



**LEbanese Water
Actors Platform**



Introduction to Integrated Water Resources Management

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Water is a **UNIQUE, MULTI-VALUED**
and **LIMITED** resource

Global Figures



Most of the world's population spends up to 3 hours a day to get the water they need to survive



30 B dollars is the cost that the UN estimated to provide safe water to the entire planet, that's third of what the world spend in a year on bottled water



2.5 Billion people, more than 35% of the world's population, lack access to improved sanitation

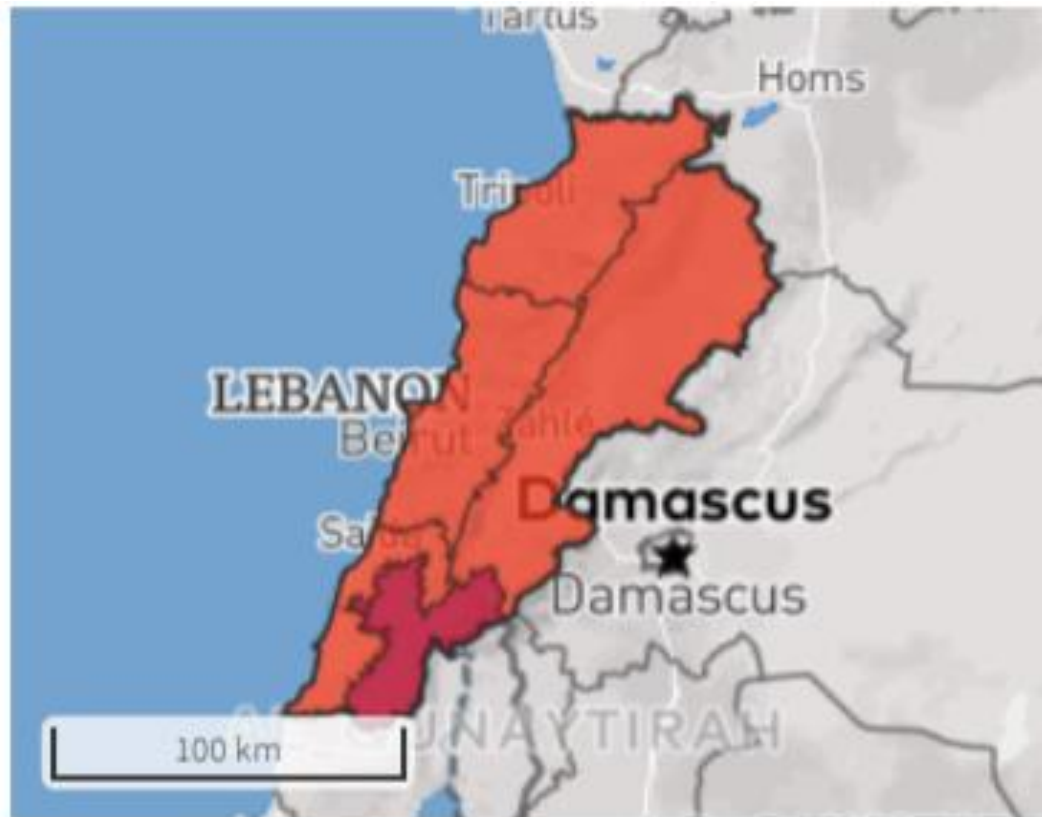
Global Water Budget

97 %
Of the
world's
water is
salt water



3 %
Is fresh
water

Water Scarcity in Lebanon



© Mapbox © OpenStreetMap

■ High ■ Medium ■ Low ■ Very low

Key water challenges in Lebanon

- Natural water imbalance
- Demand are surpassing supplies
- Poor public water distribution system management
- Water pricing and the current economical situation
- **Poor wastewater management:**
- **Lack of accurate data**
- Complication of policies and institutional issues
- Poor financing versus expensive options
- Lack of capacity
- Climate change

What are the consequences?



DECREASE IN PER-CAPITA
AVAILABILITY



DEGRADATION OF THE
QUALITY OF THE WATER
RESOURCES



WATER-RELATED HEALTH
IMPACT



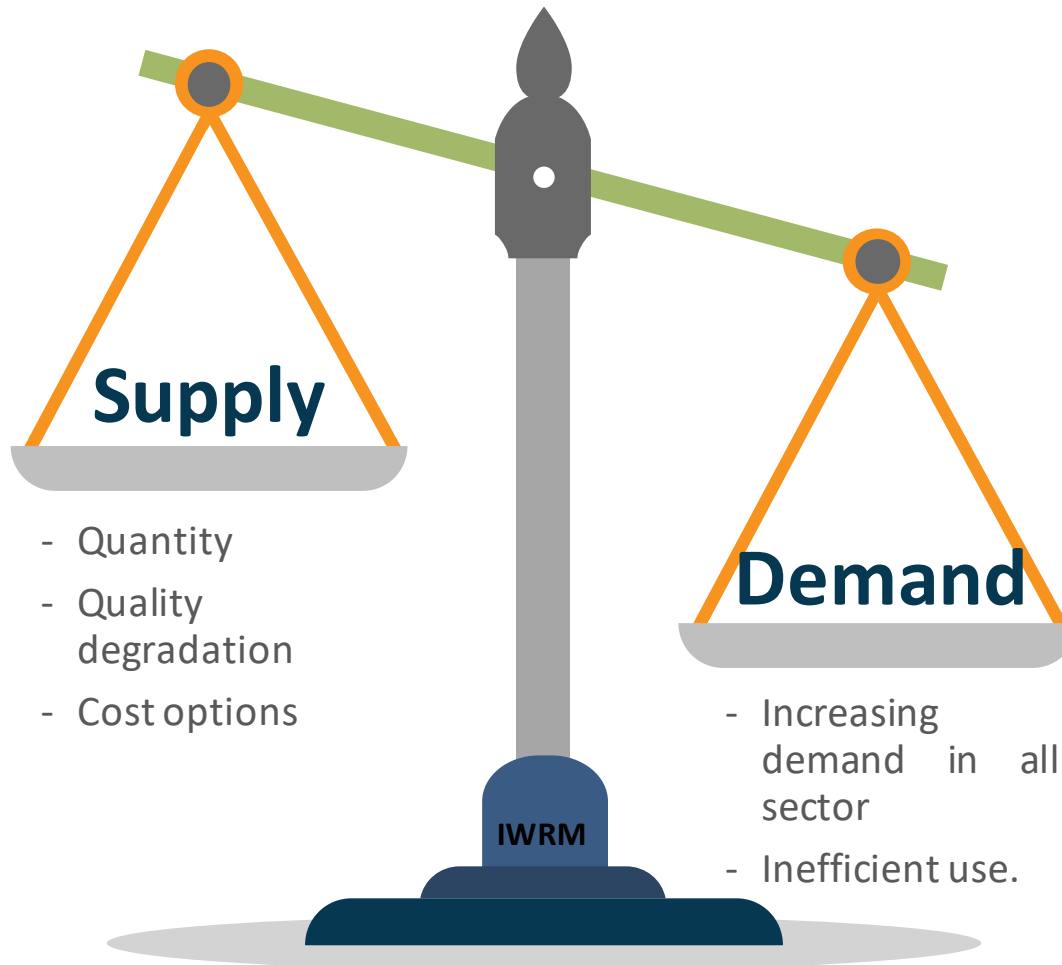
INCREASED RELIANCE ON
WATER TRUCKING AND
LESS EXPENSIVE OPTIONS



Key needs

- **Integrated management of water**
- Improved water supply and sanitation services
- Decreased water pricing and cost recovery
- Water rules, rights and legislations
- Awareness and sharing of water rights and benefits
- Multidimensional cooperation and participation between all community and stakeholders

Water Balancing act

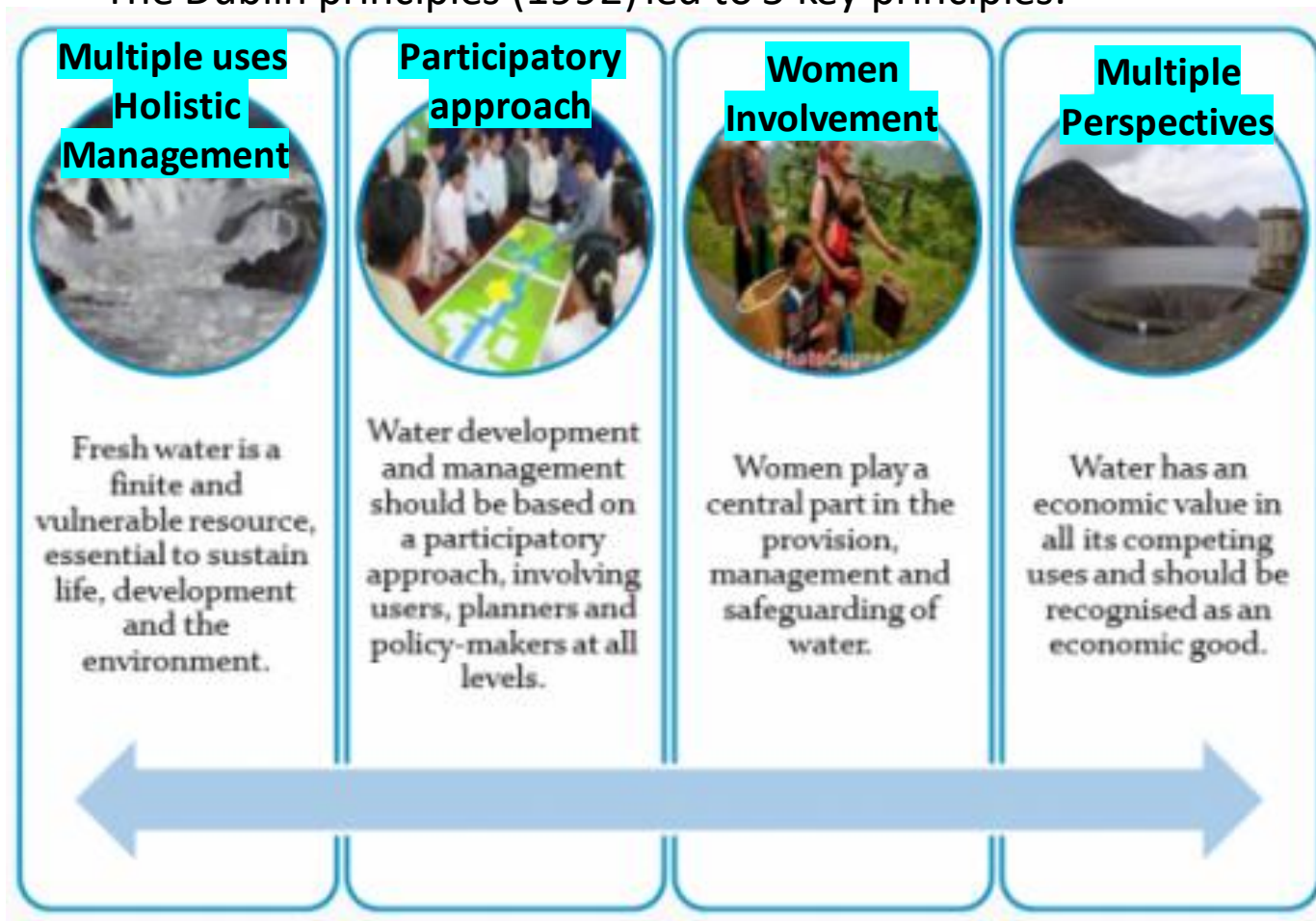


What is IWRM?

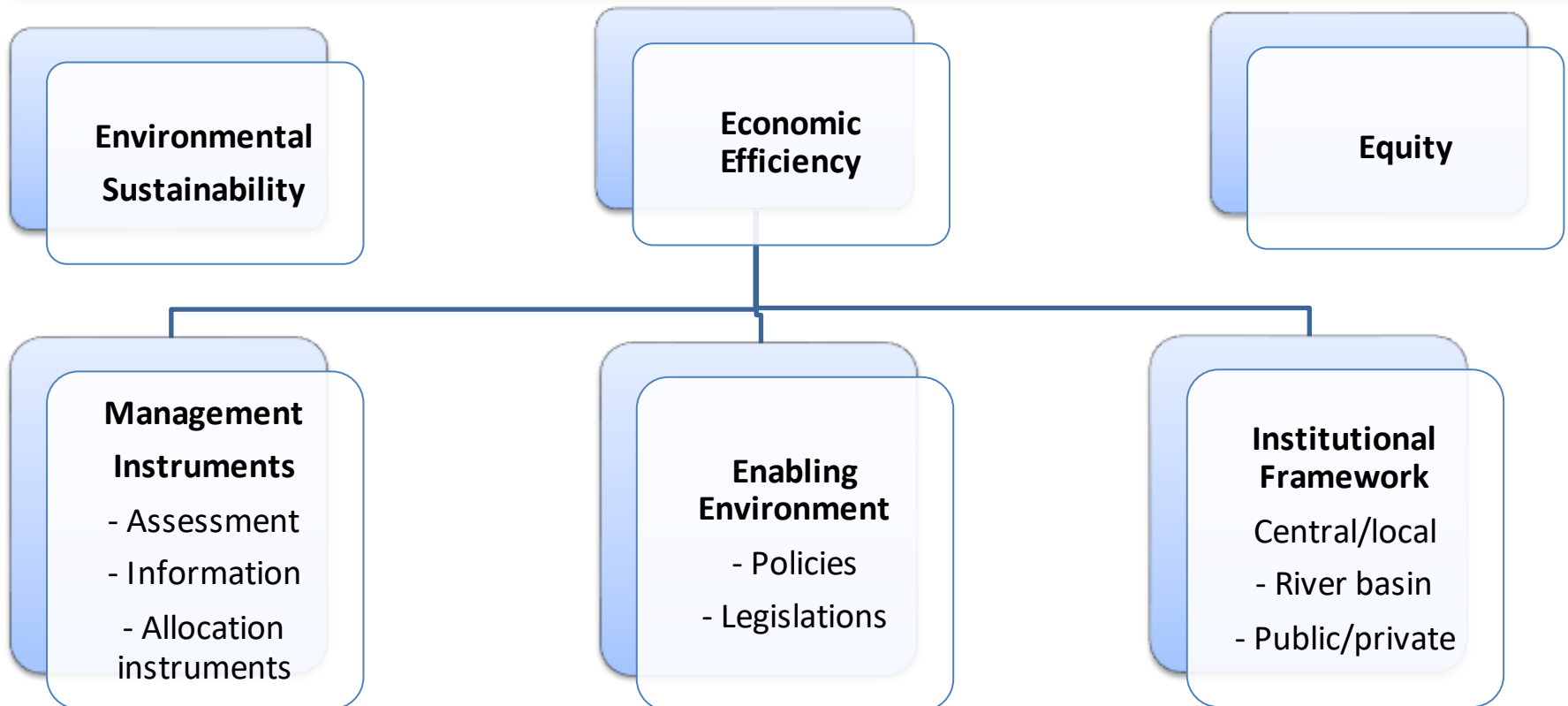
- **IWRM: Integrated Water Resources Management** is:
a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. (Global Water Partnership)
- **IWRM is about:**
 - Managing water resources at the lowest possible level.
 - Managing demand for water and optimizing the supply.
 - Providing equitable access to water resources by a participatory approach.
 - Establishing policies to help manage water resources.
 - Engaging all sectors of the economy in the IWRM process.

Key IWRM Concepts

The Dublin principles (1992) led to 5 key principles:



The 3 E's of IWRM

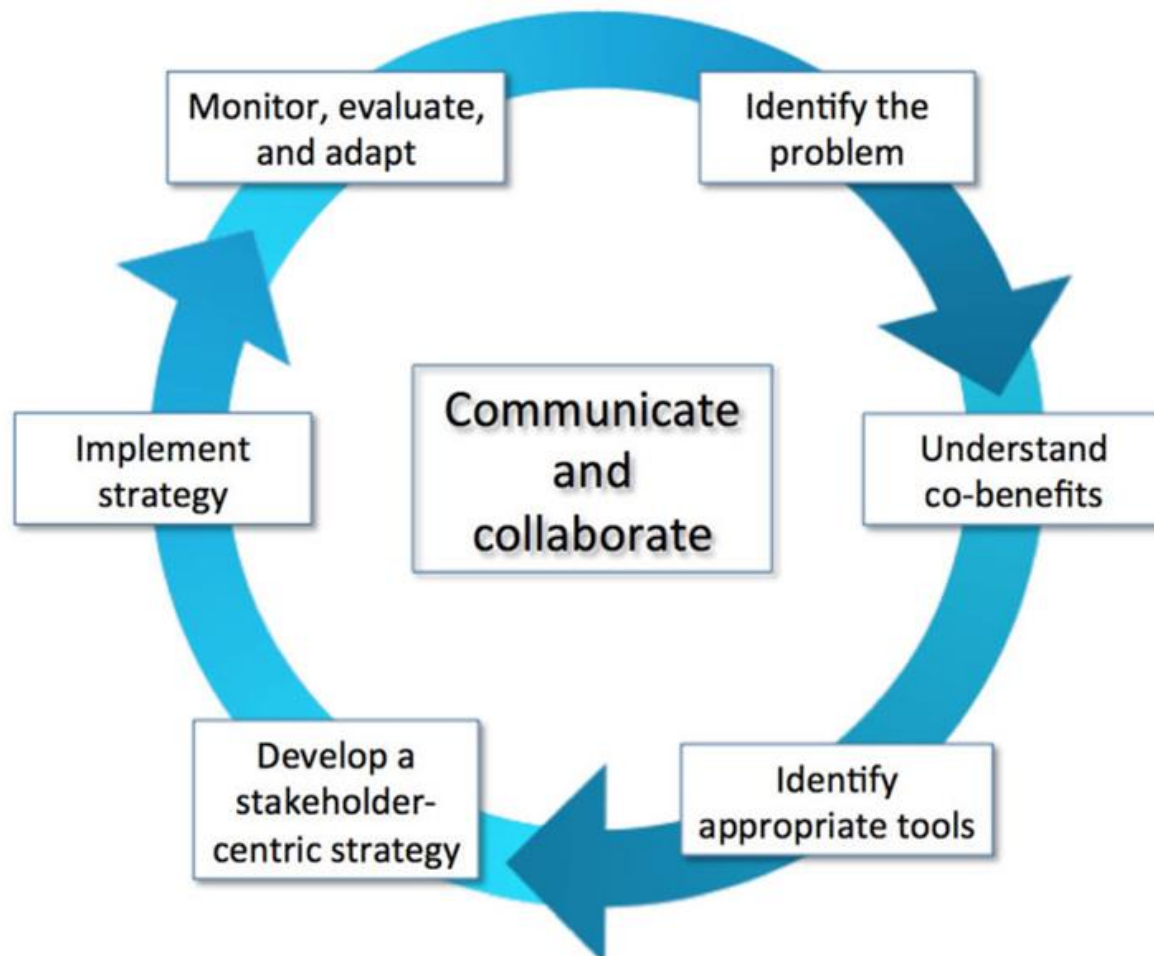


Cross- sectoral Integration

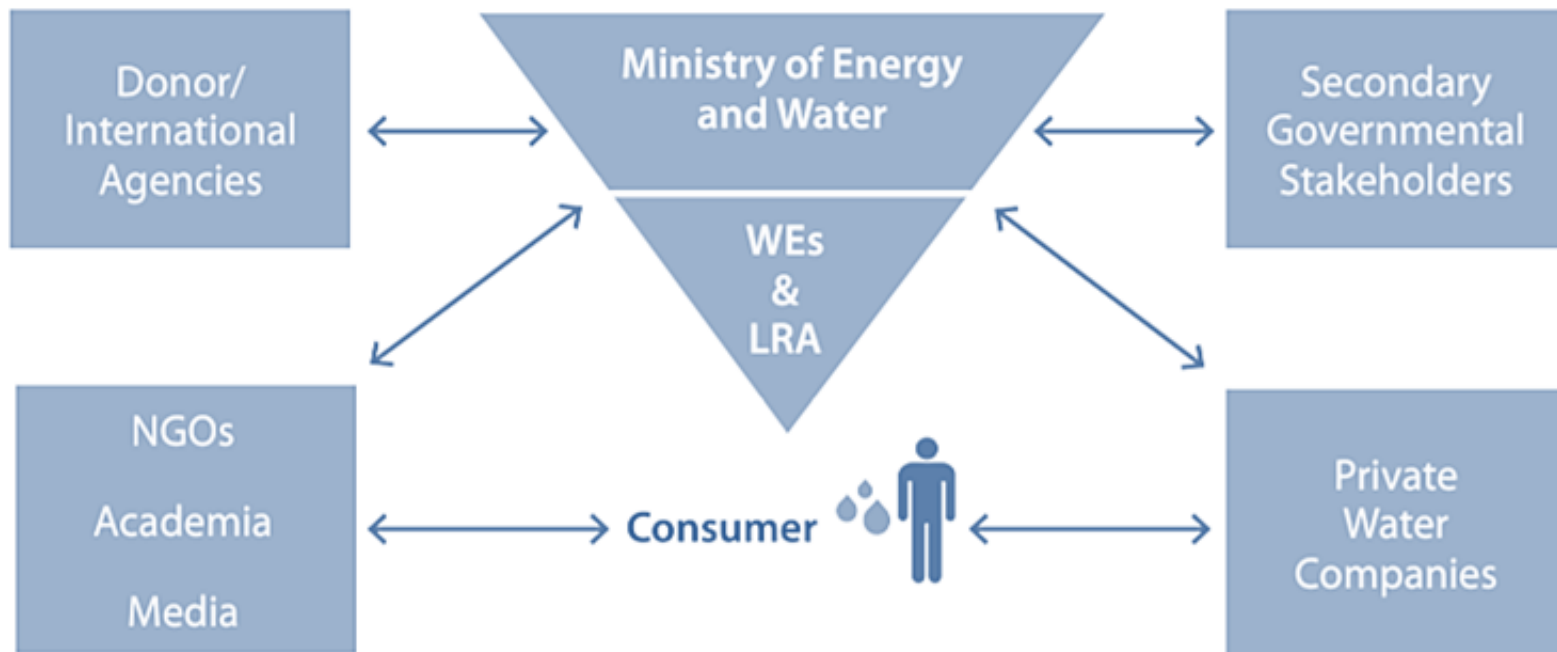
Water for people; Water for food; Water for nature; Water for other uses

Balance water for Livelihood and balance water as a resource

IWRM Process



Stakeholders of the water sector in Lebanon



Source: Farajalla et al, 2015

Why IWRM?

- The world's resources are limited, and growth that is unmanaged and not sustainable will lead to increased poverty and decline of the environment.
- Many different water usages are independent; management of the water resources must take this into account.
- More coordinated decision-making across sectors
- Directly involves the stakeholders.
- Is a tool for optimizing investments under tight financing climate.
- We owe it to future generations to find paths of development that will effectively balance progress with awareness of its environmental impact.

Key barriers to the implementation of IWRM



Willingness to change



Lack of tools and systems for integration



Lack of quantitative knowledge on water resources



Sustainability, operation and maintenance

Think About it...

Attitude
Changes
everything!

What is the general behaviour towards integrated water management in Lebanon?



What are the main sectors involved in the exploitation of water in Lebanon and what are the interactions between these sectors?



Is there any urgency to manage water resources in an integrated manner and how is this best done?