# 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. G	overnment Role, Support, Laws & Regulations		
B. W	/UA Management, Institutional Aspect		
1.	WUA/WUAFs are inactive, less functioning		
2.	WUA and O&M funds are not available, limited, insufficient		
C. Ir	rigation O&M, Water Management		
3.	3. Water is insufficient in dry season		
4.	4. Water resources deteriorate, decrease		
5.	5. O&M implementation is inadequate		
6.	6. Sedimentation is too high		
D. A	D. Agriculture, Economic, Finance		
7. Uncontrollable pests, insects and animal disturbances			
8.	8. Production inputs are lack, expensive		
9.	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. G	overnment Role, Support, Laws & Regulations		
B. W	/UA 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. Ir	rigation O&M, Water Management		
4.	Improve irrigation structure by number and quality		
5.	Rehabilitate irrigation structure permanently		
D. A	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			
Yogy	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 the mentioned site categorizations. They are shown in Table H.1.3 and summarized in the right table. Numbers in WUA categories the show number of WUA identified each problem.

	Problems *)	Success WUR	Non-WAIR.	Single WUA	Several WUA	TOTAL
		Seco	Nar	Sng	Sente	T
	GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS	$^{\dagger}$				_
Role	Dinas Pengairan field staff is low in number, facility & incentive	1	2	2	4	9
Support	Trainings and extension works are not effective	3	3	3	3.	-1
E	WUA MANAGEMENT, INSTITUTIONAL ASPECT	Т				
Productivity	/URAN is not yet collected, farmers pay no IPAIR		4	1	3	18
L1600000011	WUX fund is not available, insufficient	2	4	4	2	1
Entrepreneurship	WUAWAUAF is not active, less functioning	2	4	5	4	1
C	IRRIGATION OBM, WATER MANAGEMENT					_
Water	Water availability is low (in dry season, MT-3)	3	5	5	4	1
Structure	Canal bank is broken, longsor (cattle), planted with trees	2	3	4	4	1
	Waterleakage is high	0	2	3	2	1
metor	Canal is not constructed permanently	3	2		2	7
N80	Maintenance is low, canal is not cleaned		3	5	4	1
	Sedimentation is high, pendangkalan	2	4	4	6	13
	AGRICULTURE, ECONOMIC, FINANCE					Т
Land	Productivity is low, not optimal, decreasing	4	-2	3	4	3
Technology	Uncontrollable pest, insect and animal disturbances	4	3	2	3	1
Contracting and Contracting	Production inputs (Fertilizer, Insecticide) are lack, expensive	4	15	3	4	1
Production	Cropping pattern/calendar is not organized	3	2	1	3	8
Marketing	Low price, not stable	3	5	4	5	.1
Income	Farmer income is low	4	4	4	4	1
19702745	Total	11	8	3	10	

<sup>\*)</sup> Problem categorization of Phase I Study is used Source: PRAPCM Worldhops at Survey Dis of S 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

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# 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	Water resources are deteriorating
Management	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	Canal banks broken by landslip and animals, and planted with trees
Management	
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	Water distribution schedule does not work
Management	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. W	B. WUA Management, Institutional Aspect		
1.	(Re)formulate AD/ART with members		
C. Irrigation O&M, Water Management			
2.	2. Rehabilitate irrigation structure permanently		
D. Agriculture, Economic, Finance			
3.	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	Rehabilitate irrigation systems
Management	Clean sediment and trash from canals regularly
Agriculture	Prepare DI specific cropping patterns and calendars
Agriculture	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
Government Role	Provide extension on water-based agribusiness
	Reorganize WUAs as independent and democratic units, incorporating traditional
WUA Management	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	Raise O&M funding from farmers and Government
Management	Reactivate gotong-royong for irrigation maintenance
Agriculture	Activate KUD and Dolog
KA	BUPATEN - ACTIONS RECOMMENDED AT KABUPATEN LEVEL
WUA Management	Prepare WUA/WUAF work plan using participatory approach
Agriculture	Use high yielding varieties
Agriculture	Develop business orientated production and marketing
Public Awareness	Socialize need to stop trash disposal into canals
PF	ROVINCE - 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
	Improve catchment protection
Irrigation O&M, Water	Prepare annual irrigation management plan
Management	Prepare O&M and rehabilitation plans
	Improve, rationalize and implement Turnover Program
	Organize improved technology farming demonstration plots
Agriculture	Develop farm diversification, high value crops, and agri-business
Agriculture	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	WEST JAVA	TUGYAKAK TA	EAST JAVA	NTB	TOTAL
A.	GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS						
	Job division between Government and Water Users is unclear	4	1				5
5 .	Dinas Pengairan field staff is low in number, facility & incentive	4	1	1		3	9
Role	Pendampingan (Juru, PPL etc) is less functioning	3	3			2	8
	PPI socialization (fund) is limited	1		3			4
	Trainings and extension works are not effective	5	3	4			12
Support	Kabupaten fund for <i>Otonomi Daerah</i> is limited			3			3
В.	WUA MANAGEMENT, INSTITUTIONAL ASPECT						
	WUA/WUAF is not yet available	1	3			4	8
	Training is limited to WUA leaders	1		3			4
Productivity	<i>luran</i> is not yet collected, farmers pay no lpair	H.		2	2	4	8
	WUA fund is not available, insufficient	1	3	2	2	4	12
A alma im	WUA administration is not worked out	1	J		1	4	6
Admin		<u>.</u>	1				15
	WUA/WUAF is not active, less functioning	4	4	2	3	4	
Integrity	Regular WUA meeting is not available/limited to leaders	2	1	3		2	8
<u>C.</u>	IRRIGATION O&M, WATER MANAGEMENT						
	Flood (in rain season)	2	3		3		8
Water	Water availability is low (in dry season, MT-3)	4	3	1	4	5	17
vvatci	Debit of water resource/river is small/decreases		3		2	5	10
	Uncontrollable forest cutting, deforestation	1	1			4	6
	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	1(
Structure	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
	Regulation of water allocation is not available, not applied	6	1			1	8
Management	Downstream is lack of water	4	2		3		9
Management	Conflict of water users: paddy x <i>keramba</i> /fishery, non-farmers	1	3			1	5
	O&M fund is low	1	3			2	6
	Maintenance is low, canal is not cleaned	4	3		2	3	12
O&M	Sedimentation is high, <i>pendangkalan</i>	4	3	1	3	5	16
	Water flow is not fluent	7	3	<u>'</u>	2	J	5
D	AGRICULTURE, ECONOMIC, FINANCE		J				3
D.			4	2	1		8
Land	Landholding is low (<0.01 - <0.5)	г		3	1	1	-
	Productivity is low, not optimal, decreasing	5	4		3	1	13
	Application of fertilizer/new technology is improper	2	2		4	4	8
Technology	Uncontrolable pest, insect and animal disturbances	4	2		1	5	12
	Production inputs (pupuk, insecticide) are lack, expensive	6	3	1	2	4	10
	Farmers work individually		3				3
Production	Production is low, fail	1			1	4	6
	Production/harvest cost is high	1				4	5
	Paddy market is controlled by traders	2				6	8
Markatina	Farmers sell productions to local collectors		3			2	5
Marketing	Low price, not stable	7	2	1	2	5	1.
	KUD has no competing power against private/traders	4	1			6	1
Income	Farmer income is low	7	4	2	1	2	10
E.	SOCIO-CULTURAL ASPECT						
	Subsistance 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	Ė		Ė		5
	some to gottong rojong roudous				i		ı

\*) Problem categorization of Phase I Study is used

Source: PRA/PCM Workshops at Survey DIs of Stydy Provinces

Table H.1.2 Problems Identified in PRA Workshops in Detailed Survey Area (1/2)

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Table H.1.2 Problems Identified in PRA Workshops in Detailed Survey Area (2/2)

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Table H.1.3 Problems Identified in PRA Workshops by WUA Category (1/2)

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Role	GOVERNMENT BOLE, SUPPORT, LAWS & REGULATIONS  Job division i between Government and Winer Users is unclear Intermector coordination is weak legar-sectors in still high) Intermector coordination is weak legar-sectors in still high) Intermector of WIAA progress is formal advancement, not activity. Clinian PMD is less involved in WIAA development. Direas Repairable in minimum in information for WIAA.  WIAA development policy is top-down. Direas Repairable PALOS (SIST IS IS-A) number. Repairable Pendarprogram (Acts), PPL etc. is less functioning. PPT socialization (Aura) is limited.		1			1	0 0 0 0 0 0 0 1	1	1	1	1		1		1 1 8 8 8 1 2 3 8	1	1		1		1 1 1		2 0 1 0 0 2 2	1	*1	1 1 1	1 1			
35000H	Beatings and assertion a value are not whether.  Politication for Autonomy Deerah is limited.  Makepaten GOI program for new agriculture is not yet available.  Government fund for CBM is limited.  Government support is low.  Government response is allow.  Government pays less attention to WUA.  Pennia readings on PPI regulations, rearrises ato is low.	1	3	1			1 0 0 1 0 0		1	1 1 1 1	1				3 1 0 1 1 1 1 1 1	1	1		i	1			3 0 0 0 1		1	1	1			1 3
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Polluchilly	WILA MANAGEMENT, INSTITUTIONAL ASPECT WILA-VILLAP is not yet available Training is limited to WILA leaders WILA has no work ohn WILA leaders have not clear job description WILA leaders have not softwe WILA wasters have not softwe WILA wasters have not softwe WILA wasters have no salary nor honorarium ATRAN in not jot collected, norman pae no WARP		1	,		1	1 1 1 0 0	1		1		1	1	1 1 1 1	3 0 1 1 2 1 4	1	1	1	1		1	1	2 0 0 2 2 1	1 1		1	1			
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reuntit	WUA leaders are not real farmer WUA leaders is lijn in human resource capability			Ė		Е	8						1		1	1							1		1			1		
1. John Dity	Works AF is not active, less functioning Works are not yet involved equally Cooperation within and serong WUAs is low Cooperation within and serong WUAs is low Cooperationations of WUA leaders are lack WUA waders are not elected democratically figurement to not involvemented Trust to WUA leaders is low Regular WUA meeting is not available/firefled to leaders Senotion is not applied BIRCATION GAM, WATER MANAGEMENT Flood (in sen season)	1	1	1	1		0 0 0 0 0 0 0 2	1	1	1	1	1			1 1 1 1 2 1 3	1 1 1 1 1	1 1		1	1		•	1 1 0 2 0 2 2 1 1 2			1			1	
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Structs	Claimbation building is improper/insufficient/bolen Canal is not in good condition, broken No channel set fore distribution tanks to forms Claimbage canal is not available, improper Well design is improper Well is not personnent			1			0 0 1 0	1			1		1	1.	1 3 1 2 8 8	1	1 1 1				1		1 0 0 1	1	1	1			,	
Management	Weir is damaged Masse water uses in upstream Regulation of water allocation is not swallable, not applied Cownestream is lack of water Maser incale from main sensi is not coordinated Water pumpe are too many Farmers do not know on-farm water alrocation system Farmers do not know on-farm water sanagement Water is not properly distributed Water is not properly distributed Water is not properly distributed		1 1		1		0 1 1 2 0 0 0 0	1	1 1 1		1 1	1		1	2 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1		1	1	1		0 1 2 3 1 0 0 1	1	1			1 1 1	1	
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Table H.1.3 Problems Identified in PRA Workshops by WUA Category (2/2)

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	PROBLEM *)	transplacement Agent	mpany, Katasana d	DI RESEL JAMAL, Habys Progo	DI TENDRO, Lamana	Di Naluden, London Barel	SUBTOTAL	DELL'ARCHITECTOR, Passar Session	DESCRIPTION PROFILE PROSPERY	Dictriculation, Devid	DESCRIPTION OF SERVICES	OHEDOHAOLAD, Samming	D SLANKY, LONDON TIMO	DESCRIPTION OF STREET	DEBATAROCHE, Nombe	III Jesus SACARJes, De Dariente	Di Chiklasse, Bardang	DI TALIBO OFFIC, Sanan	DIRECTOR NAME	DI SECURD OLA, Lawled Swy	D.(250,0ms	SUBTOTAL	DIRECTOR TUC, Kata Padang	Business awaying	TH CRUSTARY PARTOWS, Propor	31 HENDRO KINE SHARE	31-Calviel, Bacongary	3 DEPHGN SLA, Sunbays	SUBTOTAL
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	OSM cost is high	1		$\vdash$		1	2		Н				Н			-		H	Н			0				-	-		2
	OSM fund to low OSM five is not considered with formers		1	+		1	ú		H	1			-		+	+	t		Н		1	t B		1	1	+	+	7	Ť
	OSM fee collection is low, funded from village land		П	1		1	2			1	+		1		1	1		1				3			1	1			2
	OEM fund management is not transparent		Е				0			1			1	1	1							n							0
	Moreon as the content out the out	-	н	+	-		0	1	-	1			1		_	12	1.2		4		1		ш	H	14	4	4	44	ų,
١	Farmers do not know OSM technical limosr-how. Naminfarmer water fee is managed by GOI		Н	$\vdash$	$\vdash$	Н	0	Н	Н	+	1		-		-	+	+	$\vdash$	Н	1		0			1	-	+		0
	Summirtator is high, protection (1)	1	t		1		2	613	itt	T.	m	10	1	_		1	1			1	1	4	100	10	100	11	10	rii.	Ė
	Drainage gate is not functioning						0			1					1	1		10.0			-	1							g
	Gate structures are closed with rubbleh	-	н	$\vdash$			0		1						1	-	-	1				1			- '	1	-	-	1
	Gate is broken by famer Water flow is not fluent	+	⊬	+	1	-	1	1	1	1		1	+		1	+	1		Н			1	1	Н	1	+	+	+	1
	Pleachel at intuka point drusppesss		Ħ	Н	1		0		Н	1			н			1	1	1				1			1	$\Box$	1	#	.0
Ī	PPI could not be implemented yet		⊏	$\vdash$			0		=				4	- 1								0				$\exists$	_	1	1
	AGRICULTURE, ECONOMIC, FINANCE Landfolding is low (COD) — COS)	+		1	-	-	2	Н	Н		1		-	-	1	+		1	Н	-		2		Н	1	-	+	+	1
	Landuse change from seven to rorr-sevely off-farm uses		i,	1			0			i.	1	-						-				0			1			1	i
	Absentee landowners are lot in number						0							- 1		1						1							0
	Productivity in the most contract to present a contract to the		1	1	1	1				1	-	1	-		1	1	1					3	2	ST.	1		1		Ţ
	Equipment for land preparation in teck in number. Form toboror is tack in number, expending	1	₽	$\vdash$	-	1	1	Н	Н	H	$\vdash$					1	-	Н	Н		1	2				+	+		0
	Tractor is expensive, less uses					1	0						1		1	1					1	1							9
	Young generation is not interested to farming		1				1															0			1		$\Box$		1
	Teologia Antheik (corv.) Its Itack.	1	H	$\vdash$	-	-	1	Н	H	-	⊢	1	н			+-	-	H	H	-		0	$\vdash$	Н		4	+		0
	Tenant famous 3 landowner famous. Agency sociating formers with copital is not available.	1	+	+			1		Н	1			н			+			Н			0		Н					0
	Access to credit (KKF, keelt Artsheran pargen) is low		1		1		1			1						Т					1								0
1	HLO's credit is not receit	1	1			-	1		μ.								-					0				_	-		1
	Farriers are lack of capital	+	Н	+	-	1	1	H	Н	-	-		-	1		+	-		Н	-	1	0		Н	-	+	-		0
	Fish production input is expensive	+	H		-		0		$\vdash$				-			1			-			1	1			+	$\pm$	4	1
	Application of fertilizer/new technology is improper		T			1			ш	1				1 3		1					1	2	1		1			1	3
r	Archetoliele ood, mant sed searel (bitatories)	1	81	811	18	18	В	ų,	_	1			_	1 3		1		H	н	-	1	2	1	1	-			1	3
-	Productor locale Parable due topo en la procede esta la procede esta la productiva de la productiva de la procede esta la productiva de la pro	1	1	***	-	-	1	4	***	1	ĮX.	-	3.0	1	1	1	+	Н	Н		1	0	-	-	1.	-	4	-	0
	No information of good seed						п	1							1							0							0
	Seeding inov-tow is tow	1					1		ш				-		4							0					-		0
	Farm technology is inadequate to local condition. High yield variety/fateted seed is not used.	-	н	$\vdash$	-		0	Н	Н	1	H		-		,	+	-	Н	Н		1	2	1	Н	$\rightarrow$	+	+	+	0
	Farmers work individually		1				1			1							1					1							0
	Chroping patracis/ calender is not argented	11		Į.	ш	1	.3					t	1			1						1	1		1	$\Box$			1
	Cooperative farring is not yet evaluate	-	1	+	1		1	1	Н	1	$\vdash$		+		+	1	+		Н	1		1		Н		+	+		0
	Poodcrop is denugled Lank properation is inside suste	+	+			1			Н	-			-			+						0		Н		+	1		2
	Harvest/post harvest practice is not efficient.	1	П			1	+							1								0							1
	No orogican be planted /WT-():		Е				8	1					-1		1							0				4	4	1	0
	No crop disensification Production is law, full	+	н	+	1		1	Н	1		$\vdash$		1	1	!		Н		Н	1		1		н	-	-	-	1	0
	Production/hanest cost is high	1	t	+	1		1	Н	1	-	$\vdash$			1		+	1	Н		-		i				7			,
	Fish production is low		П				9						1								7.	0	1						1
	Farners have no their own marketing channel	1						1	н				-		1	1						0		1	1	4	-		3
	Market information net for farmers is not available. Formers have low marketing casability.	-	н	$\vdash$	-		0		Н	1	$\vdash$		-			+	1		-	1	1	1		Н		1	+		1
į	Pacity meter is controlled by tradens		П			1				1			1				T.			1	1		1	1	- 1	1	$\pm$		3
	Farvers sell productions to local collectors	_	1		_	1	2			1						I.	1					1						1	-
	Competitiveness of farin productions is tow	43	-1	1	1.7	102	0	32	1	۳	E.	-	٠,		1	1		Н	Н	1	1	4	-80	2	1	4	and the	_	1
	Farmers have no agritualness partner	1					1							1		+					t	1			1			1	
	Transportation is expensive		1				1							1 3								0							0
	KUD has no competing power against private/traders	1	1	-	1		2			1	1347		1	1			1		-	1	1			÷				L	
	Farming insut-output ratio is negative	+1	-	1	X	-	0	-	1	1	N.			+	1	1	1	1	H			1	1	- 10	1	-	-	×	0
	Farm Income Coff-farm Income		Е				0			1	1				1		1	1				1						_	0
	Farm in rain season, off-farm in dry season	-	F	-		-	0				1		-	- 1	1	-	-					0			-	-	-	-	10
	SOCIO-CIA TURAL ASPECT Subsistence faming, low risk		۰			-	0		-	1			-	1	1	1	1	1	Н			3		Н	1	+	-	1	7
	Farmers are difficult to adopt new technology						0			1						1				1		2			1			1	2
	Farmers, rely on traditional farming practice						0			03												D			1			1	2
	Farmers do not know/aware on WUA Farmer awareness on CISM is low	+	H	1	1	t	1			1		1			1 1	1	-	1		H		3		Н		1		+	2
		+	+	1		-	0	1	1	1	1				1	1	1					0				1	1		0
	Sense of belonging to irrigation system is low						0	Ĺ	Ė					- 1	1	t						2		1		1		I	.1
	Sense of telonging to irrigation system is low.  Adult leater (with mense) is less involved.	-					0									1						1				1			0
	Adat leader (vini) memor) is less instrinct Adat leaders like outside		Е	+	-											1.	100												.0
	Adul Institut (with memory), is less instituted.  Adult leaders like outside.  Trust to Adult leader de reseaso.	ŧ		F	F		8		H	H			-					$\vdash$				1			$\rightarrow$	+	+		
	Adult kiseler (mini) mensel) is less investeed. Adult leaders like outside. Trust to Adult keeler de creaces. Electricies to Adult regulations decreases.						0	,	1							1			H			1	1						0
	Adult leader (nink mense) is less instried Adult leaders like outside Trust to Adult leader de present Descipline to Adult regulations decreases Serone to group-report reference Women farmers are under-estimated						0	1	1					1	1	1						2 0	1	1					1
	Adult leader (whit memor) is less involved. Adult leaders like outside. Trust to Adult leaders de organico. Discipline to Adult regulations decreases. Some to geting Agung relaces.						0	1	1						1	1		1				2	1	1					1 1 0 0

<sup>\*)</sup> Protein collegestation of Presid Ethicky is used Source PRAPON Violentops at Survey Drs of S Skells Provinces

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

	Activities *)	WEST SUMATERA	WEST JAVA	YOGYAKARTA	EAST JAWA	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	(B)	2	0	0	1	9
В.	WUA MANAGEMENT, INSTITUTIONAL ASPECT						
Admin	Establish Cooperative Farming	2	(9)	(3)	0	0	8
	(Re)formulate AD/ART corresponding to farmers aspiration	5	0	2	1	2	10
Integrity	Involve Adat institution/leaders, cerdik-cendekla & alim ulama	B	0	0	0	0	6
C.	IRRIGATION 0&M, WATER MANAGEMENT						
Management	Rise adequate O&M fund among farmers and Government	2	1	3	0	0	6
M&O	Reactivate irrigation maintenance by gotong-royong	(5)	0	1	0	0	6
	Conduct routine maintenance by WUAWUAF (periodical by Gov)	0	1	3	0	0	4
	Clean sediment and sampah (by GIP3A + Pernda fundings)	1	1	2	9	1	8
	Improve O&M iwan 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

<sup>\*)</sup> 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)

		-	-	NE SI	1 81	SMAT	EH				WES.	11.13	AUA.	-		OG	1,040	4111	-		5/20	1	M/J/A			- 1	-71	В			1
	ACTIMITY *)	Distribute areas, Agen.	DILLIBURITH PRINCIPAL Parties Deleter	DESATANG RAREL, Passenan	DilleTenblant, 30 scts	DE AMBELIA DE PONTANTO EN FRANTAMENTO	DH0T0 T00, Ritta Parlery	DISDETARD, SWISARING	SUBTOTAL.	Of CLAMORELON, Huningen	DOMESTICAL OWN	DISTABLISM, Seeding	DLOSADARE EMPARO, Boger	SUBTOTAL.	Disbox, JAMAL, Kulen-Propo	to the suite development of the suite of the	DETAILING OPIUS, Saviano	DOMESTING APPL Shorted	BUSTOTAL.	DHEDOMODIA, Summer	DLCAMA, Barnagons	DIFFECTION, FIGURE	DITECHO, Londong	SUBTOTAL	DPBGATAB, London Dank	D SHEWS OLA, Lambel Sand	Distance, London Your	Office of American	British Col., Des	SUBTOTAL	TOTAL
	1	7	3	4	9		T	8	9	10	11	12	13	14	15	11	tT	111	19	20	21	22	23	24	25	26	23 7	5	29 3	0 31	
Ξ	GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS																											T		T	I
40m	Describe code for of been ent retriadants: Impose GOI feet officers (with adequate facilities and incentived) Impose officer number (capability/salery responsible for OSM Actions OSM field officers with adequate facilities and incentives Formulate job devices of PSA and PSV/PFA (water gate backer)			1				1 1	2 0 7	1	1	100	,	2 8 1 8			1		1 1 1								1			0 0	1
	Provide Training on irrigation O&M (for GO) field afficers, farment)			1	1				7								1	1	2											- 8	-4
appoint	Cythesia (Youd cerps) extension services  Episola PPL, Living garant TVA and discovered works.  Formulae proposel procedure for OO support facilitation largered selection and control on contractor works.	1	100	56	30	100	1	301	MI -	1	1			1 2 8		1	1		1 1 2					1			1			0 0	9
A	Provide COdpendangingen for WGN & Kehiripoh Tare Gira subsidy for hetiture Review policios on foot occurity and floor pico								1					:				1	1					:	1		1			1 2	2
-	Formulate clear director (sutherty, task, resp) of GOI and WUA. Regulate ground vioter pump systems, by Perila.	1			1				8					:					÷	1	1			2						0	13
	Provide Supari legalization for FSA  WILA MANAGEBENT, INSTITUTIONAL ASPECT	Н					-	-		-						-					1	-		1			$\rightarrow$	+	1	1 2	13
NEN.	(Tellorgenize WUA/WUAP Provide leadership training for WUA E WUAF leaders	F		1	1				2	1	1			1 2	1			1	1 2	1			1	1	1				1	1 3	
DOUBLE	Activate WUA leaders with clear job description and incentives. Reform WUA leaders democratically	H		1	1	1	1	-	3	-	1			1.	1	-	1		1			-					-		1		13
Ī,	Consider and manage WUA Javes & CISM fee transpersity Establish Fativer Association	1	F				1		2	Ξ	1			1		Η	1		1			-	1			-		Ŧ	1	1	1.5
į	Establish Composition Familing					1	1	1	2	100	×	31	A	3	(8)	UI S	1	¥.	1	1				1	1				1	9 2	1
5	Pervide administration (organization, financial) of WUA & WUAF The furnishing ADVART be responding to familia separator. Send copy of WUA work plan to Village & Faicanestan GOI	220	ee	36	30	1935		833	80					i	1		1	1	2		1			1	1					1 2	1
- and delay	Propose assistance to related GCI Agencies as required  Extablish Martering Unit at group level  Formulate clear MUA work stan German (5 pears)  Indiate routine meetings among fermers /17 /WUA/WUAP	1				1			1 1 0					-		1	1	1	1 1 1										1	9 1	3
	Provide training for WUA nembers on need analysis Danduct basis training for WUA and WUAP				1	1			1				1	1				1	1					:	1					1 0	
THE ST	Energy was retrieved to accompany a energy of the upon Inches women farmers	1	1	*	8		1	133	100		Ė			1					-					-						0	1
_	Establish WLM and WLMF	Н	1			-	-	-	1		_		1	1		-		-			-	-					-	+	-	- 0	+
	Apply the prevailing regulation and purchasers	þ																			1			1				1	1	0	
White	Control forest/tree suttings of water catchment areas Conduct reforest/on/eigening of water catchment areas Minimize forest/free sutting Proposer forest people for better living							1	1 1					-					-			1	-	1	1		1	-	+	1	
	Pitrmelize intigation canals (from kenenby, tempe, kellage etc). Invoke W.M in construction work plan and inglementation. Rehabilitate intigation structure permanently.	1		1	1	1	1		2 2 2 8	1	1		1	2 0 2	1 1	1 1			2 2				1	1	1		1			0 0	1
ATTENTO	Establish endung at upotware Establish drainage system Topesse Irrigelion structure (water gate, caret, we'r, etc.) Propose for additional against to ecreasis water supply		1	1		1			3	1	1		1	1		1			1 1	i	1	12	1				1		1	1 1	+
	Establish ground-water pump impation eyetem Fixe adopted GEM fixe several famous and Go controllers	1			-		1		2	1				1	(8)	1	1		À		1			1						0	
1	Conduct irrigation water-through periodically Ensure set casts water stocation on notating basis Portial buildings along riser bank/buffer-zone Purishneet for illegal water off-tase			1		1	7.	1	1 2 11 8					1	1				1			1		1 1			1		1	2 0 2	
	Regulate water allocation among sectors adequately	693	963	90	191	111	000	963			1			1 1	1			10		140	360		30	1			1			0 0	
	Constact OSM training for WUA, WUAF & field officers blavege OSM tool at WUAF level Jedoo or DSM seen callector, system and management (Relog relief OSM fee See parcets to proce OSM cost exclusive). Provide periodical impation mentaneous.	1	T.T.	100			1			1	1		1 1	1 1 3 8		1		1	1 1				1	1	1					0 0	
	Conduct operation of irrigation by WUAF Propers properly irrigation OSM scheduling		1						1					:	1	î	1	1	2											0	ŀ
4	Albicate water on rotation x cropping pattern/calendar Formulate appraisal procedure for impation tumover JPF3		1		1	-	1	1	1	_		-	-	:				_	+				1	1			1	+	-	1 2	

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

		$\vdash$	1	WES	TS	344	UT ER	A			HE	ST.	2000	V		Y00	YVAC	ART	A,		EA	87.	MOVA	-			M	TB	-	-	-
	ACTIVITY *)	OCHANGAL ARRENT Agent	\$1,000,00 NYS.B., Peons Sedan	DESCRIPTION OF STREET	DISATANGUM, BONGS	Di Alay SASARAN, PE Paraman	SHIDTO FUD, Historiang	DELECTIONS, SWISHING	SUBTOTAL	DIOLESCH DICHARDE	OLOBALEBUH, Gand	Di Chrisciales, Bandang	Dictabant bases, logor	SUBTOTAL	SPER LANGE, Faller Prigo	31 SP SENCENN, Sanageleas.	D TALING ORAC, Samen	DOMESTIC SINCE	SUBTOTAL	DHEBONOLAG, Summer	Dr.Cwinel, Bookspan	SHALDLAN, NASH	STREET, LANGES	SUBTOTAL	31900 AND LONGS BASE	de tambaren da.A., London Barke	DI SEMBIR, Lossico: Pinar	COMPANIES AND AND AND AND AND AND AND AND ADDRESS OF THE PARTY AND ADDR	CHOOK AND THE	Contract them	SUBTOFAL
		-2	3	4	- 5	-6	-7	9	- 9	10	11	12	12	14	15	19	13	ts	19	20	21	22	23	24	25	25	20	10 2	29 1	90	21
	AGRICULTURE, ECONOMIC, FINANCE																							3/-				T		1	
All															t		1		2					0		-	_	4			В.
No.	Provide saving & credit activities on group basis	⊢	-	-	-				2	1	-	-	3	1	1	1	-	-	1	Н	-	-	н	0	$\vdash$	-	-	+	14		4
ð	Provide credit to engover group capital formation	-	-	-	Н	-		-		1			1	2	-		1	-					Н	0		-	-	+			1
	Improve KUT to selective favors								+	-				0		1			1		-	-	Н	0		-	+	+	1		1
ă	Organiza grouped ferming Import form laborare	-	Н	-			-	-	Ť.					÷	-	-		-	D				-	0			-				2
7	Provise tractor and other production neare	1							1					0	t				1	t				1	1		1	+	1		2
	tion organic rentition	1													lois	D)	[60]	(4)	96	-				0					1		2
	Use-high yet-ling venery/labelled seed	133	36	1	26	36	50	all	100		1			1	1				1					0			1		1		3
	Economic Section Control Control (Control Control		7	1				1						X	100	3		×					.0								
(Bupasy)	Organize terracing system															1		100	1					0							В
Ē	Control pests, insects and animal disturbances	1	1	1			1		4							17			0					0						1	1
ŧ	Introduce officent henest techniques (nechanos, group)	1		-		-			1						-	-	-	_	.0				ш	0		ш	4	4			9.
£	Provide post hervest requirements (freefer, lenter jersur, alore)									-			-						0	_		-	ш	0	1		1	-	1		3
	Provide demonstration plot, kaj telap faire technology	-	-				1	-	1				1	1					0					8			-	+			
	Provide production inputs accessedly to farmers	-	-	-	-	1	-	-	1	-		1	-	1	-	-	1	1	+	1	-	-	Н	1	1	$\rightarrow$	+	+	1	1	1
-	Provide agricustress trainings	$\vdash$	-	-		-			i	-				i				1	+					8		-	-	+	-		ì
	Provine participative training on sendene seaks ten- Exhabitish Corporate Farming	-							i	-	_	-		i			1	-	2		-	-		0			+	+	-		î
2	Establish Farrier Association's rice millings		Н			-			Ť				-	i.	-	-	-		D		-			1			+	+	+		î
ä	Prepare land by using mechanical equipment (bulkcod)													0.					0					0			1		1		2
3	Activety Cog anset so Fakersol: Tank for production in weight puls	lie:	BOO	BES	10	100	181	(8)	bris/Sirce		1			1					0					0			7	Ŧ			0
ĭ	Introduce cropping diversification			1		1			2								1		1					0	1			7			1
н-	Intiate Agritusiness restings					1											1		1					0			0017				0
	Exception permanents with priorie sector	1					-		1					1	31	31		B	20					.0	ERS.		1	130	1.1	133	剣
	Indervert calgoing patients see one converse Susaket base	1	122	1	U.S	33.	36		3				1		(9)	1	3.	Ш	3	1			1	3			1				7
ž	Addison N.C. and Document and property	831	1	1	303	200	93	200		-					2				0					- 8		ш	1	4	-		2.
Sattre	Organize hirt warlering		-	-	100		100	-						0	1				1		-		ш	0		-	4	4	4		
ŝ	Function (3.0) for grafitable poor and wene ting	ļu:	Œ	100	(36)	UU.	100	30	391	-	-	-			-		-		.0		-		Н	0		-	1	-			2
÷	Provide merket informations Sociéties for farmers	$\vdash$	-	-		-				+								-	0	-			-	0	$\vdash$	+	+	+	-	1	1
+	Motivate WUA members on the recessity of OSM was	$\vdash$	4	1		-	1	-	3								-		0		1		1	2		-	-	+	-		
	Socializa IVIA by immoring WJAF and oldage seators	100			90	30		90	1201		1		1	2	1			1	2		i		3	2			1		1		
	Socialization of regreening program in violer catchment areas.	1	-	-	, and		1	-	1	1	100		20	-				-1-	0		-	1	1	1			3		1		3.
	Socialize the importance of river bank/buffer-zone	1				-				$\vdash$							5.		0			1		1				7	1		
	Socialize the importance of well maintained impation				-		1		1						1		1		1			1		1			1				1
	Provide regular socialization to prevent persocials casals.						-								1	1			1			-		.0			$\neg$	$\neg$			B
	Install rembu-rembu Jerangan (forbidden marks)															1			1					.0							
	Socialize former perticipation in Irrigation development		1				1		2								1		1					0					7.		
	Promote high economic value commodifies (to young generation)		1						2								1		1					.0			1		1		3
	Premiste organic field por	1	Ц.						1	-							1		1					0		ш	1	4	1		3
	Prorecte group of herwest						-							0	1				1					0				1			B
	Promote Cooperative Farming	1				1			2	-					1		1	-	2					0			-	4	-		ı
	Socialize reformulated AD/ART				1	1	1747	-	1	-					-		-	1	1					0			-	4	-		4
	Circulate WUA fand WUAP) work plan ond implementation	UI)	930	130	00	580	180	UU		-								1	1					0			-	+	-		B
	Promote water-right among farmers				1				1	-	1	-	-	1					0		-	-		0			-	+	-	_	
	Socialize Job S. responsibility of PPA (water gate heaper)	-	-	-	1		-	1	1					÷	-	-	-		0.				H	0			-	+	+		÷
-	Socialize division (suffertly, task, resp) of GOI and WUA								_					_										_			-	+		$\rightarrow$	_
	Total	21	- 11	- 24	- 99	115	- 24	14	143	1 16	18		486	44				:18	100	- 60	- 16		110	37	14	n	26	m :	2011	26 5	94

<sup>\*)</sup> Authory categorisation of Counter-measure typothesis is used. Source: IPEA/PCM Wilefoliops of Survivo Dis of 5 Study Printings

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

	I - Inisiative, proposal F - Funding D - Decision A - Action, im	pler			В -	Ве	rticipa nefici				n, control & evaluat				
			F	PRO	VIN	CE					SK ALI	LOCAT	ION		
	ACTIVITY *)		_			~	٩٢	GO'	VERNME		Water			Private	Funding
	nemmi ,	SM	ſM	Oſ	E	NTB	TOTAL	Central	Prov.	KAB / KOT	Users	Univ.	NGO	KUD	Agency
Α.	GOVERNMENT ROLE, SUPPORT, LAWS & REGULATIONS														
	Recruit and manage COs adequately to WUAs/WUAFs	1		1		1	3	С	С	DEF	IPB	IA	IA	Р	
	Carry out M&E on WUA/WUAF progress/activities		1				1	DBF	DBF	IDBF	Р	А	А	Р	
Role	Develop data-base of turned over irrigation and WUA/WUF progresses		1	1			2	DABF	DABF	IDABF	Р	BP	BP	Р	F
~	(Re)formulate landuse and spatial plan for water-based agribusiness		1				1	С	С	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	ВР	BP	BP	BP	BP	
	Assist WUA/WUAF work plan, implementation and evaluation		1				1	С	С	AF	IBDF	А	А	Р	
	Provide integrated Extension services for agribusiness development	1		1			2	С	С	AF	IBDF	Р	Р	Р	
	Facilitate learning-by-doing trainings on WUA needs basis		1	1	1		3	С	С	AF	IBDF	Α	Α	Р	
	Organize grant sources for WUA fund strengthening			1	1		2	CAF	CAF	IDAF	BP	Р	Р	Р	F
Support	Audit WUA/WUAF institutional, activity and financial aspect	1					1	С	С	IDAF	BP	Р	Р	Р	
Sup	Activate KPL (Juru, PPL, Kades) role for WUA empowerment			1			1	С	С	IDAF	BP	Р	Р	Р	
	Activate Balai PSA-WS services				1		1	С	С	IDAF	ВР	Р	Р	Р	
	Prepare/train PPL adequate to agribusiness prod and marketing		1				1	С	С	IDAF	BP	Р	Р	Р	
	Provide WUA/WUAF legal basis to enable work with Bank and Private			1			1	С	С	DA	IBF	Р	Р	Р	
	Provide Panitia Irigasi Secretariate (office) permanently			1			1	С	С	IDAF	BP	Р	Р	Р	
Laws	Produce Provincial and Kab/Kodya regulations on irrigation			1			1	С	IDAF	IDAF	BP	Р	Р	Р	
	Formulate redefinition of irrigation-related GOI Agencies' roles		1				1	IDAF	IDAF	IDAF	BP	Р	Р	Р	
	Produce Perda (Peraturan Daerah) for water resource sustainability	1		1			2	С	IDAF	IDAF	BP	Р	Р	Р	
	Produce Perda for participative regional development planning				1		1	С	IDAF	IDAF	BP	Р	Р	Р	
	Produce rules of the game of Cooperative and Private partnership	1				1	2	С	IDAF	IDAF	BP	Р	Р	Р	
	Regulate Water Rights by area, sector, and water user category	1	1				2	IDAF	IDAF	IDAF	BP	Р	Р	Р	
	Regulate task allocation of Government and water users		1	1			2	IDAF	IDAF	IDAF	ВР	Р	Р	Р	
	Regulate inter-Kabupaten/Kodya irrigation authorities			1			1	С	IDAF	IDAF	BP	Р	Р	Р	
	Formulate Panitia Irigasi membership, their rights and obligations			1			1	С	С	IDAF	BP	Р	Р	Р	
	Deregulation of loan agreement				1		1	IDAF	IDAF	IDAF	BP	Р	Р	Р	DAF
	Reform national food security and rice price policies		1				1	С	С	IDAF	IBP	IP	IP	Р	

to be continued

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

	I - Inisiative, proposal F - Funding D - Decision A - Action, im	plen	nent	or			rticipa nefici				n, control & evaluat				
			F	PRO	VIN	CE		COV	VERNME		SK ALI	LOCATI	ION		ı
	ACTIVITY *)	SM	ſM	Oſ	EJ	NTB	TOTAL	Central	Prov.	KAB / KOT	Water Users	Univ.	NGO	Private KUD	Funding Agency
gal	Produce Nagari Regulations (Pernag) on land and water utilization	1					1	С	С	IDAF	IBP	IP	IP	Р	
Laws & Regal	Regulate GOI, water users & private relationships in agribusiness dev	1					1	С	С	IDAF	IBP	IP	IP	Р	
Lav	Regulate Irrigation Turnover, procedures and mechanisms	1	1		1		3	С	С	IDAF	IBP	Р	Р	Р	
В.	WUA MANAGEMENT, INSTITUTIONAL ASPECT														
ctivity	Evaluate WUA/WUAF progress in O&M and irrigation management	1		1	1		3	С	С	IDAF	BP	Р	Р	Р	
Productivity	Include women in WUA/WUAF decision making	1					1	С	С	ICP	IDABF	IP	IP	Р	
	Formulate AD/ART with members participatorily	1	1	1	1	1	5	С	С	ICP	IDABF	Р	Р	Р	
Admin	Propose for Badan Hukum (legalization)		1			1	2	С	С	ICP	IDABF	Р	Р	Р	
	Carry out financial administration of WUA/WUAF transparently		1		1		2	С	С	ICP	IDABF	Р	Р	Р	
	Function WUA/WUAF to be an agribusiness organization	1		1	1	1	4	С	С	ICP	IDABF	IP	IP	Р	
ırship	Organize WUA/WUAF for O&M fund raising/capital formation		1	1		1	3	С	С	ICP	IDABF	IP	IP	Р	
Entrepreneurship	Train WUA/WUAF on water-based agribusiness management	1		1	1	1	4	С	С	IDAF	IBP	Р	Р	Р	
Entre	Establish saving and credit self-help groups					1	1	С	С	ICP	IDABF	Р	Р	Р	
	Establish forum of GOI Agencies and water users communities		1	1			2	С	С	IDAF	IBP	IP	IP	Р	
	Organize basic training for WUA/WUAF leaders and members		1				1	С	С	ICPF	IDABF	Р	Р	Р	
Integrity	(Re)organize WUA/WUAF independently and autonomously	1	1			1	3	С	С	ICP	IDABF	Р	Р	Р	
Inte	Involve local Adat institution/norms/values in irrigation management	1					1	С	С	ICP	IDABF	Р	Р	Р	
	Organize annual WUA/WUAF General Assembly		1				1	С	С	ICP	IDABF	Р	Р	Р	
C.	IRRIGATION O&M, WATER MANAGEMENT														
	Conserve water resource to secure water sufficiency	1	1				2	IDAF	IDAF	IDAF	BP	Р	Р	Р	F
Water	Establish alternative water resources (incl. ground water pump)	1				1	2	С	С	IDF	IABPF	Р	Р	Р	F
	Organize reforestation/regreening of water catchment areas		1			1	2	IDAF	IDAF	IDAF	BP	Р	Р	Р	
Structure	Establish small dams (embung) to store water in rain season					1	1	С	С	СР	IDABPF	Р	Р	Р	
Stru	Improve/rehabilitate broken irrigation structures permanently	1	1	1	1	1	5	CF	CF	IDAF	IDABPF	Р	Р	Р	
nent	Allocate water on croping pattern and calendar	1	1	1	1		4	С	С	ICP	IDABPF	Р	Р	Р	
Management	Include women in irrigation management and decision making	1					1	С	С	СР	IDABPF	IP	IP	Р	
Mŝ	Prepare annual irrigation management and O&M work plan		1	1			2	С	С	ICP	IDABPF	Р	Р	Р	

to be continued

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

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

Organize groups of activities related to   1   1   1   1   4   C   C   ICP   IDABPF   IP   IP   P   IP   P   IP   IP   IP	I - Inisiative, proposal F - Funding P - Participation C - Coordination, control D - Decision A - Action, implementor B - Beneficiary, user E - Monitoring & evaluation																
ACTIVITY					PRO	VIN	INCE										
Organize groups of activities related to   1   1   1   1   4   C   C   ICP   IDABPF   IP   IP   P   IP   P   IP   P   I	ACTIVITY *)			_		_	В	AL.	GO	VERINIVIE		Water	I I adio	NCO	Private	Fundina	
April	ŕ		M	M	)ſ	ъ	IN	101	Central	Prov.		Users	Univ.	NGO		Agency	
Managementatically and transparently	Production	agribusiness	1	1		1	1	4	С	С	ICP	IDABPF	IP	IP	Р		
Second   S		democratically and transparently	1	1	1			3	С	С	ICP	IDABPF	IP	IP	Р		
		business-oriented farming	1					1	СР	СР	IDAF	IBPF	IP	IP	Р		
		commodities		1	1			2	С	С	ICP	IDABPF	IP	IP	Р		
Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification and processing   Develop farm diversification   Develop farm diver		farming				1		1	С	С	ICP	IDABPF	IP	IP	Р		
Organize (market) Information Center for agribusiness development Organize inter-sectoral nets of (local, national and global) marketing Reactivate KUD for marketing purpose Organize Group of Marketing Reactivate KUD for marketing purpose Organize Group of Marketing Promote inter-sectoral nets of (local, national and global) marketing Reactivate KUD for marketing purpose Organize Group of Marketing Promote inter-sectoral nets of (local, national and global) marketing Promote interest of the promote intere			1	1	1	1	1	5	С	С	ICP	IDABPF	IP	IP	Р		
Organize inter-sectoral nets of (local, national and global) marketing Reactivate KUD for marketing purpose Organize Group of Marketing  E. SOCIAL PREPARATION  Socialize Provincial and Kabupaten regulations on irrigation Socialize WUA/WUAF under Irrigation Policy Reform Socialize Government change of paradigms Promote water-based agribusiness development Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability and promote organizing ability among Socialize integrated pest and insect control Promote organizing ability among Socialize Balai PSA-WS I 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		processing	1	1		1		3	С	С	ICP	IDABPF	IP	IP	Р		
Organize inter-sectoral nets of (local, national and global) marketing Reactivate KUD for marketing purpose  Organize Group of Marketing Reactivate KUD for marketing purpose  Organize Group of Marketing  1			1	1	1		1	4	СР	СР	IDAF	IBPF	IP	IP	Р		
Organize Group of Marketing 1 1 1 C C C ICP IDABPF IP IP P  E. SOCIAL PREPARATION  Socialize Provincial and Kabupaten regulations on irrigation Socialize WUA/WUAF under Irrigation 1 1 1 DAF IDAF IDAF BPF IPC IPC P  Policy Reform Socialize Government change of paradigms Promote water-based agribusiness development Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among 1 1 1 DAF IDAF IDAF IDAF BPF IPC IPC P  Socialize Blaia PSA-WS 1 1 DAF 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  Promote that the importance to the control Promote organizing ability among 1 1 1 DAF 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  Prepare dissemination workshops at Central, Kab and Village levels 1 1 2 IDAF IDAF IDAF BPF IPC IPC P	eting	Organize inter-sectoral nets of (local,		1	1			2	СР	СР	IDAF	IBPF	IP	IP	Р		
E. SOCIAL PREPARATION  Socialize Provincial and Kabupaten regulations on irrigation Socialize WUA/WUAF under Irrigation 1 1 2 IDAF IDAF IDAF IDAF IDAF IDAF IDAF IPC IPC P P P P P P P P P P P P P P P P	Marke						1	1	СР	СР	СР	IBPF	IP	IP	IDAF		
Socialize Provincial and Kabupaten regulations on irrigation Socialize WUA/WUAF under Irrigation Policy Reform  Socialize WUA/WUAF under Irrigation Policy Reform  Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government change of Socialize Government Change of Social Government Chang		Organize Group of Marketing		1				1	С	С	ICP	IDABPF	IP	IP	Р		
regulations on irrigation Socialize WUA/WUAF under Irrigation Policy Reform Socialize Government change of Socialize Government change of Promote water-based agribusiness development Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Socialize Balai PSA-WS I 1 1 1 DAF DAF DAF DAF BPF PC PC P IDAF DAF DAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF DAF BPF PC PC P IDAF DAF DAF BPF PC PC P IDAF BPF PC PC P IDAF DAF BPF PC PC P IDAF BPF P	E.	SOCIAL PREPARATION															
Socialize WUA/WUAF under Irrigation Policy Reform  Socialize Government change of 1 1 1 2 IDAF IDAF IDAF BPF IPC IPC P P P P P P P P P P P P P P P P		regulations on irrigation			1			1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote water-based agribusiness development Promote water-based agribusiness development Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among The state of the sta		Socialize WUA/WUAF under Irrigation	1	1				2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
development Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Promote organizing ability among Prepare dissemination materials for Central, Kab and Village levels    1		_	1			1		2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote adequate O&M for irrigated farming sustainability Promote the need to calculate iuran on O&M cost estimates Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Socialize Balai PSA-WS  Promote dissemination materials for Central, Kab and Village levels Held dissemination workshops at Central, Kab and Village levels  1							1	1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote the need to calculate iuran on O&M cost estimates  Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Prepare dissemination materials for Central, Kab and Village levels    1		Promote adequate O&M for irrigated		1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Socialize the importance to keep canals clean from garbage Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Promote organizing ability among Socialize Balai PSA-WS Prepare dissemination materials for Central, Kab and Village levels  42 55 40 34 33 204  1 1 1 DAF DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P  DAF DAF BPF PC PC P		Promote the need to calculate iuran on		1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote reforestation/regreening for water resource sustainability Promote labelled (high yielding) seed uses Socialize integrated pest and insect control Promote organizing ability among Prepare dissemination materials for Central, Kab and Village levels    1		Socialize the importance to keep canals		1				1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote labelled (high yielding) seed uses  Socialize integrated pest and insect control  Promote organizing ability among  Socialize Balai PSA-WS  Prepare dissemination materials for Central, Kab and Village levels  Held dissemination workshops at Central, Kab and Village levels  1		Promote reforestation/regreening for		1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Socialize integrated pest and insect control  Promote organizing ability among  1		Promote labelled (high yielding) seed				1		1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Promote organizing ability among Socialize Balai PSA-WS  1 1 1 IDAF IDAF IDAF BPF IPC IPC P  Prepare dissemination materials for Central, Kab and Village levels Held dissemination workshops at Central, Kab and Village levels  42 55 40 34 33 204  1 IDAF IDAF BPF IPC IPC P  IDAF IDAF BPF IPC IPC P  IPC P  IPC P  IPC P		Socialize integrated pest and insect			1	1		2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Prepare dissemination materials for Central, Kab and Village levels Held dissemination workshops at Central, Kab and Village levels  42 55 40 34 33 204    State   Sta		Promote organizing ability among		1				1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Central, Kab and Village levels Held dissemination workshops at Central, Kab and Village levels  42 55 40 34 33 204  Length IDAF IDAF IDAF IDAF IDAF IDAF IDAF IDAF						1		1	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
Central, Kab and Village levels  42 55 40 34 33 204		Central, Kab and Village levels		1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
		<u> </u>		1			1	2	IDAF	IDAF	IDAF	BPF	IPC	IPC	Р		
*) Activity categorization of Phase I Study is used			42	55	40	34	33	204									

<sup>\*)</sup> Activity categorization of Phase I Study is used

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