

GCP/RAS/241/JPN

Second Regional Advisory Team Meeting

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Agenda items:

Introduction: Project Update, Outstanding Issues and Mind Mapping

Session 1: Dilemmas and Difficulties

Session 2: Practical and usable guidance for the implementation of water rights

Session 3: Policy tool development

Session 4: Pitching session to prioritize and action FAO follow-up activities

Meeting Objectives:

1. Make best use of the excellent group of minds present by having in-depth and detailed discussion on difficulties and dilemmas in order to:
 - Clarify definitions
 - Share illustrative examples
 - Identify linkages
 - Relate the questions on dilemmas and difficulties to specific issues and details of reform, investment, financial arrangements on which policymakers have to weigh options and make decisions etc.
 - Discuss potential options, solutions and guidance for policy-makers facing these dilemmas and difficulties
 - Promote pragmatic and feasible pathways
2. Design a series of policy tools to help policy-makers craft a coherent set of effective and feasible policies.
3. Brainstorm different ideas for implementing a system of water rights in practice.
4. Prioritize areas for future FAO thematic work with regard to agricultural water management including suggestions as to design, partnerships, budgets, activities and outputs.

Outputs

1. A comprehensive mind map that illustrates the dilemmas and difficulties faced by policy-makers and their inter-linkages with one another.
2. One results brief from each dilemma working group (six in total) for inclusion in the publications.
3. Practical and implementable suggestions for facilitating the allocation of water rights.
4. A policy toolbox containing the results of the four policy tool development working groups.
5. Outline of three priority areas for FAO follow-up work, including initial program design.

Session One: Addressing Dilemmas and Difficulties

Throughout the active two-year life of the project, which has included technical case studies and dialogue processes at the country level and an online conference at the regional level, a myriad of serious (and generally worsening) agricultural water management challenges have been reported back to FAO. These challenges are well-known to practitioners in the industry and include water scarcity (both constructed and physical), declining water quality, weak governance, underperforming irrigation schemes, declining groundwater tables, etc. In analysing the case studies and links between the varied challenges FAO has determined a number of **dilemmas and difficulties**, consideration of which is critical to the formulation of feasible and coherent policy-making. One of the main objectives of this project is to encourage due consideration of these during the policy-making process.

1. **Managing Transitions: supporting continuity or a combination of improvements and exit strategies?** (F: Chris Perry and R: Louise Whiting)
2. **Informal water economies: to manage or not to manage?**
(F: Aditi Mukerji and R: Tushaar Shah)
3. **Is the pursuance of agricultural productivity (economic efficiency) always compatible with other strategic goals such as food security, rural stability and equity?**
 - a. *Resource use efficiency, resilience or redundancy?*(F: Thierry Facon and R: Adnan Nor)
4. **Implementation of ideal or second-best/Plan B options?**
(F: Ian Makin R: Khim Sophanna)
5. **Prioritizing: national objectives, local objectives or basin objectives? How do we better align goals?**
(F: Thierry Facon R: Phong The Dang)
6. **Realistic financial arrangements and incentives for performance?**
(F: Paul Hofwegen and R: Man Purotaganon)

Session objectives

- clarify exactly how they manifest in different contexts;
- define the main impacts of failing to address these dilemmas on agriculture and other sectors
- hypothesize about likely future scenarios;
- brainstorm and discuss innovative strategies for addressing each dilemma and guidance for making tough choices;
- test devised solutions on illustrative case studies
- report back to the plenary and submit a summary brief.

Setting the boundaries

For this exercise it is important to make clear the boundaries within which we are working from the outset.

- (a) poor quality infrastructure and under-funded O&M;
- (b) moderately motivated and under-valued staff working in difficult conditions;
- (c) less water than we originally thought;
- (d) commercialization of agriculture, demographic trends, rising prices, etc

We need to think about which of these problems governments are ready and willing to remediate. This sets the boundaries for the immediate future.

Instructions for facilitators and rapporteurs

As we will be in small groups, we have the opportunity to have a writing workshop. The reports can be bulleted but what is essential is to capture all the important details of the reasoning:

- in a graphic form, but expanding/providing more details on a local mindmap each of the policy questions being discussed, with clearly outlined linkages and the factors that will make a particular country go a certain way rather than another way. We want to walk a thin line between ending up being prescriptive and being too vague:
 - o starting from discussing the particular configuration and choices or absence of choice for the countries that the participants are familiar with, they may decide either to have several mindmaps if they feel that this is necessary, provided that they explain why the question is very different for that particular country, or why this particular country made this particular choice and/or why it is not working; or agree that a common mindmap works well, provided that the key factors or drivers that will guide or sometimes dictate the answers to the questions are clearly identified and then mapped. Some countries will have more options than others. Clarifying why certain options are working or not working is a good way to develop the linkages and mindmaps.
 - o For instance, on the policy question on productivity vs other strategic goals and/or the transitions discussions, it is likely that some of the following considerations will play an important role:
 - Size of the country
 - Resource base
 - Level of economic development
 - Demographic trends
 - Main macroeconomic development directions
 - Political system
 - Government style
 - Strength of existing institutions
 - Formality of water economy
 - Present performance of agriculture
 - Etc.
 - o Although we do not want a push-button policy tool, a decision-tree may be helpful in structuring the discussions and these elements of details. There may be different options that can be pursued in their implications.
 - o If participants have time, they can draw the mindmap on powerpoint or word, otherwise, a good sheet of paper will be good enough.
- In a text form, where the lines of argument are clearly understood and can later be edited into text.
 - o A word document is fine and easier to manage for formats than a powerpoint, as is as easy to beam
- If there are strong disagreements, it is fine. It is actually useful to map the disagreements as long as each position is well argued. In this case, it would be interesting to know what could be done or researched to resolve the disagreement.
- If some questions are left unanswered, or the groups do not have a solution, this should also be documented.
- Although we are clear about some trends and drivers, things may turn out differently than we think and there are still areas of uncertainty. It is therefore important that, if necessary, the participants capture this in “what if” and discuss the robustness of proposed strategies and options.

In summary, what is important is that as much as possible the participants have the discipline to quickly translate their discussions into graphic or written form and this will be a key role for the facilitators.

1. Managing transitions: supporting continuity or a combination of improvements and exit strategies?

Facilitator: Chris Perry

Rapporteur: Louise Whiting

Key points for consideration:

- Should we manage transitions or leave them to occur naturally? If we do manage, what is the intended outcome? For the benefit of the poor? Shaping, anticipating, coping with leftovers, counter-measures?
- How do we clearly define the transitions problem? Consider farm incomes, farm sizes, climate change, decreasing availability.
- Food security implications as countries transition - if switching to high-value crops is an answer then for whom and where? But who will be left to grow the food staples?
- Moving towards capping, entitlements and water rights: what are the feasible and pragmatic strategies?
- The relationship between land tenure and transitions/consolidation and the establishment of water rights and capping
- Modernization as a method of adapting to change (includes an exit component).
- Transition to scarcity as a driver of necessary structural adjustment?
- Transition from supply-driven approaches to demand management?
- How relevant/useful is undertaking an analysis of how these transitions worked in Korea, Japan, Europe?
- What are the key factors, determinants and considerations that would guide policymakers towards preferred policy directions?
- Trends and drivers appear to be quite heavy but what is the uncertainty about these trends and drivers and the scenarios we are building? At what levels and how could this uncertainty be best managed?
- How can having a clear idea about the future influence or shape the responses to today's problems?

Is there a "dilemma" between food security and farm incomes/sizes?

- Small farmers used to make an acceptable but low income growing the basic crops that underpin food security. Increasingly, as non-agriculture incomes rise, it is impossible to make an acceptable living from a small farm.
- Normal statistics show that farm size (or land holding) continues to decrease as inheritance splits small farms into ever smaller and unviable sizes, yet nominally farm households show ever smaller percentages of income from agriculture. Sales of small tractors and other implements continue to increase - is this because people are spending less time on the farm so need mechanization or because the remaining farmers are managing larger farm units?
- It is easy to saturate the market in horticulture, including floriculture, and we witness the consequent 'waste' – the dumped tomatoes and oranges. So not every smallholder has a horticulture option, and to cast the choice between food or garlands as a dilemma may not be realistic.
- What triggers farmers to make the switch from cereals (it is probably unlikely that farmers will enter new markets and abandon staples altogether unless they know incomes are will rise sufficiently to afford staples).
- If smallholders are a policy target, how many smallholders are there left and what proportion of production are they actually responsible for?
- Example: In Indonesia and in particular on Java the land ownership / holding still continues to decrease but the system of leasing small holdings is increasing so single producers use several holdings while the owner can concentrate on his/her off farm activities. As labor becomes more scarce and cost increase there is a new economic activity of farm labor

enterprises that offer land preparation (usually mechanical) transplanting and harvesting services. This is a growing part of absorption of agriculture labor. Farmer/landowners usually try to avoid selling their land as it is their pension fund and security for their children. If they sell it, it is most likely to investors that have "conversion" ideas like plantations or expanding residential/industrial zones.

Thinking About the Future

Many less developed countries currently have a significant proportion of their population dependent on low-income agriculture -- something more than subsistence agriculture, but nevertheless leaving the farming family among the lowest income groups.

How Is this group going to become middle income? Some will leave agriculture, for the rest agriculture must become more profitable.

A commonly presumed route to higher agricultural incomes is concentration on high value crops — vegetables, fruit, flowers, etc — but the reality is that the demand for food and fibre are such that the dominant crops (in terms of area, and water) will continue to be basic food and fibre — grains, sugar and cotton — and these will be the crops from which the vast majority of the new "middle income" farmers will have to make their living.

This sequence of logical steps (if indeed it is) in turn allows some speculative calculations regarding farm sizes.

The table below, derived from public domain databases, is a (very) rough attempt to relate per capita income in agriculture to average incomes for a random selection of Asian countries. The ratio between these averages varies from 2 (Philippines) to about 8 in India and China.

Country	GDP per Capita ¹ (\$/yr)	Population ¹ (M)	Agricultural Workforce ¹ (%)	Agriculture as % of GDP ¹	Value of Ag Production ¹ (\$M)	Per Capita Agricultural Income
China	8,342	1,347	64	10	1,028,742	1,193
India	3,694	1,210	57	18	303,382	440
Thailand	9,363	93	53	12	72,773	1,476
Philippines	4,073	65	37	14	49,095	2,041

How can the ratios be closed? There are several ways (if “special” crops and subsidies are excluded):

- Increases in yields
- Higher margins (crop prices up or input prices down)
- Increased cropping intensity
- Increasing farm sizes (land consolidation – but water consolidation?)
- Diversification of income base

The first three of these might contribute 20% each in the next 10-20 years (compound total 73%). The balance?

Clue:

Average farm sizes in the US increased by a factor of three in the course of the twentieth century. What are the implications of this for irrigation system modernization and allocation of water use rights?

1. [World Economic Outlook Database-April 2012, International Monetary Fund](#). Accessed on 18 April 2012
2. http://earthtrends.wri.org/searchable_db/ (based on FAO)
3. http://en.wikipedia.org/wiki/List_of_countries_byGDP_sector_composition

2. Informal Water Economies: to manage or not to manage?

Facilitator: Aditi Mukerji
 Rapporteur: Tushaar Shah

Background Information

A marked feature, especially of agricultural water use in many countries, is the degree to which it falls outside the main scope of water management agencies. Examples abound. Farmers the world over are turning to pumps to irrigate their fields rather than rely on irrigation. The reasons are many—from being able to obtain a reliable supply of water when it is wanted, to not having to rely on an irrigation bureaucracy to deliver the same service. Farmers are willing to pay more in terms of energy to get that water. Pumping from groundwater serves over half of India’s irrigated area. Pump sales are booming across Asia. Typically, socio-economic development implies a gradual formalization of the water economy, although the political system of some developing countries makes them more formal.

Table 1: Formal v Informal Water Economies

Informal	Formal
Self-supply predominates	Service providers dominate
Vast numbers of tiny, primary water diverters from nature	Very few, but large primary diverters of water from rivers, lakes
Water institutions are local, fragmented, informal	Water institutions are few, formal, legal bodies
Intermediation in water services are low or absent	Very high degree of intermediation in water provision
Even if water is scarce its free	Even if water is plentiful, it costs money

An advantage to working in the informal water economy is that water users do not have to rely on ineffective government mechanisms to access water. Farmers basically take water issues into their own hands, harvesting water or installing pumps to get water when it is needed. Also, informal systems are much faster to react than formal institutions because they are not linked to bureaucracy. In addition to this, prices do not constrain physical access as the water resource is free.

A major disadvantage of working within the informal sector is that there are few mechanisms to handle conflict between individuals, or to regulate overexploitation of resources. Further, informal systems can lead to a skewed distribution of water resource access - those with the money to buy good pumps can abstract the most water. This often works to accentuate a rich–poor gap in places with informal water management schemes. Together with the framework of open and closed basins, the framework of formal and informal water economies provides important context for examining a river basin.¹

Key points for consideration

- Implementation of water rights – How? When?
- Can you build on desirable features of informal water economies institutions or interface them with formal water management institutions?
- If not water-related, then what other instruments are available, open or likely to work?

¹ David Molden, Jonathan Lautze, Tushaar Shah, Dong Bin, Mark Giordano & Luke Sanford (2010): Governing to Grow Enough Food without Enough Water—Second Best Solutions Show the Way, *International Journal of Water Resources Development*, 26:2, 249-263

• **3. Is the pursuance of agricultural productivity (economic efficiency) always compatible with other strategic goals such as food security, rural stability and equity?**

Facilitator: Stefano Burchi
Rapporteur: Adnan Nor

Background information

It is crucially important that there is good alignment of the many policies, pieces of legislation and fiscal measures within and outside the water sector that influence water management, service delivery and level of demand. Decisions outside the water domain such as those about energy prices, trade agreements, agricultural subsidies and poverty reduction strategies, often have a major impact on water supply and demand and, hence, water scarcity.

Agriculture and food security are intimately linked to water and policies in these domains must be consistent. In times of crises and with volatile markets, concerns about feeding their populations become of paramount concern to national decision-makers. Water authorities should cease to regard water as a sector 'compartment' and engage more proactively with other economic sectors to make their water management strategies coherent with key decisions being taken elsewhere.

Efficiency versus resilience and redundancy

Efficient use of water is understood in more general economic terms, as the use of water to maximize the value of goods and services produced. Economic efficiency maximises outputs and minimizes costs. Efficiency eliminates redundancy, which is abundant in nature, in favour of finding the one "best" way of doing something -- usually "best" means most profitable over the short run -- and then doing it that way and that way only. For example, the recent tsunami in Japan and floods in Thailand have highlighted the high vulnerability of "lean" modern supply chains to natural hazards.

Resilience, on the other hand, refers to the capacity of a system to absorb disturbance and reorganise/recover while undergoing change in order to maintain a desired level of production, or income. Reorganization/recovery requires alternatives. A resilient system is likely to be adaptable and diverse. For example, an irrigation system would be resilient if after reductions in water allocations and availability, it was still sustaining the desired production and livelihoods. It is likely to have some redundancy built in as part of its own buffer. A resilient perspective acknowledges that change is constant and prediction difficult in a world that is complex and dynamic. It understands that when you manipulate the individual pieces of a system, you change that system in unintended ways.

Indicators of a resilient system include: Soil health, water supply reliability, other biophysical indicators, diverse community networks, diverse economic base, low relative debt levels, people entering/leaving the community, industry/government partnerships. Restoring resilience to manmade systems will require an eye for options, an appreciation for redundancy, and a tolerance for chaos.

Key points for consideration

- Is there a "dilemma" between food security and farm incomes? Small farmers used to make an acceptable but low income growing the basic crops that underpin food security. Increasingly, as non-agriculture incomes rise it is impossible to make an acceptable living from a small farm. If they all switch to growing roses or qat, what happens to food security?
- Inter-sectoral dimension: food/grain versus other economic sectors
- Using of clear terminology, particularly with regard to changes in water use, as a good starting point.
- Resource use efficiency versus resilience and redundancy

- The costs and benefits of optimization
- Climate change and disaster preparedness
- Having excess capacity that can be put into use in the face of shocks
- Slack/buffer in basins through inter-basin transfers
- Complex systems

Examples from China:

Excerpts from the recent World Bank report on addressing China's water scarcity

- ▶ *Issues for the future*
- ▶ *Water efficiency, food security, and rural development*

Our case studies have revealed a big variation in the economic value of water by sector and by region, low economic efficiency of agricultural water use, and poor cost-effectiveness of underground water withdrawal in North China. Although the general direction of improving water-use efficiency by reducing demand for water by the agricultural sector is supported, the issue is complicated by and associated with various issues involving the rights and well-being of the rural population, national food security, agricultural sector protection, and poverty alleviation. The central issue is how to reduce rural poverty and secure the nation's food supply while at the same time improving the efficiency of water use. Any further policy recommendations have to address these concerns and will require further study.

The Chinese Government is aware that, because of its sheer size, it may not be able to procure from markets quantities of grain corresponding to significant variations in production and therefore needs to maintain high levels of self-sufficiency in grains even though economic water productivity will be low. At the same time, it intends to ensure water allocation to poor rural areas for economic development and poverty reduction. Under a constraint of overall capping of water use, this implies a reallocation of water away from existing irrigation systems though an increasing in efficiency. The government also considers that national food security is a national objective that should not be achieved at the expense of maintain farmers in poverty. This translates into massive subsidies and other supporting measures.

Three Red Lines control targets	total quantity of water consumption (10 ⁸ m ³)	water consumption per RMB10,000 industrial value(m ³)	coefficient of effective farmland irrigation water use	Water Quality Standards of the Main Water Functional Zones in Rivers and Lakes
2020	6700	<65	>0.55	80%
2030	7000	<40	>0.6	95%

Groundwater productivity, environmental and social goals

Intensive use of groundwater in northern China has improved productivity and increased agricultural output and the incomes of many farmers. However, this has come at a price. Environmental problems, in particular related to overdraft, have manifest. With falling water tables, pumping costs have risen by 0.005 yuan per cubic meter and water quality has rapidly declined. Increasing the scarcity value of groundwater implies increased costs to users, an outcome which will disproportionately hurts the poor and goes against China's national policies to both reduce poverty and reduce the gap between rich and poor. Simultaneously addressing groundwater and poverty challenges will not only require technical and institutional changes in the way groundwater is

governed, but also the political will and economic capital to ensure that larger social objectives are met.

China has recently conducted policy experiments where the proceeds of a very substantial hike (tripling) of water prices for water demand management were redistributed on an area basis to the farmers with the objectives of avoiding to hurt their income.

4. Implementation of ideal or second best/Plan B options?

Facilitator: Ian Makin

Rapporteur: Khim Sophanna

Background information

Too much of what is advised by experts and the international research community is unfeasible – for political, financial, social or practical reasons. This often results in stagnation – doing nothing because the ideal solution is not feasible or trying or pretending to do something with no results.

Case Study: A decade ago north Gujarat was marked by rapidly depleting aquifers, a nearly bankrupt utility, and an agricultural lobby strong enough to fight efforts to meter electricity. Electricity theft and unreliable power were issues. Researchers at the International Water Management Institute recommended a scheme to supply uninterrupted power on a rationing schedule designed to match the supply to irrigation needs as closely as possible.

Plan A: formulation of provision of water licences, metering flows, and water pricing as part of a program to bring groundwater use under control. In other words, attempting to bring in thousands of users from the informal to the formal sector.

Plan B: The IWMI ‘Jyotigram programme’, which separated domestic electrical supplies from electricity supplies for water pumps, and to ration electricity to farmers. The state government of Gujarat acted on IWMI's recommendation by investing about \$260 million for separate electrical feeder lines for farming and non-farm uses. The scheme made it possible for farmers to keep to certain irrigation schedules and, at least theoretically, conserve water depending on how much they pumped during the rationing period.

Result: more reliable supply for farmers in the 8 hours power was available but nevertheless rationed. A 24 hour power supply for domestic users, greatly improving productivity of households, hospitals, schools, etc. In this sense, good governance can trump a preordained recipe for good management (that has been transplanted from somewhere else) where overall benefits are optimised.

One of the key objectives of this session is to develop concrete and actionable ‘Plan B’ options for inclusion in the publication. The table below provides a useful means of organizing information around this objective.

	Challenge	Known solution	Constraints as to feasibility	Plan B?
1	Increasing competition for water leading to reduction in allocations to agriculture	IWRM		
2	Poor service delivery to farmers leading to non-payment of water fees	PIM/IMT		
3				
4				
5				

Key points for consideration

- What can be done/ is politically feasible now and in the future?
- How do we create an environment where policy-makers who want to try Plan B can experiment?

5. Prioritizing: national objectives, local objectives or basin objectives? How do we better align goals?

Facilitator: Thierry Facon
Rapporteur: Phong The Dang

Policies, legislation and fiscal measures have profound effects on what happens at district and local levels.

Key points for consideration

- Impacts of decentralization on agricultural water management – scale and locale.
- Autonomy over resource and over finance? Follow the money.
- Examples of misalignment of goals between national, local and river basin levels include:
 - Decentralization in Indonesia has led, in a first phase, to all local government levels wanting to be self-sufficient in rice to a situation now where Gvt is now uncertain on how to influence events in key production areas to achieve rice and other production targets.
 - National food security versus local economic goals and water allocation within basins on a provincial basis (China)
 - National environmental guidelines for hydropower in China vs provincial economic development considerations
- What are some other common areas where goals are likely to be in direct conflict?
- In Australia and Europe high-level bodies provide financial incentives to the basin organizations/state governments that adhere to high-level planning rules. Could this work in Asia?

6. Realistic financial arrangements and incentives for performance?

Facilitator: Paul van Hofwegen
Rapporteur: Man Purotaganon

Key points for consideration

- O&M costs need to be covered, but where does the money come from in the (very common) situation where farmers cannot afford to pay? (WATSAL)
- Oftentimes local governments have been handed over cannot or will not pay either.
- If a decision is made to subsidise:
 - How is performance and accountability maintained?
 - How do we ensure subsidies are 'smart'? (Vietnam, Thailand, Indonesia)
 - What to subsidize and who to subsidise? Clients? Operators?
 - Should there be any subsidy at all? (electricity and tubewells in India)
 - How to avoid subsidies in one sector thwarting the goals and objectives of another sector?
 - If you eliminate subsidies on the water side, will they not pop up somewhere else?
- How can the **transition** from unviable to viable farms be promoted?
- Does the explicit consideration of multiple uses and services offer opportunities for a firmer financial basis for overall system financing?
- How much should irrigation agency staff be paid? We ask them to provide a better service than 50 years ago, yet pay rates relative to average incomes has fallen dramatically.

Example

Vietnamese example: the Government has abolished irrigation service fees paid by farmers to Irrigation Management Companies which are now paid by the state – this has resulted in improved service for some time but inflation and rising labour costs have eroded the value of the budgets. The IMC, a State enterprise, is increasingly responding to the MoF while technical control or local government control have decreased. Meanwhile, IMCs are wondering how to keep staff in a market-oriented economy.

Indonesia – relationships between operators and clients

Chinese subsidies²: In an effort to increase grain self-sufficiency and farmer incomes (and thereby encourage farmers to remain in agriculture) Chinese subsidies to agriculture grew by 85% (from an already high base) to 95 billion yuan between 2007 and 2008. Data analysis in the Huang paper found that the subsidies are having no significant impact on agricultural production or national food self-sufficiency. However the paper also found that the subsidies may be having the unintended consequence of stabilizing incomes and keeping the marginal farmer from migrating out of agriculture. The Chinese Government has recently announced³ a subsidy shift that will “increase the intensity” of farm subsidies, redirecting them towards the more productive regions, large-scale farmers, and co-operatives.

² Huang et al. 2011. Subsidies and Distortions in China's Agriculture: evidence from producer-level data *The Australian Journal of Resource Economics* 55:53-71.

³ <http://ictsd.org/i/news/bridgesweekly/124690/>

Session Two: Water Rights

Water allocation is defined as the process by which an available water resource is distributed (or redistributed) to legitimate claimants. The resulting authorization for use is granted, transferred, reviewed, and adapted as a 'water use right.' Priorities for allocating water can be defined in law or through strategy development or planning processes.

The implementation of a legitimate and enforceable system of water rights is not an easy process in most developing country contexts, where managers and policy-makers will be up against some or all of the following:

- Increasing water scarcity and competition
- Highly informal water economies with millions of disparate users
- High incidence of poverty
- Conflicting policy objectives from above and below
- Under-funding
- Inability to enforce rules and regulations
- Generally weak governance structures

The objective of this discussion is to brainstorm ideas as to how some of these barriers can be overcome or mitigated.

Key Questions

- What are some suggestions for how even a rudimentary system of water rights can be implemented in practice? Can implementation be gradual? Are there not things that need to be done first?
- In some countries, some stakeholders have lost hope in government moving effectively on water rights and water allocation and have resolutely focused on local level approaches. In other places, social demand management for groundwater seems to be promising where hydrocratic approaches. Can these now be inspirations or building blocks for policy or for the establishment of formalized systems?
- How can governments decide on the appropriate 'cap' on water allocation, with consideration of many different conflicting goals?
- What guidance can be provided to help governments assign **values** to the different uses of water?
- 'Bargaining' is an essential step in the allocation process, how do we make sure this process is fair and equitable?
- How can the implementation of water rights be used to ease the imminent and inevitable transition from water abundance to water scarcity in many basins?
- Countries such as Australia and the US have advanced water rights and water trading systems: what lessons can be taken from the developed world experience? (capping and complementary reforms)
- Distributed and polycentric water governance are frequently advocated. But how can the deal with basic issues of water sharing?

- How can we convince governments that the investment required in the accounting and allocation process is worthwhile?
- How to deal with both surface and groundwater?
-

Background reading: Chris Perry's ABCDE

Session Three: Developing Policy Tools

While the principles behind good policies are often quite well understood, it is accepted that public policy choices are often circumscribed by political, social or financial considerations. One of the key aims of this project is to facilitate and encourage a situation where decision-makers appreciate and understand these constraints and dilemmas and in doing so gain a new perspective that allows for the design of policies and investments that are strategic, multi-objective and predictable in impact.

The dilemmas and difficulties working group sessions illustrated that the design of management policies, strategies and investments involves extremely difficult choices and trade-offs. The obvious next step is to determine how the project data, and the results of the discussion thus far, can be organized and presented in a way that can provide pragmatic guidance to policy-makers on the ground.

Objectives

The object of the toolbox is to assist FAO member countries and stakeholders in developing a **feasible set of effective and coherent policies** and interventions that are aligned with their triple bottom line goals and can function in a dynamic transition landscape. To achieve this there are a number of questions that policy-makers need to think about and answer, such as those related to managing transitions, trade-offs, likely impact, equity, type of water economies, etc. (the policy dilemmas and difficulties).

Four separate working groups will each address a different scale or method of policy-making:

1. Rapid policy appraisal
2. National policy-making
3. Localized policy-making
4. Permanent policy dialogue facility

The aim is to design a new process that encourages policy-makers to think about the policy dilemmas we have just discussed and make informed choices regarding trade-offs and the likely impacts of the policies they design on stakeholders in general and agricultural water use and food security in particular. The aim is NOT to develop blueprints or prescriptive policy recommendations.

Thinking outside the water box

A useful starting point for this exercise is to ask: **what is it that policy makers don't understand about irrigation and/or water resource management in the region?**

Tease out some of the basic barriers (ignorance, status quo, rent-seeking, development mindset of departments). What can the sector do to nudge policy making in the right direction?

For example, just saying 'accounting is necessary' is not enough – the real issue is how to make a compelling economic case and to ensure the public and private capacities are able to sustain levels of productivity or equitable service.

"Promote integrated planning and greater cross-system coherence across the global food security agenda, based on closer coordination between the food, energy, water and environmental policy sectors". [Rio +20]

Group One: Rapid Policy Appraisal

Facilitator: Thierry Facon

Team: Ian Makin, Panpilai Sukhonthasindhu, S.M Belesare

The key objective of a Rapid Policy Appraisal process is to bring together a group of policy-makers and stakeholders and ask a range of probing questions designed to re-appraise current or planned policies and get them thinking about issues relevant to good, multi-objective policy-making and with due consideration of the policy dilemmas and difficulties.

The objective is not quickly to produce a new policy matrix but to trigger some brainstorming, new thinking and the exploration of possibly more effective options by offering new perspectives, or increase confidence in decisions as the case may be.

This procedure could take place over several days. Participants would be forced to think about a number of dilemmas and difficulties, trained in better policy-making throughout the process.

The Rapid Policy Appraisal could be particularly useful in providing constructive input to specific challenges eg: the current suite of decrees in Cambodia.

The following questions will help guide you through this creative design exercise.

- Who are the key stakeholders?
- Who needs to be there?
- What is the target audience?
- How does this audience affect how the tool is designed?
- How can the known policy dilemmas be incorporated?
- Who would start and facilitate such a process? How can it be demand-driven and non-intrusive?
- What are the conditions required for successful implementation/use?
- Can the questions be formulated so that they are seen as well-intended and helpful as opposed to intended to evaluate or distribute good and bad marks?
- What are the known barriers to implement such a framework?
- What would be the timeframe?
- What is the information that needs to be collected and available and other preparation to make this tool effective?
- Would such a tool be useful in your country?
- Can confidentiality or informality of discussions be a condition for success?
- What further research is needed to implement such a framework?

Time permitting, conduct a simulation exercise with a sample country and populate your submission with examples and lessons.

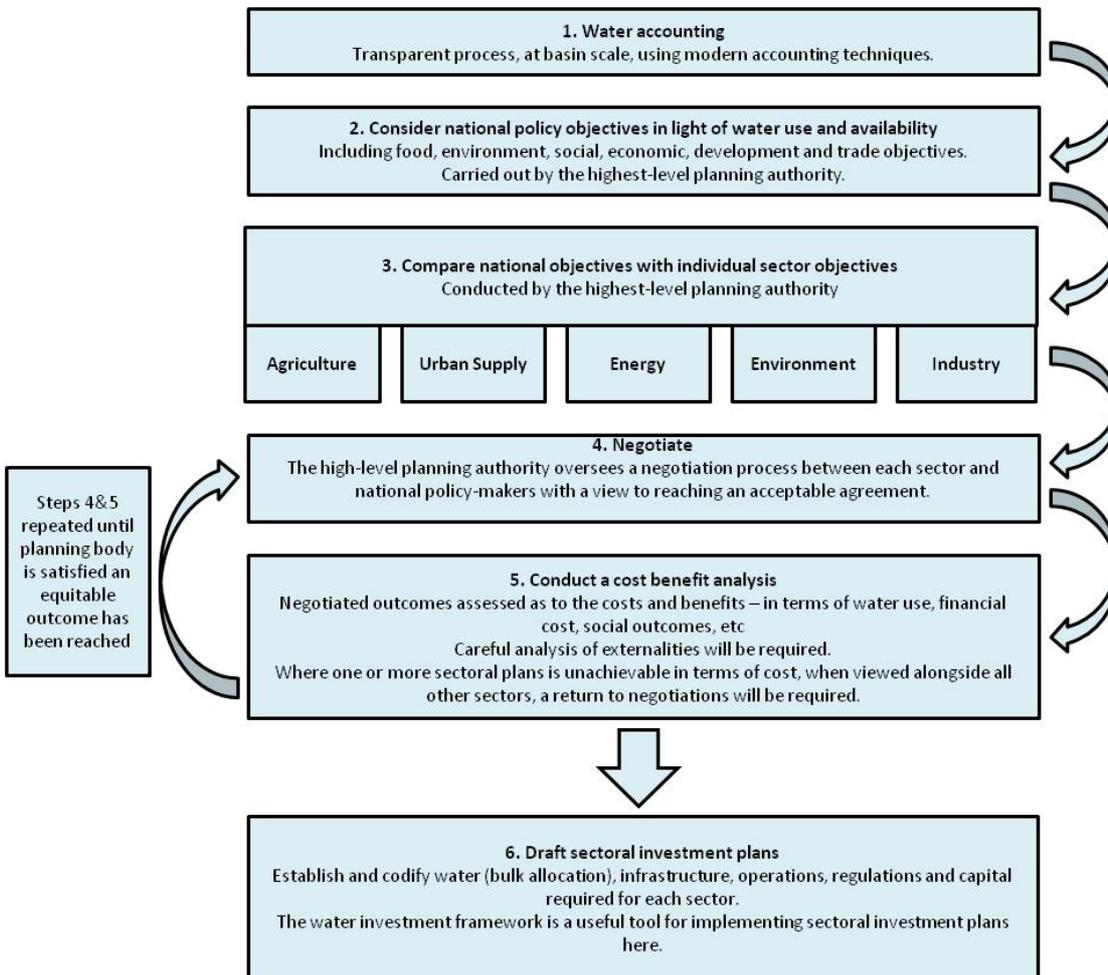
Group Two: Assistance for National Policy-Makers

Facilitator: Chris Perry

Team: Li He, Phong The Dang, Aditi Mukherji

The aim of this exercise is to provide some guidance to national policy-makers who are serious intent in engaging in a policy reform process on how to structure this policy reform process, in a way that is also conducive to better on-going sector management. There are some established ways of doing this, including sector reviews, which have shown serious limitations

The framework below, together with Chris Perry's ABCDE framework, can be used as a starting point if desired.



In addition to this framework, it is suggested that this policy development framework should include the development of a specific framework of monitoring of reform, investments and result, with mechanisms for a structured policy review process.

Time permitting, conduct a simulation exercise with a sample country and populate your submission with examples and lessons.

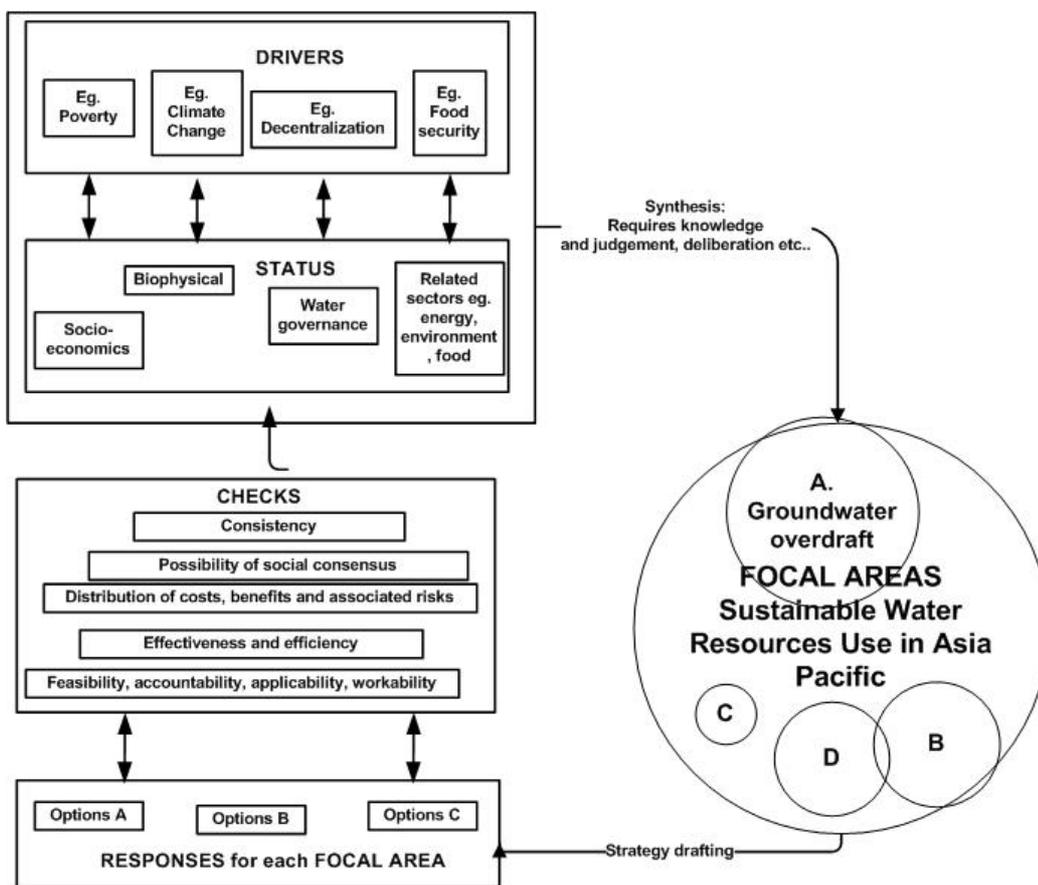
Group Three: Localized policy-making

Facilitator: Paul Hofwegen

Team: Muhammad Nawaz, Khim Sophanna, Tushaar Shah

This tool is also intended to assist FAO member countries and stakeholders in developing a **feasible set of effective and coherent policies** and interventions that are aligned with their triple bottom line goals and can function in a dynamic transition landscape. Its testing in some of the countries participating in the GCP/RAS/241/JPN has led to the consideration that this process, although it can be used at the national level, could also be particularly useful at local or river basin levels, to structure a dialogue between local stakeholders, local government and river basin organizations.

The draft framework combines standard approaches similar to strategic planning and management with a series of filters and tests to ensure feasibility, coherence and effectiveness. In this sense, it goes further than tool #1 which is more about probing.



The following questions will help guide you through this creative design exercise.

- Who are the key stakeholders?
- Who needs to be there?
- What is the target audience?
- How does this audience affect how the tool is designed?
- Who would start and facilitate such a process? How can it be demand-driven? What are the conditions required for successful implementation/use?
- What are the known barriers to implement such a framework?
- What would be the timeframe?

- What is the information that needs to be collected and available and other preparation to make this tool effective?
- Would such a tool be useful in your country?
- Who can facilitate such a process?
- What further research is needed to implement such a framework?
- Can this usefully be done within a workshop and/or extended over a long timeframe?

Time permitting, conduct a simulation exercise with a sample country and populate your submission with examples and lessons.

Group Four: Creation of a permanent dialogue facility

Facilitator: Stefano Burchi

Team: Man Purotaganon, Adnan Nor, Louise Whiting

The creation of a community of practice is one of the key outputs of the entire project. This would be an interactive, ongoing and self-sustaining element. It ties in closely with the new Revitalizing Asia's Irrigation initiative.

Member countries are increasingly reluctant to have outsiders coming in and designing or dictating policies and this is a very good sign. However, through this project as well and the recently initiated design process, there is a general agreement that member countries, in spite of their disparities, need to have good answers to a fairly common set of policy questions – these are the policy dilemma and difficulties questions we have been working on yesterday – and that these answers would be guided by national agendas and considerations and as such might differ widely.

Representatives of member countries have thus indicated that they were keen in having a place where they could freely share and query experience with their peers, on how they have dealt with these questions, how it has worked, what were the lessons learned, and what processes or methodologies they have used for decision-making, monitoring, etc. . Recently, in the region, initiatives have also supported forms of benchmarking and peer-review.

This permanent dialogue facility would therefore be a regional policy tool, which could have the following functions:

- networking
- open and neutral meeting place
- community of practice
- offer on-demand services such as facilitating the conducting of the various tools on the policy tool box designed by Groups 1, 2 and 3
- offer forms of peer review or benchmarking

The following questions will help guide you through this creative design exercise.

- Who are the key stakeholders?
- What is the target audience?
- How does this audience affect how the tool is designed?
- Who would start and facilitate such a process? How can it be demand-driven? What are the conditions required for successful implementation/use?
- What are the known barriers to implement such a framework?
- What would be the timeframe?
- Would such a tool be useful in your country?
- Who can facilitate such a process?
- Can confidentiality or informality of discussions be a condition for success?
- What further research is needed to implement such a framework?

Session Four: Pitching for FAO follow-up activities

This will consist of a 'pitching session' that will be conducted in order to discuss what can be done in terms of future thematic work for FAO. Each participant is given 10 minutes to draft a 1-minute outline of what they think is the most important emerging issue to be followed-up by FAO (see example below). Once the group has heard the 1-minute pitches they will vote and rank them in terms of importance.

The top three ideas will be elaborated in small groups in terms of components, locations, organizations, activities, resources, likely costs, or at least cost components, possible lead organizations or people.

Water Accounting Pitch [Example]:

FAO could potentially start a programme of work on Water Accounting, with assistance from AusAid and ACIAR (AusAID providing thematic funding and advice, and ACIAR working to provide research support)

Potential other partners include ICID and the World Bank.

This could be broadly based and involve:

- i. Exchange programmes for water planners, water managers and irrigation system managers
- ii. Rapid appraisals of different countries – data needs, systems, national and regional water balances, nature of informal water allocation (surveys) etc
- iii. Training and development of course modules.

Pilot projects on developing a water accounting system

- i. Working out how to get water accounting information up to scratch in a number of pilot situations (countries)
- ii. Piloting a bulk allocation process in a number of countries with contrasting conditions.