Health Impact Assessment
Tunisia

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Assessment Objectives

▪ Main objective:
  - Protect population health from climate change impacts.

▪ Sub objectives:
  - Assess Health vulnerability of Tunisia to climate change in the past and predict future risks,
  - Assess the adaptive capacity of health sector facing climate change,
  - Improve reactivity of Health Sector face to climate sensitive Diseases and enhance early warning capacity face to extreme weather events
Context of Programs on Climate Change

Collaboration with GTZ, Germain technical cooperation in a Project: Reinforce capacity of Tunisia in order to implement the UNFCCC from 2006-2011, with 2 components:

- Vulnerability and Adaptation to climate change V&A
- Clean development mechanisms [CDM]
Approach to Organization

- **Expert consultation:** A Group of National experts composed of several stakeholders discussed about health and Climate change, shown the priority of the issue, determined 4 sensitive pathologies to climate change,

- **Private expertise:** Private experts worked according to Terms of references in order to make situation analysis, prepare a draft of a strategy, draft of an action plan, develop Three actions to be implemented as prior actions for the adaptation of Health sector to climate change,

- **Appropriation and revision by the Ministry of Public Health:** An expert from the Ministry of Public Health is revising all documents in order to produce final report,

- **Approval by the government:** Is in progress.

The whole process was accompanied by many concertation, training workshops and official meetings of committees and Ministers (more than 20).
Process of the elaboration of the strategy of adaptation of health sector to climate change

📅 4-5.07.2006: Intersectorioal workshop on vulnerability and adaptation to climate change (V&A),

📅 28-29.11.2006: 4 groups of pathologies has been defined to be sensitive to climate change in Tunisia by national experts,

📅 20.02.2007: Approval of a concept regarding to climate change and health,

📅 24.04.2007: Approval of terms of references of a national study on climate change and health,
Process of the elaboration of the strategy of adaptation of health sector to climate change

14.09.2007: the beginning of the study,

11.01.2008: Discussion and enrichment of the report of the phase I

14.04.2008: Approval of the report phase II,

15.04.2008: The beginning of the process of approval and validation of the strategy by the health sector (Appropriation of the strategy by health sector)

15-16.10.2008: Consultation of health expert on the strategy,

Fig 2 Consultation of experts on the health adaptation strategy
Technical Scope and Major Findings

**Technical Scope:** Assessment based on questionnaires for health workers, and some other stakeholders, population, some observations, studies (GIS, for Leishmaniasis), climate modeling (without disease modeling),

**Major Findings:** Some health risks may be influenced by climate change in the future: Water borne diseases, vector borne diseases, air borne diseases, health risks related to extreme weather events (floods and heat waves).
Many studies show changing climate in Tunisia.
Health impacts of climate change in Tunisia

Heat waves: Data of surveillance of weather forecast of institute of meteorology of Tunisia shows increase of temperature in Tunisia with an increase of frequency of heat waves especially in summer, which may increase health risks: direct and indirect health risks: cardiopulmonary, respiratory diseases,…

Floods: Tunisia has Known many sequences of floods which become more frequent and intensives: these last 50 years extreme events were responsible of direct and indirect health impacts: mortality: degradation of water quality,

Water borne diseases: hepatitis A and typhoid fever,

Vector-borne disease: leishmaniasis (Zoonotic), with the risk of re-emergence of eliminated diseases,

Air pollution: risk especially for big cities, where climate change may reduce dispersion of pollutants in the high atmosphere and concentrate them at low level (thermal conversion), concentration of pollutants may increase health risks: asthma, suffocations, lung cancers, children mortality…
Concerned Stakeholders were identified: MOH, MEDD, M transport, Pasteur Institute, preventive Medicine, Meteorology, Industry, NGO’s, researchers.,

- Climate Sensitive diseases are determined: Water, Vector, Air Borne diseases, and extreme weather events health risks with a special focus in floods and heat waves (with a difference for vulnerable groups such as young people, inhabitants of flood areas),

- The assessment of current capacity to deal with these health outcomes shows that there is a good capacity in the management of these health risks and impacts but the increasing of risks related to the phenomena of climate change may influence the capacity to manage these impacts.
Part 2: Assessment Methods

The projection of health impacts of climate change: based on climate modeling (Models of climate in Tunisia for 2050, HadCM3 model (scenarioA2)) which predict temperature increase, precipitation decrease and increase of some extreme weather events such as floods: the projection of health impacts of climate change was performed based on a simple prediction of the association of epidemiological situation without using concrete tools of modeling climate sensitive diseases (lack of technical competences (new and emergent science), lack of some important data for climate sensitive diseases modeling).

The assessment of the additional burden of diseases related to climate change is qualitative and not quantitative and based on expert and field worker point of views, results of questionnaires,

A strategy of adaptation is proposed,

A draft of an action plan is already done,

Three actions were determined to be national priorities and should be implemented: Prevention of water borne diseases, vector borne diseases and air borne diseases, (Private experts are preparing some concrete projects to be funded and implemented with the technical assistance of GTZ),
Adaptation Strategy of health sector to climate change

- Protecting vulnerable groups
- Completed by policies of other sectors (Agriculture, transport...)
- Goes with objectives of health sector
- Treat Climate change related diseases
- Environmental Approach
- Equity
- Flexible to replace non efficient actions
- Short term+long term Reactive + Programmed Actions

Basics for strategy of adaptation of health sector to climate change,
Strategic axis for Adaptation of Health sector to climate change

• **Axis 1**: Reinforce the capacity of surveillance of the climate sensitive diseases and develop early warning capacity.

• **Axis 2**: Reinforce professional capacity to face health impacts of climate change and protect population health.

• **Axis 3**: Sensitize general population and vulnerable groups on climate risks in order to adapt their behavior to climate change.

• **Axis 4**: Develop mechanisms of intersectoral collaboration in the context of climate change and health.

• **Axis 5**: Promote research and international cooperation in order to support the adaptation strategy.
Part 3: Major Challenges & Quality of Assessment

- Comprehension of the relation between climate and health outcomes for some stakeholders,
- Lack of technical competencies in term of modeling climate sensitive diseases,
- Need for a great number of data to perform modelisation of climate health risks, These data are either not available at all or not available for long periods (Environmental Data, Health Data, meteorological data, social data,...)
- Multidiciplinary approach and need for good communication skills to go ahead in the consultation process,
- Assessing the cost effectiveness of adaptation actions which will be used as an argument for the different proposed investments
- Impacts of adaptation measures in other sectors were not studied, e.g. the intensification of use of treated waste water as adaptation action of agriculture to water resources decrease may have great impacts on health,
Part 4: Utility of Assessment & Meeting Decision Needs

- The main concerned Policy makers accompanied the process (Minister of Public Health and Minister of Environment), and it will be another steps for government approval.

- The assessment asked many important questions: Which are the climate sensitive diseases, Health risks related to Climate Change? How to reduce these health risks?

- The results of the assessment will be integrated in the development strategy of the sector (Mission of update of attribution of health sector)

- There is two implemented research groups on climate change and health: Leischmaniasis and climate change and heat waves and climate change,

- A long process helped to build capacities in term of climate change and health, many training At national and international level, courses on climate change and health for all concerned stakeholders funded by GTZ, CEHA-WHO (Heidelberg University, international course on climate change and health research methods, UMEA university)

- Process with a big collaboration and multisectoral approach,
Other steps:

- Give information on quantitative health impacts of climate change and their costs,
- The assessment should respond to questions about: the cost of non intervention, cost of intervention, cost effectiveness,
- Choose the key messages to be delivered by decision makers in official meetings and in meetings with public,
- Make a continuous evaluation of the implementation of the strategy and it’s outcomes in order to show effectiveness,
- Research supportive group for the strategy in all related issues to climate change and health,
- Government approval of the assessment and strategy in the meeting of National Committee of Sustainable Development.
Other steps:

- **A regional course on climate change and health** is planned to be done by October 2010, fund is already offered by GTZ, need for technical support form WHO, programme, speakers,

- Vulgarization workshops at regional and local levels in order to get feedback and raise awareness and inform all the population, already programmed and has budget resources to be done, (translating the document into three languages, to put it on the website to be shared with national and international levels…)

- Implementing the prior actions which are already on the political agenda of concerned policy makers,
Plan of the final document

Process of elaboration of the assessment

Situation analysis

Analyse capacity of health sector to deal with climate change issues

Gaps

Objectives of the strategy

Strategic axis

Conclusion
Process

Strategy of adaptation of health sector to climate change

Action Plan

Three prior actions to be implemented

Already done

To be finalised soon
**Assessment, Strategy+++,**
working group from different stakeholders trained
Research groups in place
Policy makers aware and supporting the process
(Supportive Group for the implementation of the strategy,
the monitoring..) +++

Reviewing by the sector of health

Private expertise

International expertise

Expert group

Continuous communication with policy makers

Training and communication all stakeholders
Thanks For your Attention