



# Monitoring Strategy & Action Plan for Lake Kivu Gas Extraction

## Presentation of NCEA Advice with focus on institutional aspects

Prepared for the Conference on  
Safe Gas Extraction from Lake Kivu

Copenhagen, 13-15 May 2009

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## Netherlands Commission for Environmental Assessment (NCEA)

- Advisory body on a statutory basis
- Advices on both EIA and SEA
- Independent, Expert body & Transparent
- No judgement on acceptability of project or plan

### International cooperation:

1. Strengthening EIA/SEA systems
2. Advices on specific EIAs and SEAs
3. Helpdesk and reference centre

# NCEA and Lake Kivu

- Facilitator, chair & secretariat of workshop in Gisenyi on Lake Kivu Monitoring Programme (March 2007)
- Advice on Harvesting the Methane Resource and Monitoring the Stratification of Lake Kivu, Rwanda (NCEA Independent Working Group, August 2007)
- Advice on Monitoring Strategy and Action Plan for Lake Kivu Gas Extraction (NCEA Secretariat, February 2008)
- Facilitator, chair & secretariat of workshop in Copenhagen on Lake Kivu Safe Gas Extraction (May 2009)

# Request 2008 Advice

- Monitoring Strategy & Action Plan for Lake Kivu Gas Extraction
- Request by GoR, asked to focus on:
  - technical
  - institutional
  - financial
  - timeframe
  - roles/responsibilities
- This presentation: **INSTITUTIONAL ASPECTS**

# Calling for Caution

- Strong sense of urgency to start operating the first pilot plant for gas extraction (2009: started!)
  
- But caution is needed:
  - the knowledge base for licensing of the plant is incomplete (MPs)
  - to operate without license = without a legal base (who will be responsible in case of an accident?)
  - no approved EIA for the extraction plant available (as required by Rwandan Law)
  - Information on safety aspects of the KP1 pilot plant design, operational routines and control systems not available at Ministry of infrastructure
  - A foreseen third party safety assessment for the KP1 pilot plant had not yet been commissioned

# Risk & Authority

- Accidents with (pilot) plants can be assumed to happen
- Accidents cannot be excluded to cause gas eruptions
- Any risk is for the authority that gives the plant permission to operate
- Therefore, this authority should fulfil all its safety precautions and legal requirements before giving such permission

# Establish Authority with adequate powers

- **Risk** of accidents can be reduced by adequate monitoring & enforcement
- **Impact** of disaster can be contained by immediate adequate action
- Lake Kivu safety issues warrant the **permanent vigilance** of a special authority with adequate powers
- The NCEA recommends that this **authority be established as soon as possible**

# Institutional structures

for licensing, monitoring, inspection and  
disaster preparedness and response  
(chapter 7)

- 7.1 Local Institute (or Bilateral Competent Authority)
- 7.2 Expert Advisory Group
- 7.3 Developers
- 7.4 RURA
- 7.5 REMA



## 7.1. Local Institute (LI)

The NCEA recommends that the legislator legally establishes the Local Institute

The LI should have power and means to act instantaneously to avert risks and hazards, and therefore have real-time insight in monitoring data

It should:

- (i) advice government agencies on planning resource use, concessioning and licensing
- (ii) monitor and inspect installations
- (iii) carry out near plant and whole lake monitoring
- (iv) assure public safety and
- (v) administrate, communicate and report

## 7.2. Expert Advisory Group (EAG)

The current availability of high-tech scientific personnel in the two countries is limited

- the EAG should build capacity
- perform back stopper function
- possible support mechanisms:
  - exchange programmes for young scientists
  - local formation
  - international cooperation research programs

## 7.3. Developers

The developers should:

- design their extraction plans and gas ducts according to specifications provided by the Regulatory Authority
- operate according to the specifications and conditions of the licence
- monitor operations according to the proposed monitoring protocol

## 7.4. RURA

The RURA is authorised to regulate technical, economic and legal aspects of the gas sub-sector. NCEA recommends RURA:

- to take up all responsibilities as foreseen in the RURA law
- to use LI expertise for performing its regulatory functions
- to delegate to the LI its power to monitor, inspect and enforce the extraction plant and gas duct licences

## 7.5. REMA

The REMA is authorised to approve ToR and EIA studies for the extraction plans. NCEA recommends REMA:

- to take up all its responsibilities as foreseen in the law
- to use LI expertise for performing its functions for ToR and EIA-report approval
- to delegate to the LI its power to monitor, inspect and enforce environmental aspects of the plant licenses

# Roles, Responsibilities & Powers

In Annex 3 (hand out) you will find:

- Suggested composition of the LI
- The roles, responsibilities, powers and functioning of all institutional structures in more detail

## Advisory Short Term Action Strategy to establish capacities (chapter 8)

- Finalise Management Principles document;
- Commission, execute, validate consultant study on:
  - describing development of the most credible major disaster
  - contingency planning (incl. location specific evacuation plan)
  - training programs for implementing contingency plans
- Establish a compulsory monitoring protocol for extraction plants
- Legally enact the Management Principles document and the monitoring protocol in Rwanda and (if possible) the DRC

## Advisory Short Term Action Strategy (2) to establish capacities (chapter 8)

- Assuring that KP1 complies with Rwanda legislation
  - Review and approve EIA report for KP1
  - Commission, execute and validate an Independent third party assessment of installations (specialist team) and consecutive licensing KP1 (assure assistance of a team of specialists)
- Establish the monitoring requirements for government on lake status
- Provide for an operational intermediate monitoring function for near-plant monitoring (hire a specialist consultant for up to 6 months)



## Advisory Mid and Long Term Strategy and Action Plan (chapter 8)

- Implement training program for contingency plans
- Commission and validate consultant study on establishing early warning system
- Establish early warning system
- Establish (also legally), equip, train & operate the Local Institute
- Establish (contract) the Expert Advisory Group
- Review, peer review, finalize, validate and enact the gas law

## Advisory Mid and Long Term Strategy and Action Plan (chapter 8)

- Build capacity on regulating, monitoring, and inspecting gas operations in RURA
- Build capacity in specific scientific institutes
- Build laboratory capacity in KIST (or Butare University) and Bukavu University
- Implement the biological baseline study according to the proposed protocol (to be further specified)
- If turns out to be needed, build capacity, raise funds, program and apply biological monitoring

# Furthermore in the advice

- Ch. 5: generalities on Kivu gas extraction monitoring
- Ch. 6: monitoring parameters, frequency and data flow
- Ch. 10: budget estimates

Annex 1: Data Methane gas Kivu

Annex 2: Lake-wide ecological monitoring

Annex 3: Roles, Responsibilities and Powers

Annex 4: Advisory cumulative action plan

Annex 5: Provisional Investment budget

Annex 6: Advisory Monitoring Programs