



Day 3: Data Management

Making it Matter and Helping it Flow





Day 1: Overview of Integrated Water Resources Management – Integration from theory to Practice

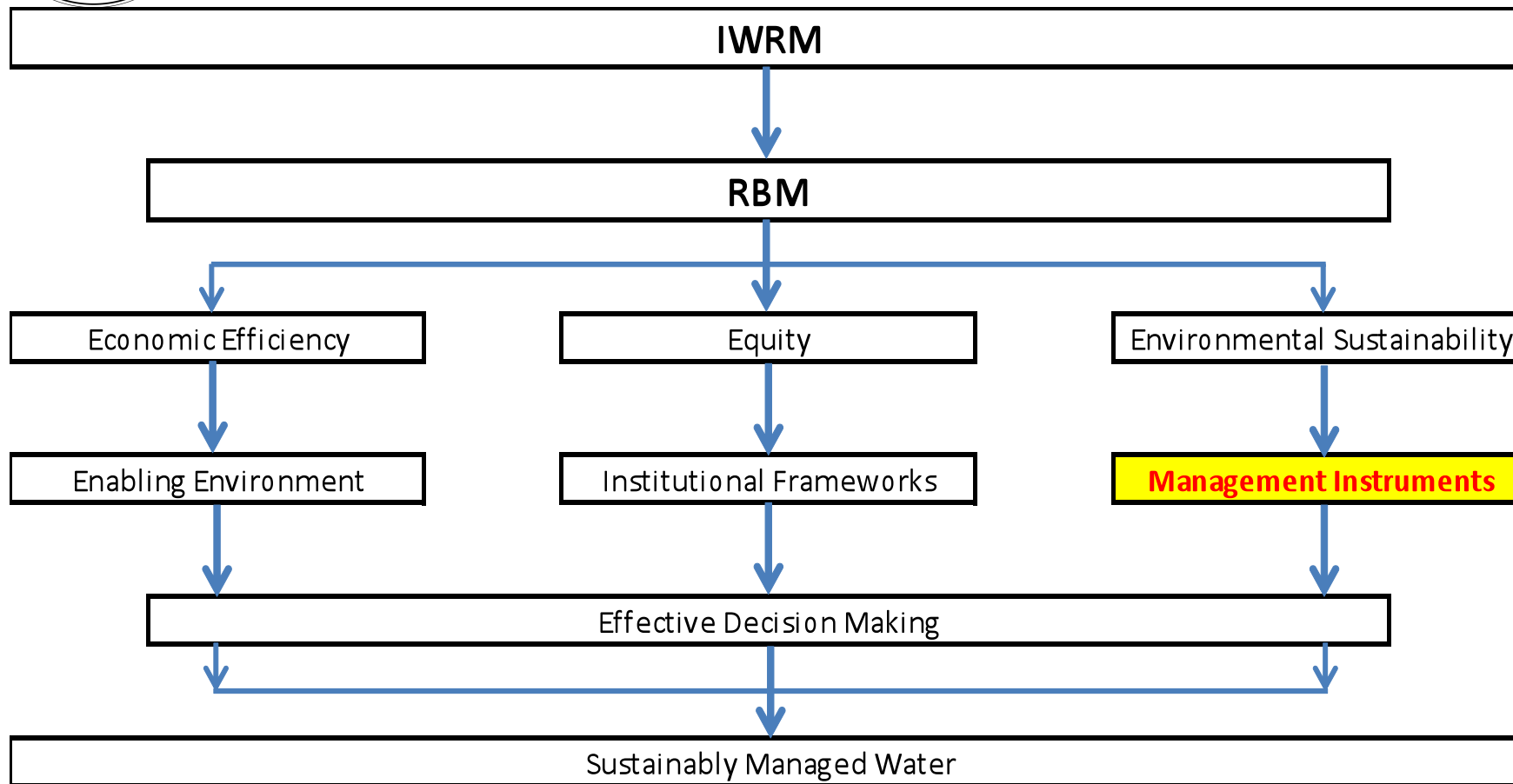
Day 2: Water Quality Management - Reaching Decision Makers

Day 3: Data Management – Making it Matter and Helping it Flow



Data Management – Making it Matter and Helping it Flow

- **Part 1: Introduction - IWRM and how data management connects**
- Part 2: Information in Water Quantity and Water Allocation
- Part 3: Information in Water Quality Management
- Part 4: Other aspects of IWRM and information management needs
- Part 5: Summary and Conclusion





What IWRM Supports

Economics and Economic Efficiency:

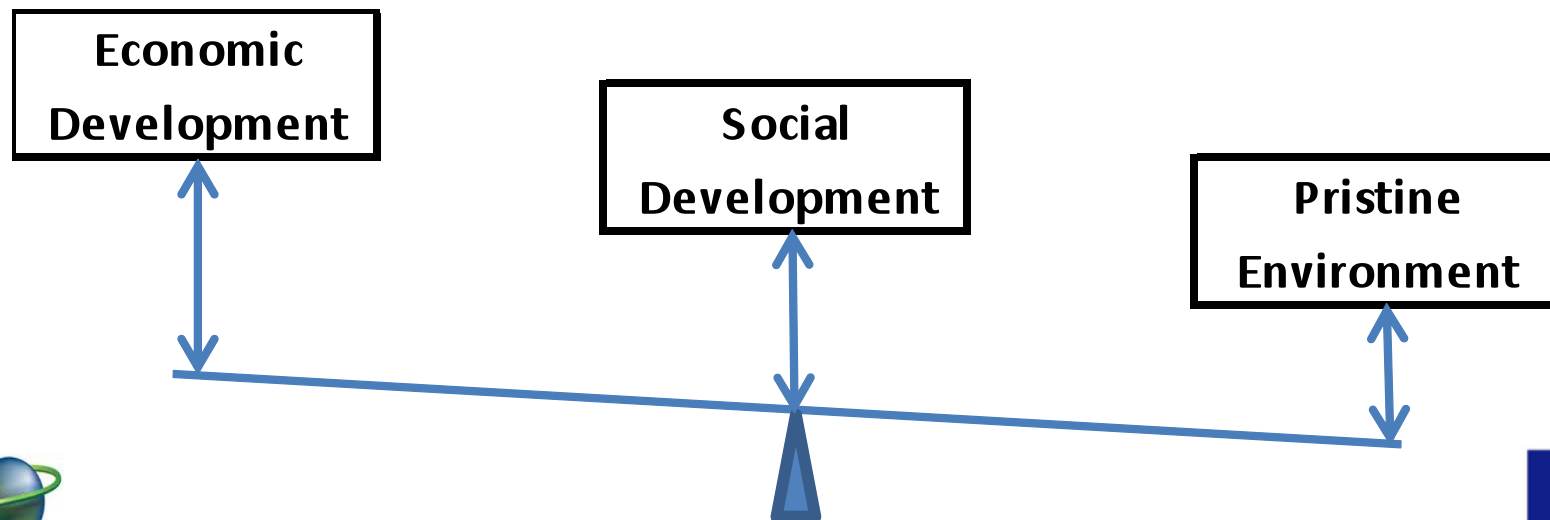
- Driving economic development;
- Ensuring infrastructure investments in water resources achieve their design purpose;
- Ensuring the costs of improved water management result in greater benefits;
- Effective data and information chains are crucial



What IWRM Supports

Equity:

- Equitable allocation and distribution of water
- Equitable regulations on water, on environmental protection
- Equity is about finding balance:





What IWRM Supports

Environmental Sustainability:

- specific environmental and ecological health;
- maintaining a healthy place to live
- sustainability of the water resource – so there is sufficient, clean water for now, the next generation, the generation after that.....



What we need to Support IWRM

Enabling Environment:

- strong and realistic policies
- realistic and enforceable laws and regulations;
- water mainstreamed into national development
- appropriate and sustainable funding



What we need to Support IWRM

Institutional Frameworks:

- capacity development of water management practitioners;
- decentralization of decision making to appropriate levels;
- establishment of cross-sectoral coordination frameworks;
- improvement of ministerial and departmental mandates;
- formal involvement of stakeholder groups;
- public awareness and mobilization of stakeholders;



What we need to Support IWRM

Management Instruments:

- IWRM strategy and plan development;
- water resources issue assessments;
- water resources development plans (such as RBM Plans);
- regulatory instruments and enforcement mechanisms;
- demand management, conservation initiatives
- **Effective information management;**



IWRM is a sharing of responsibilities and roles among stakeholders

- Perspectives and challenges vary among stakeholders
- Stakeholders have different goals, perspectives and interests
- Therefore different information needs – BUT
- different information may come from the same data source.
- Data collectors, information providers need to understand these differences



Who are the stakeholders?

Many, but....

- water resources planners and managers
- environmental management specialists
- land management specialists
- public health professionals (water supply, sanitation, etc.)
- policy makers (water, environment, land, public health, economic development, etc.)
- Others

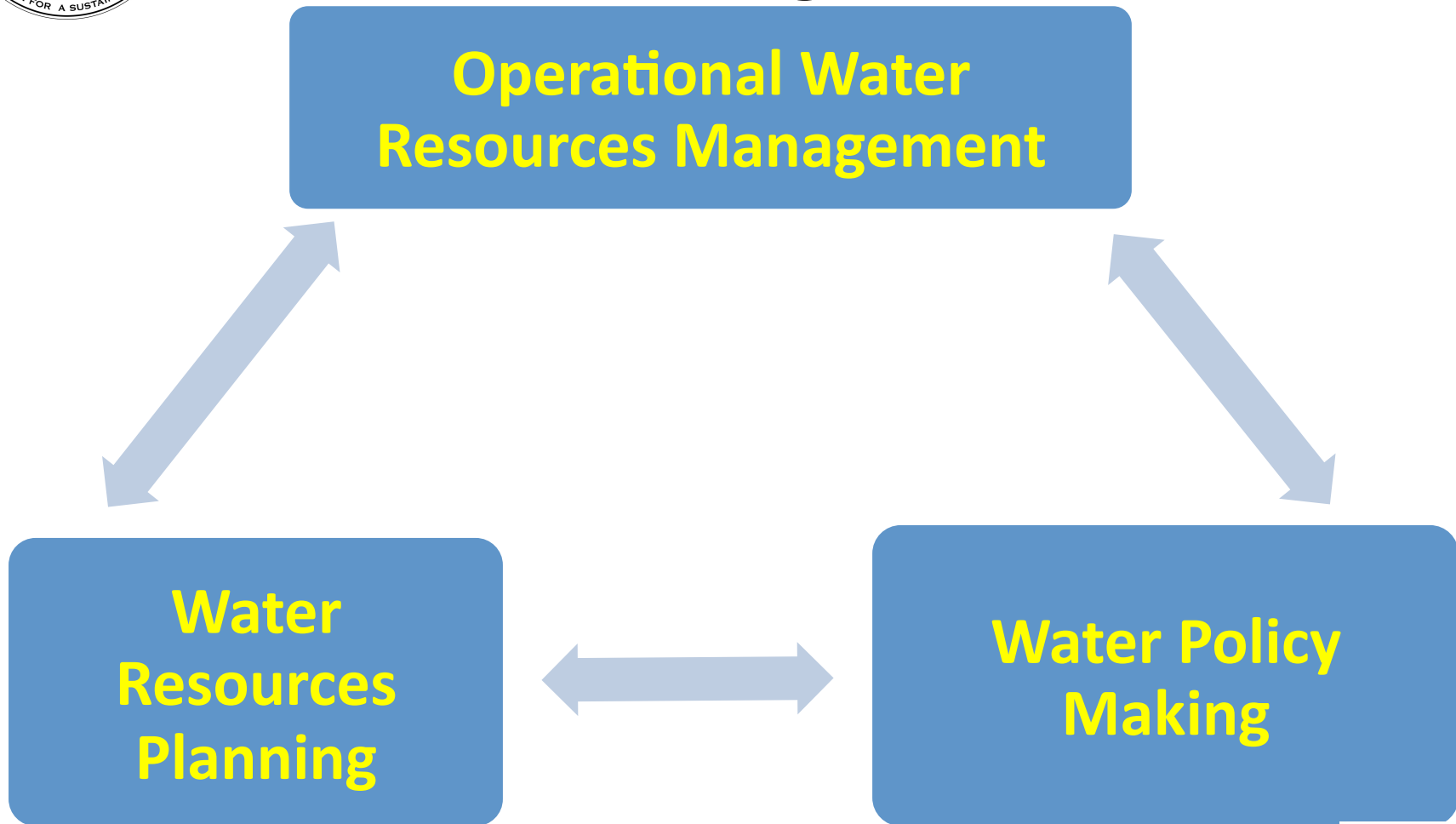


Water Resources Management - 3 Levels

1. Operational Water Management
2. Water Resources Planning
3. Policy Making



Three Levels in Water Resources Management





Water Resources Management - 3 Levels

1. Operational Water Management

- ideally at the river basin level
- managed by a River Basin Organization or equivalent
- must include water quality as well as quantity
- must include river basin ecosystem or environmental health (land use, urban and industrial development, etc.)
- implements planning and policy
- time scale: short term, day-to-day or by season or year



Water Resources Management - 3 Levels

2. Water Resources Planning

- ideally river basin level but in collaboration with national level
- May have a transboundary component
- often infrastructure-oriented, financial aspects important
- driven by policy, supports operational management
- time scale: medium to long term



Water Resources Management - 3 Levels

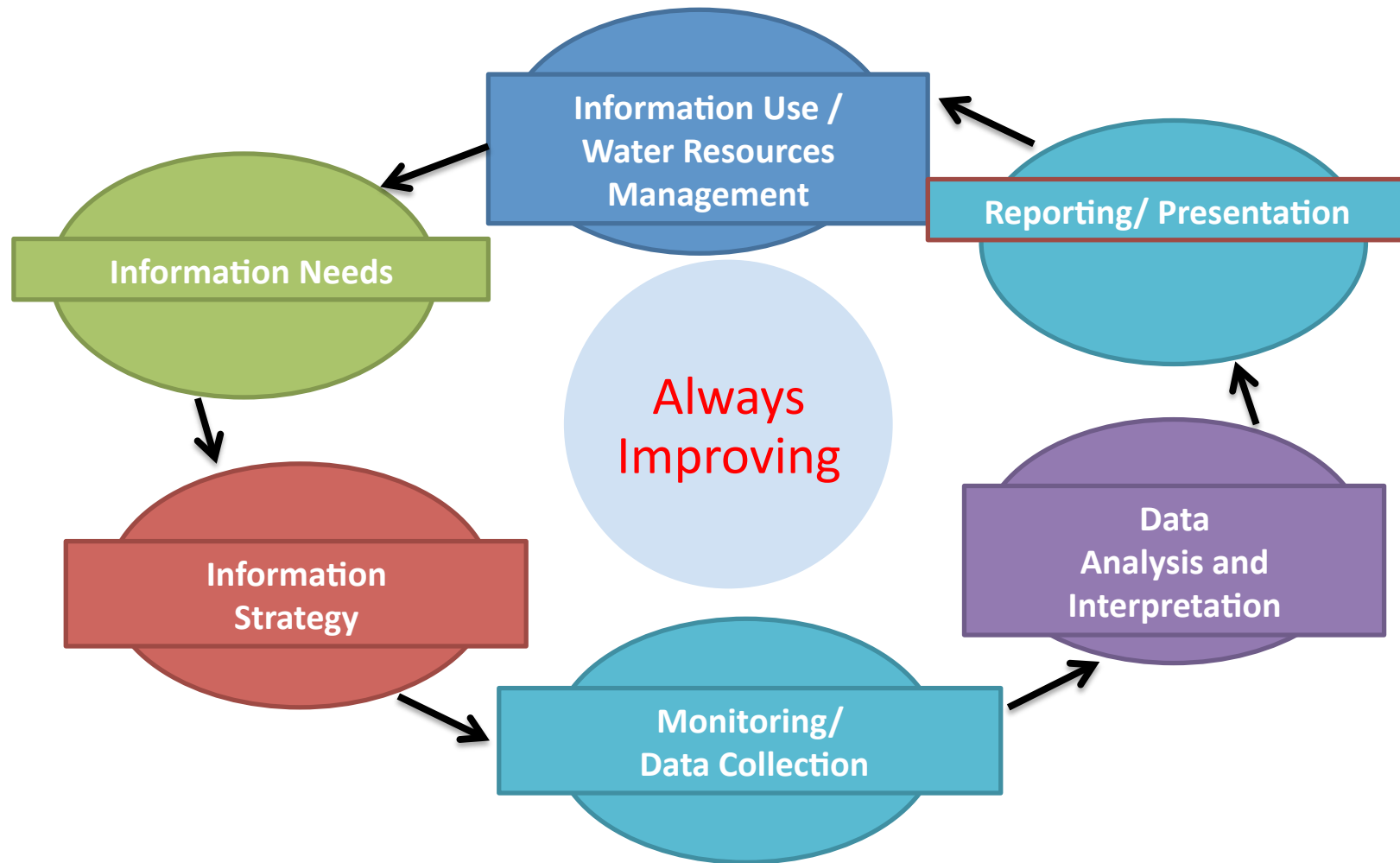
3. Policy Making

- national level but affects all river basins
- may have a transboundary component
- closely associated with law
- may be broader in scope than water (i.e. environment, natural resources, etc.)
- instructs and drives planning and operational management
- time scale: not limited





Information Cycle





Data Management Systems

What does it need?

- People
- Budget
- Smart / Effective Planning

There is little point in designing an information management system if it is not going to be properly staffed and financed.