

The International Hydrological Programme (IHP)

Rwanda activities from 2008

Back ground

- The International Hydrological Programme (IHP) is an intergovernmental programme of the UN system devoted to water research, water resources management, and education and capacity building.
- UNESCO's International Hydrological Programme, founded in 1975.
- In Rwanda, several activities have been done in the same line such as research activities organized under the International Hydrological Programme from 2008:
- The world headquarter is located in Paris, France and the African one is located at Nairobi , Kenya;

Some key activities (1)

- **2008: Ground water quality and vulnerability assessment around Kigali city;**
- **2012: Hydrological issues for sustainable and appropriate solutions for Rwanda's environment;**
- **2013: HELP research of Sebeya river upstream**
2019; (Hydrology for the Environment, Life and Policy). A new approach to integrated catchment management by building a framework for water law and policy experts, water resource managers and water scientists to work together on water-related problems.

Some key activities (2)

- **2014: Eco-hydrology research on Cyohoha North lake catchment;** uses the understanding of relationships between hydrological and biological processes at different scales to improve water security, enhance biodiversity and further opportunities for sustainable development by lessening ecological threats and maximizing greater harmony within catchment processes.
- **2015: Assessment on surface and groundwater quality of Nyabugogo wetland; impact of domestic, industrial and climate change;**
- **2018: The impact of Community Land Use / Land Cover Management Practices on Downstream Surface Water Quality in Migina Catchment, Southern province of Rwanda;**
- **Precipitation Estimation from Remotely Sensed Information for East African Member States using Artificial Neural Networks.**

2008, 2009, 2010

- 2008: Ground water quality and vulnerability assessment around Kigali city, October 2008, Hotel Umubano;
- 2010: Provisional commission, 1st meeting, April 2010, 1st consultative meeting;
- 2010: Training Workshop meeting of the Provisional National Committee of the International Hydrological Program (IHP), December 2010.

Recommendations (1)

- **Contacts have to be made to the Ministry in charge of water resource in its attributions, with a view to put in place a better system for strengthening the communication, publication, coordination and monitoring of management research;**
- **A provisional recognition from the Minister with in his attributions is very needed for the IHP Provisional National Committee while still waiting for its final establishment;**

2012, 2013, 2014

- 2012: Consultative meeting with IHP regular members and partners on hydrological issues for sustainable and appropriate solutions to Rwandan's environment; **R/Done;**
- 2012: One full month training on advanced technologies of irrigation and farmer associations for water management by Charles Kasanziki in Israel; **R/Training at national level since it was a ToT (Training of national trainers);**
- 2013: Draft legal and administrative texts for the establishment of the IHP national committee; **R/Done;**
- 2013: A study tours to Sebeya Catchment and Cyohoha nord catchment was done in order to implement respectively the HELP and ECO HYDROLOGY UNESCO Programme; **R/Done;**
- 2014: IHP study tour at Cyohoha North Lake catchment; **R/Done;**

Recommendations (1)

- HELP project will be conducted on Sebeya Catchment and the proposed team leader was Dr. Munyaneza Omar in collaboration with Musabyimana J Claude, Dr. Digne Rwabuhungu, Jean Pierre Rugema and François-Xavier Tetero; **R/Done at proposal level but need a follow up for way forward and sustainability;**
- ECO hydrology project shall be on: Cyohoha Nord catchment with as proposed team leader Dr. Digne Rwabuhungu in collaboration with Charles Kasanziki, Omar Munyaneza, Vincent Kabalisa and Andre Ndahimana. **R/Done at proposal level but need a follow up for way forward and sustainability;**

2015: Assessment of surface and groundwater quality in the Nyabugogo wetland:

- Since water pollution is a matter of life, we must use all strategies to get means for **sending samples out of the country** should be found;
- We have to invite policy makers to raise their awareness of the importance of water protection **to gain support for future project and avoid thereby financing problems;**
- To analyze the remaining parameters as **mercury, fertilizers, pesticides since a research project is a ongoing work.**
- Members of the workshop recommended to include **sociologists specialist** within the team members dealing with Eco Hydrology and HELP projects;
- To plan further research on **the source of pollution of Muhazi Lake** because results are showing alarming values upstream of Nyabugogo catchment;

Recommendations

Some issues have to be solved accordingly:

The former lake bank was surrounded by aquatic plants and natural forests on hillside so there is no longer clear water because sludge from hillside has filled the former lake;

The lake level decreasing may be also due to sedimentation compromising the lake level and swamp water reservoir;

The government and Bugesera districts should incorporate in regular annual budget and community works (Umuganda tasks) the removal of water hyacinths because, they quickly reappear after limited projects.

2017: Africa IHP Committee from IHP National Committee Focal points;

IHP NATIONAL COMMITTEE FOCAL POINT:

Dr . Sekomo Christian, senior lecturer at University of Rwanda and chair of IHP National Committee

Mvunabandi Dominique, Director of science and technology at Rwanda National Commission for UNESCO , and IHP focal point;

COMPOSITION OF IHP NATIONAL COMMITTEE

- Chairman: Dr Christian B. Sekomo, Senior Lecturer at UR**
- Vice Chairman: Jean Claude Musabyimana (He is no longer in MINAGRI and must be replaced)**

Secretary: Charles Kasanziki, Lecturer at UR

Ongoing IHP projects (1):

- A preliminary study by IHP-Rwanda technical team, on **Eco Hydrology** challenges and approaches for the cyohoha north lake catchment, in bugesera district;
- Hydrology for the environment, life and policy (**HELP**) in Rwanda”: proposal for an integrated water resource management strategy for the Sebeya catchment, **submitted to UNESCO for support**;
- UNESCO-UR research project (**support from one UN and UNESCO Nairobi regional office to IHP Rwanda in 2014**) on “Assessment of surface and groundwater quality in the Nyabugogo wetland (Kigali): impacts of domestic, industrial wastewaters and climate change”;

Ongoing IHP Projects (2):

- 2018: A study tour and a consultative workshop on Migina catchment in Southern province. The field visit started from the Migina river downstream side in Huye District as a departure point, up to the boarder of Rwanda and Burundi at 33 km from Huye town; **R/ Done.**
- The research on Migina catchment :Impact of Hilltop Community Land Use/Land Cover Management Practices on Downstream Surface Water Quality in Migina Catchment , Rwanda **is still ongoing ; Results should be regularly communicated to IHP members,;**
- Precipitation Estimation from Remotely Sensed Information for East African Member States using Artificial Neural Networks. **R/Training at national level since it was aToT (Training of national trainers).**

Conclusion

- **Need of national trainings by IHP members sent for ToT: (1) Advanced technologies of irrigation and farmer associations for water management by Charles Kasanziki in Israel + (2) 'Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks''**
- **Pursue pending researches;**
- **Funds for analysis that are difficult to be done in country;**
- **Official and approved National Committee of the International Hydrological Program (IHP);**
- **Official and approved legal and administrative texts for the establishment of the IHP National Committee;**
- **Regular consultative meetings setting more IHP activities**