AFRICAN GREAT LAKES MONITORING

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ACARE and IISD ANNUAL MEETING
AFRICAN GREAT LAKES

FISHERIES

1.5 Million Tons/Year

WATER

>28 % vol. surf. world freshwater

BIODIVERSITY

>1400 fish species

THREATS

- Overfishing
- Climate change

FISH CATCHES DECREASE
Overfishing ? Climate change ?

CLIMATE CHANGE
Warming: 0.11 °C / decade

ANTHROPOGENIC PRESSURE
50 million people

POPULATION GROWTH > 5%
THREATS

ALGAL BLOOMS

INVASIVE SPECIES

POLLUTION

EROSION

Sedimentation

Photo: Olivier Dewitte
DATA ARE NEEDED TO ADDRESS THREATS

- OVERFISHING → FISHERIES
- POLLUTION → WATER QUALITY
- ALGAL BLOOMS
- CLIMATE CHANGE → METEOROLOGY
- INVASIVE SPECIES → BIODIVERSITY
- EROSION → LAND USE
ADDED VALUE OF A MULTILAKE MONITORING

LIMNOLOGICAL CYCLES

Tanganyika

Malawi/Nyasa

Climate variability
PRESENT MONITORING
DISCONTINUOUS & NO HARMONIZATION

3 years
SHORT TERM PROJECT

>10 years
No or few data!

3 years
SHORT TERM PROJECT

PROBLEM!
PRESENT SOURCES OF DATA

1. DISCONTINUOUS

2. NOT SIMULTANEOUS

Lake A
Lake B
Lake C
Lake D
Lake E...

Years

SHORT TERM PROJECTS
MULTI-LAKES MONITORING

Lake A: **continuous**
Lake B
Lake C
Lake D
Lake E

**KEY DATA**

**LONG TERM MONITORING**

**SHORT TERM PROJECTS**
2-3 years

**MANY MORE PARAMETERS**

YEARS
Parameters to monitor?

FIELD

REMOTE SENSING

WATER

METEOROLOGY

LAND USE
AUTOMATIC BUOYS

HYDRODYNAMICS
Institutions & people
WHO, WHAT, WHERE?

Remote sensing + database

Institutions
capacities

Agreement

TRAINING

Monitoring
1. - Water/limnology
   - Fisheries
   - Meteorology

Evaluation &
adjustment
2. - Biodiversity
   - Land use
   - Socio-economic data

AFRICAN
GREAT LAKES
LONG TERM
MONITORING
LONG TERM MONITORING and ADVISORY GROUPS

ADVISES TRAINING, HELP ..

Lake Edward-Albert Advisory Group

Lake Kivu Advisory Group

Lake Tanganyika-Science Advisory Group

Lake Turkana Advisory Group

Lake Victoria Advisory Group

Lake Malawi/Nyasa/Niassa Basin Fisheries & Aquaculture Network

AGL INSTITUTIONS
An INTERNATIONAL CONSORTIUM to support the monitoring of African Great Lakes

AGL INSTITUTIONS

Multilakes monitoring

AGL CONSORTIUM
« Friends of the African Great Lakes »

ACARE-IISD ?
ARCOS ?
ICRAF ?
IUCN ESARO ?
IUCN ISI ?
EAGLOnet ?
LLO ?
TNC ?
…
WHAT COULD BE DONE WITH FUNDING?

NEEDS

Basic instruments
- Meteo station
- PC/internet
- Automatic buoy

DELIVERABLES

Continuous times series
- fisheries
- water quality
- biodiversity indicators
- land use/erosion
- meteorology

SCIENCES

- Data
- Ecological understanding (threats/forecasting...)

NECESSARY FOR MANAGERS

SUSTAINABLE USE

of major regional RESOURCES and WORLD heritage sites.

Conclusions

Remote sensing

20 stations
THANK YOU!

ASANTE  NATOTELA

MURAKOZE