Water and Food Security in the River Nile Basin: the Perspectives of Government and NGOs in the Major Downstream Country Egypt

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Key Facts

• Water is a key component in determining the quality of our lives.
• Water in Life: Water makes up 50 to 90 percent of the weight of living things. Each cell in the body depends upon Water in order to function.
• 1,700 liters of water needed to produce one Kilogram of Rice.
• 165,000 liters of water required to produce one ton of steel.
• Water is essential for all life on this planet.
Nile River Basin

- The Nile River is the world's longest river and has played a central role in human history for many centuries.
- In modern Africa the Nile river basin contains all or part of ten countries which are Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda.
## Nile basin: areas and rainfall

<table>
<thead>
<tr>
<th>Country</th>
<th>Total area of the country (km²)</th>
<th>Area of the country within the basin (km²)</th>
<th>As % of total area of basin (%)</th>
<th>As % of total area of country (%)</th>
<th>Average annual rainfall in the basin area (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burundi</td>
<td>27 834</td>
<td>13 260</td>
<td>0.4</td>
<td>47.6</td>
<td>895 - 1 570 - 1 110</td>
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<tr>
<td>Rwanda</td>
<td>26 340</td>
<td>19 876</td>
<td>0.6</td>
<td>75.5</td>
<td>840 - 1 935 - 1 105</td>
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<tr>
<td>Tanzania</td>
<td>945 090</td>
<td>84 200</td>
<td>2.7</td>
<td>8.9</td>
<td>625 - 1 630 - 1 015</td>
</tr>
<tr>
<td>Kenya</td>
<td>580 370</td>
<td>46 229</td>
<td>1.5</td>
<td>8.0</td>
<td>505 - 1 790 - 1 260</td>
</tr>
<tr>
<td>Zaire</td>
<td>2 344 860</td>
<td>22 143</td>
<td>0.7</td>
<td>0.9</td>
<td>875 - 1 915 - 1 245</td>
</tr>
<tr>
<td>Uganda</td>
<td>235 880</td>
<td>231 366</td>
<td>7.4</td>
<td>98.1</td>
<td>395 - 2 060 - 1 140</td>
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<tr>
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<td>1 100 010</td>
<td>365 117</td>
<td>11.7</td>
<td>33.2</td>
<td>205 - 2 010 - 1 125</td>
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<tr>
<td>Eritrea</td>
<td>121 890</td>
<td>24 921</td>
<td>0.8</td>
<td>20.4</td>
<td>240 - 665 - 520</td>
</tr>
<tr>
<td>Sudan</td>
<td>2 505 810</td>
<td>1 978 506</td>
<td>63.6</td>
<td>79.0</td>
<td>0 - 1 610 - 500</td>
</tr>
<tr>
<td>Egypt</td>
<td>1 001 450</td>
<td>326 751</td>
<td>10.5</td>
<td>32.6</td>
<td>0 - 120 - 15</td>
</tr>
<tr>
<td>For Nile basin</td>
<td>3 112 369</td>
<td>100.0</td>
<td>0 - 2 060 - 615</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: The data represents areas and rainfall for countries within the Nile basin.*
Annual Fresh Water Availability

Country
- Burundi
- Rwanda
- Tanzania
- Kenya
- Zaire
- Uganda
- Ethiopia
- Eritrea
- Sudan
- Egypt

Cubic Meter
- 1995
- 2025
- 2050
Vision for Water in the Nile River Basin Countries.

- By year 2025 will have 100 per cent food security, 100 per cent self-sufficiency for food, ability to export food industries from other countries and growing rain-fed agriculture.

- Several aspects will be considered:
  - water management
  - environmental activities
  - fishing
  - exchange in technology, production, environmental aspects.

- Forming a common regional market.
Vision for Water in the Nile River Basin Countries.

- Optimize water use efficiency between Nile basin countries. Better water management and crop production, farmer participation, awareness of water values and shortages adding to the environmental aspects.
- Population growth rate to be considered as an impediment to development.
- Equal distribution for water,
- Private sector participation.
Constraints to achievement

- Budget and funding limitations and technical backstopping for better use of water.
- Absence of agreements between African countries.
- Political stability between Nile Basin countries.
- Climate changes and demography.
- Unstable macro-economic conditions with each country.
- Increased competition among water sectors.
- World-wide trends and quality controls between developed and developing countries (unfair competition)
- Inequitable utilization of water.
What steps to be taken to achieve these? (Opportunities)

- The ‘Vision’ project for the Nile Basin.
- Research and technology transfer between the basin countries.
- International facilitation in different countries.
- Institutionalization and harmonization of legal aspects to set up monitoring system for water or overuse of water resources.
- Training between Nile River countries.
- Nile River Basin conference series and initiatives.
- General awareness between Nile countries.
- Bio-technology and desalinization technology available to increase productivity.
What do we need to do?

- Education of the farmers and involvement in water management in addition to extension services.
- Exchange of information.
- Capacity building.
- Cost recovery is a regional vision.
- Identification of capabilities to produce more food.

- The National Water Policy (till 2017) prepared by Ministry of Water Resources and Irrigation represents an Integrated Water Resources Management plan which has partially been in implementation for few years now.

- It based on three main corner stones:
  - Optimal use of available water resources
  - Water quality protection and pollution abatement
  - Development of new water resources in cooperation with the Nile Basin countries (trans boundary issues).
NGOs Vision for Water.

- **Being convinced** of the importance of achieving the sustainable development of the Nile River.
- **Calling upon** the necessity to create an active democratic dialogue between the concerned parties on the national and regional levels on taking part in the management of resources and preserving it.
- **Appealing** to increase the awareness among the different parties.
- **Stressing** on the importance of planning the projects that would provide a proper solutions for water shortage problems.
NGOs Vision for Water.

- **Realizing** the different obstacles and problems impeding the scientific and comprehensive method of managing the river resources.
- **Confirming** the role of the civil society Organizations in achieving the desired objectives aiming for developing the river resources.
- **Anxious to** affirm the principles of partnership between all governmental parties and the civil society organizations in managing the resources of the Nile as well as planning the proper policies in this regard.
What is Food security?

- **Food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO).
- **Food Security** is “access by all people at all times to enough food for an active and healthy life” (World bank).
- **Food Security** is “access to adequate food by households over time” (quoted in Maxwell and Frankenberger, 1992).
Some Food Security Indicators in Nile Basin Countries

![Graph showing food security indicators for Nile Basin countries. The graph compares net cereal imports and food aid as a percent of total consumption (blue bars) and food aid as a percent of total imports (purple bars) for countries such as Burundi, Rwanda, Tanzania, Kenya, Zaire, Uganda, Ethiopia, Eritrea, Sudan, and Egypt, 1998-2000.](image-url)
Some Food Security Indicators in Nile Basin Countries

- Average Daily Per Capita Calorie Supply, 1999 (kilocalories)
- Average Daily Per Capita Calories from Animal Products, 1999 (kilocalories)
Some Food Security Indicators in Nile Basin Countries

Percent of children that are underweight, 1995-2000 %

- Burundi
- Rwanda
- Tanzania
- Kenya
- Zaire
- Uganda
- Ethiopia
- Eritrea
- Sudan
- Egypt
- Global

Countries and their corresponding percentage of children underweight.
Egyptian Vision for Agriculture till year 2017.

- Increase the annual rate of growth of agricultural production to 4.1%.
- Sustain the increase in cereals production which amounts recently to 18 million tons yearly through the contrivance of high yielding varieties, national campaigns.
- Increase edible oil crops production to substitute imports through the expansion of sunflower, soybeans and canyola areas.
- Increase sugar production through the expansion of sugar-beet crop.
Egyptian Vision for Agriculture till year 2017.

- Upgrade horticultural crops marketing efficiency
- Place more emphasis on irrigation water use efficiency and agricultural soil improvement and maintenance projects
- Increase animal production protein from its numerous sources to maintain self sufficiency of poultry meat, dairy products and eggs.
- Support agricultural researches, marketing extension, mobilize woman role in agricultural and rural development