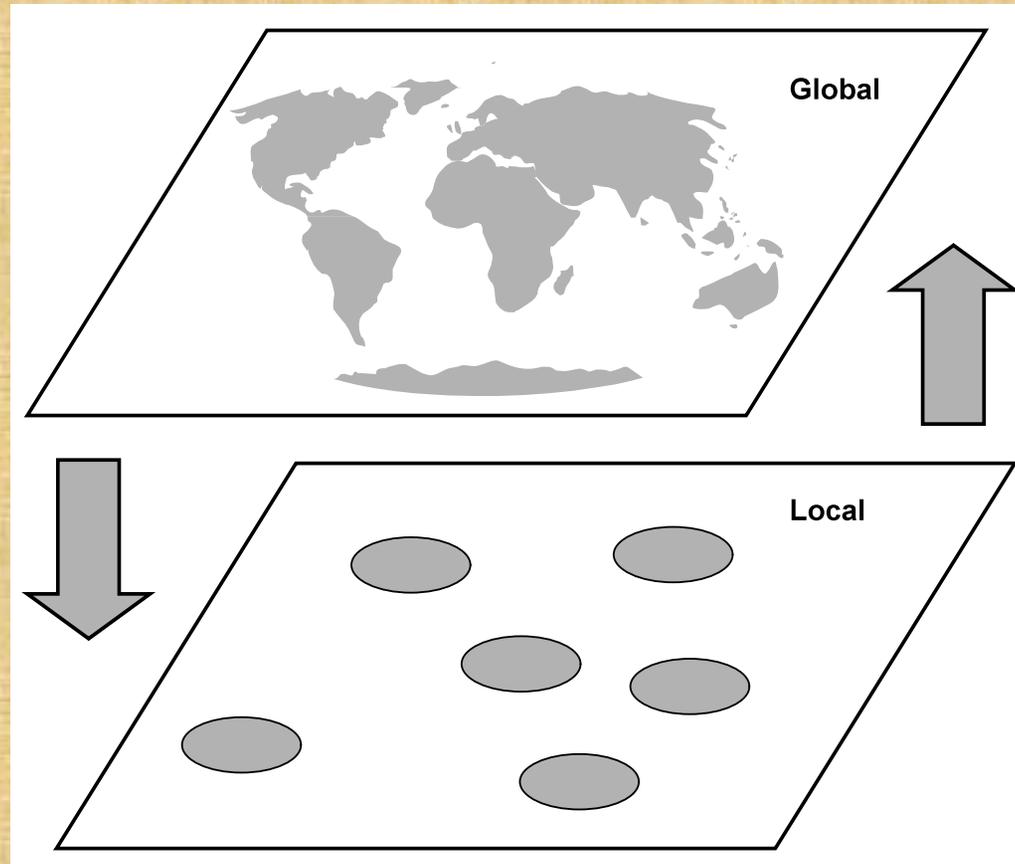


# IMPACTED THE WORLD BANK REPORT TO COPENHAGEN on the Economics of Adaptation to Climate Change

Strategic cyclical scaling: Evaluation at local and global scales.



**Source: Ecology and Climate: Research Strategies and Implications**

**Terry L. Root and Stephen H. Schneider**

*Science* 21 July 1995:Vol. 269. no. 5222, pp. 334 - 341

# THE UNKNOWN STEVE



# STEVE THE MOVIE STAR



WOODY ALLEN  
TAKES A  
NOSTALGIC LOOK  
AT THE  
FUTURE.



Woody Allen and Diane Keaton  
in  
"Sleeper"

A JACK ROLLINS-CHARLES H. JOFFE PRODUCTION

Produced by JACK GROSSBERG • Executive Producer CHARLES H. JOFFE  
Written by WOODY ALLEN and MARSHALL BRICKMAN • Directed by WOODY ALLEN  
The United Artists logo is visible in the bottom right corner of the poster.

# **An Equalize Wise Man Said it Best:**

Do you see a man skilled at his work?

He will serve before kings;

He will not serve before obscure men.

Proverbs 22:29

**THANKS , STEVE !!!**

# MULTI-METRIC VALUATION WATER RESOURCES

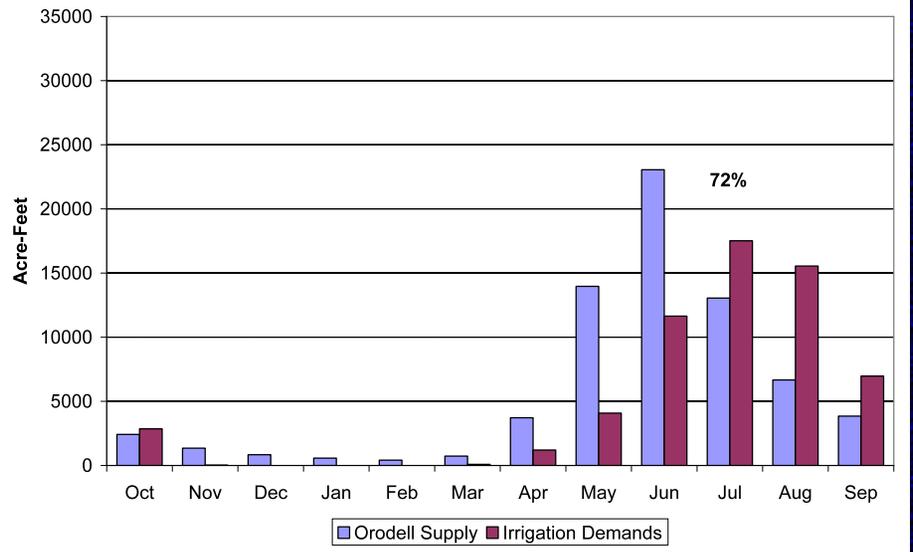
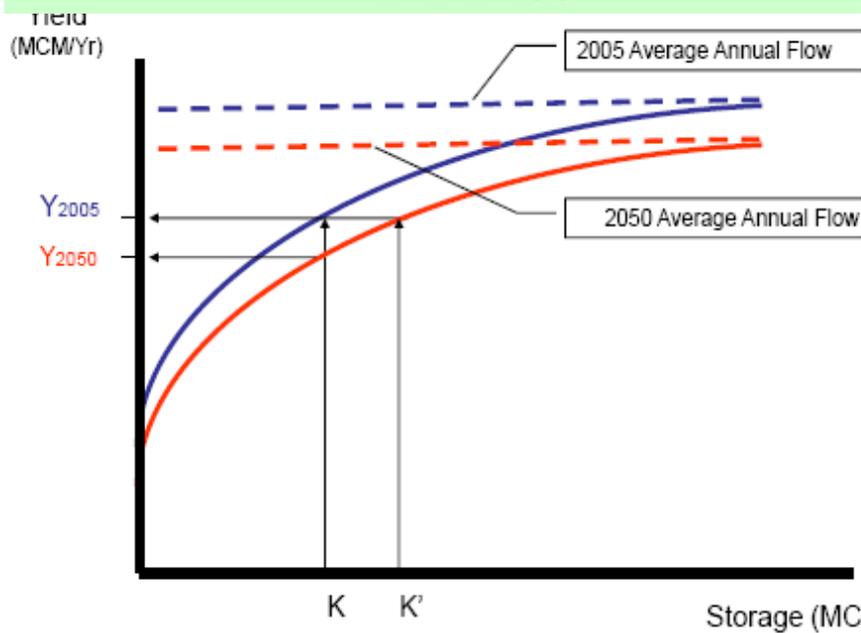
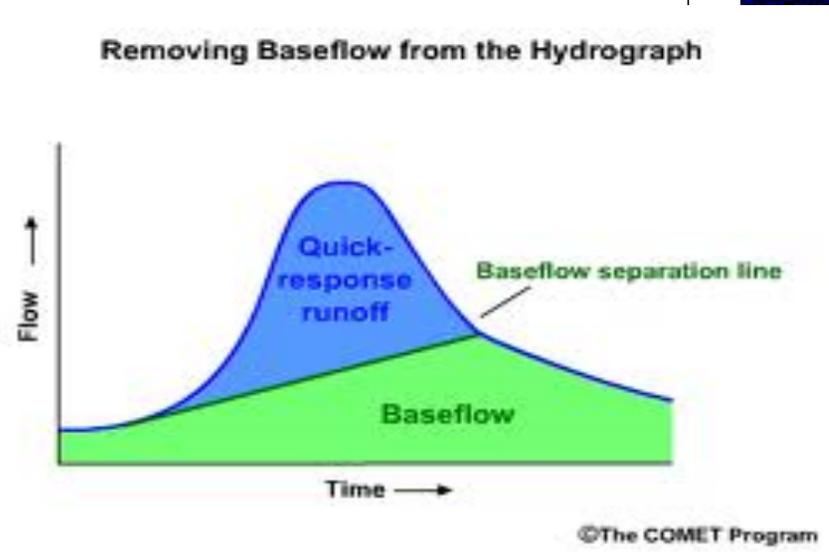
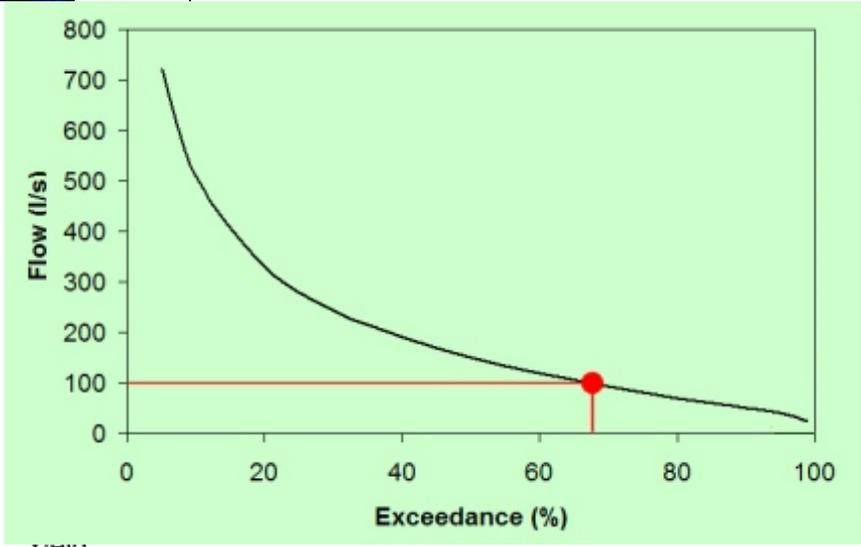
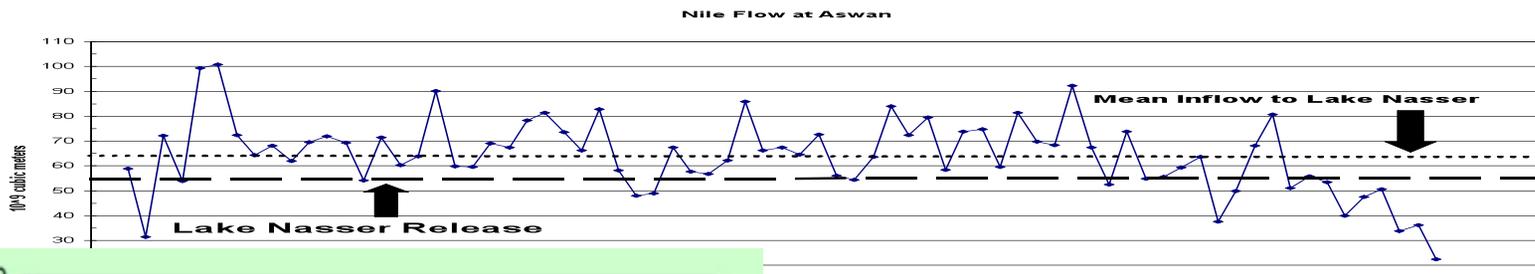
Kenneth Strzepek

**MIT** - Joint Program on the Science and Policy of Global Change  
UNU- World Institute for Development Economics Research

**CCI/IA Workshop Snowmass  
28 July 2010**



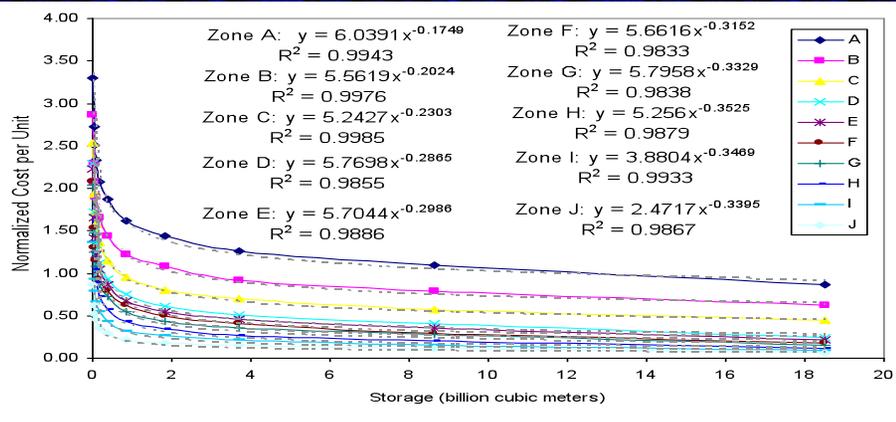
*Joint Program on the Science  
and Policy of Global Change*  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



# Valuation in Water Resources

<b>Water System</b>	<b>Metric</b>
Irrigation and Drainage	<b>Net irrigation deficit</b>
Urban Water Supply and Sanitation	<b>Runoff_Low Flow</b>
Rural Water Supply and Sanitation	<b>Runoff_Base flow</b>
Flood Control	<b>Runoff_Floods</b>
River Basin Management and multi-purpose infrastructure	<b>Basin yield</b>

# Market Valuation?



## Water Supply Cost

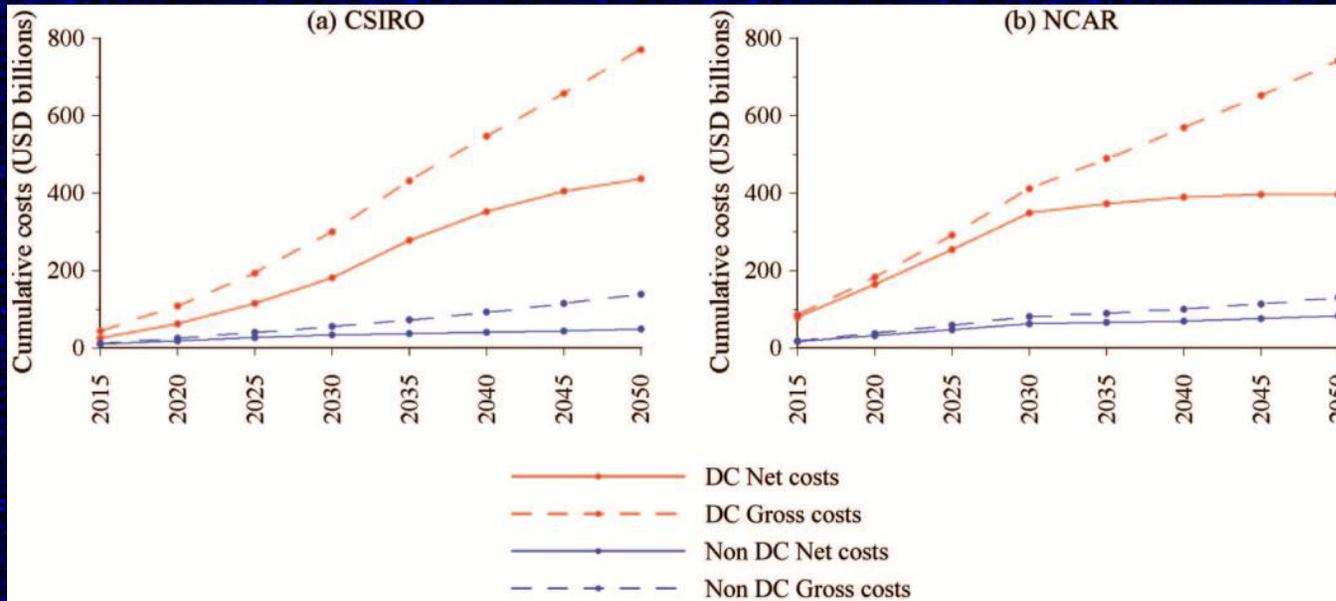
- Cost to replace lost yield
  - New Reservoir Storage
  - Alternative Supply
    - Conservation
    - Desalination

## COST OF RIVERINE FLOOD PROTECTION

- 50-year monthly flood in urban areas
  - \$50,000 per km<sup>2</sup> for urban areas
- 10-year monthly flood in agricultural areas
  - \$8,000 per km<sup>2</sup> for agricultural areas.
- These cost estimates were derived through a review of World Bank project performance assessment reports, implementation completion and results reports, performance audit reports, and project completion reports

# Cost of Adaptation in 2050

Water  
Supply



Flooding

