31.7.3 water users association / irrigation management / farmer participation
water costs

Irrigation Service Fees (ISF) in Indonesia:

Towards Irrigation Co-management with Water Users Associations through Contributions, Voice, Accountability, Discipline and Plain Hard Work

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SETTING

"NO FUNCTION OF Government...", John Stuart Mill noted some 150 years ago... "is less optional than the regulations of what rights, and under what conditions, a person or group shall be allowed to exercise over the Earth's forests and waters, above and below surface, the common inheritance of the human race...."

Irrigation management appears a worthy cause, as 20% of the world's tilled areas are irrigated lands, producing as much as 40% of the food and fiber mankind needs. In the next 50 years, the agricultural production needs to triple to keep up with growth in population, alleviate extreme malnourishment and meet demand for meat. Irrigated areas need to contribute to this enormous challenge.

Worldwide, these irrigation resources have been developed at tremendous costs. This investment often does not receive the operation and maintenance (O&M) to keep it in a stable condition. If the lack of O&M capacity persists, it possess a serious threat to the survival of the investment, and a potential embarrassment to Governments. Indonesia is no exception to this capacity problem. Much was achieved during 1968 to 1986 in building a base of about 4 million hectares (ha) of technical irrigation. This created food self-sufficiency in 1984, a remarkable and impressive feat. Yet the issue remains that O&M performance was unsatisfactory. Upgrading occurs regularly, using scarce financial resources, and requiring recurrent subsidies.

The problem then is where to get the resources for doing this O &M properly. But an issue of a more principled nature unfolds here, at the basis of Public Government:...*who should do this and how...* This comes at a time with a loss of interest in and dissatisfaction with irrigation sector management performance. Analysis of past efforts in irrigation O&M shows no easy and quick solutions. What is needed appears a major shift in thinking, a paradigm shift. This shift based on **"who and how"** should result in achieving two things. **One** is that irrigation service providers need new sources of money, as subsidies are often insufficient and politically under pressure to be stopped altogether. **The other** is that the water users need more voice and meaningful participation, more transparency and accountability, new roles and rights, **and** that they need to contribute more.

TOWARDS IRRIGATION CO-MANAGEMENT THROUGH ISF

Indonesia is planning to achieve just such paradigm shift. In 1989 Indonesia introduced an Irrigation Service Fee (ISF) to water users, for this fee to become a significant contribution to system management. This was structured in a newly formulated irrigation O&M policy, issued in 1987. The Government believed that water users in developed areas of technical irrigation are direct beneficiaries of these past investments, and that these users could increasingly contribute towards covering the costs of O&M of main and secondary canals. The initial issue for ISF was then how to go about this, to what extent, with what new roles, with what procedures and mechanism. Once ISF is introduced into a system, it is necessary to see how to phase out the government subsidy on O&M over, for example, 5 to 8 years. In turn ISF contributions are to take over to the maximum extent possible. Whether to go for 100% contribution depends on assessment of the capacity to pay in relation to actual O&M costs. Today, in some areas where ISF was introduced in 1990, this contribution may already be up to 65% to 70% of the O&M costs. ISF comes on top of contributions made by users to their Water Users Associations (WUAs) for tertiary block management and maintenance, a responsibility regulated in 1982. ISF introduction in a system is preceded or accompanied by a major effort in the form of a package approach to improve the physical facilities, strengthen government institutions, train Water Users Associations (WUAs) in water management, improve land tax collection on irrigated areas, improve budgeting procedures, and rationalize future investments for further irrigation developments. This ISF introduction took WUAs as the focal point. Organizing these WUAs and grouping them into federations is a prerequisite to meeting voice requirements of water users. Findings of the ISF introduction effort in 1989 - 1994 are presented here.

ISF LESSONS IN VIEW OF IRRIGATION CO-MANAGEMENT

The lessons learned from ISF introduction should be linked to what issues are important in Irrigation Co-Management (ICM).

First, the introduction of ISF should *not* be a cover for shifting the cost of system O&M to users while the Government retains the sole rights to decisions. ISF, otherwise, is just another revenue program, having the undertone of just more taxation on resources. Sustainability depends on how the Government sells the concept and gives meaning to *the idea of Voice-for-Money and Decentralization*, how the Government manages its own public relations with water users and the associations they need to form.

Second, ISF functionality should be tested regularly against many well-known managerial standards, i.e. least-costs, least-activity approach, data base correctness, essential (not necessarily simple) collection procedures, accountability, [lean-and-mean]. This as any new policy may lead to too many unnecessary activities, to institutional oversizing of needs, or to too many assumptions.

Third, ISF introduction nationwide is a 12- to 15-year effort, which requires *the need for a deep-rooted socio-political conviction that water users can and should pay.* It requires the acceptance and use of positive and negative pressure ("carrot and stick"), and to have to deal with default (non-payment) and sanctions.

Fourth, for *ISF* to function, WUAs are the key. These WUAs should be seen as *functional and "minimal" organizations,* minimal in that WUAs only do what is required in handling a new large administrative and action-oriented task. Their authority (internally and in relation to irrigation service provider) needs to be spelled out, meaning that even here "carrot-and-stick" management tools and rights need to be defined. Except for hard work, there will not be a magic discovery on "how to best form a WUA". After forming WUAs, the Government should review to reduce its own role in a planned manner.

Fifth, for ISF to be acceptable, it should be understood that *nothing replaces good service*, [acceptable and feasible equity in water distribution, as well as realistic cropping calendars, based on water availability.] With ISF introduction, many of the unrealistic promises of the past on service have to be "undone". Service differentiation (good service, high fee; poor service, lower fee) should be an integral element.

Sixth, ISF introduction is *hard work* at any system level for a 3- to 5-year period. The institutions proposing it and WUAs accepting it, should be in it [for the long run]. They should understand that there will be *no-gain-without-pain.*

Seventh, ISF on a large scale is associated with *coming to grips with numbers:* numbers on areas actually serviced, on names, on land holdings, with lists and spreadsheets, budgets for phasing in collection results and phasing out subsidies, flexibility, on tariff and on 100% rules. Many numbers used will be challenged and will have to be abandoned. The dynamic element of the numbers should not be seen as problematic.

Eighth, institutional performance and progress (of both Government and Water Users Associations) *can be measured* by indicators which are based on such issues as the creation of necessary documents, signing off on steps which include elements of essential Water Users Voice, completion of written agreements, timely submit of key forms, etc.

Ninth, the occurrence of many problems in ISF in the first two years in systems where an ISF type policy is introduced, *should not be upsetting and discouraging.* Problems in ISF at system level should be carefully analyzed to locate their root, i.e. in service, in administrative or numerical issues, in learning and familiarity, or, perhaps most importantly, in non-acceptance or rejection of principles.

Tenth, there is a very *large role of Public Administrators in any ISF or irrigation co-management structure.* Issues of land and water affect socio-politics, and O&M often falls directly under the responsibility of Local Governments. The irrigation service agency should recognize this and accept this, even if it may be unfamiliar with such new involvement of an untested group of participants.

IRRIGATION SERVICE FEE (ISF) IN INDONESIA

The focus in the 1987 irrigation O&M policy is clearly on service improvement and stabilizing food (rice) production for self-sufficiency. The byproduct, because of ISF procedures, is that slowly but surely a management transfer occurs, where water users become (and need to become) co-managers. Through ISF, system management is decentralized to districts and levels below. Users become involved in a major way, both in planning the service, identifying the problems, setting realistic cropping intensity targets, agreeing on differences in service between system parts (if so required), and agreeing on fee and differences therein.

Total technical irrigation area in Indonesia of system larger than 500 ha is about 3.2 million hectares. If semi-technical and village irrigation are added, the total irrigated area is in excess of 4.5 million ha. Initially tested for procedures, applicability and acceptance on some 55,000 ha pilot area in 4 districts by 1991, ISF coverage

expanded to 209,000 ha by 1993. ISF is today introduced on some 600,000 ha of technical systems. By early 1995 ISF will be in an area in excess of 1 million ha. Planning in the 11 provinces where ISF is now operational (North and West Sumatra, Lampung, West, Central and East Java, Yogyakarta, South and South-East Sulawesi, West and East Nusa Tenggara) indicates that the area will expand to 1.6 million ha, and full coverage on all eligible hectares by 2002/2003.

Based on the data from the ISF area today, the number of water users per hectare is an average 3 to 5 per ha. The average size of a Water Users Association is 70 ha, but with considerable range in size from 20 to 180 ha. The average size of a federation is 8 to 12 WUAs. The average system is some 4,000 hectares, but can be as little as 600 to 900 ha, and as large as 66,000 ha, or even covering one command area as the Jatiluhur area in West Java of over 250,000 ha.

O&M needs (which include replacements) per system are between US$ 12 to 25 (Rupiahs 25,000 to 55,000) per hectare. Water users in ISF are requested in the initial year to contribute [$] 6 to 14 depending on service levels, based on service differentiation. Fees are calculated based on a tariff formula which asked about 40 to 50 % in the first years. The plan is to increase to full fee (100% cost recovery) by Year 6. Other contributions by users, already being paid and often based on irrigated land area, to other issues can be as much [$] 50 to 120 per year. Net income from one hectare of irrigated land with two rice crops and one to two dryland crops per year can be between [$] 900 and 1,300 per year. The required fee for O&M of between [$] 12 and 20 per year would thus represent between 1% and 2% of the possible net income per hectare.

ISF and Irrigation Management Transfer

If the Government needs more money to meet O&M costs, and water users need more voice and accountability, the issue therefore is clearly how to link these two needs. Irrigation Management Transfer is such an attempt to link the issues. Transfer is defined as... *to convey or cause to pass from one person or group to another...* Transfer in irrigation management now most likely means giving and shifting the responsibility for O&M to some one else, as there is an undeniable dissatisfaction with the present situation. Transferring includes cost, but also voice and the decision structure of O&M. But this transfer should be carefully analyzed, as going from one situation to a new opposite (and often utopian) situation is most likely not what will make things work. The pendulum should not swing too far or too fast. What is needed is finding how to share tasks, what are the new responsibilities of the irrigation service provider, and what are the new roles, rights and responsibilities of WUAs. A full transfer of O&M responsibility to WUAs is not considered in the Indonesian 1987 O&M policy for irrigation, and such full transfer is perhaps premature. In this policy ISF is introduced in the technical systems larger than 500 ha. In view of planning improvements step-by-step, a first step of getting beneficiaries to co-manage and contribute significantly in O&M costs seems most appropriate.

ISF Concept and Procedures

From pilot work in 1989 - 1991 emerged the concept of ISF and the introduction procedures. The procedures give meaning to what emerged as a guiding principle: *a trade of Voice-for-Money.* The procedures are to replace the subsidy arrangements which allowed for many issues in irrigation service to remain unresolved or incomplete. With ISF, this is not possible any more. A basis for structured horizontal communication is needed between water users and service provider, structuring the roles, responsibilities and rights of WUAs in the light of issues considered under irrigation co-management.

ISF is introduced through the Ministry of Home Affairs. Revenue of any kind, whether tax or fee, is collected in Indonesia under the supervision of Public Administrators such as Governors, Districts Heads (Bupati) and Sub-District Heads (Camat). By law, operation and maintenance are the responsibility of the Governor of a province. There is also a recent general drive to decentralize further to District levels. This includes irrigation O&M. These administrators are supervised by the Ministry of Home Affairs. This agency was thus forced into a prominent role in irrigation management in 1989. ISF with its many elements of arbitration, accountability and transparency, needs someone as buffer and arbitrator, as filter and stimulator, as decision maker between service provider and service receivers, i.e., the water users. The Bupati as District Head serves in this role in ISF.

The *ISF concept* has *ten basic elements*:

1. Structured and meaningful participation of and communication with WUAs
2. Area-based service orientation and payments (good service, higher fee; lower service, lower fee)

3. Partnership between water users and the Government (phase in ISF, phase out subsidy in agreed and budget-structured manner
4. System needs-based budget (NBB) based on joint system walk-throughs and derived plan of operation and maintenance (POM).
5. POM, NBB, service levels and tariff reflected in service agreement
6. WUA administered and collected, Federation managed and supervised
7. Incentives and sanctions for timely and late payment
8. Use of funds collected in system for O&M
9. Bupati (District Head) as facilitator, mediator, arbitrator, assessor and manager
10. Significant role for sub-district head and village head

To meet all these elements of the ISF concept, the *main procedures for ISF introduction* are given below; they are contained in Technical Guidelines issued through the Ministry of Home Affairs to Provincial and Local Government:

1. the ISF information campaign at start
2. the ISF socio-hydro mapping to delineate WUAs and federations of WUAs
3. the WUA and ISF data base (user and land holding registration on WUAs basis - village and hydrological)
4. the system walk-through and inventory of service issues (and costs) and levels
5. the defining of plan of operation and maintenance (POM), including cropping calendar and intensity by block
6. the determination of system-based needs-based-budget (NBB)
7. the discussion with WUAs for agreement on O&M costs and Tariff
8. this to be reflected in signing of service agreement between WUAs and Local government institutions
9. the timely issuance of all District legal decrees (15 in all)
10. the preparation for accounts and collection (forms) and issuance of Payment request
11. the development of List of Planted Area (LOPA) and List of Harvested Area (LOHA) as basis for payment, exemptions and backlog
12. the start-up of payment period and development of list of exemptions
13. the assessment and review of service and collection
14. the accountability on account management and fund use

In equation form the above can be written as:

ISF = Info + Service improvements and specifications + Data Base + Actual Collection + Voice + Accountability + Sanctions

With this, cost recovery as ISF becomes much more than just standard irrigation improvements as WUAs now have opportunity to seriously complain. Government service providers need the money, so they will (have to) increasingly listen to those complaining and paying the fee. The Government often assumes it does this listening satisfactory, but this may not be the case. They thus will need an attitude which should be based on the principles of *"Public Relations" and "Transparency"*. The irrigation management transfer issue has a major element of the shift, intended or not, towards a public utility, which often has a large public-relations, information and service-complaint department.

Because the elements of the ISF concept and procedures are essential for creating a psychological and managerial basis for a sustainable ISF, there is no solution to the desire for a quick ISF introduction. It is not easy to form functional WUAs and Federations of WUAs that can do the ISF work, in many places at the same time. Procedures and collection require a relatively high level of management sophistication of WUAs for them to be sustainable. If anything, ISF is initially only hard and time consuming (and for some boring) work. ISF introduction on a system-by-system basis takes 3 to 4 years, to be functional and to assure high collections. For those doing it, the solving of problems with and through WUAs is a significant part of the hands-on learning experience in irrigation co-management. This time is needed to prepare the introduction system-for-system, forming these Water User Associations which, so often, appear to be elusive (with the creation of 1 to 3 levels of WUA federations depending on system size), and doing it right the first time.

ISF introduction is perhaps slow at times because of lack of the system readiness on almost every prerequisite in relation to accountable collection. Even if the argument holds true that the service is already very good, the service provider should realize that the revenue side as a prerequisite to proper ISF collection is absent or incomplete. A whole new data base, often non-existing, and a full information campaign among WUAs, combined

with learning and time for asking questions and feedback on service, is needed. Not only are WUAs not ready for immediate successful ISF collection, but so are institutions not ready in many ways. The past subsidy of O&M has allowed both the irrigation service agency and WUAs to avoid doing everything that is needed for collecting money, certainly on a 100% basis. One should realize that with subsidies, who needed WUAs? The O&M subsidy hid the incompleteness in many elements of data base and management which are now prerequisites to collecting fees from water users.

ISF introduction is exciting in many ways as issues in service are actually resolved through voice, with WUAs increasingly demanding focused and timed actions and communications. It requires improved performance of District institutions who now have to structure a whole new set of procedures and activities into existing tasks in the yearly service cycle as this enfolds. Water users will pay, without much hesitation, but logically there needs to be some type of pressure. In areas where users now pay close to 100% of payment requests, ISF is a well-structured program, with focus on meaningful interaction between service provider and the WUAs. It is not just participation in a traditional sense, but with actual roles and involvement of WUAs in day-to-day management and in collection. WUAs become important too in issues of payment discipline, administration, sanctions from first questions, through warning and peer pressure, to the ultimate penalty: cutting off of water supply to WUAs or a group of individual users. Peer pressure is essential, often within a village setting.

To get to this point of ISF introduced [everywhere] in the technical system, will depend on how those managing the irrigation sector resolve the last of any major service problems in each and every system. The ISF program at present absorbs (logically) the best systems first. While the ISF procedures are anchored in lower administrative levels as the district, sub-district and village, the more problem-prone areas are exposed to the ISF policy and program, slowing down initial progress and success. This requires an attitude and a preparation equivalent to running the Olympic marathon fully, not just the first few miles. In reality, the good areas are absorbed first (easy success), the areas with service issues and complaints come after that. It is here that sustainability is created. One issue is what service to predict, service as expressed in cropping intensity and cropping calendar. In the approximate 7,000 systems in Indonesia, there is a very large range of water availability, as expressed in the ratio of watershed (catchment) area versus irrigated area. This leads to cropping intensities for rice-based cropping calendar of anywhere between 1 and 2.7. Service thus varies often in the same district. This will affect ISF, in for example the issue of what to ask in tariff, and will require convincing the users in "drier" systems on why to pay.

ISF *can be rewritten as* a list of communicative issues of what constitutes a first major step to *WUAs-based Irrigation System Co-Management:*

* WUAs are structurally involved in identifying and solving service problems in main system in system walk-through, so not just in management of tertiary units
* WUAs agree to plan of operation
* WUAs agree to plan for maintenance
* WUAs participate in maintenance
* WUAs co-implement plan of operation
* WUAs agree to system's budget for O&M
* WUAs, through federations, resolve water allocation problems
* WUAs represented on District Irrigation Committee for ISF
* WUAs agree to service levels, tariff and differentiation therein
* WUAs administer payment request and collecting the fee
* WUAs request accountability on what the ISF fund is used for
* WUAs involve in setting exemptions, default management and sanctions

This list of communications and participatory issues is the essence of *what can be called Voice-for-Money.* This *list* is now structured in the Technical Guidelines for ISF, issued under regulation today. The issue is now staying the course, evaluating progress and at the same time solving increasingly complex relationships on competition for water (and land) with other water use sectors.

VOICE

This element of *Voice* of Water Users Associations is crucial in ISF on a road towards irrigation co-management. It should be understood by institutions used to managing irrigation alone, that voice has a psychological element working to the advantage of the Government. By giving voice, the right to insist on ISF payment and on meeting other WUAs-agreed upon tasks is created.

This voice by WUAs occurs 5 to 8 times during one year as the service cycle (cropping calendar from October/November to September/October in next year) [begins]. Voice includes the recording of service issues as perceived by WUAs, the establishment and agreement on cropping calendar and intensity, a system walk-through, the agreement on service differentiation, O&M budget and associated ISF tariff, the agreement on the list of exemptions to payment and the membership of WUAs in District Irrigation Committee. Because of these Voice mechanisms ISF is perceived as a service fee, and not as a tax. Water users become more vocal and more vigilant, and start to demand more transparency. The development of the data base, of users' names and holdings, of going through the procedures of collection and until a first round of problem solving measures during second collection year, all need to be guided. This means that in view of limited resources (financial and human) ISF cannot be introduced quickly and easily over larger areas. Each WUA needs to be formed, needs to be informed, needs to understand, needs to agree, needs to voice its often legitimate views and needs a data base. WUAs need to be established, [and functionality of ISF administration]. WUAs need to be legally formed, including spelling out the roles and rights. During the [introduction] phase of ISF, many issues emerged in service and data base for which nobody was prepared. This resulted in many discussions and the need for hard work, straightening out the problems in the system, while setting WUAs as administrators, regulators, and collectors. The Government should not assume that its actions are always automatically for the benefit of users. The Government role (which it has to learn) is now to say to WUAs in a proper way: ... *We work on improving our roles of managing water and service; you give your input on service and costs; we jointly decide on plan and tariff, agree on this, and, therefore, once service is given, you (WUAs) pay without delay...*

In districts where the preparation was done well, where the ISF system readiness criteria were followed, where no shortcuts were taken, ISF is very functional at WUA level. Visits to now perhaps 12 districts (with this number increasing steadily) would confirm this, and more and more districts are becoming part of *WUAs- and ISF-based Irrigation Co-Management.* In all these districts, where procedures are followed with no shortcuts, collection results and satisfaction with Voice (the two things in ISF that matter) will be high, often [immediately] above 85%. In general, a fall back in collection can be noticed during the second year, as the assumption is made that the initial effort was sufficient. This points to the need to keep up the pressure on those which need to perform the new roles in the shift towards irrigation co-management through ISF. If insufficient pressure and insufficient value is attached to rooting the initial introduction process, institutions will be insufficiently aware of balancing new tasks and sustainability.

Management of Problems after Initial Year of Collection

A first collection year shows a set of problems which a WUA and the Local Government invariably will encounter. If these are not analyzed and managed in a guided process, all institutions, including the WUAs, may come to think of ISF being too complicated and too sophisticate to handle; in short, they may be discouraged. In those districts where a pragmatic approach to problem management was taken, most problems were resolved in a relatively short time. The list below shows the major groups of problems which emerge as WUAs take on roles in ISF collection and co-management:

1. Incomplete and incorrect data base (names, areas)
2. Incomplete/wrong information (reach all on time)
3. Administrative errors
4. Shortcuts in procedures, limiting or eliminating the Voice mechanism and agreement mechanisms
5. Assumptions that learning and training were sufficient
6. Lack of financial control, subsidy arrangements, assessment and accountability, anticipation of shortfalls
7. Poor arrangements for incentives and backlog management
8. Non-acceptance of principles of ISF, in view of poverty, non-payment for co-shared benefits by other water sectors

These categories of problems show the importance of system readiness for ISF. Initially the focus during the pilot phase of 1989 - 1991 was on procedures and mechanism, on legal base, on assessment of capacity and willingness of the water users, on how to motivate and strengthen the institutions. This was a dynamic hands-on and action-oriented phase, where doing it taught many valuable lessons. This and a certain amount of stubbornness and persistence in solving issues and [attitude] turned out to be the key to developing something that was widely accepted.

Creating Sustainability

Creating an ISF that sustains itself requires energy and commitment. This energy and commitment should recognize a hierarchy of issues of creating and assuring sustainability of ISF. All issues need to be recognized and require a balanced focus, yet there is the fact that the level of importance decreases with increase in number of level:

Level 1	Socio-Political Vision, Insistence and Legal Base
Level 2	Economic Considerations (often the basis for action)
Level 3	Fiscal and Financial Management (phase in ISF / phase out subsidy)
Level 4	Institutional Performance (how to transform the initial enthusiasm)
Level 5	Concept, Procedures and Mechanism (the hands-on phase)

Level 1 is important to Level 2, which is important to Level 3, and so on. If support or vision in Level 1 is insufficient, it does not matter what is done on level 2; it will not work in the long run. This is valid in the comparison between all levels: if Level 5 is good but not so the performance in Level 4, it will not work. So the best procedures have no meaning, if institutions do not perform. Starting at level 4 and 5, this means that even with the best possible concept and procedures, if the institutions, especially Bupati as district head, the local irrigation service and local revenue office do not perform well, there is no ISF. Similarly, with level 3 and 4, even with the best institutional performance and attitude, if the arrangements on phase-out subsidy, phase in ISF results are poorly budgeted, [it] will have negative repercussions.

Considerations on National Implementation

In addition to the above hierarchy of issues, there are four very important considerations on implementation of ISF for coverage, at national level, or at province or at district level:

1. a Sense of Discipline (or the 100% or no shortcuts rule).
2. a Sense of Urgency and Timing (look at end product/time).
3. a Sense of Budget Control (keep track of cost and budget phase-in/phase out).
4. a Sense of No Negotiation on Principles (list of Voice-for-Money).

If ISF as a form of irrigation co-management is introduced as a policy, but the above 4 considerations are not understood, a diluted and watered-down version will quickly appear, not structured in institutions and community; resistance will emerge, alternatives offered, and before long, the policy collapses. It will then require a decade or two and new jargon and catch words to generate interest as those in charge are still disgruntled and disappointed with the previous efforts.

Understanding the "Learning" and "Reverse" Element of ISF

The finding of the introduction of ISF is that for it to work on a system by system basis, each system needs to be "ready". Asking water users for money means they will complain if they perceive something is wrong. This has shown to be not easily understood by some in several institutions. The assumption is often made that the well-intentioned planning and implementation should be accepted by users, at times perceived to be unjustified [ungrateful.] Though service is very good and reliable in many areas, no system is really ISF ready. WUAs are the keys, and if these do not exist, they need to be formed 100% in every meaning of that ratio. What this means is the data base in the widest sense, i.e, user and land registration, delineation of WUA areas, description of service on unit or block basis, plan of operation and maintenance, system based needs-based-budget (NBB), [is to be correct.] This means that the initial absorption capacity of institutions to ISF may vary by District, but in general is limited. Like anything that needs to be learned and discovered, and where skills are to be improved along the way in a dynamic process, *ISF needs the "Ah-ha!!" experience*, as if saying: Oh, do *you mean that; we like that. That is good and can be done..*" Just as one cannot learn to handle a computer in a day, so ISF cannot be learned in a year. Even with the best of intentions, budgets are not ready, other programs require attention, and invariably a certain tiredness will occur.

ISF has an aspect of being "development-in-reverse". Rather than to give and do things for water users, on which much of the development of the past was based, they are the ones who now have to give and do things. It should be no surprise that now, with disappointing results in many places in establishing the irrigation management, the irrigation co-management is only the panacea many believe it to be if several conditions are met. WUAs need to

be approached with the right balance of socio-political pressure (*"you have to become involved as this appears the best form of local resources management"*) with voice. In addition, it is crucial to approach systems from the viewpoint of the 100% rule in management, i.e. the system and service needs to be debugged, or if differences remain, different fees need to be established, negotiated, accepted, agreed, and recorded. However, if the focus is too much on getting the collection going as soon as possible, shortcuts occur, creating the basis for disaster.

Therefore it is important to define *the 100% rule - all needs to be service OK and data base OK and tariff agreed with WUAs and collection prepared.* This rule is based on managerial logic and could have been anticipated at the start of design of the ISF introduction plans. However, discovering this during actual ISF introduction on a system-by-system basis is very useful as it brings forward the responsibilities, the roles and the rights of WUAs.

WATER USERS ASSOCIATIONS AND ISF

There is thus no panacea for ISF, for forming WUAs, no golden-rule discovery in bringing ISF as a first step in irrigation co-management. The average area of a Water Users Association is 70 ha, but can be as small as 4 ha and as large as 180 ha. If there are 7,000 systems in Indonesia each larger than 500 ha, on a total of 3,200,000 ha, then all these systems need to be *ISF-readied*, and ALL these need to be approached, informed, convinced and organized. With an average of 3 to 5 water users per hectare, some 12 million water users need to be informed, and ISF is to be put in and accepted by the minds and actions of over 12 million farmers. No small accomplishment if this could be achieved by 2003.

[WUAs (hydrological based), especially in areas where there was no traditions of irrigation.] The massive scale of the ISF introduction, coupled with the desire for fiscal results and quick area coverage leads to short-cuts. Voice then becomes quickly just information and instruction. All the elements of community organization, the information campaigns, selecting a WUA board, creating laws and by-laws of the WUAs, all what is so desired by many in the professional irrigation management, are extremely difficult to accomplish on a 100% basis. The results will then range from very good in some districts to immobility and apathy in others.

At the basis of this is the role of the WUAs. WUAs up to very recent times, were, more agricultural production oriented and/or water management oriented. Water management in water-rich areas is easy, and in water-poor areas it is often considered futile. The role of the WUA in relation to the service element is new and untested. For an ISF policy to be effective and sustainable, all of the following need to be accomplished. Water Users Associations need to be formed, organized and created legally. They need to understand the difference between the service element, the production element and the revenue process. The WUAs will not pay the ISF without some form of outside pressure.

Nothing will replace the hard work required to start ISF. It will be difficult to recreate situations which occur in small-scale irrigation (often hill-type) or subak type irrigation as in Bali. Even in Bali an ISF may one day be introduced soon into subaks which are located and linked along Government managed and operated canals. Subaks then are no different from what WUA are supposed to do, namely managing their units and co-managing the main system.

The service agreement in which tariff and service are specified, and which is signed by parties concerned, is important as a psychological and management tool. It forces the Government to commit the service, and commits the users to payment. It can to be used as a knife cutting both ways, i.e. *Please give service as promised and agreed", but also: "We gave service, you agreed to pay, now pay.*

On the service side, answers are needed on what can be achieved given water availability and system distribution constraints. What equity over the system area can be achieved, and how will the water membrane be stretched in a way acceptable to various WUAs over up- and downstream areas [need answers.] There is a tremendous variation in the many elements that make up irrigation service. Topography is another issue which creates differences in services. Often users complain about drainage, or other issues not related to bringing water to fields. All this needs to be realized and explained.

[Introduction experience] in ISF in Indonesia brings forward a finding that it is *not* as much the willingness and capacity to pay, but the willingness and capacity to let WUAs take on new roles and new responsibilities, including all associated rights. In short: the total institutional performance picture is to be changed significantly. It is in molding this into something that suits the purpose (service for pay, pay for service) that the hard work is needed, to be accompanied by a change in attitude. The fact that change is opted for, requires a new structure of institutional bureaucracy, additional new public regulations, new public enforcement mechanisms, new view on irrigation as resources management. ISF means vocal and strong WUAs, exercising new rights. It is clear that if the Government wants ISF, it should accept the new major rights of WUAs in the ISF procedures. It should also be clear that Central level Government should both insist and support with resources the establishment of WUAs by the local government. This does not happen by itself. The whole "transfer", from subsidy to self-supporting, from

centrally administered to Local Government and WUA managed systems is a shift in thought, a paradigm shift. This takes time, and thus policy commitment. This is no easy task, as the old unsatisfactory and/or expensive procedures in system administrative and financial management have to be replaced by a whole set of new procedures and mechanism. *The one subsidy source* (Ministry of Finance) has to be *replaced by 45,000 new sources, being the 45,000 WUAs* which all need to be informed, established, convinced, and organized. The Government on the other hand should not hesitate in requesting payment. In areas where 1 hectare of land produces a net income of [$] 1,000, the payment of a fee for service of [$] 12 can be considered very reasonable. Once "... *the bugs are out of the service and ISF...",* and the data base and WUAs are ready, ISF performs well...

From the point of view of what a WUA is, the variation should be understood. Firstly, WUAs are established and organized differently, either hydrological based or village based. Ultimately, once ISF is introduced, and service is good, it does not really matter. It is then not the hydro-boundary, but the pressure to keep ISF functioning that will be crucial. However, hydrological based WUAs are to be preferred.

For sustainability of ISF and irrigation co-management, the level of activities for a WUA should be only the absolute minimal. WUAs should not be forced to come together and meet unnecessarily. Tasks can be derived from the Voice-for-Money List, and should include such things as 1) representation in ISF procedures, 2) administration of members/land holdings, and need for fee differentiation within unit, 3)administration and implementation of collection, exemptions and incentives, and 4) administration and implementation of backlog collection and sanctions.

WUA's performance will depend not only on guaranteeing the ISF concept, but also on spelling out 4 issues: the need for discipline based on service agreement, the urgency on collection, the attempt to control budget and expenditures, and no negotiations on principle. And even if WUAs would perform, they will need a good partner in the institutions which are responsible. WUAs should not be subject to "strengthening" to carry out roles the Government cannot do, unless the Government makes this clear and WUAs learn to accept this.

CONCLUSIONS

Does ISF Really Work?

To assess what ISF does, and whether it really works, it is needed to look at systems where it has been for 3 to 4 years. In these systems, ISF works in shifting costs and in bringing voice, in view of issues in irrigation co-management. For it to work in money (collection) terms, the role of District head in how he/she insists on payment and how he/she works through Sub-districts Heads is important.

Firstly, ISF systems have a substantially better data base and service base than non-ISF systems. Many WUAs and federations have by now efficient displays of maps of units, collection targets and monitoring, as well as service issues. The availability and correctness (and how it is used) of this data base constitute one major criterion to assess the impact of ISF. Secondly, WUAs are decidedly more active in ISF systems, first through pressure to do it, then through interest in the issue. Thirdly, in an ISF system, a substantial decentralization of tasks and roles is apparent.

Many of these findings are found in a recent independent assessment of the impact of ISF. The ISF introduction has been researched in 1993 in detail for the area of Nganjuk and Kediri in East Java, where 9 villages in both ISF and non-ISF areas were evaluated on data and users' views for the period 1989-1993 (World Bank working paper "*Does Voice Work? - A study on impact of Voice on Public Accountability*" Samuel Paul, May 1994). Paul noted further for ISF areas a substantial transparency of the irrigation management process, a substantial delegation of functions, and substantial staff incentives. Water users were increasingly satisfied with the response to issues and complaints, compared to non-ISF WUAs.

ISF as A Step towards Irrigation Co-Management

ISF in every system would be a first major step on the road to a more irrigation management transfer. There will always remain a major task for the Government as water resources management was assigned to the Government by the 1945 Constitution. Ownership of infrastructure by WUAs, especially in areas exceeding one administrative unit (the village) is already complicated, as system turnover program to WUAs in areas below 500 ha system size has shown.

The experience in those areas now 4 years under ISF points to the ISF policy to be perhaps the major task the Government of Indonesia can and should achieve in the irrigation sector over the next 15 years. Clearly, ISF is a first major step in meaningful involvement of Water Users Associations (WUAs) in system management. If this ISF can be established firmly, even further management transfer can and should be considered. The ISF introduction

should also be increasingly seen in combination with how to balance water supply to the irrigation sector as the major user and those vying for a share of this irrigation sector water.

ISF procedures guarantee that if service results are poor (harvest failure), water users can request exemption from the fee. In systems considered insufficiently developed, or containing poverty-classified villages, District Heads can postpone ISF introduction, if they so wish.

The introduction of ISF in Indonesia points to the fact that large-scale systems, serving national interest and rice production targets, should remain to a certain extent under Government management. At the same time roles of WUAs need to and can be expanded continuously. The possibility for this co-management will vary by region, by level of system development, agricultural performance and markets, and size of land holdings. It will depend on system size as linked to topographical features and administrative boundaries, as well as to water availability. Systems differ so much in water availability and setting, in crops and market access, in land holding size, in support services and availability of inputs, that each case needs to be reviewed on its circumstances. ISF procedures sort out these differences on their importance. Suddenly users are asked to or can give their opinion on almost any management issue. This is good for all, without question.

The introduction of the ISF policy is already a significant form of management transfer. If successful and sustainable, and if contributions reach 100% of O&M costs, the Government can think further. Perhaps water shortages will force the issue of more and broader management transfer much earlier as now anticipated. What seems equally important is linking irrigation management to non-irrigation water use demands. The structural role of irrigated agriculture needs to be reviewed in relation to sectors exploding in growth and demanding a greater share of irrigation water supplies for urban development, domestic water supply, industries, flushing for water quality control in rivers, and fisheries along coastal areas. These sectors will compete for limited water supply, as now on Java and Bali, but soon elsewhere too.

Functional Water Users Associations

WUAs should be functional and minimally active organizations. Criteria to check on WUA functionality are relatively easily developed. The Government should never forget that functionality of WUAs should be tested against the least cost, least activity principle. Water users have many other worries to make ends meet; the demands put on them in irrigation co-management should be assessed from a viewpoint of efficiency, equity and effectiveness. The ISF policy needs functional WUAs, and WUAs need a functional and effective ISF. *Both* ISF and WUAs need pressure. *Positive* in the sense of voice and meaningful participation in making system ISF ready. *Negative* pressure in case payment is not made, collection is low, but service delivered as agreed and a service agreement exists. Any hesitation on gradual but firm sanctions is deadly here for ISF sustainability. The Government should review regularly what ISF contribution is, relative to net income per hectare, as well as other contributions which farmers make.

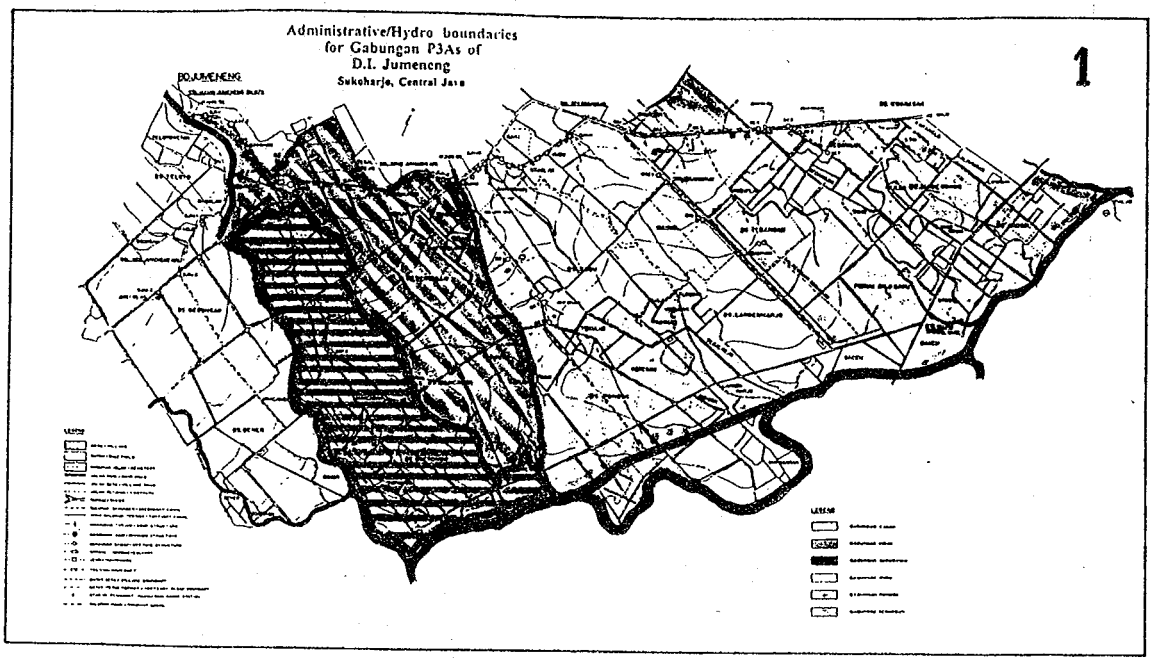
The attached figure with 3 maps is an indication of the organizational and data base requirements, and the procedures of ISF.

Map 1 shows the administrative boundaries of 6 sub-federations of Water Users Associations of the irrigation system of Jumeneng (955 hectares), Sukoharjo district, Central Java. Together, these sub-federations form the Federation of Water Users Associations through an elected federation committee; they discuss the O&M plan and the Needs-Based Budget with the irrigation service; they make a service agreement with the government, make a list of planted and harvested area on seasonal basis as means to verify service, monitor and stimulate collection from the WUAs, resolve and advise on request for exemptions on ISF payment, and discuss and enforce sanctions.

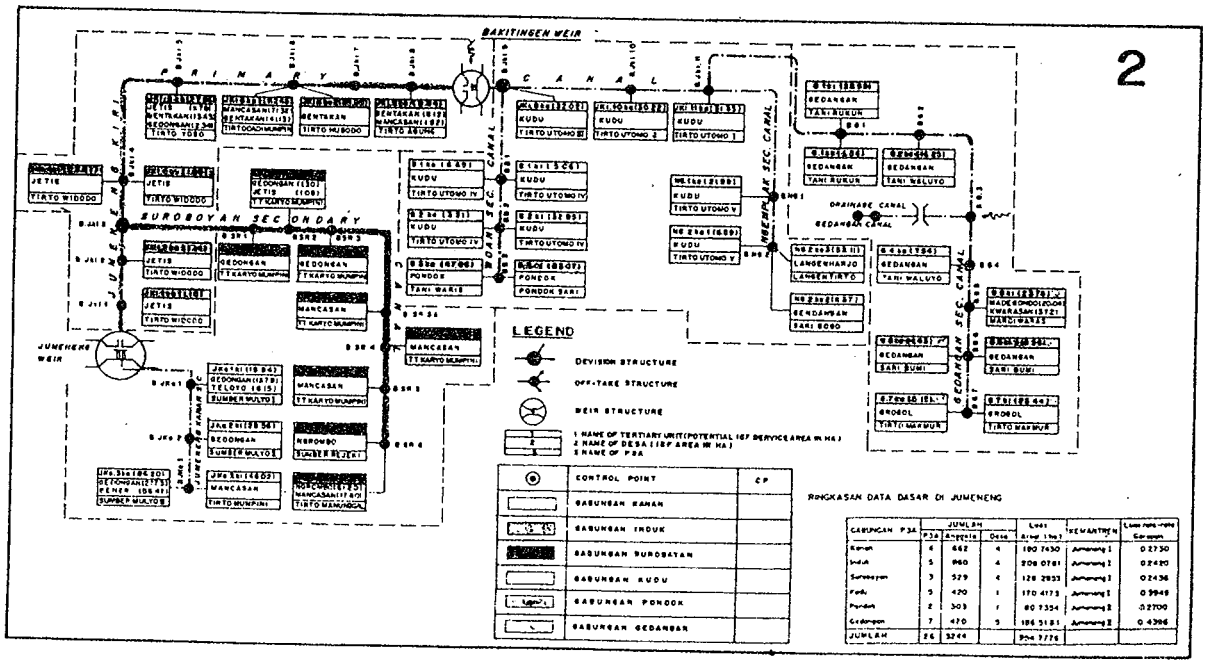
Map 2 shows the socio-hydro organization of these federations of WUAs around the secondary and tertiary units, a procedure where the village or sub-village unit boundaries are matched as good as possible with the boundaries of tertiary units and service issues.

Map 3 shows the inventory of service issues as emerged from the system walkthrough, based on the Federation of WUAs boundaries. These service issues become part of the POM and NBB and are given a cost, to be included in the budget, and to be reviewed yearly [whether resolved.] The basis of ISF success is the logical need of good service. But good service by irrigation service agency is in itself not enough. The whole management concept, the interaction, and the reason for paying for resources management directly should be understood, by the water users and by the Government; the concept should be accepted by WUAs and by the Government. *That will take vision, conviction, discipline, accountability and plain hard work*, and the patience to clearly explain, to structure decentralization and co-management, and ultimately the vision to give WUAs a clear signal and a chance to perform.

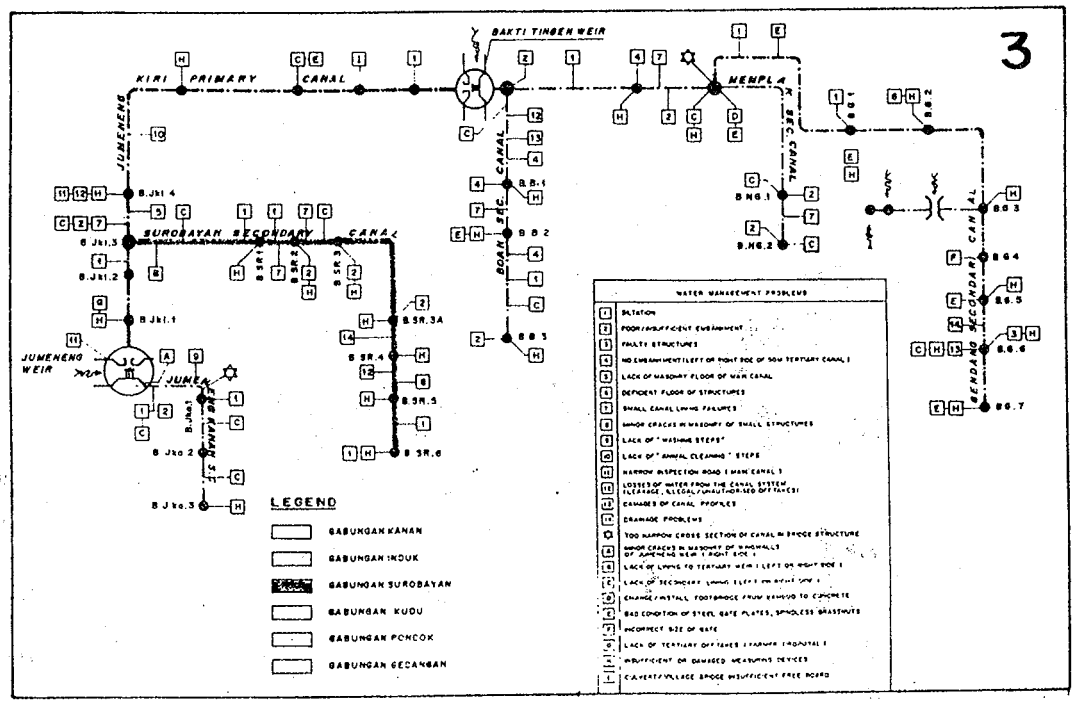
Map 1.


Administrative/Hydro boundaries
for Gabungan P3As of
D.I. Jumeneng
Sukoharjo, Central Java
1

Map 2.


BAKITINGEN WEIR
PRIMARY CANAL
JUMENENG KIRI
JUMENENG WEIR
SUROBOYAN SECONDARY
WONOSARI SEC. CANAL
KRENDAWAHAN SEC. CANAL
CEDARAN SEC. CANAL
ORDINARE CANAL
LEGEND
DEVISION STRUCTURE
OFF-TAKE STRUCTURE
WEIR STRUCTURE
CONTROL POINT
GABUNGAN KANAN
GABUNGAN INDUK
GABUNGAN SUROBAYAN
GABUNGAN KUDU
GABUNGAN PONDOK
GABUNGAN GEDANGAN
RINGKASAN DATA DASAR DI JUMENENG
2

Map 3.


3
BAKTI TINGEH WEIR
KIRI PRIMARY CANAL
JUMENENG
SUROBAYAN SECONDARY CANAL
BOAN SEC. CANAL
MEMPLA SEC. CANAL
JUMENENG WEIR
JUMEN
LEGEND
GABUNGAN KANAN
GABUNGAN INDUK
GABUNGAN SUROBAYAN
GABUNGAN KUDU
GABUNGAN PONCOK
GABUNGAN GECANGAN
WATER MANAGEMENT PROBLEMS