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# Annual Report EUROCLIMA+ 2020

## until 27 August 2022

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## Acronyms

- HVR – Hazard, Vulnerability and Risk
- EU – European Union
- DRR – Disaster Risk Reduction
- CCA – Climate Change Adaption
- CBC - Capacity Building Centers
- National Institute of Water Resources (INRH, in Spanish)
- National Civil Defense General Headquarter (EMNDC, in Spanish)
- Comprehensive Water Development Program (PIDH, in Spanish)
- PMC - Provincial Meteorological Centers
- NRC - National Radar Center
- EWS - Early Warning Systems
- TFD - Trust Fund for Development
- DRRMC - Disaster Risk Reduction Management Centers
- EWP - Early Warning Point
- MINCEX – Ministry of Foreign Trade and Investments
- NCE - Nature, Climate and Energy
- RRR – Resilience and Risk Reduction



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## Executive summary

The central region of Cuba faces drought and floods due to intense rains and hurricanes that are increasingly becoming more severe, recurrent and combined. Both hydro-meteorological phenomena have been exacerbated as a result of the impacts of climate change, which demonstrates the need to comprehensively address Disaster Risk Reduction (DRR) management.

The project takes place in this context, and it is implemented in 14 central and northern municipalities of the provinces of Ciego de Avila and Camagüey. Taking into account a multi-hazard approach, this initiative aims to strengthen hydro-meteorological monitoring systems and government management through the transfer of technology and the updating of the main management instruments. It supports the exchange and transfer of knowledge about more comprehensive, inclusive and gender-sensitive forms of management, thus enhancing the link between key actors, participation at all levels and integrated risk management.

In the first year of implementation, the project's actions were focused on:

1. Preparation for the procurement process of specialized and computerized equipment.
2. Meetings with national and provincial counterparts for the preparation of investment processes by counterparts, which will guarantee the conditions for the installation and start-up of the equipment to be transferred.
3. Beginning of the updating of flood Hazard, Vulnerability and Risk studies.
4. Training workshops for key sectors in risk management and climate change adaptation (CCA).
5. Meetings with national counterparts to plan knowledge management actions: technical workshops and review of systematized products that will be transferred from other projects.
6. Implementation and planning of gender actions.
7. Face-to-face and virtual follow-up actions.

Technical descriptions of all the equipment to be purchased by the project have been finalized. An information technology consultant has been hired to finalize the technical details of the specialized equipment, jointly with national and provincial counterparts. The procurement processes related to the strengthening of surveillance institutions and hydro-meteorological monitoring began.

In order to support the updating and analysis of diagnostic and planning instruments, flood Hazard, Vulnerability and Risk (HVR) studies were initiated in both territories, in synergy with the project "Building coastal resilience in Cuba through natural solutions for adaptation to Climate Change" (hereinafter "Coastal Resilience"), financed by the EU and implemented by the UNDP's Nature, Climate and Energy (NCE) area.

As part of the training of key actors in risk management and CCA, actions were initiated for the application of the UNDP-promoted tool to integrate DRR and CCA components at the regional level. Cuba has been selected as a pilot country in the Caribbean for the adaptation of this tool to the Cuban context. The tool will be validated within the framework of the project, in synergy with the Coastal Resilience project, as this one will be the first initiative to apply it. This pilot will allow the development of an instrument that facilitates the integration of DRR and CCA

components in local development strategies and it is expected to extend its validation at the sectoral level, within the framework of the project.

The gender actions of the project will be cross-cutting to all results. In this period, the National and Provincial Gender Groups were created and two meetings were held with the national counterparts to plan future actions. These groups are made up of one actor from each key sector participating in the project and will be in charge of transferring knowledge to the municipalities.

To follow up on the project implementation, UNDP has conducted a visit monitoring to the intervention provinces and specific agreements were taken to support the achievements of the project results. Also, virtual meetings were held to follow up the project implementation at the local level. In order to guarantee a fluent exchange of information, communication capacities of the counterparts were also supported by the project.

## SECTION 1 – Presentation and context

As mentioned above, the project strengthens capacities comprehensively in 14 municipalities of the provinces of Camagüey and Ciego de Avila to increase resilience to the effects of intense droughts and floods, the latter caused by heavy rains and hurricanes. 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 adaptation to climate change. A total of 718,781 people (including 352,202 women) in the intervention areas at risk of droughts or floods are indirectly benefited.

Project implementation has been marked by the country's complex economic and financial situation. In the last three years, Cuba has been affected by the tightening of the blockade sanctions, even during the pandemic, by the impact of Covid-19 and, more recently, by the European conflict. The effects of this situation are felt in all economic and social sectors, especially in relation to the low availability of fuel and foreign currency, and the deficiencies in the technical condition of the main thermoelectric plants, causing frequent interruptions to the electricity supply.

All this has imposed challenges on the implementation of projects in terms of infrastructure assurance and construction investments by the national counterparts; the realization of workshops and exchanges that involve traveling in the region; and ensuring UNDP's follow-up and monitoring actions. It has been necessary to coordinate the support of the provincial governments to ensure the supply of diesel fuel during field trips, since it is only available at service centers with authorization letters from local governments. The import processes have also been affected by an increase in the prices of goods and freight on the international market.

As for the management of the pandemic, although at the beginning of the project in 2021 the epidemiological situation was more complex, during 2022 significant control has been achieved at the national level. Cuba applies its own immunization program and has developed 3 homegrown vaccines for this purpose. 88% of the population has a complete vaccination schedule. However, several provinces have recently increased the number of positive cases, a situation that needs to be followed up. Despite the impact of the pandemic, progress has been made in the implementation of the project as described in its results and activities.

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## SECTION 2 – Activities and results

### Activities of the disaster risk reduction component

#### **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 hydro-logical surveillance, monitoring and forecasting system.

The project strengthens surveillance and monitoring of the hydrological cycle in the intervention provinces to improve integrated water management. In addition to the transfer of knowledge, specialized technology is being acquired to enable better management of groundwater and surface water sources and the monitoring of rainfall and surface water behavior in view of flood risks.

As part of the actions to strengthen hydrological monitoring, a mission was carried out for communication coverage studies in each province, led by the National Institute of Water Resources (INRH), with the participation of the Provincial Water Management Enterprises of the intervention areas (See Annex 1). The purpose of the mission was to define the appropriate location within the selected areas to install the Automatic Hydrological Stations (AHS) to be acquired. It also defined the construction works that will be necessary to guarantee the safety conditions of the AHS, which will be carried out with resources from the provincial counterparts. These resources have already been incorporated into the planning of the Provincial Water Management Enterprises and, in the case of the province of Ciego de Avila, they are already available. The security concrete booths are expected to be completed by December 2022 in both provinces.

During a monitoring visit carried out by UNDP, from June 27 to July 2, 2022 (See Annex 2), the team found it was necessary to evaluate the relocation of 3 AHS installation points for safety reasons, 2 in Camagüey and 1 in Ciego de Avila. The new points in the province of Camagüey are within the areas of intervention of the project, but may be within other properties (which will be defined once the coverage study for this new location is completed). The information will be sent to the donor for the appropriate verifications, as stated in the Financial Agreement between AFD and UNDP. The initially defined points will not be left without monitoring equipment. They continue to monitor rainfall using conventional equipment previously set up by the INRH as part of the province's monitoring network.

Regarding procurement processes, the bidding process for the purchase of equipment to strengthen the surveillance and hydrological monitoring of drought and floods started. The first bids were received and evaluated by the counterparts. The contracting of the goods for an amount of 450,490.00 USD is underway. These goods are expected to be delivered by the end of 2022, although it will depend on the behavior of shipments, which currently have a tendency to be delayed. The monitoring of the sources is also strengthened with the purchase of 1 vehicle for each province, which are in the process of being contracted and should be delivered to the beneficiaries at the end of September.

In the case of Camagüey, the 9 dams that will be monitored with the support of the project are the largest in the province. 5 out of these are for supplying water to the population, i.e. almost half of those intended for that purpose; 1 of them is also used for agriculture. 350 763 people in the 7 intervention municipalities will be benefited from a better monitoring of the supply

sources. The remaining 4 dams directly supply water to agriculture and fishing activities (See Annex 3).

In the case of Ciego de Avila, mostly groundwater sources are being monitored (in this province 70% of the water is groundwater). The AHSs are located in drought high-risk areas, where there are more than 500 million exploitable cubic meters, in addition to 2 of the most important basins: La Yana and Chambas (See Annex 3). Synergy with the Coastal Resilience project has been established in these areas. The synergy achieved with this project and the Mi Costa initiative, also executed by UNDP and recently implemented in the center-south of the country, strengthens surveillance and monitoring of this territory, covering more than 94% of the water in aquifers.

In order to improve the analysis and processing of hydrological service data and thus improve forecasting and decision making in case of extreme hydro-meteorological events, the transfer of specialized equipment is complemented with the strengthening of the computer capacities of INRH organizations. In this regard, the technical specifications of the technology to be acquired has been completed and the documentation is being prepared to initiate the bidding process.

As part of knowledge management actions, meetings were held with decision-makers, specialists and technicians of the hydrological service to transfer knowledge that will strengthen management mechanisms for better water management in the country. In this regard, the project supported the National Workshop on Integrated Water Management (See Annex 4) and the Workshop on Implementation of indicators 6.1 and 6.2 of the Sustainable Development Goals (SDGs) (See Annex 5), related to Drinking Water and Sanitation services in Cuba. Both workshops were held in January and June 2022, respectively, with the participation in each of them of around 40 managers and specialists from INRH and its Water Management and Water and Sanitation Enterprises, at the national and provincial levels.

During the meetings, participants evaluated the results of the indicators of the Comprehensive Water Development Program to 2030 (PIDH), to which project results respond to. This document, which governs the national water policy, was methodologically updated during the meeting and actions to improve the comprehensive management of water resources by 2030 were defined. The SDG workshop also evaluated the progress in meeting indicators for SDG 6, its alignment with the work objectives of the INRH and the involvement of other agencies, based on a comprehensive vision in ecosystem management, to improve the quality of services and their impact on the health and wellbeing of the population.

As a strategy to disseminate knowledge and raise awareness among the population on the rational use of water and the importance of monitoring water sources, an hydrology group was created with 30 primary school students in each of the intervention provinces. In these groups, children will become familiar with hydrological surveillance and monitoring, in particular, through the work of the network of volunteer rainfall observers. Experience has shown that children transmit the information to their families and contribute to raising risk perception in the communities (See Annex 6).

#### Activity 1.2. Improve the weather surveillance, monitoring and forecasting system.

The project expands the coverage of the surveillance, monitoring and meteorological forecasting system for drought and floods in both intervention provinces, by strengthening



there Provincial Meteorological Centers (PMC) and the National Radar Center (NRC), which is located in the province of Camagüey. This will enable more comprehensive and accurate analyses for forecasting and decision making. For this purpose, a total of nine Automatic Weather Stations (AWS) are being acquired (See Annex 7), five of them will be installed in new locations, one of them is designed for coastal surveillance. The rest are new sensors that will be added to the existing ones to improve weather monitoring and indistinctly forecast coastal flooding and heavy rains in populated areas, as well as to improve management in the agricultural sector. The AWS work in an interconnected network managed by the Provincial Meteorological Centers. The offer for this equipment has already been evaluated by the beneficiaries and is in the process of being contracted for an amount of 105,000.00 USD.

The analysis and processing of meteorological service data is also being improved with the acquisition of computer technology for the PMCs. In this regard, the technical specifications of this equipment have been completed and the documentation is being prepared to initiate the bidding process. The monitoring and management of the PMCs is also being strengthened with the purchase of one vehicle for each province, which are in the process of being contracted and should be delivered to the beneficiaries at the end of September.

On the other hand, the NRC will be strengthened with computer technology that will improve numerical modeling for flood forecasting and the integration of information from the rain gauge network of the INRH, both with the data obtained from the radar. In this regard, the PMC of Camagüey was able to run the numerical modeling with a domain for this province, although radar data has yet to be incorporated. Both actions are being carried out for the first time in the country and will be supported by the project. The technical specifications of this equipment have also been completed and the documentation is being prepared to start the bidding process, that includes all the computer technology to be used in the project.

In the area of knowledge management, two training sessions on the interpretation of satellite images and the use of Early Warning System (EWS) computer platforms were held for 10 technicians and specialists from the meteorological service. These trainings were carried out in synergy with the UNDP-implemented projects "Adapting to drought. Sustainable water management in the face of drought in Santiago de Cuba, for greater resilience and adaptation to climate change (Adapting to drought)", funded by the Russian Federation's TFD - UNDP, and "Strengthening of national and local capacities for the integrated management of drought to reduce its impacts on food security, nutrition and water supply in the eastern provinces of Cuba, including Camagüey, phase II", financed by DIPECHO - EU (Pon tu ficha, in joint implementation with WFP).(See Annex 16)

## **Result 2. Strengthened capacities for inclusive, gender-sensitive and 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.

#### *2.1.a) Transfer and validation of current operational procedures (protocols) to organize the inter-sectoral EWS management and promote a multi-hazard analysis of drought and floods.*

In order to strengthen the management of the government and the key sectors that make up the EWS, the project will support workshops to transfer knowledge on existing protocols for

drought and flood preparedness, response and recovery, promoting a multi-hazard approach. In this regard, coordination is being carried out with the National Civil Defense General Headquarters (EMNDC) so that, once the Hydro-meteorological Procedure for drought has been updated as part of the "Pon tu ficha" project, key stakeholders in the territory will be trained. This will include the transfer of knowledge about the Comprehensive Operating Procedure on the organization and operation of the EWS.

*2.1.b) Revitalize the communication and data exchange system for analysis and decision making through an exchange platform among EWS key sectors.*

The project strengthens the communication and data exchange system for analysis and decision making among EWS key sectors. To this end, it was initially planned to install a Wireless Network (RLAN) to connect them. However, once the bidding process for these assets began, the team realized that prices foreseen during the formulation of the project 4 years ago had doubled, so it was decided to conduct an analysis with counterparts at the national level.

As a result of this analysis to define the appropriate technology for the current circumstances of the country in terms of communications systems, it was concluded that, given the updating of the communication strategy, the use of mobile cell-phones and applications is more appropriate, instead of the planned RLAN technology. In this regard, and in agreement with the EMNDC and the beneficiary provincial counterparts, the budget will be earmarked for the purchase of cell phones to be used according to the methodological guidelines of the National Civil Defense. This will improve the issuance of alerts to all key EWS sectors in disaster situations, as well as the exchange of data for analysis and decision making. The project will also facilitate the training of key actors in the use of cell phones and applications, being piloted for the first time within the framework of this initiative.

*2.1.c) Support the data exchange process between the PMC's radar and rainfall forecasting center and the Water Resources Delegation to facilitate flood modeling.*

With the objective of improving numerical flood modeling and making better analyses and forecasts of the state of precipitation, which contributes to hydro-meteorological surveillance and monitoring and thus to timely decision making, it was decided to establish a mechanism to integrate the information obtained from the rainfall networks of the surveillance institutions with that obtained from the radar. To this end, the project supports the creation of exchange spaces between these institutions so that they can reconcile the information obtained for subsequent integration.

In this regard, a virtual meeting was held between the NRC and the INRH, with the participation of 10 decision-makers, specialists and technicians of the hydrological and meteorological service, from the national level and from the provinces of Camagüey and Ciego de Ávila. As a result, the exchange of information issued by the radars to the INRH has started and it is compared to the data obtained from the rain gauge network of the Water Resources Institute.

At the same time, the Methodology for the Use of Information received from radars is being revised by the NRC. This Methodology will be finalized once the radar information is integrated with that of INRH and will be piloted within the framework of the project.

Activity 2.2. Support for the updating and analysis of diagnostic and planning instruments.

*2.2.a) Support for updating the Drought and Flood Hazard, Vulnerability and Risk (HVR) Studies, prioritizing the most vulnerable municipalities.*

The HVR studies are a fundamental management tool, as they provide decision-makers with recommendations on the occurrence of extreme events that must be included in the Disaster Reduction Plans. This study is carried out by a local multidisciplinary group, composed of all the key sectors affected by a given extreme event, be it drought, flood or other.

Provincial integration workshops were held in synergy with the Coastal Resilience project to start updating the HVR studies on floods caused by heavy rains. The multidisciplinary groups that will carry out this exercise were trained (See Annex 8). The drought HVR study will begin in October, since the updating of the National Methodology was recently completed, an action that was supported by the "Pon tu ficha" project. Thus, the Methodology will be validated during the implementation of this initiative.

As part of the risk studies, three training sessions on flood modeling were held for the provincial coordinators of the HVR studies. The trainings used as a basis the new Methodology for HVR Studies of floods due to heavy rains, which is also piloted within the framework of this project, in synergy with Coastal Resilience.

*2.2.b) Support the preparation of plans for adaptation and mitigation measures against drought and flood risks, to be considered in local planning instruments.*

The updating of diagnostic and planning instruments will allow the preparation of recommendations for decision makers, which should be included in the Disaster Risk Reduction Plans. Based on these recommendations, the project will support institutions at risk in the elaboration of adaptation and mitigation measures to face drought and flooding.

The implementation of the Guidance for the integration of DRR and CCA components will serve as a key tool to achieve this objective. This work will also be supported with information technology to improve the work of environmental and civil defense specialists at the provincial and municipal levels. In this regard, the technical specifications of the equipment have been completed and the preparation of the documentation to initiate the bidding process is in process.

Activity 2.3. Create and strengthen local institutions that support risk management and adaptation to Climate Change.

*2.3.a) Support the creation and strengthening of Disaster Risk Reduction Management Centers (DRRMC) to facilitate Government Management, as well as Early Warning Points (EWP) for protection and preparedness in vulnerable communities.*

As part of the support to drought and flood risk management, the project strengthens and creates DRRMCs and EWPs for preparedness in communities. The DRRMCs and EWPs play a key role in disaster preparedness and response. Therefore, the DRRMCs and EWPs of Camaguey are strengthened, as 3 new DRRMCs and 4 EWPs will be created in Ciego de Avila. Initially, DRRMCs were to be located at the municipalities of Chambas and Morón, and one at the provincial level. However, as the approval of the project was delayed and the implementation of the Coastal Resilience initiative, which has synergies in the municipality of

Chambas, progressed, the authorities prioritized the creation of a new DRRMC and 1 EWP in the municipality of Chambas. Therefore, in coordination with the EMNDC and the Civil Defense of Ciego de Avila province, this project decided to create 1 DRRMC and 1 EWP in the Bolivia municipality, where the impacts of drought and flooding are combined. The 3 remaining EWPs will be created in the Chambas municipality, as planned. The property information of the area where the DRRMC and the EWP in the Bolivia municipality are located will be sent to the donor as established in the Financial Agreement between AFD and UNDP.

In order to comply with the above, information technology, furniture and means of protection will be acquired, as established by the EMNDC, to equip the new DRRMC and EWP and strengthen the existing ones. The technical description of these goods was completed during this period and the documentation is being prepared to initiate the bidding process.

At the same time, DRRMC specialists are being trained. In this regard, the National Workshop on Lessons Learned, Experiences and Good Practices on the Functioning of the DRRMC and the Capacity Building Centers was held. Seventy specialists and managers from the project's intervention provinces participated, in synergy with the Coastal Resilience initiative. In addition, national coordinators of the country's HVR studies and the EMNDC also participated (See Annex 9).

During this workshop, 10 decision-makers, technicians and specialists from the provinces of Ciego de Avila and Camagüey were trained on the work of the DRRMC. The managers of the 3 DRRMC to be created in Ciego de Avila also participated (See Annex 10).

*2.3.b) Strengthen preparedness of the community and key local actors in vulnerable areas, with the support of the Capacity Building Center, the branch of the Center for Disaster Reduction and Adaptation to Climate Change (CRDAC) and the provincial universities.*

As part of the knowledge management actions to strengthen key actors' preparedness, the Guidance for the implementation of a methodological tool that will facilitate the integration of DRR and CCA components in local development strategies is being developed. The implementation of this Tool adapted to the national context is also being supported by the UNDP Regional Center's Disaster Reduction, Sustainable Development and Resilience Area, through consultancies. The actions carried out included:

- Virtual meeting with the 13 Agencies of the United Nations System that cooperate with Cuba under the current Cooperation Framework, to present the "Methodological Guidance for the integration of DRR and CCA components in development strategies. Adaptation to the Cuban context". (See Annex 11)

- Meeting with 25 decision-makers and specialists from the intervention provinces to transfer knowledge on the integration of DRR and CCA components into the work of DRRMCs, together with the Capacity Building Centers and governments. As a result, a first diagnosis of the existing conditions in each province of intervention, for both this project and the Coastal Resilience initiative, was obtained for the application of the Guidance for the integration of DRR and CCA. (See Annex 11).

Activity 2.4. Contribute to in-creased perception of drought and flood risk and strengthen flood warning through media support.

The strengthening of institutions linked to hydro-meteorological monitoring and risk management is complemented by actions to increase risk perception of the population and the actors of the different key socioeconomic sectors. In this sense, the work of mass media is fundamental, so the project supports their work in an integral manner, combining the transfer of technologies with training in risk management issues.

The technical description of the equipment to be delivered to provincial media (television, radio and newspaper) has been finalized in consultation with local counterparts, and the documentation is being prepared to start the import process. At the same time, two meetings were held with key media stakeholders participating in the project, one of which was virtual. The other meeting was held during the monitoring visit carried out by UNDP from June 27 to July 2, 2022 (See Annex 2). During these meetings, media involved agreed upon the actions to be carried out as part of the work plan. Technical and gender trainings were planned to improve knowledge on risk management and EWS with a gender perspective, with the objective of using appropriate language in the dissemination of messages beyond project implementation. These trainings will be given by local actors, given their expertise in the subject, after conciliation with the national level.

Activity 2.5 Support processes that favor 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.

The gender actions of the project will be cross-cutting to all results. Experiences and lessons learned from other recently concluded projects will be transferred and inserted into the framework of initiatives being developed by UNDP. In this regard, the National and Provincial Gender Groups were created during this period and two meetings were held with the national counterparts to plan future actions. These groups are made up of one actor from each key sector participating in the project and will be in charge of transferring knowledge to the municipalities. They will also lead the actions that will be developed in this regard.

The project will support the elaboration/updating of gender strategies in the national institutions in charge of hydro-meteorological monitoring. The INRH proposal on the institutional gender strategy has been received and is currently being reviewed by UNDP. Training will also be provided to key project stakeholders at the national and provincial levels; to the volunteer rainfall observers who will benefit from the project with the acquisition of equipment; and to the rest of the observers who belong to the hydrological service in the two intervention provinces. In parallel, the project will be inserted in the Oiga Cc initiative and the Campaign Rompe Esquemas carried out by UNDP within the framework of other projects to contribute to the elimination of gender stereotypes. Both aim to carry out concrete actions to eliminate gender stereotypes and discrimination against women and promote their empowerment in all sectors and activities of society.

**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.

Taking into account the experiences and good practices obtained in previous UNDP-implemented projects to improve capacities and increase resilience to drought and floods, this project will support workshops to transfer knowledge on tools that facilitate the management of these risks. Meetings were held with national counterparts to update and transfer the main documents prepared and validated in other initiatives implemented by UNDP.

In order to comply with the above, the following actions were taken:

- Conducted training to the Capacity Building Centers (CBC) and Provincial HVR Coordinators for flood modeling in synergy with the Coastal Resilience project (See Annex12).
- Performed analysis of sea-level rise behavior for the municipality of Chambas, in the province of Ciego de Avila, which is the pilot area of the project. Next actions are planned to analyze the behavior of heavy rains and their impact on floods. Subsequently, an integral analysis of the effects of both phenomena (sea level rise + heavy rains and their impact on flooding) will take place.
- Meeting held with the Institute of Geophysics and Astronomy's National Risk Assessment Group, from the Environment Agency, to review its products, which will be transferred to the project's key stakeholders.
- Updated drought and flood risk perception surveys with a gender focus. Planned meetings for training multidisciplinary groups in the provinces of Camagüey and Ciego de Avila for its application.
- The document "Instructions for informed decision making based on Hazard, Vulnerability and Risk studies. Danger of flooding due to heavy rains" is being updated. In this update, other hazards will be incorporated, leaving a comprehensive instruction manual for decision making. Once HVR studies are updated, training will be scheduled for decision-makers in each province to ensure their understanding.
- Methodologies and technical manuals are being designed and reprinted for delivery to key stakeholders in both provinces to begin the training process.

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.

Meetings are being organized with national and provincial counterparts to capitalize on the technological contributions and innovations developed in the provinces, which will be transferred through South-South cooperation, together with the management tools validated by other projects. Workshops will be held to share experiences and lessons learned to increase involved countries' resilience to drought and floods. This action will not take place until progress is made on project results. It is scheduled for the last year of implementation.

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.

This action cannot be carried out until the rest of the project's actions progress, so it is expected to take place in the last year of implementation. However, some actions are being carried out that will contribute to this result, such as:

- As mentioned in activity 3.1, an analysis of sea-level rise behavior for the municipality Chambas, in the province Ciego de Avila, pilot area of the project, has been conducted. Future actions to analyze the behavior of heavy rains and their impact on flooding have been planned.
- Training for specialists and managers of the DRRMC to be created in Ciego de Avila, including the one created in Chambas as part of the Coastal Resilience project, on the functioning of DRRMCs and the integration of DRR and CCA components (Activity 2.3 a and b).
- Acquisition of specialized technology to strengthen hydro-meteorological monitoring of drought and floods and computer assets to support risk management in the pilot municipality is underway.
- Planned training and exchanges for decision-makers and specialists of the DRRMC, EWPs and media outlets to improve integrated risk management within the EWS framework.
- Planned knowledge management actions on DRR, CCA and gender for local stakeholders.

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).

In coordination with the national and provincial counterparts, the transfer of knowledge from national and international experts will be planned in order to make available the products achieved in the project. In order to contribute to this result, the national counterpart is scheduled to participate in the Regional Event on Disaster Risk Management and Urban Water, to be held on October 17-21, 2022 in Guatemala, sponsored by DFA and AECID. In addition to the results of the project, experiences and lessons learned in risk management and specifically in integrated water management will be shared. UNDP will also participate in the Communicators Event that will take place within the framework of these workshops.

Following the invitation of the European Union Delegation, UNDP also participated in the "Exchange meeting between climate change projects in Cuba", with the aim of sharing experiences and lessons learned for the implementation of the State Plan to Address Climate Change (Tarea Vida) at the local level. The meeting took place within the framework of the Coastal Resilience initiative, and was attended by representatives of several projects that are being implemented with the financial support of EU funds through UNDP.

### SECTION 3 – MONITORING

Considering the COVID-19 pandemic and the prevention measures implemented by the Cuban government and the United Nations System, no monitoring visits were made to the intervention provinces during the first 8 months of the project. Therefore, project actions were followed up through videoconferences, with the participation of key actors (at the local and national levels) from each sector benefited (See Annex 13). The project supported the communications of provincial counterparts with telephone top-up cards, which facilitated remote monitoring and coordination actions among different actors at the territorial and national levels.

Once the country's epidemiological conditions improved, a monitoring visit by the UNDP implementation team took place from June 27th to July 2nd, 2022. The visit was led by the Resilience and Risk Reduction Area (RRR) Officer and specialists from the INRH, project leader for the national counterpart. Meetings were held with all the key beneficiary sectors in both provinces. They confirmed the work plan and discussed possible actions to be taken to achieve the expected results.

In addition to the meetings at the provincial level, they also visited the municipalities of Bolivia and Morón, where 2 of the new DRRMCs and EWPs will be established. Visitors also checked that the facilities where the DRRMC will be installed are practically ready for the equipment setup. The CBCs that will be benefited are also in good construction conditions and it was possible to verify the capacities created, since the specialists have a high level of knowledge and are responsible for both the CCA and DRR components. These specialists will be in charge of transferring knowledge to the new DRRMCs.

## SECTION 4 – KNOWLEDGE MANAGEMENT

Knowledge management actions have been developed as described in each of the results and activities. In general, workshops have been carried out to update flood risk studies and to train decision-makers and specialists in DRR and CCA issues. In addition, workshops related to integrated water management were held with a national scope and meetings were held to improve rainfall forecasting by integrating radar information with that obtained from the rain gauge network of INRH. Workshops have been planned for the next semester and are described in the work plan in section 11.

Regarding publications, the products that were systematized in other projects are being reviewed for reprinting and subsequent training of key actors at the provincial level. In addition, progress is being made in the development of new products resulting from the project.

## SECTION 5 – COMMUNICATION AND VISIBILITY

As part of the communication and visibility actions, the project identity was developed and promotional printed materials were produced to ensure visibility of the project during technical workshops (agendas, tarpaulins and T-shirts) (See Annex 14). In addition, a fact sheet on project results was prepared. These activities were posted on the personal and institutional social network profiles of project participants. The signing of the Financial Agreement between AFD and UNDP and the initiation workshop were duly documented by Cuban and foreign news agencies and on the websites and social networks of the participating institutions (See Annex 15). A report was also made for national television on the content of the project and its expected results.

The activities are detailed below with links to publications:

### **1. Signature of the AFD-UNDP Agreement**

#### **National Media**

- Agencia Cubana de Noticias

<http://www.acn.cu/medio-ambiente/84700-firman-pnud-cuba-y-francia-proyecto-sobre-cambio-climatico>

- Prensa Latina Televisión: <https://www.youtube.com/watch?v=UaOWCOYVyTM>

- Cubadebate

<http://www.cubadebate.cu/noticias/2021/09/15/proyecto-de-colaboracion-contribuira-a-gestion-de-desastres-naturales-y-adaptacion-al-cambio-climatico/>



- Radio Habana Cuba  
<https://www.radiohc.cu/noticias/nacionales/270209-pnud-cuba-y-francia-firman-proyecto-sobre-cambio-climatico-foto>
- Canal Caribe: <https://www.facebook.com/watch/?v=361732459011554>
- Periódico Trabajadores  
<http://www.trabajadores.cu/20210916/firman-convenio-para-reducir-el-riesgo-de-desastres/>
- Periódico Escambray  
<http://www.escambray.cu/2021/union-europea-pnud-y-cuba-juntos-en-proyecto-para-reducir-riesgos-de-desastres/>
- Cubasí  
<https://cubasi.cu/es/noticia/firman-pnud-cuba-y-francia-proyecto-sobre-cambio-climatico>
- Portal Cuba.cu  
<http://cuba.cu/medio-ambiente/2021-09-16/proyecto-de-colaboracion-contribuira-a-gestion-de-desastres-naturales-y-adaptacion-al-cambio-climatico/57354>
- Excelencias Cuba  
<https://www.excelenciascuba.com/economia/pnud-cuba-y-francia-firman-proyecto-sobre-cambio-climatico>
- Red Cubana de la Ciencia  
<http://www.redciencia.cu/noticias/2021-9-15/firman-pnud-cuba-y-francia-proyecto-sobre-cambio-climatico/9536>

### **International Media**

- XINHUA: [http://spanish.news.cn/2021-09/15/c\\_1310189917.htm](http://spanish.news.cn/2021-09/15/c_1310189917.htm)
- EFE  
<https://efs.efeservicios.com/noticia-multimedia/destinara-millones-euros-aliviar-efectos-inundaciones-sequias-cuba/55007022814>

### **UNDP Cuba Website**

<https://www.cu.undp.org/content/cuba/es/home/presscenter/articles/2019/proyectoinrhgestio-ndesascnortedecuba.html>

### **Social network**

#### **Facebook**

- UNDP Cuba: <https://www.facebook.com/pnudcuba/posts/3825739787526374>

#### **Twitter**

- UNDP Cuba: <https://twitter.com/PNUDCUBA/status/1437796249072283649>  
<https://twitter.com/PNUDCUBA/status/1437798633940963329>  
<https://twitter.com/PNUDCUBA/status/1437800168569573377>
- UNDP AL: <https://twitter.com/PNUDLAC/status/1437826774423977997>

- UN Cuba: [https://twitter.com/ONU\\_Cuba/status/1438120223937269764](https://twitter.com/ONU_Cuba/status/1438120223937269764)
- Maribel Gutiérrez (UNDP Resident Representative Cuba):  
<https://twitter.com/MargutCanda/status/1437822149578866692?s=08>
- French Development Agency: [https://twitter.com/AFD\\_es/status/1437892112125775872](https://twitter.com/AFD_es/status/1437892112125775872)
- Carlos Fidel (Director DOEI, MINCEX): <https://twitter.com/CarlosFidelDOEI/status/1438094873375170570>
- Radio Reloj: <https://twitter.com/RadioRelojCuba/status/1437941256487907330>
- Radio Baraguá: <https://twitter.com/RadioBaragua/status/1438130727850283011>

## **2. Project Initiation Workshop preparatory meeting**

### **Social Network**

- <https://www.facebook.com/argelio.fernandezrichelme/posts/10216215028088279>.
- <https://www.facebook.com/mariela.infantesoca/posts/1645726849152391>.
- [https://www.facebook.com/permalink.php?story\\_fbid=1510781512629347&id=100010925382502](https://www.facebook.com/permalink.php?story_fbid=1510781512629347&id=100010925382502).

## **3. Project Initiation Workshop**

### **Social Network**

#### **Twitter**

- Iván Zverzhanovski (Deputy Resident Representative, UNDP Cuba):  
<https://twitter.com/ivanzver/status/1460253269138288640>
- UNDP Cuba: <https://twitter.com/PNUDCUBA/status/1460274111469563909>  
<https://twitter.com/PNUDCUBA/status/1460274125180702720>  
<https://twitter.com/PNUDCUBA/status/1460274139487424514>

#### **Facebook**

- [https://www.facebook.com/permalink.php?story\\_fbid=1512182895822542&id=100010925382502](https://www.facebook.com/permalink.php?story_fbid=1512182895822542&id=100010925382502)
- <https://www.facebook.com/yunyslka.gonzalezvaguez/posts/10227194813684542>

## **SECTION 6 – ORGANIZATION AND RESOURCES**

At the request of the Government of Cuba, UNDP ensures the full implementation of the project using the direct implementation modality (DIM) in compliance with UNDP rules, regulations and policies and the donor's supervision requirements. UNDP provides direct programmatic and operational services, which contribute to the quality of implementation. Advice is provided for strategic programming processes, monitoring and supervision of planned project activities, and financial management. These services include strategic and operational follow-up, financial and procurement management, knowledge management and communication. Operational services include the issuance of checks, vouchers, bank management,

procurement processes, payroll, administration and logistics management. UNDP's cost recovery policy will be applied, as reflected in the budget.

Procurement processes are carried out according to UNDP norms, complying with international standards of transparency and competitiveness and seeking to ensure the best "value for money". In cases where long-term corporate agreements are available for certain products, these will be used to guarantee competitive prices. In the case of procurement processes of equipment and supplies, similar items will be grouped together in the same process whenever possible, as in the case of information technology. This will expedite procurement processes and reduce import costs, including freight costs.

These measures will allow for efficient use of project resources, considering that this is an initiative that was formulated four years ago and prices have risen considerably both domestically and internationally.

Knowledge management activities have been organized in coordination with provincial and national counterparts, taking into account the planned budget. Actions with similar contents will be concentrated in workshop packages, which will be held at the province's main city or at a halfway point between intervention areas, with the objective of optimizing resources, whether monetary, fuel or other.

## **SECTION 7– COORDINATION AND SYNERGY WITH OTHER COMPONENTS**

The project works in synergy with the Coastal Resilience project in the municipalities of Chambas and Nuevitas, in the provinces of Ciego de Avila and Camaguey, respectively. As mentioned before, this project is implemented by UNDP's NCE area and aims to strengthen and integrate DRR and CCA in the socio-economic development plans of vulnerable coastal municipalities sectors and governments. In articulation with this project, the DRR + CCA Guidance will be validated in the municipality of Nuevitas. The NCE and RRR areas of UNDP continue coordinating actions in which synergy is possible.

In parallel, this initiative also works in synergy with the project "Pon tu ficha", phase II, implemented by WFP (as leading agency) and UNDP, with DIPECHO funds in the municipality of Esmeralda, in Camaguey. The project strengthens capacities in the agri-food and water management sectors to increase resilience to drought. Tools and instruments of this project are being transferred to this initiative and the knowledge management actions that coincide are planned jointly, taking into account that both projects are implemented by the UNDP RRR area and have a common objective, which is to improve capacities to reduce the impact of drought.

## **SECTION 8 – GLOBAL CONSIDERATIONS, DIFFICULTIES, RISKS AND LESSONS LEARNED**

### **a. Global considerations**

#### **a. Difficulties and Risks**

The current complex the economic-financial situation of the country has impacted the project implementation paths. Fuel shortages have increased and affected not only the monitoring activities by the UNDP team, but above all, the realization of the field activities as initially planned, such as: monitoring of the provincial actors, transfer of personnel and equipment to

distant points for the construction works before the installation of the AHS; realization of workshops, as the electricity supply is affected for 12 or more hours a day. Although it has been possible to progress on the planned activities so far, there are warning signs that the current energetic situation may be one of the major risks to timely project implementation in the next semester. UNDP, together with national and provincial counterparts, is following up on this situation to make the appropriate adjustments.

As for COVID-19, although the epidemiological situation in the country has improved, it continues to be a risk for implementation. However, a group of mitigation measures reflected in the Project Document have been foreseen, which will allow the planned actions to continue. New lockdown measures in the country would lead to an adjustment of the planned activities, which would be carried out virtually, supporting the communications of the provincial counterparts. Additionally, the current dengue outbreak could also pose further challenges to the project implementation at the local level.

On the other hand, the conditions surrounding the economic, commercial and financial blockade imposed by the United States on Cuba continue to be an important obstacle to the procurement processes that have already begun, which may cause delays beyond what has been foreseen. During the period, UNDP had to re-launch 1 process, because no supplier came forward, given that the suppliers willing to trade with Cuba is decreasing because they may be sanctioned by the United States.

Likewise, the global supply chain continues to be affected, especially shipping companies' difficulties in meeting demand. In the case of Cuba, this situation is aggravated by the restrictions imposed by the blockade, which has generated delays in the shipments, non-compliance with itineraries by shipping lines and difficulties in finding new spaces on ships. UNDP is closely monitoring this situation and alternative solutions will be sought, considering experiences and lessons learned from previous projects. UNDP will also be in contact with the donor informing this situation and its possible solutions.

## **b. Lessons learned**

During this period, experiences and lessons learned from other concluding projects on drought management have been transferred. The main ones are:

- Group similar items to launch a single procurement process, regardless of the beneficiaries.
- Establish a joint action planning system with other projects being implemented in the project intervention area to concentrate efforts and resources and avoid duplication of content.
- Strengthen alliances with national and provincial counterparts to ensure more effective monitoring of remote implementation and compliance with plans in the provinces.
- Maintain direct communication with project coordinators in the provinces and use local capacities to carry out different kind of training. This will allow us to move forward in the implementation and also promote capacity building at the territorial level.

## **SECCIÓN IX – CROSS-CUTTING ISSUES**

### a. Gender

As indicated in Activity 2.5, the gender actions of the project will be cross-cutting to all its results. Gender Groups have been created at the national and provincial levels for the organization and follow-up of implementation, and actions have been planned for the next six months.

## SECTION 10 – FINANCIAL REPORT

### a. Implemented budget

REPORT 2021- 2022

UE COMPONENT	BUDGET EURO	DELIVERED EURO	BALANCE EURO	% DELIVERED
Human Resources	70,000.00	7,301.85	62,698.15	10%
Travel	43,740.53	7,645.53	36,095.00	17%
Goods and services (1)	1,071,128.63	0.00	1,071,128.63	0%
Studies and technical advisories	40,000.00	0.00	40,000.00	0%
Communication, visibility and knowledge management	40,000.00	3,416.46	36,583.54	9%
Seminars, workshops and trainings	94,000.00	11,549.75	82,450.25	12%
Assessments and Audits	3,000.00	0.00	3,000.00	0%
Implementing costs	40,000.00	742.24	39,257.76	2%
<b>TOTAL</b>	<b>1,401,869.16</b>	<b>30,655.83</b>	<b>1,371,213.33</b>	<b>2%</b>

DFA COMPONENT	BUDGET EURO	DELIVERED EURO	SALDO EURO	% DELIVERED
Indirect costs	98,130.84	2,087.16	96,043.68	2%

<b>GENERAL TOTAL</b>	<b>1,500,000.00</b>	<b>32,742.99</b>	<b>1,467,257.01</b>	<b>2%</b>
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UE COMPONENT	BUDGET EURO	DELIVERED EURO	SALDO EURO	% DELIVERED
Good	1,020,128.63	0.00	1,020,128.63	0%
Services	51,000.00	0.00	51,000.00	0%

## SECTION 11 – ACTIVITIES PLANNED FOR THE NEXT PERIOD

### a. Work plan (Attached)

#### a. Budget projections

UE COMPONENT	BUDGET EURO	COMMITMENT 2022
Human Resources	70,000.00	8,550.43
Travel	43,740.53	9,317.00
Goods and services (1)	1,071,128.63	570,688.00
Studies and technical advisories	40,000.00	5,505.50
Communication, visibility and knowledge management	40,000.00	8,470.00
Seminars, workshops and trainings	94,000.00	26,549.75
Assessments and Audits	3,000.00	
Implementing costs	40,000.00	7,727.76
<b>TOTAL</b>	<b>1,401,869.16</b>	<b>636,808.44</b>

DFA COMPONENT	BUDGET EURO	COMMITMENT 2022
Indirect costs	98,130.84	44,576.59

<b>GENERAL TOTAL</b>	<b>1,500,000.00</b>	<b>681,385.03</b>
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UE COMPONENT	BUDGET EURO	COMMITMENT 2022
Good	1,020,128.63	570,688.00
Services	51,000.00	