

# ASSESSMENT OF 10-YEAR PIM DEVELOPMENT IN TUYEN QUANG PROVINCE

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Subtropical jungle



Mountainous rice fields



Tuyen Quang Province location  
in the map of Vietnam



The Lo River Bridge in Tuyen Quang Town

## **I. Necessarity for transfer irrigation schemes to Forestry Agriculture Cooperative**

*The irrigation management system prior to transfer:* In 1995, there was 1342 irrigation schemes in Tuyen Quang province. In which, the

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provincial Irrigation Management Company (IMC) took abilities in management of 152 irrigation schemes, covering 11.3% of existing number of schemes which provide irrigation to 32.3% of area in spring crop and 27% of area in summer crop. The remaining 1190 ones irrigating 67.7% of area in spring crop and 73% of area in summer crop were managed by the Forestry Agriculture Coopertaive (FAC).

*Irrigation fee collection:* Irrigation fee was collected only for those schemes which were managed by IMC, but not for schemes managed by the FAC. As a consequence, there was a lack in budget for rehabilitation and maintenance of irrigation canal systems, so that the irrigation schemes were degraded gradually leading to low irrigation performance.

Almost of irrigation schemes in Tuyen Quang are small which are situated dispersely in the province irrigating for area of a FAC or a commune. Taking into account these conditions, in order to improve the effective irrigation management and to enhance the farmers' rights and responsibilities and to increase the budget income for maintenance of irrigation schemes, the Provincial People's Committee (PPC) has issued the Decision on procedures for management of the irrigation schemes which are transferred to FAC since January 1996.

## II. Existing irrigation schemes and corresponding maangement models

### 1. Existing irrigation schemes:

Up to 31/12/2006, there are in total of 2430 irrigation schemes which irrigating for area over 1 ha. In 2006, these irrigation schemes provided irrigation to 16,317 ha of spring rice crop covering 83,4% of total cultivation area and 18,215 ha of summer rice crop covering 70,3% of total cultivation area, resulting in average of 75,94% cultivation area of the year. In which, irrigation area provided by specific scheme is given in following table.

No.	Scheme type	Number of schemes	Irrigation Area (ha)	
			Spring crop	Summer crop
	<b>Total</b>	<b>2.430</b>	<b>16.317,1</b>	<b>18.215,2</b>
1	Reservoir	441	4.896,3	5.401,7
2	Weir	970	7.955,1	8241,6
3	Pumping station	73	795,4	1.032,2
4	Temporary weir	928	2.573,2	3.438,4
5	Gravity canals	18	97,1	101,3

The existing canal system has a length in total of 7.000 km. In which, up to 31/12/2006, 1,796,62 km of main, secondary canals which provide irrigation for more than 5 ha are lined. In which:

+ 1,268.8 km is implemented by canal lining program, in which cement is supported by the state and labor contributed by farmers

+ 527,83 km is lined by other sources.

## **2. Irrigation management models:**

In 1996, Tuyen Quang PPC issued the Decision No. 142/QĐ- UB dated on 19/01/1996 on transfer of all irrigation schemes to commune, FAC, and irrigation management board. And in 2006, the PPC issued the Decisions No. 37/2006/QĐ- UBND dated on 26/7/2006 and No. 44/2006/QĐ- UBND dated on 18/8/2006 on management and exploitation of the irrigation schemes, rates of irrigation fee and water fee, and structures for management of these fees.

The common management model of irrigation schemes in Tuyen Quang is the irrigation management board (IMB) in which farmers participate in management of the irrigation schemes which has been operated for 10 years. So far, these IMBs are still actively operating and being consolidated as the Circular No. 75/2003/TT- BNN dated on 20/12/2004 of the Ministry of Agriculture and Rural Development (MARD) on guidelines of consolidation and establishment of the water user associations.

### *a/ Inter-district irrigation management board:*

There is one inter-district IMB namely Ngòi Là irrigating 414ha for Trung Môn and Kim Phú communes in Yên Sơn district, and Y La and Hưng Thành communes in Tuyên Quang town.

IMB is an inter-district irrigation management model which is belonged to the Department of Agriculture and Rural Development (DARD) established by PPC.

The management board of Ngòi La IMB includes a chairman and technical staffs responsible for managing the headworks and main canals. Besides, the IMB also includes chairmen of FAC and chairmen of commune in the command area of the irrigation system who concurrently work for the IMB in managing secondary and on-farm canals in each commune.

### *b/ Inter-commune irrigation management board:*

The province has 5 inter-commune IMB namely Hoàng Khai, Nhữ Khê, Kim Thắng, Như Xuyên, and Thác Dã which are decided by the district people's committees (DPC) and belonged to the DPC.

The inter-commune IMBs include specialized technical staffs responsible for managing the headworks and inter-commune canals. Besides, the IMBs also include chairmen of FAC and chairmen of commune in the command area of the irrigation system who concurrently work for the IMBs in managing secondary and on-farm canals in each commune.

*c/ Irrigation management board under the forestry agriculture cooperative:*

In total, the province has 155 IMBs under the forestry agriculture cooperative. These IMBs are established by the commune people's committee (CPC). In which:

- 121 IMBs managing irrigation schemes in several FACs in a commune.

- 25 IMBs managing inter-village irrigation schemes belonged to a FAC.

- 9 IMBs separately managing the irrigation schemes in each village.

These are management models in the FACs established based on whole commune, several villages in a commune or in each village in the commune. The IMBs are responsible for management and protection of the irrigation schemes in each commune.

### **III. Achievements in farmers participation in managing irrigation schemes:**

- Thanks to application of above mentioned irrigation management models in recent years, the irrigation schemes are managed effectively in that the irrigation area is increased, the canal systems are well maintained and step by step rehabilitated and upgraded. In 2006, the irrigated area of the province is increased upto 16,317 ha in spring rice crop and 18,215 ha in summer rice crop. As compared to 1996, the irrigated area is 5.930 ha (57,0%) higher in spring rice crop and 5.830 ha (47,1%) higher in summer rice crop.

- The methods for irrigation management are step by step revised towards socialization in management of the irrigation schemes. The irrigation management models are being improved suitably with the conditions of the schemes and abilities of the farmers. The decentralization in management of the irrigation schemes has created an

avantage condition to reform the FAC, in which provision of irrigation is the main activity of the FAC.

- All irrigation schemes are managed by farmer-based management organizations. Many IMBs have operated effectively. Most of members of managing boards of IMB have been trained to improve their specialization skills in operation and maintenance of the irrigation schemes. Farmers have actively participated in various activities in managing the irrigation schemes, so that the canal systems are in good maintenance, irrigation fee is wholly collected, and irrigation schemes are being rehabilitated and upgraded completely.

#### **IV. Role of the provincial water resources department in draw out policies, regulations:**

With the functions on state management on irrigation system in the province, the provincial water resources department (PWRD) helps DARD in steering management and exploitation of the irrigation system in the province. Specifically, the PWRD in combination with district department of agriculture and rural development (DDARD) directs the communes, FACs, IMBs in management and exploitation of the irrigation schemes. In addition, the PWRD takes responsibilities to draw out new policies and regulations in suitable with the changed situations and also supervise and assess the implementation of these policies and regulations, such as follow:

- Advising DARD in compiling the Decision No. 37/2006/QĐ-UBND on exploitation and management of the irrigation schemes, which is issued by CPC dated on 26/7/2006 to replace the previous Decision No. 142/QĐ-UB dated on 19/01/1996

- In combination with the provincial Department of Cooperative and Rural Developments in advising DARD to compile the Decision No. 44/2006/QĐ-UBND on management of irrigation fee, rates of irrigation fee and water fee which is issued by the PPC on 18/8/2006 replacing the previous Decision No. 299/QĐ-UB dated on 30/4/1996.

- Compile the Guidelines No. 1723/HD- SNN on organization of management and exploitation of the irrigation schemes which is issued by DARD on 7/11/2006 according to the CPC's decision No. 37/2006/QĐ-UBND.

- In combination with the provincial Department of Cooperative and Rural Developments to compile the Regulation No. 1790/HD- SNN specifying management of irrigation fee, rates of irrigation fee and water fee which is issued by DARD on 21/11/2006 according to the CPC's decision No. 44/2006/QĐ-UBND.

- Compile the Regulation No. 1593/HD- SNN on determination of corridors for safely protect the irrigation schemes and dyke system in the province which is issued by DARD on 17/10/2006

- Provide guidelines, supervise, and submitted to CPC for approval of budget support for operation of irrigation management organizations in the province.

- Organize training courses for communes, FACs in implementation of regulations and policies issued by the state and PPC. In addition, PDWR also takes responsibilities in supervision and assessment of implementation of localities, then makes proposals for adjusting suitable to the actual conditions of the province.

## **V. Existing limitation and recommendation:**

### **1. Existing limitation:**

- The authorities in several communes have not yet paid attention and do not have essential measures to support the FACs and IMBs in collection of irrigation fees, upgradation and lining on-farm canals. Moreover, the authorities also do not apply strict measures for those people who violate the regulation of exploitation and management of the irrigation schemes. The farmers still expect subsidies from the state.

- The numbers of irrigation technical staffs at district and communes are few, not enough as requirement. The knowledge on irrigation management of FAC and farmers is limited, not yet satisfied as required. The leaders of communes and FACs are changed annually and almost new leaders have not been trained so that these leaders usually have difficulties in managing the irrigation schemes.

- Several FACs slowly conduct the reform and consolidation in organizing services for agriculture production, in which the irrigation provision service is done less effectively.

### **2. Recommendations:**

- Promotion of farmer participation in management of irrigation scheme is an important factor for ensuring the successful irrigation management, specially in management of small schemes in mountainous areas. However, there is also a need for investment of state in upgradation and rehabilitation of the headworks and main canal of the irrigation schemes. The farmers contribute irrigation fee for small repair, operation and maintenance of the irrigation schemes.

- Widely conduct the propagation on promotion of farmer active participation in management of irrigation schemes. The organization and operation of water user organizations should continuously be improved for

mostly suitable to the actualities. The training courses to IMBs and farmers on Ordinance of exploitation and protection of the irrigation schemes, policies and technical knowdlege in management of the irrigation schemes should be organized regularly, so that the IMB and farmers have sufficient abilities to effectively manage the irrigation schemes.