Reflections

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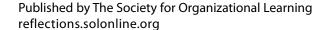
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Food for Thought: **Discovering Common Ground**

BART HILHORST AND PETER SCHÜTTE

The Nile's waters are vital for the livelihood of over 200 million people in its basin. Rapidly rising populations and consequent environmental stresses have lead to water scarcity and complex protracted negotiations. Peter Schütte and Bart Hilhorst describe an interactive process called Food for Thought (F4T), in which a group of 25 representatives from all Nile countries participated in a joint scenario building exercise to consider future water demands, particularly for agricultural needs. The authors share details of this process, demonstrating that scenario thinking can increase the appreciative understanding of a complex problem in a relatively short period of time, surface hidden assumptions, clarify desired futures, and foster trusting relationships among a diverse set of stakeholders and experts by encouraging a wider perspective.



Bart Hilhorst



Peter Schütte

he Nile is shared by ten countries. Ongoing population growth puts unprecedented pressure on scarce water resources. Concerted efforts are ongoing to strengthen cooperation among the Nile riparians, but progress in the negotiations over the joint development of the shared Nile waters is slow. In the face of high poverty levels and the large number of people intimately dependent on the Nile waters for their livelihood, it can be argued that delays in establishing effective cooperation pose a risk to the overall development efforts in the Nile region.

"What gives us power as humans is not our minds, but our ability to share our minds."

W. Brian Arthur

The "Food for Thought" (F4T) scenario exercise started in late 2006. It was initiated by the Food and Agriculture Organization (FAO) Nile project in collaboration with the Global Water Partnership (GWP) Eastern Africa. A group of some 25 decisionmakers and stakeholders from all Nile countries engaged in a joint scenario building exercise to examine the uncertain future of the dominant driver of water use in the basin - demand for agricultural produce.

The anticipated outcome of the exercise was to obtain a realistic range of future agricultural demand levels in the basin, as a function of population growth, urban-rural population distribution, nutrition patterns, potential of commercial agriculture focused on export, biofuels prospects, etc. The outcome would serve as input into an analysis of the agricultural water variable in the Nile basin.

Early on in the process it became apparent that the structure of the demand function was determined by a wider range of parameters than originally foreseen. The exercise had to broaden its scope. Through a highly participatory process, it evolved into a systematic analysis of the complex rural development challenge in the basin, which is at the core of the ongoing negotiations regarding Nile water allocation.

Because of this wider perspective, the overall results of the exercise carried far more significance. Apart from answering a technical question, What will be the future demand for agricultural produce?, the exercise resulted in significant process gains. The process of collective sense making at the regional level increased mutual understanding among participants, while new shared interests and contours of common ground were identified.

Due to geography and history, there is limited economic integration between the upstream and downstream Nile regions. Apart from the river, there is little that links the ten states as a group. Direct common interests among the riparians are limited.

The Hydro-Political Context

The Nile is the longest river in the world, shared by ten countries, and draining almost ten percent of the African continent. The text below describes the determining features of the Nile from a water policy maker's perspective, setting the scene for the hydro-political process.

The Nile is a relatively small river in terms of volume of runoff. From a hydrologic point of view, this is among the most characteristic features of the Nile. In spite of the size of its basin – over 3 million square kilometers – its annual renewable flow is just above 80 cubic kilometers. This volume represents a layer of less than 30 mm if spread over the Nile watershed.

The Nile is the only significant source of water for the downstream riparians. Egypt and northern Sudan receive insignificant rainfall. Over 80 million people in the downstream river stretch depend exclusively on the Nile for their water supply. Agriculture remains an important part of the national economies providing employment,

reducing expensive food imports, and generating foreign revenue. The agricultural economy has developed based on the existing Nile flows. Smaller quotas will require politically difficult and painful adjustments to the economy.

The upstream riparians have large rural populations that depend on subsistence agriculture.

The upstream riparians predominantly consist of rural populations. For instance in Ethiopia - with a total population of about 79 million in 2005 some 84 % are estimated to live in rural areas. Similar percentages are seen in other upstream countries. They derive their livelihood mostly from smallholder subsistence farming. Ethiopia's widespread poverty suggests that food security depends on local produce. This intimate dependency on agriculture - without alternatives accentuates the importance of water.

Ongoing population growth puts unprecedented pressure on natural resources. The lowvariant United Nations Population Division (UNPD) population prospect predicts an increase of 61% in the Nile Basin countries by 2030. It is 82% in the high-variant scenario. This rapidly expanding population, whose growth occurs in rural areas, puts unprecedented pressure on natural resources. Further, it entrenches the perception that the Nile waters are essential for rural development and food security.

The Nile stream flow is fully allocated. The limited Nile flows are now fully utilized for agricultural, domestic, industrial, and environmental purposes. The realistic potential for further supply increase (by draining wetland areas or reducing reservoir evaporation) is limited, particularly relative to the anticipated increase in water demand due to population growth. Hence, Nile water allocation represents a near zero-sum game.

Rainfall is rather abundant but variable in large parts of the upstream riparians. The average annual rainfall is 1150 mm on the Ethiopian Nile catchment. For Uganda it is 1200 mm. These are substantial figures, but the high temporal variability

of rainfall has a marked adverse impact on the productivity of rain-fed agriculture. Some upstream countries have prioritized investments in largescale hydraulic infrastructure to mitigate the effects of the weather uncertainties. In their analysis, hydrologic variability is among the key constraints to rural development.

There are limited direct links between upstream and downstream riparians. Due to geography and history, there is limited economic integration between the upstream and downstream Nile regions. Without effective north-south transport connections, inter-basin trade volumes are small. Apart from the river, there is little that links the ten states as a group. Direct common interests among the riparians are limited.

The complexity of managing the Nile waters is **increasing rapidly.** The principal cause is ongoing population growth, which increases pressure on the finite land and water resources as well as competition over its use. In addition, Nile management is no longer confined to the regional context alone. For instance, with rising dependency on food imports, Nile managers now have to take into account the uncertainties of international food markets, further complicating their decisionmaking process.

Negotiations over the use of the Nile waters have been difficult. Parties have held very different views about what constitutes their fair share of the waters and the principles that govern their allocation. One could argue that "sanctioned discourse" - limits in what can be discussed because of taboos or strong social norms - has complicated the negotiations.

The Nile Basin Initiative (NBI) was established in 1999. The Nile riparians have started a concerted effort to enhance cooperation. They are guided by a shared vision to "achieve sustainable socio-economic development through the equitable utilization of, and benefits from, the common Nile Basin water resources." So far, progress toward a negotiated solution has been slow.



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The F4T Scenario Project: Participants, Setup, and Process

Scenario thinking has proven effective in engaging decision-makers in a strategic conversation. In this capacity, the method has become popular in the corporate sector. In the public sector, dialoguebased processes like scenario thinking have demonstrated their value by contributing to the solution of highly complex problems and to building a level of trust in protracted and polarized conflicts. A well-known example is the Mont Fleur project in South Africa. During the uncertain transition to a democratic regime in the early 1990s, it contributed to the negotiation process by aligning views on what could be possible after apartheid.

After an initial focus on a technical question, the F4T project took its inspiration from Mont Fleur. The process was designed and conducted by the FAO project team, supported by an external process facilitator.

Active stakeholder participation was considered critical to ensure the relevance of the scenario exercise. A scenario group was formed that included members from all Nile countries, from both inside and outside government, whose backgrounds were mostly in water resources and agriculture.

F4T development activities included:

- interview series to set the scenario agenda
- first workshop to develop the scenario frame and so-called first generation scenario stories (Cairo, November 2006, 2 days)
- research phase, in which a number of key questions were examined in depth
- second workshop examining critical assumptions, and verifying and deepening the scenario logics and stories (Entebbe, February 2007, 2 days)
- third workshop in which the scenario set was presented to a new audience; F4T was used to

The Nile Basin

en years of Nile negotiations are mired down in a near zero-sum game. It seems that whatever the outcome, somebody feels defeated. The upstream countries fear that they may jeopardize their future development potential by conceding the freedom to use the river without encumbrance, while those downstream perceive that their historic rights and livelihoods are being compromised.

The F4T scenario exercise provided an opportunity to step away from the zero-sum game and focus on the underlying challenges related to population growth, development, and providing food security. It crystallized the structural issue of unemployment, especially in the agricultural sector on which 50-80% of all countries are still dependent.

By focusing on major long-term driving forces in the Nile region and by allowing sufficient time to avoid having to make immediate decisions, F4T offers an excellent collaborative platform to identify common interests while avoiding politically explosive positions and compromise of deeply held beliefs. There was rapid realization that regional collaboration offers the only hope for long-term food security, and that the countries working as a



block become much less vulnerable to adverse international policies and shocks. It became clear that good governance and predictable rules in all the countries are a precondition for regional integration.

For those of us so committed to and deeply engaged in the exercise, it brought to the foreground an entire spectrum of sustainable development issues as well as their crucial interdependencies. Ultimately, it brought to life the complex and abstract concept of integrated water resources management.

— Simon Thuo, Regional Coordinator Global Water Partnership in the Greater Horn of Africa

- analyze implications, and to identify signposts and trend breaking events (Cairo, April 2007, 1 day)
- fourth workshop, which focused on analyzing impacts, stakeholder reaction, areas of influence, and options to influence the course of events or adapt to new realities (Entebbe, May 2007, 2 days)

The process started with a round of over 50 interviews, with government officials, experts, academicians, and business people from the countries involved. The focus of the interviews was clearly agriculture and agricultural demand in relationship with water resources. The goal of this round of interviews was to provide an overview of views and issues that could serve to develop an initial strategic agenda for the workshops. The content of the interviews traveled well beyond the narrow water-related issues into areas such as international trade, rural development, population growth, poverty, education and health, and issues of (national) food security.

The interview feedback served as an input for a first workshop, where a group of some 25 participants discussed issues and uncertainties of the basin's future. During this meeting, the participants agreed to a first generation scenario framework that reflected those uncertain factors that were considered key to future developments in the region. Alignment among the participants on the factors that would "really make a difference" emerged very early during this workshop. Interestingly, both key uncertainties that emerged from the group's discussions were not directly wateror agriculture-related, but related to international trade opportunities and to what was coined "quality of governance" in times to come. Notably, the latter, on which consensus was very high, had not been or had hardly been touched upon during the initial interviews but moved to the center of the group's strategic conversations about the future.

In much the same composition, the group reconvened for three subsequent two-day workshops, which were used to discuss and probe the initial

FIGURE 1 Four scenarios based on effectiveness of governance and international agricultural trade regime



framework, develop and test the four emerging scenario story lines and so called "story maps", and subsequently to ponder scenario implications and the question, "What if we do nothing?" During the final workshop the group addressed new insights and the question, "What would/could we do if...?" A series of new insights was agreed to and options for each scenario and across all four scenarios were developed. Over time, confidence grew that the group's scenarios as a set were both highly plausible and highly relevant. More importantly, there was alignment among the participants on ways of moving forward as well as shared insights on possible risks.

Scenario Storylines

Four scenario story lines were developed based on two uncertain elements: effectiveness of governance and international agricultural trade regime (Figure 1).

Unintended Consequences: Nile countries suffer high food prices when they fail to increase their agricultural output after OECD countries cut surplus production.



Joint Effort: robust governance and improved agricultural market conditions propel Nile countries into the middle class.

Nile on its Own: regional trade grows owing to improved Nile governance and limited international trade options.

Double Burden: inefficient governance conspires with unfavorable international trade conditions to frustrate agricultural development and keep Nile countries in poverty.

(The FAO scenario booklet presents the four comprehensive narratives, together with information on starting conditions, key uncertainties, and predetermined factors.)

Common Ground

The Nile issue can be described as a protracted resource conflict in which parties have become committed to locked positions. Concerted efforts are being made to strengthen cooperation, but consensus regarding joint management of the scare water resources has not yet been reached. The reasons for this are complex and interwoven.

Nile management is highly complex. It involves ten countries, each with its own specific development challenges, in an environment of high population growth. It has to address increasing pressure on a finite and fully allocated resource. Delays or failure may exacerbate critical food security or development concerns. Nile decision-makers have to take into account the diverse interests of numerous actors – both in the private and public sector, at state and sub-state level, and across diverse sectors of the national economy. The historic context has also made the Nile discourse sensitive.

Kahane has argued that such highly complex problems require a systematic approach that takes into account the functioning of the system as a whole. Compartmentalization – considering only some aspects of the problem instead of the full system - is a real risk when dealing with highly complex problems. It is fair to say that this applies to the Nile discourse, where most participants originate from the water or irrigation sectors. Furthermore, most can spend only part of their time on understanding the Nile context because their principal focus is on national responsibilities.

As a result, one could argue that thinking regarding Nile cooperation is still mainly focused on the river and water-related aspects (hydropower development, improving irrigation efficiencies, etc.). It reflects the historic context in which the Nile is, in fact, the only factor that unites the ten riparians as a group. It also reflects the shared vision to "achieve sustainable socio-economic development through the equitable utilization of, and benefits from, the common Nile Basin water resources," which specifically concentrates Nile cooperation on the river and its derived benefits.

This situation is further complicated by the natural tendency in protracted negotiations to view the world from a rather strong partisan perspective, where mindsets and positions have become entrenched.

In the absence of a comprehensive perspective, it is difficult to identify the full set of shared or complementary interests of the parties involved, and the full range of options for mutually beneficial compromise. When the talks concentrate on the river alone – a near zero-sum game – progress is naturally slow as agreement may require difficult adjustments to national economies.

The F4T forum inadvertently served as a vehicle for stretching the Nile discourse and contributing to a better definition of the problems to address. To capture its original objective of quantifying a realistic range of future demand for agricultural produce in the basin, discussions quickly moved toward factors outside the traditional waterirrigation domain.

This is a characteristic feature of the scenario approach. The robust scenario development process, which starts by listing and then prioritizing driving forces, encourages the group to think beyond group assumptions. In the case of the F4T exercise, the institutional factors – quality of governance and the international agricultural trade regime – emerged at the top of the list of key influencing factors. This steered discussions away from the natural resource base as the principal constraint to economic development in the region and resulted in a broader perspective.

A second characteristic of the scenario process is the systematic analysis of the causal structure that underlies the problem being addressed. It builds plausible scenario logics at the extreme corners of a scenario space defined by the two principal influencing elements. The scenario logics - and the critical assumptions involved in their development - are checked in a workshop setting. The process continues by systematically analyzing relevant policy questions, from the perspective of multiple stakeholders, with the scenario tool as backdrop. This methodical diagnosis typically results in a better understanding of exactly what needs to be solved. The F4T analysis prioritized rural development rather than optimizing water allocation

Abbreviated F4T Scenario Storylines

Nile on its Own: Regional trade grows owing to improved Nile governance and limited international trade options. World commodity prices remain low but governments stabilize prices through regional tariffs. Policies promote local production and interregional trade. Gradually, Nile countries experience an increase in wealth and food security and a decline in poverty.

Joint Effort: Robust governance and improved agricultural market conditions propel Nile countries into the middle class. Governments stimulate rural development and, responding to higher commodity prices, agricultural productivity increases. Rural economies benefit and improve. Favorable economic conditions result in smaller families and reduced population growth.

Unintended Consequences: Nile countries suffer high food prices when they fail to increase their agricultural output after OECD countries cut surplus production. Only large export-oriented farms benefit from improved market conditions, but the majority of smallholders are unable to respond to price incentives due to the lack of an enabling environment. Subsistence farming dominates. With persistent high population growth rates, livelihood conditions deteriorate and economic development stagnates.

Double Burden: Inefficient governance conspires with unfavorable international trade conditions to frustrate agricultural development and keep Nile countries in poverty. Rural areas stagnate. High poverty levels and insecurity lead to adoption of family-based survival strategies, resulting in accelerated population growth and a downward spiral of economic decline.

as the principal task at hand for Nile managers. The analysis also brought to the fore the importance of addressing the non-biophysical constraints of rural and agricultural development.

Two more aspects of a scenario process deserve mention. The first relates to the relatively safe space that is created by discussing the future. Even with different backgrounds and aspirations, it is quite easy to agree on a future in which most of us can lead a meaningful and fulfilling life. No immediate hard choices are required when discussing multiple futures that are 20 or so years ahead. This safe space encourages unofficial views, and creates an atmosphere more conducive to free discussions.

The second aspect concerns the highly participatory nature of the scenario process. First, it should lead to a better problem analysis. Knowledge of a group - if mobilized in a systematic way that encourages open discussion – typically exceeds that of an individual. But the most crucial aspect of the group process is the joint discovery of insights by the scenario team. It builds common ground.

One should note that the insights gained by F4T are not new. In fact, they are well known to sector specialists. However, they were new for those outside their respective disciplines, and formed crucial input for the joint problem analysis made by

the team. One could argue, therefore, that the relevance of F4T lies in the joint discovery of these insights by a diverse group of decision-makers and experts from all riparian countries. The strong convergence of views that emerged in the scenario group is considered the most important outcome of the exercise.

Subsequent interviews with key players among the participants confirmed some tentative observations about the scenario process.

- Quickly moving away from the problems and differences of today into a conversation about the future, enabled a quick process of "unfreezing" among the participants.
- The scenario process has contributed to mutual understanding and trust among the participants, to the reframing of mental models, and to seeing the world in a new way. (Pierre Wack referred to this as "re-perceiving".)
- Specifically the process has made the sensitive factor "effectiveness of governance" discussable.
- Mutual understanding and alignment on issues and options has markedly grown among the participants. [NB: A number of participants considered this to be the single most important outcome of the process.]

Through the F4T process a number of new shared interests emerged, in particular those related to agricultural trade regime. Notably, these are not



directly related to river flow and therefore offer better prospects for negotiated solutions. It created an opportunity for enlarging common ground.

Reframing of Mental Models

The reframing of mental models is illustrated by two examples.

The first is that by looking at the Nile challenge from a new vantage point, it was possible to reformulate the problem description.

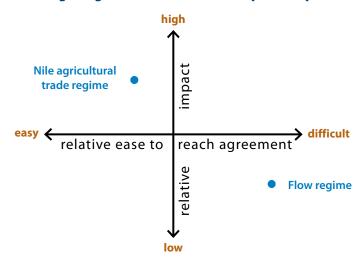
The original problem description was, "The main problem in the Nile region is that we are - or will be – water scarce; if we do not get our fair share of the water and its benefits, and without optimal management of the Nile resources, there could be major negative impacts on our development."

The alternative problem description was, "The main problem in the Nile region is the large and very poor rural population who fully depend on small-holder subsistence farming for their livelihood and food security. While climatic variability has a marked negative impact on improving agricultural productivity, in some regions the nonbiophysical constraints are more prominent than those related to the natural resource base."

The latter description moves away from the near zero-sum flow allocation process and makes it possible to identify new shared interests. It offers opportunities for meaningful cooperation on an important subject (e.g., how to promote rural development, and in particular how to address the non-biophysical constraints to rural development) that is not directly related to the Nile flows and should, therefore, be easier to attain.

The second example illustrates "unfreezing" mental models. During a negotiation skills training, F4T was used as backdrop to assess implications of possible agreements. An informal discussion emerged in a small group. It plotted negotiation topics on a two-dimensional "negotiation space," impact of agreement and anticipated difficulty to reach agreement. It was quickly agreed that con-

FIGURE 2 Negotiation space plotting the relative ease of reaching an agreement versus its anticipated impact.



sensus on flow regime would be difficult to attain. But it was also agreed that a realistic compromise on flow allocation would not dramatically alter the existing situation. Hence, its overall impact on the Nile economies was considered comparatively low. By contrast, establishing joint agricultural trade policies was considered easier, with much higher expected benefits, particularly for rural areas (Figure 2). Although these findings may be obvious in hindsight, they were guite unexpected in this improvised exercise.

Enlarging the F4T Footprint

This article reports on the first phase of the F4T scenario exercise: building the scenarios. While it has been insightful for the participants, one can argue that so far the overall impact of F4T has been rather limited. This is because of the relatively small size of the original scenario group. It also points to an inherent limitation of the scenario process: only a relatively small group (approximately 20 people) can participate in the original scenario building exercise. A key challenge for scenario thinking, therefore, is how to communicate the process gains and insights to a wider audience. This is especially true for a scenario project whose explicit purpose is to contribute to a negotiation or reconciliation process, where legitimacy and inclusiveness are key requirements.



This factor was not taken into account when designing the original F4T process, when the focus of the exercise was still on examining a technical question (future demand for agricultural produce). As a result, no (financial) provisions were made for disseminating the process results, and the selection of participants was guided by professional qualifications rather than by their networks of influence.

To reap the full benefits of the exercise, the process of scenario-based strategic conversations needs to involve the right people - those with the power to influence and act.

We envision a two-pronged approach to enlarging the F4T footprint: inform people of the scenario stories and their possible implications; then engage a large group of Nile Basin stakeholders and decisionmakers in a scenario-informed thinking process.

The second component is clearly more ambitious, and takes the form of a series of national and regional workshops. Here, the strategic conversation plays an important role and the workshops must be run by a trained facilitator.

During such workshops the scenarios are considered one by one. It is important to remember that all are plausible. The first step is to engage the participants in the scenario stories and have them understand their drivers and causal structure. The next step is to use the scenario set as backdrop to examine relevant policy questions from the perspective of multiple stakeholders.

The workshop concludes with a dialogue about insights gained, questions remaining, directions to follow, actions to take, and, ideally, some common ground and ideas on how to take the process to the next level.

Conclusions

With growing populations and the size of the Nile economies increasing relative to the finite natural resource

base, pressure on the Nile waters is rising to unprecedented levels. Failure to effectively manage the resource may affect millions of people who intimately depend on it. Within this context, Nile water management is highly complex.

As mentioned earlier, Kahane has argued that such highly complex problems require processes that are systematic, emergent, and participatory. F4T met those criteria and this led to a more comprehensive analysis of the development problems in the Nile region. The exercise confirmed the importance of rural development when addressing the Nile challenge, and examined how, and under which conditions, changes in trade regime could have an impact.

F4T proved that scenario thinking can increase the appreciative understanding of a complex problem in a relatively short period of time. The highly participatory process was stimulating and productive as well as useful in developing more trust in the decisions made by the Nile experts.

The results of the F4T exercise were emergent. While the initial objective was to answer a rather technical question, "What is the range of future demand for agricultural produce?" the final results carry more significance.

Among the most striking aspects of F4T was the strong convergence of views that emerged in the diverse scenario group. There was general acceptance of the plausibility and relevance of each of the four story lines that were developed.

By taking a wider view, F4T proved useful in stretching the Nile discourse. A number of shared interests were identified and examined, in particular those related to agricultural trade regime. Notably, these are not directly related to river flow and therefore offer better prospects for negotiated solutions. This demonstrated the effectiveness of scenario thinking to support a highly complex negotiation process.

F4T proved that scenario thinking can increase the appreciative understanding of a complex problem in a relatively short period of time.

F4T has concluded the scenario-building phase. We learned that this first scenario group is too small to maintain momentum in this ten-country environment. Process results need to be disseminated to a wider audience through a facilitated process of scenario-based strategic conversations, involving the right people with power to influence and act. If these conditions are not met, F4T, though very interesting and educational for its participants, risks having only limited impact.

Or maybe not. As one participant observed, ideas embraced by collective awareness do not easily go away.

Collective Insights

selection of collective insights from the F4T process is presented below. While well known to sector specialists, their joint discovery by the F4T group contributed to the common analysis of the Nile challenge.

- The natural resource base was not considered the principal constraint to economic development in the Nile countries; institutional aspects like international agricultural trade regime and governance—political accountability, and the quality of bureaucracy and the rule of law - were regarded as more critical.
- With dominant rural populations, the state of rural areas determines demographic developments in the upstream riparians; this underscores the importance of rural development in shaping the future of the waterdemand function.
- Rural development depends on improving agricultural productivity. While the temporal variability of rainfall has a marked negative effect on agricultural productivity, the non-biophysical constraints are dominant in some regions.
- Profitable and stable farm gate prices are key starting conditions for all agricultural activities. Therefore, a coordinated agricultural trade policy - regarding both the internal Nile market and the external international market could significantly benefit the riparian community.
- However, the prospects for rural development are limited if the right conditions stable land tenure, extension services, infrastructure, fair access to markets, etc. – are not in place.
- Improved terms of agricultural trade, therefore, are only positive when an environment exists where farmers can respond to price incentives. Otherwise, unintended consequences ensue. This scenario underscores the importance of proper sequencing and timing of policy measures.

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