



# Floods, Droughts and Risks: The Introduction

*Dr. Mary M. Matthews, Ph.D.  
Chief Technical Advisor and  
Project Coordinator*



# Overview

- How it fits in IWRM?
- What are the issues?
- Why does it matter?
- Who are the stakeholders?



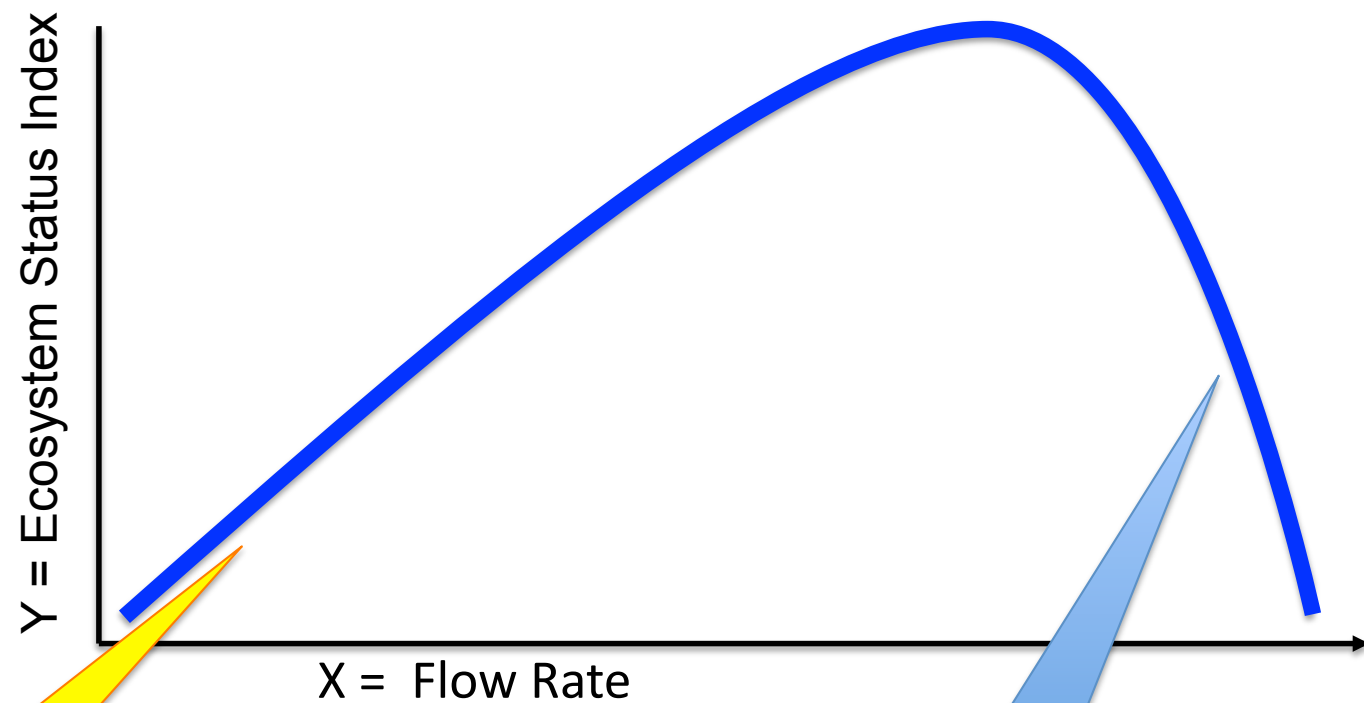
# How does it fit?

- Extreme events
- Yesterday – ecosystems and environmental flows – “regular flow patterns”
- Balance thrives when “normal”
- Changes in flows = changes in ecosystems
- Adaptation and evolution



# How does it fit?

$$\Delta X \rightarrow \Delta Y$$



**Droughts**

**Floods**





# What are the issues?





# Extreme Events



Lake Lanier,  
Georgia USA  
Main water  
supply to  
Atlanta



# How does it fit?

## Floods - Naturally

- Nutrients distribution
- Water to nearby lakes refreshed
- Soils wet
- Floods = Natural cycles

## Droughts

- Longer term
- Robustness of endemic species
- Species adapt



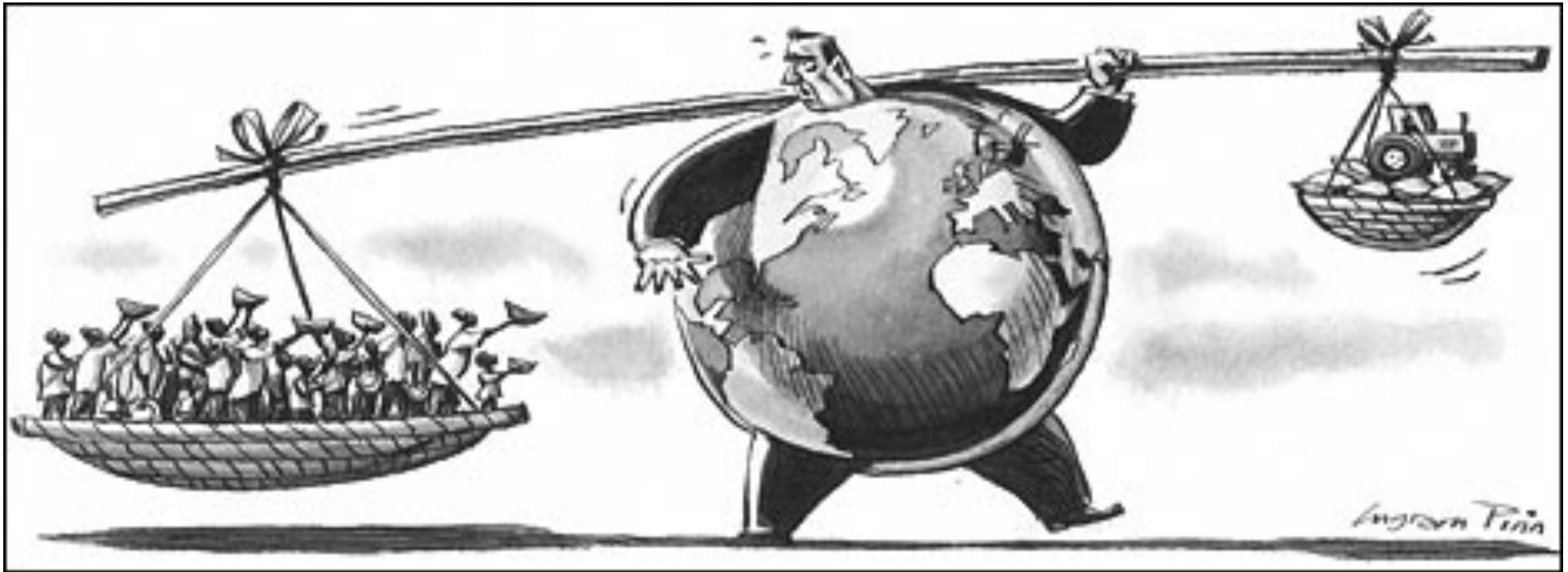


# Extreme events in out of balance ecosystem





# Extreme events in out of balance ecosystem







# Human changes





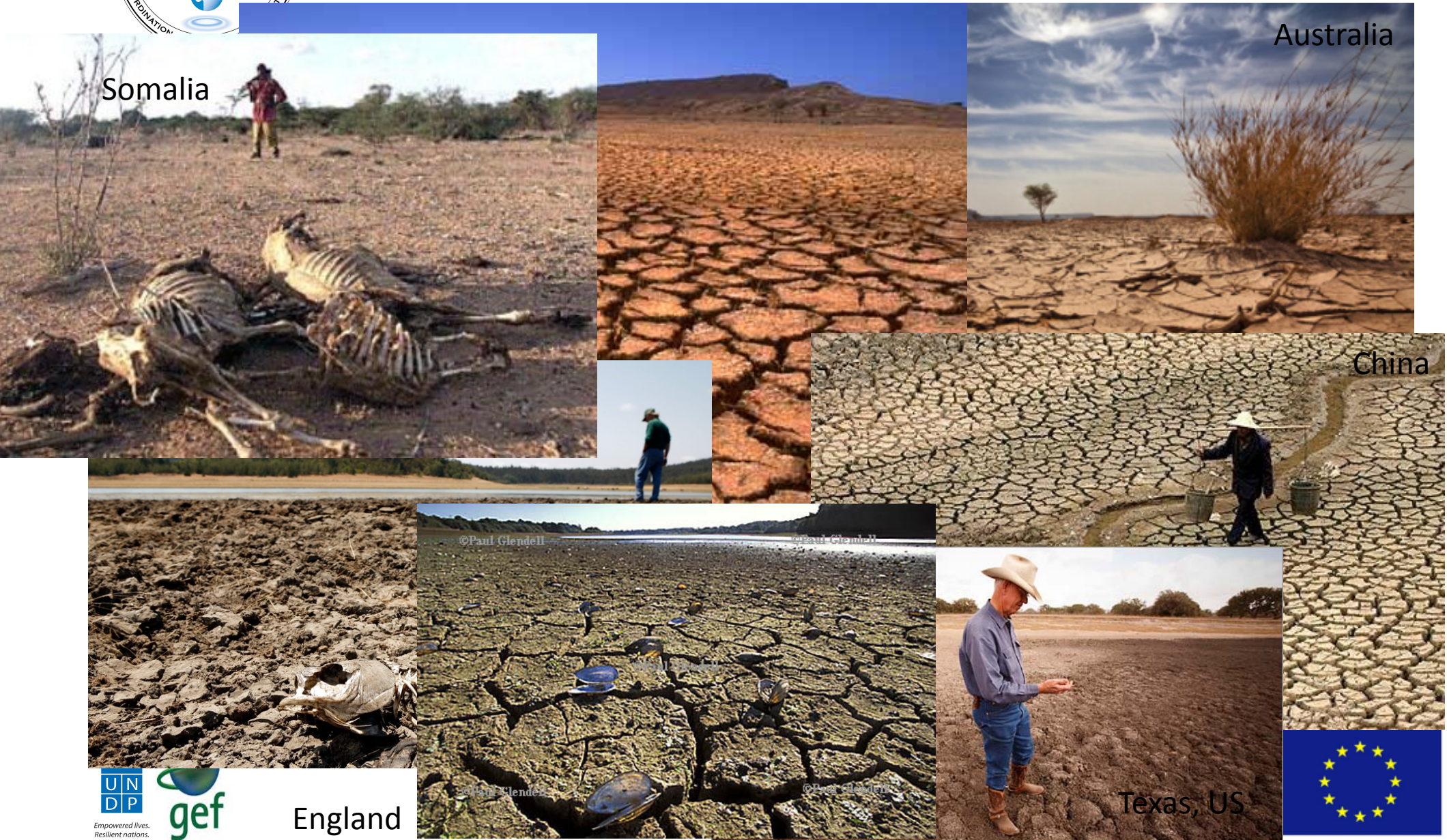


# Why does it matter?





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# Why does it matter?



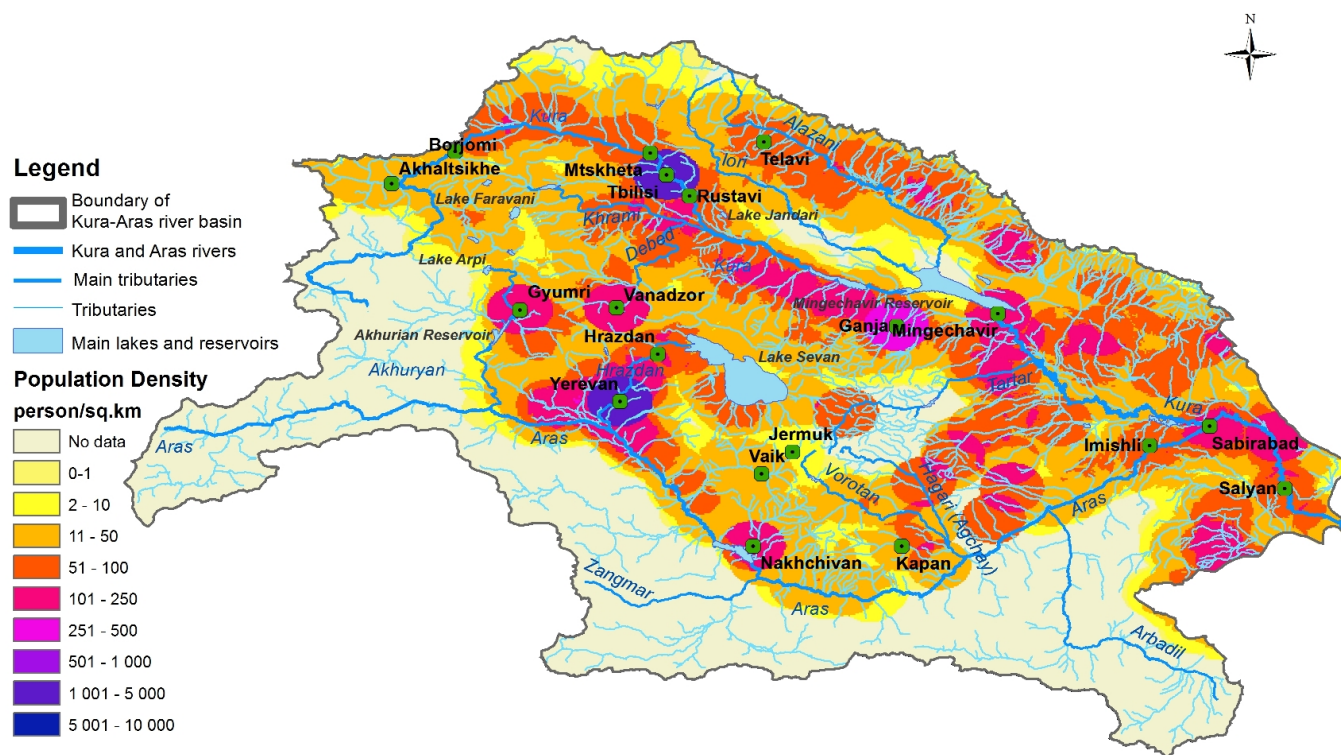


# Why does it matter?



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Population Density Map of the Kura-Aras Basin



Prepared by: UNDP/GEF Project  
on Reducing Transboundary Degradation  
in the Kura-Aras River Basin  
March 2012

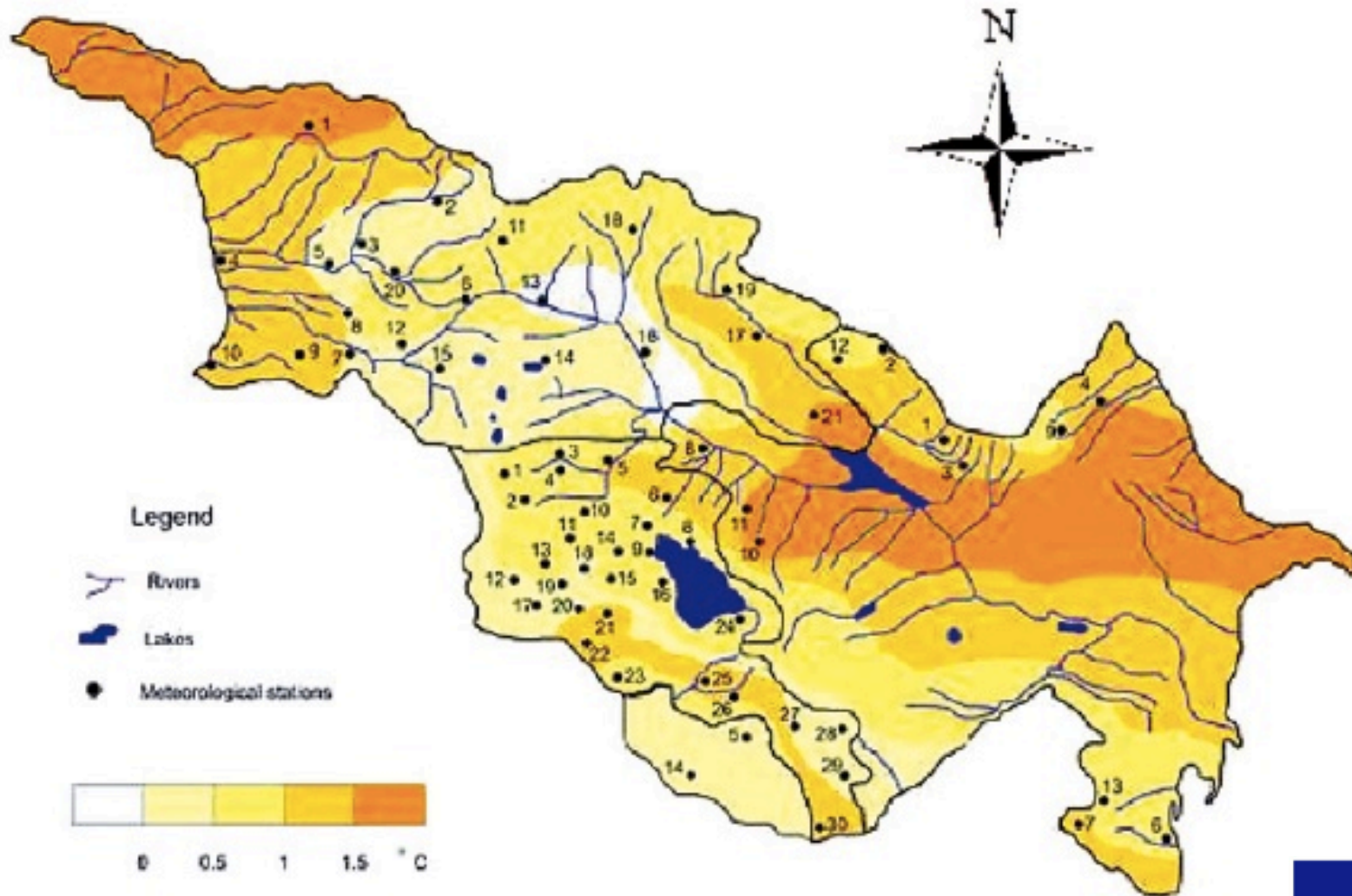
0 35 70 140 210 280 Km  
Geographic Coordinate System: GCS\_WGS\_1984  
Datum: D\_WGS\_1984  
Prime Meridian: Greenwich





# Why does it matter?

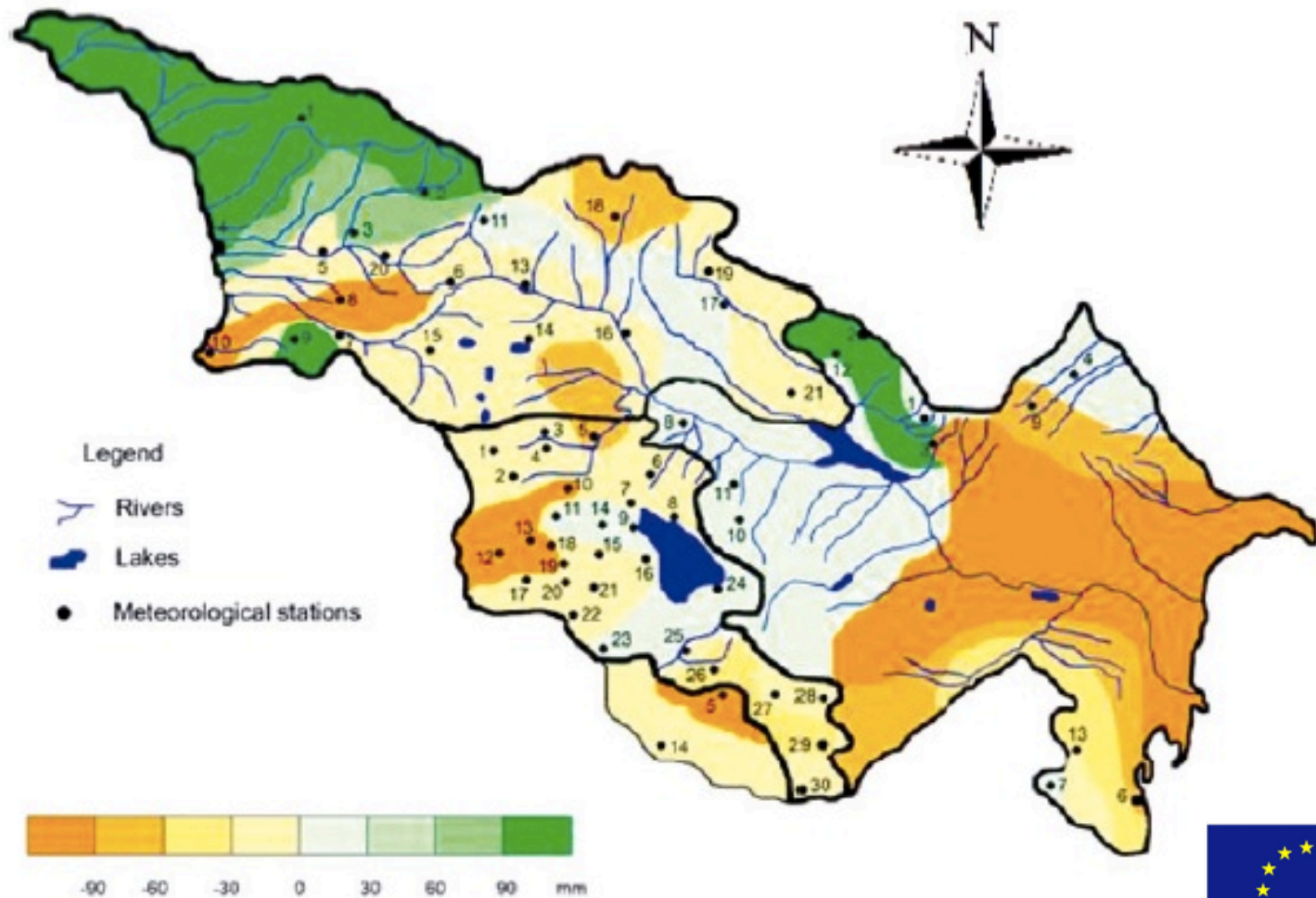
## Mean Annual Temperature 1960-1990





# Why does it matter?

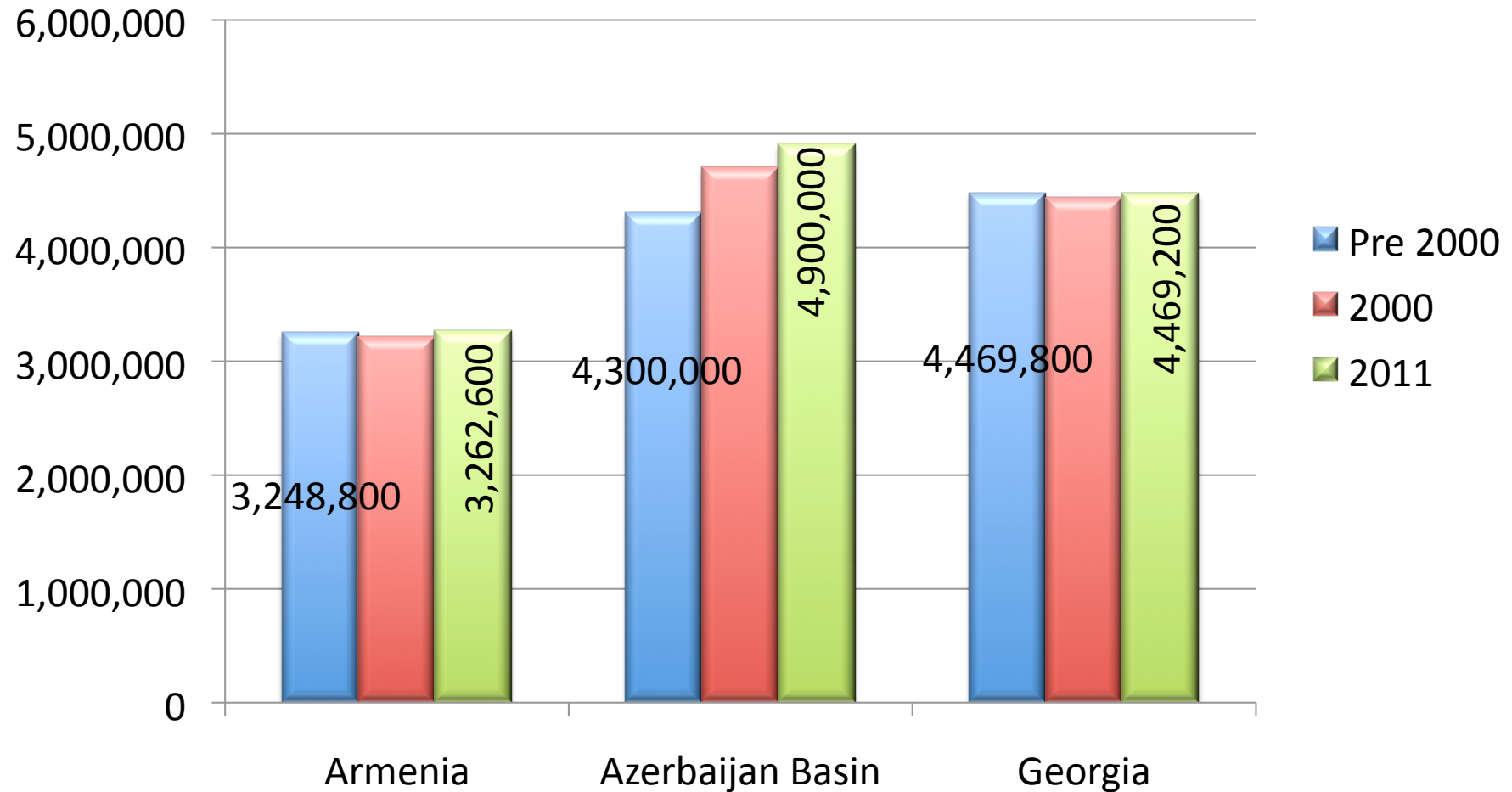
## Mean Annual Precipitation 1960-1990





# Why does it matter?

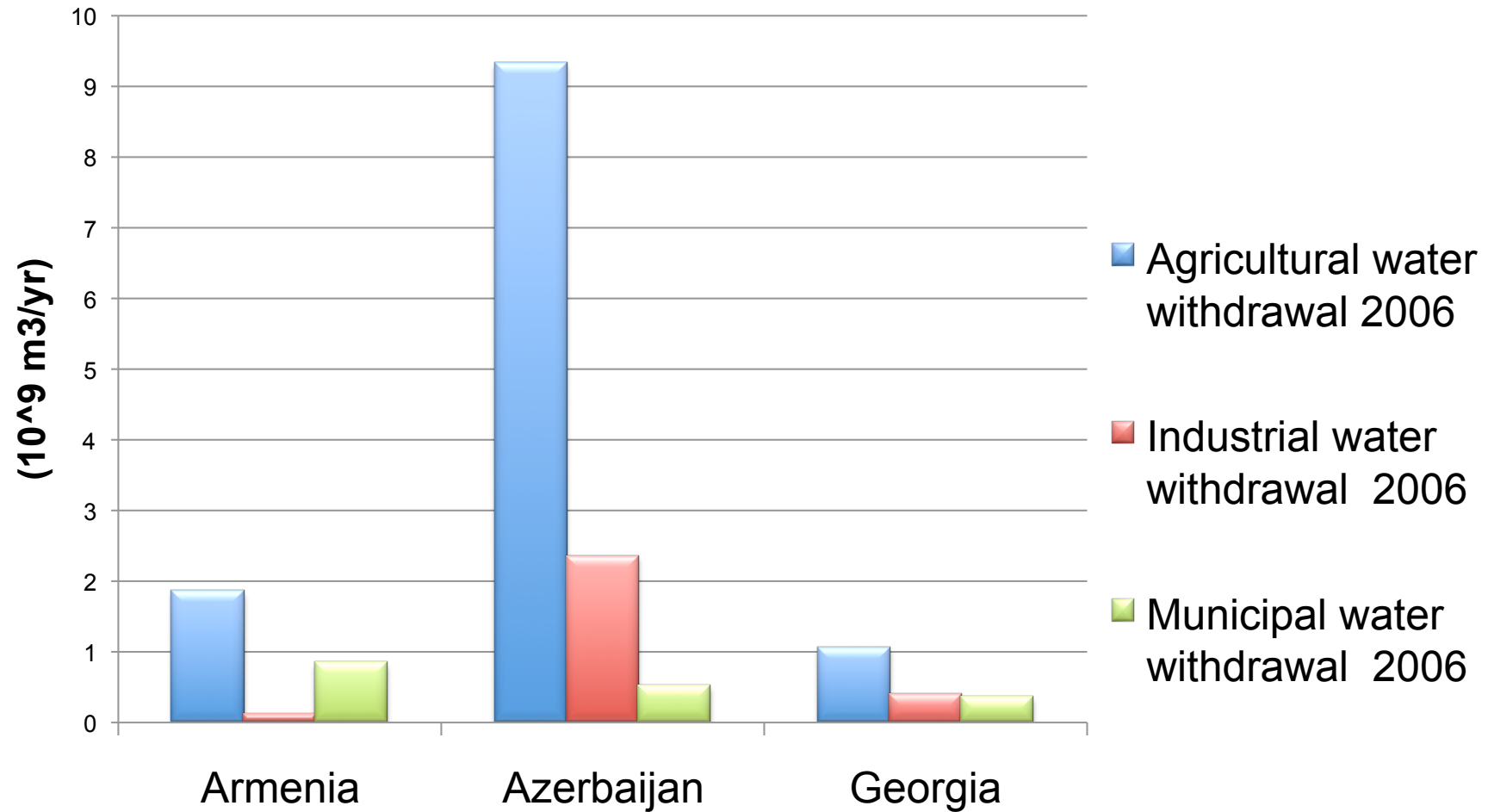
## Population growth in the Basin





# Why does it matter?

## Water Withdrawals by Sector







# Stakeholders



Empowered lives.  
Resilient nations.

gef







Thank you!  
Questions

*Next:*

*Flooding, Droughts and Risks  
What's really going on?*

