DETERMINATION OF INDICATORS IN EFFECTIVITY OF FARMER EMPOWERMENT DURING DEVELOPMENT AND MANAGEMENT OF IRRIGATION

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ABSTRACTION

The agricultural sector's role is very strategic in developing villages, and irrigation as one of the supporting components has a similarly important role pertaining to food supply longevity, increment in farmer income, and also in increasing the employment rate in villages. It may be theorized that the quality of irrigation in a certain agricultural area will have a direct influence upon the welfare of its residents, especially the farmer class. Based on this theory, it is necessary that Indonesia's authorities have further understanding of the irrigation network concept. This paper records an attempt to study the relation between effective irrigation systems and farmer empowerment, along the way discovering and, incorporating into the research, aspects of Indonesia's agricultural culture. To that end, the Aditya Engineering Consultant team has conducted a research which encompasses legal, financial, technical, governmental and ecclesiastical studies. The team devises its own evaluation tools and scoresheets, which will be explained in detail in the paper.

1. BACKGROUND

The agricultural sector holds a very strategic role in the development of villages, and irrigation, as one of the supporting components, has a very important role in accordance with the goals of agricultural development, namely increasing food supply stability, increasing farmer income, and increasing employment rate in villages. In accordance with the spirit of democratization, decentralization, and an open-minded nature in our society's way of life, it is necessary to determine a policy regarding the development and management of irrigation systems.

The Indonesian Government's Ruling on Irrigation (Peraturan Pemerintah Republik Indonesia Nomor 20 Tahun 2006 tentang Irigasi, Pasal 4 ayat 1 dan 2) states :

Participative forms of development and management of irrigation systems aims to promote water utilization in agriculture, one that is conducted in participative, integrated, enviromentally conscious, transparent, accountable, and fair. The accountable and transparent factor means that the development and management of irrigation systems is conducted openly and responsibly. The fairness factor means that it is conducted proportionately and according to the needs of irrigation users from top to bottom.

Irrigation has a function to support land productivity in order to increase agricultural production, national food supply, and public welfare especially farmers, which can be realized through the consistency of the development and management of irrigation systems.

The 84th article of Act No.7 (2004) about Water Resources states that the public has equal rights to participate in the planning, execution, and monitoring of water resources management, including the development and management of irrigation systems.

The funding of irrigation system management, including operation, maintenance and rehabilitation of primary and secondary irrigation systems, can also involve the farming community as stated in Article 78 Verse 3 of Act No. 7 (2004) about Water Resources.

Effective and efficient policies of Irrigation System Development are necessary to ensure the continuity of such systems and the rights on water for all water users. This is based on the following facts :

- A recent shift on the value of water, from a public resource of endless supply which can be used without cost into a socially functioning economical resource;
- A recent rarity on water uniformity measured on a national scale, especially during the dry season, leasing to a need to be frugal with water utilization;
- Increasing competition in water usage between irrigation and other sectors;
- The widening scope upon which a previously irrigation-specific plot of land is utilized.

In accordance with the above, it is necessary to empower farmers in a participative irrigation system development and management whose success can be measured from its effectivity indicators, which needs to be conducted in accordance to the agricultural community's needs, at the same time considering technical, sociocultural, economical, and evironmental aspects, along with a continous P3A empowerment, which will hopefully lead to a continous and sustainable irrigation system.

2. PRINCIPLES ON PARTICIPATIVE IRRIGATION SYSTEM DEVELOPMENT AND MANAGEMENT

Sociocultural aprroaches

As stated by Government Ruling No. 20 (2006) on irrigation, a public-based approach is emphasized. It is necessary to utilize a sociocultural approach, which considers public potential, needs and local wisdom. To further that goal, the participation of water-utilizing farmer communities are vital. It has been proven that although new technologies and policies exist which serve to improve farmer income, the farmer themselves often have trouble to abandon their long-standing customs and methods. They consider them as proven despite not being optimal. To that end, in order to introduce new technologies and policies, it is necessary to approach these groups, carefully considering local conditions and customs. Oftentimes, an informal leader or public figure can serve to be a leading example in funding or management of irrigation.

Also, a participative approach where participants can choose and design their own technologies (with or without guidance) can grow a sense of belonging, supplanted by their belief that they are the most knowledgable about the various social and physical variables existing in their immediate environment. Of no less importance is the fact that such an approach is the embodiment of democratization, upholding human rights and the fulfillment of basic human needs.

Principles of Democratization, Participation and Empowerment of Farmers *(Strengthening the Customers)*

Irrigation system development and management should prioritize the interests and roles of water-utilizing farmer society in their working areas. Participation can be embodied in building, operating, maintaining and rehabilitating irrigation networks. These can begin in the planning stage, decision making processes and the execution of development and management of irrigation systems, which include operation, maintenance and rehabilitation.

Resident/City Governments in accordance with their authoritative roles has been encouraging the farming society to apply efficient technologies which complies with their needs, utilizing local resources and know-how.

To realize that goal, a continous empowerment effort (customer strengthening) has been committed, by giving them larger roles. Such empowerment is a liability for the regency/city administrators to improve knowledge and skills, which are completed through training sessions, technical guidance and peering.

Principles of Decentralization and Debureaucratization

The application of regional otonomy as stated in Act 32/2004 on Regional Government has given a wide, tangible and responsible authority in irrigation management upon Provincial Governments and Regency/City Governments. A democratic, region-level control is necessary, because decentralization means the transfer of authority from the central government to provincial and regency/city governments (and in some cases, farmer communities) in a form of role distribution on funding, development and management. Debureaucratization can be defined as a redistribution of authority and responsibility between central, provincial and regency/city governments which are embodied in a cooperation and integration of interests in development and management of irrigation.

As stated in Act 7/2004 on Water Resources, authority on irrigation system development and management is described as follows :

1. Development of primary and secondary irrigation systems are within the authority and responsibility of central and regional governments, as long as they fall within these limitations:
    a. Primary systems and inter-provincial systems are handled by the central government.
    b. Primary and secondary inter-regency/city systems are handled by provincial governments.
    c. Complete primary and secondary inter-regency/city systems are handled by said regency/city's government.
2. Tertiary systems are left to the farming communities.
3. Development of systems will involve the public.
4. Development by farming communities can be customized according to their needs and/or abilities.

Principles of Accountability and Transparency in Development and Management

A sizable investment is needed in the development and mangement of irrigation systems, which can be sourced from governmental budgets or other financial sources and farming communities.

Such an investment has to be accountable and reportable to its financiers or other stakeholders. Thus, the government and those other stakeholders need to realize their responsibility to farmer communities transparently through an irrigation committee. In accomplishing their task, the committee may invite other stakeholders including farmer communities into their meetings to get valuable input, by itself increasing the accountability and transparency of the committee's work.

All stakeholders may accomplish this transparency in each step of decision making and execution of development and management. More tangibly, this can be achieved in the form of cooperation/partnership with public or contractual works. Other than that, farmer cimmunities can commit a social monitoring on development and management through reports and complaints to the government.

Open accountability is manifested through activity reports, financial administration reports audited by the irrigation committee so farmer communities can acknowledge them, including asset and inventory reports..

The "One Irrigation Zone = One Control Unit" Principle

Irrigation zones include a plot of land which gets water froma single irrigation network, beginning with a water supply at the main retrieval gate, a distributing primary and secondary gate, the watering zones at the tertiery levels, direct usage at the quartary levels or an irrigated plot of farmland which is done in a fair, prevalent way considering the water needs at the downstream, midstream and upstream areas. Thus, an irrigation zone is a whole system, which should also be a single managerial and financial unit. This definition leads to a systematic unity of management (one irrigation area, one plan, one integrated management).

The execution (development and management, security, conservation, rehabilitation of networks) has to be based on a singular planning sytem and one integrated management in funding and management.

The organizing of planting timelines and water distribution will be done in a singular scope of system, starting at primary and secondary levels up to the tertiary levels by an organization appointed to manage an irrigation area, so water leverage can be achieved at a pinpoint time, space, quantity and quality.

Principles of Development and Management for Market-based Farming Businesses

Not only for rice grains, irrigation can be utilized for other profitable plantations. A diversification of farming businesses has to be done to improve farmer income by adjusting to market demand. Non-rice vegetables such as red and white onions, pepper, beans, etc will then need different watering schedules.

Production management can be done by farmers themselves, coordinated by the farmer communities, thus opening more jobs, improvement in working capital, transpotation business chances, and marketing of said commodities to improve the welfare of our farmers.

Principles of Effective and Efficient Development and Management to Achieve Optimization

To ensure an efficient and effective system development & management, along with granting maximum benefit to farmers, it is necessary to optimize the utilization of rainwater, surface water and ground water in an integrated method, while emphasizing on ground water usage.

Such an effort is required to achieve the maximum continuity of an irrigation system. A good water supply and irrigation infrastructures will also support the improvement of farmer income.

To that end, good irrigation infrastructures will have to be manifested by meticulous planning and execution of construction, and a development activity which complies with current norms, standards, guides and manuals.

3. FARMER EMPOWERMENT (P3A – *WATER-UTILIZING FARMER COMMUNITIES*)

Aforementioned empowerment must not stand apart from organizational aspects, indicated among others by its legal status, managerial abilities, personnel acitivity rate and amount, and also, level of practical skills in irrigation are necessary to comply with the operational aspects, which is supported bu financial aspects.

Methods of Empowerment

P3A empowerment can be accomplished through socialization, motivational meetings, trainings and visits, periodical meetings in an observer's office, facilitations, comparative studies/internships, technical guidance, training sessions, mentoring and other methods according to local conditions and based on local needs/socioeconomical/technical/organizational profile, or the results of continous performance assessment/monitoring which are conducted systematically by units on the government level, plus on-site work by On-Site Guide Groups and Mentoring Team. Also of great importance are other elements linked to irrigation according to local needs with technical and financial support from the government. Its stages are as follows :

a. Preparation
   - Identifying target groups, who will participate in irrigation development and management.
   - Choosing and appointing participant names, and determine the amount of people required to participate.
   - Composing a public participation schedule, integrated with P3A, GP3A, and IP3A empowerment.
   - Preparing the materials.
   - Preparing financial and accommodation needs, including transportation and manpower fees.

b. Planning
   - Making plans for a strategy or rule of thumb regarding public participation which will suit every level (seminars, workshops, or scientific meetings).

- Preparing seminar kits.
- Planning of guidebooks and farmer community participation schedules.
- Planning a location survey.

c. Execution

Forms of farmer community participation in cooperation with govenrments of regencies/cities may include a publicly ran or contract-based jobs, such as construction, conducted in accordance with applicable laws.

Parameters of P3A, GP3A, and IP3A's Self-dependance

Empowerment aims to create a self-dependant breed of P3A, GP3A, and IP3A, in their organizational, technical, and financial aspects; supported by the government which holds the facilitator/dynamizator role through their programs. This goes alongside previous evaluations as visible on **Graph 1**. It shows a performance level evaluation sheet, as sourced from the Program Mentoring Directorate.

The parameters of the aforementioned self-dependance can be examined from several aspects

a. Organization

The existence of P3A, GP3A, dan IP3A organization(s) that possess the following characteristics

- Has a General Management Budget.
- Legally approved through a Decree from the local regent/mayor or other legal insitutions depending on what's necessary.
- Has a dilligent administration (possessing maps describing the irrigation networks, membership guidebooks, working program etc).
- Active in meetings or events, in order to improve the organization's manpower.
- Can solve internal problems, organizational problems and external conflicts.

b. Technical aspects

- A well-functioning, well-maintained irrigation network.
- Capable of composing a detailed planting plan and water distribution plan.
- Capable of imposing a mood of fairness between the downstream and upstream members.
- Capable of solving problems which may arise from water-sharing conflicts between members and other, non-member irrigation users.
- Farmer groups may participate in primary and secondary system development, especially those works not requiring heavy tools and machinery, thus creating a fluid cash flow to the organization's balance.

c. Farming technicals

- Capable of improving and maintaining and plant intensity on high levels, with efficient watering (beside of other non-irrigation farming aspects).
- Capable of minimizing productivity gap between downstream and upstream areas.
- Capable of increasing plant productivity from time to time.

d. Financial and business aspects

- The manifestation of a farmer community capable of gathering at least 50% of actual required funds and primary/secondary system maintenance funds.
- Such an organization is capable of initiating more than 70% of its members to contribute to the irrigation management fund.
- The existence of a self-dependant business unit, trusted or approved by other parties to enable the farmers access to various financing institutions (to approach Banks for instance), which in turn will support the organizational effort by increasing its cash flow.

e. Government role
- Empowerment programs in the form training, mentoring etc specifically tailored to the P3A, GP3A, and IP3A's needs.
- Sufficient allocation of funds to support such an empowerment program.
- Empowerment units with reliable manpower on the regency/city level, and various Field Guide Groups.

Table 1. Valuation sheet of P3A performance

Scheme Of Irrigation : .....
P3A : .....
Distric Of Scheme :.....
Command Area (ha) :.....
Number of Member of P3A :.....

ASPEK/KRITERIA					PENILAIAN NILAI	PENILAIAN (Maks, Min)		TOTAL NILAI	
1. ORGANISASI									
1.1. Kepengurusan P3A lengkap dengan AD/ART dan Pemahamannya		Belum disyahkan 0.10	Disyahkan Kepada Desa 0.15	Disyahkan Camat 0.20	Nilai	(Maks, Min) 0.40	0.10	(Maks, Min) 1.50	0.10
1.1.1. Kepengurusan lengkap dengan AD/ART		Disyahkan Bupati 0.20	Disyahkan Pengadilan 0.40						
1.1.2. Pemahaman AD & ART		Sudah Dipahami 0.20	Kurang Dipahami 0.10	Belum Dipahami 0.00		0.20	0.00		
1.2. Jumlah Anggota yang hadir pada rapat tahunan	>80% 0.40	50% - 80% 0.30	<50% 0.20	Tidak Ada 0.00		0.40	0.00		
1.3. Frekwensi rapat pengurus		>2 kali per musim 0.50	>2 kali per tahun 0.30	Tidak Ada 0.00		0.50	0.00	Nilai	
2. PENGUNAAN AIR									
2.1. Ada pola dan rencana tata tanam		Ada Rencana 0.25	Tidak Ada 0.00			0.25	0.00	3.00	0.00
Realisasinya	>70% 0.75	50% - 70% 0.50	<50% 0.30	Tidak Ada 0.00		0.75	0.00		
2.2. Ada rencana pengembangan air		Ada Rencana 0.25	Tidak Ada 0.00			0.25	0.00		
Realisasinya	>70% 0.75	50% - 70% 0.50	<50% 0.30	Tidak Ada 0.00		0.75	0.00		
2.3. Frekwensi pertemuan antara Pelaksana Teknis P3A/Ulu-ulu dengan Mantri Pengairan dan Ulu-ulu dengan petani	1/2 bulan 1.00	1 bulan 0.50	>1 bulan 0.25	Tidak Ada 0.00		1.00	0.00	Nilai	
3. PEMELIHARAAN JARINGA									
3.1. Program kerja pemeliharaan		Musiman 1.00	Tahunan 0.50	Tidak Ada 0		1.00	0.00	3.00	0.00
3.2. Pelaksanaan pemeliharaan	>70% 1.00	50% - 70% 0.75	<50% 0.50	Tidak Ada 0.00		1.00	0.00		
3.3. Rencana kerja perbaikan dan pengembangan jaringan		Ada Rencana 0.25	Tidak Ada 0.00			0.25	0.00		
Realisasinya	>70% 1.00	50% - 70% 0.75	<50% 0.50	Tidak Ada 0.00		1.00	0.00	Nilai	

ASPEK/KRITERIA					PENILAIAN NILAI	PENILAIAN (Maks, Min)	TOTAL NILAI
4. KEUANGAN							
4.1. Jumlah iuran anggota yang terkumpul dan anggota yang membayar sesuai AD/ART	>70% 1.00	50% - 80% 0.75	<50% 0.50	Tidak Ada 0.00	Nilai	(Maks, Min) 1 0	(Maks, Min) 2.5 0
4.2. Pengeluaran biaya sesuai AD/ART dan program	>70% 0.75	50% - 80% 0.50	<50% 0.30	Tidak Ada 0.00		0.75 0.00	
Administrasi keuangan		Tertib 0.25	Tidak Tertib 0.15	Tidak Ada 0.00		0.25 0.00	
4.3. Pertanggungjawaban penggunaan uang kepada rapat anggota		Tahunan 0.50	>1 Tahun 0.25	Tidak Ada 0.00		0.50 0.00	Nilai
5. KONDISI FISIK JARINGAN							
5.1. Bangunan	Baik dan Berfungsi 3.00	Cukup dan Berfungsi 2.00	Rusak dan Berfungsi 1.00	Rusak dan Tidak Berfungsi 0.00		3.00 0.00	6.00 0.00
5.2. Saluran	Baik dan Berfungsi 2.00	Cukup dan Berfungsi 1.50	Rusak dan Berfungsi 1.00	Rusak dan Tidak Berfungsi 0.00		2.00 0.00	
5.3. Fasilitas penunjang		Baik dan Lengkap 1.00	Baik dan Tidak Lengkap o.50	Tidak Ada 0.00		1.00 0.00	Nilai
6. PEMBINAAN P3A							
6.1. Pembinaan teknis	Sesuai Kebutuhan 2.00	Tiap Musim 1.50	Setahun Sekali 1.00	Tidak Ada 0.00		2.00 0.00	4.00 0.00
6.2. Kebutuhan dan pemenuhan bantuan teknis		Dipenuhi Sendiri 1.00	Ada Kebutuhan Dapat Dipenuhi 0.50	Ada Kebutuhan Tidak Dipenuhi 0.00		1.00 0.00	
6.3. Kebutuhan dan pemenuhan bantuan fisik		Dipenuhi Sendiri 1.00	Ada Kebutuhan Dapat Dipenuhi 0.50	Ada Kebutuhan Tidak Dipenuhi 0.00		1.00 0.00	Nilai
NILAI TOTAL N > 14 BAIK 8 < N < 14 CUKUP N < 8 KURANG							Nilai Total N (Maks, Min) 20.00 0.10

4. INDICATORS OF EFFECTIVITY ON FARMER EMPOWERMENT IN DEVELOPMENT AND MANAGEMENT OF IRRIGATION NETWORKS

A feasible effort by the governments, among others, to improve the economy is by improving the quality of water infrastructures. It will be well-maintained and function well over time. However, for some time the prevailing impression is that these activities have failed, which is due to the lack of public participation, in turn deeming it impossible to meet public demand specifically.

To counter such a drawback, the government has devised empowerment and mentoring efforts upon farmer groups, that focuses on Water Resource Management, especially on the development and management of an irrigation system that is based on local know-how. It is carried through by democratically assembled Public Groups (Pokmas). After such a group is formed, its staff and regular members will cooperate in identifying and solving Water Resource Management problems, especially those concerning development and maintenance of a system which considers the interests of downstream, midstream and upstream farmer communities.

Facilitators and/or mentors from linked institutions have also performed various empowerment and mentoring efforts to encourage Pokmas activity in managing their Water Resources, specifically regarding group management, clerical and financial administration, and also to push these Pokmas groups to transform into self-dependant groups. These people's roles are not to create dependance. Instead it is an educational role, preparing the society to work on their own and finally be self-dependant in the future.

Educational roles are very beneficial in social implementation processes. They begin with socialization activities, on to group forming and development, exploration of water resource infrastructures, dialogic-democratic decision making processes, and even to mediation and advocation in solving problems related to development and management of irrigation systems. In the end, we need to evaluate the effectivity of farmer empowerment to allow the government to improve a long-term empowerment effort.

Evaluation of effectivity levels in farmer empowerment

Legal aspects, existing empowerment programs, society strengthening aspects and social insitution aspects hold an influence over empowerment efforts. Indications of success can be determined while assuming that the P3A members' behaviour will match the goals of irrigation management :

- Increasing productivity,
- Fair, reliable and predictable (both quantitatively and timely) distribution of water,
- Decreasing conflicts between members,
- Utilizing all available resources (land, water, capital and manpower)
- Achieving a constant level of performance.

We have determined the following scores to represent the effectiveness of farmer empowerment: 1 (effective), 2 (not effective enough), and 3 (not effective), by way of direct observation on the network's physical condition and questionnaire-based in-depth interviews. We base our fact-finding attempts on the principles of being "simple, appropriate, quick results" which has been repeatedly used in social studies *(N. Darismanto, 2005)*. **Table 2** shows a form used in our scoring attempt, with its indicators included as key questions.

TABEL 2. FORM PENILAIAN TINGKAT EFEKTIFITAS PEMBERDAYAAN PETANI DALAM PENGEMBANGAN DAN PENGELOLAAN JARINGAN IRIGASI

Propinsi :
Daerah Irigasi :

NO	NAMA P3A	DESA / DUSUN	JUMLAH ANGGOTA P3A	ITEM INDIKATOR																		SCORE RATA - RATA	TINGKAT EFEKTIFITAS
				Meningkatkan Hasil Produksi					Melaksanakan Pembagian Air					Mengurangi Konflik		Mengerahkan Sumber Daya (Manusia, Lahan, Air)				Mencapai Tingkat Kinerja			
				Kondisi Fisik Jaringan	Intensitas Tanam	Luas Tanam Padi/Palawija	Produksi	Kesejahteraan Petani	Rasio Pelaksanaan Pembagian Air	Rasio Luas Tanam	Nilai Faktor K (Pembagian Kecukupan Air)	Pengaturan Pintu	Pengambilan Liar	Konflik Pembagian Air	Tingkat Konflik	Dana	Jumlah Personil/Tenaga	Sistem Kontrak Kerja	Sumbangan P3A dalam O&P	Tingkat Perkembangan P3A/GP3A	Peran P3A dalam Pengembangan dan Pengelolaan		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Petunjuk **Pengisian Kolom 5 s/d 22**

Pengisian **Kolom 5** = di isi 1 (Berfungsi)
di isi 2 (Kurang Berfungsi)
di isi 3 (Tidak Berfungsi)

Pengisian **Kolom 6** = di isi 1 (3 X tanam)
di isi 2 (2 X tanam)
di isi 3 (1 X tanam)

Pengisian **Kolom 7** = di isi 1 (Meningkat)
di isi 2 (Tetap)
di isi 3 (Menurun)

Pengisian **Kolom 8** = di isi 1 (Meningkat)
di isi 2 (Tetap)
di isi 3 (Menurun)

Pengisian **Kolom 9** = di isi 1 (Meningkat)
di isi 2 (Tetap)
di isi 3 (Menurun)

Pengisian **Kolom 10** = di isi 1 (Ada)
di isi 2 (Sedang di Rencanakan)
di isi 3 (Tidak Ada)

Pengisian **Kolom 11** = di isi 1 (Meningkat)
di isi 2 (Tetap)
di isi 3 (Berkurang)

Pengisian **Kolom 12** = di isi 1 (Nilai ≥ 1)
di isi 2 (Nilai 1)
di isi 3 (Nilai < 1)

Pengisian **Kolom 13** = di isi 1 (Dilaksanakan oleh Petani)
di isi 2 (Oleh juru pengairan + petani)
di isi 3 (Oleh Juru pengairan)

Pengisian **Kolom 14** = di isi 1 (Tidak ada)
di isi 2 (Berkurang)
di isi 3 (Sering)

Pengisian **Kolom 15** = di isi 1 (Tidak ada konflik)
di isi 2 (Kadang kadang ada konflik)
di isi 3 (Ada konflik)

Pengisian **Kolom 16** = di isi 1 (Tidak pernah konflik)
di isi 2 (Konflik Berkurang)
di isi 3 (Sering konflik)

Pengisian **Kolom 17** = di isi 1 (Dari anggota P3A)
di isi 2 (Dari bantuan Pemerintah + Anggota P3A)
di isi 3 (Dari bantuan Pemerintah)

Pengisian **Kolom 18** = di isi 1 (Tersedia)
di isi 2 (Kurang tersedia)
di isi 3 (Tidak ada)

Pengisian **Kolom 19** = di isi 1 (GP3A dengan proyek)
di isi 2 (Fihak proyek)
di isi 3 (Tidak ada kontrak)

Pengisian **Kolom 20** = di isi 1 (Ada)
di isi 2 (Sedang di kumpulkan)
di isi 3 (Tidak ada)

Pengisian **Kolom 21** = di isi 1 (Berkembang)
di isi 2 (Sedang berkembang)
di isi 3 (Belum berkembang)

Pengisian **Kolom 22** = di isi 1 (Aktif)
di isi 2 (Cukup aktif)
di isi 3 (Tidak aktif)

PENILAIAN TINGKAT EFEKTIFITAS :
- SCORE RATA - RATA 1 = EFEKTIF
- SCORE RATA - RATA 2 = KURANG EFEKTIF
- SCORE RATA - RATA 3 = TIDAK EFEKTIF

5. CONCLUSION

1. Farmer empowerment (in developing and managing irrigation systems) can be achieved through socialization, motivating sessions, trainings and visits, periodical meetings, facilitation, internship/comparative study, technical guidance, mentoring and other methods, taking into consideration the technical, sociocultural, economical and environmental aspects of the farmer community.
2. It aims to ensure the longevity and continuity of irrigation networks and its infrastructures.
3. To promote the objectivity and continuity of empowerment efforts by the government, we need to determine an indicator of its effectiveness. Variables used in the evaluation are (1) level of P3A performance, (2) effectiveness level of irrigation management by P3A, and (3) farmer participation.
4. The success of development and management of irrigation systems can be valued using effectiveness indicators, which show whether the goals of system development has been achieved, namely : (1) Increasing productivity, (2) A fair, reliable and predictable (both quantitatively and timely) distribution of water, (3) decreasing conflicts among members, (4) utilization of resources (land, waterm capital and manpower) and (5) achievement of a constant level of performance.

6. ADVICE

1. Each irrigation zone will have a different level of performance thus causing determination of said indicators to depend on P3A conditions. Also, indicators may be affected by how long have empowerment taken place in the area. It is advised to reevaluate current P3A performances, and then to determine the effectiveness rate.
2. Conditions of a network maintained by P3A will very much influence how far they would participate. It is advised to perform a network evaluation (in the form of asset management) by segmenting the network depending on the results of the asset evaluation.
3. Based on the points mentioned above, it is possible to determine empowerment effectiveness by using the indicators in Table 2.

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