



2008-2022

Haiti

*Increasing Haiti's resilience to
natural disasters and promoting
sustainable practices*

An aerial photograph of a river delta, likely the Artibonite River in Haiti, showing a complex network of channels and floodplains. The image is overlaid with a semi-transparent blue filter. The surrounding landscape consists of green agricultural fields and some scattered buildings.

Acknowledgements

UNEP's work in Haiti was possible due to the strong partnerships with the Ministry of Environment and associated institutions like the National Protected Area Agency, the Ministry of Agriculture, Natural Resources and Rural Development, the Directorate of Civil Protection, the National Centre for Geospatial Information Services, the Inter-ministerial Committee on Land Use Management; partners on the ground, such as the Organization for Environmental Restoration, the Artisanal Fishing and Integrated Development, Reef Check Haiti, and Foundation Nouvelle Grande Anse, among others; funding support from the Government of Norway, the Global Environment Facility, the French Development Agency and Finland among others; and also very importantly the communities we worked with.

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Côte les Cayes, Tib Jer Cayemites, 2012, UNEP

Front Cover image: Coast and Mountains, South Department, 2014, UNEP

Back Cover image: Coastal View, South Department, 2014, UNEP

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“UNEP’s work in Haiti aims at building effective community resilience models through promoting nature-based solutions to disasters risk reduction and sustainable development. This goal implies to work on a broad range of activities, including agroecology, marine environmental management, sustainable livelihoods and energy access, development of protected areas and environmental governance. In the South Department, the programme focuses on integrated practical action in a highly vulnerable region –nonetheless promising – fostering landscape management, restoring ecosystems and developing sustainable livelihoods in agriculture, fisheries and eco-tourism. At national level, the programme reinforces environmental governance and capacities with public institutions.”

Fabien Monteils
Haiti UNEP Country Head

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1. CONTEXT

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

On 12 January 2010, Haiti was hit by a powerful 7.0 magnitude earthquake. Devastating Port-au-Prince, Léogâne, Miragoane, and Jacmel, the catastrophic event resulted in an unprecedented level of damage and loss to the Haitian society and to its economy, infrastructure and natural resources.

Already the poorest, most environmentally degraded, and politically unstable country in the Western hemisphere, Haiti has often been presented as an example of ecological devastation. The country nevertheless features tremendous ecological potential, a wealth of biodiversity and endemic species of significant value for the whole Caribbean region.

Since the 2010 earthquake, the Government of Haiti has attempted to balance short and medium-term imperatives with longer-term needs. In this context, UNEP developed its multi-year programme, with a view to build resilience against natural disasters and foster sustainable development.

On 4 October 2016, category 4 hurricane Matthew hit Haiti and increased labour and environmental vulnerabilities, making a combination of short, medium and long-term approaches all the more critical and UNEP's long-term focus on resilience all the more relevant.

In 2022, The United Nations Environment Programme (UNEP) in Haiti stands on the frontline of **systemic challenges**, including economic turmoil and inflation, poverty trap, social unrest, political and institutional lock, mass migrations and risks of famine. The country's profound and worrying deterioration in the socio-economic, political and security context, was aggravated by the COVID-19 pandemic and a magnitude 7.2 earthquake that affected more than 800,000 people on August 14, 2021.

All these challenges are closely interconnected with the impacts of climate change, massive loss of ecosystems and associated services, severe pollution and depletion of natural resources and food stocks.

Vegetation in Haiti, which was formerly dense, has suffered over decades and centuries from overexploitation. It has now been reduced to savannahs, open forests and vestiges of closed forests, which are made up of broad-leaved trees and conifers. Although faced with a shortage of water and destructive tropical storms, the country's agriculture must nevertheless ensure the alimentary needs of a population in the context of a demographic explosion. This has contributed to an excessive exploitation of the environment in

Fishermen, South Department, 2009, UNEP



Haiti, leading to over-use and loss of land through acceleration of the process of erosion. Agricultural production is very low because of weak means of production and inefficient marketing channels. Most farms are small-sized, family-owned and primarily geared towards self-sufficiency, while export crops are grown on larger plantations.

Fuel provided by biomass is still the most used form of **energy** in the country, with wood, charcoal and bagasse representing the biggest portion of domestic energy consumption. Traditional industries and hydro-energy account for a marginal portion of the energy consumption while the rest is supplied by petrol and its derivatives. This situation triggers the destruction of the environment, placing the natural resources as well as the quality of life of the population under serious pressure.

Water resources in Haiti have been under tremendous pressure over a number of decades and the combined effect of demographic growth and institutional weakness has opened the sector to private investors which have exploited them without the adequate government control. Inefficient waste management implies insalubrity, higher health risks and increased contamination of the marine area close to urban areas.

The **coastal marine** area is potentially rich, but also subject to extreme exploitation. This over-exploitation is aggravated by the contamination of the coastal area and of the sea, due to the dumping there of waste material. The main causes for this coastal crisis are urbanization, the inappropriate use of mangrove forests and overexploitation of fishery resources, as well as soil erosion from degraded watersheds.

Moreover, the geographical position of the country exposes it to random natural manifestations, contributing to an exacerbation of the environmental crisis. Frequency and intensity of climate and natural **hazards** increased, with high risks of hurricanes, heavy rainfalls and landslides, longer periods of droughts, and earthquakes.

In this extremely fragile and unstable context, the action of the United Nations System in Haiti remains driven by the "One UN Plan". The plan has been extended until the next UN Sustainable Development Cooperation Framework takes over from January 1st 2023. The environment is significantly anchored in the work plan of the United Nations in Haiti, aiming at bridging agendas and addressing Gordian Knots with significant connections between the climate, nature and pollution dimensions and broader solutions to strengthen resilience, security and sustainable development.

2. OUR WORK

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

Prior to 2010 earthquake, UNEP had been working with the Government of Haiti for several years. In October 2008, UN Environment participated in the hurricane Post-Disaster Needs Assessment and mobilised a small resident team. The UN Environment country-based programme in Haiti started operating as a coherent unit in 2009. At the heart of the programme are the rehabilitation of badly degraded ecosystems and the promotion of sustainable development.

In the aftermath of 2010 and 2016 disasters, UN Environment, as part of the UN country team, supported international emergency assistance and early recovery efforts, in the areas of energy, sanitation, reinstallation planning and waste management for affected and displaced communities.

UNEP in Haiti aims to provide support to national institutions and the UN Country Team through strategic environmental partnerships with a view to implementing an ecosystem-based approach that will contribute to stabilization, resilient economic growth and sustainable development in Haiti in the framework of the 2030 Agenda. In order to achieve this goal, UNEP in Haiti is structured around two fundamental interconnected programmes with two levels of intervention, with the following specific

objectives: the **National Environmental Governance Programme** seeking to strengthen environmental governance with the necessary tools for a better understanding of the environmental challenges and allow more informed decision-making, and the **Regional Grand Sud Sustainable Development Programme**, intended to provide backing to local capabilities in restoring ecosystems and environmental services, in developing a green, blue and circular economy, in adapting to climate change, in reducing the risks of disasters, and in promoting energy and renewables. Within the 2010-2020 timeframe, foundational, first time achievements have been marked for Haiti such as the Government declaration of the first 9 marine protected areas of the country (26 are in place nowadays), the first electric cooperative of Haiti connecting over 2000 households via solar energy, the first coastal native plants nursery paving the way for natural coastal protection schemes, the first green economy assessment resulting in the development of targeted value chains and the first municipal solid waste management plan (Les Cayes) allowing upcoming strategic local interventions on waste to energy through e.g. plastic recycling.

Since 2017, thanks to the contributions of the Kingdom of Norway, the Global Environment Facility and the French Development Agency,



River Basin Project, 2009, UNEP

five projects have been implemented with the Ministry of Environment of Haiti (MDE), the Ministry of Agriculture, Natural Resources and Rural development (MARNDR), Civil Protection Directorate (DPC) and Haitian NGOs. As part of ecosystem-based adaptation and eco-DRR activities, UNEP has been promoting the establishment of **new Protected Areas** accounting for more than 50% of Protected Areas across the country. It has supported the formulation of management plans for these areas including the Macaya National Park as well as coastal/marine protected areas in La Cahouane, Port-Salut Pointe Abacou, or Ile-à-Vache. Field interventions take place from the hills to the sea (“ridge-to-reef”), with re-vegetation, sustainable farming (agroecology) and support to value chains (cocoa, vetiver...) to reduce upland erosion and inland flooding risks. Coastal re-vegetation is used to act as natural buffers against storm surges and coastal flooding, common in Haiti. In total, 141 hectares of reforestation have been undertaken in areas exposed to coastal hazards and flooding, including mangroves. Over 170 kilometres of riverbanks have been strengthened and reforested with bamboo to prevent soil erosion, and more than 2600 hectares have been covered with agroforestry, forest seedlings, sustainable agriculture, grafting, fruit plants.

Trainings to develop capacities locally and nationally have also been conducted to improve coastal zone management through Eco-DRR. To increase local resilience through sustainable fisheries, a participatory action plan was constructed together with the fishing communities, including trainings for more than 200 fishermen on disaster preparedness and management but also the repair and improvement of boats for them to be able to fish further from the shores and reduce fishing pressures. Such field activities have been used as an entry point to raise local and national awareness about Eco-DRR and promote improved coastal governance in Haiti.

UNEP is providing **support to the Directorate of Civil Protection** (Direction de la Protection Civile, DPC) in updating its appeal for funds for improved coordination in responses to natural disasters (also integrating the epidemic response needs). UNEP also supported the DPC in strengthening its early warning system, revising contingency plans and studying community risk at the departmental, municipal and local levels, in favour of the vulnerable 14000+ inhabitants living on the islets and in the Ile-à-Vache Marine Protected Area off the coast, as well as in the other MPAs (Port-Salut, Saint-Jean-du-Sud and La Cahouane). Large scale awareness-raising campaigns via radio broadcasts and sound

trucks also help reach a large part of the population on disaster risk reduction measures.

UNEP is also supporting the Haitian Government in the implementation of international environmental **conventions** on Biodiversity, Climate Change and Desertification, and in its active participation in international **negotiations** as a Small Island Developing State and a Least Developed Country.

Between 2018 and 2022, UNEP supported the Southern Agriculture Departmental Direction with the implementation of the **“Ecosystemic Approach of the Haiti Southern Coast”** project, funded by the Global Environmental Fund (GEF). One of the main objectives of this project was to improve the management of coastal areas, and to prevent their degradation and disappearance. A study of the impacts of climate change on areas and particularly the coastal species of the Great South was finalized after request from the Ministry of Agriculture, Natural Resources, and Rural Development.

Since the early stages of the **Covid-19 pandemic in April 2020**, UNEP in Haiti has been very responsive in providing support to reduce the risks related to the coronavirus, both at country level and with local communities involved in its interventions. UNEP

used all leverages possible within its mandate. Quick fixes were made possible working through existing projects and capacities to align activities with emergency needs.

On 14 August 2021 at 8:29 a.m., a 7.2-magnitude earthquake struck the Southern Peninsula of Haiti made up of the departments of Sud, Grand’Anse and Nippes. The national authorities declared a state of emergency the same day and activated the national natural disaster risk management system to coordinate, through the General Directorate for Civil Protection (GDCV), rescue operations aimed at saving lives and responding to the immediate needs of affected populations. Being well established in the South Department, UNEP answered the call and was instrumental in supporting GDCV with the coordination of emergency operations. On 16 August 2021, the national authorities also mobilized the World Bank- United Nations-European Union tripartite partnership – joined by the Inter- American Development Bank – to support the development of the Post- Disaster Needs Assessment (PDNA). The PDNA was officially launched by Haiti’s Prime Minister on 30 and 31 August 2021. The Ministry of Environment, with the support of UNEP, coordinated the assessment of the environment sector of the PDNA.



Community Consultations, Port Salut, 2013, UNEP

Recent projects

Climate Security in Haiti

International rankings are unanimous, Haiti is one of the countries that is both the most exposed and the least able to face climate risk. On June 17, 2021, during a special meeting of the UN Security Council on Haiti, Norway insisted on the importance that the Bureau Intégré des Nations Unies en Haiti (BINUH) takes into account the security risks caused by the effects of climate change. This request was reiterated in 2022.

In June 2022, UNEP launched a multipartite initiative on climate security in Haiti, regrouping 13 UN agencies, 4 international organizations and 9 international NGOs present in Haiti. The objective is to produce an introductory study on climate security in Haiti, in order to reinforce awareness and build a narrative to accelerate action towards climate adaptation and resilience building. The focus is on the assessment of the interaction between climate change and socio-political, economic and demographic factors that can result in major livelihood and economic disruption, political instability and insecurity at different scales (local, national, transnational). The study will be

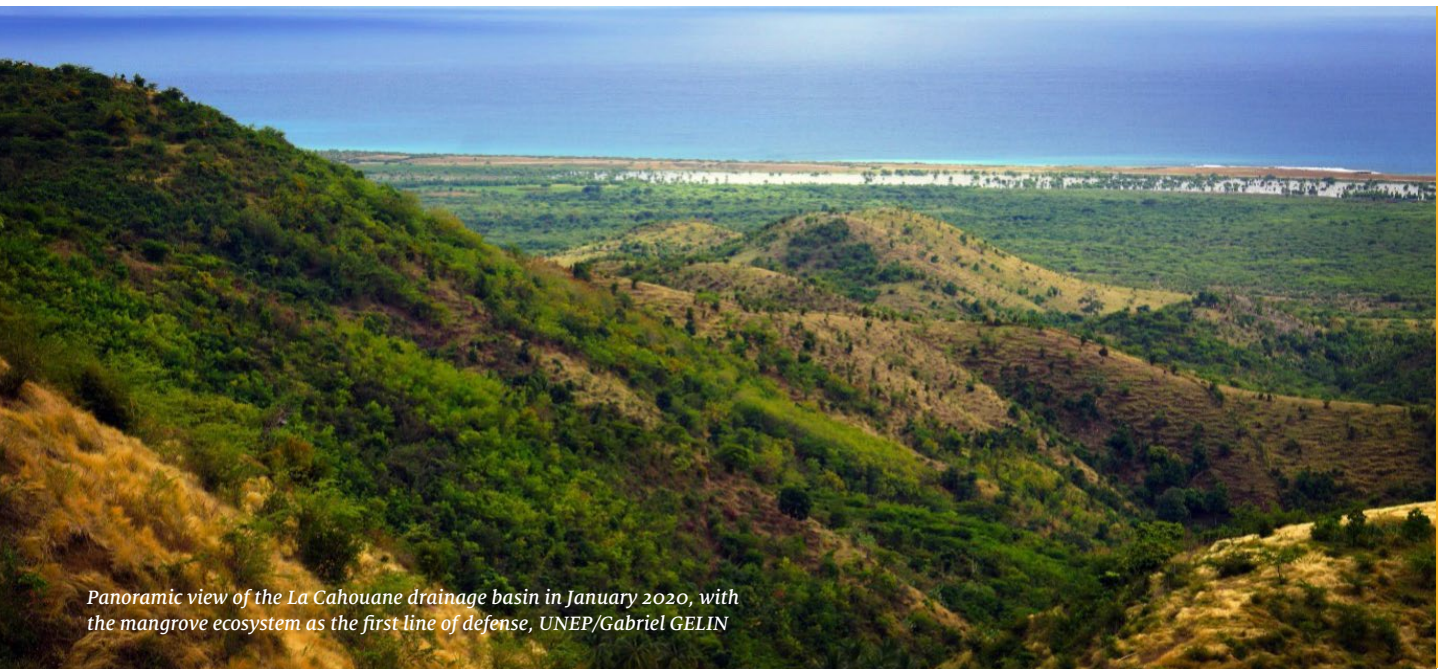
backstopped by an international consultant under the supervision of UNEP Haiti and is planned to be published in the first quarter of 2023.

Food Security in Haiti

WFP is implementing, in the municipality of Saint Michel de l'Attalaye, the "Resilience Project and school canteens based on decentralized local purchases" to provide a more comprehensive response to targeted communities living in food insecurity. This project aims, among other things, to improve the livelihoods of small farmers and their communities in the areas of Saint Michel de l'Attalaye by increasing their food security and nutrition by 2023. This is an integrated project which will include, among other things, activities such as conditional cash distributions, the implementation of support measures aimed at improving nutrition, hygiene and gender practices, and financial inclusion. This project will also present the added value of setting up community assets with high environmental value and strengthening livelihoods through an agroecological approach. To this end, WFP has requested the technical support of the United Nations Environment Program (UNEP), within the framework of a UN-to-UN agreement,

Hurricane Matthew, South Department, 2016, UNEP/ Niloufar Bayani





Panoramic view of the La Cahouane drainage basin in January 2020, with the mangrove ecosystem as the first line of defense, UNEP/Gabriel GELIN

to play the role of consultant in order to be able to improve the sustainability of its activities by integrating the environmental dimension.

As part of this support, UNEP completed and analysed the project activities and made proposals for integrating and/or strengthening environmental considerations in the implementation of these activities. Among other support already provided, it is worth highlighting in particular:

- Carrying out an environmental and social review of the project;
- The collection of environmental data from the area of intervention;
- Providing analysis and recommendations

on training modules in environment and agroecology as well as on adaptation to climate change;

- Offering technical advice, support and quality control to project partners and beneficiaries on agroecological practices, participatory planning and the development of community assets;
- The formulation of an initial dashboard of indicators for an integrated resilience and environmental monitoring system adapted to the project;
- The formulation and definition of the methodology for the production of data

3. KEY OUTCOMES

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

The efforts made by UNEP in Haiti have progressively been bridging gaps in national policies and contributing to positive changes in local institutions and communities' behaviors for improved environment management practices. In practical terms, foundational first-time achievements have been marked for the country through UNEP's support:

- Haiti's first report on the status and outlook of the Haitian environment, the 2010 Global Environment Outlook (GEO) Haiti report through a dynamic, inter-disciplinary, and participatory process.
- First comprehensive review of environmental safeguards and associated policies, laws and regulations (2021), fostering the development of safeguards in Haiti and the development and promotion of methodological guidebooks of watershed, riverbanks and coastal reforestation.
- Haiti's first marine protected areas (MPAs): with the support of UNEP and local partners, the government declared eight marine protected areas along the south coast, including La Cahouane, in August 2013.
- Haiti's first protected areas management plan and operational plan were developed in 2014-2015 (Macaya National Natural Park), as well as a methodology for PA management plan development nationally.
- Haiti's first electric cooperative (CEAC) was constructed between 2013-2015 in the arrondissement of Coteaux and is providing power to over 2000 customers as of June 2022.
- First green value chains assessment report (2016) and bleu economy study (2021) carried out together with the development of corresponding sector strategies for key agrobusiness value chains.
- Haiti's first coastal species plant nursery was established in 2014 in Port Salut, soon followed by nurseries in Saint Jean du Sud and La Cahouane, overall providing over 400,000 mangrove seedlings to rehabilitate over 141 hectares of degraded coastal ecosystems and better protect against tropical storms and extreme weather events. Over 170 kilometres of ravines reforested with bamboo to prevent soil erosion.



Environment Workshop, 2012, UNEP

- Haiti's first online library was developed in 2015 for its Southern region. This knowledge platform aims at sharing reports, studies and stocking archives relevant to the Grand Sud region in view to support and inform regional development amid all the partners.
- Support to the Government in establishing early warning systems on vulnerable islands and islets along the southern coast beginning in 2016.
- Over 80 hectares of cacao have been planted, benefiting to more than 331 producers in South Haiti. Over 2600 hectares have been covered with agroforestry, forest seedlings, sustainable agriculture, grafting, fruit plants.
- Support to transnational cooperation through the inclusion of Haiti into the Caribbean Biological Corridor with Cuba and the Dominican Republic, and into four key Caribbean regional frameworks).
- Creation and operationalization of the Haitian Biodiversity Fund endowed with USD 24M (2019).
- Development of the National Environmental Information System (2021).

- Production and distribution of an awareness film on the sea and the Haitians: "Thus Spoke the Sea", directed by famous Haitian filmmaker Arnold Antonin (2019).

As such those achievements are milestones leading Haiti, its institutions and communities towards:

- Greater recognition, protection, restoration and sustainable use of marine and terrestrial biodiversity.
- Sound implementation of ecosystem-based approach for reducing disaster risk, and developing 8 sustainable value chains (vetiver, cacao, honey, fishing and aquaculture, fruit trees, woodlots for charcoal production, castor oil and solid waste) in a sustainable way.
- Increasing energy access in remote areas through new solutions to energy poverty.
- A common, integrated and long-term vision for the sustainable development at sub-national, national and regional level.
- Longtime commitment with a wide range of partners from National Government entities and local organizations to UN agencies, programmes and funds and international NGOs and donors.

4. LESSONS LEARNED

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

1. The relevance of important concepts including ridge-to-reef approach, green and blue economy, green value chains and, naturally, locally suitable operating model and ecosystem restoration practices has highlighted the **criticality** of UNEP's strategy in the country. Beneficiaries, partners and stakeholders manifest strong interest and support in the programme approach. Combining capacity-building with practices and species that contribute to food security for beneficiaries gives them motivation and makes for a better engagement of local communities. Gender mainstreaming in implementation has been instrumental to ensure that solutions come from inclusive decision-making process at community level.
2. With limited resources both in terms of geographic scope and time, and despite a chaotic context which tends to become the norm, UNEP ensures **continuity** of support, progress in programme implementation, builds on robust knowledge of the country, firm **anchorage** in the Grand Sud with close and long partnership with local communities and organizations, and **trusted relationship** with public authorities at multiple levels. After both COVID-19 and the August 2021 earthquake stroke, UNEP and the Ministry of Environment consulted stakeholders and reviewed UNEP portfolio with very limited adjustment, recognizing that existing activities already address key emergency needs of the Haitian people, notably support to livelihood to vulnerable populations, which are a critical part of the response to the crisis.
3. As part of the UN Country Team, UNEP has been actively involved in the adoption of previous UNDAF and the "One UN Plan 2020-2022", with environment as a cross-cutting perspective and fundamental contribution in terms of employment, livelihoods and resilience. UNEP was also actively engaged in the UN post-Covid-19 recovery plan and the formulation of the Post-Disaster Needs Assessment and the Integrated Reconstruction Plan for the Southern Peninsula after the 2021 earthquake through environmental impact studies, leading role in coordinating partners' support and advise to joint initiatives at field level.



4. UNEP and partners are now in the process of designing a new phase of programme implementation, aiming at switching from building trust, partnerships, capacities and piloting targeted activities, to strengthening landscape level governance and impacts, through cross-sector integration, leveraging and aligning external aid, and building robust information system to support transformation towards environmental restoration and resilience. Spearheading this new strategy, the joint development of an “integrated landscape approach” could serve as a catalyst for integration and synergies of action at a landscape level within the United Nations

Country Team and development partners, with the environmental perspective and urgent resilience as a vector for joint intervention, and improved monitoring and data production on the evolution of the environment and socio-economic dimensions.

5. Thinking outside the box, UNEP is looking for innovative solutions to mainstream environmental benefits in terms of resilience and growth, such as a national mechanism of payment for environmental services, a green national GDP, the creation of a green tax, and tariff barriers to protect Haitian green and blue economy stakeholders and production.

5. UNEP HAITI PARTNERS AND DONORS

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

UNEP Haiti office projects in the country have been implemented in close collaboration with international and national partners, providing technical assistance and advisory services for the implementation of environmental law and policy, and strengthening the environmental management capacity of developing countries and countries with economies in transition. The Ministry of Environment and the Ministry of Agriculture, Natural Resources and Rural Development have been the main government partners of UNEP Haiti projects in the country.

Key Government Partners:

- Ministry of the Environment
- Ministry of Agriculture, Natural Resources and Rural Development
- Directorate of Civil Protection Agence Nationale des Aires Protégées (ANAP)
- Centre National de Gestion de l'Information Spatiale (CNGIS)
- Conseil National pour la Sécurité Alimentaire (CNSA)
- Comité Interministériel d'Aménagement du Territoire (CIAT)

Key donors:

- Norwegian Ministry of Foreign Affairs
- Global Environment Facility (GEF)
- The French Development Agency (AFD)
- Ministry of Foreign Affairs of Finland

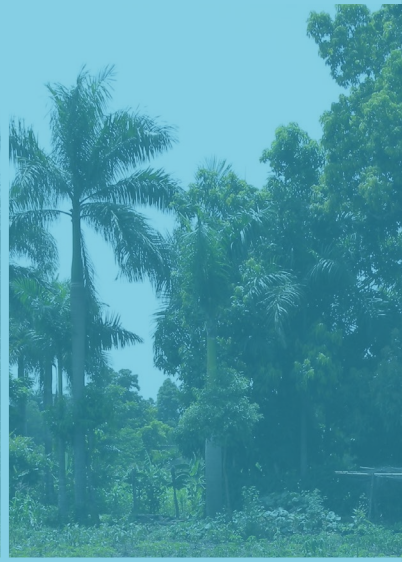
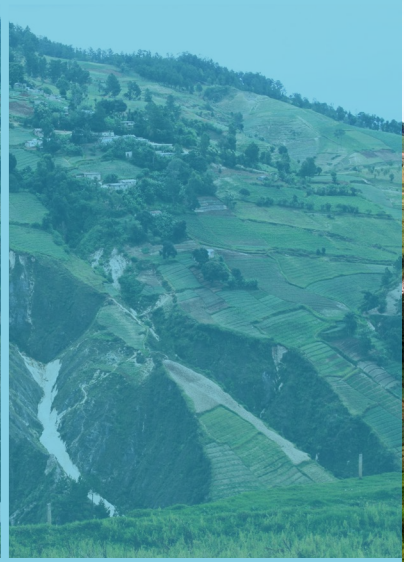
Key Non-Government Partners:

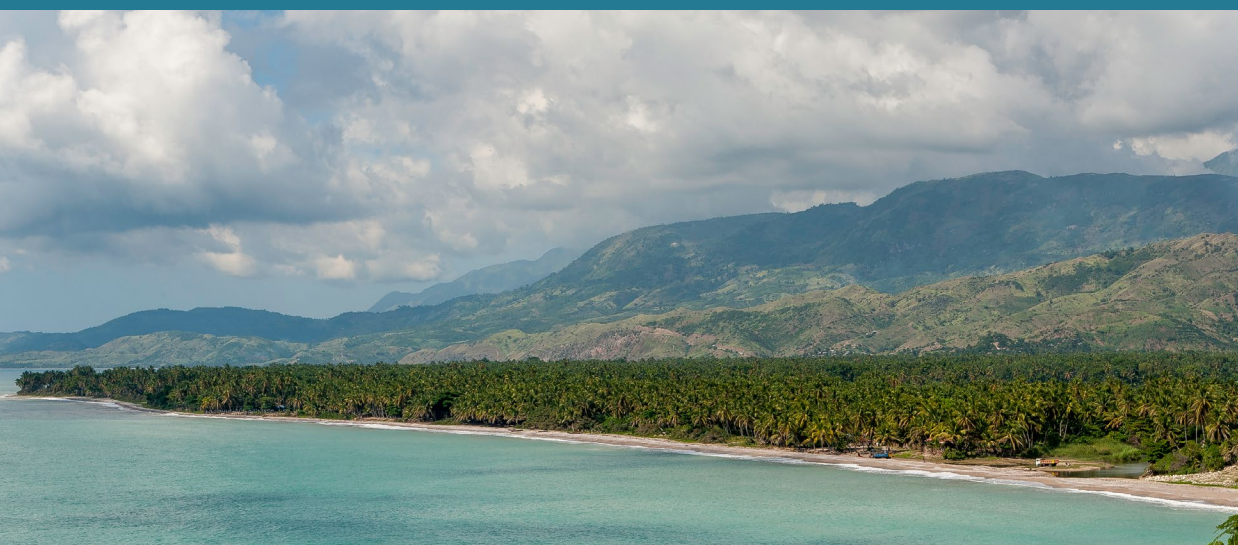
- Organisation pour la Restauration de l'Environnement
- Pêche Artisanale et Développement Intégré
- Fondation Nouvelle Grande Anse
- Reef Check Haiti
- Un Enfant par la main
- Agronomes et Vétérinaires Sans Frontières (AVSF)
- Ayitika
- Cooperative Electrique de l'Arrondissement de Coteaux
- The Nature Conservancy

6. REFERENCES

Increasing Haiti's resilience to natural disasters and promoting sustainable practices

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- "South Governance" project, June 2015
- Emergency Response and Business Continuity Plan, June 2020
- Thus Spoke the Sea, Documentary (EN), (FR), (SP), June 2020
- Mangrove restoration in Haiti moves up a gear, July 2020
- Supporting Haiti's COVID-19 Response, July 2020





Overall, UNEP strategic approach to Haiti consists in demonstrating the feasibility of establishing resilient and sustainable rural landscapes, to pave the way for scaling up and effective recovery of the country in ecological as well as in social stability, human development and economic terms. Past interventions confirmed the relevance of important concepts including ridge-to-reef approach, green and blue economy, green value chains and, naturally, locally suitable operating model and ecosystem restoration practices, as well as governance capacity-building at both central and local levels. UNEP and partners are now aiming at switching from building trust, partnerships, capacities and piloting targeted activities, to strengthening landscape level governance and impacts, through cross-sector integration, leveraging and aligning external aid, and building robust information system and sustainable financial mechanisms to support transformation towards environmental restoration and resilience.