

ANNEX H: VERIFICATION OF MAJOR ISSUES AND COUNTERMEASURES

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H.1 PRA and Kabupaten Workshops

For the verification of major subject and countermeasures, the detailed surveys at 25 sites within 5 study provinces were conducted in Phase II Study. The study included the following activities:

- 1) PRA surveys at selected detailed survey
- 2) Kabupaten PRA workshops based on the PRA results among farmers from PRA survey areas and kabupaten government officials
- 3) Provincial PCM workshops at Study Provinces among farmers and kabupaten government officials which conducted PRA and Kabupaten workshops and Officials of Provincial Government.
- 4) Central Workshop in Jakarta participated with farmers, regional and central government officials, donor institutions, NGO, etc.

Participants at Kabupaten, Provincial and Central workshops are counted around 900 without members of JICA Study Team and Provincial Study Team.

H.1.1 Major Problems Identified at PRA and Kabupaten Workshops

A trial was made to summarize the major problems of irrigation management, WUA and turnover at the selected site and Kabupaten/Kotamadya levels. Using >50% site and Kabupaten/Municipal parameters the major problem category realized in the entirely selected 25 sites and Kabupaten/Municipal of the Study Provinces is as shown in Table H.1.1. They are summarized below.

Major Problems in 25 Sites and Kabupatens/Municipals

Major Problems	
A. Government Role, Support, Laws & Regulations	
B. WUA Management, Institutional Aspect	
1.	WUA/WUAFs are inactive, less functioning
2.	WUA and O&M funds are not available, limited, insufficient
C. Irrigation O&M, Water Management	
3.	Water is insufficient in dry season
4.	Water resources deteriorate, decrease
5.	O&M implementation is inadequate
6.	Sedimentation is too high
D. Agriculture, Economic, Finance	
7.	Uncontrollable pests, insects and animal disturbances
8.	Production inputs are lack, expensive
9.	Cropping pattern and calendar are not organized, not applied
10.	Production is low

Source:

Field Survey in 25 Selected irrigation schemes in the Study Provinces of West Sumatera, West Java, DI Yogyakarta, East Java and West Nusa Tenggara, JICA Study Team, 2001

The major problems concentrate on WUA institutional, irrigation O&M and management, and agriculture. It occurs in both the selected Schemes and also in the entire Schemes within the local Kabupatens and Municipals. The other 'major problems may occur in the selected Schemes but they are not evident for all Schemes within the Kabupatens and Municipals, and vice versa.

H.1.2 Major Activities Proposed at PRA and Kabupaten Workshops

By using the same screening parameter, major programs prioritized at both site and Kabupaten/Municipal levels are as presented in Table H.1.4 and the table below. Belong to site and Kabupaten/Municipal levels, a set of activities should be taken to address the major problems, namely:

- 1) reconstructions of both WUA/WUAF and irrigation structure adequately,
- 2) partnership with private sector for agribusiness development, and
- 3) WUA/WUAF socialization under irrigation policy reform.

Major Activities in 25 Sites and Kabupatens/Municipals

Major Activities	
A. Government Role, Support, Laws & Regulations	
B. WUA Management, Institutional Aspect	
1.	Provide leadership training for WUA/WUAF leaders
2.	(Re)organize WUA/WUAF democratically
3.	(Re)formulate AD/ART with members
C. Irrigation O&M, Water Management	
4.	Improve irrigation structure by number and quality
5.	Rehabilitate irrigation structure permanently
D. Agriculture, Economic, Finance	
6.	Develop partnership for business-oriented agriculture and marketing
E. Socio-Cultural Aspect	
7.	Socialize WUA/WUAF under irrigation policy reform
Source: Field Survey in 25 Selected Schemes in the Study Provinces of West Sumatera, West Java, DI Yogyakarta, East Java and West Nusa Tenggara, JICA Study Team, 2001	

Details at WUA sites and Kabupatens are shown in Table H.1.5.

H.1.3 The Specific Problems by WUA Development Category

It was reported that 25 sites of field survey undertaken in 5 Study Provinces of the Phase II were selected by using 4 site categorizations, namely (a) 5 sites with success WUA, (b) 7 sites with no WUA, (c) 7 sites with single WUA, and (d) 6 sites with several WUA. An attempt was made to compile the faced problems at irrigation scheme level by the mentioned site categorizations. They are shown in Table H.1.3 and summarized in the right table. Numbers in WUA categories show the number of WUA identified each problem.

Problems *)		Success WUA	Non-WUA	Single WUA	Several WUA	TOTAL
A. GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS						
Role	Dinas Pengoran field staff is low in number, facility & incentive	1	2	2	4	9
Support	Trainings and extension works are not effective	2	3	3	3	12
B. WUA MANAGEMENT, INSTITUTIONAL ASPECT						
Productivity	URAY is not yet collected, farmers pay no FNR		4	1	3	8
	WUA fund is not available, insufficient	2	4	4	2	12
Entrepreneurship	WU/WUAF is not active, less functioning	2	4	5	4	15
C. IRRIGATION O&M, WATER MANAGEMENT						
Water	Water availability is low (in dry season, MT-3)	2	5	5	4	17
Structure	Canal bank is broken, longsor (cattle), planted with trees	2	3	4	4	14
	Water leakage is high	2	2	3	2	10
	Canal is not constructed permanently	2	2		2	7
O&M	Maintenance is low, canal is not cleaned		3	5	4	12
	Sedimentation is high, pendangkalan	2	4	4	6	18
D. AGRICULTURE, ECONOMIC, FINANCE						
Land	Productivity is low, not optimal, decreasing	4	2	3	4	13
Technology	Uncontrollable pest, insect and animal disturbances	4	3	2	3	12
	Production inputs (Fertilizer, insecticide) are lack, expensive	4	5	3	4	18
Production	Cropping pattern/calendar is not organized	2	2	1	3	8
Marketing	Low price, not stable	2	5	4	5	17
Income	Farmer income is low	4	4	4	4	16
Total		11	8	3	10	33

*) Problem categorization of Phase I Study is used

Source: FRAPCM Workshops at Survey Dts of 5 Study Provinces

H.2 Provincial Workshops

H.2.1 Major Problems Identified at Provincial Workshops

A trial was made to summarize the major problems of irrigation management, WUA and turnover by site, Kabupaten/Kotamadya and Provincial levels of the Study Provinces. Using >50% site screening parameters the superimposed data show that 9 of 11 major problems prevailing in the selected 25 sites and Kabupatens and Municipals confirmed at Provincial level as shown in the table below.

Major Problems by Site, Kabupaten/Municipal and Province

Major Problems	
A. Government Role, Support, Laws & Regulations	
B. WUA Management, Institutional Aspect	
1.	WUA/WUAFs are inactive, less functioning
2.	WUA and O&M funds are not available, limited, insufficient
C. Irrigation O&M, Water Management	
3.	Water is insufficient in dry season
4.	Water resources deteriorate
5.	O&M implementation is inadequate
D. Agriculture, Economic, Finance	
6.	Production inputs are lack, expensive
7.	Cropping pattern is not organized, not applied
8.	Production is low, decreases
9.	Farmer income is low

Source:
Field Survey in 25 Selected Schemes in the Study Provinces of West Sumatera, West Java, DI Yogyakarta, East Java and West Nusa Tenggara, JICA Study Team, 2001

The major problems concentrate on WUA institutional, irrigation O&M and management, and agriculture.

The remaining two 'major problems of Scheme and Kabupaten/Municipal levels did not occur for all Schemes in the Province. For its details see Table H.1.1

H.2.2 Specific Problems by Level of Regional Officials and Farmers

(1) Problems identified at all levels from the field up to provincial government

Subject	Major Problems
Government Role	Government lacks sufficient field staff, equipment and budget Training and extension works are not effective
WUA Management	Farmers' incomes are not sufficient to pay ISF WUA leaders capability is low or they are given no incentives
Irrigation O&M and Management	Water resources are deteriorating Irrigation facilities are in poor condition or deteriorating O&M of irrigation system is inadequate
Agriculture	Land holdings are too small Productivity is low Farming inputs are expensive Uncontrollable pest, insect and animal disturbance Cropping plans are not implemented Production is low Market is controlled by private sector Low and unstable prices of agricultural products Farmers' incomes are low

(2) Problems identified by farmers only

Subject	Major Problems
Government Role	Field officers (PPL, juru, etc.) function sub-optimally
WUA Management	
Irrigation O&M and Management	Canal banks broken by landslip and animals, and planted with trees
Socio-cultural	Subsistence farming, low risk

(3) Problems Identified at Kabupaten Level

Subject	Major Problems
Government Role	Regulations regarding water allocation are not available or are not working
WUA Management	Farmers do not know WUA
Irrigation O&M and Management	Flooding in wet season and insufficient water in dry season Canals are unlined/ non permanent, water leakage through the canal is high Downstream users face water shortages Farmers do not know about proper O&M techniques
Agriculture	KUD has no competitive power against private/traders
Socio-cultural	Settlements along canal deposit garbage

(4) Problems identified by Regional government (kabupaten and province)

Subject	Major Problems
Government Role	Regional Laws/regulations are not yet complete
WUA Management	WUA leaders are not elected democratically
Irrigation O&M and Management	Water distribution schedule does not work Conflicts among water users Deforestation in catchment area Design & construction of DI did not involve participatory approach
Agriculture	Access to farming credit is limited HYV seeds are expensive and not used by farmers Farmers cultivate in uncoordinated manner

(5) Problems identified by Provincial Government

Subject	Major Problems
Government Role	Sectoral coordination is low Information in the field is insufficient Irrigation and WUA development is top-down Socialization of PPI has not been carried out Authority under PPI is not yet clear
WUA Management	Farmers participation in WUA activity is low WUA management is not transparent Irrigation turnover does not yet work
Irrigation O&M and Management	
Agriculture	Farm labour is limited Quality of products are low Farming management is poor Partnerships in water-based agribusiness have not yet been developed Farmers find difficulty in adopting new technology, being given inadequate information
Socio-cultural	Young generation is not interested in farming

H.2.3 Major Activities Proposed at Provincial Workshops

By using the same screening parameter, three major programs were recommended to be taken into priority for all Schemes in the Provinces as evident from the table below.

The recommended actions concerned with:

- (Re)formulation AD/ART with members
- Rehabilitate irrigation structure permanently
- Partnership with private sector for agribusiness development and marketing

For its details see Table H.1.5.

Major Actions by Site, Kabupaten/Municipal and Province

Major Actions	
B. WUA Management, Institutional Aspect	
1.	(Re)formulate AD/ART with members
C. Irrigation O&M, Water Management	
2.	Rehabilitate irrigation structure permanently
D. Agriculture, Economic, Finance	
3.	Develop partnership for business-oriented agriculture and marketing

Source:

Field Survey in 25 Selected Schemes in the Study Provinces of West Sumatera, West Java, DI Yogyakarta, East Java and West Nusa Tenggara, JICA Study Team, 2001

H.2.4 Recommended Activities by Level of Regional Government Workshops

Recommended actions by each level of provincial studies are summarized as follows:

General Category	Specific Action
General - Actions recommended at all levels.	
Irrigation O&M, Water Management	Rehabilitate irrigation systems
	Clean sediment and trash from canals regularly
Agriculture	Prepare DI specific cropping patterns and calendars
	Establish water based agribusiness cooperatives
Public Awareness	Socialize WUA/WUAF establishment in line with Irrigation Policy Reform
Dual - Actions recommended at two levels	
Government Role	Train WUA/WUAF in leadership skills
	Provide extension on water-based agribusiness
WUA Management	Reorganize WUAs as independent and democratic units, incorporating traditional institutions, where relevant.
	Reorganize AD/ART with members' participation
Irrigation O&M, Water Management	Establish, with WUA participation, adequate O&M fee levels and collection system
Agriculture	Reactivate seed production using farmers
FIELD - ACTIONS RECOMMENDED AT DI LEVEL	
WUA Management	Provide WUA leaders with clear job descriptions and incentives
Irrigation O&M, Water Management	Raise O&M funding from farmers and Government
	Reactivate gotong-royong for irrigation maintenance
Agriculture	Activate KUD and Dolog
KABUPATEN - ACTIONS RECOMMENDED AT KABUPATEN LEVEL	
WUA Management	Prepare WUA/WUAF work plan using participatory approach
Agriculture	Use high yielding varieties
	Develop business orientated production and marketing
Public Awareness	Socialize need to stop trash disposal into canals
PROVINCE - ACTIONS RECOMMENDED AT PROVINCIAL LEVEL	
Government Role	Shift Government's role from regulatory to facilitator
	Synchronizes Government support for irrigation
	Specify roles of Government and water users
	Provide training/extension regarding water-based agri-business development

	Recruit and train community organizers for role at WUA level
	Train WUAs to estimate O&M and rehabilitation costs
	Improve seed production and fertilizer distribution
	Organize grant sources for initial WUA establishment
	Develop water rights at all levels
WUA Management	Establish forum of GOI agencies and Water Users
Irrigation O&M, Water Management	Improve catchment protection
	Prepare annual irrigation management plan
	Prepare O&M and rehabilitation plans
	Improve, rationalize and implement Turnover Program
Agriculture	Organize improved technology farming demonstration plots
	Develop farm diversification, high value crops, and agri-business
	Organize agro-commodity market information center
	Organize credit systems
Public Awareness	Promote integrated pest management

H.3 Verification Countermeasures at Provincial Level

H.3.1 Acceptability and Applicability of Countermeasures for Irrigation and WUA Management

In most provinces there was either agreement with or no comment regarding the overall goals, the project purpose, the outputs and the proposed activities within this section. West Java tended to differ from the other four provinces, where in many cases whilst being in general agreement with the hypothesis, changes/modifications were suggested. All countermeasures are basically accepted but some province justified minor modification or commented on the following points (Table H.3.1):

- Overall goal; WUAs are self-standing, autonomous and taken root
- Activity I-1.3 [Public awareness campaign] traditional local leaders shall be targeted
- Activity I-1.4 [Formulate WUA/WUAF]
- Activity I-1.6 [Assist to set ISF] no assist but guide
- Activity I-1.7 [WUA registration] no assist but guide

H.3.2 Acceptability and Applicability of Countermeasures for Irrigated Agriculture

It is possible to say most of countermeasures are accepted and applicable for the future activities to improve the irrigation management and to empower WUAs, except the following activities (Table H.3.2);

- Activity AF-2.2, [one village one special products policy]
- Activity AG-3.5, [one village one special products policy]
- Activity AG-4.2, [review existing KUD]
- Activity AG-6.2, [clarify effective land use]

“One village one special products” is one of the most popular policy to develop rural area in Japan. But it might not so much pay attention on the regional development among the people under irrigated agriculture. They give their attention more on the irrigation among the participants of this Study. And past KUDs’ activities gave most people bad image, it would need another approach to formulate cooperative activities. And effective land use originated the land tenure system or agrarian reform might need the socio-cultural changes. The present small land holding or share cropping system problems are rather difficult to start reformation, even farmers know it need improvement.

H.3.3 Task Allocation of the Countermeasures Activities

The task allocation of activities in countermeasure hypothesis were discussed in several kabupaten and provincial workshops. The following summaries of task allocation validation at Provincial level used >25% site screening parameter for activities. Accordingly the recommended actions were more various by Province as shown in Table H.3.5.

Law No.22/1999 on regional autonomy and related laws and regulations were taken into account. As a result, task allocation which regard to Government role IDAF (initiative, decision, action and funding) to be acted by Government at Kabupaten and Municipal level. Water users and other concerned parties are at beneficiary and participation positions. Similar task allocation was recommended for Irrigation O&M/water management especially for water resources and irrigation rehabilitation. Task allocation which regards to the remaining actions belongs to Water Users' IDAF. Government is in position to coordinate and control, whereas the other concerned parties are support and participation.

Table H.1.1 Major Problems by Scheme, Kabupaten Workshops

Problems *)		WEST SUMATERA	WEST JAVA	YOGYAKARTA	EAST JAVA	NTB	TOTAL
A. GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS							
Role	Job division between Government and Water Users is unclear	4	1				5
	Dinas Pengairan field staff is low in number, facility & incentive	4	1	1		3	9
	<i>Pendampingan (Juru, PPL etc)</i> is less functioning	3	3			2	8
	<i>PPI</i> socialization (fund) is limited	1		3			4
Support	Trainings and extension works are not effective	5	3	4			12
	Kabupaten fund for <i>Otonomi Daerah</i> is limited			3			3
B. WUA MANAGEMENT, INSTITUTIONAL ASPECT							
Productivity	WUA/WUAF is not yet available	1	3			4	8
	Training is limited to WUA leaders	1		3			4
	<i>Iuran</i> is not yet collected, farmers pay no <i>lpair</i>			2	2	4	8
	WUA fund is not available, insufficient	1	3	2	2	4	12
Admin	WUA administration is not worked out	1			1	4	6
Entrepreneurship	WUA/WUAF is not active, less functioning	4	4		3	4	15
Integrity	Regular WUA meeting is not available/limited to leaders	2	1	3		2	8
C. IRRIGATION O&M, WATER MANAGEMENT							
Water	Flood (in rain season)	2	3		3		8
	Water availability is low (in dry season, MT-3)	4	3	1	4	5	17
	Debit of water resource/river is small/decreases		3		2	5	10
	Uncontrollable forest cutting, deforestation	1	1			4	6
Structure	Canal bank is broken, <i>longsor</i> (cattle), planted with trees	7	3	1	3		14
	Water leakage is high	2	1	1	3	3	10
	Canal is not constructed permanently	2	1			4	7
	Distribution building is improper/insufficient/broken	4					4
	Canal is not in good condition, broken	3	1			5	9
Management	Regulation of water allocation is not available, not applied	6	1			1	8
	Downstream is lack of water	4	2		3		9
	Conflict of water users: paddy x <i>keramba</i> /fishery, non-farmers	1	3			1	5
O&M	O&M fund is low	1	3			2	6
	Maintenance is low, canal is not cleaned	4	3		2	3	12
	Sedimentation is high, <i>pendangkalan</i>	4	3	1	3	5	16
	Water flow is not fluent		3		2		5
D. AGRICULTURE, ECONOMIC, FINANCE							
Land	Landholding is low (<0.01 - <0.5)		4	3	1		8
	Productivity is low, not optimal, decreasing	5	4		3	1	13
Technology	Application of fertilizer/new technology is improper	2	2			4	8
	Uncontrolable pest, insect and animal disturbances	4	2		1	5	12
	Production inputs (<i>pupuk, insecticide</i>) are lack, expensive	6	3	1	2	4	16
Production	Farmers work individually		3				3
	Production is low, fail	1			1	4	6
	Production/harvest cost is high	1				4	5
Marketing	Paddy market is controlled by traders	2				6	8
	Farmers sell productions to local collectors		3			2	5
	Low price, not stable	7	2	1	2	5	17
	KUD has no competing power against private/traders	4	1			6	11
Income	Farmer income is low	7	4	2	1	2	16
E. SOCIO-CULTURAL ASPECT							
	Subsistence farming, low risk	1	3	1		1	6
	Farmer awareness on O&M is low	3	1	4	1		9
	Sense to <i>gotong-royong</i> reduces	5					5
Total		18	21	7	8	19	8

*) Problem categorization of Phase I Study is used

Source: PRA/PCM Workshops at Survey DIs of 15 Study Provinces

Table H.1.4 Major Activities Prioritized at PRA and Kabupaten Workshops

Activities *)		WEST SUMATERA	WEST JAVA	YOGYAKARTA	EAST JAVA	NTB	TOTAL
A. GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS							
Role	Generate collection of taxes and retributions	0	3	0	0	0	3
Support	Optimize PPL, Juru Pengairan/PPA, and other extension works	6	2	0	0	1	9
B. WUA MANAGEMENT, INSTITUTIONAL ASPECT							
Admin	Establish Cooperative Farming	2	3	3	0	0	8
	(Re)formulate ADIART corresponding to farmers aspiration	5	0	2	1	2	10
Integrity	Involve Adat institution/leaders, <i>cerdik-cendekia</i> & <i>alm ulama</i>	6	0	0	0	0	6
C. IRRIGATION O&M, WATER MANAGEMENT							
Management	Raise adequate O&M fund among farmers and Government	2	1	3	0	0	6
O&M	Reactivate irrigation maintenance by <i>gotong-royong</i>	5	0	1	0	0	6
	Conduct routine maintenance by WUAMUAF (periodical by Gov)	0	1	3	0	0	4
	Clean sediment and <i>sampah</i> (by GIPSA + Pemda fundings)	1	1	2	3	1	8
	Improve O&M <i>lawan</i> collection system and management	4	1	0	1	0	6
	(Re)consider O&M fee (adequately to proper O&M cost estimate)	4	3	1	0	0	8
D. AGRICULTURE, ECONOMIC, FINANCE							
Technology	Use organic fertilizer	0	0	3	0	2	5
	Use high yielding variety/labelled seed	4	1	1	0	3	9
	Establish/activate Kelompok Penangkar Benih	1	0	3	0	0	4
Production	Activate Cooperative/Kelompok Tani for production means/inputs	4	1	0	0	0	5
	Establish partnership with private sector	1	0	3	0	4	8
	Implement cropping pattern/calendar on water & market basis	5	1	3	2	2	13
Marketing	Activate KUD and Dolog adequately	4	0	0	0	2	6
	Function KUD for profitable price and marketing	5	0	0	0	2	7
E. PUBLIC AWARENESS							
	Socialize WUA by involving WUAF and village leaders	5	2	2	2	3	14
	Socialize WUA (and WUAF) work plan and implementation	5	0	1	0	0	6
	Total	13	3	7	1	1	2

*) Activity categorization of Counter-measure hypothesis is used

Source: PRAPCM Workshops of Survey Dis of 5 Study Provinces

Table H.1.5 Major Activities Proposed by Farmers at PRA Workshops (1/2)

ACTIVITY =>	WEST SUMATERA								WEST JAVA					YOGYAKARTA				EAST JAVA				NTB				TOTAL					
	D. SUBULAH, Agah	D. LUBER NYER, Payer Solaha	D. BATAK PAUL, Pomeran	D. BUKIT ANDUN, B. Naha	D. ABRI BUKITAM, P. Mawana	D. POKTO YUG, Naha Puhing	D. S. BERING, S. Mawana	SUBTOTAL	D. CILAMUNG, Mungga	D. CILAMUNG, Catur	D. D. Y. BUKIT, B. Naha	D. D. Y. BUKIT, B. Naha	D. D. Y. BUKIT, B. Naha	SUBTOTAL	D. M. BUKIT, B. Naha	SUBTOTAL	D. P. BUKIT, B. Naha	D. C. BUKIT, B. Naha	D. C. BUKIT, B. Naha	D. C. BUKIT, B. Naha	SUBTOTAL	D. P. BUKIT, B. Naha	D. C. BUKIT, B. Naha	D. C. BUKIT, B. Naha	SUBTOTAL						
1																															
A. GOVERNANCE ROLE, SUPPORT, LAWS & REGULATIONS																															
Role								0	1	1	1	3																0	3		
Support								1	1	1	1	1	6	1	1	2													1	9	
Law & Reg								1	1	1	1	1	6	1	1	2													1	9	
B. WUA MANAGEMENT, INSTITUTIONAL ASPECT																															
Productivity								1	1	1	1	1	6	1	1	2													1	9	
Admin								1	1	1	1	1	6	1	1	2														1	9
Empower								1	1	1	1	1	6	1	1	2														1	9
Integrity								1	1	1	1	1	6	1	1	2														1	9
C. IRRIGATION O&M, WATER MANAGEMENT																															
Water								0	0	0	0	0	0	0	0	0														0	0
Structure								1	1	1	1	1	6	1	1	2														1	9
Management								1	1	1	1	1	6	1	1	2														1	9
O&M								1	1	1	1	1	6	1	1	2														1	9
PR								1	1	1	1	1	6	1	1	2														1	9

Table H.3.1 Task Allocation of Proposed Activities in the Workshops in Study Province (1/4)

		I - Initiative, proposal		F - Funding		P - Participation		C - Coordination, control								
		D - Decision		A - Action, implementor		B - Beneficiary, user		E - Monitoring & evaluation								
ACTIVITY *)		PROVINCE						TASK ALLOCATION								
		WS	WJ	JO	EJ	NTB	TOTAL	GOVERNMENT			Water Users	Univ.	NGO	Private KUD	Funding Agency	
								Central	Prov.	KAB / KOT						
A.	GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS															
Role	Recruit and manage COs adequately to WUAs/WUAFs	1		1		1	3	C	C	DEF	IPB	IA	IA	P		
	Carry out M&E on WUA/WUAF progress/activities		1				1	DBF	DBF	IDBF	P	A	A	P		
	Develop data-base of turned over irrigation and WUA/WUF progresses		1	1			2	DABF	DABF	IDABF	P	BP	BP	P	F	
	(Re)formulate landuse and spatial plan for water-based agribusiness		1				1	C	C	IDAF	BP	BP	BP	BP	F	
	Reform the prevailing Agrarian Law		1				1	IDAFC	BP	BP	BP	BP	BP	BP		
	Synchronize GOI supports & services for water-based agribusiness	1		1			2	IDAFC	BP	BP	BP	BP	BP	BP		
Support	Assist WUA/WUAF work plan, implementation and evaluation		1				1	C	C	AF	IBDF	A	A	P		
	Provide integrated Extension services for agribusiness development	1		1			2	C	C	AF	IBDF	P	P	P		
	Facilitate learning-by-doing trainings on WUA needs basis		1	1	1		3	C	C	AF	IBDF	A	A	P		
	Organize grant sources for WUA fund strengthening			1	1		2	CAF	CAF	IDAF	BP	P	P	P	F	
	Audit WUA/WUAF institutional, activity and financial aspect	1					1	C	C	IDAF	BP	P	P	P		
	Activate KPL (Juru, PPL, Kades) role for WUA empowerment			1			1	C	C	IDAF	BP	P	P	P		
	Activate Balai PSA-WS services				1		1	C	C	IDAF	BP	P	P	P		
	Prepare/train PPL adequate to agribusiness prod and marketing		1				1	C	C	IDAF	BP	P	P	P		
	Provide WUA/WUAF legal basis to enable work with Bank and Private			1			1	C	C	DA	IBF	P	P	P		
	Provide <i>Panitia Irigasi</i> Secretariate (office) permanently			1			1	C	C	IDAF	BP	P	P	P		
Laws &	Produce Provincial and Kab/Kodya regulations on irrigation			1			1	C	IDAF	IDAF	BP	P	P	P		
	Formulate redefinition of irrigation-related GOI Agencies' roles		1				1	IDAF	IDAF	IDAF	BP	P	P	P		
	Produce <i>Perda (Peraturan Daerah)</i> for water resource sustainability	1		1			2	C	IDAF	IDAF	BP	P	P	P		
	Produce <i>Perda</i> for participative regional development planning				1		1	C	IDAF	IDAF	BP	P	P	P		
	Produce rules of the game of Cooperative and Private partnership	1				1	2	C	IDAF	IDAF	BP	P	P	P		
	Regulate Water Rights by area, sector, and water user category	1	1				2	IDAF	IDAF	IDAF	BP	P	P	P		
	Regulate task allocation of Government and water users		1	1			2	IDAF	IDAF	IDAF	BP	P	P	P		
	Regulate inter-Kabupaten/Kodya irrigation authorities			1			1	C	IDAF	IDAF	BP	P	P	P		
	Formulate <i>Panitia Irigasi</i> membership, their rights and obligations			1			1	C	C	IDAF	BP	P	P	P		
	Deregulation of loan agreement				1		1	IDAF	IDAF	IDAF	BP	P	P	P	DAF	
	Reform national food security and rice price policies		1				1	C	C	IDAF	IBP	IP	IP	P		

to be continued

Table H.3.1 Task Allocation of Proposed Activities in the Workshops in Study Province (2/4)

ACTIVITY *)		PROVINCE						TASK ALLOCATION							
		WS	WJ	JO	EJ	NTB	TOTAL	GOVERNMENT			Water Users	Univ.	NGO	Private KUD	Funding Agency
								Central	Prov.	KAB / KOT					
Laws & Regal	Produce Nagari Regulations (Pernag) on land and water utilization	1					1	C	C	IDAF	IBP	IP	IP	P	
	Regulate GOI, water users & private relationships in agribusiness dev	1					1	C	C	IDAF	IBP	IP	IP	P	
	Regulate Irrigation Turnover, procedures and mechanisms	1	1		1		3	C	C	IDAF	IBP	P	P	P	
B. WUA MANAGEMENT, INSTITUTIONAL ASPECT															
Productivity	Evaluate WUA/WUAF progress in O&M and irrigation management	1		1	1		3	C	C	IDAF	BP	P	P	P	
	Include women in WUA/WUAF decision making	1					1	C	C	ICP	IDABF	IP	IP	P	
Admin	Formulate AD/ART with members participatorily	1	1	1	1	1	5	C	C	ICP	IDABF	P	P	P	
	Propose for Badan Hukum (legalization)		1			1	2	C	C	ICP	IDABF	P	P	P	
	Carry out financial administration of WUA/WUAF transparently		1		1		2	C	C	ICP	IDABF	P	P	P	
Entrepreneurship	Function WUA/WUAF to be an agribusiness organization	1		1	1	1	4	C	C	ICP	IDABF	IP	IP	P	
	Organize WUA/WUAF for O&M fund raising/capital formation		1	1		1	3	C	C	ICP	IDABF	IP	IP	P	
	Train WUA/WUAF on water-based agribusiness management	1		1	1	1	4	C	C	IDAF	IBP	P	P	P	
	Establish saving and credit self-help groups					1	1	C	C	ICP	IDABF	P	P	P	
	Establish forum of GOI Agencies and water users communities		1	1			2	C	C	IDAF	IBP	IP	IP	P	
Integrity	Organize basic training for WUA/WUAF leaders and members		1				1	C	C	ICPF	IDABF	P	P	P	
	(Re)organize WUA/WUAF independently and autonomously	1	1			1	3	C	C	ICP	IDABF	P	P	P	
	Involve local Adat institution/norms/values in irrigation management	1					1	C	C	ICP	IDABF	P	P	P	
	Organize annual WUA/WUAF General Assembly		1				1	C	C	ICP	IDABF	P	P	P	
C. IRRIGATION O&M, WATER MANAGEMENT															
Water	Conserve water resource to secure water sufficiency	1	1				2	IDAF	IDAF	IDAF	BP	P	P	P	F
	Establish alternative water resources (incl. ground water pump)	1				1	2	C	C	IDF	IABPF	P	P	P	F
	Organize reforestation/regreening of water catchment areas		1			1	2	IDAF	IDAF	IDAF	BP	P	P	P	
Structure	Establish small dams (embung) to store water in rain season					1	1	C	C	CP	IDABPF	P	P	P	
	Improve/rehabilitate broken irrigation structures permanently	1	1	1	1	1	5	CF	CF	IDAF	IDABPF	P	P	P	
Management	Allocate water on cropping pattern and calendar	1	1	1	1		4	C	C	ICP	IDABPF	P	P	P	
	Include women in irrigation management and decision making	1					1	C	C	CP	IDABPF	IP	IP	P	
	Prepare annual irrigation management and O&M work plan		1	1			2	C	C	ICP	IDABPF	P	P	P	

to be continued

Table H.3.1 Task Allocation of Proposed Activities in the Workshops in Study Province (3/4)

I - Initiative, proposal F - Funding P - Participation C - Coordination, control D - Decision A - Action, implementor B - Beneficiary, user E - Monitoring & evaluation															
ACTIVITY *)		PROVINCE					TASK ALLOCATION								
		WS	WJ	JO	EJ	NTB	TOTAL	GOVERNMENT			Water Users	Univ.	NGO	Private KUD	Funding Agency
								Central	Prov.	KAB / KOT					
O&M	Identify O&M and rehabilitation needs by irrigation walk-through	1	1	1			3	C	C	IDAF	IDABPF	IP	IP	P	
	Prepare rehabilitation and O&M plan adequately	1	1			1	3	C	C	IDAF	IDABPF	IP	IP	P	
	Carry out rehabilitation and O&M as planned and scheduled	1				1	2	C	C	IDAF	IDABPF	IP	IP	P	
	Clean periodically canals from sedimentation and garbage	1	1	1	1		4	C	C	ICP	IDABPF	IP	IP	P	
	Consider O&M iuran on irrigation management and O&M cost		1				1	C	C	ICP	IDABPF	IP	IP	P	
PPI	Evaluate WUA/WUAF proposal for irrigation turnover	1					1	C	C	IDAF	BP	IP	IP	P	
	Conduct irrigation turnover from Government to WUA/WUAF	1		1	1		3	C	C	IDAF	BP	IP	IP	P	
	Conduct advocacy for irrigation policy reform implementation				1		1	IBPF	IBPF	IBPF	IBPF	IDA	IDA	P	
	Organize inter-Kabupaten public consultancy on PKPI				1		1	CP	IDAF	IDAF	BP	IP	IP	P	
D. AGRICULTURE, ECONOMIC, FINANCE															
Land	Enlarge planted land areas by mechanization	1			1		2	C	C	ICP	IDABPF	IP	IP	P	
	Study on land suitability and soil fertility				1		1	C	C	ICP	IBPF	IDA	IDA	P	F
Capital	Deregulate KUT/other credit schemes accessible to farmers		1	1	1	1	4	CP	CP	IDAF	BP	IP	IP	P	
	Organize Farming Bank and Insurance		1				1	CP	CP	IDAF	BP	IP	IP	IDAF	
Labor	Organize groups of farm laborers and tenant farmers		1			1	2	C	C	ICP	IDABPF	IP	IP	P	
	Provide hand tractor	1	1			1	3	C	C	IDAF	IBPF	IP	IP	IDAF	
Technology	Provide appropriate post-harvest techniques and facilities		1	1	1	1	4	C	C	ICP	IDABPF	IP	IP	P	
	Organize cropping pattern and calendar on water availability		1			1	2	C	C	ICP	IDABPF	IP	IP	P	
	Control on seed production and distribution			1	1		2	C	C	ICP	IDABPF	IP	IP	P	
	Control on fertilizer and insecticide distribution			1	1		2	C	C	ICP	IDABPF	IP	IP	P	
	Reactivate <i>Kelompok Penangkar Benih</i> (group of seedling farmer)	1			1	1	3	C	C	ICP	IDABPF	IP	IP	P	
	Develop dem-plot/technology fit to agribusiness x environment	1	1	1		1	4	CP	CP	IDAF	BP	IP	IP	P	
	Organize mechanisation of land preparation		1		1		2	C	C	ICP	IDABPF	IP	IP	P	
	Develop organic fertilizer uses	1			1	1	3	C	C	ICP	IDABPF	IP	IP	P	
	Provide production means and inputs required for agribusiness	1	1				2	C	C	ICP	IDABPF	IP	IP	P	
	Provide appropriate technology inventory at farmer level			1			1	CP	CP	IDAF	IBPF	IP	IP	P	
Develop alsintan (machinery prod means) services for farming		1	1			2	C	C	IDAF	IBPF	IP	IP	IDAF		

to be continued

Table H.3.1 Task Allocation of Proposed Activities in the Workshops in Study Province (4/4)

I - Initiative, proposal F - Funding P - Participation C - Coordination, control D - Decision A - Action, implementor B - Beneficiary, user E - Monitoring & evaluation															
ACTIVITY *)		PROVINCE						TASK ALLOCATION							
		WS	WJ	JO	EJ	NTB	TOTAL	GOVERNMENT			Water Users	Univ.	NGO	Private KUD	Funding Agency
								Central	Prov.	KAB / KOT					
Production	Organize groups of activities related to agribusiness	1	1		1	1	4	C	C	ICP	IDABPF	IP	IP	P	
	(Re)establish Cooperative democratically and transparently	1	1	1			3	C	C	ICP	IDABPF	IP	IP	P	
	Train Cooperative leaders/members on business-oriented farming	1					1	CP	CP	IDAF	IBPF	IP	IP	P	
	Produce high economic value commodities		1	1			2	C	C	ICP	IDABPF	IP	IP	P	
	Provide trial (dem-plot) of corporate farming				1		1	C	C	ICP	IDABPF	IP	IP	P	
	Organize partnership for profitable production and marketing	1	1	1	1	1	5	C	C	ICP	IDABPF	IP	IP	P	
	Develop farm diversification and processing	1	1		1		3	C	C	ICP	IDABPF	IP	IP	P	
Marketing	Organize (market) Information Center for agribusiness development	1	1	1		1	4	CP	CP	IDAF	IBPF	IP	IP	P	
	Organize inter-sectoral nets of (local, national and global) marketing		1	1			2	CP	CP	IDAF	IBPF	IP	IP	P	
	Reactivate KUD for marketing purpose					1	1	CP	CP	CP	IBPF	IP	IP	IDAF	
	Organize Group of Marketing		1				1	C	C	ICP	IDABPF	IP	IP	P	
E.	SOCIAL PREPARATION														
	Socialize Provincial and Kabupaten regulations on irrigation			1		1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Socialize WUA/WUAF under Irrigation Policy Reform	1	1			2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Socialize Government change of paradigms	1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote water-based agribusiness development				1	1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote adequate O&M for irrigated farming sustainability		1		1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote the need to calculate iuran on O&M cost estimates		1		1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Socialize the importance to keep canals clean from garbage		1			1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote reforestation/regreening for water resource sustainability		1		1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote labelled (high yielding) seed uses				1	1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Socialize integrated pest and insect control			1	1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Promote organizing ability among		1			1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Socialize Balai PSA-WS				1	1	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Prepare dissemination materials for Central, Kab and Village levels		1		1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
	Held dissemination workshops at Central, Kab and Village levels		1		1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	P		
		42	55	40	34	33	204								

*) Activity categorization of Phase I Study is used

Source: Provincial Materials of the Study Provinces prepared for Central Workshops of May 30, 2001