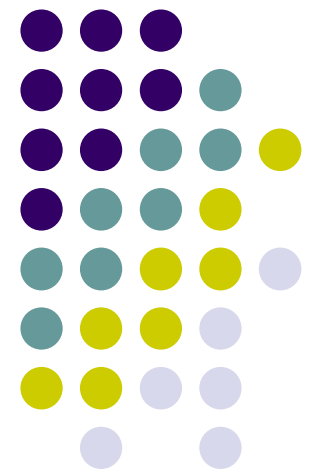
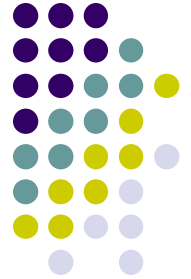


Adapting Management of Transboundary Basins to Meet Climate Challenges

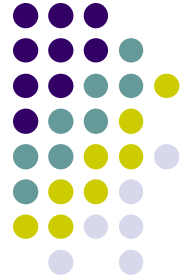
Ron Hoffer
Environment and Water Advisor
The World Bank
May 2009



Session approach



- I. Mainstreaming and the World Bank
- II. Case study – Sava River Basin
- III. Facilitated dialogue: “*science, application and policy*”



I. Mainstreaming & World Bank

- Knowledge products
- Near-term “no regrets” investments
- Mobilizing new finance
-outreach and communications

Water and Climate Flagship Report



- Summary of topical background and technical literature
- Basin-based climate and hydrology projections (runoff; basin yield; extreme events; base flow; irrigation demands, etc.)
- Review of Bank portfolio risk and trends
- Setting the stage: risk assessment framework; strengthening expertise
- Release in Summer 09?

Flagship work in progress



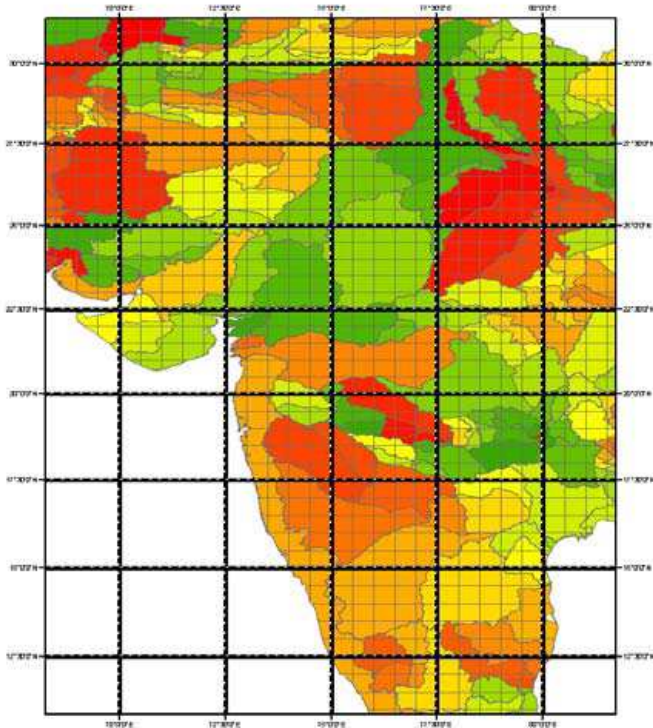
22 Global Climate Models

3 Emission Scenarios: (B2 A1b A2)

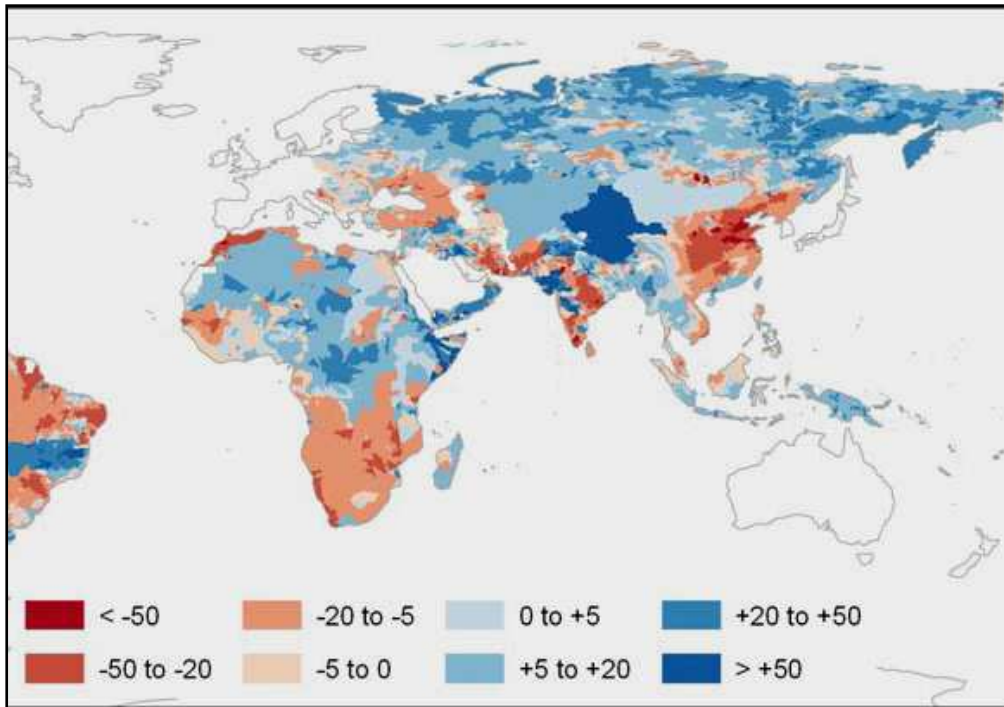
Projected to 2030 and 2050

CLIRUN-II Hydrologic model

No “downscaling” but grid aggregation
and alignment with catchments



Flagship work in progress



% change in basin yield by 2030

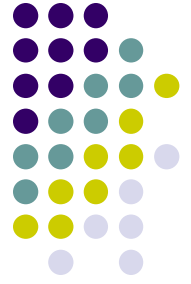
- Portfolio review?
- Continent review?
- Basin planning??
- Project design??



New ECA Adaptation Pilots

Topic	Output	Water issue	Transbound?	Focus
Water in SEE	Water adaptation plans	Inland water transport; IWRM	Yes; Sava than others in SEE?	SEE
Vulnerability of energy systems	Full sector risk review;	Hydropower; thermal cooling	Not directly	Albania; other SEE?; Caucasus
Agriculture and rural livelihoods	Sector note; adaptation plan	Some link to irrigation	No	Albania; other SEE?
Roadmap for Amu Darya	Water adaptation plan	Hydropower: IWRM	Yes	Central Asia
Distributional (income) impacts	Poverty & climate maps	Rural WSS?	No	Starting in Central Asia

World Bank increasing “no-regrets” adaptation investments



- Rehabilitation of drinking water, wastewater and irrigation systems
- Introduce more efficient irrigation technologies
- Modernize power generation and improve dam safety at hydropower plants
- Strengthen flood control dykes; shift to non-structural
- Strengthen HydroMet services

World Bank: SE Europe & Turkey



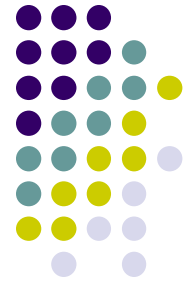
Knowledge Products

- Pilot assessments of impacts & adaptation

Example Investment Projects

- Energy community of SE Europe
- Irrigation and drainage rehabilitation
- Turkey renewable energy
- Trade and transport
- Integrated ecosystem management
- Watershed management
- HydroMet service improvements
- Regional disaster risk management

New Climate Investment Funds



Clean Technology Fund

Finance scaled-up
demonstration,
deployment and transfer
of low carbon
technologies

US\$5 billion pledged (+/-)

Strategic Climate Fund

Targeted programs to pilot new
approaches with potential for
scaling up

**Pilot
Program
for
Climate
Resilience**

**Forest
Investment
Program**

**Scale Up
Renewable
Energy in
Low
Income
Countries**

US\$1 billion pledged (+/-)

Climate Finance Needs

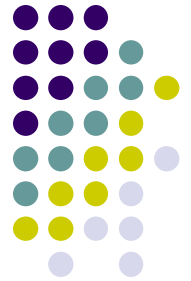


(Estimates for 2010-2020 in US \$ bln /year)

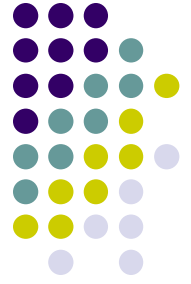
Mitigation (CO2 target)		
	550 ppm	450 ppm
Global	270	460
Developing countries	150	220
Adaptation		
Developing countries	30	30

Current “dedicated” resources covers < 5% of need

Session approach



- I. Mainstreaming and the World Bank
- II. Case study – Sava River Basin
- III. Dialogue on “*science, application and policy*”



III. Science, application & policy

- Where can we use existing climate science to make water project decisions?
- Does climate adaptation support IWRM or take away the focus?
- What is happening in my country/institution that I would like to share today on these issues?
- What additional workshops are a high priority for SEE?
- Other issues?