

Panel Discussion Summary Report
Asia-Pacific Regional Initiative on Energy, Environment and Ecosystems (3E) Nexus for
Sustainable Development
24-25th February, Hulhule Island, Male', and Maldives

Summary of each panel discussion by session-wise:

Session 2 – Environmental Technology

- There were 6 papers in this session that spanned across
 - Solid waste management
 - Water and wastewater treatment, and
 - Water quality

Paper 1

An Overview of Municipal Solid Waste to Energy and Climate Co-benefit Potential in Asia- A Case of Thailand

- Highlighted energy recovery from wastes (WTE) is one of the effective ways to deal with increasing waste generation while fulfilling growing energy demands, along with various climate co-benefits.
- Thailand is targetting to meet 25% of its total energy consumption from renewable energy sources by 2021.
- Key challenges: technical, financial and capacity issues.
 - WTE facilities are operating at cost-inefficient conditions,
 - inappropriate choice of WTE technologies
 - lack of wastes separation at source

- lack of skilled manpower for operation and maintenance of the WTE facilities etc.

Issues for thought:

- WTE and 3R (reduce, recycle and reuse) have conflicting needs
- Question: Which option has a higher overall benefit?
- Public education/awareness is an important attribute for WTE implementation (e.g., waste separation)
- Question: How to promote effective public education/awareness

Paper 2

Monitoring trihalomethanes (THMs) in water supply facilities in Ho Chi Minh City, Vietnam and application of low cost methods for THMs removal at household scale

- Water quality data obtained in Vietnam during 2006-2011 showed that ammonia and organic concentrations exceeded their allowable limits (N-ammonia > 5 mg/L, COD > 10 mg/L).
- The concentration of THMs in water distribution network could reach 1,662 µg/L.
- A low cost household-scale air-stripping column could remove 64% of THMs.
- 83% OF THMs could be removed by boiling water for 15 minutes.

Issues for thought:

- The practicality of boiling water for 15 minutes.

- The merit of exploring basin wide water quality management strategy.
- The importance of political factors and how this attribute could be enhanced.
- Affordability and international cooperation are important. How to manage these issues?

Paper 3

Innovating Water Treatment Technologies in Managing Water-Energy Demand

- It is possible to produce high quality water from unconventional water sources and optimize energy consumption via technological innovation.
- Research on innovative water technologies will need to be continued along the direction of water-energy nexus.
- Public education is an important attribute towards success in implementing innovative solutions.

Paper 4

Sustainable Waste Management in Palm Oil Mills

- Sustainable palm oil mill effluent (POME) management has been successfully developed in Indonesia which help to prevent environmental pollution and produce valuable materials, such as energy or organic fertilizer, simultaneously.
- How much the management pays attention to greenhouse gases emission reduction is an important issue.

Issues for thought:

- How to motivate management to pay attention to greenhouse gases emission reduction
 - Possibility: tax incentive, etc.
- Political and social factors are important issues. How to manage these issues?

Paper 5

Sustainable arsenic removal system for affected communities in Cambodia using HAIX

- Arsenic removal is an important issue for people who live in the area contaminated by arsenic in Cambodia.
- This presentation highlighted the importance of promoting public awareness of negative health impact associated with arsenic (and for that matter other water quality issues)
- Social economic dimension is not less important than technological for water quality enhancement.
- People must have good awareness of the health impacts associated with water quality
- Political factors and international cooperation are important factors.

Paper 6

Monitoring Water Quality of Estero de Paco, manila

- This presentation described the effort to restore water quality of Estero de Paco and challenges encountered.

Issues for thought:

- Willingness to bear the cost incurred is essential for implementing water quality enhancement projects.
- There is a need to explore optimizing operating protocols for water quality enhancement systems to enhance acceptance by the beneficiaries.

Affordability is an important parameter for successful implementation of water quality enhancement projects.