

Haiti Regeneration Initiative



Preliminary Concept Note

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Cover image: A woman standing in a sterile widened riverbed near Jacmel after the 2008 hurricanes.



INTRODUCTION

The challenge

Haiti is the poorest, least stable and also most environmentally degraded country in the Caribbean. This environmental degradation has associated severe social and economic impacts – the largely destroyed rural environment cannot fully feed its population or provide adequate livelihoods. The degraded catchments have also made Haiti’s rural and urban populations very vulnerable to flooding and extreme natural adverse events.

This problem is not new – the degradation of Haiti has been gradually increasing in intensity since the 18th century. What is new is the severity and near-universal extent of the degradation and the associated social and economic impacts. Haiti is now locked in a negative spiral – an ever-deepening interlinked social, economic and environmental crisis, which is causing untold hardship for the great majority of its population. The hurricane season of 2008 was a tipping point which not only caused massive social and economic losses but also produced major permanent damage to the environment, furthering eroding the capacity of the country to recover from the chronic crisis.

Haiti’s population, currently estimated at 9.92 million, is projected to grow by 20% approximately by 2020¹. Moreover, a significant increase in the frequency of hurricanes is expected. The crisis is therefore almost certain to worsen, and escalate from a development issue to a long-term humanitarian and security issue, unless decisive action is taken.

Recent environmental initiatives by Haiti’s government and national and international organizations have been well-intentioned and positive, but the challenge in Haiti is so great that they struggle to address it. There is also substantial evidence that many earlier assistance programmes by the international community have not succeeded, and that part of the problem has been the way in which assistance has been delivered. A change in approach is needed, and it must be well informed by the lessons of the past.

¹ According to the IHSI (Institut Haïtien de Statistiques et d’Informatique), Haiti’s population estimated in May 2009 at 9.92 million is expected to reach 10.91 million in 2015 and 11.74 in 2020.

The opportunities

The country does have the capacity and opportunity to address these challenges if provided with the right type and level of international assistance.

Haiti has significant human assets, an improving political environment and gradual improvements in the effectiveness and sustainability of international assistance.

The Haitian population has a substantial technical skill base well suited to this initiative and also benefits from strong support from its Diaspora. The current government is stable and progressing with a range of pro-poor reforms. The environment in some areas has been stabilized by successful interventions and some relatively pristine marine and coastal areas remain.

The Haiti Regeneration Initiative

The Haiti Regeneration Initiative is being developed on the principle that large scale, chronic problems need ambitious, innovative solutions.

The vision is both simple and bold – to build and support a national movement in Haiti that understands the underlying issues and tackles them in an organized and integrated way. Well-planned, concerted action will be required over the next 20 years and beyond.

The Regeneration Initiative aims to reduce poverty and vulnerability to natural disasters-including climate change- through the restoration of ecosystems and livelihoods based on sustainable natural resource management.

It is being designed and developed through a process of consultation between UN agencies, governmental entities, NGOs and technical institutes.

This preliminary concept note is part of the consultation process. It presents the rationale for the Initiative, the development process and current design ideas for comment.

Current design work involves analysis of issues and lessons learned from previous projects,



Preserved pristine area of mangroves and coral reefs near Petit Goâve.

development of preliminary and baseline studies², and identifying initial geographic priorities of the Initiative. The next phase will involve selecting options from the wide range of technical and socio-economic models available and planning for implementation.

Next steps and feedback

The development process will continue throughout 2009. Launch is planned for 2010. We welcome feedback on this document and the concept, particularly from partners who may wish to contribute to the development process over the next 12 months. The Initiative contact focal point is Mr Antonio Perera, based in Port-au-Prince, Haiti (antonio.perera@unep.org, tel: + 509 36 99 55 40).

CONTEXT

Social and economic background

Haiti has a surface area of 28,704 km² and is located in the western part of the island of Hispaniola, with the Dominican Republic (48,730 km²) occupying the eastern part. It is a small and crowded Least Developed Country (LDC) with a population of 9.92 million³ and a density of 350 inhabitants per km². The current population growth rate is approximately 2.5% per annum. Socio-economic indicators are uniformly very low. Haiti has a per capita annual income of about US\$ 650 and 54% of the population live in extreme poverty (<\$1/day) and 78% in poverty (<\$2/day) whilst a small minority (<1%) are relatively rich and control much of the fertile land.

Approximately 65% of the population is directly dependent upon agriculture and 62% of the population suffers from food insecurity, with more than half of the national food consumption being imported.

² These studies will be available in January 2010.

³ Source : Institut Haïtien de Statistiques et d'Informatique (IHSI), May 2009.



When Christopher Columbus discovered the island of Hispaniola, 98% was covered by forest. Today, less than 1% of this original forest cover remains.

The political system of Haiti has been in turmoil since the 1990s and remains fragile. In 2004 the United Nations intervened with the creation of the UN Mission for Stabilization in Haiti (MINUSTAH) which has supported the restoration of a secure – although fragile – socio-political environment in the country.

Haiti has substantial human resources and a resilient grassroots social structure – particularly in the rural areas. Education levels and technical skills in subjects such as agriculture/agronomy are significant. Rural communities have a long tradition of collaboration to resolve communal issues and conduct projects collectively. Many NGOs are active in the country and the local population benefits from strong links to a Haitian Diaspora estimated at over 2 million people.



The agricultural sector employs 51% of the active population; yet it only contributes to approximately 25% of the GDP.

The environment of Haiti

Haiti's poverty, instability and environmental degradation are tightly interlinked problems. The destroyed rural environment currently cannot fully feed the population or provide adequate livelihoods. The degraded catchments also leave both its rural and urban populations highly vulnerable to flooding.

The environmental challenges facing the country are well recognized and understood at all levels: from the highest political spheres to individual farmers.

In the mountainous areas, the main issues are deforestation and unsustainable agricultural practices on steep slopes in upper river catchments. This drives soil loss by erosion, soil fertility losses, landslides and reduced water retention.



Unsustainable agricultural practices, such as slash and burn, contribute to environmental degradation.

On the slopes themselves, the result is lower and less reliable crop yields and extensive damage to the soil profile.

Further downstream in river areas, the effects include unwanted sediment deposition and increased flood surges, which directly result in

Haiti – Key environmental statistics



© ABASS/MINUSTAH

According to IUCN, Haiti possess more than 5.242 vascular plant species, of which 37% are endemic. Regarding fauna, Haiti is rich of over 2 000 species, of which ¾ are endemic. (www.cbd.int/)

Forestry: Percentage of remaining original forest cover: less than 1%. Current total forest cover – all types: 3.8%. Ongoing deforestation rate- unquantified but clearly significant. 75% of energy demands are satisfied by wood fuel (fire wood & charcoal).

Biodiversity and protected areas: Percentage of areas under effective protected area management: 0.35% to 0. A single site in the Massif La Hotte contains the entire known population of 13 Critically Endangered and Endangered species, more than any other site in the world. 46 of 50 Haitian frog species are threatened, representing a critical threat for global biodiversity.

Soil and erosion: 63% of the land surface has a slope of over 20%, yet 58% of the area is subject to some form of agriculture. Of the country's 30 major river basins, 25 are severely eroded. Annual soil losses are calculated at 36, 6 Million of tons. 6% of land area is impacted by irreversible erosion (no soil left).

Freshwater pollution: 50% of rural and 33% of urban population are without an improved water source, and 84% rural and 62% urban population are without improved sanitation facilities.

Coastal and marine environments: Haiti has 1,535 km of coastline, and an island shelf which totals around 5,000 km². Mangroves, sea grass beds and coral reefs in Haiti are locally highly degraded and under continued significant pressure from overexploitation of resources, land based pollution and sedimentation, habitat encroachment and destruction.



"This used to be my land!" A woman standing in a sterile widened riverbed near Jacmel after the 2008 hurricanes.

both fertile land loss from the upper floodplains (riverbed widening) and in catastrophic flooding in vulnerable townships in the lower floodplains.

In marine and coastal zones, mangroves, sea grass beds and coral reefs in Haiti are severely degraded. Although specific issues prevail, several problems are closely linked to those encountered in the mountain ecosystems. Sedimentation caused by the erosion of the upper parts of the watersheds, overexploitation of resources, land-based source pollution and habitat encroachment put these ecosystems under pressure.

As a consequence, this reduces fishing catches and limits the potential for aquaculture. Conversely, the lack of fishing equipment and limited fishing techniques prevent Haitian fishermen from accessing marine resources further offshore, creating an imbalance between overexploited and underexploited resources.

Moreover, the degradation of mangroves and coral reefs prevent them from playing their role of natural buffers against storms and hurricanes.

Finally, the degradation of marine and coastal zones also limits the development of international coastal resort tourism (an important source of income for many other Caribbean islands).

Some positive signs demonstrate that overcoming these difficulties and reversing the trend is possible. In selected areas, some conservation and restoration projects have succeeded in stabilizing environmental degradation and improving the situation.

The impact of prior initiatives such as the introduction of eucalyptus trees can be seen scattered throughout the countryside. Certain marine and coastal zones remain relatively preserved and pristine.



Mangroves are threatened nationwide by cutting for firewood and charcoal. Today, the total surface of mangrove area is estimated to be approximately 20.000 ha. (Source : République d’Haiti, 2004)

The 2008 hurricanes

In August and September 2008, four storms/ hurricanes hit Haiti, causing death and injury and the widespread destruction of infrastructure and livelihoods.

One effect of the 2008 hurricane season was its severe impact on natural resources, particularly through erosion. Fast, high water flows literally washed away significant areas of agricultural land in many river valleys. Unfortunately, this loss of agricultural land is permanent; given the food shortage in Haiti, avoiding further losses must be a high priority.

In October 2008 the UN, the World Bank, the Haitian government and other partners carried out a Post Disaster Needs Assessment and launched an associated disaster recovery

appeal. This appeal was formally launched on April 12th 2009 at a donors’ conference in Washington D.C. where foreign donors pledged to donate \$353 million towards Haiti’s reconstruction.

Emerging issues

It is clear that Haiti has the potential to improve; however, current negative trends must be reversed in order for this to happen.

In the short term, the global economic crisis will reduce the remittances which currently underpin the Haitian economy⁴.

Moreover, the current population of 9.8 million is predicted to increase by approximately 20% by 2020⁵. Hurricanes are also expected to be more frequent as a result of climate change.

⁴ According to *The World Bank Migration and Remittances Fact Book 2008*, the amount of the Haitian Diaspora for annual remittances reached in 2006 US\$ 1.07 billion a year or 21,6% GDP.

⁵ According to the IHSI (*Institut Haïtien de Statistiques et d’Informatique*), Haiti’s population estimated in May 2009 at 9.92 million is expected to reach 10.91 million in 2015 and 11.74 in 2020.

Population movement will increase and there will be continual internal migrations from the most degraded and natural disasters affected areas to other urban centres. Any effort to reverse the environmental crisis in Haiti must take into account these dominant trends: rapid population growth and uncontrolled urbanization, at all levels, national, departmental and communal.

Lessons learned

Project mapping and analysis of lessons learned have identified that certain issues have limited the effectiveness of international assistance and national initiatives in the fields of environment and natural resource management.

The main issues are:

- Failure to record and disseminate lessons learned;
- Failure to expand successful projects;

- Poor coordination between international actors; between international actors and the government; among government departments;
- Short-term interventions applied to long-term issues;
- Insufficient national and local ownership of issues and initiatives.

The analysis process nevertheless also identified a number of successful projects and activities whose beneficial effects can be seen throughout Haiti. Many strong national and international institutions in Haiti have proven capability in implementing large scale programmes.

The Initiative will draw on the lessons of the past to help design a sustainable solution. It will be a mixture of old and new ideas and adaptations of approaches that have been proven to work. Scale and timing will be especially important: the Initiative is designed for a 20 year lifecycle and eventual national scale.



Gonaïves, one of the areas most affected by the hurricanes, October 2008.



The population living in lower parts of eroded watersheds is extremely vulnerable to natural disasters.

Political momentum

The timing for the Haiti Regeneration Initiative is opportune. Indeed, while the challenges Haiti faces are growing, the approach of the government and the international community is improving.

The current government is stable and progressing with a range of reforms to combat poverty. Since the beginning of 2009 the international community has renewed its focus on Haiti. The 2008 hurricane disasters have drawn attention to the relationships between disaster vulnerability, poverty and the state of the environment.

The United Nations has appointed a Special Envoy, former President of the United States Bill Clinton, to ensure that the current commitment of the international community is sustained and to assist in resource mobilization. There is also increasing awareness in Haiti of the importance of learning from past experience and

of integrated planning, particularly for catchment management.

THE INITIATIVE

The vision

The vision is both simple and bold – to build and support a national movement in Haiti that understands the underlying issues and tackles them in an organized and integrated way.

Well-planned, concerted action will be required over the next 20 years and beyond to halt the ongoing degradation and to gradually restore the Haitian environment and related livelihoods.

The Initiative will have a catalytic effect: local actors will be given the information, means and motivation to act and this will be supplemented by appropriate policy and planning work at the national and regional level.

Overall objective of the Initiative:

'To reduce poverty and disaster vulnerability in Haiti through the restoration of ecosystems and livelihoods based on sustainable natural resource management'.

Specific objectives:

1. Reduce poverty in rural areas through the introduction and expansion of sustainable agriculture, agroforestry, forestry and energy programmes;
2. Reduce the vulnerability of urban populations to flooding through restored catchments and improved river basin management;
3. Slow down, halt and, where possible, reverse the ongoing degradation of Haiti mountain and marine environments;
4. Increase the contribution of sustainable forestry to help meet Haiti's energy and timber needs.

Seek the benefits of well managed ecosystems

The Initiative is based on the concept of ecosystem services. Ecosystem services are the benefits that a healthy and well managed environment provides. They include, for example, food from cropland, grazing land and the sea; clean water; construction materials and energy from forests; income from tourism; resilience against natural disasters including flooding from extreme rainfall and climate change.

In the case of Haiti, these benefits are absent or greatly reduced due to environmental degradation.

A particular challenge for Haiti is river basin management. Forest cover in the steep hills retains soil, which in turn retains water from rainfall, reducing river flood peaks and conserving flows in the dry season.

With most of the forest and much of the soil gone in the upper catchments, many of Haiti's



Even though 63% of the land surface has a slope of over 20%, 58% of the area is subject to some form of agriculture.

rivers are now highly unstable, changing rapidly from destructive flooding to inadequate flows.

Resolving this issue will require extensive long term investment in both engineering and ecological solutions –the latter are generally cheaper and, when well planned, can actually generate revenue and help reduce rural poverty.

Hence the focus of the Initiative is the sustainable management and restoration of ecosystems and generation of livelihoods opportunities in the upper watershed areas and marine and coastal zones of Haiti, thereby reducing poverty and vulnerability to disasters.

The main challenge of the Initiative is to identify, promote and sustain the right way to achieve this goal. By creating a favourable environment for success it will be possible to mobilize the population, through national campaigns, advocacy activities, capacity-building and efficient coordination and networking.

Structure and scope

The Initiative fits within established development and assistance frameworks such as the the National Growth and Poverty Reduction Strategy Paper and the UN and Partners Development Assistance Framework. No new institutional heavyweight framework is required. What is needed is an intelligent, flexible implementation mechanism that can improve coordination, fill identified gaps and adapt continuously to meet changing needs and circumstances.

In the current early design phase, the Initiative has three main components: campaign, programmes, network and Technical Assistance Facility.

1. Campaign

The objectives of the campaign are:

- a) To raise national and international awareness of environmental issues through advocacy and to provide general guidance for solutions;



Fishermen using elementary fishing equipment and techniques face a reduction of their fishing catches as a consequence of environmental degradation.



Land-based sources of pollution contribute to the deterioration of coastal and marine ecosystems.

b) Fundraising.

The targets of the campaign are the population of Haiti and the international community engaged in Haiti or interested in helping the country.

Proposed activities include broad production and distribution of awareness-raising material and collaboration with national and international media. The campaign will particularly support efforts in the educational field aimed at mobilizing young people and teachers in activities for environmental protection and sustainable development.

2. Programmes

The Programmes are the main outputs of the Initiative. They aim to deliver lasting positive change through substantial long-term investment at the national and regional levels. They will be developed and implemented by partner organizations and supported by a small management team.

The final structure is still to be determined but it is expected to involve a combination of geographic and thematic programmes:

Geographic programmes:

- a) Integrated programmes for microcatchements;
- b) Marine and coastal restoration (wherever possible watershed and marine programmes will be co-located);

Thematic programmes:

- c) Integrated restoration and energy solutions (reforestation and/or revegetation combined with energy source provision – fuelwood, charcoal, biofuels, other biomass);
- d) Governance (improvements in law, and government policy, programmes and implementation capacity);



Biomass (firewood, charcoal, bagasse) remains the most widespread source of energy in the country (75%).

implementation of strategies, programmes and projects that support the overall objectives of the Initiative.

The Network will influence programmes that are relevant to but outside the scope of the Initiative. It will enable key players to share information and expertise, and facilitate coordination. The members of the network are expected to include the Government of Haiti, international actors assisting Haiti (donors, development banks & agencies, NGOs etc.) and Haitian civil society. This network of actors will be linked by tools and events such as a website, a project database, electronic library, teleconferences, workshops etc.

e) Land tenure;

f) Others to be determined.

3. Network and TAF

The objective of the Network and associated Technical Assistance Facility (TAF) is to encourage and help enable the design and

The TAF will be composed of experts who will provide support to network members essentially free of charge for short assignments and regular, part time advice. These experts may help to develop new projects or improve existing ones. Areas of activity will include forestry, agriculture, erosion control, river basin management, disaster risk reduction and climate change.



Selling charcoal at a local market.

Timing, scale and rollout plan

The Initiative will function over a 20 year period at a minimum, first starting in selected locations and then expanding systematically to cover the whole of Haiti.

For the first five years, the Initiative programmes will focus 100% on the southern peninsula of Haiti starting with up one district and expanding quickly over time so that the influence of the programme covers the entire peninsula.

A project map is being developed for the southern peninsula at present. This map, together with baseline studies, will determine the appropriate first project locations and the expansion process.

Technical options

The technical options currently available for the restoration of degraded environments such as those found in Haiti are generally well known and tested. Many are already being used in parts of Haiti on a small scale. The challenge is to identify the right combination of options for

particular environments and the correct way of implementing them. Selection criteria include capital and maintenance costs, durability, lead times, cultural suitability and potential for scaling up.

Example of simple technical options:

- Erosion control structures (terraces, gully traps, windrows)
- River training structures (gabions, bed clearance, retention basins)
- Coarse revegetation schemes (planting, seeding, animal control)
- Forestry (plantations, afforestation, assisted natural generation, woodlots)
- Coastal/marine restoration (mangrove re-planting and artificial reefs).

Example of more complicated technical schemes:

- Agroforestry

The Southern Peninsula

- West, South East, South, Grande Anse, Nippes Departments
- 35% app. of the total surface area of Haiti
- 5 million people app., principally in the capital Port-Au-Prince and surrounding areas
- Most mountainous part of the country: Massif de la Selle and Massif de la Hotte
- Highest level of rainfall
- Great majority of remaining forests, protected areas and sites of high terrestrial and marine biodiversity (Forêt des Pins, Parc la Visite, Parc Macaya)
- Potential for development of fisheries and ecotourism
- Ecosystem services: the region has a critical link with the capital in that it supplies much of its food (from the coastal plains) and its energy (as charcoal from its forests).
- Vulnerability to natural disasters: most of the urban centres are located at the base of highly degraded catchments and so highly vulnerable to flooding.



Tree cutting for timber and charcoal production.

- Biofuels
- Solar schemes
- Bio-char/soil augmentation
- Pisciculture
- Carbon sequestration projects etc.

Socio-economic models and options

All the technical options need a supporting socio-economic and legal framework. The Initiative must overcome the institutional, financial and cultural obstacles that have led restoration projects to fail in the past.

At the national level, this requires a robust legal framework and integration of the Initiative into national poverty reduction and disaster risk reduction policies, plans and programmes.

At the local level, what is needed is a participatory approach that engages Haiti's local governments and poorest communities. Local involvement in project design and local control over implementation will be essential.

Example of simple socio-economic options:

- Cash/food for work
- Capacity building
- Micro-grants
- Temporary subsidies

Example of more complex options:

- Creation and management of protected areas
- Land leasing

- Reform of the charcoal supply chain
- Payment schemes for ecosystem services – particularly in reforestation of upper catchments.

Financing

One of the key lessons learned from earlier initiatives in Haiti is that over-reliance on short term aid funding (particularly *ad hoc* grants of 1-3 years) undermines project impact and sustainability.

Rather than a single grant, a long-term financing plan is needed to ensure adequate and stable cash flow for the Initiative over the next 20 years and beyond.

The financing plan of the Initiative is in the early development stage but is anticipated to include a mix of bilateral grants, development loans, micro-credit, carbon credits and project-generated revenue – e.g. through the sale of forestry products.

The financial scale of the Initiative cannot be determined at this stage, other than to anticipate that total turnover will be well over US\$1 billion over the 20 year period. Foreign aid is expected to be 10-20% of the turnover and weighted towards the first 5-10 years. Seed funding requirements for the programme for the first five years are expected to be in the order of \$25 million.

Linking and complementing existing policies and programmes

Many current policies and programmes in Haiti are relevant to this Initiative. However, major gaps and challenges remain:

- Numerous government and UN policies, plans and programmes set out the framework and the need for activities envisaged in the Initiative, but these activities have yet to be implemented or even defined and financed;
- Geographic coverage is extremely uneven – at present there is an uncoordinated “patchwork” of projects of all sizes and types;
- Virtually all aspects of coastal and marine management are neglected at present;
- All projects have challenges in sourcing and retaining technical expertise.

A key feature of the Initiative is that it seeks to influence the investments of others as well as implement its own programme. In this context, the Initiative will have the following features:

- Wherever possible the investments will be based on a “ridge to reef” design philosophy, aiming for an integrated approach to each watershed and associated coastline;
- In mountain regions in the medium term, a mosaic of interventions will target identified gaps in and between existing programmes;
- An integrated coastal/marine programme will start from first principles and expand geographically as resources permit;
- Thematic programmes, e.g. energy solutions, will focus on specific sites to start, but have a much broader influence as other communities and project sponsors adopt the model/ project designs seen to be working in practice;
- Over time the coordinating influence of the network and the information supplied through the campaign component of the Initiative is expected to deliver two fundamental improvements:
 - The current ad hoc patchwork patterns of investment will shift towards a strategic/integrated approach over time for defined areas;
 - There will be a gradual move to the project implementation models that can demonstrate enduring success and cost-effectiveness.



Deforestation and erosion in the upper part of Grande Rivière de Jacmel watershed.

NEXT STEPS

Initiative development process

Concept development is planned to continue throughout 2009 with the launch of the Initiative planned for Q1 2010. The following activities are ongoing and planned:

- A range of management and technical studies designed to inform the design;
- Continuous partnership building;
- Development, consultation, government endorsement and finalisation of a detailed concept note;
- Development of a project fundraising and financing plan.

The United Nations Environment Programme is funding the development phase of this Initiative with the support of the Government of Norway. UNEP is playing a catalytic role in this design phase and will continue to provide some seed funding for 2010 and 2011. Co-funding by partners is anticipated from 2010 onwards.

Further information and feedback

We welcome feedback on this document and the concept. Any comments, requests for further information and expressions of interest to join in the efforts to develop this Initiative should be directed in the first instance to:

antonio.perera@unep.org
tel: + 509 36 99 55 40
Port-au-Prince, Haiti

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*For further information: antonio.perera@unep.org
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