
Quarterly Monitoring Report

EUROCLIMA+

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I. IMPLEMENTED ACTIVITIES AND ACHIEVED RESULTS

Activity	Description
Result 1. Strengthening of the hydro-meteorological EWS for surveillance, monitoring and forecasting of drought and flood.	
<p><u>Activity 1.1.</u> Revitalize the hydrological surveillance, monitoring and forecasting system.</p>	<p>Conditions have been created for the installation and operation of Automatic Hydrological Stations (AHS), which will extend the coverage for monitoring and control of the water cycle in the intervention areas in the provinces of Camagüey and Ciego de Ávila (See Annex 1). During the installation mission that will take place from 9 to 24 June 2023, a total of 26 AHS will be installed (17 in the province of Ciego de Avila and 9 in the province of Camagüey (out of the 14 planned). Five huts which will guarantee the equipment's safety could not be completed in time due to lack of fuel available in the province of Camaguey. These 5 AHS will be installed in the coming months. UNDP and the National Institute of Water Resources (INRH) will follow up with the local authorities.</p> <p>The above-referred equipment will improve hydrological monitoring and surveillance in both provinces, covering 90% of the territory in Ciego de Avila and around 40% in Camagüey. More than 700,000 people affected by severe droughts and floods will become more resilient to these extreme weather events through more accurate and real-time forecasts. At the same time, large areas of crops will be benefitted particularly in the province of Ciego de Avila, which supplies agricultural products to several provinces in the country.</p> <p>In the case of Ciego de Avila, the measurement coverage will benefit groundwater basins, some of which are open to the sea, making it possible to control salinity. In all cases, it is essential for the proper control of the water levels in the basins and for the regulation of proper exploitation. In the case of Camagüey, the monitoring mainly benefits surface sources (reservoirs) and will play a crucial role in controlling water availability in the face of the complex drought currently affecting the area, as well as possible flooding due to heavy rainfall, especially in areas of the provincial capital.</p> <p>Procurement is underway for computer equipment for data analysis and processing as a component of the strengthening of hydrological monitoring and surveillance, in an amount of 68 mil USD. This equipment will be installed in the hydrological situation rooms to be set up under the project, which will be used to analyze and process information from hydrological monitoring. This will improve the management process of water supply sources for the population and key economic sectors in a drought scenario,</p>

	<p>as well as part of the Early Warning System (EWS) for the risk of flooding caused by severe local phenomena or hurricanes.</p> <p>A monitoring visit was carried out in April 2023 by the UNDP team in charge of implementation (See Annex 2). Meetings were held with the key actors of the Water Resources sector, including their managers, to verify the progress in the conditions to be created for the installation and start-up of the hydrological equipment. Key aspects of the implementation were discussed, such as the organization of the mission for the installation of the equipment (scheduled from 9 to 24 June, 2023) and the training for its use; the actions related to the exchange of information between Water Resources, the National Radar Centre (CNR in Spanish) and the Provincial Meteorological Centre (CMP in Spanish); the systematization of experiences and results, among others.</p> <p>In this regard, a meeting was held to analyze the Aquifer Drought Methodology, which is being developed by specialists from the Provincial Water Development Enterprise of Ciego de Avila, as one of the products to be delivered by the project (See Annex 3). Twenty-five decision-makers, specialists and technicians from all the project's key sectors involved in hydrometeorological monitoring and risk management participated in the exchange. The relevance of scaling up the document at the national level to contribute to capacity building to improve water resources management in drought scenarios was noted. It was agreed to hold a meeting with specialists at the national level to review this Methodology, so that it can be finalized in the coming months.</p> <p>- An exchange took place between students and professors from the Hydrology Student Groups of both provinces and team members of the "Adaptation to Drought" project in Santiago de Cuba, implemented by the UNDP. The meeting was led by the Health Promotion Center of Santiago de Cuba, an entity for the promotion and dissemination of the health system, leader in community work at the national level. Experiences, best practices, and lessons learned from the community campaigns developed in the framework of the project to increase risk perception in the event of a drought event were shared. (See Annex 4).</p> <p>- The UNDP implementation team also held an exchange with the Hydrological Student Groups as part of the monitoring visit in April 2023. The preparation of the students and teachers in working on hydrological issues and their links to the project were noted (See Annex 5).</p> <p>As part of this meeting, an exchange was held in Ciego de Avila with key actors in the community of Ruspoli and parents of the students who</p>
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	<p>participate in the hydrological student group, to agree on the activities that will take place in the framework of the actions related to gender awareness.</p> <p>At the same time, the Provincial Water Development Enterprise of Ciego de Avila has taken steps to improve the conditions of the rural school that houses the hydrology student group.</p> <p>First provincial hydrological report on Camaguey Television as a result of the project's actions was broadcasted. This report is also being prepared to be broadcasted in the province of Ciego de Avila.</p> <p>This practice has been adopted by the national television, which informs the population of the country's hydrological situation on a weekly basis. In the case of the concerned provinces, it was considered necessary to make a local broadcast at least once a month so that the population and key economic sectors are aware of the hydrological situation of the province and can increase their resilience, especially in the event of severe droughts.</p>
<p><u>Activity 1.2.</u> Improve the weather surveillance, monitoring and forecasting system.</p>	<p>The improvement of the Automatic Weather Stations (AWS) and the new ones already received and, in the process, to be installed, will increase the coverage of the meteorological monitoring system in the provinces of intervention. These AWS will be complemented by the strengthening of the meteorological radar. This will improve timely decision-making in the face of extreme hydrometeorological events such as floods and droughts, as the information provided will be complemented by the data produced by the strengthened hydrological network.</p> <p>The UNDP project implementation team, national and local partners, are organizing the transfer of the equipment to the provinces, which has been difficult due to the energetic crisis in the country, leading to a reduction in the availability and distribution of fuel. Meanwhile, the AWS are being calibrated at Meteorology Institute (INSMET in Spanish) and the concrete bases for the installation of this equipment are being completed.</p> <p>Contracting the IT resources is currently in process. It will allow the CMPs to analyze and process the data received from the AWS to improve meteorological monitoring and surveillance.</p> <p>An exchange between decision-makers and specialists from the CMPs of Camagüey and Ciego de Ávila and the UNDP implementation team, took place during the monitoring visit in April 2023. Challenges for the installation of equipment and other actions, such as the exchange of information between the CNR and INRH to improve flood forecasting were assessed.</p>

	<p>The first hydro-meteorological brochure in the province of Ciego de Avila was produced as a result of the project (See Annex 6). The first brochure for the province of Camagüey is being finalized. These brochures have been produced jointly by the CMP and the Provincial Water Development Enterprises with the aim of providing comprehensive information on the state of the drought and its forecasts, based on information from both monitoring networks.</p> <p>They will be distributed to key sectors in the provinces through local governments and the Disaster Risk Reduction Management Centers (CGRRD in Spanish). The latter will be created in Ciego de Avila and strengthened in Camagüey with the support of the project. The brochure will enable users at provincial and local level to be better prepared for droughts and to use water more efficiently.</p>
<p>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.</p>	
<p><u>Activity 2.1.</u> Train governments and key sectors in the use and implementation of EWS operational procedures</p>	<p>Progress has been made in the development of the methodology for the use of radar information. A face-to-face meeting between the National Institute of Water Resources (INRH) and the National Radar Centre is planned for June 2023 to evaluate the process of integrating the rainfall measurement information received from the radar, meteorology and the INRH rainfall network, which will allow a better diagnosis of its behavior.</p> <p>Meetings have been held between the main actors of the EWS at national level to finalize the Operational Procedure for the Integrated Management of Drought, led by the National Civil Defense Headquarter (EMNDC in Spanish). This document has a national scope, and guides and regulates the functions of key actors in disaster risk reduction in the face of drought.</p>
<p><u>Activity 2.2.</u> Support for the updating and analysis of diagnostic and planning instruments.</p>	<p>Progress has been made in updating the flood Hazard, Vulnerability and Risk (HVR) studies in vulnerable municipalities of the intervention provinces. The studies of the 3 most vulnerable municipalities in each province are being updated: Chambas, Florencia and Bolivia in Ciego de Avila; Nuevitas, Camaguey and Sibanicú in Camaguey. In the case of Camaguey, this includes the provincial capital, the fourth most populated city in the country.</p> <p>The progress of the flood studies will be presented at the II Congress of Geospatial Sciences and Risk Reduction, to be held in Havana from 3 to 7 July, 2023 as part of the 14th International Conference on Environment and Development.</p> <p>Initial workshop was held to update the drought into the HVR studies in both intervention provinces (See Annex 7). As part of these workshops, around 30 decision makers, technicians, and specialists from key sectors</p>

	<p>in each area were trained by the Environment Agency on the new Methodology for Drought HVR Studies. The training participants make up the multidisciplinary group responsible for updating the HVR studies.</p> <p>Considering that the new National Methodology for Drought HVR Studies will be validated in the selected municipalities of the project, these studies will be carried out in representative municipalities of each territory. The Methodology was developed in the framework of the Joint Programme "Pon tu ficha", funded by DIPECHO and implemented by the World Food Programme and UNDP.</p> <p>A second training on the new method for calculating the integrated hazard is planned for 6-10 June 2023, which will allow progress in validating the Methodology in the pilot municipalities.</p> <hr/> <p>Contracting of the IT resources is currently ongoing. It will facilitate the preparation and updating of HVR studies and the incorporation of their recommendations into the Sectoral Disaster Risk Reduction Plans (PRRD, in Spanish). Furniture and other goods that will strengthen the Capacity Building Centers (CBCs) in the most vulnerable municipalities are in the same stage of the procurement process.</p> <p>This will facilitate disaster risk management and the elaboration of recommendations for decision-makers to include in the provincial PRRDs, with the aim of increasing resilience to droughts and floods.</p>
<p><u>Activity 2.3.</u> Create and strengthen local institutions that reinforce risk management and adaptation to Climate Change</p>	<p>A technical meeting was held in the province of Ciego de Avila with the consultants who led the adaptation to the Cuban context and validation of the "Guide for the use of a strategic tool for integrating Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) components into local development strategies" (See Annex 8). This tool was adapted to the Cuban context and validated in 2 municipalities, in synergy with the Coastal Resilience project, funded by the EU and implemented by the UNDP Nature, Climate and Energy area. This initiative has been supported by the UNDP Regional Centre in its two phases and the Euroclima project has led its piloting as part of its objective to address the integrated management of DRR and CCA.</p> <p>The meeting was attended by around 30 decision-makers and specialists from the province involved in risk management and climate change. The contents, experiences and good practices resulting from the process of developing and validating the guide were shared. The importance of this instrument for the country was highlighted, which joins other instruments already developed on the subject, such as Directive No. 1 of the National Defense Council (which regulates disaster risk management in the country</p>

	<p>and has recently been updated) and the "Tarea Vida" (National Plan for Fighting against Climate Change).</p> <p>The Guide has been presented at the national level to the management mechanisms that the country has in place to manage DRR and CCA policies, such as the Macro Programme for Natural Resources and Environment; the Secretariat of CITMA (Ministry of Science, Technology and Environment, which is the national environmental management authority), among others.</p> <p>The next actions, which will take place in a third phase starting on June 1st, 2023, with the support of the project, have been planned in order to validate this tool in the water sector in the province of Ciego de Avila. This sector was selected because of the capacity it has built up in terms of human resources and because of the characteristics of its hydrogeological system, more than 70% of which is made up of underground basins, to supply the population and key sectors, mainly agriculture. This territory is an important center of production that provides food at provincial and national levels and is one of the most affected by droughts and floods.</p> <p>A follow-up meeting was held with key civil defense actors from both provinces as part of the UNDP monitoring visit in April 2023. Progress was noted in the rehabilitation of the premises where the new provincial CGRRD will be installed and in 2 municipalities in the province of Ciego de Avila. The resources are guaranteed to complete this rehabilitation before the equipment is imported: computers, communications, protection, etc., which will allow work to begin in the CGRRD and in the Early Warning Points (EWP) located in vulnerable communities. In the case of Camagüey, all the conditions are guaranteed for the installation of the equipment that will strengthen the existing CGRRD.</p> <p>The procurement of IT equipment to support the management of drought and flood risks in both provinces is underway. Furniture and other goods that will strengthen the CGRRD and the EWP are in the same situation. The bids for protection equipment are being evaluated and the generators, which will ensure risk management in a context aggravated by extreme events, should arrive in the country at the time of deliver this report. Communication means are under tender.</p>
<p><u>Activity 2.4.</u> Contribute to the perception of drought and flood risk and strengthen flood warning through media support.</p>	<p>Meetings were held with mass media representatives involved in the project (TV, radio and written press) to define future project actions. The first provincial hydrological report has been organized and issued as part of these actions, As mentioned in Activity 1.1, it will be launched monthly.</p>

	<p>Media covers the actions of the project in a transversal way. Reports have been produced to disseminate the project's content, and a face-to-face training session is planned for June 2023 to improve communication products from a gender perspective.</p>
<p><u>Activity 2.5</u> 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</p>	<p>The contracting of the IT and communication media, that will support the dissemination of messages in the different areas, is underway. They will not only contribute to the dissemination of the project activities but will also be a tool to increase the risk perception of the population beyond the territorial scope of the project and to ensure info communication flows as part of the EWS in the event of an extreme event as droughts, floods, hurricanes or others.</p> <p>Second gender awareness training for INRH and its business groups was held on May 2, 2023 (See Annex 9). Twenty decision-makers and specialists, who are also the focal points of the Gender Committees created in each of the INRH units at different levels, participated. These committees were created to support the elaboration of the INRH Gender Strategy as part of the actions carried out under the national Programme for the Advancement of Women (PAM in Spanish).</p> <p>The project supported the drafting of the above-mentioned strategy through trainings and actions aimed at eliminating gender stereotypes and raising awareness of these issues. In this sense, two representatives of the INRH Gender Committee participated in the workshop "Exchange on Gender in the Government of the Municipality of Marti, Province of Matanzas: new space to strengthen our strategy for local, sustainable, carbon-neutral development and in response to climate change" (See Annex 10). This project, also funded by the EU, allowed the exchange of experiences and good practices that can be applied in the elaboration of INRH's gender strategy. In addition, it was possible to learn about the OigaCC initiative (Opting for gender equality in climate change adaptation), which is being implemented in the community of Ruspoli, in Ciego de Avila, where there is a Hydrology Student Workshop in a primary school in this province.</p> <p>Also, a member of the project participated in the workshop on masculinities, a new project that is being implemented by UNDP (See Annex 11). The knowledge gained from these exchanges can be transferred to the project beneficiaries, which will further contribute to the elimination of stereotypes and the design of INRH's gender strategy with an inclusive approach.</p> <p>Training for the multidisciplinary groups responsible for HVR studies is planned for July 2023 to improve the analysis of risk perception surveys from a gender perspective. This will enable better assessments to be made</p>

	<p>from this approach in the risk studies and recommendations to be included in the PRD with a more comprehensive vision.</p>
<p>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.</p>	
<p><u>Activity 3.1.</u> Transfer tools to improve hydro-meteorological forecasting, water management and risk management of drought and floods, capitalized on previous projects.</p>	<p>Several tools are being updated to improve integrated water management and thus drought and flood risk management:</p> <ul style="list-style-type: none"> - As mentioned in Activity 2.1, meetings have been held between key EWS stakeholders at national level to finalize the Operational Procedure for Integrated Drought Management, with the aim of validating it in the project intervention provinces. - The updating of the flood risk studies in the most vulnerable municipalities has progressed and the updating of the drought study based on the new national Methodology has started (see Activity 2.2). - A set of systematized products from other previous drought and flood DRR-related projects coordinated by UNDP, has been revised to be transferred to the intervention areas. They are as follows <ul style="list-style-type: none"> - Instructions for hydrological modelling and prediction. - Numerical prediction guidance. Comparison of modelling systems. - Survey of the population on the risk of flooding due to heavy rainfall. - Guidance for decision makers to understand hazard, vulnerability and risk studies. Flood risk due to heavy rainfall. -Methodology for a medium-term hydrological drought diagnosis and forecasting system. -Manual on rainwater harvesting solutions. - Drought Early Warning System IT Platform Guide - A workshop on the transfer of the hydrological drought diagnosis and forecasting methodology is planned for 6-10 June, 2023. This methodology has been developed in previous projects and will be validated in the provinces of Camagüey and Ciego de Avila.
<p><u>Activity 3.2.</u> 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</p>	<ul style="list-style-type: none"> - A technical meeting was held to analyze the Methodology for determining hydrological drought in aquifers, that was developed by specialists from the Provincial Water Management Enterprise of Ciego de Ávila, and which is one of the new products of the project (see Activity 1.1 and Annex 3). - The elaboration of the Methodology for the use of radar information has progressed (see Activity 2.1).

<p>level through South-South cooperation.</p>	<p>- Meeting held in the province of Ciego de Avila to start the validation process of the "Guide for the use of the strategic tool to integrate the components of DRR and CCA in local development strategies" in the water resources sector (see Activity 2.3).</p> <p>The new products developed in the project, such as the methodology for drought in aquifers; the methodology for the use of radar information; the hydro-meteorological brochure; and others that are being validated, such as the national methodology for drought HVR studies; the methodology for diagnosis and forecasting of hydrological drought; and the DRR and CCA Guide, will be capitalized and included in a toolbox that will be transferred to other areas of the country, if possible through South-South cooperation.</p>
<p><u>Activity 3.3.</u> 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>	<p>As part of the actions linked to this activity, steps have been taken in Outcomes 1 and 2 that contribute to the pilot action. In this sense:</p> <ul style="list-style-type: none"> - Installations and commissioning of the AWS have been planned, which will strengthen hydrological monitoring and surveillance. - Knowledge on the integration of DRR and CCA components has been transferred based on the Guide for the use of the Strategic Tool adapted to the Cuban context. - Training and exchanges to raise awareness of gender issues and eliminate sexist stereotypes have been conducted. - Progress has been made in updating procedures and methodologies to improve risk management: Operational Procedure for Integrated Drought Management; National Methodology for Drought HVR Studies (under review after validation in the project).
<p><u>Activity 3.4.</u> 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>	<p>- Project results were presented at the 8th Regional Platform for Disaster Risk Reduction, held in Uruguay from 28 February to 2 March, 2023 Project results and Cuba's achievements in EWS, drought and flood management were also shared (See Annex 12). The following actions were carried out:</p> <ul style="list-style-type: none"> • Working meeting with the Civil Protection System of Uruguay and UNDP to address the challenges of drought. Euroclima experience and tools shared. • Presentation of project results in a meeting with UNDP DRR and CCA focal points in the region. • Shared project results through its publications in the TSS Platform session and ECHO meeting with regional partners. • Meeting between the official delegation of Cuba and UNDP Regional Center to organize a regional workshop on DRR-CCA, as a continuation of the actions related to the implementation of the DRR and CCA guide validated in the Euroclima pilot actions.

	<p>- The participation of national counterparts in the regional workshop on the harmonization of DRR and climate change agendas, to be held in Panama from 20 to 23 June, 2023 is being organized. This workshop will be financed by the UNDP Regional Centre with the project support. The results of the project related to DRR and CCA will be presented and representatives from key sectors such as Civil Protection, CITMA, Water Resources, Urban Planning and UNDP.</p> <p>- The participation of national and local counterparts in the 14th International Conference on Environment and Development, to be held in Havana from 3 to 7 July, 2023 is being organized.</p>
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II. Difficulties and mitigation actions

Some relevant difficulties stand out:

- The country is experiencing a complex socio-economic situation, with the energetic crisis having the greatest impact on implementation. In this context, in the province of Camagüey, 5 of the 9 huts planned to guarantee the security of the AWS, which will strengthen surveillance and hydrological monitoring, have not been completed. Even though the project supported this activity to some extent, implementation in general has been affected by the reduction in the allocation of fuel to the provinces due to its scarcity.

This situation has critically limited the movement to the various installation points, which are distant from each other as they are spread over several municipalities. This is a large geographical area to cover to ensure effective monitoring at representative points, particularly in the different geological sectors that make up the groundwater basins. The territory has guaranteed the distribution of construction materials with its own resources. At the time of writing this report, 100% of the works have been completed in Ciego de Avila and around 50% in Camaguey.

- The country's fuel shortage also affected the development of knowledge management activities, as power cuts became more frequent. However, alternatives were sought, such as holding workshops and other exchanges in provincial government offices that have electricity generators. In addition, the project provided mobile data top-up cards for mobile phones to support virtual exchanges between key actors in different sectors. This support enables remote communication between provincial partners and the implementation team for project follow-up and coordination of activities.

- Monitoring, expert missions and training have also been affected by the availability of fuel. However, the implementation team made one monitoring visit in April 2023 to Ciego de Avila and Camaguey, although it was not possible to visit the intervention communities.



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III. Quarterly Planning

See attached Work Plan