Facing Water Scarcity
Multi-perspectives for Egypt

Water scarcity

A country faces *water scarcity* if the availability of water drops below 1000 m3/capita/year. Egypt passed that threshold already two decades ago. The good news is that the ingenious National Water Resources Plan enabled Egypt to cope with the challenges so far.

But a study undertaken in 2008 by the Egyptian-Dutch Advisory Panel on Water Management showed that even if all the measures contained in that National Water Resources Plan are implemented, Egypt will have to cope with severe water scarcity before 2020.

The policy challenge therefore is to find new ways to ensure that this scarcity does not constrain future economic development and adversely affect the welfare of the population.

Unavoidable facts, trends and uncertainties

In the years to come a range of unavoidable facts and trends as well as a number of uncertainties will have great impact on the availability and use of water resources. Let me point out some important ones.

- The amount of water available in Egypt is determined mainly by the volume of water flowing through the Nile.
  Increasing the supply of water is an option of course, but a very limited one. This means that any increase in demand will have to be met by a decrease in demand by another sector. In effect, this is a trade-off between the demand for drinking and industrial water and the agricultural water demand.

- The growth of the Egyptian population and its economy will lead to an increase in the demand for water. Egypt's population will grow from 76 million in 2008 to 120–150 million by 2050. Improvements in the standard of living will lead to changes in consumption patterns.

- By 2050 some 55–70 million new labour force entrants must have found profitable employment. Egypt therefore needs to identify and develop economic sectors in which it can produce more internationally competitive goods and services for export.

- A lot of fertile land currently under cultivation (particularly in the Delta) will be lost to urban development. This land will be used to meet the additional demand for housing, employment and public facilities.

- Bringing new land into cultivation cannot fully compensate for this loss. An increasing proportion of the national demand will have to be met through the use of 'virtual water' (i.e. water imported in the form of imported food and fodder).

- In the decades to come agriculture will be confronted with a drastic reduction in the availability of water. This implies important changes. Changes in the agricultural structure, revised cropping patterns and reduced agricultural employment are keys to implement successful solutions. But at the same time they create great social problems.

- Other uncertainties relate to climate change and how this might affect future water availability.

Changing Perspectives

Dealing with water scarcity requires an important change in thinking and an entirely different approach to policies. The main elements are

- introduction of a "demand oriented" approach in water management instead of the common "supply driven" approach

- replacing the "freely available" perception of water by one in which water is an 'economic and scarce' good.

- changing the basic philosophy underlying food policy from 'national self-sufficiency' to 'food security through food imports'.

The Challenges

Of course Egypt is already taking many measures to prepare for the future. The water scarcity issue presents new challenges to the Government of Egypt as a whole. Success will depend entirely on the ability to remain focused on the main message and come up with innovative and integrated national policies. Let me just indicate some major aspects:

- Demographic developments are the crucial factor. It is imperative that all possible measures are taken to reduce population growth and improve the country's human capital base.

- New urban and infrastructure development should be planned in a way that prevents the loss of high-value fertile agricultural land.

- Predictable and stable conditions for both domestic and foreign investment in internationally competitive businesses are of crucial value for the country's ability to finance the necessary food and fodder imports in the years to come.

- As the agriculture sector will be affected in many ways, it is important to enable farmers to cope with the changes as well as creating appropriate social support mechanisms to provide for the exodus of agricultural workers.

- A gradual reduction of all subsidies in the agricultural, energy and drinking water sectors that lead to wasteful use of water is inevitable to avoid costly fiscal burdens and constraints on the public budget.

All these challenges require full public awareness and widespread support as well as the political will to take decisions and implement them.

Water is not the only issue. Water security cannot be separated from food security; nor can water policy be pursued independently of economic policy, agricultural policy, industrial policy, public services policy, etc.

This means that to attract both domestic and foreign investment and to create the jobs needed for the growing workforce, the macroeconomic, legal, institutional and social conditions must be reformed, and these reforms must be upheld. There are many uncertainties involved. Tough decisions will have to be taken, and opponents will contest some of the substantive arguments on which these decisions are based.

Targets can only be realized through an approach that involves the business community, NGOs and citizens groups in finding win-win situations. It is crucial that all stakeholders develop a high degree of awareness of the issue.

The key message

The key message arising from the projected situation in 2050 is the **need for policy integration**. The issue of water scarcity has ramifications that can no longer be adequately addressed by the Ministry for Water Resources and Irrigation alone.

Many other government departments and agencies must be actively involved. Vital decisions will have to be made at the highest political level. It is important to have a robust and flexible system for decision making as well as the ability to respond to demands from all sectors from a water scarcity perspective.

To avoid a looming crisis and possible immense social unrest action is needed on redesigning Egypt's future in an integrated way.
Action must be taken to:

- massively raise awareness and thus generate the support and political will needed to implement the tough measures required to change people's behaviour;
- identify and implement the necessary modifications to the public decision-making process.

Let me conclude this brief introduction by stating that

- **The focal point for further study and action is to identify the modifications to the public decision-making process that enable the government to integrate policies.**
- **Exchange of knowledge should be directed to learn from best practices elsewhere**