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Wetland policy development in Rwanda: from wetland inventory to legislation of sustainable use

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REMA "OUR ENVIRONMENT OUR FUTURE..."

Ramsar

Content

1- Rwanda Wetlands Inventory and Categorization

2 - Tools for Rwanda Wetlands Sustainable Management

3 - Focus on Rwanda wetlands Bill and BIS

4 - Over-exploitation of papyrus

5- Assist operators with guidelines

6- Conclusion

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Introduction (1)

Two major drainage basins: the Nile to the east: 67% and delivering 90% of the national waters and the Congo to the west: 33% and handles all national waters. Various type of wetlands cover 10.6% (278 536 ha) of Rwanda.

The Rwanda Environment Management Authority (REMA) is the National Administrative Authority for Ramsar Convention (April 06 and August 06).

A NBSAP acknowledges both the inherent ecological importance of wetlands as well as the socioeconomic value of a range of ecosystem services that they provide.

Introduction (2)

- Four adopted Ministerial Order related to Wetlands,

- A Bill Determining the Use and Management of Wetlands in Rwanda (2009)are available and,

- A Ministerial Order on Review and Approval Procedures for Wetlands Management Agreement in Rwanda is also available.

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Rwanda Wetlands Inventory and Categorization

Related Ministerial Orders

- Where wetlands occur and ascertain which are for Conserv.;
- Identified the functions
- Baseline for measuring future change; and
- Tool for planning and management.

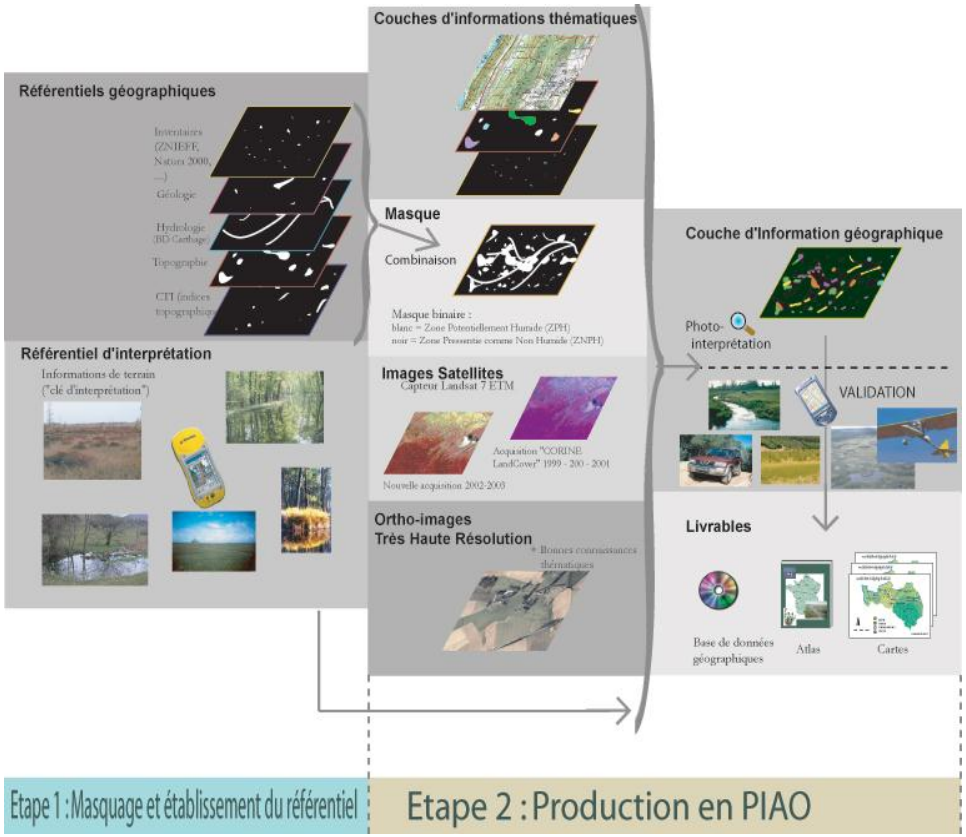
Inventory

Baseline for measuring future change; and tool for planning and management.

Stakeholders

53 Watershed Management Committees.

Technical Committee to follow up the process: Members are MINAGRI, ORTPN, NGOs, MINELA, MININFRA, NUR, etc.…



Both low and medium resolution satellite data (e.g. MODIS, Landsat, SPOT) were used for the national scale mapping,
High resolution data was used for individual wetland site mapping.

Mains Outputs of the Inventory

860 Wetlands (278 536 ha)

-10.5% of Rwanda area

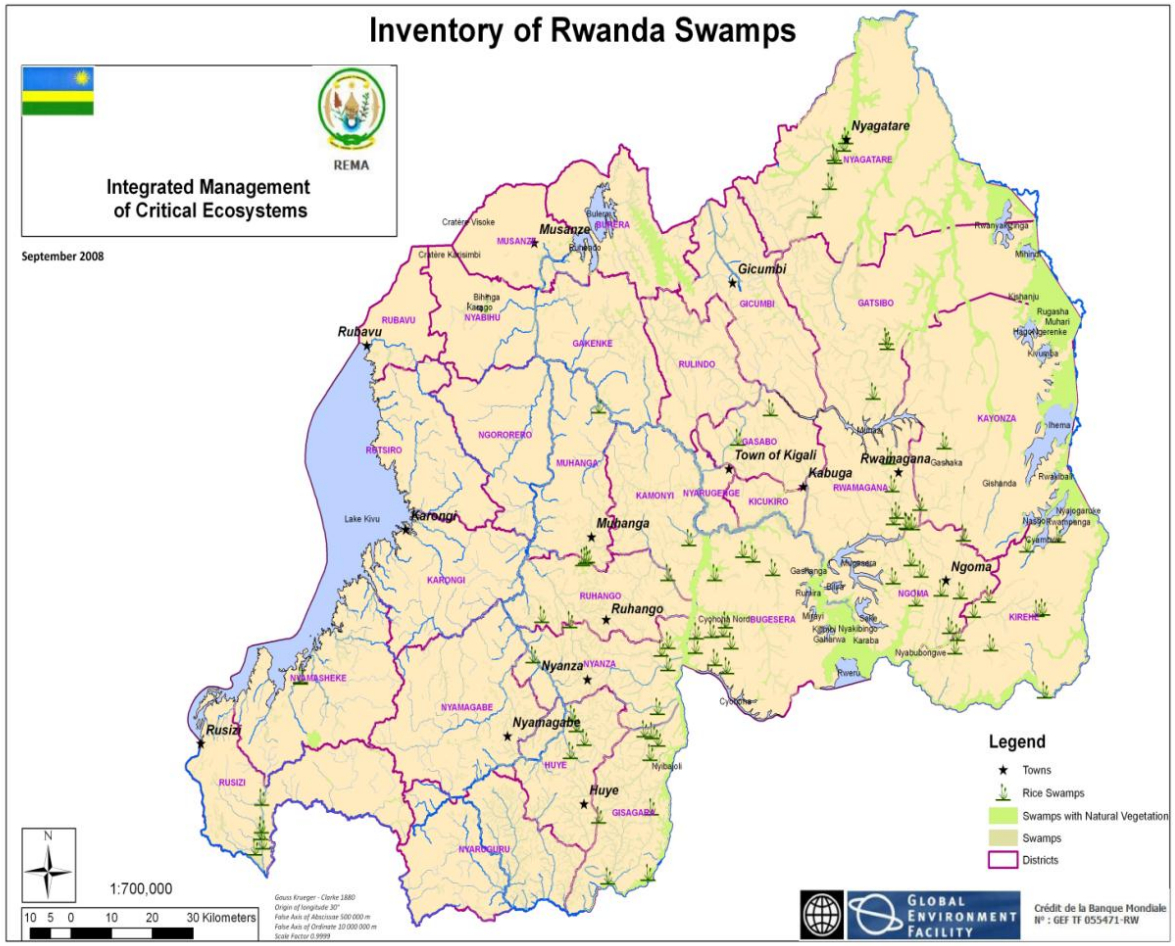
-41% Covered by Natural Vegetation-Papyrus

-53% Covered by Fields (148 344 ha)

-6% Fallows (Jachères)

101 Lakes – 149 487 ha

861 Rivers – 6 462 km



Wetlands Management Modalities

– **38 wetlands**– 56 120 ha proposed for full Protection (20%)

– **475 wetlands**– 206 732 ha proposed for exploitation under condition (74%) including:

- 182 wetlands- 145 768 ha which are shared by several Districts
- 365 Cultivated wetlandsof > 100 ha – Total 184 032 ha with 130 873 ha cultivated

– **347 wetlands**– 15 689 ha proposed for exploitation under a basic EIA (6%)

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Tools for Rwanda Wetlands Sustainable Management

- Legal Instruments for Rwanda Wetlands Sustainable Management
- Capacity Building Tools in order to manage Rwanda Wetlandsin Sustainable Manner
- Technical Tools for wetlands and Watershed Management

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Focus on Rwanda Wetlands Bill

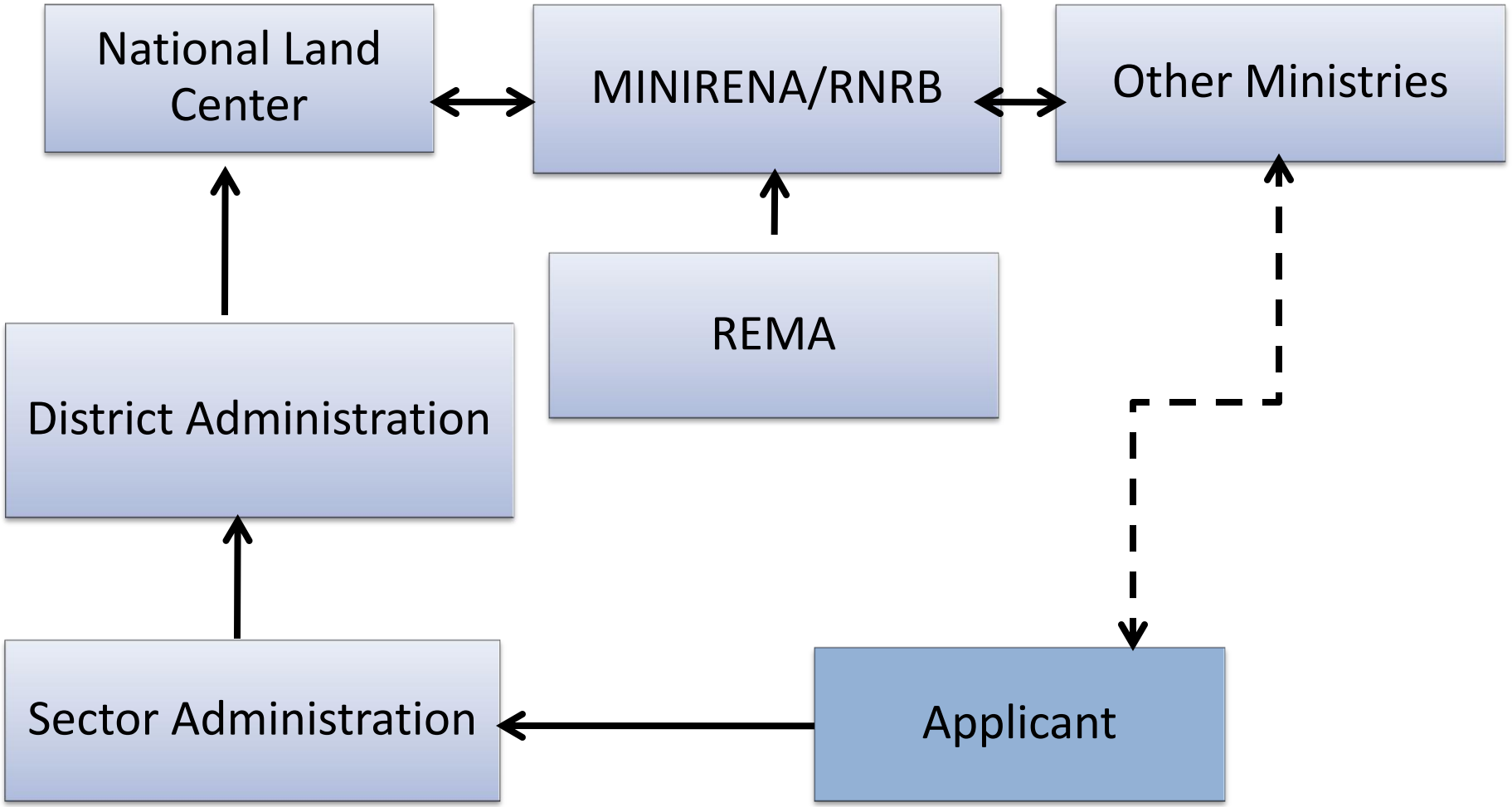
The Bill is a legal instrument:

- To improve wetlands governance in Rwanda
- To strength the legal status of marshlands and to determine the conditions of their management and their use, in a sustainable manner.

Administrative Structure Principles

- Full Respect of Existing Mandates
- Clear Responsibilities
- Separation of Tasks
- Central Function of NLC
- Management Authority of MINIRENA/RNRB
- EIA Inputs from REMA

Administrative Structure



Right Allocation Principles

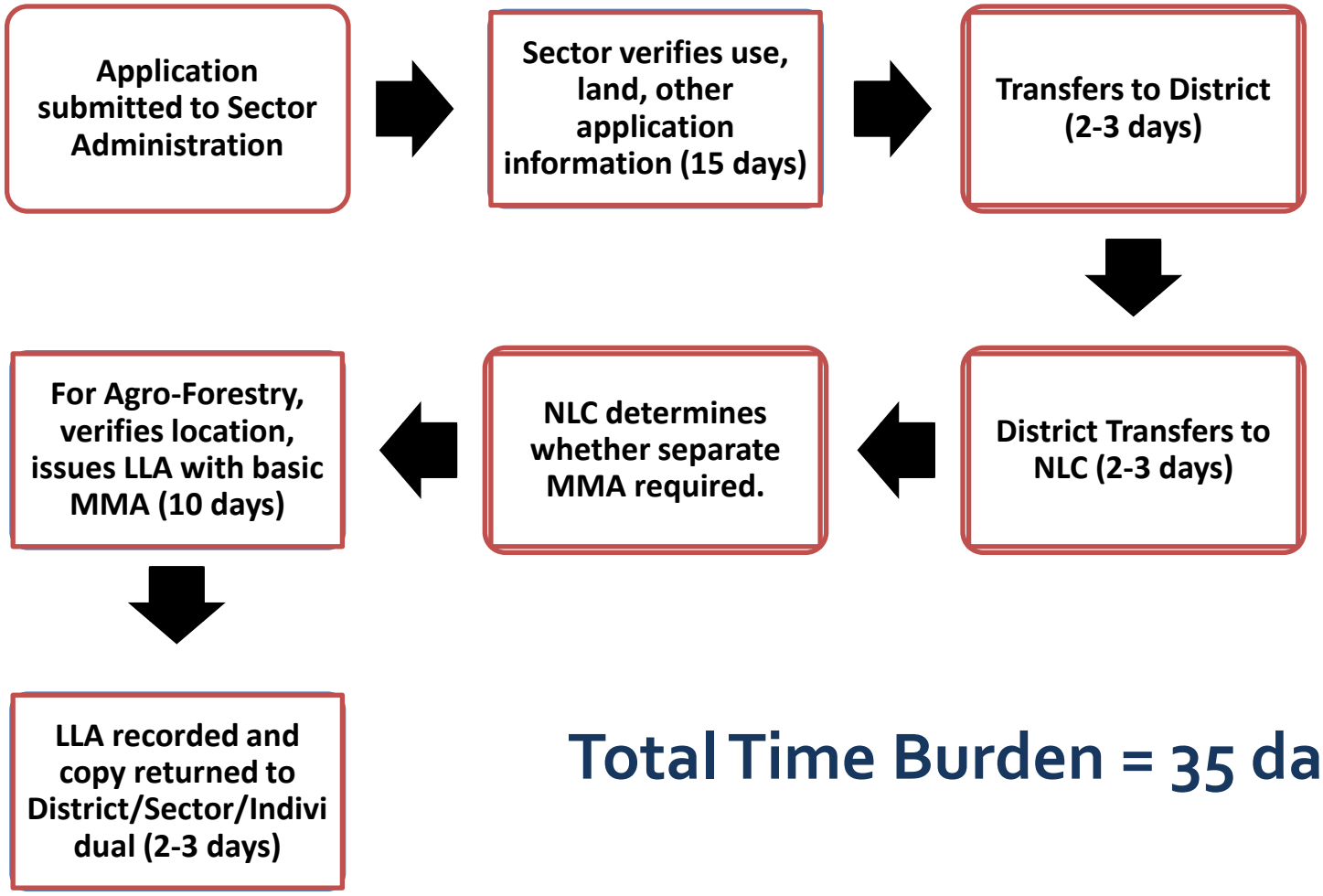
- One Door – formal process begins at the sector administration for all applications
- Simplified procedure for majority of users
- Clear steps and responsibilities at each stage of the process
- Time and energy efficient
- Incentives for compliance
- Transparent and participatory

Procedural Types

3 types:

- Simplified procedure for agro-forestry uses (**LLA only**)
- Procedure for all uses requiring an EIA, but not approved by another ministry (**LLA+MMA**)
- Procedure for uses requiring approval by other ministries.

Allocation Procedure – LLA only



Total Time Burden = 35 days

Allocation Procedure – LLA + MMA

Application submitted to Sector Administration

→

Sector verifies use, land, other application information (15 days)

→

District conducts technical review (15 days)

↓

NLC determines whether separate MMA required. If so. Transfer to MINIRENA (15 days)

←

MINIRENA/REMA returns application to NLC for processing (3 + 15 days)

←

LLA recorded and copy returned to District/Sector/Individual (3 days)

Total Time Burden = 66 days

Implementation

- 1st year immediate one-time investment plus operations and salaries = **$3.75 million**

- Continuing costs for annual salaries and operation = **$2.25 million**

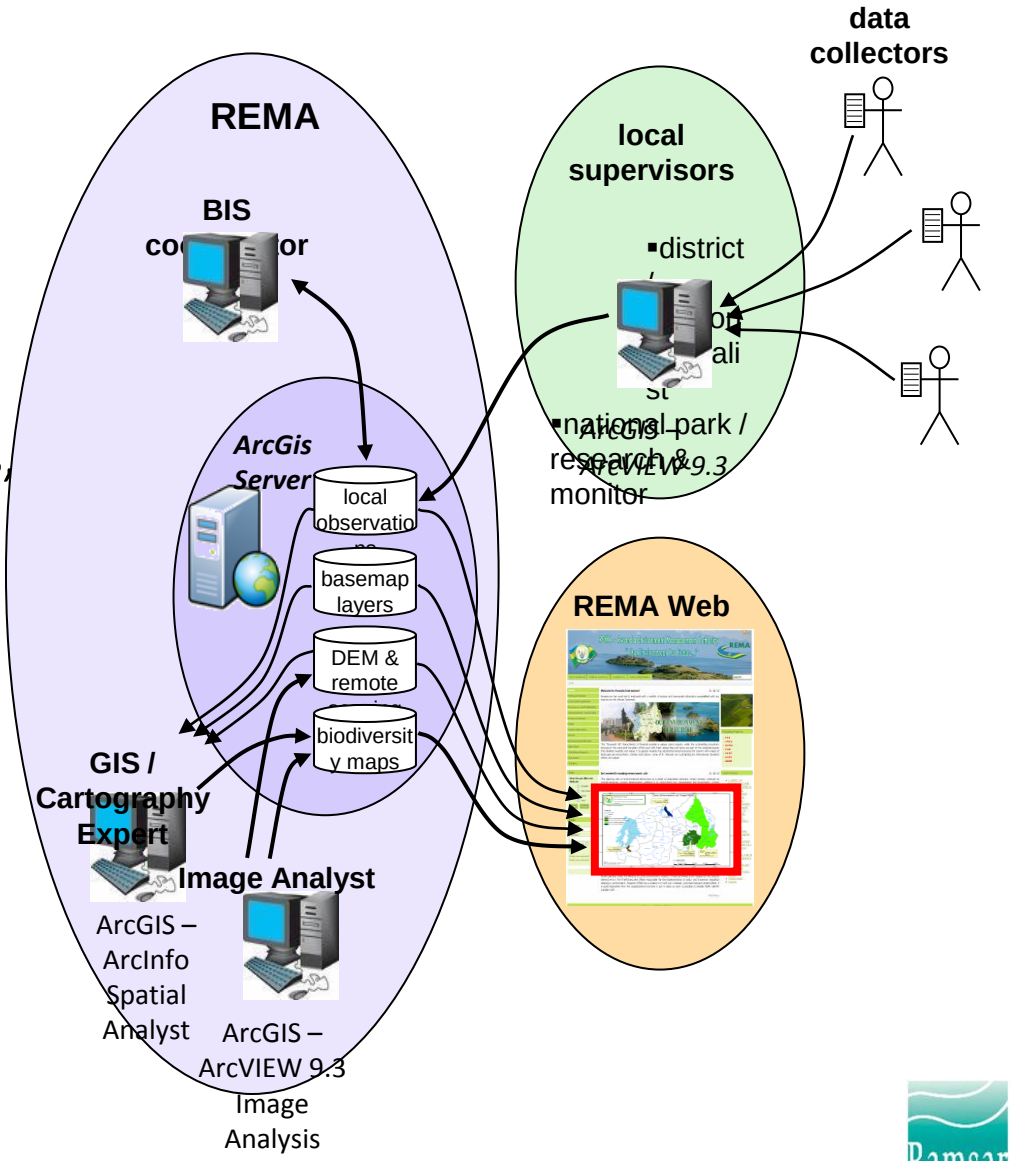
- **Feasibility study needed**

This is a call for action

Focus on REMA's Biodiversity Information System

To design and setup a Biodiversity Information System Platform for Rwanda That will be provided:

- Real time data collection (PCs Internet, Phone, Cellular Phone, PDA Smartphone, Local Applications);
- A two way communication with field environmental data collectors;
- Automatic generation of trend charts, interactive maps and consolidated environmental data tables;
- Analytical tools and ability to export environmental data;
- Real time compilation of environmental information in the field;
- Automatics and rapid evaluation of environmental indicators.



Focus on over-exploitation of Papyrus

The following plant species are exploited from wetlands:

- *Cyperus papyrus, Cyperus latifolius, Vossia cuspidata* used for roofing,
- *Cyperus papyrus, Cyperus latifolius*, used for mat making,
- *Cyperus papyrus*, used in making false ceilings,
- *Cyperus denudatus* for rope making

The wind energy potential has not yet been assessed to date; the alternative of substitution biomass, mainly the papyrus, faces competition from the requirements of intensive agriculture

Papyrus in Rwanda wetlands

Type	Altitude	Type of Soil	Functions
High altitude	> 1800	Peaty (developed peat)	Water reserve, water source, biodiversity reserve
Volcanic highland	1550-1800	Peaty	Water reserve, water source, filter
Cyangugu Volcanic Highlands	1550-1800	Peaty	Water reserve, water source, filter
Central Plateau	1400-1800	Mineralized soil (Clay sandy, limono sandy)	Water reserve, Agricultural production
Kanyaru-Nyabarongo and Kagera Basin	1200-1500	Organic with less developed peat	Water reserve, water source, Dam
Basin in the East	1200-1500	Vertisol	Water reserve
Bugarama depression.	< 1000	Mineralized and vertisol	Agricultural production
The edge of Lake Kivu	1400-1500	Mineralized	Biodiversity

Uses of Papyrus

Two types of handcraft: utility and art. Utility basketry is practiced by men than by women. The small basket, such as mats, baskets, wreaths and panels, is carried out by women.

The men: basket, construction of huts, large baskets, palanquins, shields, rain caps, beehives, etc.. Both use the papyrus or banana leaves.

Baskets and Mats

Assist users with Guidelines

Making /selling baskets and mats →local economy → source of income

However exploitation of papyrus → standards or guidelines. The load capacity is unknown and as well of natural regeneration. The areal extent is unknown and there is need to evaluate its importance.

Assist operators with appropriate guidelines and standards to equip various levels of development decision makers with tools to make appropriate decisions with respect to wise use of Papyrus in Rwanda.

GL = general guidance to assist and provide information for planners, developers and users of papyrus in assessing, developing and managing the wetlands in sustainable ways in the context of IWRM.

Conclusion

- Rwanda has several tools for the wetlands Sustainable Management
- There is need of specific guidance for the natural resources exploitation. Those dependents on wetland ecosystem services for subsistence need more practical guidance.
- Management Guidelines for papyrus wise use: Positive and negative effects of papyrus exploitation, Recommendations and additional actions to influence papyrus natural regeneration.

This is a call for action