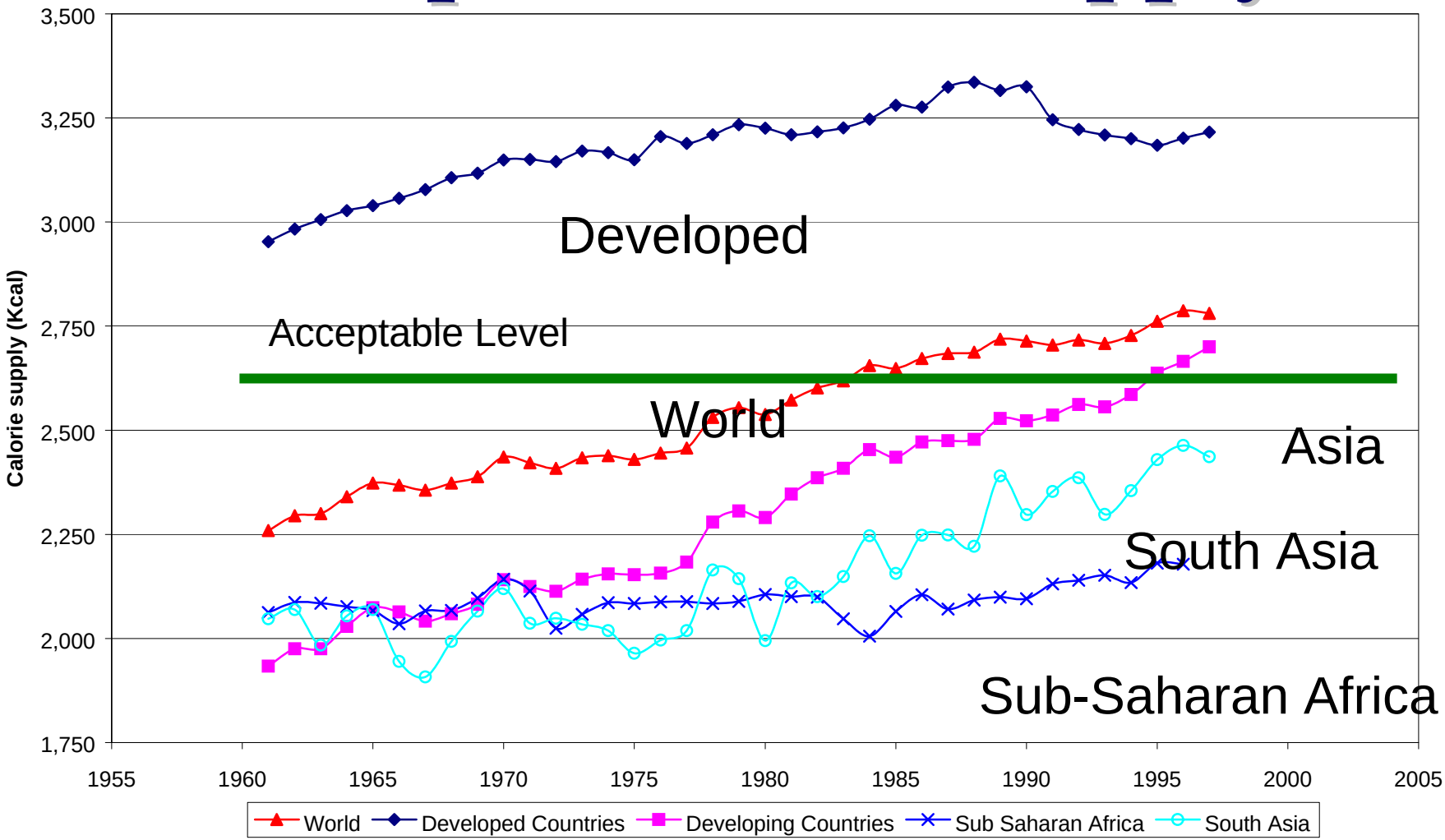
The Comprehensive Assessment of Water Management in Agriculture

An Overview

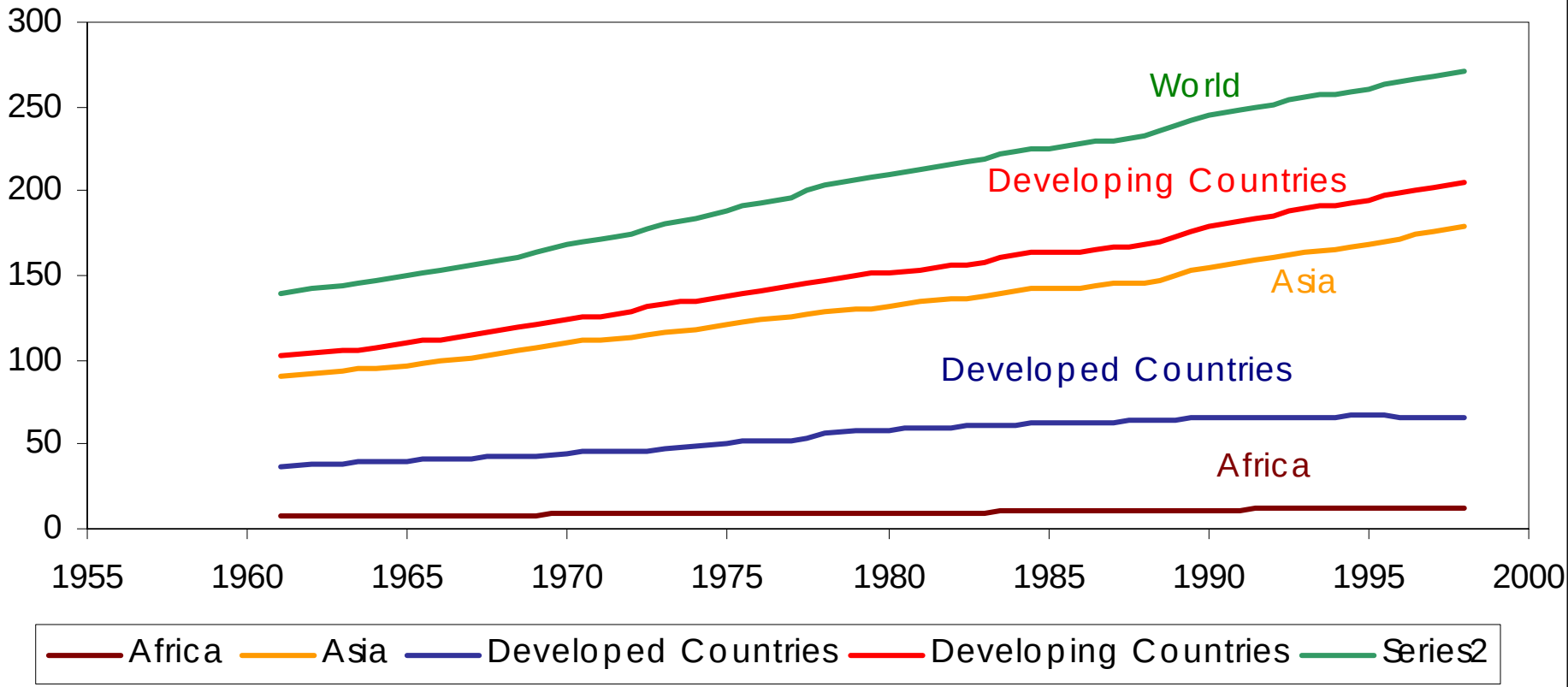
Why the CA?

Per Capita Calorie Supply



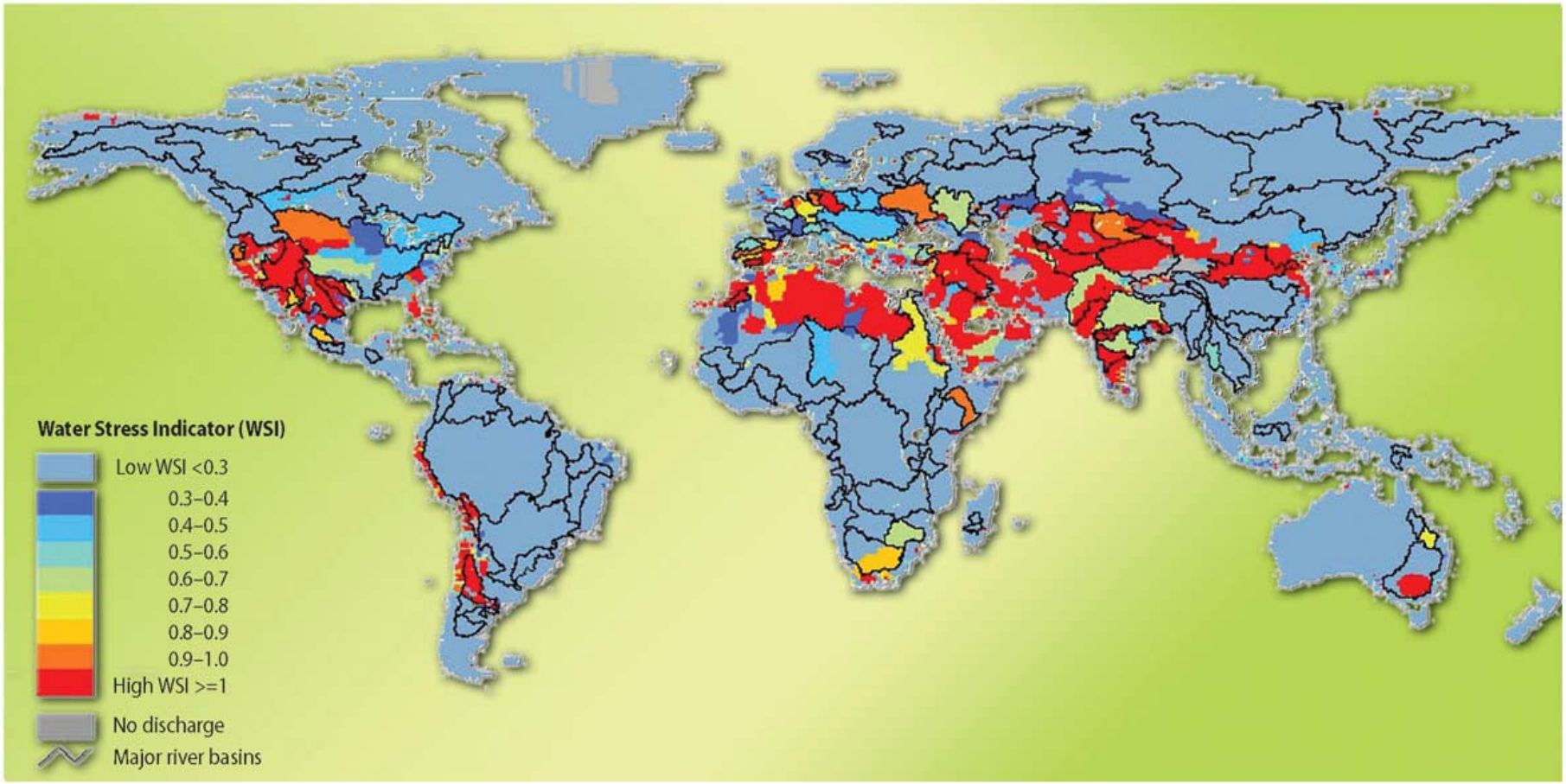
Source: FAOSTAT, 2001

Figure 1. Irrigated Area: 1961-1998



Source: FAO 2000

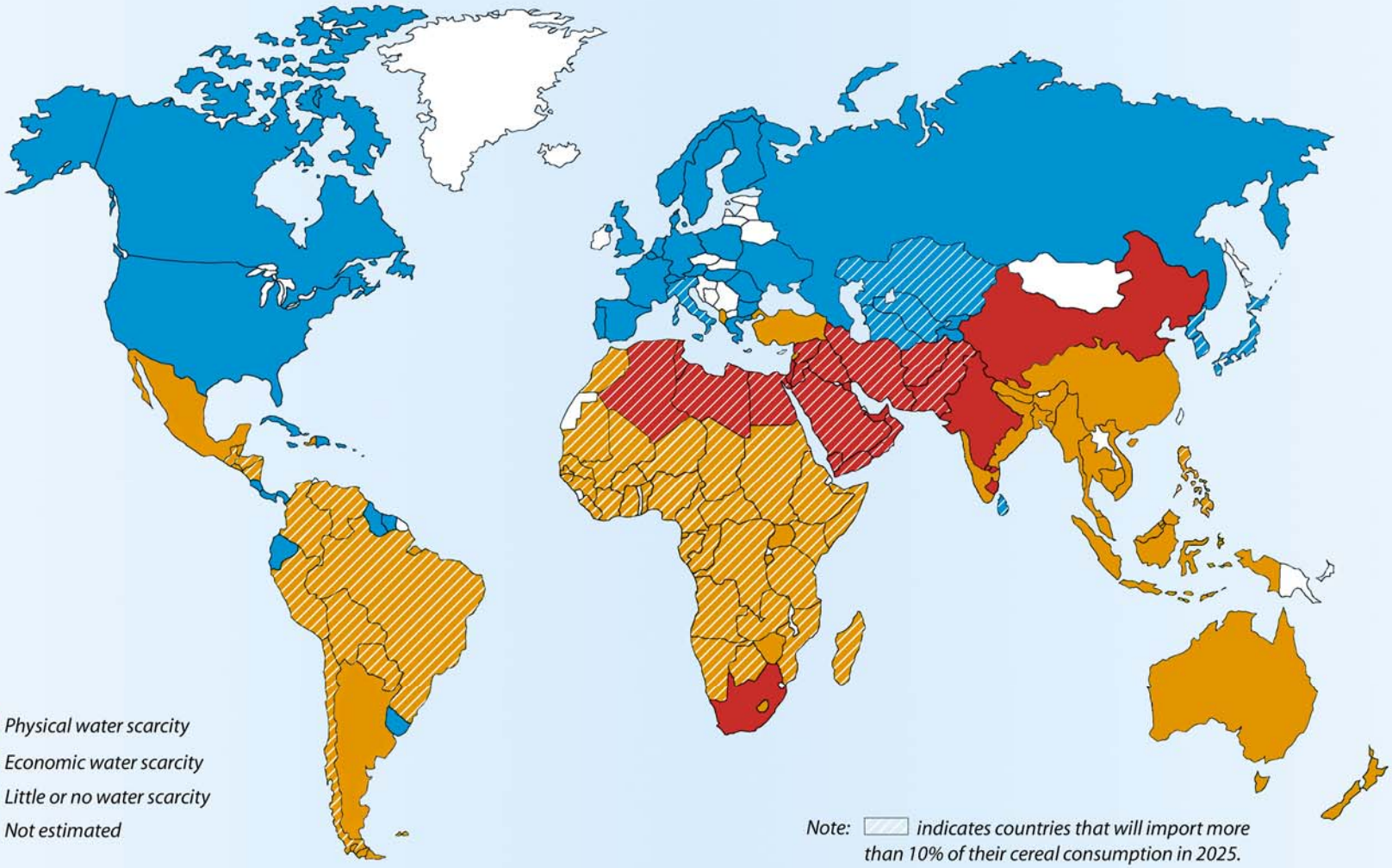
Environmental Water Stress



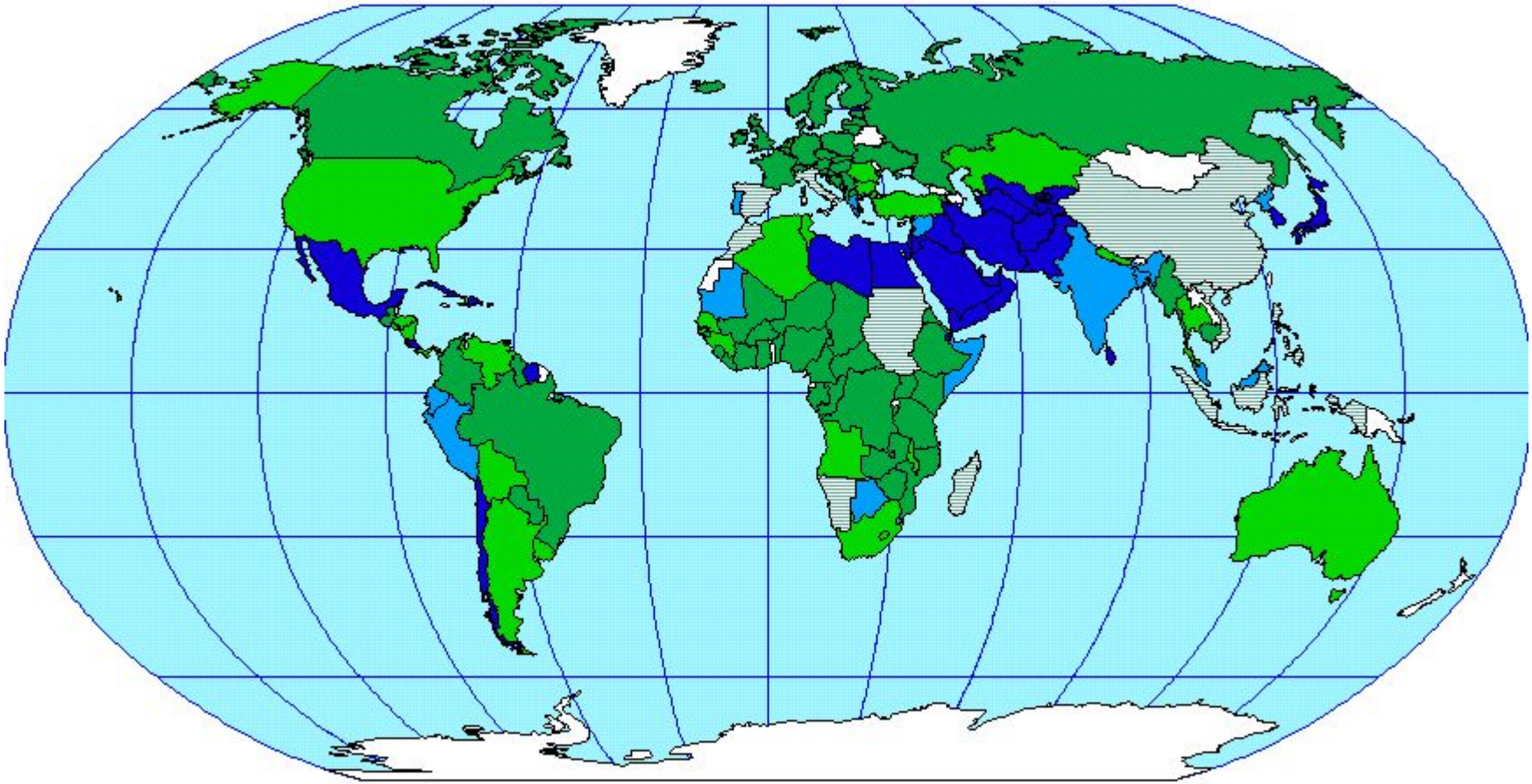
Source: IWMI, WRI, Kassel University

COMPREHENSIVE Assessment of water management in agriculture

Projected Water Scarcity in 2025



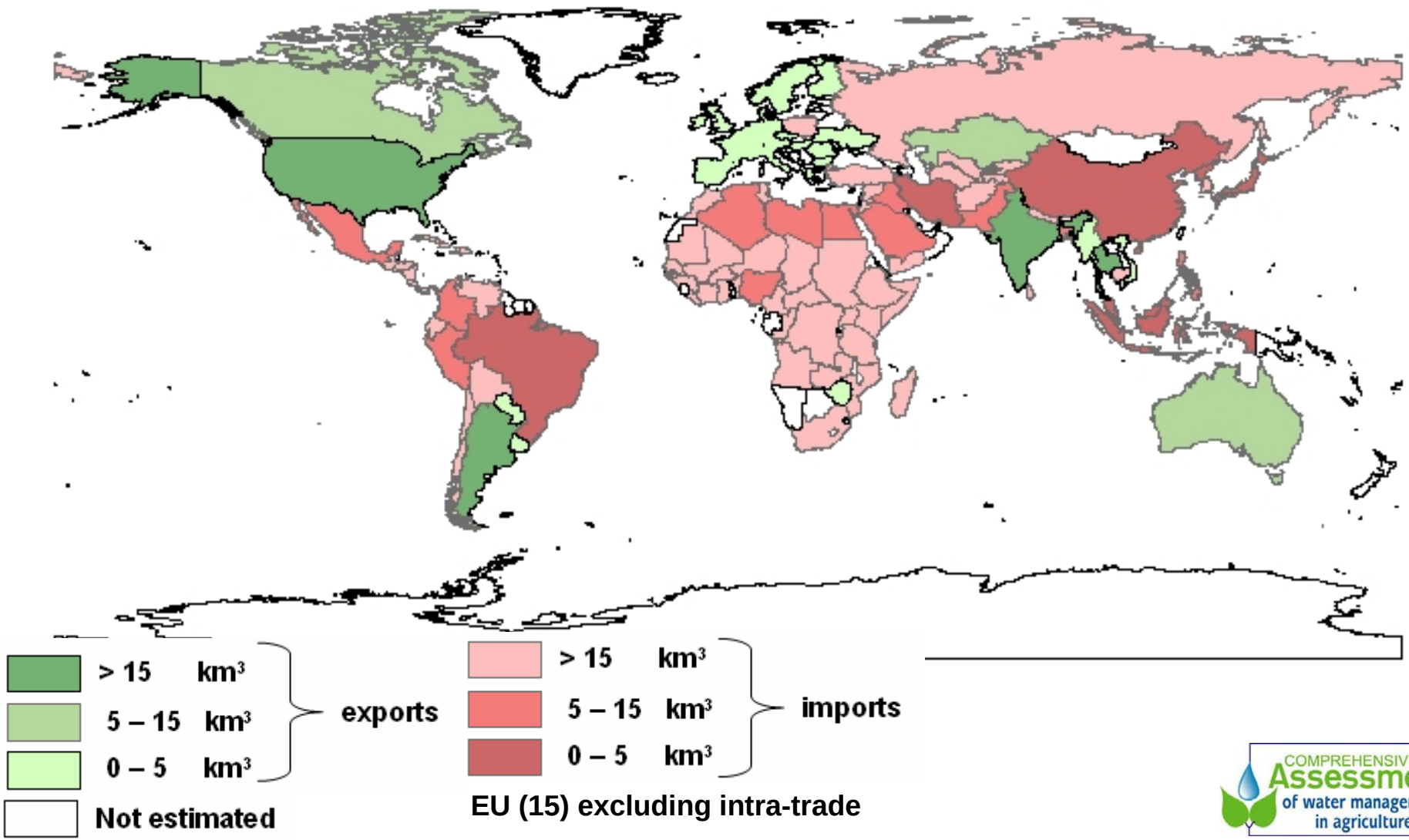
World map of Green and Blue water dependence in food production



Source: Rockstsrom et al, 2003, Water Productivity in Agriculture: Limits and Opportunties for Improvement

Virtual water flows (1995)

measured in crop ET, cereals



COMPREHENSIVE Assessment of water management in agriculture

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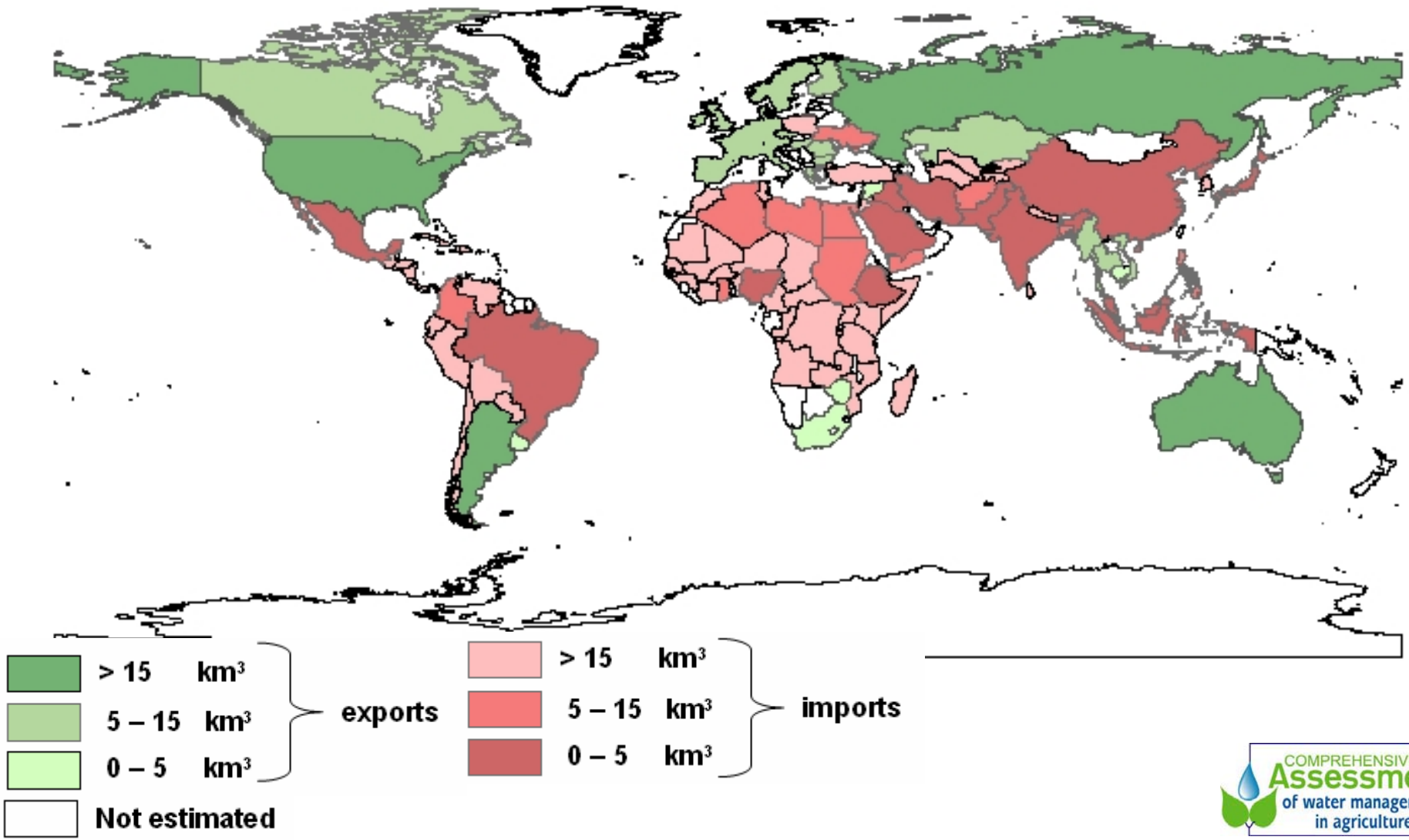


COMPREHENSIVE Assessment of water management in agriculture

Introducing the CA

The CA: Water, Food and the Millennium Development Goals

How can water for food be developed and managed to:

- **Help end poverty and hunger**
- **Ensure environmentally sustainable water-agriculture practices**
- **Find the balance between food and environmental security?**

The Assessment brings together researchers, water managers, development professionals, policy makers to take stock of:

- **the impacts of the past half-century of water development for agriculture**
- **the water management challenges communities are facing today**
- **the solutions people have developed**

For Better Investment and Management Decisions

By farming communities, governments, and donors to meet food and environmental security goals in the near future considering their impact over the next 25 to 50 years

The CA Program

For an improved knowledge on water management in agriculture

- an *assessment synthesis report*
- *assessment research* documented in a CABI book series, research reports, journal articles, discussion papers, working papers, briefs, and other outlets.
- *Assessment tools and information* including models (e.g.WaterSim), data and information tools (global map of irrigated areas, environmental flow map, information on virtual water trade), literature reviews (irrigation impacts).
- *Capacity building*
- Buildup of a community of practice and *networks of water, food and environment partners*

Builds on Initial Research Phase

- A first phase of the project sponsored 65 research projects done by 180 people from 149 institutes. Results are documented in a variety of publications:
- A book series of 8 available in 2006. (water productivity-published, coastal zone conflicts, groundwater, rainwater, land and water degradation, water laws, water pricing, and basins).
- Peer reviewed publications in numerous outlets including the CA Research Report Series (available on CA website).
- Other material includes 9 books, 48 workshop proceedings, 3 discussion papers.
- Briefs and media material. CA results have presented in ID21, SciDev, Bridges, and numerous media publications including New Scientist.
- Presentations at Stockholm Water Week, Water Dome, World Water Forum, and numerous conferences.


COMPREHENSIVE Assessment of water management in agriculture
GLOBAL PROJECTS
Pakistan
Central Asia
Iran
Syria
Tunisia
Jordan
Egypt
China
Nepal
Thaiwan
Laos
Thailand
Vietnam
Philippines
Mexico
Burkina Fase/Ghana
Ethiopia
Kenya
Tanzania
Botswana
India
Srilanka
Chile
Argentina
South Africa

CA Program Support

- Governments of Netherlands, Switzerland, and World Bank Support to the CGIAR for System Wide Initiatives for "core" support of assessment activities.

- Grants to assessment activities by: Governments of Netherlands, Sweden (through the Swedish Water House), Switzerland, Taiwan, Japan, EU (through the ISSIIM project), and Austria, the OPEC foundation, FAO, the CGIAR Challenge Program on Water and Food and the Rockerfeller Foundation.

Numerous in-kind contribution by participants of the assessment program and process.

Steering Committee

- Patrick Dugan, Worldfish
- Suhas Wani, ICRISAT
- Eiman Karar, DWAF, South Africa
- Johan Rockstrom, SEI, Sweden
- Gina Castillo, Novib-Oxfam, Netherlands
- Jean-Marc Faures, FAO
- Bas Bouman, IRRI
- Theib Oweis, ICARDA
- David Molden, IWMI

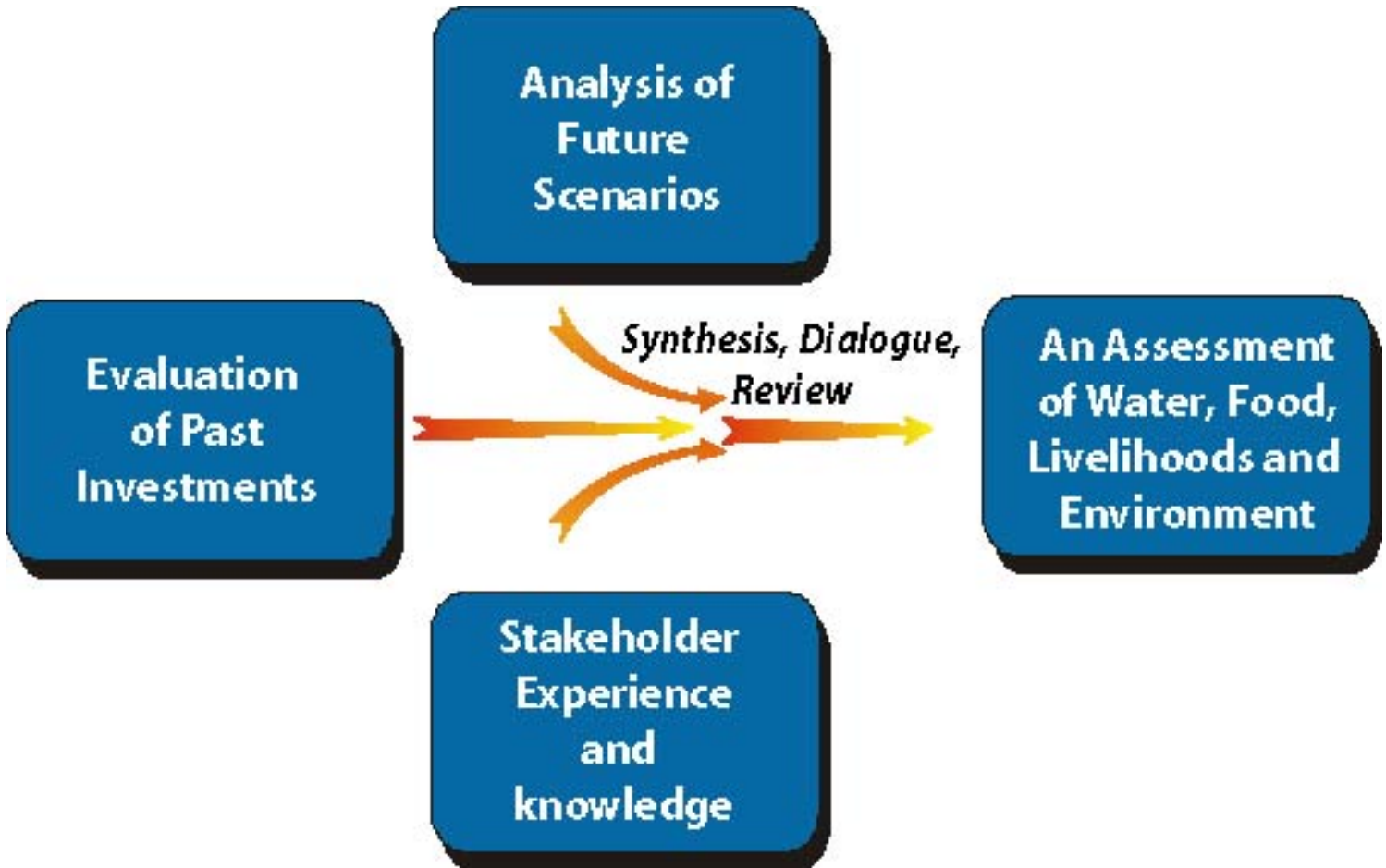
Co-sponsors

- FAO, CGIAR
- RAMSAR, CBD

Synthesizing Results Producing the Assessment Report

Where are we now?

- Synthesize CA research and any other relevant experience and knowledge.



The Synthesis Report

- An assessment of water, food, livelihoods and environment
- That influences investment and management decisions on water and agriculture
- To reduce poverty, malnutritition and hunger, while promoting environmentally sustainable practices (the MDGs)

	Review	Assessment
Audience	Scientists	Decision-makers
Conducted by	One or a few	Larger and varied group
Issues/topic	Simple and narrow	Broad and complex
Identifies gaps in	Research: driven by curiosity	Knowledge for implementation: problem-driven
(Un)certainty statements	Not required	Essential
Judgement	Hidden, more objective	Required and clearly flagged
Synthesis	Not required	Essential to reduce complexity
Coverage	Exhaustive, historical	Sufficient to deal with main range of uncertainty

The Assessment

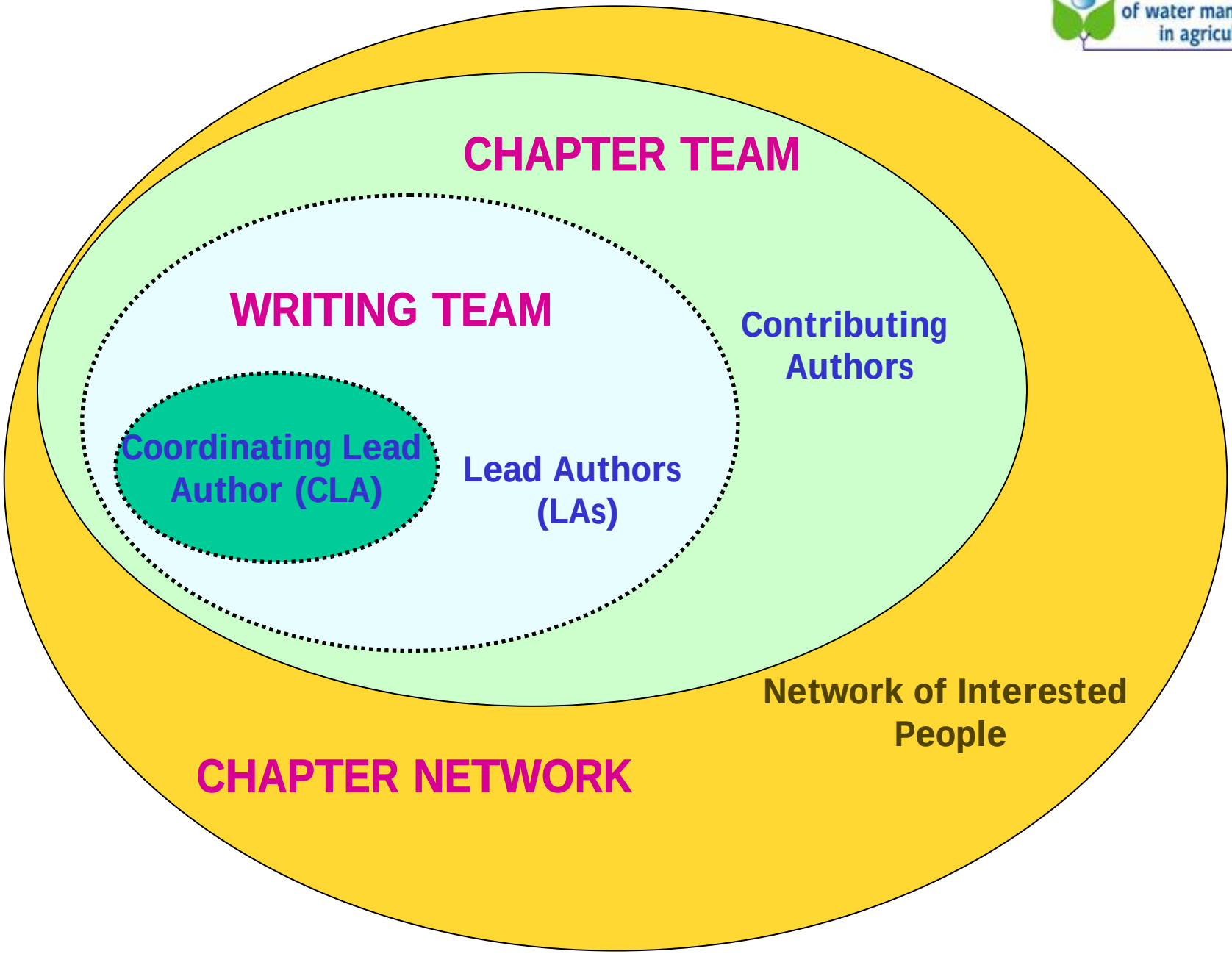
- Trends, conditions, response options, scenarios
- As comprehensive as possible on water-land-food-livelihoods-environment
- Credible, authoritative key messages
- Built by a process that encourages stakeholder participation and buy-in
- Transparent, inclusive, globally diverse teams of authors
- Delivered as a technical volume and an overview for policymakers.

Outline

- Section 1
  - Introduction
  - Conceptual Framework
  - Impacts of WMA
- Section 2 –
  - Rainfed
  - Irrigated
  - Groundwater
  - Low Quality Water
  - Fisheries
  - Rice
  - Land
  - Basins
  - LIvestock
- Section 3 –
  - Water Productivity
  - Ecosystems
  - Policies & Institutions
  - Poverty
- Section 4
  - Scenarios
- Section 5
  - Overview for Policy makers

Building the Assessment

- **Participatory approach engaging communities of practices to develop chapters around each CA question and cross cutting issue**
- **Each chapter has author team 10 – 20 with 3 to 4 lead authors including one coordinating lead author (CLA), plus larger consulting network (100+)**
- **Teams from a diverse background – experience, gender, location**
- **Thorough and extensive scientific and stakeholder review process for credibility**


CHAPTER TEAM
WRITING TEAM
Coordinating Lead Author (CLA)
Lead Authors (LAs)
Contributing Authors
Network of Interested People
CHAPTER NETWORK

Teams

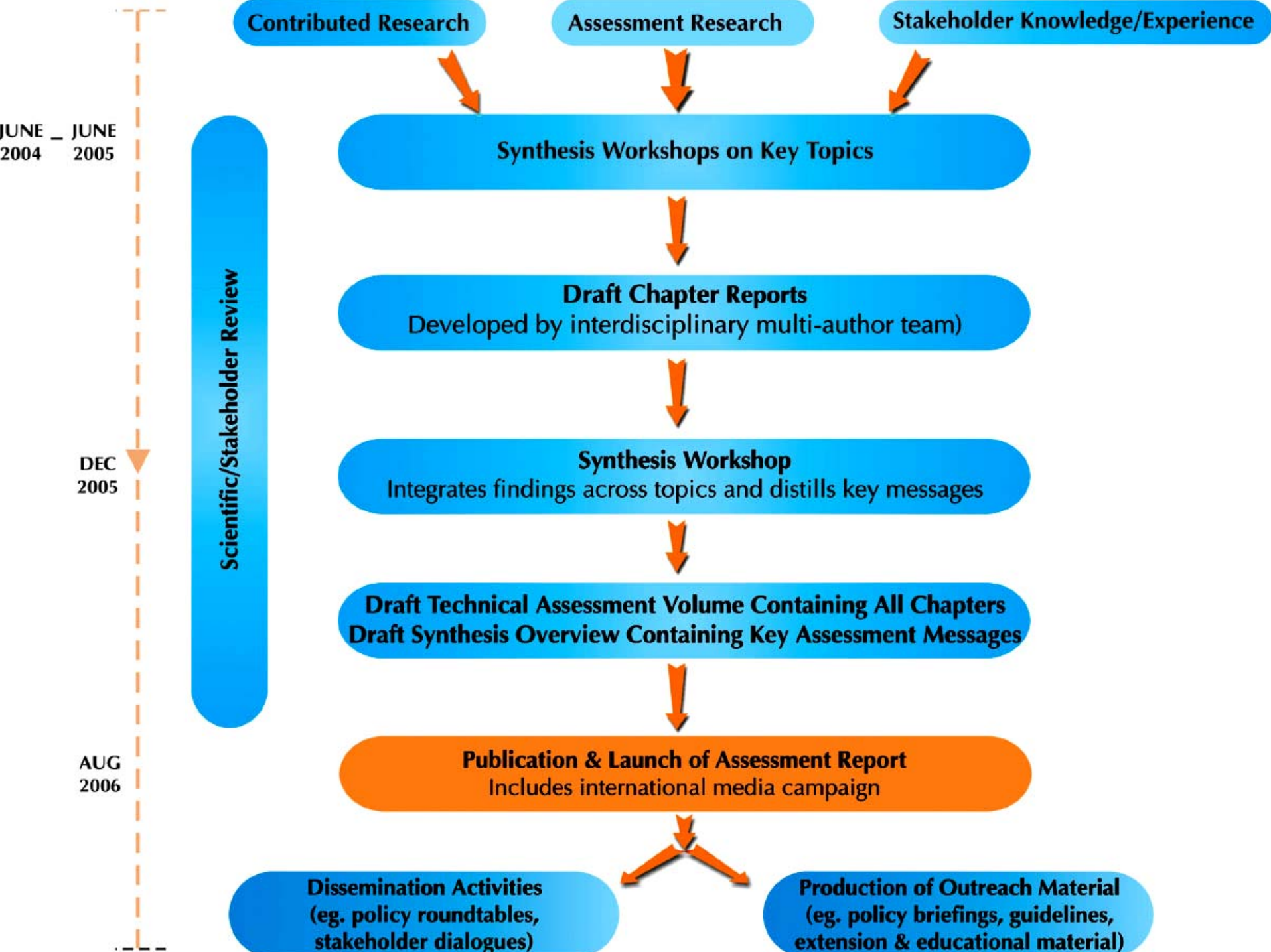
- **Chapter Teams & chapter networks**– 3 to 4 lead authors for writing, contributing authors, network
- **Cross-cutting issue teams** – same composition with additional responsibilities of interacting across chapters
- **Scenario Team** – core team plus CLAs
- **Reviewers** – independent,
- **Secretariat –** supports process

Cross Cutting Issues

- Ecosystems, Policies & Institutions, Poverty, Gender, Health, Climate Change, Productivity
- Gender, Health, and Climate Change –
  - Incorporated across chapters
  - Working groups on these to:
    - Identify issues for chapters
    - Provide content for chapters

Co-sponsors

- FAO, the Ramsar Convention on Wetlands, the Convention on Biological Diversity, and the CGIAR
  - Provide questions and issues for the assessment
  - Accept assessment report and transmit it to their government constituents
- In discussion with Ramsar/CBD and CGIAR/CPWF to make a special report
- Linked to IAASTD


Contributed Research
Assessment Research
Stakeholder Knowledge/Experience
JUNE 2004 _ JUNE 2005
Scientific/Stakeholder Review
Synthesis Workshops on Key Topics
Draft Chapter Reports
Developed by interdisciplinary multi-author team)
DEC 2005
Synthesis Workshop
Integrates findings across topics and distills key messages
Draft Technical Assessment Volume Containing All Chapters
Draft Synthesis Overview Containing Key Assessment Messages
AUG 2006
Publication & Launch of Assessment Report
Includes international media campaign
Dissemination Activities
(eg. policy roundtables, stakeholder dialogues)
Production of Outreach Material
(eg. policy briefings, guidelines, extension & educational material)

Detail of the Timeline

- Nov 2005 to April 2006: chapter finalization with internal reviews across chapters, scientific review and wide consultations and reviews with chapter networks
- April 2006 – editing and publishing
- Through July 2006 – editing, layout,
- August 2006– delivery of the Summary for Decision Makers (SDM) in Stockholm
- Aug – Sep 2006 – publishing
- Sept/Oct 2006 – delivery of assessment at a launch (to be organized)

Thank you

For further information visit:
www.iwmi.org/assessment
or write to
comp.assessment@cgiar.org