

PIM MODELS IN VIETNAM – EXPERIENCE LESSONS

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A, EMERGING ISSUES

Vietnam has had a traditional paddy production for longtime. Since 18-19th century, it has been stated that the success of paddy production thanks to irrigation and drainage services and irrigation services is work of community (PIM) (1). It can be considered that this is the first concept of PIM

For centuries, cooperation and mutual support not only in irrigation services but also in other sectors, have been a tradition for Vietnamese via an organization of “Phuong” – an organization contributes fund to help construct individual house - of “Hoi” – Association of planting and land preparation- “Yeng” – called in South Central like “Phuong” and “Hoi”. In 50s and 60s decade, following the policy of the State, in rural areas, “Labor work exchange group” including water delivery work had been set up in production, Agricultural Cooperatives have Water management Group, Irrigation Group 202 (responsible for on-farm irrigation maintenance and repair). Also Trading Cooperatives have been established for supply of input materials for agriculture productions. These are considered as PIM activities agreed and implemented by farmers.

In the following decades, PIM has become a policy of the State as *"the State and people working together"* following criteria “people know, people discuss, people do and people inspect to mobilize the internal strength from people’s contribution - PIM

Though PIM has been carried out for long time but term of “PIM” and methodology on PIM in Vietnam recently has been formed and used in documents since the first national workshop on PIM organized in CuaLo, Nghe An in April 1997 by MARD, ADB, WB with the participation from INPIM, NGOs, representatives of different sectors at both Central and local levels.

Since then, Vietnam had set up the Vietnam network on Participatory Irrigation Management (VNPIM) which has actively operates and cooperate with International Network on PIM, to promote PIM development in Vietnam.

These are important benchmarks to determine the development process of PIM in Vietnam which there are very few people recognized.

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In investment projects, mainly are projects funded by foreign loans, PIM has been considered as a criteria for investment because it is a factor to determine the success of the project. This makes more pressure for people, relevant agencies, and stakeholders to consider and implement PIM as required by the project. However, in fact, this pressure is not strong enough for PIM success within the framework of the project.

One of reason leading to this issue is that recognition and awareness of PIM have been still limited for many officials even some do not want to know. This leads to authorities at different levels and relevant agencies have not taken into account properly to PIM.

Practically, each project has its own approach to implement PIM based on some “PIM experts”. Therefore, PIM models are established as required by projects, biased to “achievements” and lead to unsustainable. Many models return to “start point” after the completion of projects regardless the scale and fund sources of projects.

Market mechanism is demanding PIM actively develop. This aims to get better in both quality and quantity with cost reduction for agricultural products improving competitive capacity and increasing farmer’s income. Thus, it has been raised that farmers should not only have right to participate in irrigation management but also contribute their funds and own infrastructures. They also are responsible and get benefit from irrigation services via their shares and stocks from equitization of IMCs. These will promote irrigation services more sustainably.

Implementation of PIM is a process, which is recognized to make effective. However, it will confront with individual benefits of some stakeholders and with lack of enthusiasm and consideration of officials at different levels. Thus PIM implementation has faced with many difficulties.

To better understand about PIM, a number of questions, which were raised such as: *What is PIM? Why it is called by PIM? Irrigation Management Transfer? Why does PIM have to be implemented? What is different between PIM and IMT? What are objectives of PIM? What are requirements of PIM? Why should be farmer’s participation required? What is participatory? What are conditions/terms for participatory? have been answered by the reality during implementation of PIM and explained in many materials.*

In this paper, I briefly introduce assessment of PIM models and experience lessons gained from PIM enforcement in Vietnam.

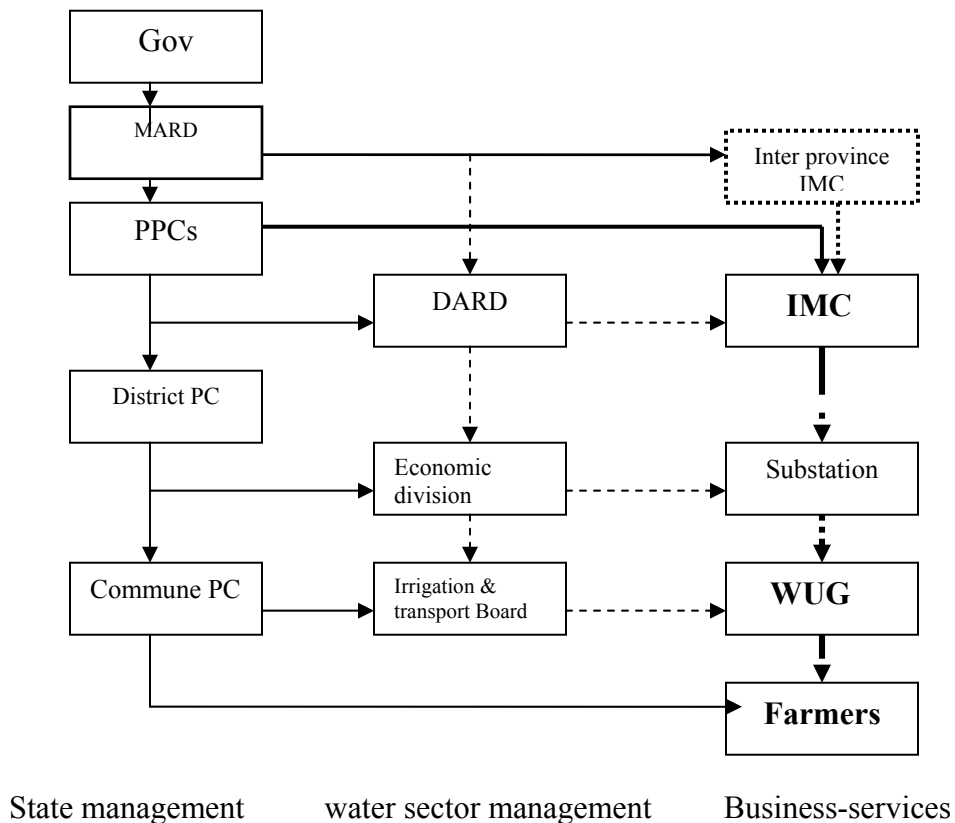
B, CURRENT STATUS OF PIM MODELS IN VIETNAM

PIM models are defined in Ordinance on exploitation and protection of hydraulic works and in Circular No 75/2004/TT-BNN by general terms: “Water user organizations”. These models include Cooperatives, Associations, Groups and so on.

Organizational system of hydraulic works management is presented in Chart 1 forming by 2 blocks: *State – People*, through 3 management levels: *Company (IMC) – Water user organizations (WUOs) – Water users*, carrying out 3 functions: *state management – water management – business management (services)* ensuring the “closed management”

in irrigation systems, in which WUO is considered as *an important “bridge”* between IMC and water users in water management. Performance of WUOs should be incorporated with performance of IMC. Therefore, it is impossible not to mention about the operation of IMC while assessing the performance of WUOs?

Chart 1 : Organizational system of hydraulic works management



Notes:
 State management —————>
 Water management - - - - ->
 Service contract ······>

C, ASSESSMENT OF OPERATION AND ORGANIZATION OF WUOs

I, IRRIGATION MANAGEMENT COMPANY - IMC

Currently, there have been more than 100 IMCs under MARD, Provincial People Committees managing headworks, main canals, secondary and tertiary canals of medium and large scale irrigation systems accounting for 91% of existing irrigation schemes serving for 80% irrigated area and more than 10.000 WUOs. These are main kinds of management models with different scales.

In some provinces such as Tuyen Quang, Lao Cai which has many small-scale irrigation schemes has no IMC. The management of these existing irrigation schemes was transferred to WUOs, Agricultural and Forest Cooperatives.

Recently, following policy on “enterprise renovation” the phenomenon of “joining or dividing” IMC has been taking place. However, it has not complied with basin principles, management requirements thus this leads to cumbersome and ineffective organizations, which are not autonomous in both operation and finance (Joining because of headwork reduction and dividing due to management decentralization at district level).

There have been a few provinces equitizing IMC, exchanging IMC into “One-membership Limited Company” pursuant to Decree No 95/2006/ND-CP by the Government. This aims to confirm Government’s role in irrigation services that is to create an effective organization having close responsibilities and benefits with farmers.

Due to the fact that there are not a few irrigation schemes, which were constructed incompletely with low quality, it has directly impacted on service quality of IMCs. Especially, because of inappropriate policies in water management – the Government determines and controls output of service (water fee) under its “policies” while IMCs operate under market mechanism (for inputs of business) – IMCs are not autonomous and transparent as required. Water management staffs are not trained fully as their job particularly about 20% of them are unskilled employees while lack of promotive policies. Therefore, many IMCs operate ineffectively. Income of IMCs fails to cover their expenditures at the same time Government subsidies do not follow as regulated. These lead IMC to have to “reduce its expenditures within limited budget”, leads to lack of fund for Operation and Maintenance, irrigation schemes and fall into a situation under which irrigation and drainage schemes continue to deteriorate and operate with low effectiveness. (*According to ADB report – 2006, Nam Yen Dung IMC spent in 2004 for repair and maintenance of structure about 3.7% of total costs whereas, management costs accounting for 5.7%, other costs making up 5.6%.*)

II, WATER USER ORGANIZATIONS:

Irrigation services is a work that farmer cannot carry out itself or do ineffectively. These should base on communities via an organization so called “water user organization”.

Currently, there are about 1.500 WUOs including Cooperatives, Groups, Associations manage 9% of independent irrigation schemes serving for 20% of total irrigated area. These irrigation schemes are separate serving for a isolated area out of irrigation scheme managed by IMC. This does not mention about nearly 10.000 WUOs manage tertiary canals and structures on canals within irrigation schemes managed by IMC.

Operation of IMCs and WUGs has to be based on village – a terminal administration unit. It plays a very significant role in irrigation scheme management especially water delivery for farmers, structure protection, water fee collection.

a, Forms of organization:

There are 6 forms of Water User Organizations carrying out full irrigation services or part irrigation services as required by farmers. They are much diversified in scales, names and operations (Chart 1). According to Department of Cooperatives and Rural Development (MARD), there are 5 kinds of WUOs: Agricultural Cooperatives, Water user group, Water management Board, Village's Water Management Board, Water user Association. Also, there are only 11% of surveyed provinces having all 5 kinds of organization and for the remaining, Agricultural Cooperative is a main kind

Table 1

Forms		Abbreviation	Characters/terms
I	Cooperatives		Operation and organization under Law on Cooperatives
1	Agricultural Cooperatives	ACs	Irrigation services at commune, village scale
2	Water User Cooperatives	WUCs	Specialized in irrigation services at intercommune, commune and village scale
3	Irrigation Cooperatives	ICs	Specialized in irrigation services at commune and village scale
4	Irrigation and Electric Cooperatives	IECs	Integrated services at commune and village scale
5	Agricultural and Electric Cooperatives	AECs	Integrated services at commune and village scale
6	Agricultural and Forest Cooperatives	AFCs	Integrated services at commune scale
II	Water user organization		Pursuant to Law on Cooperatives and Law on Civil
1	Water user Association	WUA	at intercommunes, commune and village scale
2	Water user group	WUG	at commune and village scale
3	Water management group	WMG	at village scale
4	Water management team	WMT	at village scale
5	Water delivery group	WDG	at village scale
III	Management Board	MB	At inter district, inter commune, commune, intervillages, village or independent MB
IV	Equitization, Individuals		Pursuant to Law on Cooperatives and Law on Civil
1	Cooperatives- Individuals	C,Is	
2	Hiring contract WMG, Individuals	HC WM	At inter village and village scale (Some spontaneous case)
V	Commune People's Committee	CPC	Not service organizations
VI	Village	Village	Head of village responsible for this duty, no formation of a service organization.

According to survey data in 29 provinces, all of interviewed people stated that it is necessary to set up WUOs, about 67-80 percent of them said that the strengthening of these organizations and IMCs for more effective operation should be needed.

b, Distribution of forms of existing “WUOs”:

The distribution of forms of existing “WUOs” is presented in the following table

Table 2

No	Region	Agricultural Cooperatives		Other organizations				
		Quantity	Rate %	WUCs		WUA, WMG, WMT, WUG,		Rate %
				Quantity	Rate %	Quantity	Rate %	
1	North	3788	91,0					9,0
2	Red river delta	2006	96,7	29	1,4	40	1,9	3,3
3	North Central	3631	86,5	256	6,1	311	7,4	13,5
4	Sounth Central	994	67,0	331	22,3	158	10,7	33,0
5	North East South	236	62,8	101	26,9	39	10,3	37,2
6	Mekong river delta	406	58,5	54	7,8	234	33,7	41,5
7	Central Highlands	189	73,0	42	16,4	27	10,6	27,0
	Total	11249	76,5	958	11,5	1039	12,0	23,5

According to survey data MARD – 2003, Integrated ACs serving irrigations have considerably reduced

It can be seen from table 2 that the formation of WUOs is different among regions. The situation of WUOs in RRD is not favorable due to many reasons. One of them is slow access to market approach in this region.

c, Current status of operation and organization of WUOs form:

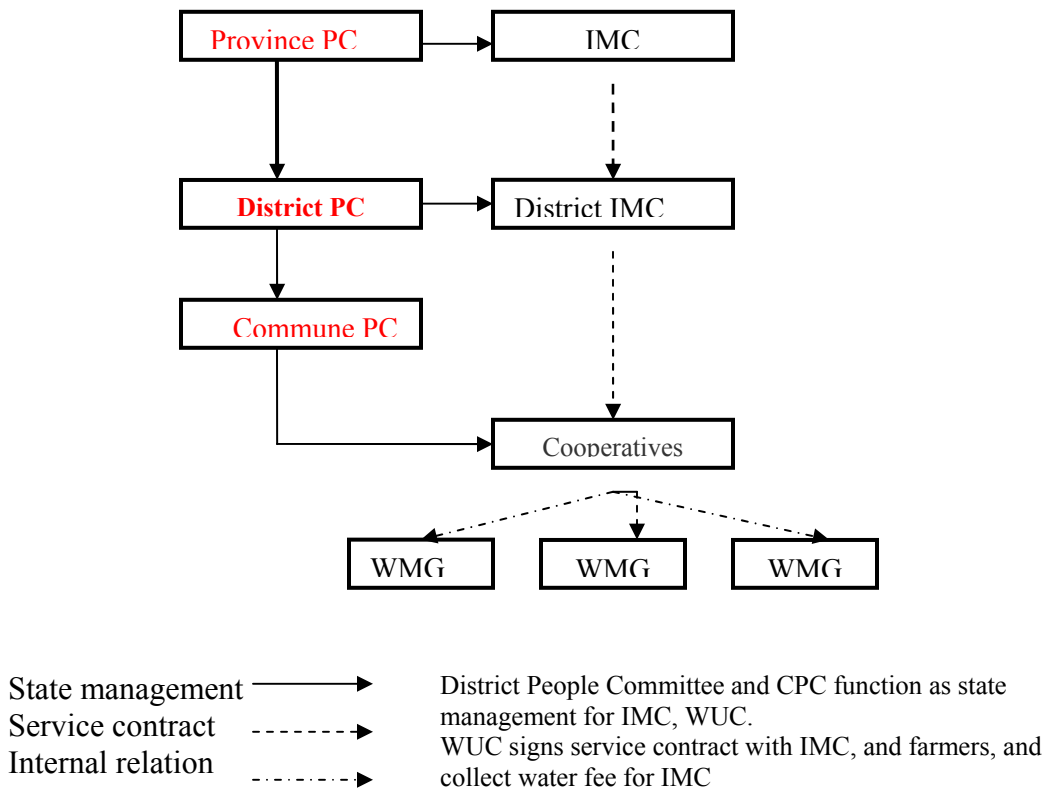
+ Cooperatives:

This is a common organization reconstructed from old style Cooperatives and now operating under Law on Cooperatives.

Pursuant to this Law, members of Cooperatives have to apply for joining voluntarily, contribute their stocks, operate under regulations and charter approved by Congress of members of this organization. However, the enforcement of this Law is not followed fully in some places especially the voluntariness of farmers. *According to survey data from 29 provinces, there are 20-25% of them applying for voluntarily, especially Tien Giang province with 76.6%. The majority (75-80%) inscribe their names or event 3.2% enforced to participate in.*

Contents of Charter of many WUOs are not in accordance with actual situation and requirements of farmers. Many integrated cooperatives have not full their autonomous rights. Their operation, activities are controled by CPCs. Scope of operation of Cooperatives is mainly limited within administrative border (commune or village). There are very few models operate within hydraulic border (intercommune canal). For Cooperatives serving within a commune or inter-communes, they have their own WMGs for village or intervillages.

General chart of Cooperatives serving irrigation in irrigation schemes



WUOs classified by name include as the following:

1, ACs (accounting for 76,2% of total WUOs in the whole country)

ACs are set up under Law on Cooperatives. The scope of operation of ACs is based on administrative borders at commune, intervillages, village (Bac Ninh, Bac Giang. Therefore, there are a number of ACs in a commune (2-9ACs). Irrigation schemes in commune are managed at the same time by some Cooperatives via their WMGs. What unusual is that CPC signing service contract with IMC but Cooperatives in commune have to contact with IMC to solve difficulties in water management. This leads to a cumbersome and ineffective organization especially in rehabilitation of structures (Figure a)

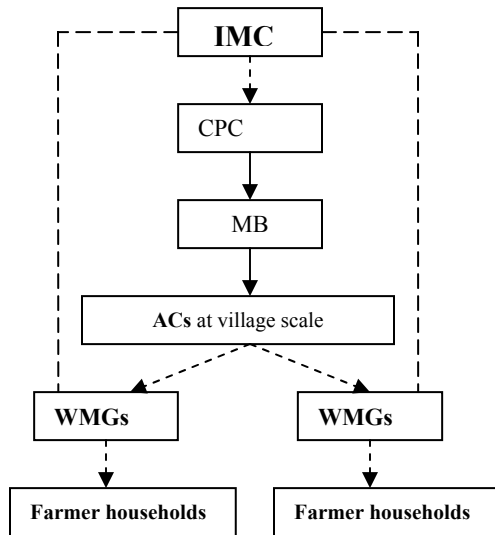
According to survey data, about 69.96 % of ACs setting up their Charter on operation in irrigation services, 67.73% ACs apply hiring contract regime for WMGs. For the remaining ACs, WMGs carry out water fee collection, water management and other activities based on revenue under management of the management Board of ACs.

Particularly Tuyen Quang province based on its mountainous features has set up Agricultural and Forest Cooperatives, Agricultural production and service Cooperatives.

These Cooperatives operate at commune level. These WUOs carry out many services including irrigation, land preparation, input materials (seed, fertilizers, and pesticides), technologies, plant protections... (Figure b)

There are some ideas raised that ACs should cover integrated services aiming to support for irrigation service which considered as “public service” that its income never cover fully for expenditures.

Figure ACs at village scale in BacNinh



State management
Service contract
Internal relation

Figure a

Figure AFCs in Tuyen Quang

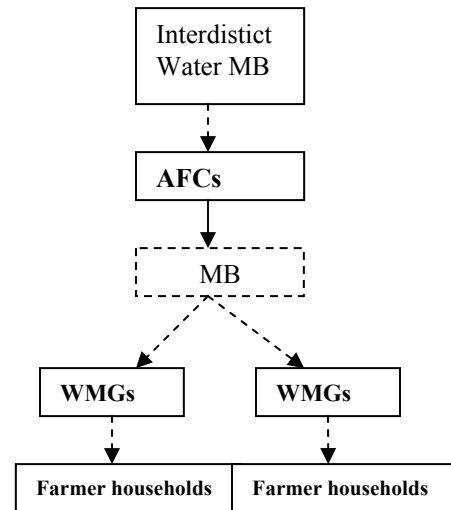


Figure b: No IMC, only inter-district and inter-commune water management Board

Most of ACs are integrated cooperatives with at least 2 services and maximum of 6 services. According to survey data this kind of WUOs only effectively operate when *it carry out well all of its services as required by farmers namely effectively managing irrigation schemes, canals, ensuring enough irrigation water, saving water, electricity, reducing management cost, collecting full water fee, transparent finance, implementing O&M sufficiently.*

In fact, however, there are many Cooperatives only serve for irrigation but called Agricultural Cooperatives not Water User Cooperatives because they don't want to abolish the name of “Agricultural Cooperatives” which has been recognized in subconscious for many years.

According to survey data (1) almost ACs have their revenue from water fee (*accounting for 75%, in North East South 96%*) This might present that other services is not effective (in *Central Highlands ACs get 20,2% income from other services*). Therefore, more than 80% expenditures is mobilized from water fee. This leads to lack of fund for O&M and

financial balance of ACs divided into 2 kinds: “Integrated accounting” and “Separated accounting” as presented in Table 3

(Table 3) Financial situation of ACs by “Integrated accounting” and “Separated accounting” (%)

T	Region	% ACs “Integrated accounting”	% ACs “Separated accounting”	% salary	% payment for IMC	% for repair
1	North	61,5	38,5	36,3	16,0	18,0
2	Red river delta	85,7	14,3	23,7	62,8	9,9
3	North Central	54,8	45,2	14,4	57,9	25,8
4	Sounth Central	32,3	67,7	11,3	48,5	15,4
5	North East South	81,3	18,7	14,6	66,6	13,2
6	Mekong river delta	39,3	60,7	19,3	51,3	15,8
7	Central Highlands	28,1	71,9	18,5	62,5	11,3

The results show that when finance is not transparent in integrated activities this will lead to a stituation that lack of fund for O&M and structure will seriously deteriorate

+ *Integrated accounting*: is accounting together for all services or activities of ACs including irrigation services.

According to survey data, Integrated accounting only is effective when all services done by ACs are good quality and meeting to actual requirement of farmers as well as they support mutually based on financial activities for each service is transparent and public.

+ *Separated accounting*: ACs carry out a number of services aiming to coordinate activities of their service in the same Cooperatives for the highest effectiveness. However, in order to ensure water fee is used effectively especially for O&M, ACs undertake “separated accounting” for each service implemented by ACs. This is a solution for better use of water fee. However, in some ACs applying “separated accounting” method, it has promoted commune authorities in water fee misuse.

It is showed that *Integrated accounting or separated accounting is not compulsory regulations*. In deed, this a *temporary solution* to operations of irrigation service of ACs in the context of there is no a sound mechanism, farmer are not actually participated and have rights to monitor and inspect activities of ACs especially finance.

2, Water user Cooperatives: (accounting for 12% of WUOs)

These are specialized cooperatives serving for only irrigation at different scale. The organization and operation of WUCs follow the Law on Cooperatives. These WUCs develop in localities where farmers do not need to set up Integrated Agricultural Cooperatives. WUCs operate within “hydraulic” border especially inter-commune irrigation schemes. This is stated in Circular No 75/2004/TT-BNN by Ministry of Agriculture and Rural Development. These organizations almost are agreed and supported by farmers. However, they are not taken into account by local authorities and IMCs. Some WUCs operate very effectively inter-communes (3-4 communes event 7)

irrigation scheme transferred from IMC, but they are discriminated so it is difficult to expand widespread even in the system of IMC.

3 . Irrigation Cooperatives:

These are also specialized cooperatives serving for only irrigation at commune scale especially independent irrigation schemes located out of systems managed by IMCs. Alike to WUCs, ICs develop in localities where farmers do not need to set up or event complex with Integrated Agricultural Cooperatives. The organization and operation of ICs are also similar to other WUOs pursuant to the Law on Cooperatives.

Currently, some ICs established by a group of persons (about 10) are authorized to manage independent irrigation schemes serving for one commune. After put into operation, they are facing with many difficulties because lack of fund, skilled labors in water and structure management. Furthermore, the relationship between ICs and water users are not close. In fact, in this case, it is showed that local authorities play a very important role in supporting and promoting the operation of these ICs.

According to survey by Department of Water Resources – MARD, kinds of Cooperatives, mostly ACs have not presented fully requirements of participatory. Farmers are not participated much in planning, design of irrigation schemes

During construction of irrigation schemes, farmer also nearly are not allowed to take part in monitoring for both irrigation schemes funded by Government and structural items they are responsible for contribution (investment). They mainly participate in the forms of contributing their labors, fund to construct on-farm canals and structures. According to survey data:

+ *Red river delta*: More than 80% of surveyed Cooperatives have schemes funded by State budget from 50-80% (average 60-70%, maximum 100%), contribution of farmers accounts for 20-50% (average 30-40%, max 100%)

+ *Mmountainous areai* : More than 90% surveyed Cooperatives have schemes funded by State budget from 60-70% (no any case at maximum level 100%), Farmer contributions from 30-40%.

However, farmers are still not allowed to participate in monitoring the investment of projects. According to surveys, there are only 20-25% water users apply for joining ACs. This illustrates low voluntariness and unsustainability of farmers (Tien Giang is highest at 76.6%), from 75-80% farmers only inscribe even 3.2% are enforced and some are arranged by local authorities.

Charter of Cooperatives: By interviewing and survey, it showed that farmers are still not participated in discussion of Charter's contents, development of production option, water fee. These issues are mainly decided by Congress of members whereas, members in fact are not selected by farmers. There are many cases that are arranged by local authorities (People's Committee). Particular, farmers are not taken part in monitoring of investment and finance of Cooperatives

Legal status of Cooperatives have not been recognized fully. Some Cooperatives after changed have not their account, no seal, Charter is not advised by farmers while they are reported with full legal status.

According to survey data from 29 provinces, about 20-40% WUOs have not signed service contract with water users, about 20-30% WUOs have still owed water fee. Subsidy of the Government is not fully enforced so WUOs are not autonomous. There are a few training course for Farmers and staff of Cooperatives to take part to improve their knowledge about water management and policies.

4, Other forms of WUO:

4.1, Water User Associations (WUAs), Water User Groups (WUGs), Water Management Groups (WMGs)

These forms of WUOs: WUAs, WUGs, WMGs account for 23.5 % of total WUOs in the whole country. In Mekong river delta, this figure is 41.5% meanwhile, it is 3.3% in Red river delta. Currently, *WUAs, WUGs, WMGs* are set up, operated and organized under Law on Civil if these are approved by Commune People’s Committee, which will function the state management for irrigation system within its area.

Because these organizations are considered as “voluntary” organization of farmers, they have no full legal status with no seal, account, no working place and even some organization are not recognized by local authorities. Therefore they face with many difficulties in operation and unsustainable. These models almost develop in areas that there are no ACs or ACs are not recognized.

The scale of WUAs usually is with in a village, a commune or event at intercommunes (3-4 communes). For WUAs managing independent irrigation schemes not related to system managed by IMC, they decide all activities under the leadership of CPC.

For WUAs managing irrigation works within system managed by IMC, they have to become a fully legal status to have rights to sign service contract with IMC and under management of District People’s Committee. (Figure 1a)

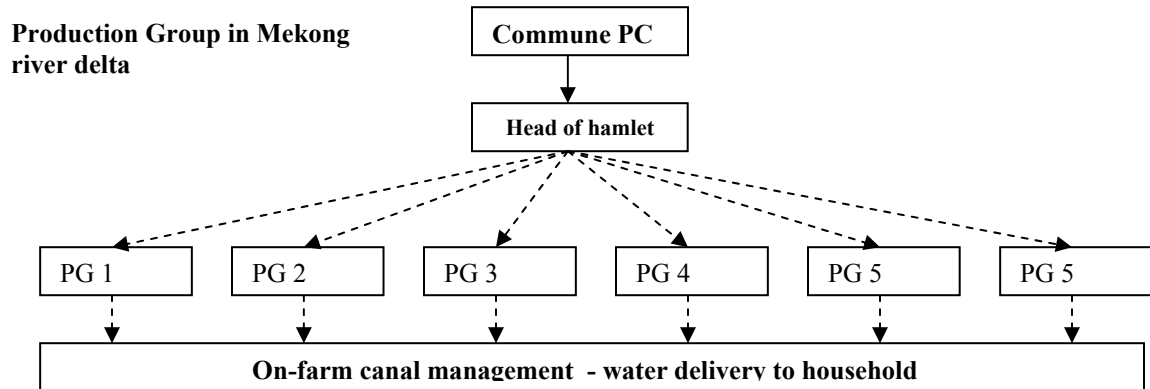
For WUAs, WUGs, WMGs under Cooperatives, signing service contract with IMC is the competence of Cooperative. They operate under the management of Cooperative. (Figure 2a)

For small scale irrigation scheme serving within a village, a commune, mostly WUGs and WUAs are set up as required by farmers. Member of Management Board of WUAs, WUGs will be selected by farmers. In some cases, they are appointed by CPC to be approved by the Congress.

According to a survey in Tra Vinh province, the form of WUOs at village/hamlet scale “*management through Production Group*” for irrigation service is common. Each hamlet has a number of Production Groups which its members are selected by farmers. This group is directly under management of Head of Agricultural Board of hamlet. (Figure 3a)

In addition, there is a form of “Cooperation Group”, which is similar to Association form but in smaller scale, mainly carrying out for water service for feeding sugpo prawn in Mekong river delta. This organization is formed under the high voluntariness of farmers and based on their clear benefits. In fact, this organization has not been taken into

account by local authorities. About 70-80% of interviewee were satisfied with this kind of organization because it bring equality in water delivery, contribution to O&M. There are no water conflicts and finance is transparent. About 67% interviewee said that they were willing to pay higher water fee if water service is better.



Hình 3a

Operation of WUAs managing irrigation schemes not related to IMC follows their charter or regulations approved by the Congress. However, contents of Charter or Regulations are still simple. For WUAs under Cooperatives, they follow the Charter of Cooperatives and regulations of WUAs

In fact, WUAs are set up at small scale (village) and operation of WUAs is more “close with farmers” and also is easily monitored by farmers. Therefore, water delivery, management and protection, O&M of irrigation scheme are often carried out. However, because of “no detailed guidelines pursuant to Law on Civil”, less support from local authorities especially commune government, when difficulties occur they always exceed the capacity of WUAs (in technical, financial and training issues). These will lead to unsustainable situation of WUAs.

Currently, there have been no sound and complete policies for operation, support in training, technical and financial assistance and protection of WUA’s interests, application of technologies. In addition, local governments have not considerably taken into account these WUAs therefore many WUAs still operate in effectively.

Organizational chart of Water Users Associations in Bac Giang

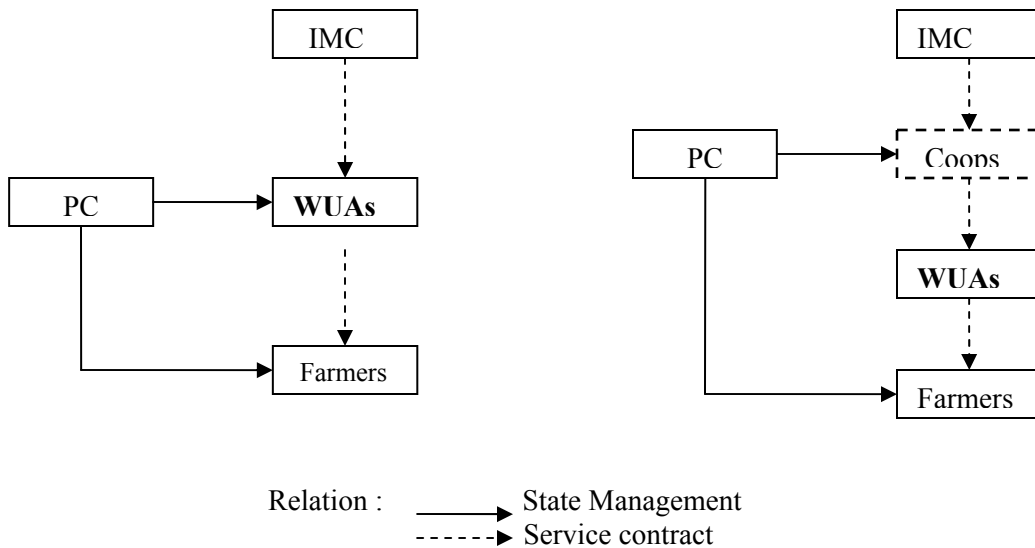


Figure 1a

Figure 2a

Water User Associations in Nghe An, Ha Tinh

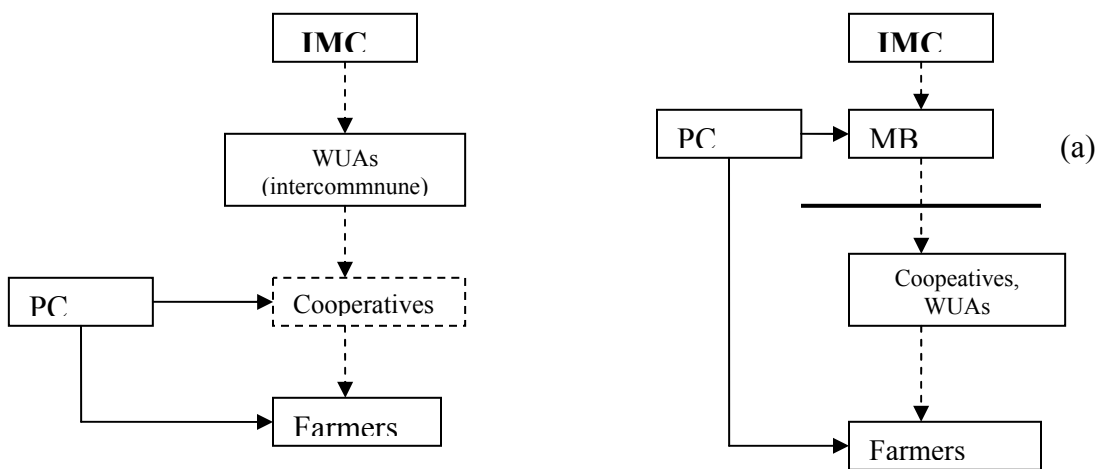


Figure 3a

Coopeatives under management by financing mechanism (a) **Figure 4a**

4.2, Model of Water Management Board

Almost communes in provinces have a Water Management Board or Water and Transportation Management Board under Commune People’s Committees being responsible for state management functions at commune level. In some places, this Board is an water management organization at commune level (Ha Tinh, Lao Cai, Quang Nam

provinces), or is a “Council” including its members which are water users (communes, districts). This “council” executes water use plan within area under its management.

Members of WMB are not selected by farmers. In many case, WMB is an intermediate organization helps CPC to manage activities of Cooperatives carrying out irrigation services in the area. One of the key issues is financial status of Cooperatives following regulations made by WMB. Farmers are not participated in these activities. Therefore, in some cases, WMB is a barrier for the operation of Cooperatives (Figure 4)

In Lao Cai province : Water Management Boards, which are common organization managing irrigation services, are established by Decision 40. This WMB includes 3 official members: Chairman (commune leader), vice chairman (official in charge of forest, agriculture and water or land), an accountant (commune’s accountant). These WMBs are set up almost in lowland communes which have medium scale irrigation schemes and large area of paddy in districts and cities.

In fact, root organization network of WMB is various among regions. Many WMBs apply a hiring contract in management and protection of irrigation schemes. Entities get hiring contracts with WMBs are very different as below:

- Village (head of village or selected persons from village are responsible for the contract)
- Social organizations such as Youth, Women, Venterant Associations)
- Individuals.

In some places, WMBs are formal organizations established as contacting unit and irrigation schemes still are assigned to be managed by villages. Therefore irrigation schemes here are not fully managed. It is reported by the local that where local government is strong and pay attention to irrigation, WMB will get positive support in operation and water fee is collected. However, because the enforcement of democratic regulations in irrigation scheme management at village has not been considered considerably, the role of farmers in irrigation scheme management have not been promoted.

As regulated, members of WMB are appointed by Commune People’s Committee and approved by District People’s Committee. They are not selected by farmers. In some cases when person who was appointed to WMB but he or she refused to do, CPC itself appointed other person led to some negative effects (appointed close relatives).

WMB has only 3 persons so it can not directly manage all irrigation structures in commune area, it has to sign service contract on operation with head of village. This is an organization with unclear functions, duties, ineffective operation and less participatory in management process. Thus, this model should be applied only for area with strong local authorities and without WUOs.

At present, WMBs in Lao Cai get percentage of water fee to pay salary for their members. This model is not common because it is not suitable in current situation. So far, WMBs in Lao Cai have reduced gradually to 60 ones from 73.

In Tuyen Quang : There are 3 models of Management Board with different operation forms given as below:

- 01 inter-district Management Board is responsible for managing reservoirs, main canals, and water delivery to head of canals in irrigation area managed by AFCs established by PPCs and under management of Sub Department of Water Resources. This MB has 5 staffs of which 3 technical staffs in charge of managing 80 ha get salary from water. There are 2 **persons carry out their duties concurrently** including a chairman of CPC and a head of AFC also get salary from water fee. Branch and on-farm canals are managed by MB of AFCs.

- 06 inter-commune Management Board: These MBs manage irrigation structures related to many Cooperatives and deliver water to head of canals of irrigation area. These MBs are set up by District People's Committee. Chairman of this MB is a staff with his professional in water resources; accountant is accountant of AFC with largest irrigated area. It also has 1-2 technical staffs which are responsible for 60 ha of each. Its members are chairman of communes or head of Cooperatives benefited from irrigation scheme. They get salary from water fee. On-farm canals in the scheme are managed by MB of AFCs.

- 140 Management Boards of AFCs: These organizations are in charge of managing structures serving irrigation within a commune, or structure serving intervillages. Structures within village are managed by village's cooperatives.

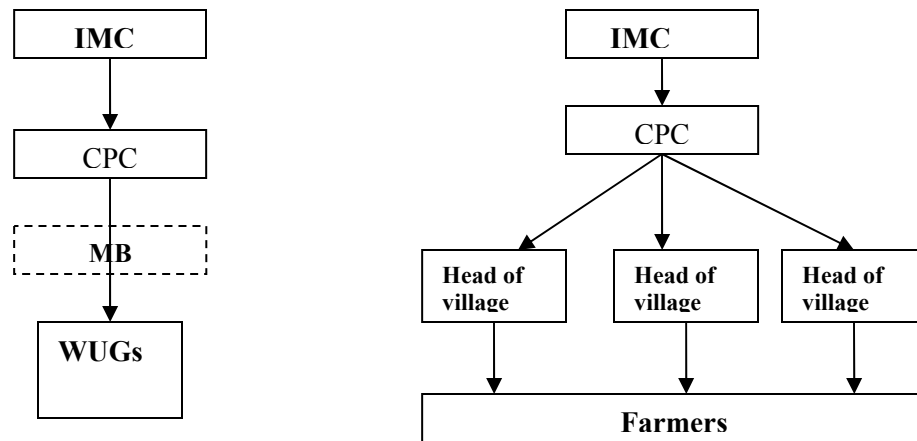
Chairman of MB is head of AFC, it is the same for accountant, its staff including 3-5 persons selected from production group, each of them responsible for 40-50 ha and get salary from water fee. This MB is set up by CPC and responsible for management, protection of irrigation scheme and distribution of water within scheme.

4.3, Model of Commune People's Committee

In many communes, the formation of ACs are not concurred by farmers while the establishment of WUAs/WUGs face with many difficulties from local authorities. Therefore Commune People's Committee has to undertake "management" of irrigation schemes and sign service contract with IMC. In Ke Go (Ha Tinh province), this model account for 20%, villages make up 75%. In fact, CPC is not an business unit so it can not function well for doing business like irrigation services event it is impossible to undertake this mission unless it has workers selected by water users. Therefore, Irrigation schemes here do not have "actual manager". In fact CPC appoints one its staff in charge of "steering" head of villages to manage structures within village and collect water fee for IMC and get certain percentage collected. In some cases, CPC assign head of village to collect water fee, inform water distribution to farmer. Farmers have to deliver water to their farms. According to estimation in a commune located in HaTinh, labor work that farmer has to undertake to deliver water is equivalent to VND 400,000-600,00 per crop.

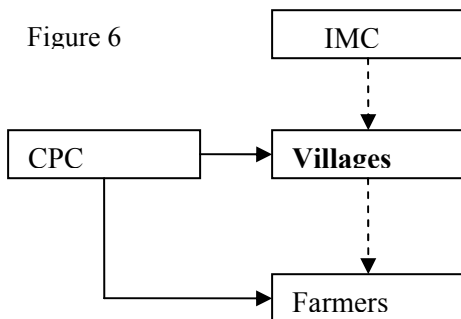
Almost interviewees did not satisfied with this model because water distribution fail to meet requirement, inequal. Water conflicts often occur, water fee is not transparent and made public, farmers are not participated in planning, design, and O&M of irrigation scheme. Farmers here expect to have a better participatory organization.

Model of Commune People’s Committee Figure 6



4.4, Model of village: Village is a terminal/basic administration unit. It also is an organization of management of irrigation structures within village. It plays a very significant and decisive role to effectiveness and sustainability of WUOs and IMCs. Head of village is person who understands most very much the situation of village, land, structures and even shortcomings.

Figure 6



This is village model (WMGs) in Yen Dung, Bac Giang (6)
 Village (WMGs) sign service contract with IMC
 Here, CPC only functions state management not intervene to WUGs. Water fee is collected from farmers and pay to IMC. Due to low water fee, revenue fail to cover its expenditures. Aslo WUGs have not trained leading to limitations in operation

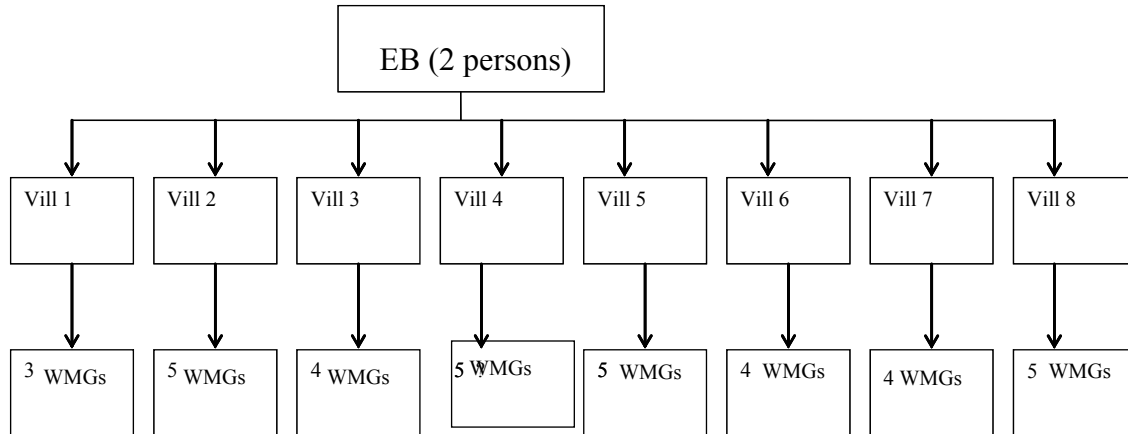
This kind of organization is very different. Especially in mountainous areas, for example in Lao Cai, the minority ethnic has its own “self management village”. It is very traditional forming from cooperations, and farmer contribute under the mobilization of head of village, village patriarch.

In Mekong river delta, it has an organization at village/hamlet scale via “production group” or “Cooperation Group”

In Quang Nam province, Economic Board of commune is responsible for management of irrigation via head of villages. Each village has its own WMG. This kind of organization is similar to Water and Transport Management Board in other provinces. Infact, EBs do not directly manage irrigation services but promote and monitor water fee collection and

get percentage of water fee collected. They don't care about effectiveness of irrigation systems.

Figure 7 – Model of WUOs in Binh Tu - Quang nam



4.5. Models of equitization and individuals

These models have been emerging in recent years in some provinces. There are not many models but is not many but they manage irrigation schemes (pumping station, small reservoir, canals) effectively.

These models develop following farmer requirements base on *self-adjustment via approval of farmers* which get more effective.

- 1, Owner of pumping station Nguyen Van Son, in Tan Cong Tri, Tan Hong, Dong Thap province:
 - 3 pumps with capacity of 2000m³/h
 - Investment fund VND 560 million
 - Annual revenue VND 400 million, Costs VND 338.5 million, of which salary accounting for 15%, other costs 9%. Electricity, petrol: 46%, repairs 30% - get benefits.
- 2, For pumping stations managed by Ngô Nguyen Chi Công (2 pumps). The managers fail to cover expenditures of the pumping station because water fee collection only reach 55% as planned, electricity accounting for 51% – loss
3. Mr. Lan's Pumping station in Than Hoa, Phan Van Thuan's Pumping stations, Mr. Hai's in Hai Phong, Mr.Thieu's Ky Anh (Ha Tinh), Da Hieu reservoir in Dac Lak, individuals get hiring contract to manage canals in HCM city.

Almost private/individual models face with many difficulties in operation because these are not guided instructed and no appropriate policies supporting the operation of these models especially when they face with risks. Current policies only support for IMC and WUOs. In addition, local authorities do not support to development of these models even hinder them for instant prevention from water fee collection in Mr.Thieu's Cooperatives.

III, WATER USERS (Farmer households) :

Water users is one of 3 entities in the organizational system: IMCs - WUOs – Water users. Water users almost are farmers. Their life mostly depends on paddy production. They are vulnerable people get low income, not trained but have to pay many items excluding water fee. Their awareness of irrigation scheme management and protection is limited thus they often make structure damage, waste water (2-5 times). These lead to an increase in management expenditures and misbalance of water delivery.

Farmers gain the subsidy on water fee from the Government. This leads to their reliance on Government. They also are not authorized to manage irrigation scheme in addition, there are no appropriate policies on their participatory. Therefore, they do not want to participate in irrigation scheme management. Farmers owe water fee while the Government does not subsidize insufficiently making to lack of fund for O&M and structures become more degraded.

In irrigation scheme management, organization and operation of IMC is not separated with that of WUOs. The existence and sustainability of WUOs mostly are decided by farmers. While these WUOs are not strengthened following PIM direction, Operation of IMC will face with many difficulties and ineffective. Also, farmers are first persons will suffer from these consequences. Therefore, WUOs should be of people, for people and people have to be responsible for WUOs

Considerations:

In Mekong river delta, conditions for agricultural production of farmers are very favorable. Agricultural land is concentrated. Farmers are not suffered from water shortage. Headworks and main canals of irrigation schemes in the region do not demand fund for rehabilitation and repair. Farmers get familiar and access to market economy especially in trading production. They recognize the role of cooperation in production including inputs and outputs.

However, deterioration of irrigation especially canals, more difficulty in water distribution will be challenges for this region in next decades.

Furthermore, because rice market is often fluctuated, cost of inputs (labors, electricity, petrol, seed, fertilizers, and losses in post harvest are increased, income of farmers will reduce.

To support for farmer, the local government just consider reducing input costs by decreasing water fee that farmers have to pay to IMCs not to take into account the management aspects by WUOs improvement.

*Reducing water fee payment for farmers in the region do not increase their income especially the poor. That is because benefit gained directly from irrigation service is limited for the poor have small irrigated land but indirect benefit gained from hired working is bigger. For non poor farmers, who have large irrigated land will get more benefits from this subsidy policy.**

Considered issues: In this region, besides WUOs, it requires to establish and strengthen IMCs especially for inter-province systems which have been leaved “open”.

D, WHICH IS EFFECTIVE PIM MODEL?:

As mentioned above, models of PIM are diversified in scale, name, forms of operation with different effective levels and it can be concluded that:

- Each locality with its concrete features of *water resources, irrigation scheme scale, awareness of people, knowledge of official, interest of local authorities on management and implementation of policies on PIM* should apply for one model
- Effectiveness of each model is different
- Almost, PIM models operate effectively within their framework of « model » because it have not been expanded within its area. Some provinces have effective PIM model but not expanded.

One question should be raised here is « Which is effective model that we expect? » meeting PIM's requirements.

Some experts base name, scale of model to define the “effective model”. Thus, there are a number of experts stated that Organizations named “Agricultural Cooperatives”, Agricultural and Forest Cooperatives serving irrigation management are not PIM models. They said that PIM model should be named “Water User Association” regardless the model is accepted by farmers or not?

Based on current situation of existing PIM models, they expose their explanations in 3 points of view as below:

Firstly, ACs, AFCs is organized under Law on Cooperatives but almost of established cooperatives have not conform fully to contents of the Law especially voluntariness and limited participation of farmers, their members are not selected by farmers. In some places, farmers do not demand to set up Acs, irrigation services are undertaken by village. According to survey data, many ACs have carried out many services especially irrigation service, effectiveness of these ACs is not high, water fee misuse often occur, service costs increase. These ACs also have not act as a “bridge” between IMC and farmers.

Secondly, WUOs set up by “expert” are stated successful. These are “Water User Associations” established within the framework of projects. These WUAs operate with the scale of village or intervillages, manage almost independent irrigation schemes in mountainous area not related to systems managed by IMC. They do not depend on organization and finance of IMC. What is more, operation of WUAs is supported by consultancy and finance from project. However, because of its approach, farmers are not participated at early time of the project and fail to understand about benefits gained from the project.

Therefore, it is mistaken to state that “WUAs” is not enforced, farmers join voluntarily, not rely much on local authorities and after all conclude that these WUAs are expected real PIM models. However, after some projects completed, WUAs face with difficulties and return to “start point” easily or are trial models impossible to expand..

Thirdly, PIM models are expected to manage with a small scale irrigation scheme (a canal) on the basis of “hydraulic border” not based on administrative border (for only a commune or village). Therefore, these models in medium and large scale system almost are inter-commune models. In fact, there are very few cases of these models successful because they affects to benefits of many stakeholders, especially they can not break through traditional recognition about the ties of administrative border as well the power of local authority and power of IMC in both finance and human resource.

It can be seen from the reality that:

Each district or province has already its effective PIM models but they are not expanded in this area not to mention about other districts or provinces. This is presented in table below

No	Province	Donors	Models, relation to IMC	Scale	Current situation
1	Lao Cai	OxfamGreat Britain	WUAs/WUGs, Cooperation Group, MB, ACs, CPC without IMC	Commune, village	Existing, Cooperation Groups expanded in the whole province
2	Tuyen Quang	IFAD	AFCs, MB	Inter-communes, Commune	Existing, expanded in the whole province
3	Ha Tay	Australia	WUAs/WUGs, with IMC	Commune, village	No existence
4	Thai Binh	Spontaneous	ACs, ACs with IMC	Commune, district	Existing, expanded in a district
5	Hai Phong	Spontaneous	ACS, with IMC	Commune	Existing, no expanded
6	Thanh Hoa	ADB, Quaker individuals	WUAs/WUGs, ACs, with IMC without IMC	Inter-communes, village	Existing models of inter-communes, non expanded Existing, non expanded non expanded
7	Nghe An	ADB, OxfamBi	WUCs,ACS With IMC ACs, WUAs/WUGs	Inter-communes, village	Inter-communes existing, non expanded Existing, non expanded
8	Ha Tinh	-Oxfam Anh - FAD,AVA, - spontaneous, - individuals	WUAs/WUGs, ACs, IMC ACs, with IMC	commune, village commune, village commune,	Existing, non expanded Existing, non expanded Existing, non

No	Province	Donors	Models, relation to IMC	Scale	Current situation
				village commune, village	expanded
9	Thua Thien Hue	CIDSE	WUAs/WUGs, ACS IMC	Commune, village	Existing, non expanded
10	Quang nam	Spontaneous	ACs, IMC	Commune, village	Existing,
11	Quang ngai	WB	ACs, IMC	Commune, village	Existing
12	HCM city	Spontaneous	Water delivery groups, ACs with IMC	Commune, village	Existing, non expanded
13	Dong Thap	Spontaneous individuals	ACs, Cooperation groups, Equitization	WUCs, inter-communes, village	Existing, non expanded
14	Tra Vinh	Spontaneous	Cooperatives, Village/hamlet WMGs, MB, CPC	WUCs, inter-communes, village	Existing, non expanded
15	Dac Lak	DANIDA Spontaneous	WUAs/WUGs, Coopeatives, Groups with IMC, CPC, ACs, WUCs with IMC	Commune, village hamlet, village	Existing, non expanded Existing, non expanded

Therefore, effective and sustainable PIM models do not depend on their scale, name and operation form. These only depend on current status of each locality such as water resources, irrigation scheme scale, awareness of people, and knowledge of official, interest of local authorities on management and implementation of policies on PIM. Farmers benefit thank to low management costs, good quantity and quality of irrigation and drainage services, structures are not deteriorated, farmer's income is higher. These are terms and targets of PIM.

It can be stated that: *PIM models are only successful when they have sufficient legal status, are autonomous organization with real participatory especially interest and role of local authorities on management and implementation of PIM model.*

According to current situations and relevant guidelines documents, it can be shown that:

- *For WUOs serving only for irrigation, the bigger scale of model (more communes) is, the better they are and base on hydraulic boundary will reduce the cumbersome of organization.*

- *For multi-services WUO, its scale should not be less than one commune to avoid cumbersome organization. However, it should be considered that village is a terminal administration play a very important role in management, protection of irrigation scheme*

as well as water fee collection in the area. Therefore for intervillages or intercommunes irrigation schemes, villages should not be transferred as a legal status service organization. They are only used as an terminal unit of management organization. (Exception for irrigation schemes serving within one village or one village with its area more than 200 ha irrigated by a canal.

- Irrigation Management Transfer should not be limited at transferring rights of use of irrigation scheme. This should move toward transferring the ownership of schemes via equitization. However, with the non-trading production in the rural area of “limited land and condense population” even without ownership transfer policy, there will be many chanlleges for the sustainable PIM models

Thus, it is difficult to state what which effective and sustainable WUOs are. That is because they are depended on farmers themselves, interest of local authorities. However, it can be said that management models by Commune People’s Committee or Head of village are not considered as models in line with legal regulations.

E, ISSUES EMERGING FOR PIM POLICIES:

PIM in Vietnam has become « traditional » but what are legal basics for establishment of PIM model?

According to recent researches, the Government of Vietnam has oriented to PIM development by a number of important documents such as Strategy on PIM development, Law on Water Resources, Ordinance on Exploitation and Protection of Hydraulic works, Decrees, Revolutions and Circulars. In some provinces, local authorities have issued regulations on PIM development. However, it has been said that there are no fully legal basis for PIM development because there is no successful case on PIM recognized truly.

PIM is related to social, economic, political technical aspects especially organization and operation of IMC, interests of water users. Therefore, policies on PIM also are closely related to other policies *especially policies on water sector investment, finance including water fee (autonomy), agricultural policies, organization and management, technologies, modernization (management cost reduction), training (capacity building), incentives (indiscrimination) , IMT, participatory in planning, design, construction, O&M.* The big problem is that *related policies have not made a sound legal basis to promote PIM progress implementation effectively.*

However, it should be added that PIM development in Vietnam also faces with a big issue that is unreadiness or unexpectation to implement PIM policies to develop PIM widespread. (Because of being afraid of losing power, interests or misunderstanding about PIM). Even nobody will be responsible for not undertaking policies on PIM within the framework of a project.

Ministry of Agriculture and Rural Development stated that « irrigation schemes have served for 55-65% of design capacity. *There are many reasons causing this situation. One of the basic reason is organization of irrigation management have not been paid much attention by relevant agencies, sectors and authorities at different levels.* (2) Why

have not they been paid much attention to? What are needed to be paid attention to? These are questions that anybody can answer clearly.

Vietnamese people often say that “King’s regulations might be defeated by village’s rules” However, King’s regulations do not come into effects while “village’s rules are not set up because these depend much on the reliance on Government’s subsidies.

F, EXPERIENCE LESSONS ON PIM

Through steering, directly setting up successful and unsuccessful PIM models together with survey data and research, it can be said that PIM implementation is a process facing with many challenges and 11 experience lessons as well as major solution for PIM development in effective ways are presented in the following table:

Contents of Lessons		Measures to implement
1	<p>Awareness: It requires to better understand about PIM, including:</p> <ul style="list-style-type: none"> - What are objectives of PIM? (Effective, development and sustainable) - Contents and requirements of PIM? Farmers should have rights to participate in discussion, decision making on water management issues to ensure water requirements, O&M and other related requirements to undertake the democracy “people know, people discuss, people do and people inspect”. - Rights of participation should be formed in an organization set up by themselves. This organization has fully legal status, autonomy not depending on name, scale, administrative boundary. It carries out irrigation and other services as required by farmers. - Promoting role of communities together with the role of State. - Water from hydraulic works should be considered as goods to ensure finance for sustainable development of PIM on the basis of binding responsibilities to interests of water users 	Organizing workshops, training courses, propaganda, study tour according to requirements of stakeholders to improve awareness of PIM. This is a key factor for the success of PIM development
2	<p>Officials: Officials of local authorities (province, district, commune, village and of ministries, division, departments, companies should recognize truly about PIM, pay attention to PIM development. They also have good capacity to propose appropriate measures to organization, operations, and policies on PIM, to guide and instruct farmers in the implementation of PIM in effective and sustainable way. <i>Officials are an important factor (both positive and negative) especially when they fail to recognize truly about PIM or lack of enthusiasm, it will be a big obstacles for PIM development.</i></p>	Officials from Central to local authorities should have to better understand about policies, objectives, contents of PIM, united instructions to PIM implementation via training courses
3	<p>Role of local authorities, relevant agencies:</p>	

Contents of Lessons	Measures to implement
Local authorities including province (departments), district (divisions), especially commune and village should function well their state management on PIM. They should in time issue appropriate policies on PIM, take care and promote to set up PIM models with fully legal status, autonomous, effective and sustainable. IMC should support in technical aspects for PIM, IMT.	It is necessary to recognize that PIM development is responsibility of local governments at different levels
<p>4 <i>Ensuring the participation through approach</i></p> <p>Understanding contents and requirements of participation, and making <i>a mechanism for full participation</i> in all aspects of planning, design, investment, construction, management) at different scales of structures. <i>These present in contents of policies, interest of local authorities in policy enforcement paving a way for farmer to participate and set up WUOs as required by farmers through working group</i> including representatives of farmers, authorities. They also are responsible to the community to develop PIM model.</p>	Approach for farmer's participation via establishment of "working group" including representatives of farmers and others to prepare for setting up WUOs
<p>5 <i>Policies :</i></p> <p>Based on a legal framework on PIM, it requires to concretize in detailed regulations, documents for both Central and local levels, which are in accordance with actual conditions in the area and with the participation of farmers in making decisions, Regulations, Charters, Binding contracts, program, plans on aspects of finance, organization and operation. Policies on PIM including related policies make a legal basis for PIM development.</p>	Based on a legal framework on PIM (Law, Ordinance, Decree, Circular) local authorities concretize and propose to issue appropriate policies
<p>6 <i>Infrastructures:</i></p> <p>Structures in the irrigation system should be constructed completely and comprehensively. It is required to have <i>fund for rehabilitation especially on farm structures and for O&M</i>. Mobilizing the contribution of farmers is only carried out on the basis of binding interests and duties of water users. This is done via organization and operation of PIM model set up.</p>	Through assessment of status of infrastructure transferred, WUOs propose measures on technical aspects, finance and sources for mobilization
<p>7 <i>Application of technologies:</i></p> <p>To achieve PIM's objectives, it is needed to renovate on organization, operation, application of sciences, technologies to reduce cost (informatics, modernization of management</p>	Application of suitable technologies will follow and depend on terms of

	Contents of Lessons	Measures to implement
	equipment, canal lining). In turn, the effectiveness and sustainability of PIM development will be conditions to apply technologies.	structures, awareness of farmers, capacity of officials, and financial sources
8	<p>Training on capacity building: In order to successfully carry out 7 contents of experience lessons mentioned above, it is necessary to organize training by forms of meeting, propaganda, training course, study tour for stakeholders especially farmers. Therefore, contents and methods of training should be suitable with each of stakeholders and should not be mechanical, formal, imitational following requirements of “project”</p>	<p>- Workshop, study tour for key officials responsible for PIM - Propaganda, training courses, study tour for other stakeholders</p>
9	<p>Gender issue: Women should have rights to participate in PIM activities. These will make PIM model more effective because women’s characters are suitable with water management (saving), finance (water fee), O&M. Women’s role is positive so that if it is promoted it will reduce their negative limitations (water conflicts, water fee debt). Thus the role of women is very indispensable.</p>	Regulating percentage of women in meeting, in organization of PIM model.
10	<p>Co-ordination in action: PIM development does not only relate to economic and technical issues but also relate to social and political aspects so PIM implementation is not only a work for water sector, but also for related sectors such as finance, resources and environments, transport, aquaculture, agriculture.. and social organizations such as Farmer Association, Youth Associations, Women Associations. Therefore it requires a close cooperation in implementation.</p>	Local governments lead related organization to cooperate in PIM implementation. It is considered as indispensable duty
11	<p>Consultancy : Consultancy for setting up PIM models plays an important role especially at this period when PIM is facing with many obstacles. Consultants are persons who have knowledge, good understanding of PIM in both actual status and policies on PIM and other related policies. They also are enthusiasm and responsible to the community for consultant results.</p>	

References:

Summary reports on PIM, Acs by Department of Water Resources, Department of Agriculture and Rural Development, VNPIM, MARD
 Reports of experts in National and International Workshop on PIM
 Reports on PIM survey by international organizations and NGOs
 Summary reports of Project with PIM component

Training materials, publication papers on actual experiences in research and development of PIM model in Vietnam