



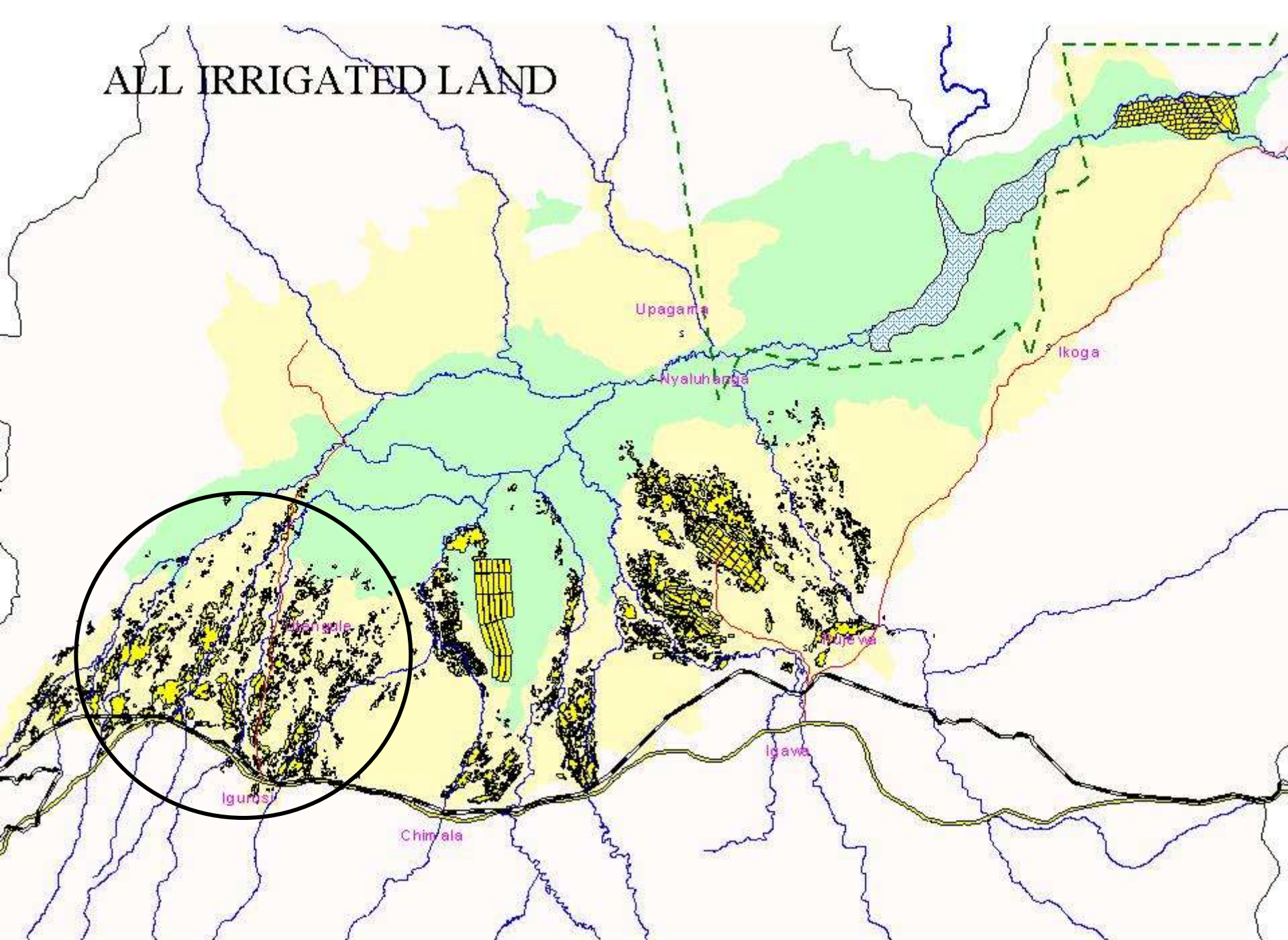
ODI. Tuesday 22 March 2005 (World Water Day) Rights to water: strengthening the claims of poor people to improved access

Faultlines in the design of water rights in IWRM, Tanzania

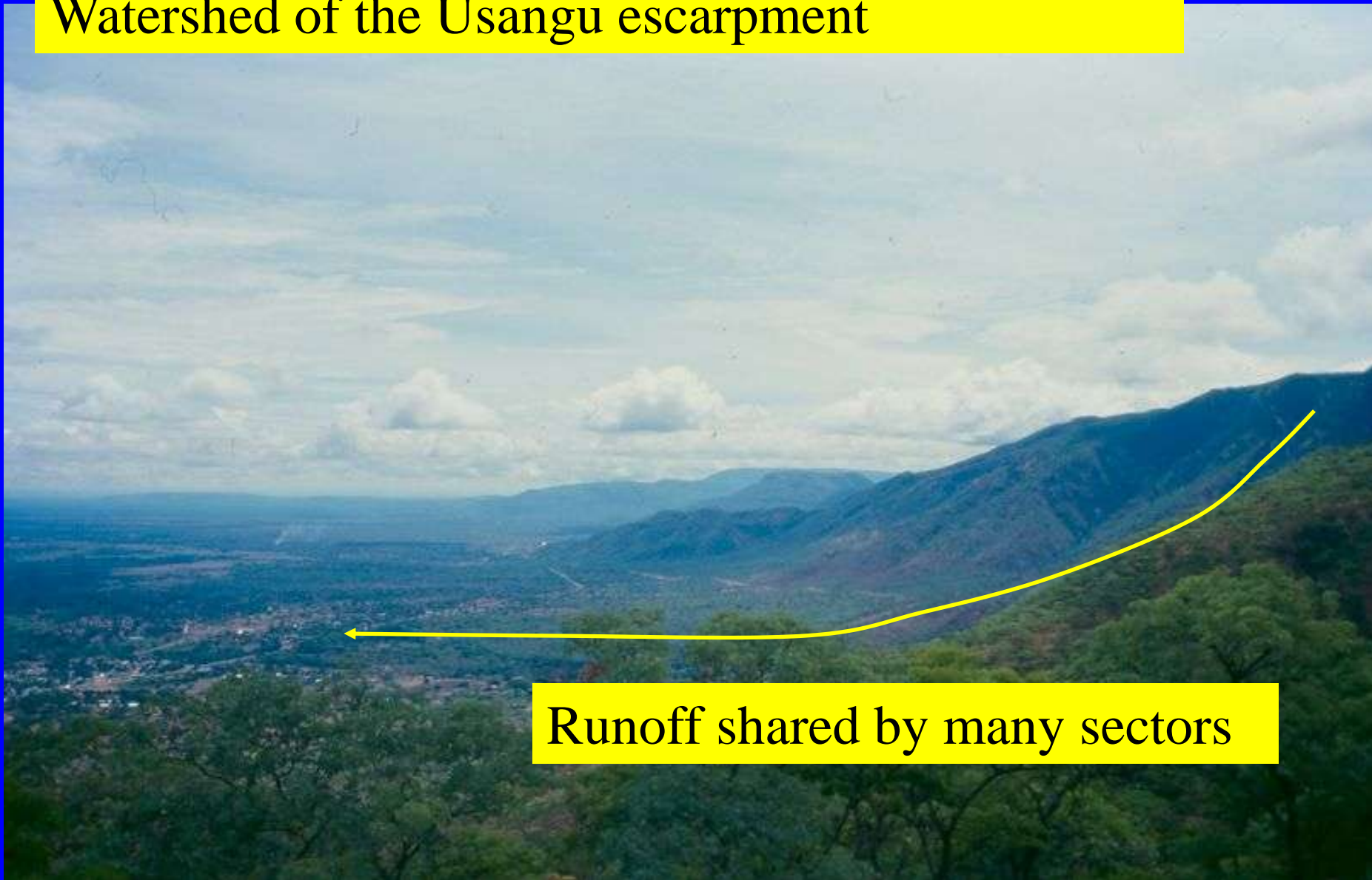
Bruce Lankford



ALL IRRIGATED LAND



Watershed of the Usangu escarpment



Runoff shared by many sectors

Role of technological change, alongside formal water rights

Traditional intakes - allow water downstream



Intake design – form and function

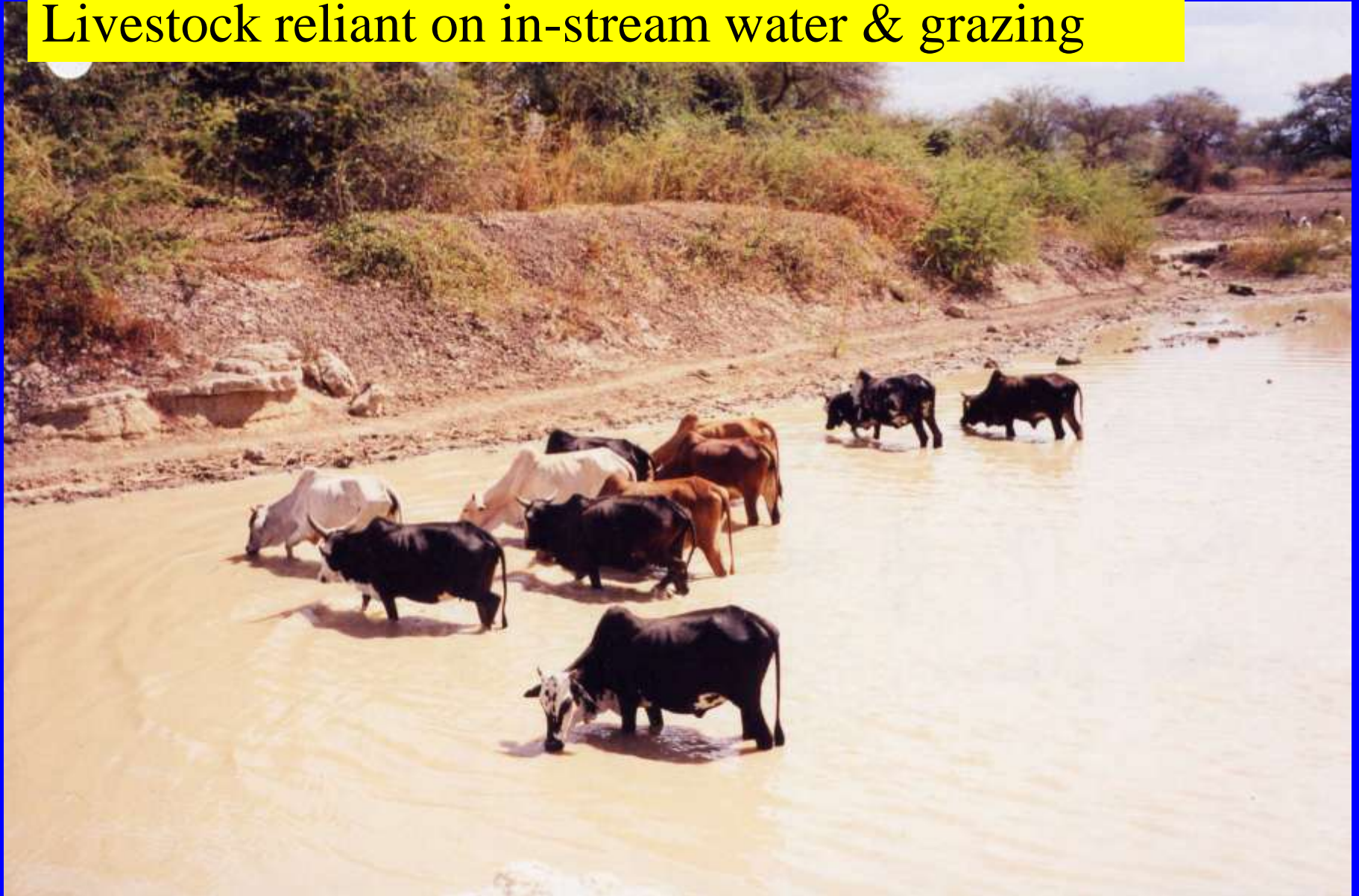
Improved intakes – full crest weir, adjustable intake & by-pass gate



Accessing domestic water from in-stream supplies



Livestock reliant on in-stream water & grazing



Fisherpeople relying on in-stream water in Usangu



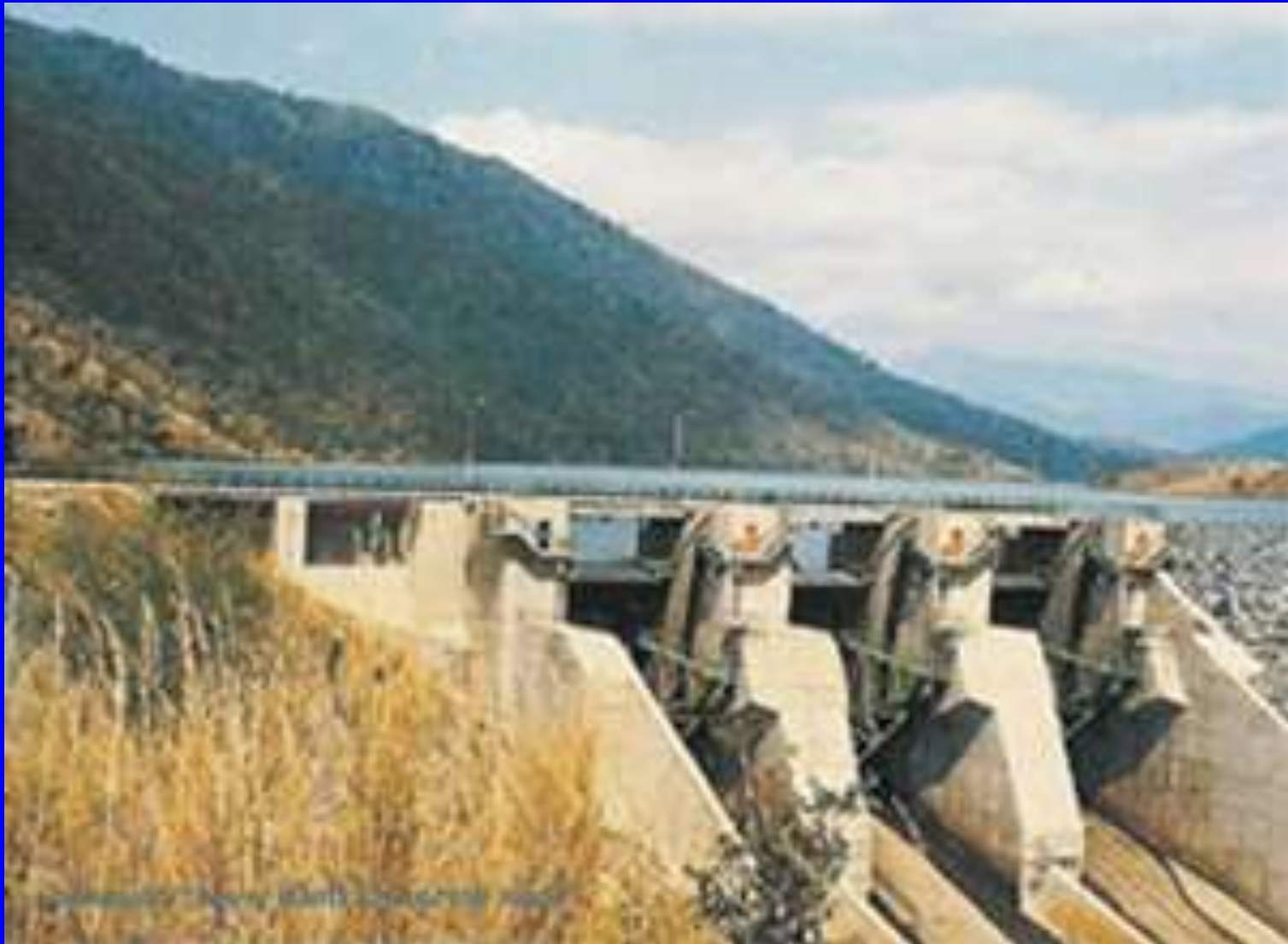
Ecosystems & livelihoods in Ihefu wetland in Usangu



Ecosystems in the Ruaha National Park



Hydropower for urban/rural Tanzania: Kidatu dam



Current IWRM - overview

Inter/intra-sectoral allocation currently managed via formal water rights issued by the Basin Water Office.

The 'rights' attempts to curtail upstream water abstraction to provide over-flow downstream, *but* abstraction is mainly currently affected by number, design and capacity of intakes – with adjustment influenced by informal ad hoc negotiations.

Water rights – Bank Style

- Experimentation in IWRM; formal water rights, expressed in flow rate for abstractors of water for productive uses – consists of an application fee of \$40, then \$35 flat rate/year, then \$0.035 per m³ per year.
- Rationale for introducing water rights:
 - *“enhancement of water fees... as an incentive for water conservation... and as a source of funds for water regulation activities, catchment conservation and water resources monitoring”*
 - *“economic instruments include water pricing, charges, penalties and incentives to be used to stimulate marketing mechanisms and serve as an incentive to conserve water..”*

Faultlines

1. Did not recognise existing customary water rights
2. Failed to accommodate swings in water supply due to rainfall and seasonality
3. Could not be tied to actual water taken because no measuring structures are in place
4. Not related to actual discharge capacities of the new intakes
5. Not related to the demand of irrigation systems
6. Were not, when cumulatively added to other water rights, related to the overall supply in the river system.
7. Could not be guaranteed by government in any shape or form
8. Was not related to services provided by GoT
9. Could not be requested and 'bought' by those who could not abstract water – therefore fisherpeople and cattle keepers
10. V. difficult to update WRT constantly changing situation

Outcomes

- Legitimised increased abstraction upstream intakes
- Reduced water for downstream users
- Higher incidence of conflict (also Pangani basin)
- Increased difficulty in accommodating informal rights and customary agreements
- Costs of administering higher than income

Evaluation

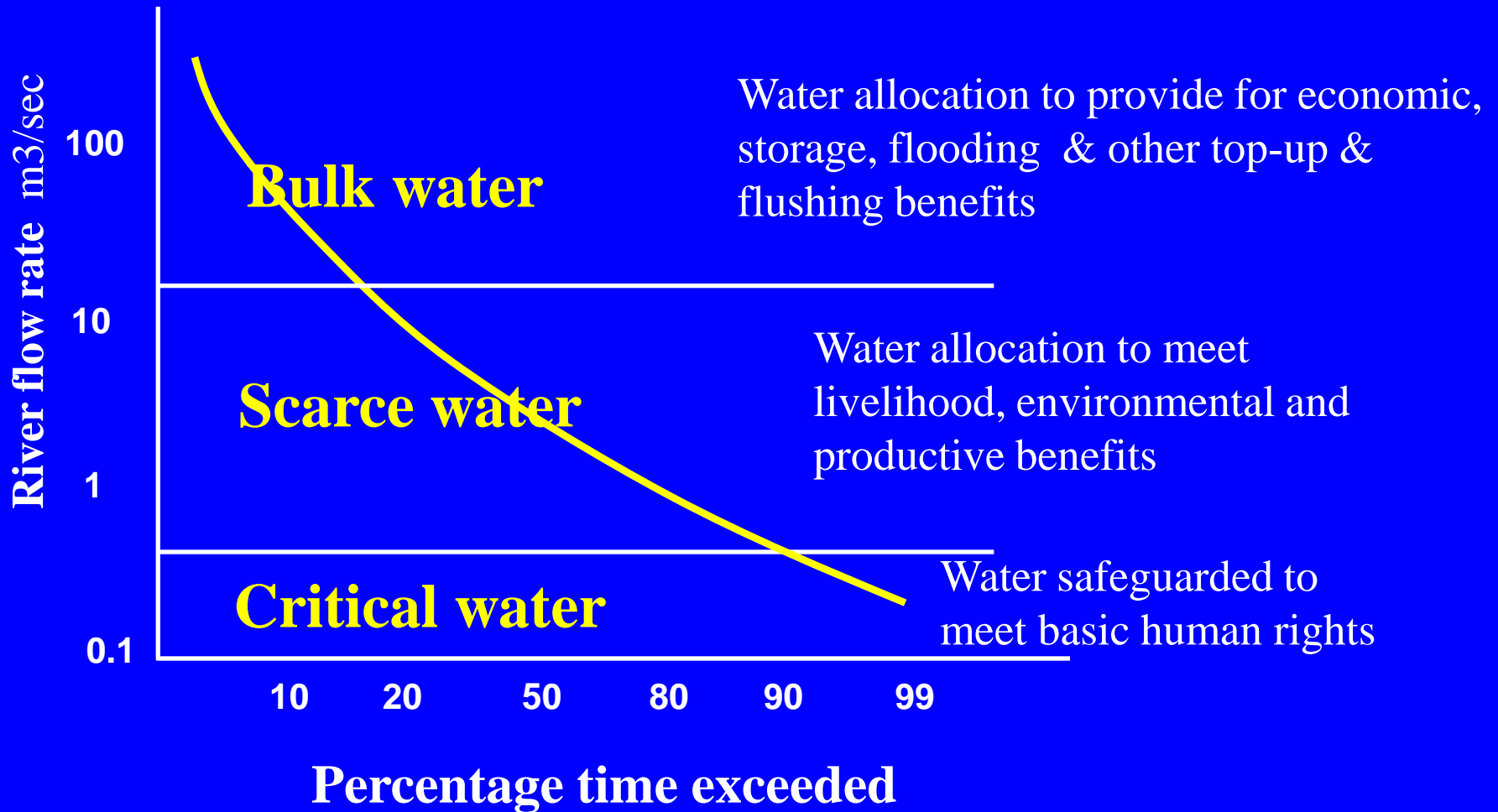
- Failed as a cost recovery tool, as a water mgt tool & as a registration tool
- A complex system now to refine and retune

Discussion – two linked issues

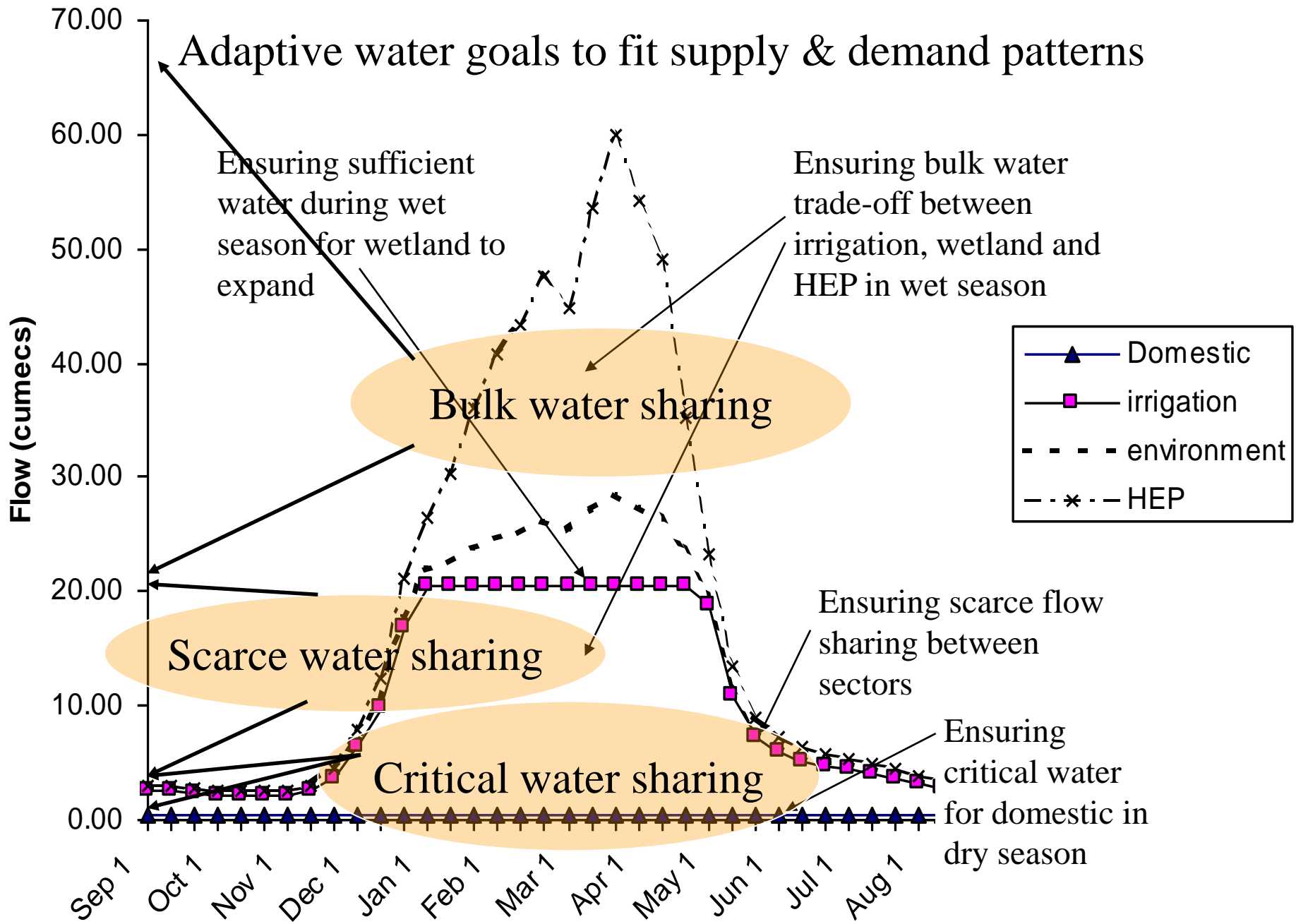
Three phase view of water management:

- Framework for building on WB water rights in Tanzania to accommodate formal/informal rights
- Additional thoughts on ‘rights’ and their relationship to allocation of water within structures of governance of water & IWRM

Three water flow phases of setting goals & managing water



Adaptive water goals to fit supply & demand patterns



Ways forward, building on WB rights

1. Engage with water users in *ways* that support and develop water arrangements at the catchment level, *and* match river basin allocation challenges
2. Allocate water permits to the catchment not individual intakes
3. The design of irrigation intakes re-tuned so they help support allocation of water during bulk phase (based on maximum intake capacities and formal rights) and allocation of water during scarce phase (based on adjustment and informal rights).



1. Service provision to water users and generating meaningful subsidiarity
Via dialogue



2. Apply permit to whole catchment not to individual intakes

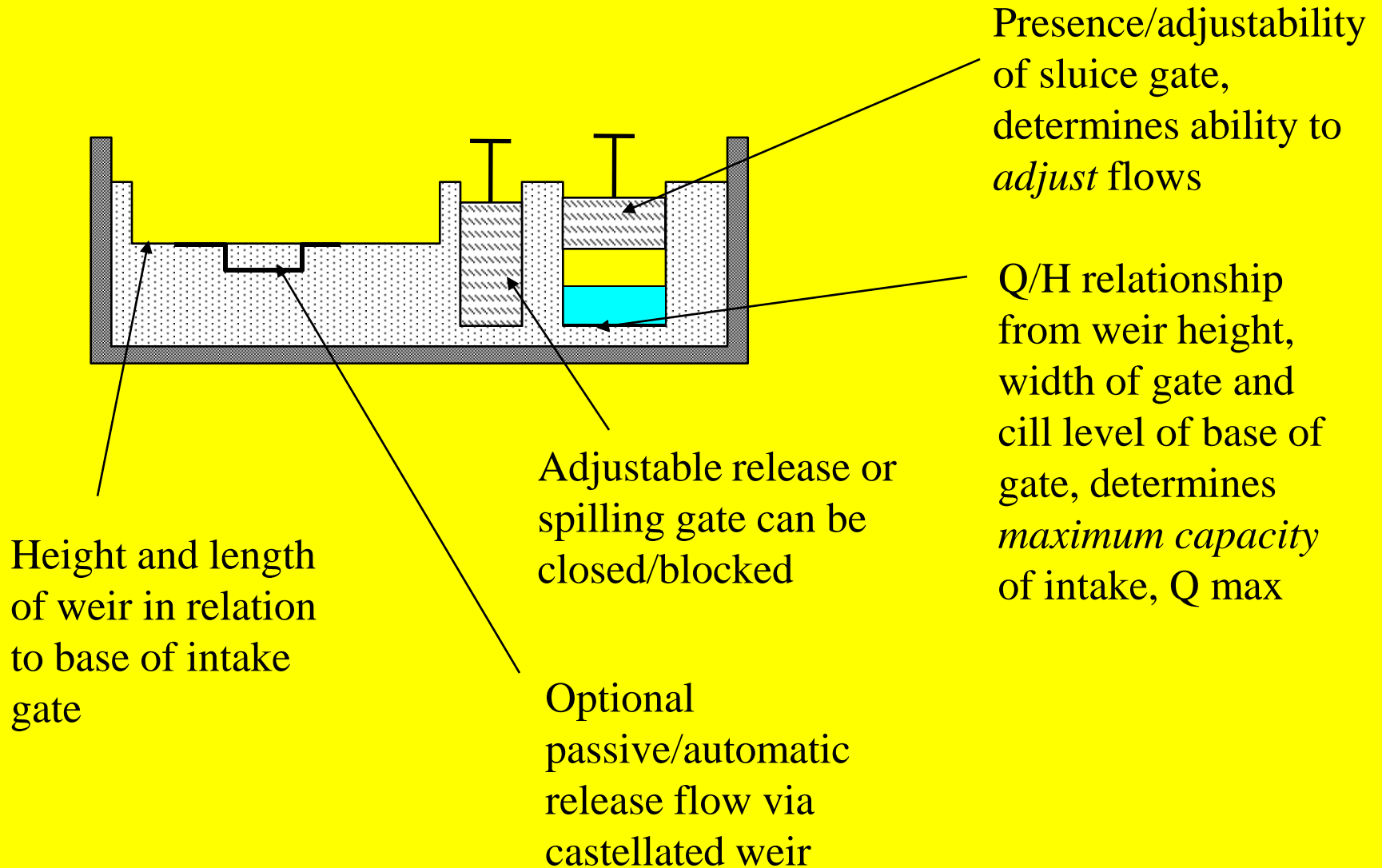
2. Revise intake design to enable sharing of water both volumetric permits and informal dry season shares

New framework – applying caps

- A framework to combine formal water permits and informal water agreements to effect intra- and inter-sectoral water allocation & reduce conflict.
- Sets and modifies seasonally-applied volumetric and proportional caps for managing irrigation abstractions and the sharing of water in river basins.
- The volumetric cap establishes the upper ceiling of irrigation abstraction rates in the wet season: it relates to formal water rights and maximum intake flow capacities.
- The proportional cap, establishes the abstraction rates in the dry season beneath the volumetric cap, it builds on customary water negotiations and on the design and adjustment of intakes by users.

Water governance structure	Wet season	Dry season
Type of cap	Total volumetric abstraction cap	Proportional abstraction cap
Part of intake design most closely associated with this	Maximum aperture Q max Focus = [litres/second]	Either design allows adjustability of gated flows or allows passive proportional abstraction of avail river flow Focus = [% of division]
Part of intake operation most closely associated with this	Advised to rely on Q max rather than on throttling. Gate is opened to maximum setting	Adjustments of intakes or scheduling of water is advised.
Rights associated with this season	Formal water permit (volumetric)	Customary agreements/rights (proportional, or time basis)
Role of catchment water user association (CWUA)	Water permit to CWUA: permit divided constituent irrigation WUA's	Division of river supply agreed between users or irrigation WUA's.
Institutional connections	Basin Office to facilitate and mediate catchment WUA negotiations	Intake to Intake representatives of irrigation WUA plus RBWO mediation
Payment structure	Fixed payment for water right	No payment for proportional share

Main components of improved offtake affecting abstraction and downstream release flows



Water rights and water management

Distinguish between

- Rights as guidance in water mgt (as guiding principles)
 1. Rights as a delivery goal (village solutions for critical water)
 2. Rights as a part of water management subsidiarity (customary rights as management in scarce phase)
 3. Rights as a formal tool for water mgt (formal permits for bulk water management)

Critical water phase – human right to water addressed





Scarce water phase –
environment, domestic and
productive rights to water
addressed (*shared?*)



Bulk water phase –
environment, productive &
economic rights to water
addressed (*shared?*)



Conclusions

- Effective river basin management: How to break up the continuum of IWRM *principles, theory & practice?*

[rights→policy→strategy→legislation→operations]

- Process of distilling water rights into IWRM operational strategies is key: Guided by principles, but focussing on *resource manageability & problems*, expressing those in three phases, knowing how formal rights fit into those three phases in different ways (with technology & customary agreements).