



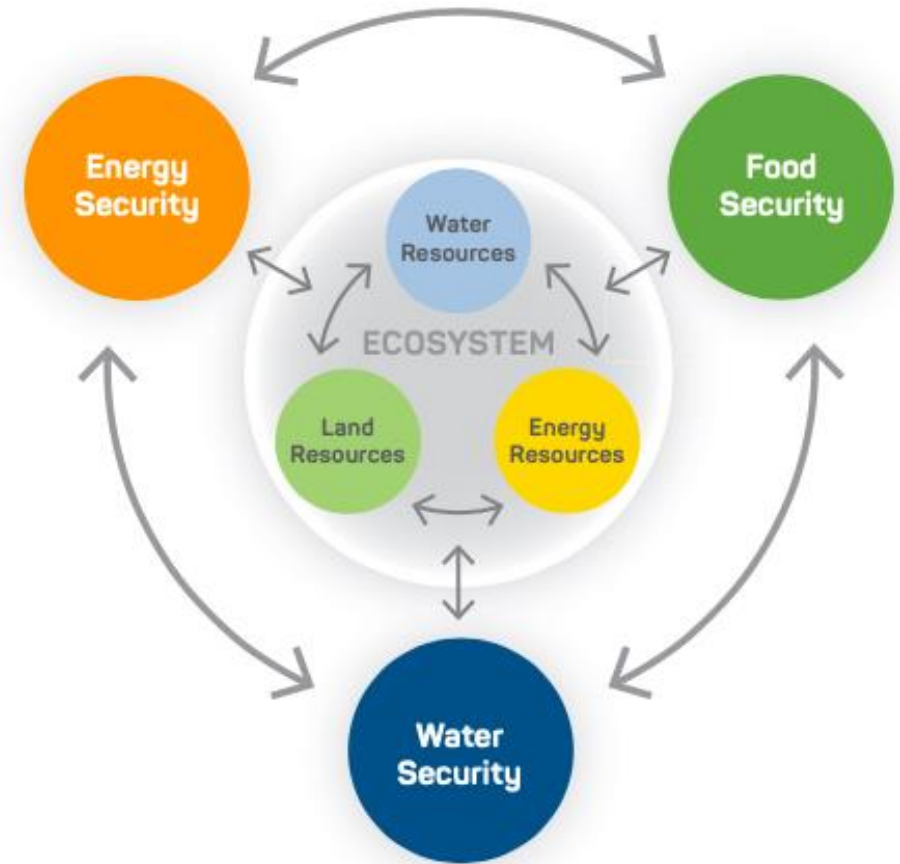
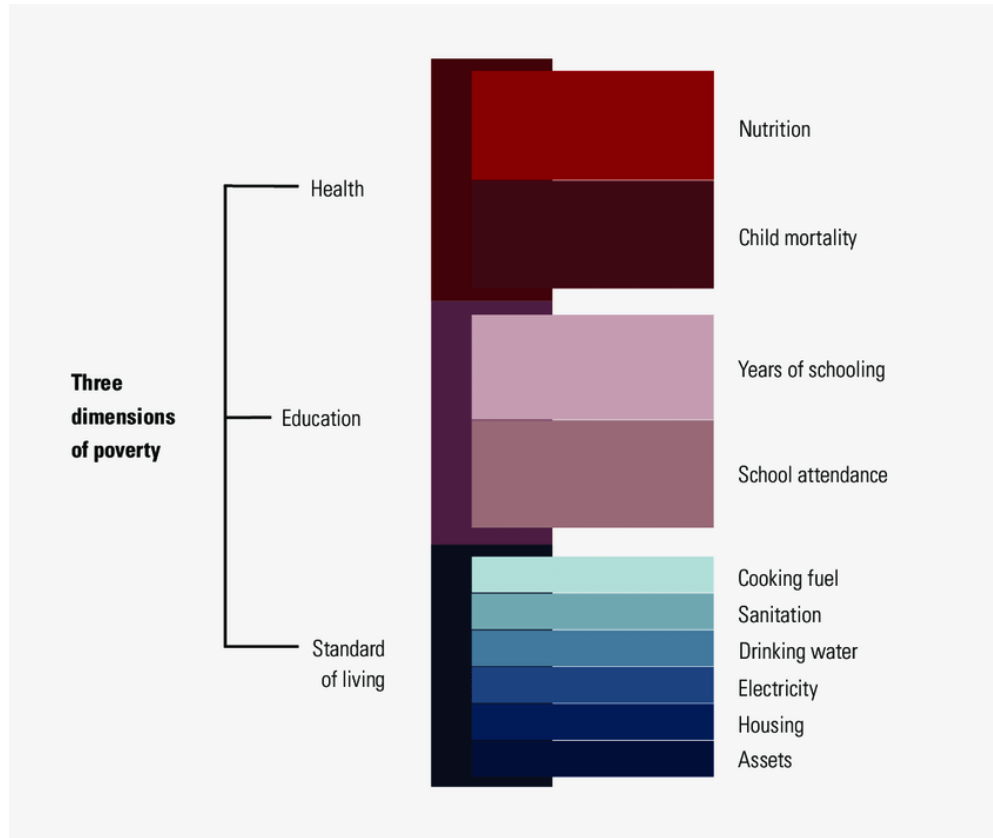
Integrating Water, Energy,
and Food for Sustainable
Development: Current Status,
Challenges, and
Opportunities



West Asia-North Africa (WANA)
Institute
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Amman, 5th of March 2024

WEFE Security & Multi-dimensional Poverty Index



OPHI (2018). [Global Multidimensional Poverty Index 2018: The Most Detailed Picture to Date of the World's Poorest People](#). Report. Oxford Poverty and Human Development Initiative, University of Oxford



Economic Modernisation Vision

Unleashing potential to build the future

The economic growth priorities of the Economic Modernisation Vision

High Value Industries

Agriculture & Food Security

Mining

Food products

Chemical products

Pharmaceuticals

Textile products

Engineered products

Logistics



Destination Jordan

Culture & nature/ adventure
tourism

Medical & wellness tourism

Faith tourism

Film production tourism



Sustainable Resources

Energy

Water



Smart Jordan

Education

ECD

K-12

Higher Education

TVET

Data

R&D and Innovation

Entrepreneurship



Future Services

ICT services

Creative industries

Financial services

Healthcare

Trade

Transport



Economic Modernization Vision

Priority A: Agricultural Production and Food Security

- Establish a specialized food security **governing** body, national food security **research** center.
- Build a food **data** intelligence system.
- Reform agriculture **regulations** and **policies**.
- Encourage **Modernization** and **innovation** of the agricultural sector, and expand the use of modern technologies.

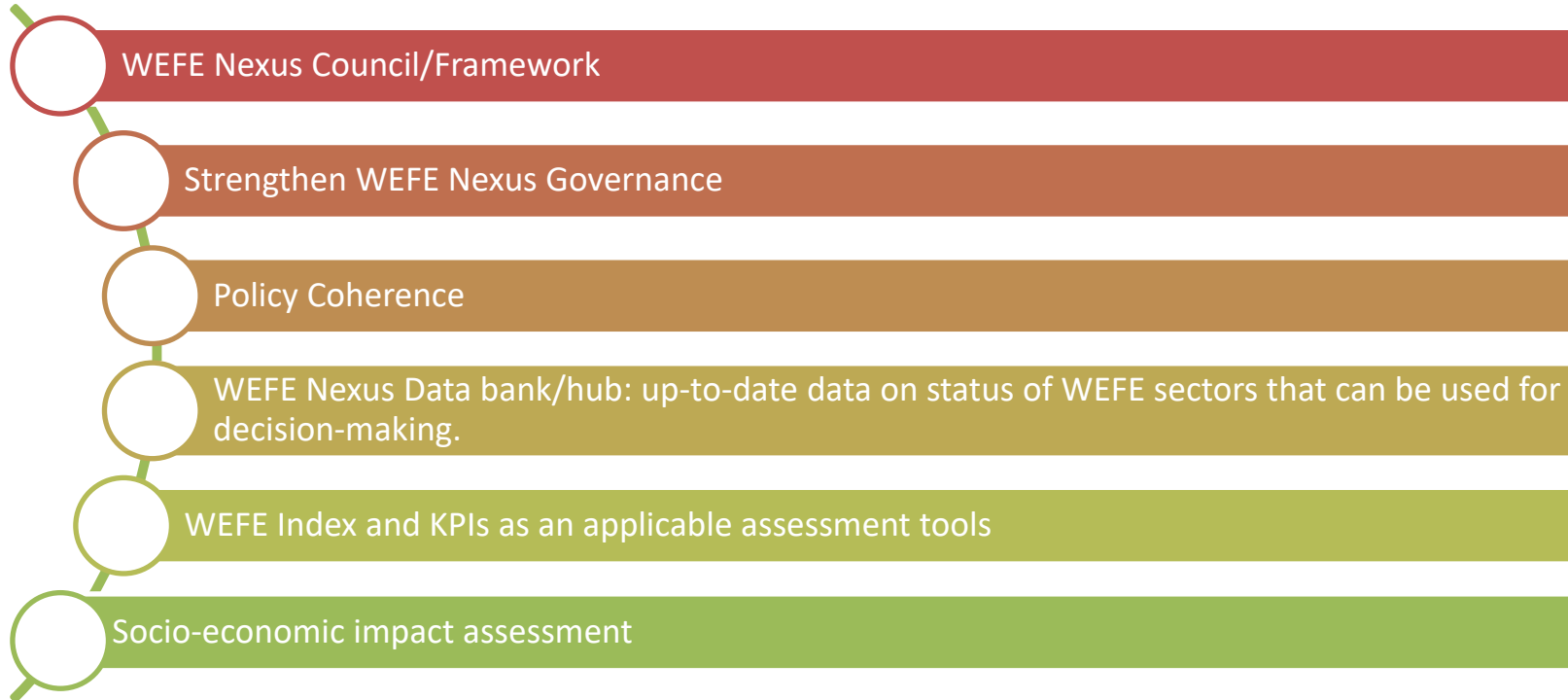
Priority B: Increasing Access to water

- Establish Nexus **Council**
- Launch National **Innovation** Center.
- Improve **water efficiency** and efficiency of **energy use** in the water sector,
- Increase the use of **renewable energy** sources.
- Reduce NRW* by 2% annually.
- Launch national **desalination** projects.

Priority C: Increasing Access to Modern Forms of Energy

- Develop an energy **transition roadmap**
- Devise new energy **regulations** and **policies**
- Adopt **technologies** and solutions for **energy efficiency**.
- Enhance inter-sector **coordination** (between the relevant sectors) and demand management/planning

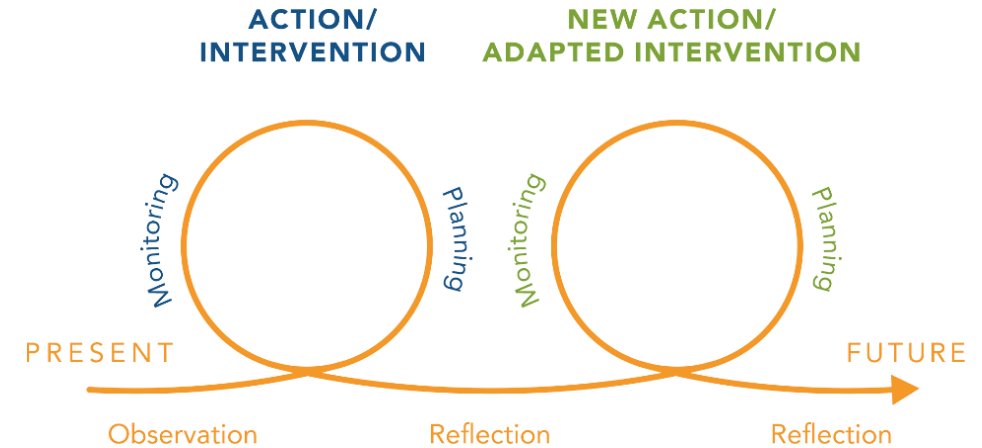
Opportunities – WEFE Nexus Framework



WEFE Nexus Council/Framework

The framework is expected to contribute to the coordination of the WEFE sectors:

- At policy and decision-making level (i.e., Ministerial Level)
- At the national technical level
- With national and international implementing entities and other partners
- Strengthening national multi-stakeholder platforms

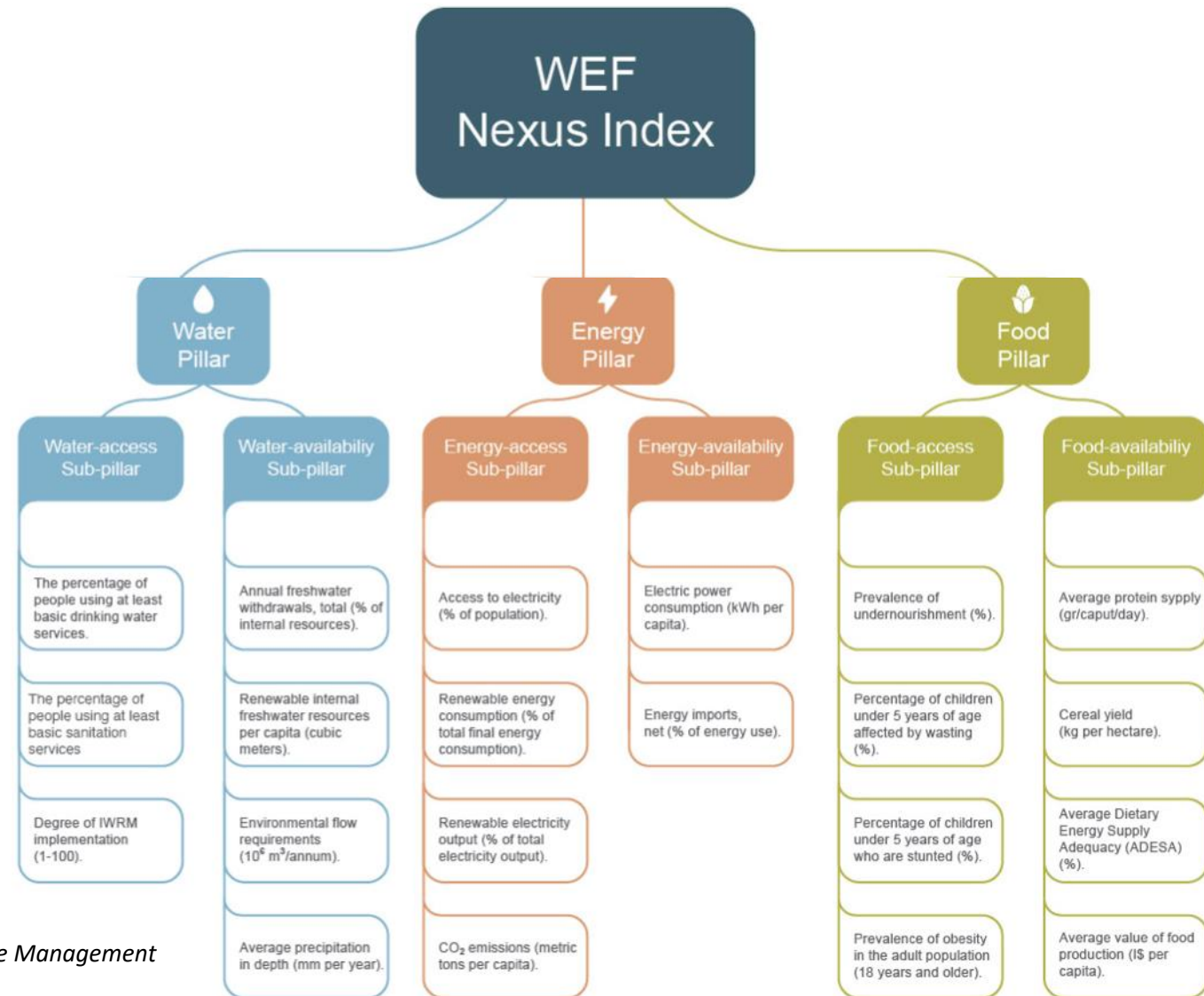


WEFE Nexus Framework

- Systematize environmental and social impact assessment across WEFE sectors for all new infrastructure/projects.
- Coordination of policies at a strategic, higher authority level (e.g. sustainability strategy).
- Reducing sectoral trade-offs.
- Enhancing resource efficiency by designed solutions to address multiple challenges simultaneously.

WEFE Index and KPIs

- The WEFE index is a national-level indicator based on 21 sub-indicators that focus on **accessibility** and **availability** in food, water and energy systems.
- It aims to introduce an indicator that allows a stakeholder to **quantify and monitor the WEFE nexus interlinkages** at a national level.



Jordan Nexus visualization platform: A visualization platform was created to facilitate and ease the exploration of the large modelling results created by FAO, 2021.

JORDAN
NEXUS model

SCENARIO OPTIONS

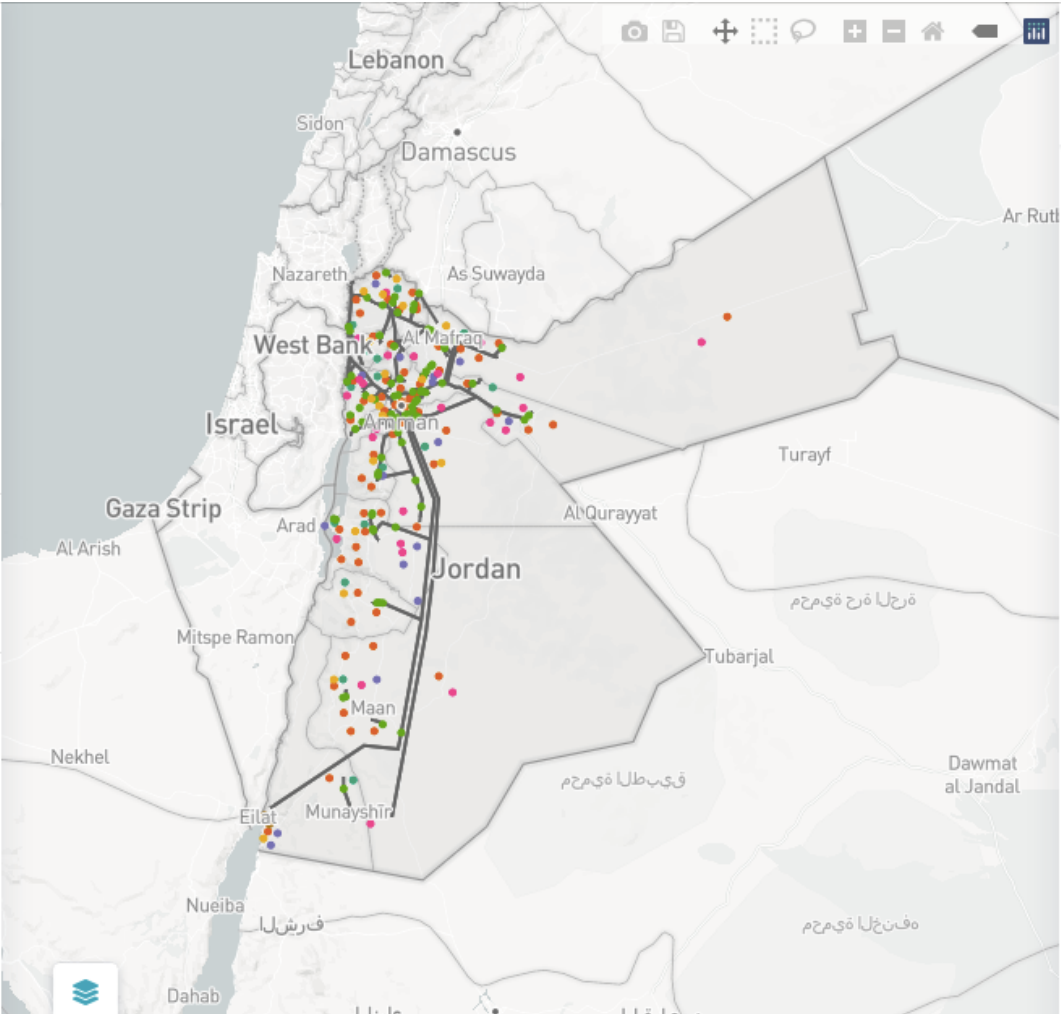
Select scenario

- Reference
- New water resources
- Reduce non-revenue water
- Increased water productivity
- Integrated strategies

Increase Evapotranspiration (climate change)

Select energy pumping efficiency goal

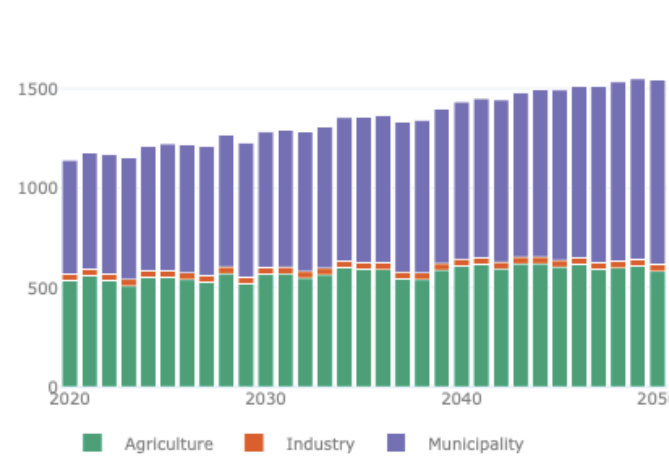
Efficiency current 60% 70% 80%



SUMMARY OF RESULTS:

Jordan country - Reference scenario

Water delivered (Mm³)



Unmet water demand (%)



Source: WEPS-NENA project: development of Nexus Model



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