



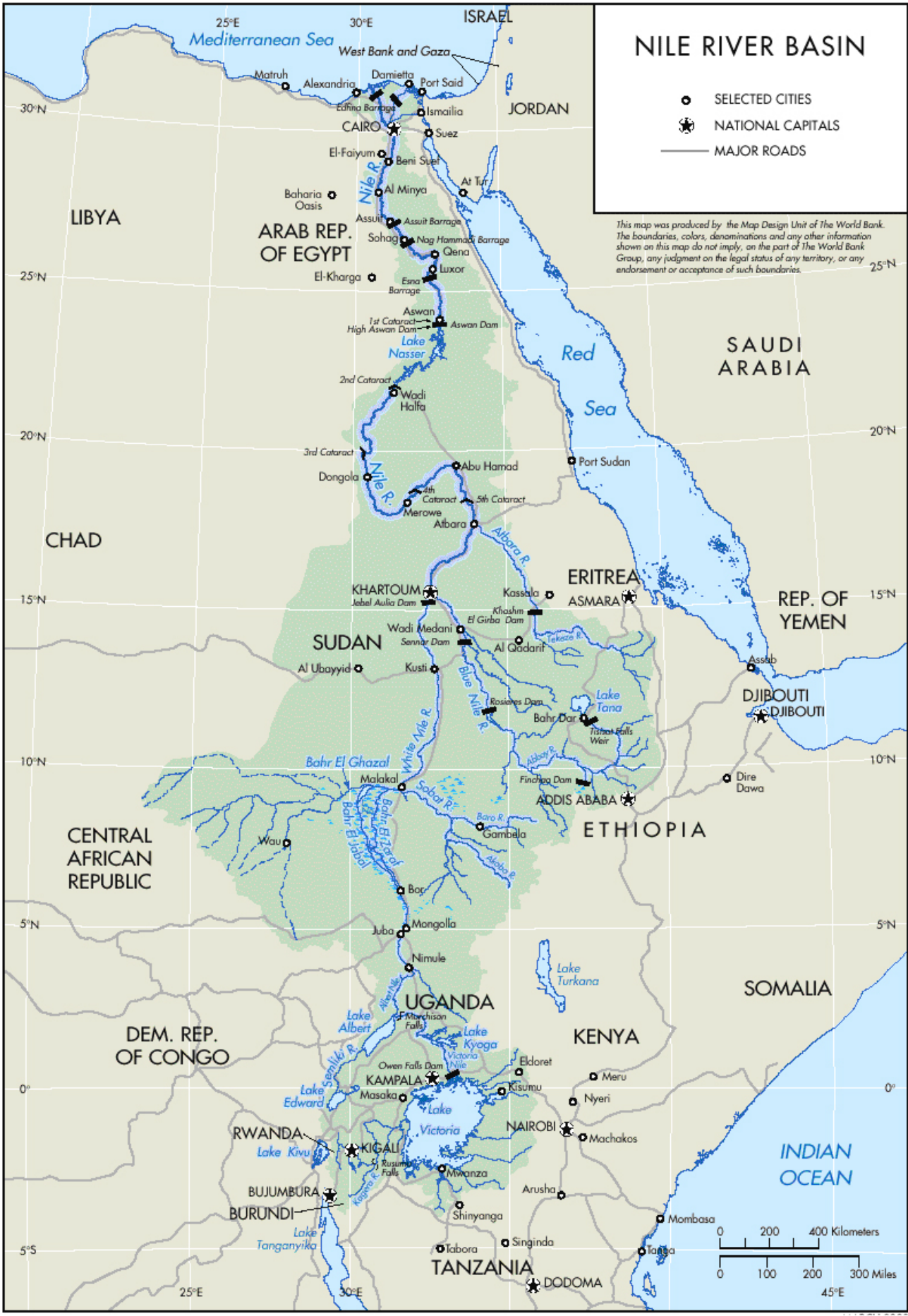
A Consortium for Capacity Development

# Charting the Nile Basin Initiative's agricultural options

**A brief on the results of a NBI Core Agricultural Functions Study, with proposed framework, options and functions for a NBI/Nile Basin Commission agricultural agenda**

Ramboll Natura and Stockholm International Water Institute (SIWI)

February 2012



# NILE RIVER BASIN

- SELECTED CITIES
- ★ NATIONAL CAPITALS
- MAJOR ROADS

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SAUDI ARABIA

ARAB REP. OF EGYPT

SUDAN

ETHIOPIA

CENTRAL AFRICAN REPUBLIC

DEM. REP. OF CONGO

UGANDA

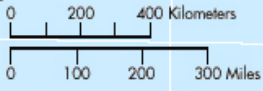
KENYA

SOMALIA

BURUNDI

TANZANIA

INDIAN OCEAN



## Background

The Nile Basin stands at a crossroads. It will not be able to feed its growing population and support a rising urban middle-class by focusing on current water practices only. Instead, a comprehensive basin development approach must be chosen, involving rainfed and irrigated agriculture, the importation of food, and the development of an export-oriented service and industrial sector to pay for the imported food. The Nile Basin Initiative (NBI) and the future Nile River Basin Commission (NRBC) are in a unique position to help secure a future where more food is grown with less water, where all people have enough to eat and a growing economy contributes to export earnings.

In this brief, we present different scenarios for developing the initiative's agricultural activities further, whether it continues operating in its current institutional structures, or if it is transformed into a Nile River Basin Commission. It summarises a thorough study into the feasibility of the different roles that the initiative could play in each suggested scenario, and the comparative advantages when taking on different agricultural functions.

Next, it provides analysis on prioritised actions to enable the NBI and NRBC to adapt to changes in the Nile Basin region and concludes with a collection of lessons learned from case studies of River Basin Organisations from around the world.

Several international river basin experiences provide the basis for the analysis leading to the results of this study. The original report, entitled "NBI Core Agricultural Functions Study: Proposed framework, options and functions for a NBI/Nile River Basin Commission agricultural Agenda," was carried out by a Ramboll Natura – Stockholm International Water Institute (SIWI) consortium during 2011, and the first draft was published in December 2011.

The aim of this brief is to help informed stakeholders act on the food production situation in the basin,

and the different roles the NBI could play to better act on its mandate to "to develop the Nile Basin water resources in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples."

*"to develop the Nile Basin water resources in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples"*



Photo: EPA

## Why the NBI/NRBC should be involved in agriculture?

There are essential reasons why the NBI and NRBC are uniquely positioned to promote productive and sustainable agriculture in the region.

The agreement that establishes the Nile River Basin Commission (the CFA) provides the institutional arrangements for a regional water management organisation to function. Further, agriculture is by far the single largest human water-use in the basin (including both rainfed and irrigated agriculture) and should thus be associated with a regional water resource management organisation. NBI and the future commission also represent much expertise in water and linked resources, either directly or through its partners. These are important arguments in favour of NBI pursuing an agricultural programme.

Should the NBI continue operating in its current organisational structure, there will be no alternatives to pursuing an agricultural programme on a basin-wide scale. There are many organisations with some sort of link to agriculture (trade, research, education); but no one with the type of comprehensive approach that NBI has on water, land and development, which includes all the basin states.

## Does agriculture fall under the NBI/NRBC's mandate?

The objectives of the NBI, "to develop the Nile Basin water resources in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples" is broad, and it connects to agriculture so long as it engages in activities that:

- Focus on the connection between water, agriculture and transboundary cooperation;
- Involve two or more countries that shall benefit;
- Features clear win-win opportunities from having a shared approach; and (where appropriate)
- Require the support (or approval) from basin countries, which NBI/NRBC can facilitate.

## What role should the NBI/NRBC play to support agricultural development in the region?

The NBI/NRBC can fulfill any of the following roles in the area of agriculture:

- Facilitate processes that lead towards a set of intended activities. Facilitation may imply the coordination of arranging funding for a research study or the transfer of experience from one country to another. This is a management function.
- Implement the activities themselves. This may consist of supporting partners in the basin with information from the DSS model. This is a development function.
- Support processes and activities that other organisations and initiatives are managing. Support may consist of being an expert advisor, source of information or facilitator.

Examples may include providing expertise to COMESA on the potential to export meat products to the Arab Gulf region.

- Act as a lobbyist. There are routine decisions taken by various institutions at national/regional/continental/global levels that have profound impacts on agriculture in the basin. NBI should engage in the taking of such decisions by for example sharing relevant information or working through media to raise awareness amongst decision-makers and the public.

## Assessing the options for future NBI/NRBC agricultural interventions

The region faces an important decision to choose whether it will establish a Nile River Basin Commission, and how they will structure the operational model for how NBI and/or NRBC will address water and agriculture issues in the Nile basin. This study provides different feasible options for both scenarios.

### Option 1: The Nile Basin Initiative

The current NBI structure is maintained. It is strengthened based on the Strategic Action Plan and turned into a permanent institution.

- **Nile Basin Initiative-Reactive Model.** Nile SEC and NBI will play a limited role in the basin's agricultural sector. It will provide some coordination, a focal point for inter-state formalities and assist on a case by case basis.
- **Nile Basin Initiative-Proactive Model.** Nile SEC and NBI play an active role in promoting agriculture and food self-sufficiency at the national and sub-basin scale. It is an active organisation, looking for opportunities to promote water efficient agriculture, sustain the environment, and encourage individual or sub-basin based countries to cooperate and achieve benefits from such endeavours.
- **Nile Basin Initiative-Development Model.** The attempts by Nile SEC and NBI to play an active role in promoting food security in the basin are hampered by a limited mandate. In order to fully promote food security, the power and trust embedded in the CFA is needed, and that is not the case in this combination.

### Option 2: A Nile River Basin Commission

A Nile River Basin Commission is established based on the Cooperative Framework Agreement. This agreement provides the basis for a commission and assigns it a mandate and a set of functions to perform.

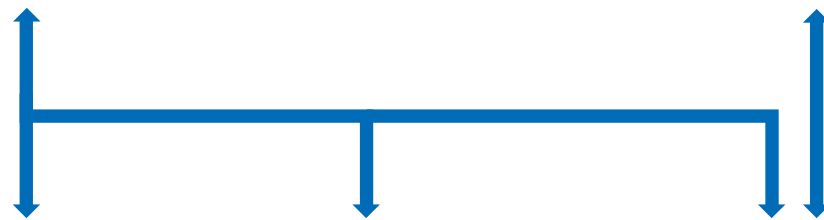
- **Nile River Basin Commission-Development Model.** The NRBC plays a very active role in promoting agriculture at the national, sub-basin and full-basin scales. By having the support of the CFA and its associated principles and vision and trust, and focusing on a full IWRM approach (thus having a food security focus on activities linked to agriculture), the full potential of the basin resources can be put at use for development and growth.

### Option 1: The Nile Basin Initiative

- ▶ Institutional arrangements are similar to those of today's NBI.
- ▶ Focus is on sub-basins or national entities. Limited basin-wide mandate.
- ▶ A coordinating and facilitating role.
- ▶ Limited opportunities to make full use of the possibilities provided by engaging a full basin.
- ▶ Nile Secretary has few management functions. Development functions are located in the sub-basins.

### Option 2: A Nile Basin Commission

- ▶ An independent, legal entity supported by a basin-wide mandate.
- ▶ Focus is on both basin-wide and sub-basin issues.
- ▶ Some executive powers; although primarily a coordinating and facilitating role.
- ▶ Focus is on both small and big scale issues, and "most welfare per drop".
- ▶ With time a full palette of both management and development functions. The former primarily at the basin scale, and the latter primarily at the sub-basin scale.



### Reactive Model

**Re-active Model:** is focused purely on the management of water – essentially making sure there is enough water in the system to satisfy the needs and/or rights of various water users, thus avoiding or mitigating conflict.

**Objective:** Limited scope of CFA implementation.

**Policy:** On demand address specific sectors according to CFA.

All functions are the direct outcome of stated terms in the CFA.

### Proactive Model

**Pro-active Model:** it plays an explicit role in promoting increased agricultural production (more "crop per drop") in the basin.

**Objective:** Food self-sufficiently, national or sub-basin.

**Policy:** Agriculture IWRM not explicitly linked to other water using sectors.

Through improved agricultural practices achieve national & sub-basin development.

### Development Model

**Development Model:** promotes broad-based socio-economic development across the basin, allocating water to users and sectors which provide the most "job per drop" or "welfare per drop".

**Objective:** Full basin food security.

**Policy:** Through comprehensive IWRM optimise basin food security and well-being.

Through comprehensive development, engaging many water using sectors, achieve basin-wide welfare.

## Analysing the core agricultural functions of the NBI or NRBC

“Core agricultural functions” are functions that an RBO has developed specifically in order to directly promote agriculture in its area of jurisdiction. The table below presents four potential core functions for the NBI/NRBC and how they specifically target agricultural development in the basin area. How Agriculture is integrated under four proposed core NBI/NRBC Functions:

### Function 1: Policy Formulation and Cooperation

This function provides the basis for cooperation across borders – the formulation of shared, basin-wide policies and/or guidelines. This is a core NBI/NRBC in-house function. It is a management function.

Sub-function	Description	Role of NBI/NRBC	Notes
1: Knowledge Management	Such a policy should cover areas linked to agriculture, water and development in the basin. They include: Data collection, storage and distribution. Water and agriculture research. The use of in-house NBI/NRBC knowledge capacity. The ultimate result is the establishment of a learning and knowledge-sharing culture.	Develop, monitor	Relatively easy, uncontroversial. Much needed to handle research, new knowledge, e.g. CC.
2: Water and Agriculture Standards	This policy provides guidance on the use of standards to promote the water and agriculture sector in the basin. It provides support to develop, regulate and monitor standards and agreements related to water use in agriculture, water quality, land protection and degradation, subsidies, and food quality.	Develop, monitor	Strong indirect tool for basin management. Many options, gradual development.
3: Basin Agricultural Planning	This focus on vital still undecided issues; the criteria for re-allocating Nile water for developing the basin’s agriculture, industry, services and environment development with a focus on food security.	Develop, monitor	Aims at water allocation, benefit sharing and food security. Requires much trust, good faith and cooperation.
4: Foreign Investments in Basin Agriculture	This is an important and emerging issue, having many effects and being highly political. It links with the function on market development. Under what conditions – if at all – should foreign investments in food production with the intention to take the food out of the basin be allowed? As it consumes vast amounts of water and land it is also an issue that NBI/NRBC should address.	Develop, monitor	Politically controversial, difficult to approach.
5: Agricultural Openness and Conflict Resolution	This policy aims to find ways to handle conflicts, and to create a culture of openness, trust and transparency through creating a prevailing sense of shared responsibility.	Develop, monitor	An indirect long-term support function. When need appears it is usually too late to act/plan.
6: Market Development	Market development is an already on going activity associated with the RATP project. Studies are undertaken, plans being written and more, although to our knowledge not based on a comprehensive policy focusing on all pertinent issues linked to market development. What these issues are should be determined, and then developed into a policy, providing guidance to activities promoting market development.	Develop	–

## Function 2: Knowledge Management

The development, management and dissemination of knowledge is critical to the basins' future. This is the umbrella function for a large family of inter-linked knowledge focused agricultural sub-functions. The function deals with five key areas for agricultural development in the Nile basin: Develop internal NBI/NRBC knowledge management strategies; Data collection, storage and sharing; Develop, regulate and monitor standards and agreements Agricultural research and the development of knowledge; and Applied training, including the dissemination of knowledge.

Sub-function	Description	Role of NBI/NRBC	Notes
1: Develop and implement KM strategies and guidelines	This sub-function is about the management of knowledge. Three activities can be identified; (i) strengthening knowledge learning and sharing processes; (ii) develop an appropriate knowledge management infrastructure; and (iii) promote a supportive knowledge sharing culture. This sub-function includes a focus on KM within the NBI itself.	Develop, facilitate	Mirrors KM policy development, but more pragmatic, provides guidelines and action on KM.
2: Data collection, storage and sharing	The function includes both an assessment of what data that is already available, what is currently being collected, and what should be collected.	Develop, facilitate, implement, fund	Builds on already on-going work. Promotes openness and easy access.
3: Develop, regulate and monitor standards/agree	This function identifies existing standards and agreements of relevance to regional agricultural development and, when needed, defines new ones that will promote agricultural production in a resource efficient, sustainable and cross-border equitable manner.	Develop, facilitate, arrange funding	Important, major in-direct function of NBI/NRBC
4: Agricultural research and KM	This function involves a focused and coordinated analysis of knowledge needs, potentially involving stakeholders in the field. The process leads to the development of adoptable interventions. In short, key activities being part of a research management agenda include: (i) review existing needs for new knowledge in the basin; (ii) what is already available; (iii) define priority needs that NBI/NRBC should promote; (iv) review implementation opportunities and modes of action; (v) implement (write ToR, contract partners, facilitate funding); (vi) receive results, quality control, and dissemination.		
5: Applied training, incl. dissemination of knowledge	This sub-function focus on taking existing knowledge – derived from NBI/NBRC's own knowledge development process, as described above, or from other sources and organisations – and disseminate it to users.		

### Function 3: Basin Development

Basin development is implementation; planning, facilitating and possibly ownership. Compared to the above two functions, focusing on management, this function focus on development, which links resources with their sustainable and efficient uses and thus generate more outputs per volume of water (and other resources) used.

Sub-function	Description	Role of NBI/NRBC	Notes
1: Plan basin development	This sub-function aims at assessing the basin resources, undertake land use planning, and model the alternatives, thus optimizing the use of scarce resources in a sustainable and resilient way.	Facilitate, plan, coordinate	If comprehensive, also full-basin and incl allocation of land & water. Politically difficult. OK at sub-basin
2: Agricultural watershed management	The function focuses on basin services that provide the basis for long-term, sustainable use of the basin and its resources. This can include the identification and protection of environmental flows, watershed areas of importance for groundwater recharge and reducing rapid surface runoff, farming practices that enable infiltration and reduces surface erosion, the not farm too close to streams and rivers and much more.	Facilitate, plan, coordinate	Provides support close to users, thus more inclined towards sub-basins.
3: Facilitate project preparations	This implies to facilitate project preparations by investment studies, resource mobilisation, and decision-making.	Facilitate decisions, funding	Demand driven, from sub-basins. Natural role, obvious niche. Likely to be successful.
4: Support project implementation and management	This focuses on the implementation of projects and, depending on ownership conditions and the role of NBI/NRBC, the subsequent management of investments made, either as the owner of the investments or as a contracted management consultant.	Implement	Requires an executive commission with broad powers and mandate. Boundary conditions required.

### Function 4: Market Development

Market development focuses on the development of markets and sharing of market information for commercial agricultural production in the basin.

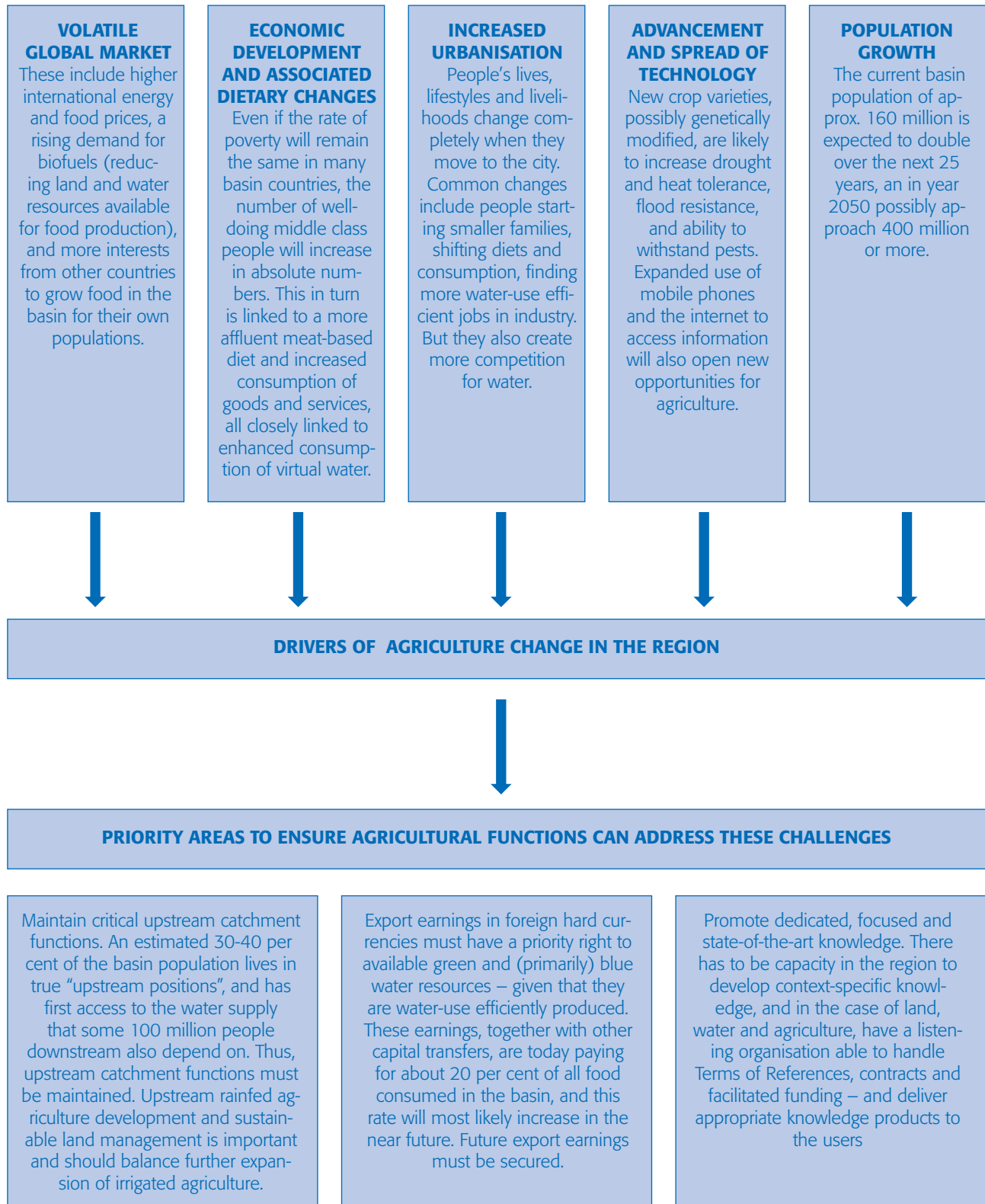
Sub-function	Description	Role of NBI/NRBC	Notes
1: Marketing/promotion ag trade	Marketing is needed in order to find buyers, and trade in order to move the goods from producer to buyer. Trade is promoted by the removal of tariffs and non-tariff limitations. Physical communications infrastructure, all need to become more efficient at transporting large quantities of food across the region as needed.	Lobbyist, advisor, information source	Promotion of trade, export/import, lowered tariffs. Mandate within NRBC questioned.
2: Market information easily available	From around the world, examples abound of the positive effects of easily available market information on farmers, development and welfare.	Lobbyist, advisor, information source	Make market information available via openness, modern technology and awareness.

The study also provides cost estimates for the implementation of the suggested plans. While these estimates are approximate, the study looks into the possibilities of starting small and scaling up the implementation of the suggested plans within a set period of time.



## Adapting the NBI/NRBC to respond to a changing Nile region

This study investigated the dominate drivers that will shape food and water security and agricultural development opportunities in the Nile basin in the short, medium, and long-term. It then suggested how the organization can strategically ensure it builds adaptive capacity to respond to change.



## Background studies: Lessons learned from other RBO's

In order to draw together suitable agriculture functions for the Nile River Basin, examples from different RBOs were compared to the NBI. In general, the term “agriculture functions” for RBOs is not so widespread, as holistic views for agriculture cooperation along transboundary river basins seldom exist. In the case of the Nile, however, this sort of holistic view is imperative to achieve the desired food and water security, in balance with the socio-economic and political developments of the basin countries.

Some of the lessons are relevant to the Nile basin (detailed studies and more recommendations available in the original study):

- Have a **strategic approach** to the establishment of an RBO, like in the case of the **Niger River**, rather than wait for issues to emerge, like what has happened in the Red River, where it resulted in conflicts and then institutions charged with managing the basin.
- **Value good quality land**. Local councils in **California, USA**, are pro-active in blocking urban encroachment onto valuable farmland. Campaigns are issued, by-laws adapted and “correct” values promoted.
- **Dam management**. Along the **Komati River in South Africa and Swaziland** a number of dams have been built. They are today all managed in a coordinated way in order to provide a reliable irrigation water supply throughout the basin.

- **Data management**. The sharing of data is often difficult in transboundary RBOs. In the **Mekong River Commission (MRC)** this has been addressed and an easy, informal system of data sharing is in place. Some of the data is even available on-line, while some has to be requested from the different countries through an easy procedure.
- **Manage water quality**. The **rivers of India** are typically heavily polluted, to the extent that both river and groundwater have been made useless. There is environmental regulation in India, but the laws are not followed.
- **Too much bureaucracy kills a local economy**. The state has for too long been heavy and overly intrusive, thus impeding the open market and competition. This has led to serious deficiencies in the agriculture sector in the **Moulouya basin in Morocco**.
- **The use of subsidies in India**. The Green Revolution in India was – and still is – based on a comprehensive system of massive government subsidies to the agriculture sector. All types of inputs are heavily subsidised, having both good and bad effects, including a near food security situation in the country. But it also says something about central Government's focus: the rural farming communities are politically important, despite the welfare now being generated in urban areas. Who should have priority use of the water?

These lessons and messages for the Nile basin form a basis for defining the role of a future NRBC in executing its functions in agriculture and promoting cooperation among parties forming the organisation.

The full review is available for download on [www.nilebasin.org](http://www.nilebasin.org)

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