

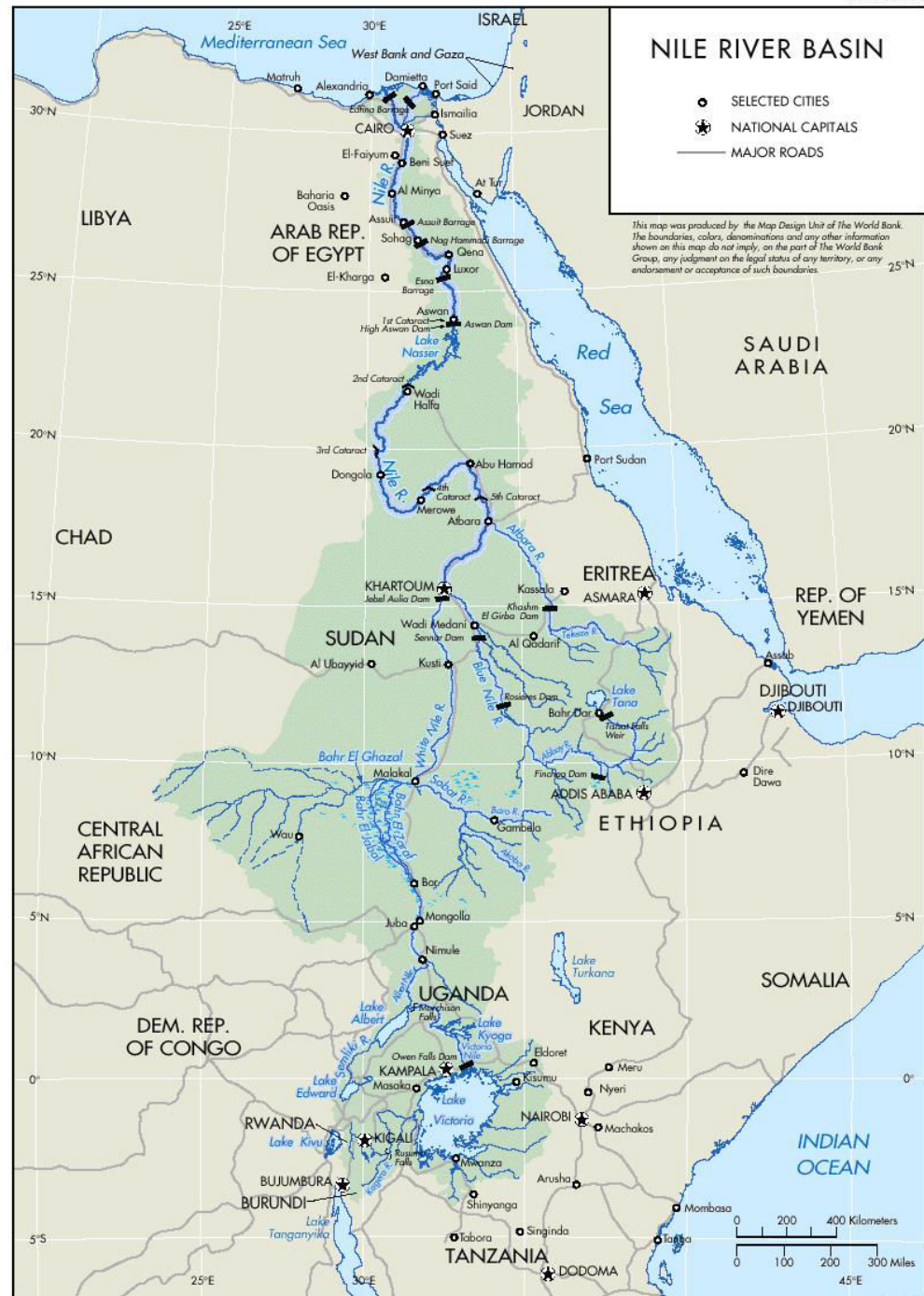
# Nile Project: Going beyond Music

Ximing Cai, University of Illinois at Urbana-Champaign



**4,258 miles (6,853 km) long!**

While the Nile River is often associated with Egypt, it actually touches Ethiopia, Zaire, Kenya, Uganda, Tanzania, Rwanda, Burundi and Sudan



# Changes and Challenges

- Population increase and food security
- Economic growth and municipal and industrial (M&I) water demand
- The impact of climate change: The Nile River Basin can be considered a climate security hot spot with rising temperatures and changing precipitation patterns

# A basin approach is like an orchestra



# The Nile Project: A musical program



“The Nile Project shows us that making music together can help people solving problems together.”

<https://abeautiful.world/stories/the-nile-project/>



# Institutional Development for Basin Management with Nile

## The Nile Basin Initiative (NBI)

A partnership among the Nile Riparian states that “seeks to develop the river in a cooperative manner, share substantial socioeconomic benefits, and promote regional peace and security”.

Formally launched in February 1999 by the water ministers of 9 countries that share the river (Egypt, Sudan, Ethiopia, Uganda, Kenya, Tanzania, Burundi, Rwanda and the Democratic Republic of Congo) with Eritrea as an observer.

# **Nile Basin Initiative (NBI): the conductor of the orchestra?**

## **The Shared Vision Program**

“a basin-wide program that focuses on building institutions, sharing data and information, providing training and creating avenues for dialogue and region-wide networks needed for joint problem-solving, collaborative development, and developing multi-sector and multi-country programs of investment to develop water resources in a sustainable way.”

# How Would Sciences Help - Premises

- Scientific studies help people know more about the truth and understand better the situation
- Scientifically based understanding changes people's behaviors
- Learning provides next generation of Nile people larger wisdom to resolve the problem better



# How Would Sciences Help: An Example

- A tool to integrate hydrologic, economic, social, and environmental components
- A modeling tool accepted by and accessible to researchers in all Nile countries
  - **A regional communication tool!!!**
  - **Another form of Nile Project**
- A tool that can be used to explore the various what-if options, especially, local water development versus regional market, upstream-downstream impact assessment
- A tool to be incorporated to education programs for the public and especially the next generation
- A tool to facilitate Virtual exercises for water allocation

# How Would Sciences Help: An Example



## Meet information needs for

- **Investment priorities**
- **Policy and institution reforms**
- **Market developments**
- **Water management plans**
- **Physical condition including soil, climate and hydrology**
- **Agricultural growth potential and implementation corridor**
- **Limiting factors in water and agriculture**
- **Equity realization**
- **Regional impact of national development**
- **Water availability potentials**
- **Potential food productivity**
- **Food prices in different countries**
- **Strategic plan evaluation**

# Solution exploration

- Knowledge based on facts and sciences
- Wisdom (knowledge, strategies, skills, willingness to collaborate, ethics, morality and more)
- Governance (institutional structure, rules, and a “good conductor”)
- Options for actions

# A River Basin Approach

- Upstream – downstream relation
- Complexity with International basin



**ICPDR - International Commission for the Protection of the Danube River**