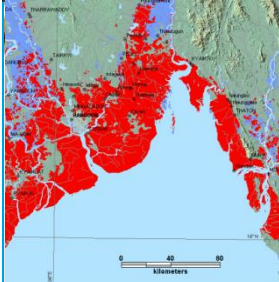


Dutch Delta Approach

Integrated Water Management and Planning



TARGET GROUP	Heads / Senior experts of departments of national/provincial government
ENTRY LEVEL	Bachelor/Master degree, ≥15 years working experience
DURATION	6 days
PARTICIPANTS	Maximum of 16 participants
LOCATION	In country (in The Netherlands is possible, but not recommended)
TRAINERS	Dutch experts, certified by <i>World Water Academy</i>
COURSE FEE	Approx. 1500 - 2000 Euro/person

INTRODUCTION Faced with rising sea levels, sinking land, highly variable river discharges (changing climate) and increasing water demand The Netherlands saw an opportunity in dealing with these interrelated challenges. The Netherlands Delta Programme **Integrates Water Management Planning** in order to protect, now and in the future, the country against flooding, to ensure supply of freshwater and deal with the effects of a changing climate. Intrinsic parts of the programme are regional and urban spatial planning, economic viability, infrastructure and land use (including agriculture, industry, recreation and nature conservation).

In The Netherlands delta region, early experiences (flooding events in 1953 and the early nineties) and awareness of flood hazards and increasing risk have stimulated the implementation of major flood defense infrastructure - the impressive Delta works. More recently, the development and application of water safety measures (infrastructural and institutional), regional planning and development and climate adaptation concepts have been successfully integrated in the so-called Delta Programme. Increasingly, this 'Dutch Delta Approach' is seen as a balanced and robust strategy to deal with flooding hazards in delta regions and coastal cities and anticipate on the detrimental effects of climate change, while at the same time provides for an organizational framework that supports integrated planning, development of green, liveable cities and sustainable, climate-proof regional development. In the Vietnamese Mekong Delta, the greater Jakarta region, Bangladesh and other countries worldwide the Delta Plan Approach is applied. Also elsewhere, for instance in the USA (New Orleans, New York) and recently in the United Kingdom, the Dutch expertise is appreciated.

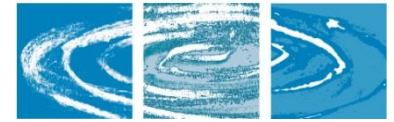
Based on the Dutch experiences, the course will be tailored to the issues and needs in your country and selected region and form a start for sustainable and integrated water management and climate change adaptation in support of long-term socio-economic development and safety.

AIM This training will provide ready-to-use knowledge, skills and tools to start with an integrated water management and planning programme for a specific region, based on the Dutch Delta Approach.

TAILORED The training focuses on a specific region (delta or river basin), the expertise shared, lessons and exercises are designed for this area and the national/regional socio-economic context and pertinent environmental issues.

CONTENT
(See also backside) In the course the following subjects will be covered:

- Interconnectivity or integration: an integrated approach is followed,
- Governance and institutional embedding and cooperation
- Financial sustainability;
- Short term (no-regret) measures and long term vision;
- Basic principles of sustainability and solidarity
- Prioritization and clear and well-structured decision making;
- Making use of reliable and common analytical data, tools and decisions support systems;
- The use of scenario's to deal with uncertainty;
- Innovation and new concepts;



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Course Content

Basic Course: In one-week, modular instruction and learning-by-doing workshops important concepts, practical skills and application of technology are covered. Within a context of the Dutch Delta Programme concept (see above) the following content will be addressed:

- Data and information management: multidisciplinary thinking, integration of data, use of data, or preferably information, information tools and systems, Decision Support Systems
- Management support tools; models, GIS applications, design and planning tools, uncertainty, use of Design Table (Map Table))
- Scenario thinking for delta development and climate change adaptation; what is scenario thinking, delta system components (physical, socio-economic, climate change and other external drivers), scenario thinking tools, simulation games to develop awareness
- Innovation and new concepts; make use of the latest insights and successful new developments

Instruction will be practical and case study oriented, either 1) Metropolitan climate adaptation and urban water management, or 2) Delta Programme application, both in your country.

Metropolitan climate adaptation and urban water management: addressing local priority issues (urban flooding, water supply & sanitation), developing urban climate adaptation and 'greening' concepts, partnerships and implementation, urban water cycle approach

Delta/coastal region; long-term delta system development versus short term impact of climate change and environmental disturbance, intraregional structure and priorities, flood and drought cycles, water allocation for regional land use planning and diversification, transboundary issues.

Creative Lab Case Study: The Delta Programme introductory training workshop (one week), can be combined with a (separate) second **Creative Lab** workshop aimed at applying the new concepts and approaches in your own case study (delta region or city). This second workshop will stimulate creative, out-of-the-box thinking and will serve to assess possibilities and potential outcomes of Delta Plan or climate adaptation concepts in the selected case. A number of exploratory sessions will take place; *Cooking Class*: bringing together the data, interests and participants / stakeholders; *Creative Design Charettes*; evaluating the outcomes and possible follow-up.

Training approach: Learning by doing: interactive and innovative training methods will be used besides some classroom presentations. The training methods, as group work, discussions, practical exercises, demonstrations, presentations, role-plays, will be tailored for each specific course. The participants will work on the selected focus area with practical exercises during the training. Up-to-date information sources and data will be used. Computers will be used during the training. Some information tools (GIS, models, DSS) will be demonstrated and applied.

Course materials: Hand-outs of presentations, exercises and background information

Trainers / Expert inputs to the programme: Dutch certified experts as trainers on specific topics; the course moderator(s) with country expertise will provide the overall coordination; supporting subject specialists (climate change and vulnerability scenario's for the country/region; flood management and hydraulic expert, socio-economic experts, relevant land use experts provide guest lectures via video-link.

FOR MORE INFORMATION, please contact:

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