

**Egyptian-Dutch
Advisory Panel on Water Management**

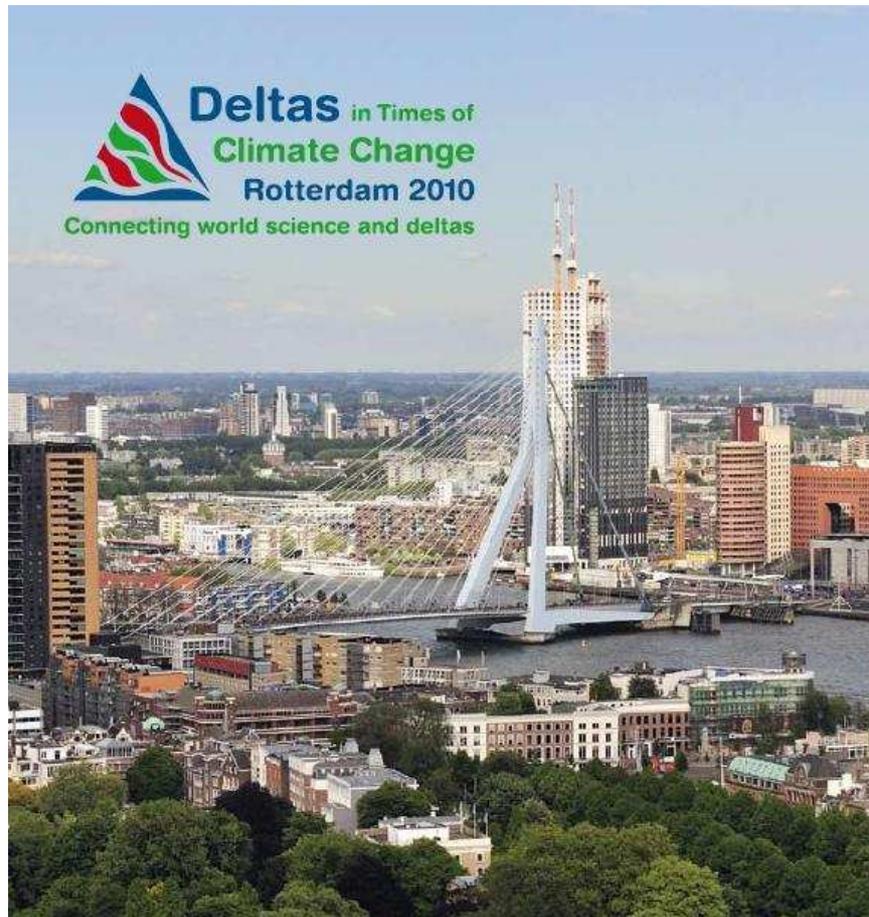
APP المجلس الإستشاري المصري الهولندي لإدارة المياه



Deltas in Times of
Climate Change
Rotterdam 2010

Connecting world science and deltas

Report on the NILE DELTA SESSION



International Conference Deltas in times of climate change
29 September- 1 October, 2010. Rotterdam, The Netherlands.

Web: <http://www.climatedeltaconference.org>

APP, October 2010
(app@link.net; www.app-wm.org)



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Session Report

Introduction

The Egyptian-Dutch Advisory Panel on Water Management/ APP was honoured by the request to organise the Nile Delta Session at the International Conference Deltas in times of climate change, that was held from 29 September- 1 October, 2010, in Rotterdam, The Netherlands.

Web: <http://www.climatedeltaconference.org>

The mandate of APP (app@link.net; www.app-wm.org) is:

...to assist, in an advisory capacity, the Ministry of Water Resources and Irrigation (MWRI) in carrying out its responsibilities with regard to managing the water resources of Egypt more efficiently and effectively.



The Conference was opened by H.R.H. the Prince of Orange
(Far left: Mr. Ahmed Aboutaleb, Mayor of Rotterdam;
seated left from H.R.H. is Prof.dr. Pier Vellinga, Chairman of the Conference)

The programme of the session is presented in Appendix 1.

This session report was prepared by APP, Dr. Samia El Guindy, Dr. Magdy Salah El Deen, Dr. Wouter Wolters, with contributions from Drs. Tessa Eikelboom (Free University, Amsterdam; during the session) and Drs. Madeleine van Mansfeld (Alterra, Wageningen UR; session preparation and session facilitation).

The Conference provided an excellent opportunity to be in contact with other Deltas and to learn from other regions of the world. After the Delta Sessions, the Delta Alliance was launched.

Presentations

(PowerPoints available separately, on the Conference web-site).

Dr. Hussein El Atfy, First Undersecretary and Head Irrigation Department, Ministry of Water Resources and Irrigation, Egypt: **Water management challenges & options in the Nile Delta**

Statements:

- Focal points for further study and action
 - The strategy to face climate change impacts should be integrated within the National Plans. This requires: awareness, political will and commitment
 - There is a need to mobilise short and long-term funding for the implementation of the Plans. This requires huge investment, that may exceed the Government's capability
 - Because climate change is a global phenomenon, we urge the international community to be committed to cooperate in funding the cost of coping with climate change.
- Exchange of Knowledge
 - There is a need to link science and research with policy. Realistic choices have to be made, determining priorities and using opportunities
 - There is a need for continuous international dialogue, sharing knowledge, integrated networking and exchange of best practices.

Mr. Henk Tankink, Panel member, representative of Ministry of Economic Affairs, The Netherlands:

Facing future water scarcity: multi-perspectives

Statements:

- Focal points for further study and action
 - Identify the modifications to the public decision-making process that enable the government to integrate policies.
- Exchange of Knowledge
 - Learn from best practices elsewhere

Prof. Dr. Shaden Abdel Gawad, President, National Water Research Center, Ministry of Water Resources and Irrigation, Panel member, Egypt: **Nile Delta research**

Statements:

- Focal points for further study and action
 - Decision makers should consider the messages from the scientific community on climate change/ CC and other expected changes. Decision makers can no longer take position of wait and see
- Exchange of Knowledge
 - Developing and maintaining working links with international water institutions
 - Knowledge-sharing and capacity building on complex water management issues



Dr. Shaden Abdel Gawad presenting the NWRC Research in the Nile Delta Session

Mr. Koen Roest, Alterra, Wageningen UR, The Netherlands: **Innovations in water demand management for Egypt and inspiring examples of water saving**

Statements:

- Focal points for further study and action
 - Water productivity is the key
 - Present productivity is already high → need innovations
 - A farming systems transition is needed
 - System changes take a lot of time → early action
- Exchange of Knowledge
 - Develop this by and with farmers & relate to other deltas
 - Change the innovation process from linear to circular
 - Government use pressure and incentive system to induce change



Mr. Koen Roest highlighting the need for innovation in Egyptian agriculture

Dr. Samia El Guindy, Director APP Central Office, MWRI. Panel member, Vice-President ICID, Egypt: **A bilateral role in the science-policy interface (APP-model)**

Statements:

- Focal points for further study and action
 - A robust science-policy interface is a must and the panel model is worth replicating
- Exchange of Knowledge
 - Joint delta research is 'value for money'
 - Question to audience: What are concrete implementable recommendations?



Dr. Samia El Guindy presenting the Panel with its unique bilateral role in the science-policy interface

Dr. Ibrahim El Shinawy, Director Coastal Research Institute, NWRC, Egypt: **Climate change and coastal protection of the Nile Delta**

Statements:

- Focal points for further study and action
 - Adaptation framework to CC impacts within Integrated Coastal Zone Management/ ICZM plans are needed as well as monitoring and observation systems
- Exchange of Knowledge
 - Issues like coastal protection, accretion and erosion systems, assessment of the vulnerable coastal areas, building capacity to manage the Egyptian shoreline

Dr. Mohamed Bayoumi, Environment Specialist, Assistant Resident Representative, UNDP, Egypt: **Integration of environment in water policies**

Statements:

- Focal points for further study and action
 - Develop an Integrated Coastal Zone management plan for the Nile Delta Coast

- Participation key partners: group decision
- Innovative techniques
- Exchange of Knowledge
 - Review best practices, upscale successful initiatives
 - Determine the maximum sea defense capacity of natural ecosystems and manmade structures in the Nile Delta in resisting expected sea level rise

Discussion

Prof. Georg Frerks (Wageningen UR; Utrecht University).

Institutional side of issues is important when we integrate science with policy.

Invest in institutional analysis. How to deal with many actors.

Social and political science. Not only on community level but also higher on and invest.

Mr. Hans van Woel (Free University, Amsterdam)

Coastal zone protection remark on last two presentations : focus on integration management.

Degradation and erosion: sediment load of Nile river is important, so not only look at delta specifically but also at river. **Use sediment load (also coastal) in addition to coastal structures.**

Mr. Jaap Flikweert (Royal Haskoning)

A lot of information and knowledge is already there and potential solutions are known. But the key gap are the decision makers. **Translate the issues for the decision makers.** High level scenario studies that show the consequences from one specific decision.

Monica Scatasta (European Investment Bank)

Comments: Funding

Before money is coming in we need to understand where we invest for. **Is the investment to continue the existing situation or is it for the future?.** What are the set of options you put on the table for decision makers. What policies are needed and where are contradictions.

Three things to get a grip on: 1) policy coherence; 2) space for use of economic incentives, 3) level of coordination of activities.

How to do this in practice. Very different from how it is done in e.g. in the UK. There is need for room to move in the political arena, within the time frames Banks are used to deal with projects.

Sieb de Jong (Province of "Zuid-Holland").

Next to think of long-term, and act on the short-term. Try to integrate developments like the lake Manzala concept. How to deal with local and regional developments.

Egypt has centralized systems and how can regional developments be strengthened. Improve bottom-up power.

Cees van der Wildt (co-chairman of the Panel and the session).

Invest in awareness: to keep dry feet is not imbedded in culture of Egypt, awareness is not reached in all target groups.

Prof Georg Frerks (Wageningen UR)

Behavioural change is needed. Understanding messages and communication is difficult. Large groups are migrating. Particular measures: **there is a need for localized communication pilots and studies to see which messages are understood.** Currently many projects do not reach there goal as they are not well communicated.

Wouter Wolters (APP, Wageningen UR)

(Reaction on Jaap Flikweert). Top level people are already on board, but something lacks as implementation is not reached. Everything is there, but how to get transformation? **Is there a lack of implementation capacity?**

Henk Tankink (Panel member, Ministry for Economic Affairs)

Important change has to be made. Discussions are sometimes rather academic: in Holland we can talk 50 years before a road is built for instance.

It is sometimes mentioned that each country needs a group that creates small disasters so that others can deal with it. **Make disasters visible, instead of hiding them, and use them to achieve change.**

Cees van der Wildt (co-chairman of the Panel and the session).

All big decisions in NL are made after disaster or major risk.

When traditional agriculture is transformed into industrial agriculture, pricing of water will become more easily acceptable.

Innovation can help to easily sell water: market-oriented: out of the box.

Business as usual does not work

Dr. Samia El Guindy (Director APP Central Office, Panel member).

Responsibility of the Ministry is high: to get water to farmers, industry etc., maintenance, etc.

Government is very aware, but there are priorities.

Actions are already ongoing and the Egyptian National Water Resources Plan is being implemented.

Financial system for projects is changing, towards PPP. Government paid infrastructure and farmer repaid in later stages (for the cost of implementation of the field system). Currently investors invest and implement the system, through PPP constructions.

Monica Scatasta (EIB)

On the example of the entrepreneurs/ PPP West Delta: this does not solve the problems in the old lands (which will become a social issue in time).

Water pricing as an option is politically unpopular. **There is a need for other ways to make it politically possible to undertake unpopular measures.**

Realistic view to create space for political decisions.

Inherent difficulties and how to overcome them politically: not just point fingers to decision makers.

Mr. Koen Roest (IWRM team, Alterra, Wageningen UR)

Political space discussion: **create show-cases of innovations and the way forward through pilots.** This will help in changing mentality.

Mr. Sieb de Jong (Province of "Zuid Holland")

Pricing in the Netherlands is also new as we face water shortage in the Netherlands. **Water pricing in NL is especially difficult with the farming community, which is very powerful.** No politician dares to go against this, and the government is bending. The economic situation may help to bring issues forward.

Dr. Hussein El Atfy

There is a clear vision and action plan. The PPP West delta is a new project paid totally by farmers. Time to change culture of the farmers.

Dr. Samia El Guindy

Water pricing is not understood by the public, it is a cultural issue. People have satellite dishes, mobile phones, but they do not want to pay for water.

Mr. Cees van der Wildt (co-chairman of the Panel and the Session).

The research presentation was impressive. **There seems to be the a need for international cooperation in research.** Joint program in addition to institutes that exchange knowledge. There may be a need to assign priorities to research topics.

Prof. Dr. Shaden Abdel Gawad (President, National Water Research Centre, Egypt).

Challenges need joint academic support together with policy makers. Research agenda based on the ministry agenda that has an inherent priority list, based on pressure. **Priorities are needed because of limited financial and human resources.**

Agenda of each minister is different, but they meet together and have to harmonize agenda's. All stakeholders where set around the table to construct national plan.

Integration on government, integration on research.

Drs. Madeleine van Mansfeld (Alterra, Wageningen UR).

In addition to all technical work, social science is needed to deal with the complexity.

Mr. Michel Robles (journalist).

Anecdote: Daughters that tell them that the sink is still running: for water pricing education is needed, starting at a young age.

We need to integrate education in coping with climate change.

Mr. Mohamed Ahmed (Planning Sector, MWRI).

Things take time to change. **We should not copy paste as we do not know how solutions were developed, we need tailor-made solutions.**

Summary by Cees van der Wildt, Panel and Session co-Chairman.

Climate change is practical item during every day life.

Integration is key word but has to remain a word with a meaning. Define it.

Awareness is absolutely important, water is precious.

Egypt knows how to deal with agriculture efficiently, so maybe the efficiency limit is already met.

Funding should not be a start issue: it will come after priority setting and awareness.

For coastal protection: keep environmentally friendly solutions in mind.

Convince the people: from bottom-up with practical examples and communication.

Dr. Hussein El Atfy, Panel member and co-Chairman of the day

Delta Alliance is a very good opportunity for Egypt.

We must act responsibly for the new generations to come.

Summary of the discussion

How to?

- Learn from best practices elsewhere
- We should not copy paste as we do not know how solutions were developed, we need tailor-made solutions.
- A robust science-policy interface is a must and the Panel model is worth replicating
- Invest in institutional analysis.
- Translate the issues for the decision makers. This may be done with scenarios/ decision support tools:
 - Needs to start at broad scale level
 - For future vision, with pro's and con's
 - Visualisation is important to bring it home
 - Identify the "big decision" to be made
- Think of the long-term, and act on the short-term.
- Make "disasters" visible, instead of hiding them, and use them to achieve change. Invest in the ability to deal with disasters.
- Financial system for investment projects is changing, towards PPP.
- There is a need for international cooperation in research. As well, research should be inter-sectoral.
- There is a need for integrated planning: urban, landscape, and water.
- There is a need for continuous international dialogue, sharing knowledge, integrated networking and exchange of best practices.

Political will

- Important change has to be made.
- Egypt has centralized systems and how can regional developments be strengthened.
- To identify the modifications to the public decision-making process that enable the government to integrate policies.
- There is a need to mobilise short and long-term funding for the implementation of the Plans. This requires huge investment, that may exceed the Government's capability
- Because climate change is a global phenomenon, we urge the international community to be committed to fund the cost of coping with climate change.
- Is funding for investment meant to continue the existing situation or is it for the future? Three things to get a grip on: 1) policy coherence; 2) space for use of economic incentives, 3) level of coordination of activities.
 - Policy coherence: how do policies in different sectors interact and possibly give conflicting incentives to water use and allocation.
 - What is the real political space in Egypt for the type of changes in decision-making that are advocated? What is the possibility to use economic instruments to provide incentives for changing water demand?
 - How can coordination between different levels of government be done best?
- Is there a lack of implementation capacity?
- There is a need for other ways to make it politically possible to take unpopular measures.
- The strategy to face climate change impacts should be integrated within the National Plans. This requires: awareness, political will and commitment.
- Decision makers should consider the messages from the scientific community on CC and other expected changes. DM can no longer take position of wait and see.

Awareness

- Awareness is absolutely important, water is precious.
- Invest in awareness. There is a need for behavioural changes, which may require incentives for change.
- We need to integrate education in climate change.
- Education is required at all levels, with issues of ongoing programmes
- There is a need for localized communication pilots and studies to see which messages are understood.

Research and innovation

- Create show-cases of innovations and the way forward through pilots.
- Innovation required:
 - Water productivity is the key
 - Present productivity is already high → need innovations
 - A farming systems transition is needed
 - System changes take a lot of time → early action
 - Develop this by and with farmers & relate to other deltas
 - Change the innovation process from linear to circular
 - Government use pressure and incentive system to induce change
- Research priorities are needed because of limited financial and human resources.
- Joint delta research is 'value for money'
- In addition to all technical work, social science is needed to deal with the complexity.
- There is a need to link science and research with policy. Realistic choices have to be made, determining priorities and using opportunities.
- There is a need for knowledge-sharing and capacity building on complex water management issues.

Water pricing?

- Water pricing is not an accepted concept in Egypt.
- Water pricing in NL is especially difficult with the farming community, which is very powerful.
- Water pricing may be combined with other sources of revenues (which requires a strategic financial plan:
 - a realistic investment plan
 - reliable and sufficient revenues for tariffs and subsidies
 - other finance at adequate cost)
- Water pricing is not understood by the public, it is a cultural issue.
- When traditional agriculture is transformed into industrial agriculture (/metropolitan agriculture), pricing of water will become more easily acceptable.

Coastal zone

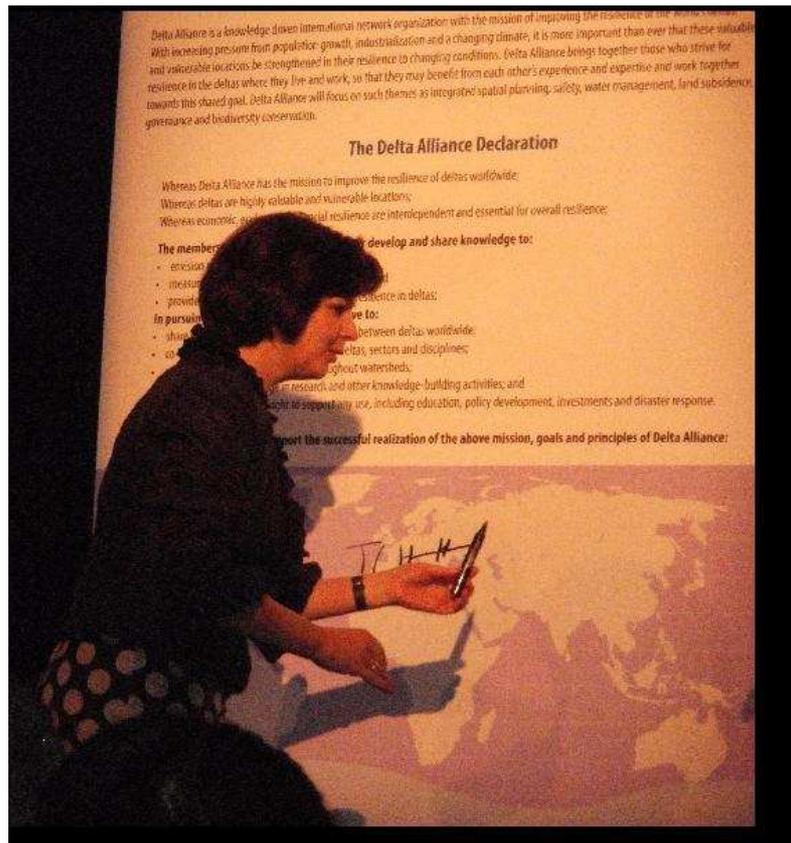
- Develop an Integrated Coastal Zone management plan for the Nile Delta Coast. Determine the maximum sea defence capacity of natural ecosystems.
- Use sediment load (also coastal) in addition to coastal structures.
- For coastal protection: exchange innovations and keep environmentally friendly solutions in mind.
- Adaptation framework to CC impacts within ICZM plans are needed as well as monitoring and observation systems.
- Important issues include: coastal protection, accretion and erosion systems, assessment of the vulnerable coastal areas, and building capacity to manage the Egyptian shoreline.

Overall

- Delta Alliance is a very good opportunity for Egypt.

Launch of the Delta Alliance

The Delta Alliance was launched during the Conference, and Egypt is among the first signatories. Mrs. Tineke Huizinga, the Dutch Minister of Housing, Spatial Planning, and Environment, opened the launching session, with an inspiring note on “Towards international cooperation in adaptation to climate change”. After her presentation, she signed the Delta Alliance Declaration.



H.E. Mrs Tineke Huizinga signing the Delta Alliance Declaration

Her introduction was followed by an explanation of the aim of the “Delta Alliance: the creation of a global knowledge network”, by Mr. Kees Slingerland, Chairman of Delta Alliance and Managing Director of the Environmental Sciences Group of Wageningen UR.

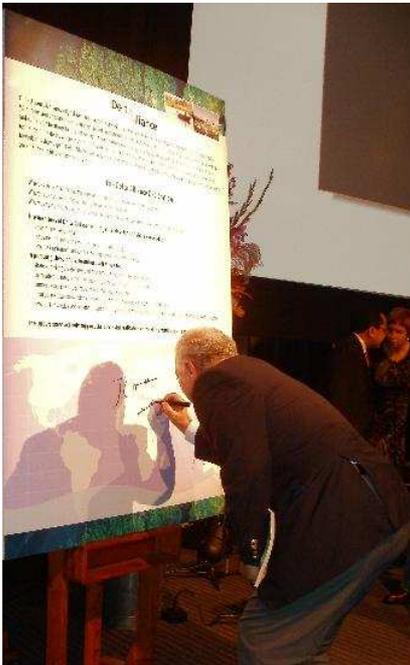
These introductions were followed by an interview session with high-level representatives:

- Mr. Fauzi Bowo (Governor Jakarta, Indonesia)
- Dr. Hussein El Atfy (First Undersecretary and Head Irrigation Department, Ministry of Water Resources and Irrigation, Egypt)
- Nguyen Thai Lai (Vice Minister, Ministry of Natural Resources and Environment, Vietnam)
- Dr. Wenwei Ren (WWF China)
- Mr. Will Travis (Executive Director of the San Francisco Bay Conservation and Development Commission).



Dr. Hussein El Atfy addressing the audience in the Main Hall during the launch of the Delta Alliance (from left to right delegates from Indonesia, Egypt, Viet Nam, China, USA)

Before Mr. Kees Slingerland closed the Delta Alliance Session, all the above high-level representatives signed the Declaration (see Appendix 2).



Dr. Hussein El Atfy signing the Delta Alliance Declaration on behalf of Egypt

Appendix 1. Programme Nile Delta Session

Thursday September 30, 2010
(9:30-12:00 hrs)

Deltas in times of climate change: need for innovation in water demand management in the Nile Delta		
Session Goal	Identification of focal points for further study and action; and exchange of knowledge.	
Chair(s)	Member(s) of the Egyptian-Dutch Advisory Panel on Water Management	<ul style="list-style-type: none"> • Dr. Hussein El Atfy, Chairman Irrigation Department, Ministry of Water Resources and Irrigation Egypt; Panel member • Mr. Cees vd Wildt, Co-chairman of the Egyptian-Dutch Advisory Panel on Water Management, The Netherlands
Introduction (15 min)	Water Management challenges and options in the Nile Delta	<ul style="list-style-type: none"> • Dr. Hussein El Atfy, Chairman Irrigation Department, Ministry of Water Resources and Irrigation Egypt; Panel member
Keynotes [of 8 min each, followed by discussion]	Facing future water scarcity: multi-perspectives	<ul style="list-style-type: none"> • Mr. Henk Tankink, Panel member, representative of the Ministry for Economic Affairs, The Netherlands
	Nile Delta research	<ul style="list-style-type: none"> • Dr. Shaden Abdel Gawad. President, National Water Research Center, Ministry of Water Resources and Irrigation, Panel member, Egypt.
	Innovations in water demand management for Egypt and inspiring examples of water-savings	<ul style="list-style-type: none"> • Mr. Koen Roest, Senior Scientist, Centre for Water and Climate, IWRM team, Alterra, Wageningen UR, The Netherlands.
	A bilateral role in the science-policy interface (APP model)	<ul style="list-style-type: none"> • Dr. Samia El Guindy, Director APP Central Office, MWRI. Panel member, Vice-President ICID, Egypt.
	Climate change and coastal protection of the Nile Delta	<ul style="list-style-type: none"> • Dr. Ibrahim ElShinawy, Director Coastal Research Institute, NWRC, Egypt.
	Integration of environment in water policies	<ul style="list-style-type: none"> • Dr. Mohamed Bayoumi, Environment Specialist, Assistant Resident Representative, UNDP, Egypt

Appendix 2. Delta Alliance Declaration

Delta Alliance Declaration

*Whereas Delta Alliance has the mission to improve the resilience of deltas worldwide
Whereas deltas are highly valuable and vulnerable locations
Whereas economic, ecological, and social resilience are interdependent and essential
for overall resilience*

The members of Delta Alliance will together develop and share knowledge to:

- envision resilient deltas
- measure, monitor and report resilience in deltas, and
- provide inspiration and support for improved resilience in deltas

In pursuing these goals, members will strive to:

- share knowledge, expertise and best practices between deltas worldwide
- co-create and integrate knowledge across deltas, sectors and disciplines
- connect expertise and parties from throughout the watershed
- incorporate local knowledge in research and other knowledge-building activities, and
- provide knowledge and insight to support any use, including education, policy development, investments and disaster response.

Delta Alliance

Delta Alliance is a knowledge driven international network organization with the mission of improving the resilience of the world's deltas. With increasing pressure from population growth, industrialization and a changing climate, it is more important than ever that these valuable and vulnerable locations be strengthened in their resilience to changing conditions. Delta Alliance brings together those who strive for resilience in the deltas where they live and work, so that they may benefit from each other's experience and expertise and work together towards this shared goal. Delta Alliance will focus amongst others on themes like integrated spatial planning, safety, water management, land subsidence, governance and biodiversity conservation.

(web: <http://www.delta-alliance.org>)