Institut international de l’aquareponsabilité municipale

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Auditing the square responsibility of a municipality

Annual meeting and Congress
Great Lakes & St. Lawrence Cities Initiative

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The opportunity

- Different aspects of water management are inter-related
- No framework for evaluating water management in all its aspects
- It is rare that a municipality has its water management audited in a comprehensive way
- No single external, independent auditing service exists based on international best management practices
iiAm
International Institute on Aquareponsible Municipalities

- A non-profit organization founded by INRS and Université Laval
- Its mission is to:
  - Set up an aquareponsibility auditing and certification program
  - Structure the scientific knowledge on water management
  - Communicate best practices
  - Produce a performance report on improvements of aquareponsible practices
Municipal aquaresponsibility: The concept

- Municipal aquaresponsibility is:
  - An integrated approach
  - that includes all actions of a municipality
  - to guarantee the responsible management of the water resources on its territory
Municipal aquaresponsibility: The concept

- Aquaresponsible management’s ultimate aim is to ensure:
  - The protection and sustainable use of the water resource
  - The optimisation of the quality of the services
  - The durability of the infrastructures
  - The most advantageous costs
Aquaresponsibility: 17 elements

- Elements – Group 1 (*technical system*)
  - Protection, conservation and responsible use of drinking water sources
  - Adequate treatment and transport of drinking water
  - Monitoring the quality of the distributed water
  - Stormwater management including wet-weather pollution and flooding
  - Adequate treatment and transport of wastewater
Aquareponsibility: 17 elements

- **Elements – Group 2 (management)**
  - Good governance and administrative accountability with respect to water-related services
  - Asset management
  - Adequate continued education of staff
  - Optimize management of water-related human, material and financial resources

- **Elements – Group 3 (risk management)**
  - Ensure risk management related to water
  - Adaptation to climate change
Aquareponsibility: 17 elements

- **Elements – Group 4 (citizen)**
  - Information of/to the citizen
  - Public access to the aquatic environment including recreational and touristic activities
  - Responsible water use

- **Elements – Group 5 (water management)**
  - Involvement in integrated river basin management
  - Adequate water quality to satisfy the different uses
  - Management of solid water
For municipalities who:
- want to have their aquaresponsibility evaluated by independent experts
- want to improve the management of their water resources

To be certified, a city needs to be audited on its water management, in all its aspects.
iiAm’s auditing and certification program

- 17 elements and 107 indicators are evaluated
- What iiAm will do for the municipalities:
  - An analysis of the current state
  - Recommendations
  - A rating of how aquaresponsible the city is
Methodology development

- Literature review and expert knowledge
- Definition of 17 elements to be audited
- Formulation of indicators for each element (107 in total)
- Formulation of variables to feed the indicators
Methodology development

- Literature sources:

  - Performance Indicators for Wastewater Services
  - Learning from International Best Practices
Methodology development

- Literature sources:

Performance assessment of Urban Infrastructure Services: The case of water supply, wastewater and solid waste

Editors: Freydis Sjøvold, Paul Conroy and Eliane Algaard
Methodology development

- Literature sources:

2011 PUBLIC REPORT

Indicators for the sustainable urban water cycle

KWR Watercycle Research Institute

BTO 2011.027(s)
April 2011
Methodology development

- Literature sources:
  - INTERNATIONAL STANDARD ISO 24510
    - First edition 2007-12-01
    - Activities relating to drinking water and wastewater services — Guidelines for the assessment and for the improvement of the service to users
  - INTERNATIONAL STANDARD ISO 24511
    - First edition 2007-12-01
    - Activities relating to drinking water and wastewater services — Guidelines for the management of wastewater utilities and for the assessment of wastewater services
  - INTERNATIONAL STANDARD ISO 24512
    - First edition 2007-12-01
    - Activities relating to drinking water and wastewater services — Guidelines for the management of drinking water utilities and for the assessment of drinking water services
Keyword: Quality control

- International, multi-skilled team
- Local independent experts to join the auditing effort
- Collaboration of the municipality
- Based on existing data that can be verified/validated
- Data validation is integral part of the audit
Conducting the audit

- Collaborative and positive framework
  - One coordinator named by the municipality for the whole process
  - For each element the city appoints a representative
  - Before the process starts:
    Presentation of the process to all officials involved
Conducting the audit

- Information provided by the municipality

- For each element
  - A list of variables is sent to the municipality’s representative
  - 1\textsuperscript{st} meeting: to clarify the data requirements
  - 2\textsuperscript{nd} meeting: to discuss the data provided by the municipality
  - 3\textsuperscript{rd} meeting: to finalise, if needed.

- Data analysis
- Report
Conducting the audit

For each of the 17 elements of aquare sponsiblity

- Evaluate the situation of the city
- Assess:
  - what is done,
  - what is partially done
  - what is not done
- Formulate and prioritize recommendations
Conducting the audit

- Report: Table of Contents
  - Introducing the element
  - Synthesis of the indicators
  - Assessment
  - Comparative analysis
  - Prioritized recommendations
  - Conclusions
  - Aquareponsibility score (/5)

- The report is confidential – owned by the municipality
Element 6 – Stormwater management including wet-weather pollution and flooding

- **Indicators**
  1. Knowledge on potential wet-weather loads
  2. Knowledge on the storm sewer system and stormwater transport
  3. Storm sewer management
  4. Knowledge on combined sewer system and transport
  5. Combined sewer management
  6. Capacity to collect and treat wastewater under storm conditions
  7. Sewer operation and maintenance
  8. Stormwater control and measures to reduce stormwater quantity
  9. Flood management
Element 11 – Public access to the aquatic environment including recreational and touristic activities

- **Indicators**
  1. Access to the waterfront
  2. Access to the water body
  3. Services and activities provided
  4. Maintenance and site security
  5. Protection and restoration of shorelines and ecosystems
  6. Access to facilities for the disabled

An example...
Copenhagen
Copencabana
But not Coli-cabana

Copenhagen’s mayor
Quebecabana

By the St–Lawrence
Conclusion

- **Aquareponsibility audit**
  - All aspects of water management of a municipality
  - International expertise (Best Management Practices)
  - Confidential report with recommendations and score
  - Tool aimed to improve a city’s aquareponsibility

- **Collaborative positive framework for continued improvement of a city’s water management**
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