



## **BUILDING A SUSTAINABLE FUTURE**



#### **REGIONAL VOICES FOR THE ENVIRONMENT**

### BUILDING INSTITUTIONAL CAPACITIES IN THE REGION:

Geraldina Deras, technician from the Instituto de Conservación Ambiental - Honduras, emphasized that the role of the Upper Lempa Watershed Project in the area "brings us great satisfaction, as it helps us unite efforts for a trinational watershed, of interest to all three countries."





#### WOMEN AND BIODIVERSITY CONSERVATION:

Sonia Arana shares, "Women play an important role in society; we learn to transmit knowledge to create better communities. And the importance of watersheds and biodiversity, as well as the significance of water conservation. Also, the participation we, as women, have in our communities."





### **LEMPA RIVER REGION**

#### >>> THE WORK CHAIN TO PROTECT THE UPPER LEMPA WATERSHED

The work in Montecristo National Park is critical to protecting biodiversity and mitigation to climate change, essential for El Salvador, Guatemala, and Honduras. The 1,973 hectares of the Montecristo forest are home to landscapes full of smells and colors due to the incredible biodiversity. And here, Idalma Aldana works as the park's director, administrated by Ministerio de Medio Ambiente y Recursos Naturales. She is the second woman to hold this position and was once the first female forest ranger. Idalma can be described as a natural leader throughout her 17-year professional career.

Montecristo is situated among the countries of El Salvador, Guatemala, and Honduras in an area called the Trifinio. The protected area of the park says Idalma, "...is a relic, with precious and critically threatened ecosystems at the national and global levels, unique species discovered by science."

"The Montecristo National Park had no projects focused on strengthening the work done here. In the Güija Complex, there were years without anyone supporting this wetland, which is so important for the country. The project aims to strengthen the management of protected areas, capacity building, and updating knowledge, which is always necessary," commented Idalma.

The USAID Upper Lempa Watershed Project strives to strengthen management capacity in the face of climate change and water resource management in the region. This objective is aligned with the park because, as Idalma stated, "This is a water recharge zone, we produce water, and we give water to neighboring communities. If we protect this Upper Lempa Watershed, we protect 70% of our territory. The Lempa River is the productive backbone of the country, and we are contributing directly to maintaining its flow."

Strengthening capacities in Montecristo can guarantee the quality and management of water resources in the Upper Lempa Watershed, which is crucial to resilience in climate change. Idalma, who visited the park for the first time at the age of 16 on a family trip without yet knowing her love for nature, highlighted that beyond her job as director, she is driven by a commitment to humanity, to all.

Montecristo National Park, founded in 1960, is now a pivotal point in biodiversity conservation and, above all, one of the water cultivators of the Upper Lempa Watershed. "We are very grateful for the Upper Lempa Watershed Project because it includes Montecristo National Park and the RAMSAR site Güija Lagoon Complex. It will include the entire territory, and that is important," said Idalma.

#### THE UPPER LEMPA WATERSHED

Montecristo National Park, founded in 1960, is now a pivotal point in biodiversity conservation and, above all, one of the water cultivators of the Upper Lempa Watershed.







### STRENGTHENING CAPACITIES IN MONTECRISTO CAN GUARANTEE THE QUALITY AND MANAGEMENT OF WATER RESOURCES IN THE UPPER LEMPA WATERSHED, WHICH IS CRUCIAL TO RESILIENCE IN CLIMATE CHANGE.

What is Idalma's top priority, as director of the institution responsible for the Montecristo area? "Landscape restoration. We must see how we create biological corridors to produce trees. If we restore, we will have more fauna and generate more water — which develops sustainable communities, resilient to climate change."

In her words, the Upper Lempa Watershed Project "...fits like a glove; we will continue to grow and improve our work. We can train and strengthening communities, and the project will help us implement this work within the park," thus continuing their work chain to protect life.

IDALMA ALDANA AT MONTECRISTO NATIONAL PARK, EL SALVADOR





## BUILT CAPACITIES FOR REGIONAL Sustainability

#### >>> WORKSHOP ON THE MANAGEMENT OF THE WATER EVALUATION AND PLANNING SYSTEM AND ROBUST DECISION-MAKING BUILT CAPACITIES FOR REGIONAL SUSTAINABILITY PARTICIPANTS

Representatives from national institutions of El Salvador, Guatemala, and Honduras participated in the workshop on the management of the water evaluation and planning system and robust decision-making, held in San Salvador from May 31-June 2, 2023. This event aimed to strengthen water resource management and planning in the watershed. The Stockholm Environment Institute supported the training as a project counterpart, contributing its expertise in hydrological and water quality components. Additionally, the first Robust Decision-Making workshop was implemented. Key water management institutions in the region took part to identify challenges and explore potential solutions for improved decision-making in the water domain.

SEI's approach is rooted in feedback from stakeholders involved in watershed management, using the RDS participatory framework. This approach maximizes the utility of the WEAP Model, providing crucial information for water resource planning and management. The RDS approach adopts a participatory model, integrating natural, social, and political aspects of water resource management into a quantitative Integrated Water Resources Management model.

This experience marked the first trinational exchange of technical experts for water management, fostering stronger collaboration and knowledge-sharing for better water resource management in the Upper Lempa Watershed. We will provide further updates as we progress in our commitment to ensuring sustainable water management in the Upper Lempa Watershed.

### PARTICIPANTS

36 Institutional Representatives from Water Resource Management Institutions Trained in Water Evaluation and Planning System (WEAP) and Robust Decision-Making Workshop.

PARTICIPANTS FROM LOS MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATÚRALES DE EL SALVADOR, MINISTERIO DE SALUD DE EL SALVADOR, AUTORIDÃO SALVADOREÑA DEL AGUA, ADMINISTRACIÓN NACIONAL DE ACUEDUCTOS Y ALCANTARILLADOS, COMISIÓN EJECUTIVA HIDROELÉCTRICA DEL RÍO LEMPA, UNIVERSIDAD DE EL SALVADOR, MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES DE GUATEMALA, UNIVERSIDAD DE SAN CARLOS DE GUATEMALA, INSTITUTO DE CONSERVACIÓN FORESTAL, COMISIÓN TRINACIONAL DEL PLAN TRIFINIO AND WINROCK INTERNACIONAL.









## INSTALLED BUOYS AT Torogoz plant, el Salvador:

A new water quality monitoring and control system has been implemented in the Lempa River.

The system primarily consists of floating buoys powered by solar energy, utilizing ultrasound technology to monitor the proliferation of microalgae. These buoys have been provided to Administración Nacional de Acueductos y Alcantarillados, enabling the agency to control microalgae growth and enhance the water quality managed by the Torogoz Plant, reducing treatment costs.

The three buoys placed in the Lempa River, which will be integrated into the Torogoz Plant, have the capacity to treat areas of up to 500 meters in diameter.

A single buoy can reduce up to 90% of existing microalgae and prevent future growth. Furthermore, the buoys are equipped with software that allows for water quality parameter tracking and efficient data management, ensuring proper water resource management. Due to the onset of the rainy season, the buoys have been temporarily removed for protection and will be reinstalled at the beginning of the dry season in November.

#### **BUOYS OPERATION**

The installation of the buoys enables the generation of prediction models using an interactive method for microalgae control based on water quality data.







## **LEAVE NO ONE BEHIND**

#### >>> SUCCESSFUL AGROCHEMICAL CONTAINER DISPOSAL CAMPAIGN PROMOTES ENVIRONMENTAL RESPONSIBILITY IN THE GÜISAYOTE BIOSPHERE RESERVE LEAVE NO ONE BEHIND HONDURAS

The Upper Lempa Watershed Project conducted a responsible agrochemical container disposal campaign in the core zones of the Güisayote Biosphere Reserve in Sinuapa, Honduras, on June 29, 2023. In collaboration with the Instituto de Conservación Ambiental and the Ministerio de Medio Ambiente. The project conducted a training and awareness-raising activity for farmers in the area. In the Güisayote area, which serves as a water recharge point for the Upper Lempa Watershed, is important to create awareness initiatives to prevent early water contamination that may reach the rivers and lakes.

One of the participants, Roel Castellón, a resident and producer of grains in Plan del Rancho, Sinuapa, emphasized that this type of training facilitates knowledge to understand the effects of improper handling of agrochemicals and their influence on groundwater contamination. He noted that although "each person knows the risks of handling agrochemicals, misuse is not immediately visible."

For Castellón, a lifelong farmer, it is crucial to be mindful of proper disposal methods. He stated, "I know that if I burn the containers, the wind will carry the ashes in all directions, potentially reaching other homes and harming people who are not responsible for my actions. If I throw them into water sources, we will harm aquatic life, contaminate the health and well-being of various animals, as well as people who rely on water in other locations and even other countries."

### HONDURAS

PROYECTO CUENCA ALTA DEL RIO LEMP

USAID

The activity took place in the Güisayote Biological Reserve, a protected natural area in Honduras covering 116,968 km2, which serves as a crucial water recharge zone.

PARTICIPANTS IN THE FIRST ACTIVITY INCLUDED FARMERS, TECHNICIANS FROM ICF AND SERNA IN HONDURAS, AND REPRESENTATIVES FROM





The activity took place in the Güisayote Biological Reserve, a protected natural area in Honduras spanning 116,968 km2, which serves as a crucial water recharge zone. The focus is to ensure that the water flows downstream without contamination. According to Deras, "Any contamination that may occur here will affect the entire 'biodiversity' [the land and water produced in the area]. Therefore, developing these activities, such as implementing a collection campaign, marks the beginning of a mindset shift among producers."



The activity was made possible by the working connection between ICF and Campo Limpio, an organization specialized in the management of empty containers that operates in the area. Campo Limpio, a program focused on providing trainings on the proper use and handling of pesticides, as well as collection and storage centers for the correct disposal of containers, joined the activity organized in the framework of World Environment Day. This allowed farmers in the area to receive training and create a space for organization to continue recycling and disposing of materials in a sustainable manner.

Through the management of ICF, farmers were able to deliver the containers they had been storing to Campo Limpio, preventing them from ending up in landfills or being burned by farmers themselves. The campaign enabled responsible and controlled waste disposal in the Güisayote area. Lastly, Mr. Castellón expressed his gratitude for the initiative: "I am satisfied with what I have learned and motivated to continue collecting containers. This is not a one-day task. We have learned, and we hope to continue this effort."





# **BUILDING A SUSTAINABLE FUTURE**

The Upper Lempa Watershed Project is an associated cooperative agreement under the framework of USAID's Sustainable Water Partnership, a global initiative that advocates for worldwide water security efforts through collaborative planning and evidence-based decision-making. These foundational principles are integral to the objectives of the project, aimed at identifying practical solutions to address human-induced and climate-related water security risks. By closely collaborating with international partners and local stakeholders, the project enhances climate resilience and natural resource governance in the Upper Lempa Watershed, which spans El Salvador, Guatemala, and Honduras. The project is focused on achieving three key objectives: strengthening capacity for water monitoring and data-driven decision-making, showcasing USAID's Water Security Improvement process to local partners and its application at the municipal level, and assessing the financial landscape of water resource management to facilitate stakeholders' access to resources.

The project is fostering improved watershed health and resilience in the headwaters of the Lempa River, directly impacting the well-being and water security of communities in El Salvador, Guatemala, and Honduras. Over its duration, the project's initiatives address water security risks in the watershed, a biologically significant region that intersects with protected ecosystems. Moreover, the project tackles root causes of migration, violence, and gender discrimination by sustaining productive economic activities and supporting adaptation to climate stressors.

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