

CLIMATE CHANGE IN CONGO BASIN



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Core group on pilot projects, third meeting
Global Network of basins working on climate change
adaptation, first meeting

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CLIMATE CHANGE IN CONGO BASIN

GEOGRAPHICAL LOCATION

The Congo is the 2^d largest african basin with 3.8 Mkm² and the 1st in term of water resources availability (2^d in the world after Amazon) with an averal discharge of 40 000 m³/s.

Is an exceptional basin on many aspects (on two hemispheres, biodiversity, forests...)



INTRODUCTION – CC OBSERVED IMPACTS

Water resources are globally abundant in the basin but some impacts of the climate variability are already observed (decreasing of the discharge in the south and in north of the basin) and others are unknown (discharge in tributaries? flooded areas under forest?...)

Main observed impacts :

- Interruption of navigation on Ubangi river (about 4 days a year in 1940, about 6 months a year nowadays...)
- Congo low water level impact hydropower production and pumping for drinkable water)
- Low water level impact industry as mining in Katanga district...

INTRODUCTION – CC CHALLENGES

Some challenges for the Congo basin are :

- Improve or adapt navigation for Ubangi river and other tributaries (Central African Republic is landlocked and is highly dependent on the navigation)
- preserved the flooded areas under forest which constituted a precious carbon sink at a mondial scale
- continue and improve hydropower for develop activities while respecting environment (renewable energy without greenhouse gas emission, respect downstream biodiversity...)

PROJECTS IN PROGRESS

CICOS is conducting two projects linked with CC :

- Forecasting water level model for Ubangi river which allowed to know between 5 and 15 days in advance the water level at the critical Zinga spill (model already developed within AMESD project)
- Build an allocated model of the whole Congo basin which, among another thing, will permit to make climate forcing (model will be soon established within FFEM project in CICOS)

It's not directly linked with CC but to estimate the evolution of the water resources it's first indispensable to know the actual situation. But the hydrometric networks are down in the basin since 1960 in DRC and since 1995 in the other CICOS countries. So, we are starting the Congo HYCOS program to rebuild operational and sustainable hydrometric services in the CICOS countries.

TRANSBOUNDARY COOPERATION

IWRM CICOS mandate is recent, cooperation between countries toward IWRM have to be build and is one of the CICOS coming missions.

Cooperation are also initiated with other Basin authority like with LCBC.

FUTURE PLANS

Some initiatives are in progress at CICOS but it's not enough, so many projects could be made in the basin but we want to focus here on two subjects :

- We need to estimate with more accuracy what is the dynamic extend of the flooded areas. We've initiated works on this aspect but we couldn't succeed due to lack of fund
- Hydropower is one of the main axe of development in the region and learn more about the possible consequences on the production is strategic to make sustainable development plan.

QUESTION TO THE OTHER PILOT PROJECTS?

We have an precise idea to delimitate flooded area under forest (We want to use developed process in Amazonia using satellite radar imagery with IRD) but it still in the research field, to do you have equivalent experience?

The lack of hydrological data is a real handicap for all the incoming studies, do you have the same problem? Did you managed to sensitize policy makers to the importance of these data?

Do you encounter problems with hydropower or had to make choice between hydropower and other water uses?