part of the measures to ensure the strengthening of hydro-meteorological monitoring, remote exchanges were carried out to follow up on the completion of these civil works, financed by the counterparts, and a mission to both sites was carried out by the National Institute of Water Resources (INRH) to verify progress, finalise installation details and, on this basis, plan the installation and set-up of the hydrological monitoring equipment.

SECTION 1 – Context

The conditions for project implementation have not changed. The main challenge for implementation is the economic situation in the country, especially the energetic crisis that affected the entire country during the reporting period. Although this situation has improved, the infrastructure conditions of the national energetic system and the availability of fuel remain a challenge for implementation. On the other hand, inflation continues to increase the cost of services required for workshops, design and printing of technical documentation. Nevertheless, the planned activities have been carried out and the work plan is being readjusted according to the evolution of prices without affecting the achievement of the expected results. The implementation team is evaluating digital publications as an alternative.

The conditions related to the economic, commercial and financial blockade imposed by the United States to Cuba continue affecting the procurement process. However, mitigation measures are planned to achieve the project outcomes, as outlined in the project document. COVID-19 is under control throughout the national territory, based on the progress of vaccination and protection measures, which are still being carried out in the context of meetings or other actions carried out in closed spaces or with the participation of several people.

SECTION 2 – Activities

Activity	Planned (P) or new (N)	Completed YES, NO, on track	Description
Result 1. Strengthening of surveillance, monitoring and forecasting system of the hydro-meteorological EWS for drought and flood monitoring and forecasting.			
Activity 1.1. Revitalize the hydrological surveillance,	P	Yes	Advanced process of completing the construction of the huts for the installation of the Automatic Hydrological Stations (AHS) (see

monitoring and forecasting system			Annex 1). Completed 5 of the 9 huts needed in Camaguey province and 11 of the 13 has been completed in Ciego de Avila.
		Yes	Carried out INRH mission to the provinces of intervention to verify the progress of the construction work necessary to ensure the safety of the equipment. The mission was also for planning the details of installation and the start-up of the AHS (See Annex 2).
		On track	All the specialised equipment to strengthen hydrological surveillance and monitoring has arrived in the country. These equipment are in process of extraction from the port and transfer to the Camaguey and Ciego de Avila provinces..
		On track	In process the procurement process of computer equipment for data analysis and processing as a component of the strengthening of hydrological surveillance and monitoring. Bids are being evaluated by the implementation team and the provincial counterparts.
		Yes	Improved hydrological surveillance and monitoring of water supply sources with vehicles delivered to the Provincial Hydraulic Exploitation Enterprise. In particular, water quality monitoring was improved, with priority given to salinity control in groundwater basins open to the sea, in view of the risk of rising sea levels.

		Yes	Increased the knowledge of 2 INRH specialists on the use, installation and maintenance of equipment to strengthen hydrological surveillance and monitoring (including measuring equipment, data processors and data transmission) through technical training in Germany provided by the supplier. This training improves INRH's capacity to ensure the installation and start-up of the hydrological equipment without the presence of the supplier, reducing the cost of this activity at national level and strengthening the sustainability capacity of this technology (see Annex 3).
		On track	Increased the knowledge and risk awareness of 60 primary school students in the intervention provinces through a series of student workshops on the importance of water, its use and the need to conserve it (See Annex 4). Students are also training on hydrological monitoring and surveillance as part of the Volunteer Rainfall Observers Network. Young people are excellent multipliers of awareness and risk perception in their families and communities. - An exchange was planned from 1 to 4 March 2023 with students and health promotion specialists from Santiago de Cuba province (Prosalud is the entity that is in charge of the health promotion at national and local level, through community work) (See Annex 4).

			The exchange has the objective of sharing the experience of community campaigns developed as part of a project against drought (Suma tu Gota, in Spanish) implemented by the UNDP in this province, to increase risk perception in the event of a drought. The meeting will also include an exchange of experiences on the joint work between the provincial water resources institutions and Prosalud to promote the importance of watersheds and a culture of saving and rational use of water in communities (See annex 4).
Activity 1.2. Improve the weather surveillance, monitoring and forecasting system.	P	On track	Contracted and delivered specialised equipment to strengthen meteorological monitoring and surveillance. The improvement of the Automatic Weather Stations (AWS) and the new ones to be installed will increase the coverage of the meteorological surveillance system in the provinces of intervention. Also they will increase timely decision-making in case of extreme hydrometeorological events, complementing the information issued of the hydrological network at national level. The meteorological surveillance system is strategic for monitoring the climate and weather and predicting the risk of potential droughts according to the behaviour of rainfall, the country's only source of water.

		Yes	Visits were carried out to the sites where the new AWS will be installed and those where they will be upgraded, in order to verify the structural condition of the facilities where this equipment will be located. The good conditions of the facilities for the installation of the equipment was confirmed.
		Yes	Improved meteorological surveillance and monitoring with the delivery of vehicles to the Provincial Meteorological Centres (CMP) from where the AWS are monitored.
		On track	Procurement of IT equipment to strengthen the analysis and processing of data from the meteorological monitoring and surveillance system through the AWS and radar is underway. ICT bids are being evaluated by the implementation team and provincial counterparts.
Result 2. Strengthened capacities for inclusive, gender-sensitive, comprehensive DRR and CCA management by local governments and key sectors to increase resilience to drought and floods.			
Activity 2.1. Train governments and key sectors in the use and implementation of EWS operational procedures.	P	On track	Facilitated exchange between the National Radar Centre and the INRH as part of the actions to integrate the information received from the radars and the pluviometric network of the water resources sector. This action will allow better analysis and forecasting of rainfall behaviour, which will contribute to improving hydro-meteorological surveillance and monitoring, and thus timely decision-making in the face of drought and flood risks.

			The methodology for the use of radar information by the National Radar Centre (NRC) is being revised. This methodology, once verified, validated and systematised, could be transferred to the rest of the country. It will allow better forecasting and facilitate timely decision-making by obtaining more accurate information through the contribution of integrating radar measurements and the pluviometric network of the water resources sector.
			Meetings have been held with the National Civil Defence Staff and key actors linked to the Early Warning System (EWS) to determine the use of mobile phones to facilitate communication in disaster situations. These will facilitate the exchange of data and decision-making in the event of severe droughts and floods. Bids for the purchase of these goods are currently being evaluated.
			Bilateral meetings and a workshop were held to update the Operational Procedure for Integrated Drought Management, led by the EMNDC as the country's lead DRR institution (See annex 5). This document has a national scope and governs preparedness and response to the effects of this hazard. Thirty decision-makers and specialists from the key sectors involved in

			the EWS, namely civil defence, meteorology, water resources, the National Risk Assessment Group of the Environment Agency and mass media such as TV, written press and radio, participated. In addition, officials from the World Food Programme (WFP) were also present due to the synergy with the "Pon tu ficha" project, funded by DIPECHO - EU and implemented by WFP, as lead agency and UNDP. Both agencies have been working in recent years on the analysis of the information contained in this procedure, with the aim of updating it with the advances made in hydro-meteorological monitoring, information and communication flows and risk assessment. The meeting identified the new elements and the gaps to be included in the procedure. A work plan was established and the responsible parties were identified.
Activity 2.2. Support for the updating and analysis of diagnostic and planning instruments.	P	On track	Progress made in updating the flood HVR studies in vulnerable municipalities in the intervention provinces. In the municipalities of Chambas, Ciego de Avila, and Nuevitas, in the province of Camaguey, hazard calculations have been carried out and progress is being made in the calculation of vulnerability. This action will later be extended to the rest of the vulnerable municipalities of both provinces.

			The update of the national methodology for drought HVR studies, which will be piloted in this project, has been completed and is currently being designed and printed. A training on this methodology has been planned for specialists from the provinces of Camaguey and Ciego de Avila in March 2023. This training will support its transfer to the provinces.
			Planned for April 2023 the workshop to start the updating of the drought HVR studies. Th multidisciplinary groups carrying out the studies will be trained in the new methodology.
			The UNDP implementation team and the provincial counterparts are evaluating the IT to be acquired. IT will facilitate the preparation and updating of diagnostic and planning tools, such as the HVR studies and the sectoral Disaster Risk Reduction Plans (DRRPs). The latter are based on the results of the risk studies. This will facilitate disaster risk management and outputs for decision makers for inclusion in provincial DRRPs with the aim of increasing resilience to droughts and floods.
Activity 2.3. Create and strengthen local institutions that support risk management and adaptation to Climate Change.	P	Yes	Validated DRR+CCA Guidance in the municipalities of Nuevitas, in the province of Camaguey, and Caibarién, in the province of Villa

			Clara, in synergy with the Coastal Resilience Project (See Annex 6). - The guidance has been presented to different governmental mechanisms at the national level in order to institutionalise it: 1. Expert Group of the Sectoral Programme for Science, Technology and Innovation "Integrated Disaster Risk Reduction in Cuba". 2. Technical Advisory Council of the Ministry of Science, Technology and Environment, where the HVR studies and methodological tools are approved at the national level . 2. State Administrative Agencies of the Tarea Vida (Life Task) 3. National Climate Change Programme
		Yes	Trained specialists and decision-makers from the new municipal and provincial Disaster Risk Reduction Management Centres (DRRMCs) and Early Warning Points (EWPs) of the most vulnerable communities to be established under the project in Ciego de Avila. The training was carried out as part of an exchange workshop between decision-makers and specialists from the DRRMCs and EWPs of the provinces of Camaguey and Pinar del Río (the latter having solid experience in the use of this government tool).

			The training was given by the National Civil Defence, 2 specialists from the DRRMCs of Pinar del Río, which are a reference at national level, and also by specialists from the province of Camaguey (also with excellent progress in the development of DRRMCs). Thirty decision-makers, technicians and specialists participated, including those from the DRRMC of the municipality of Chambas, in the province of Ciego de Avila, recently created by the Coastal Resilience project, which also carried out visits to 2 municipal DRRMCs in the province of Camaguey and other facilities related to monitoring and risk management benefiting from the project. (See annex 7)
		Yes	Trained 65 decision-makers, technicians and specialists in the work of the EWS and risk management. The specialists were from hydraulic resources institutions, meteorology, mass media and the Capacity Building Centres (CBC) of the provinces of Ciego de Avila (35) and Camagüey (30). It was given by the main key actors in each area linked to these issues (See Annex 8).
		On track	In progress the procurement process of IT to improve risk management with the creation and strengthening of the DRRMC and EWPs.

			Bids are being evaluated by the UNDP implementation team and provincial counterparts.
Activity 2.4. Contribute to increased perception of drought and flood risk and strengthen flood warning through media support.	P	Yes	Trained on the work of the EWS and risk management (mentioned in Activity 2.3), representatives from the main mass media (written press, radio and TV) in the provinces of Ciego de Avila and Camagüey. Participated decision-makers, technicians and specialists from the other sectors benefited by the project. The objective of this training was to transfer knowledge that would allow a better dissemination of the messages issued by the press, using the concepts related to risk management and CCA in a correct way (See Annex 8).
		On track	In progress the procurement process of specialised media to improve dissemination of messages is underway. Bids are being evaluated by the UNDP implementation team and provincial counterparts.
Activity 2.5 Support processes that favour gender-sensitive drought and flood DRR management through their integration in: management tools, analysis of the population's risk perception, non-sexist language, impact on key EWS components.	P	Yes	Trained in gender issues 30 actors who are part of the national group in charge of gender actions in the framework of the project. The main criteria of the counterparts regarding gender stereotypes in their institutions and at national level were presented, as well as the main actions to be developed in the framework of the project to contribute to their elimination (See Annex 9).

		On track	Updated drought and flood risk perception surveys (a complementary tool to the HVR studies to determine social vulnerability) with a gender focus. The surveys are currently being designed and printed.
	N	On track	A gender strategy is being developed at INRH, supported by UNDP through the project. It is under review by UNDP team.
Result 3. Transfer of technologies and management tools, technical training to achieve the expected results, and capitalization of innovation actions and validated experiences for their replication.			
Activity 3.1. Transfer tools to improve hydro-meteorological forecasting, water management and risk management of drought and floods, capitalized on previous projects.	P	On track	- As mentioned in Activity 2.5, the drought and flood risk perception surveys with a gender focus were updated for application in the territories, as part of the updating of the drought and flood HVR studies. - The manual on the importance and care of watersheds was reprinted for transfer to the National Watershed Council and the Intergovernmental Hydrological Programme through a workshop held in December to follow up on compliance with SDG 6. The manual was prepared as part of the "Suma tu gota" project in the province of Santiago de Cuba. - Workshop held to update the Drought Management Operational Procedure, as mentioned in Activity 2.1, to validate it in the project's intervention provinces.

	N	Yes	The Intergovernmental Hydrological Programme workshop was held to analyse the integrated management of water resources through indicator 6.6.1 of the SDGs, taking into account the context exacerbated by the effects of climate change (See Annex 12). The role of the business and academic sectors in integrated water management was also analysed, as well as the importance of involving key sectors to create synergies in actions to mitigate the effects of climate change. At the national level, a working group was created to follow up on compliance with SDG 6 indicators, and the composition of the committee was updated.
	N	Yes	Strategic water management issues were analysed in order to give greater prominence to the impact of climate change on water resources in the Nationally Determined Contributions. The meeting, chaired by the First Vice-President of INRH, was held in synergy with the "Pon tu ficha" project and was attended by 15 specialists and managers at the highest level of key sectors related to water management and DRR. It also analysed the treatment of this issue in other national management instruments and identified the gaps that INRH should work on to improve integrated water management at national level, with a focus on climate change adaptation.

Activity 3.2. Capitalize on the technological contributions and innovations developed in the intervention territories to integrate them into the EWS toolbox under development, in order to replicate them at the national or regional level through South-South cooperation.	P	On track	The actions related to these activities will take place once progress is made on the project results. However, meetings are being organized with national and provincial counterparts to capitalize on the technological contributions and innovations developed in the territories. These contributions, the management tools validated in other projects and those that constitute contributions of this one, can be shared and transferred at the national and regional level through South-South cooperation.
Activity 3.3. Develop a pilot demonstration and reference action at the basin or sub-basin level on integrated drought and flood risk management, as well as gender-sensitive integrated water management.	P	On track	The actions related to this activity will take place in the last six months of the project. However, all the actions that have taken place, as reflected in results 1 and 2, will contribute to this result. The objective of this activity is to validate all the updated tools in the pilot municipality. Examples of the actions that are taking place are: - Training to specialists and managers of the DRRMC and EWP. - Integration of DRR and CCA components based on the use of the DRR+CCA Guidance. - Strengthening of drought and floods hydrometeorological monitoring ad surveillance through the transfer of specialized technology and digital solutions. The latter also to support risk

			management in the pilot municipality. - Training and exchanges for key project stakeholders on DRR, CCA and gender. - Updating procedures and methodologies to improve risk management.
Activity 3.4. Support the exchange of experiences and expertise demanded by the intervention territories, and make available the products achieved for socialization at the national and regional levels (via south-south cooperation).	P	NO	- An exchange was held during the Regional Event on Risk Management and Urban Water, which took place in Guatemala from October 17 to 21. The project, although belonging to the risk management component, participated and presented its experiences in the urban water component, given the results achieved in the project in Cuba, which has a strong water management component. Experience was gained in the implementation of UNDP-led projects to improve integrated water management both in large cities and at the local level. (See Annex 10). - Presented project results by national counterparts and UNDP in the VIII Regional Platform for Disaster Risk Reduction, held in Uruguay, from 28 February to 2 March. Project results were also shared in a meeting of UNDP officers, and the result of Cuba's outreach on EWS and drought management at the regional level (See Annex 11).

SECTION 3 – Results or outputs

SEE ANNEX 1

SECTION 4 – Knowledge management

- Technical training was provided in Germany to 2 INRH specialists on the use, installation and maintenance of hydrological equipment. This training improved INRH's capacity to ensure the installation and set-up of hydrological equipment without the presence of the supplier and, in particular, its sustainability (See annex 3).

- Workshops on the importance of water and its rational use were conducted with 60 primary school students from the intervention provinces as part of the hydrology student workshops, and on hydrological observation and monitoring, as part of the network of voluntary rainfall observers (See annex 4).

- A workshop was held to update the Operational Procedure for Integrated Drought Management, a national document that governs drought preparedness and response. Thirty decision-makers and specialists from the key sectors that are part of the EWS and officials from the World Food Programme (WFP) and UNDP participated, given the synergy of this project with "Pon tu ficha" (See Annex 5).

- Workshops were held to make progress in updating the flood HVR studies. Concluded the calculation of the hazard and progress is being made in the calculation of vulnerability in the municipalities of Chambas, Ciego de Avila, and Nuevitas, in the province of Camaguey.

- Conducted diagnostic and knowledge transfer workshops to validate the DRR+CCA Guidance (Cuba, pilot country in the Caribbean region) in the municipalities of Nuevitas, Camaguey province, and Caibarién, Villa Clara province, in synergy with the Coastal Resilience project (See annex 6).

- An exchange workshop was held between decision-makers and specialists from the DRRMC and EWP of Camaguey, Pinar del Río province, and the new DRRMC and EWP to be created under the project in Ciego de Avila, with the aim of transferring knowledge on their operation and interaction with the rest of the key sectors of the EWS (See annex 7).

- A training workshop was held for 65 decision-makers, technicians and specialists from hydraulic resources sectors, meteorology, the mass media and the CBC in the provinces of Ciego de Avila (35) and Camagüey (30). The training was on the work of the EWS and risk management and was carried out by the main key actors in each province in relation to these issues. It is also a part of the actions to support the articulated work between the CCBs and the DRRMC to advance the integration of DRR and CCA (See annex 8).

- Training workshop on gender issues for 30 actors who are part of the national group in charge of gender actions within the project were held. The main criteria of the counterparts regarding

gender stereotypes in their institutions and at national level were presented, as well as the main actions to be developed in the framework of the project to contribute to the elimination of these stereotypes (see Annex 9).

- An intergovernmental hydrological programme workshop was held to analyse integrated water resources management through indicator 6.6.1 of the SDGs, taking into account the context exacerbated by the effects of climate change (See annex 12) .

- An exchange was held to analyse strategic issues related to water management, with the aim of giving greater prominence to water resources and the effects of climate change on them in the Nationally Determined Contributions. It also analysed the treatment of water management in other national management instruments and identified gaps that INRH should work on to improve integrated water management at the national level. Fifteen specialists and senior managers from key sectors related to water management and DRR participated.

- The progress of project results was presented during an exchange held in the Regional Event on Risk Management and Urban Water, which took place in Guatemala from October 17 to 21. (See annex 10)

- Project results were presented at the VIII Regional Platform on Disaster Risk Reduction by the national counterparts and UNDP, held in Uruguay from 28 February to 2 March. (See annex 11).

SECTION 5 - Organization and resources

The implementing teams of the national and provincial counterparts and UNDP remained unchanged during this period. Videoconferences and face-to-face meetings have been held to organise and follow up project activities. There is a working group in each province that includes a representative of each key sector benefiting from the project. The provincial group coordinators have a close relationship with each other and with the national project coordinator. The UNDP implementation team communicates directly with the national coordinator and the provincial working team. UNDP liaises face-to-face or by videoconference with counterparts at the national level and supports communication through mobile phone cards. The first National Steering Committee was held in October with the participation of national counterparts, national and provincial coordinators, the donor, the European Union delegation and UNDP (see annex). In addition to remote follow up to the project, monitoring visits will be carried out in the intervention areas, scheduled according to the expected results.

SECTION 6- Coordination and synergies

The project has synergies with the "Coastal Resilience" project, implemented by UNDP with EU funds in both provinces of intervention. UNDP coordinates the activities directly with the

national project coordinator and with the UNDP Nature, Climate and Energy (NCE) area. National and local stakeholders are involved in both initiatives.

It has also established synergies with "Pon tu ficha" project, phase II, with DIPECHO-EU funds in the province of Camaguey, which ended in December 2022. The actions planned in the framework of this initiative have been extended to the province of Ciego de Avila, as it aims to strengthen capacities for increased resilience of key sectors and the population in the face of intense droughts. Similarly, the project makes synergy with other projects being implemented to improve capacities to face droughts, worsened by the impacts of climate change in the eastern region, such as the project "Adapting to drought in Santiago de Cuba", implemented by UNDP with funds from the TFD of the Russian Federation, which ended in June 2022. The experiences of this project are also being transferred to the provinces of Camaguey and Ciego de Ávila.

Synergies are also established with the "Mi Costa" project, financed by the Green Climate Fund and implemented by the NCE area of UNDP. This synergy and the complementarity of the results will support the integration of the hydrological monitoring network of Ciego de Avila, allowing to extend the surveillance coverage to 95% of the province.

The experiences, best practices and lessons learned from other concluded projects such as BASAL, FORSAT and "Suma tu Gota" (with EU/COSUDE, DIPECHO and ODS funds, respectively), will be transferred. Likewise, the knowledge management products obtained for the use, installation and sustainability of the technology to be transferred will be shared.

SECTION 7 - Difficulties and lessons learned

The main difficulties can be described as follows:

- The country is going through a complex socio-economic situation, with the energetic crisis having the greatest impact on implementation. In this sense, the construction works (huts) for the installation of specialised equipment that will strengthen the hydrological monitoring and surveillance have been delayed due to the decrease in fuel allocations to the provinces. This limits the movement to the various installation sites, which are spread over several municipalities. It should be taken into account that this is an extensive area to cover to ensure effective monitoring at representative points, particularly in the different geological sectors that make up the groundwater basins, which in the case of Ciego de Avila, where about 80% of the water is located in this kind of basins. Nevertheless, the project supported the provincial actors as much as possible, with the aim of completing the works before the arrival of the equipment. The province has guaranteed the supply of construction materials from its own resources. At the time of writing, more than 60% of the huts had been completed in Camaguey and 85% in Ciego de Avila. All the work will be completed by the end of March, with start-up scheduled for April.

- The fuel shortage in the country has also affected the development of knowledge management activities due to the increase in power cuts. Intervention provinces were highly affected by this situation (more than the national Capital). However, alternatives were sought, such as holding workshops and other exchanges in provincial government offices that have generators. In addition, the project provided mobile data top-up cards for mobile phones to support virtual exchanges between key stakeholders in different sectors. This support enables remote communication between provincial partners and the implementation team for project follow-up and coordination of activities.

The main lessons learned have been:

- The use of remote communication for implementation follow-up, through video-conferencing and mobile telephony, has been a good practice resulting from the pandemic phase. This allows for fluid interaction between provincial counterparts and the project management team at both UNDP and the national level. It also reduces monitoring costs and allows for regular updates on the progress of results.

- UNDP supported workshops and the monitoring of oversight institutions with fuel. This action facilitated the progress of knowledge management activities, and the follow-up of construction works, with resources from the provincial counterpart, to guarantee the installation of equipment that strengthens hydrometeorological surveillance.

- The establishment of synergies with the "Coastal Resilience" project of UNDP's NCE area avoided duplication of actions in the updating of flood PVR studies and contributed to a more comprehensive understanding of disaster risk.

SECTION 8 - Cross-cutting issues

The project has a cross-cutting approach to gender-related issues in all its results. It supports the empowerment of women, gender and generational equality, as well as the elimination of gender stereotypes aggravated in a context of crises and impacts caused by extreme hydrometeorological phenomena such as drought and floods.

In particular, during this period, a training workshop on gender issues was held for the 30 actors who are members of the national group in charge of gender actions in the framework of the project. The main criteria of the counterparts regarding gender stereotypes in their institutions and at national level were presented, as well as the main actions to be developed in the framework of the project to contribute to the elimination of these stereotypes (See annex 9). The project also supports the creation and improvement of the gender strategies of the beneficiary institutions. In this regard, the first draft of INRH's gender strategy is currently being reviewed.

SECTION 9 - Leverage and Scalability

The project addresses not only DRR but also CCA components. In this sense, there could be a complementarity of funds with initiatives that have recently emerged for the integration of DRR and CCA components. Specifically, the Tool developed by project stakeholders in the framework of an initiative funded by UNDP Regional to adapt the Global Guidance for the integration of DRR and CCA in local development strategies. This tool will be piloted for the first time in the framework of the project and could generate future funding to ensure the sustainability of the expected results.

Sharing project results, best practices, experiences and lessons learned at the national level and through South-South Cooperation will also be an opportunity for the sustainability and scaling up of this initiative.

SECTION 10 – Communication and visibility

- National TV report on the expected results of the project by TV Channel Agramonte, in Camaguey

- Digital publications on project beneficiaries' social networks.

- https://m.facebook.com/story.php?story_fbid=pfbid0MAY2w15tqEH6CLJsDg3Xd4CDLKi9oEYpXXc7ViVYutSYViQxJ5NMg9F2zMejXkE6l&id=100002511850997&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid02uNMZa1RB9dv3NKrcxNDoY4r2AMAYMjH19sUMS1mt7Ke6qHYFA2zBbAq4qGWYeoBcl&id=100002511850997&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid02DHVQRccv27NKrXJcPNmRok2D1AAueZzcS9RGnPLVCEBJrZ49oxTd8L9JpG4DdKM6l&id=100024539163131&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid02Wyr62HcrqLNnDo2CW6vQiu9Y4aTiTrYbofkfCMFaRWXi65bLnV3ZFxF7T5sMvKt6l&id=100011452745644&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid024KRqTs6SFBiJHV4vFZVmLpE3t6J7xX8Hzdrai1GugpLwJ3qwik4so74qJfZoEaAml&id=1535143782&mibextid=Nif5oz.
- https://m.facebook.com/story.php?story_fbid=pfbid0JexPcCYcHL14CKuejM1KMJh1JNTpARWKYFRMYvVss5XcBQ7tae2hWnq1bPfbpHNjl&id=1535143782&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid0Mo1WBHL1iUW3o5oLgKnBqBGJ3VepqJJNDp8ZfNZnwDEU4SWzbTXwdwYALNbrMrAfl&id=1484110240&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid0846vRBPTZYf2r2AELgf3cuRoURwKz55DU2hCBA1athNTMcrcA3Q8AEDiM2YPdkTUl&id=1484110240&mibextid=Nif5oz
- https://m.facebook.com/story.php?story_fbid=pfbid02kMg3j6hQcarkGadQM33sLT3FWV37MU24gD4ciWYAM65gCTWknzBKQGHhrryWH5b8l&id=100063884260514&mibextid=Nif5oz

- https://m.facebook.com/story.php?story_fbid=pfbid02EiVLVAwRu6SetReVeEE9r5PHW8Qgz5goJRgea4BHbbMoVJZb2mdzaq5kG6uz4t6Cl&id=100024539163131&mibextid=Nif5oz

- Promotional materials with the identity logo of the project created to give visibility during workshops and other activities. Printed agendas, canvas, pens, T-shirts and other promotional materials for children. In addition, a fact sheet on the results of the project has been produced.

- Publication of the second version of the DRR + CCA Guide, updated with the results of the validation in the intervention areas.

SECTION 11 – Planned activities for the next six months

See attached work plan

SECTION 12 – Budget monitoring

	Presupuesto EURO	*Delivery EURO*				*Saldo Euro*	*Porciento*	*Planificacion Delivery*	
COMPONENTE UE	**PRESUPUESTO EURO**	**EJECUTADO EURO 2021**	**EJECUTADO EURO 2022**	**EJECUTADO EURO ACUMULADO**	**Comprometido**	**SALDO EURO**	**% EJECUTADO + COMPROMETIDO & PRESUPUESTO**	**Planificacion 2023**	**Planificacion 2024**
Recursos humanos	70,000.00	0.00	11,231.71	11,231.71		58,768.29	16%	30,520.00	26,208.20
Viajes	43,740.53	0.00	7,623.62	7,623.62		36,116.91	17%	20,184.21	15,623.93
Bienes y servicios (1)	1,071,128.63	0.00	132,836.65	132,836.65	486,456.83	451,835.15	58%	946,523.74	15,408.00
Estudios y asistencias técnicas	40,000.00	0.00	3,154.90	3,154.90		36,845.10	8%	15,696.00	8,720.00
Comunicación, visibilidad y gestión del conocimiento	40,000.00	0.00	6,037.94	6,037.94		33,962.06	15%	20,732.44	12,871.18
Seminarios, talleres, capacitaciones	94,000.00	6,876.46	20,973.81	27,850.27		66,149.73	30%	28,447.71	29,198.67
Auditorías y evaluación	3,000.00	0.00	0.00	0.00		3,000.00	0%	0.00	3,000.00
Gastos de Coordinación y gestión	40,000.00	0.00	1,839.01	1,839.01		38,160.99	5%	21,800.00	16,360.99
TOTALES	**1,401,869.16**	**6,876.46**	**183,697.63**	**190,574.09**	**486,456.83**	**724,838.23**	**48%**	**1,083,904.10**	**127,390.96**

COMPONENTE AFD	**PRESUPUESTO EURO**	**EJECUTADO EURO 2021**	**EJECUTADO EURO 2022**	**EJECUTADO EURO ACUMULADO**	**Comprometido**	**SALDO EURO**	**% EJECUTADO + COMPROMETIDO & PRESUPUESTO**	**Planificacion 2023**	**Planificacion 2024**
Costos Indirectos pagados por AFD	98,130.84	490.82	12,307.40	12,798.22		85,332.62	13%	75,873.29	9,459.33

TOTAL GENERAL	**1,500,000.00**	**7,367.28**	**196,005.03**	**203,372.31**	**486,456.83**	**810,170.85**	**46%**	**1,159,777.39**	**136,850.30**

	COMPONENTE UE	**PRESUPUESTO EURO**	**EJECUTADO EURO 2021**	**EJECUTADO EURO 2022**	**EJECUTADO EURO ACUMULADO**	**Comprometido**	**SALDO EURO**	**% EJECUTADO + COMPROMETIDO & PRESUPUESTO**	**Planificacion 2023**	**Planificacion 2024**
(1)	Bienes	1,020,128.63	0.00	132,836.65	132,836.65	486,456.83	400,835.15	61%	912,971.49	
	Servicios	51,000.00	0.00	0.00	1,090.00	0.00	49,910.00	0%	33,552.26	16,357.74

ANNEX 1: Semestrial monitoring of results or outputs

SEMESTRIAL OUTPUT MONITORING

Output 1: Strengthened surveillance, monitoring and forecasting system of the hydro-meteorological EWS for drought and flood monitoring and forecasting.

General remarks. The indicator depends on the installation of the technology, so it will not be met until the technology is transferred, installed and put into operation. This is expected to take place during the second year of project implementation.

Output indicators	T1: August 2021-February 2022				Means of verification	Monitoring assumptions	Lessons learned
	Target	Achievement	Percentage	Comments			
1.1 Percentage of territory covered by an effective EWS	50%	0	25%	- Specialised technology to strengthen hydrological monitoring in Cuba is being transferred to the intervention areas. - Specialised technology to strengthen meteorological monitoring has been shipped. - Infrastructure works to install the equipment are 80% complete and will be concluded in March.	UNDP and partner coordination and monitoring missions. Progress reports. Workshop and implementation reports.		

				The indicator will be met when the technology is installed.			
25% output progress T1: August 2022-February 2023							
Output 2: Strengthened capacities for inclusive, gender-sensitive, comprehensive DRR and CCA management by local governments and key sectors to increase resilience to drought and floods.							
General remarks:							
Output indicators	**T1: August 2021-February 2022**				**Means of verification**	**Monitoring assumptions**	**Lessons learned**
	Target	**Achievement**	**Percentage**	**Comments**			
2.1 Government and key sectors' instruments analysed or updated with a focus on resilience to drought and floods.	6	0	30%	- Progress made in the update of the flood HVR studies. - National methodology for drought HVR studies finalised to start intense drought risk studies. - First workshops held to update the Operational Procedure for Integrated Drought Management.	Coordination and monitoring missions of UNDP and national counterparts. Progress reports. Reports and evidence of workshops, trainings and technical meetings.		
2.2 Number of drought and flood management tools that are gender-sensitive and socially inclusive of vulnerable groups	4	2	25%	- Implementation guide for the strategic tool to support governments in integrating DRR and CCA into local development strategies developed and validated. - Updated drought and flood risk perception surveys with a gender approach to be implemented in the	Coordination and monitoring missions of UNDP and national counterparts. Progress reports. Reports and evidence of workshops, trainings and technical meetings.		

				provinces as part of the update of the drought and flood HVR studies.			
2.3 Local institutions that support risk management and adaptation to CC created or strengthened, increasing the knowledge of their decision-makers and technicians.	10	0	30%	- 30 specialists and decision-makers of the new DRMC and EWP to be created as part of the project in Ciego de Avila were trained in the framework of an exchange workshop between decision-makers and specialists of the DRMC and EWP of Camaguey and Pinar del Rio provinces. - 65 decision-makers, technicians and specialists in water resources, meteorology, mass media and the Capacity Building Centres (CBC) of the provinces of Ciego de Avila (35) and Camagüey (30) were trained on the work of the EWS and risk management. **- Progress will be made in the reporting of this indicator as DRMC and CBC are created and strengthened.**	Coordination and monitoring missions of UNDP and national counterparts. Progress reports. Reports and evidence of workshops, trainings and technical meetings.		
30% output progress T1: August 2022-February 2023							
Output 3. Transfer of technologies and management tools, technical training to achieve the expected results, and capitalization of innovation actions and validated experiences for their replication.							

General remarks .....

Output indicators	T1: Agosto 2021-Febrero 2022				Means of verification	Monitoring assumptions	Lessons learned
	Target	Achievement	Percentage	Comments			
3.1 Number of risk management tools transferred to the territories.	5	0	25%	- The Operational Procedure for integrated drought management is being updated for validation in the project's intervention provinces. - Updated the drought and flood risk perception surveys with a gender focus, to be applied in the territories, as part of the updating of the drought and flood HVR studies. - Reprinted booklet on the importance and care of watersheds for transfer to the National Watershed Council and the Intergovernmental Hydrological Programme. National Methodology for drought HVR studies finalised for application in intervention territories.	Progress reports. Reports and evidence of workshops, trainings and technical meetings.		

3.2 Number of risk management tools systematized	3	0	30%	- Progress made in the update of the Methodology for radar information use. **These tools are being created as a result of the project, so their progress will be reported once they begin to be developed, which is expected to happen in the second year of the project.**	Progress reports. Reports and evidence of workshops, trainings and technical meetings.		
3.3. Percentage of government actors and key sectors participating in the pilot who strengthen their capacities for integrated drought and flood management, from a gender sensitive and inclusion of vulnerable groups approach.	75%	0	30%	More than 100 stakeholders in the intervention provinces trained in risk management and EWS and on the functioning of the DRMC and EWP; also on the use of geographic information systems for flood HVR studies; 15 media stakeholders trained to improve messages aimed at increasing the perception of drought and flood risks; 60 children trained on the monitoring of the hydrological cycle and the rational use of water. **The pilot action will be in the last year of the project, once all the tools are in place and all the equipment is assembled. So it will show further progress in that period.**	Progress reports. Reports and evidence of workshops, trainings and technical meetings.		

30% output progress

T1: August 2022-February 2023