



PARTICIPATORY IRRIGATION POLICY UNDER THE INDONESIAN WATER RESOURCES LAW

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ABSTRACT

Indonesian Water Resources Law issued in 2004 provide a benchmark for water resources management and development, and therefore for irrigation, policy in Indonesia. The irrigation sector affects the livelihood of Indonesian farmers, and influence nation's food production. In accordance to the law, irrigation management be held by the government, and irrigation service fee is free within the government's built and operated irrigation systems.

However, due to limited government's financial, material, and human resources, farmers and other beneficiaries participation in term of contribution is encouraged. The law also determines local government participation, in term of obligation, to share government's responsibility on the base of administration boundary and the areas of irrigation systems.

This policy was a form of adjustment to former policy on Irrigation issued in 2001, in which irrigation management to be handed over to farmers, and irrigation service fee is an obligation collected by farmers to finance the purpose, and government's participation, in term of contribution, is encouraged to help farmers. However, under the new participation policy, farmers may be assigned to manage the irrigation system on behalf of the government, on condition that farmers are capable and willing to contribute 50 percent of management cost of the proposed system.

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INTRODUCTION

1.A. IRRIGATION DEVELOPMENT AND MANAGEMENT

Indonesian Water Resources Law issued in 2004 (Law No 7/2004) determine policy and strategy related to irrigation development and management in Indonesia. It is because of irrigation affects the livelihood of many low income Indonesian farmers and the country food production, according to the law, the irrigation development and management is under the government authority and responsibility. However, due to the decentralization and participation policy aiming at sustainable irrigation management, the law distributes the authority, and therefore responsibility, of irrigation development and management to the regional governments (provinces and districts/municipalities) and also to the beneficiaries (farmers). The delineation of the responsibility is as tabulated in Table 1. The foregoing table shows the necessity of support by other stakeholders to perform the development and management, indicates the participatory policy of irrigation development and management of the Republic of Indonesia. The standard of government built irrigation system is shown in a schematic diagram as in **Figure 1**.

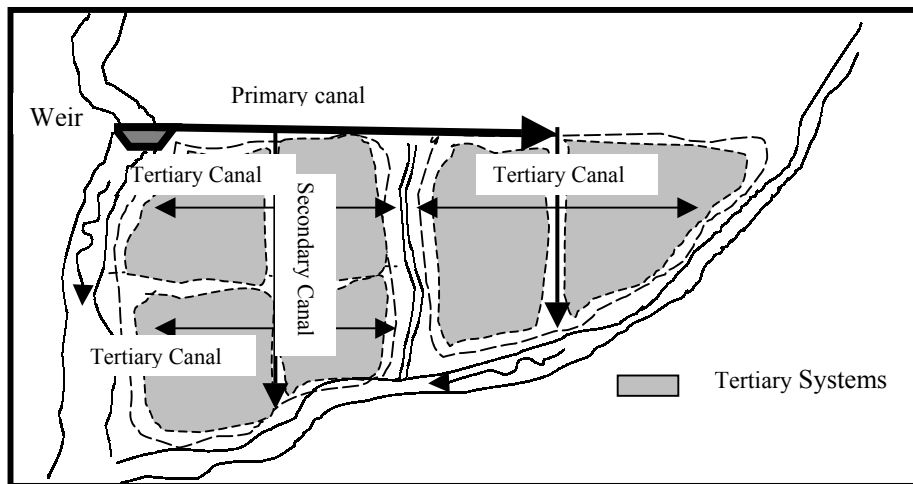


Figure 1. Schematic Diagram of Indonesian Irrigation System Lay Out

Table 1. Policy and strategy of Indonesian Irrigation Development and Management under Water Resources Law No 7/2004

Program	Activity	Category of the systems	Responsibility by (obligation)	Supported by (contribution)
Government financed Irrigation Development	Upgrading and Construction of New and Expansion of Primary and Secondary Irrigation Canals	Within the district/ Municipality	District/Municipality Government	Farmers, Provincial, and Central Government
		Inter-district Irrigation Systems	Provincial Government	Farmers, District, and Central Government
		Inter-province Irrigation Systems	Central Government	Farmers, District and Provincial Government
Government financed Irrigation Management	Operation, Maintenance, and Rehabilitation of Primary and Secondary Irrigation Canals	Within the district/ municipality Less than 1,000 ha	District/Municipality Government	Farmers, Provincial, and Central Government
		Inter-district and 1,000 – 3,000 ha Irrigation Systems	Provincial Government	Farmers, District, and Central Government
		Inter-province and over 3,000 ha Irrigation Systems	Central Government	Farmers, District and Provincial Government
Irrigation Development and Management	Tertiary System within Government financed Irrigation System	Structural Development	Government	Farmers
		Canal Development and System OM	Farmers	Government
	Primary, Secondary, and Tertiary within the private/village financed irrigation system		Private/Village	

1.B. PARTICIPATORY IRRIGATION DEVELOPMENT AND MANAGEMENT.

The participatory irrigation development and management, is defined as participation of beneficiaries and other stakeholders in the whole process of development and management not limited in the planning and decision making process but also in financing, implementing, and providing other resources as inputs to the irrigation development and management, in terms of obligation as well as contribution.

Under the foregoing policy and strategy, the institutional development, empowerment, and capacity building of the stakeholders to be reached by the following activities:

1. Incorporation of the stakeholders in the planning , design, and implementation of irrigation development (construction and upgrading) and management (operation, maintenance, and rehabilitation),

2. Participation in financing and providing resources, as obligation as well as contribution, in construction, operation and maintenance. In case of farmer's participation, it is as obligation in the tertiary systems and as contribution in primary and secondary systems.
3. Provision or assistance of organizational and institutional assets such as office space and equipment, transportation facilities, and production facilities, i.e., from central government to regional government, or from government to farmers.

IRRIGATION DEVELOPMENT AND MANAGEMENT IN INDONESIA

1.C. The objectives: The main objective of irrigation development and management is to support the agricultural development aims to increase the income and welfare of the rural population, farmers in particular. Improvement of farmer's income by increasing the agricultural production will reduce number of rural population under poverty line (37.3 million, 2003), improve welfare, and increase agricultural sector contribution to the GDP. The 2003 data show number of land owner farmers engaged in rice cultivation is 17.56 million household with average land ownership size of paddy field is 0.44 Ha/household. The income per capita of the country is IDR 7.1 million (721 USD). Agricultural sector, together with forestry and fishery, contribute 16.6.% of the Gross Domestic Product (GDP), while mining and quarrying sector contribute 10.7 %, trading, hotels, and restaurant 16.3 %, industries and manufactures 24.6 % and others sectors 31.8 %.

Another purpose of agricultural development supported by irrigation is securing food availability for the increasing population of the country. Total number of Indonesian population by the year of 2003 is approximately 215 million and the latest population growth rate is 1.5 % per year. Indonesian mainly consumes rice, which contributes to supply 67% of calories and 64 % of proteins per capita per year. In 2003, total production of paddy is 56 million ton (dried un-husked paddy). The incremental rate of paddy production is 1.14 % per year. Java Island produces 54.18 % of the total production, with production rate of 5.23 ton/ha. Paddy production is the largest output of food crop, followed by cassava (18.5 million ton), maize (10.9 million ton), peanuts (0.78 million ton) and soybean (0.67 million ton).

It was partly because of the foregoing purpose and condition that under the new Indonesian Water Resources Law, government assume responsibility of irrigation development and management, and therefore, farmers within the government built irrigation system are free from paying the irrigation service fee. The extent of government responsibility and obligation shown in the following Table 2.

Condition of Paddy Field	Developped By	Administration	Area (Ha)	Ratio (%)
Irrigated Paddy Fields	Government	Central	2.206.000	29
		Provincial	1.098.000	14
		District	2.701.000	35
	Village	560.000	7	
Rainfed Paddy Fields			1.135.000	15
Total Paddy Fields			7.700.000	100

1.D. FORMER POLICIES ON PARTICIPATORY IRRIGATION

The participatory irrigation development and management factually has been embedded within the traditional culture of the nation. The traditional model varies with the region and ethnic groups, but one of the most famous was Subak System in Island of Bali, in which farmers develop their own “water government” with strong set of democratic laws and guidelines to be observed by its members, connecting the social and cultural obligation with their beliefs and religion. The irrigation systems, categorized as village financed irrigation systems, scale varies from 10 to 800 ha, was built with heavy contents of appropriate technology in the planning of canal lay-out, and in the structural design and construction.

It was in early 1900 when Dutch Administration started to develop large scale irrigation schemes in Indonesia for the benefit of their trading company VOC (Dutch East Indian Company). Then, after the proclamation of independence in 1945, the irrigation development was escalated under the Indonesian New Order Government started in 1966. The development, with top down approach and the spirit of government build everything, subsided beneficiaries participation. The tertiary irrigation system development which had been the responsibility of farmers was taken over by the government. Under the situation where farmers’ participation was neglected, farmers became passive, powerless, yet demanding, which in turn became the cause of difficulties in operation and maintenance and high cost in government expenditures in irrigation.

Realizing the future difficulties when farmer’s participation in irrigation development and management was diminishing, Indonesian Government, in cooperation with various donor countries such as Japan (JICA and JIBIC), USAID, World Bank, ADB, GON, etc, started to plan and implement various models of institutional development, empowerment, and capacity building, in promoting farmers and beneficiary’s participation. It was started in early 1980’s when irrigation design team was not only consisting of engineers and economist, but also sociologist and anthropologist studying the existing and the required farmers and stakeholders institutions and improving farmers’ capacity and participation in the irrigation development. In assisting the study team speaking to farmers and implementing the socio-engineering prepared by the team, the service of NGO became necessary.

Under the centralized New Order Government (1965-1998), it was formulated that Central Government develop the irrigation system, while Regional and Local

Government conduct the irrigation management, i.e., operation maintenance and small rehabilitation, under Central Government inappropriate financial support. The beneficiaries participation was developed by beneficiaries pay principle in which farmers, organized in Water Users Association (WUA), were to pay the government collected irrigation service fee (ISF) to gradually reduce government burden on providing cost of irrigation management. In general the ISF collection rate was small. Moreover, although in some regions the ISF collection rate is appropriately high, the outcome was not satisfactory for the regional government used the collected ISF for purposes other than irrigation management. As a result Central Government burden on irrigation management cost were remain high, irrigation system maintenance were inadequate and suffer from serious degradation, and farmers were reluctantly pay for the ISF.

When the decentralization law was enacted to promote local government participation, irrigation management was placed under the responsibility of local government. Because of the limited local government budget capacity, local government collected ISF became the backbone to support of the irrigation management cost. However, because of reasons discussed in the foregoing paragraphs, collection of ISF was inadequate, and irrigation system degradation was increasing.

Under the National Water Resources Policy Reform leading to strengthen private sector involvement supported by World Bank and Asian Development Bank it was concluded that beneficiaries pay and manage policy will be a possible solution to overcome the irrigation management problems. Under the reform, Indonesian Government Regulation on Irrigation issued in 2001 promoted farmers to be the responsible institution for irrigation management, and an irrigation management hand-over from government to farmer's organization meeting the hand-over criteria shall be conducted. The farmers collected ISF, will be the backbone to support the irrigation management cost with government assistance, as government participation in term of contribution.

To support the 2001 Irrigation Management Policy, the following steps was required:

- Formation and revitalization of farmers' Water User Association (WUA) in tertiary systems, federation of water users association (FWUA) in secondary systems, and main water user's organization (MWUA) in primary systems, in a democratic and participative way.
- Formation of Irrigation Commission, stakeholders' forum authorized to determine irrigation plan, policy, and financing within the framework of participatory approach in District Level and Provincial Level, respectively.
- Capacity development and empowerment of the aforementioned institutions by training (organization, administration, operation and maintenance, finance, cooperatives, farming, etc), comparative study, and by provision of appropriate legal status, power, and regulations supporting the institutions, and by provision of technical and financial assistance whenever necessary.

Capacity development and empowerment of the WUA/FWUA/MWUA by incorporation in the planning and design activities, and also in the implementation of irrigation development (construction and upgrading) and hand over the management

(operation, maintenance, and rehabilitation) related to the area represented by the farmer groups.

1.E. ADJUSTMENT OF THE 2001 IRRIGATION MANAGEMENT POLICY.

In contrary of the hand over irrigation management policy to the farmers group stipulated in the Government Regulation no 77/ 2001, the Water Resources Law no7/ 2004 stated that irrigation management of primary and secondary system remain under the government responsibility, including the cost responsibility, whereas the farmers group responsible for the management and cost of the tertiary system. The other adjustment is that farmers were not required to pay for the ISF to the government, except for organizational levee in the tertiary system collected by farmers. The policy was verified by the issuance of Government Regulation no 20 in 2006 on Irrigation as a replacement to the former Government Regulation no 77/2001. The purpose of the adjustment was to remove the irrigation management burden from the farmer's shoulders, particularly the financial burden that will possibly become more expensive if the farmers group as private institution holding the irrigation management determines the profitable irrigation service fee. Beneficiaries pay principle was considered inappropriate applied to the farmers since Indonesian farmers were normally poor, considering the land ownership size of only 0.44 ha/farmer household.

However, in promoting the farmers participation particularly in the area where farmers are capable, a ministerial decree was prepared to guide that in addition of farmers shared responsibility in tertiary system irrigation management, farmers were allowed, under their own willing and proposition, to manage on behalf of the responsible government, the secondary and primary systems, on condition that farmers are willing and capable to contribute 50% of the management cost of the system they want to manage.

CONCLUSION

Participation of stakeholders, i.e., regional and local government and farmers group, in irrigation development and management, requires not only incorporation of the stakeholders in the decision making and implementation of the process, but also allocation or mobilization of their input and resources in kind of manpower, materials, equipment and finance, may be in the form of obligation because of the law, and/or in the form of contribution based on their capability and willing. The foregoing steps were obtained through empowerment of the related irrigation development and management institution and Water Users Associations (WUAs).

The on going policy on irrigation management supported by Indonesian Water Resources Law and the new Government Regulation on Irrigation was dedicated to remove the irrigation management burden and cost from farmers shoulder, however when farmers are capable, under farmers willing farmers may conduct the management of the irrigation system on behalf of the responsible government on condition that farmer can afford to contribute 50% of the management cost of the system.

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