

Sustainable Financing Irrigation Improvement Under Participatory Management

A Case Study of FAO- Special Program for Food Security INDONESIA

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SPFS

Special Program for Food Security

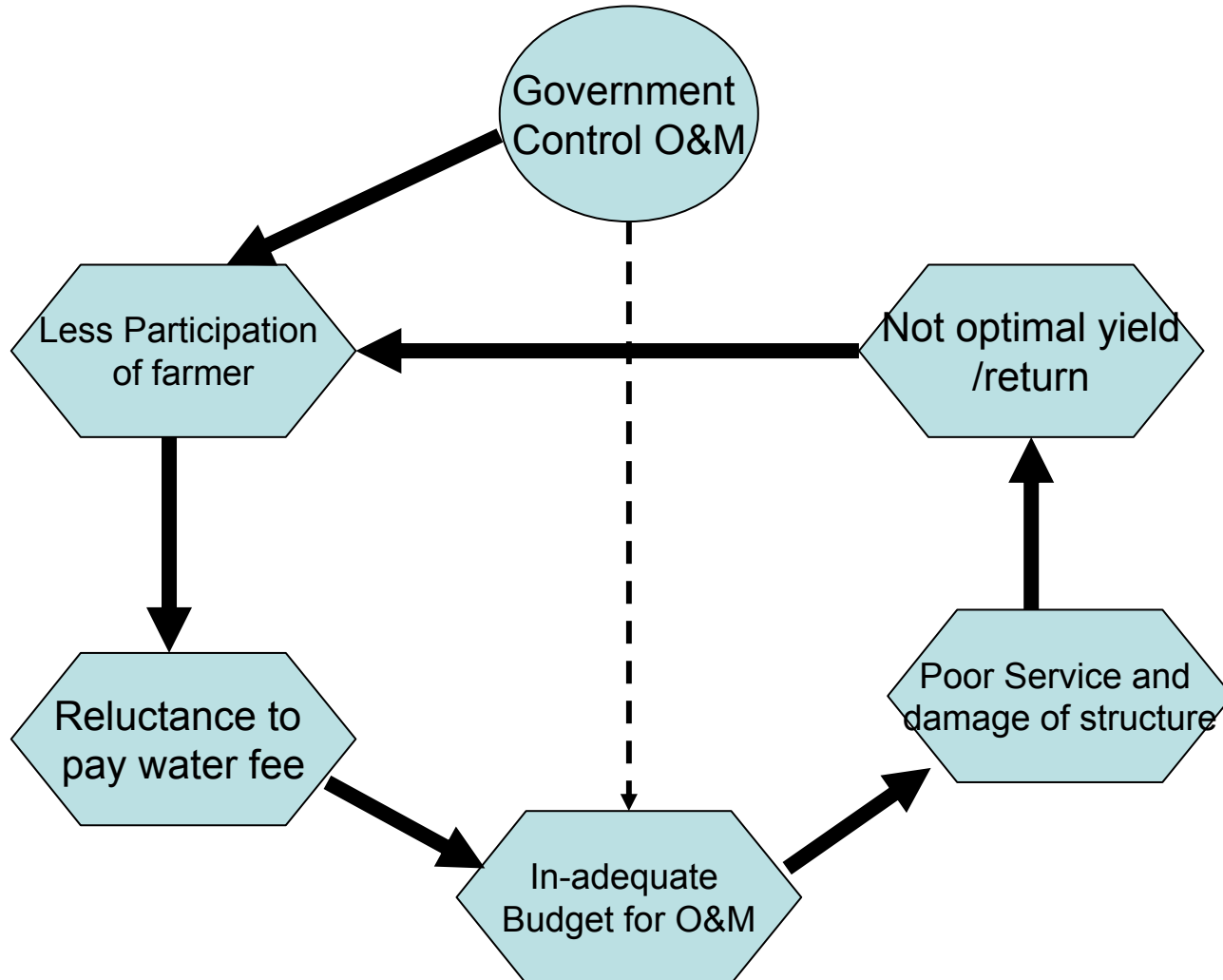
A flagship program of FAO in poverty alleviation in the rural area

Concept

Water management is key factor to enable intensification and diversification of agriculture

Situation Before Program:

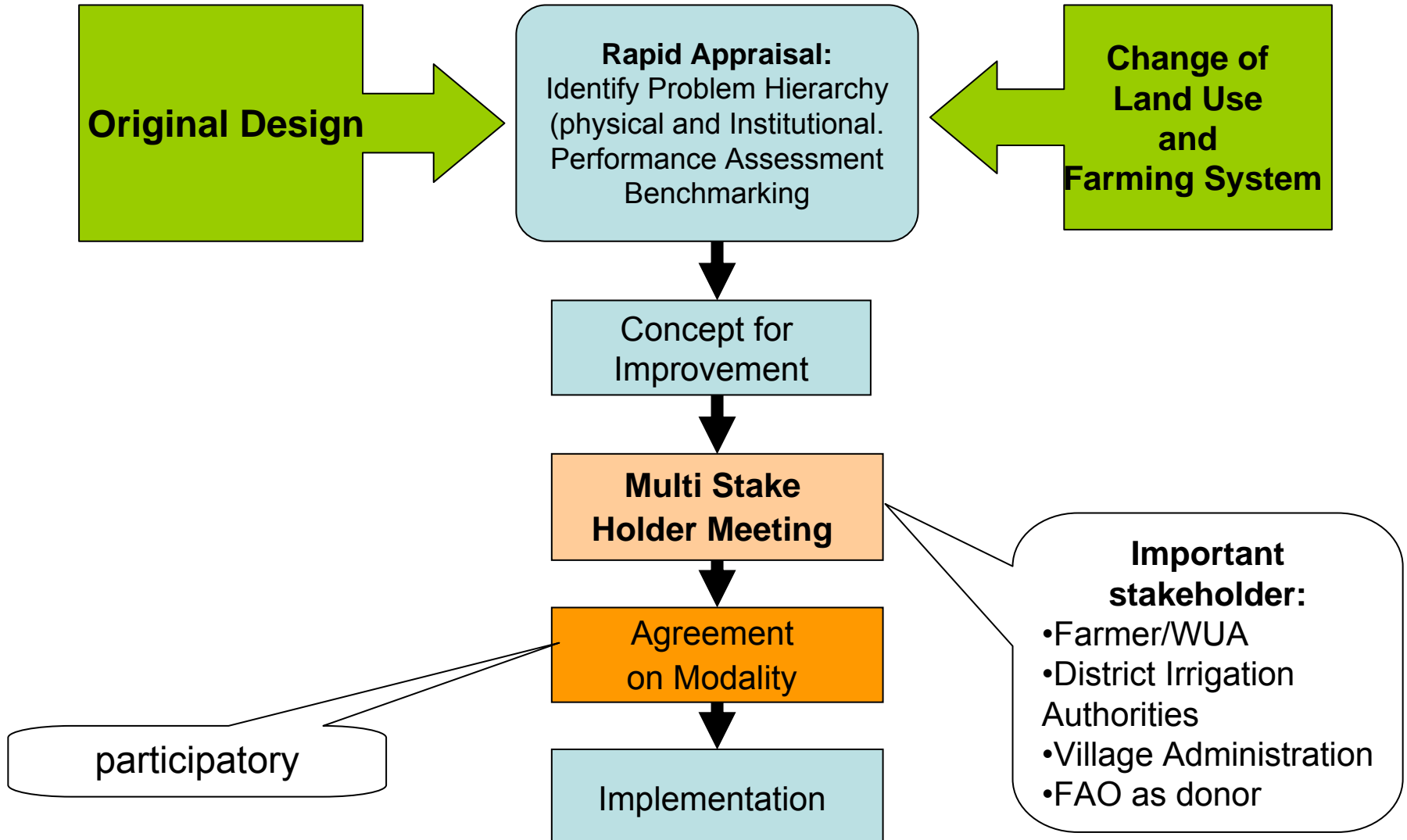
Vicious circle of irrigation O&M



Typical Problem in the past

- Damage and malfunction of structures
- In active (not existence) of WUA
- Lower yield

SPFS Modality on Irrigation Improvement and Rehabilitation

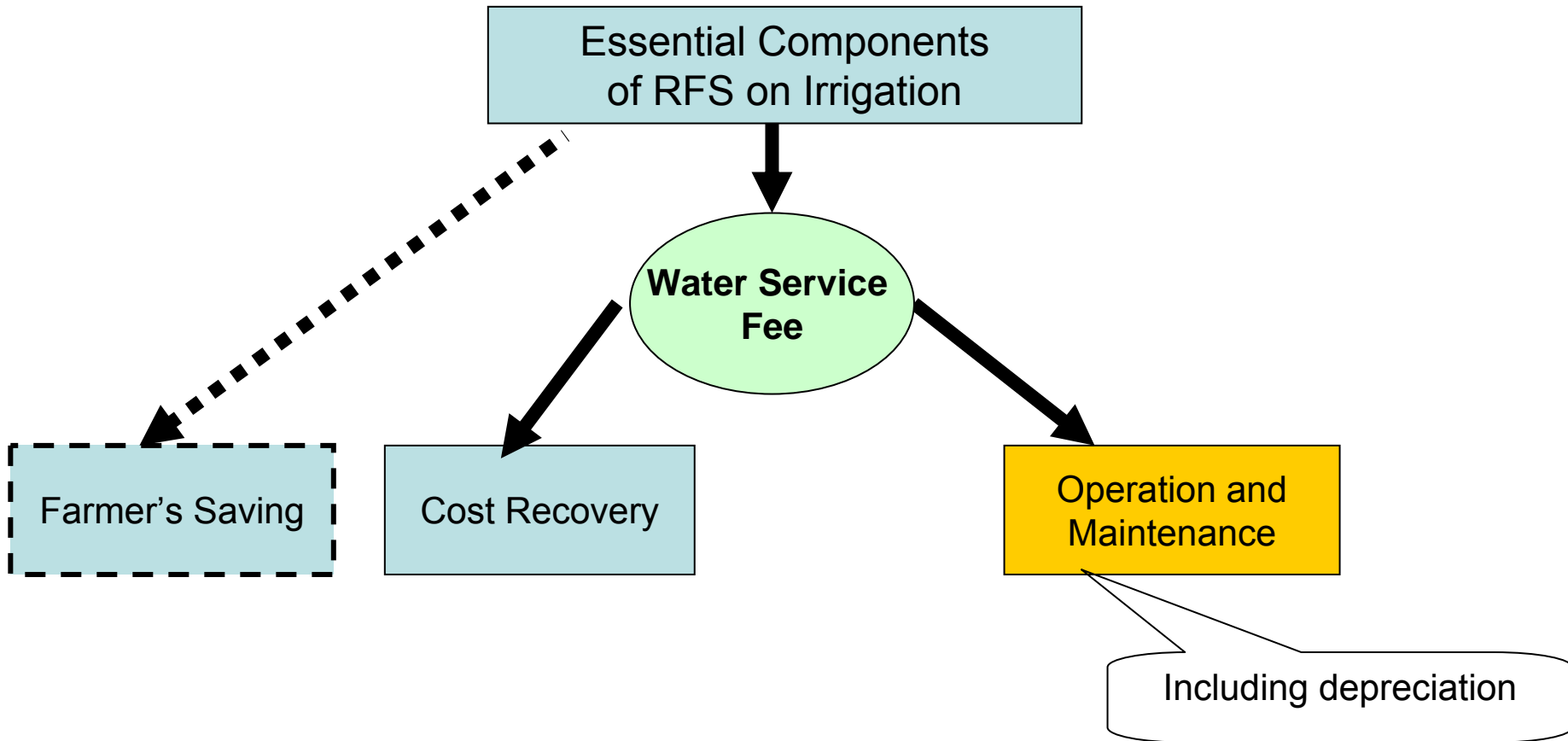


Agreement on Modality: Sharing of Incentives

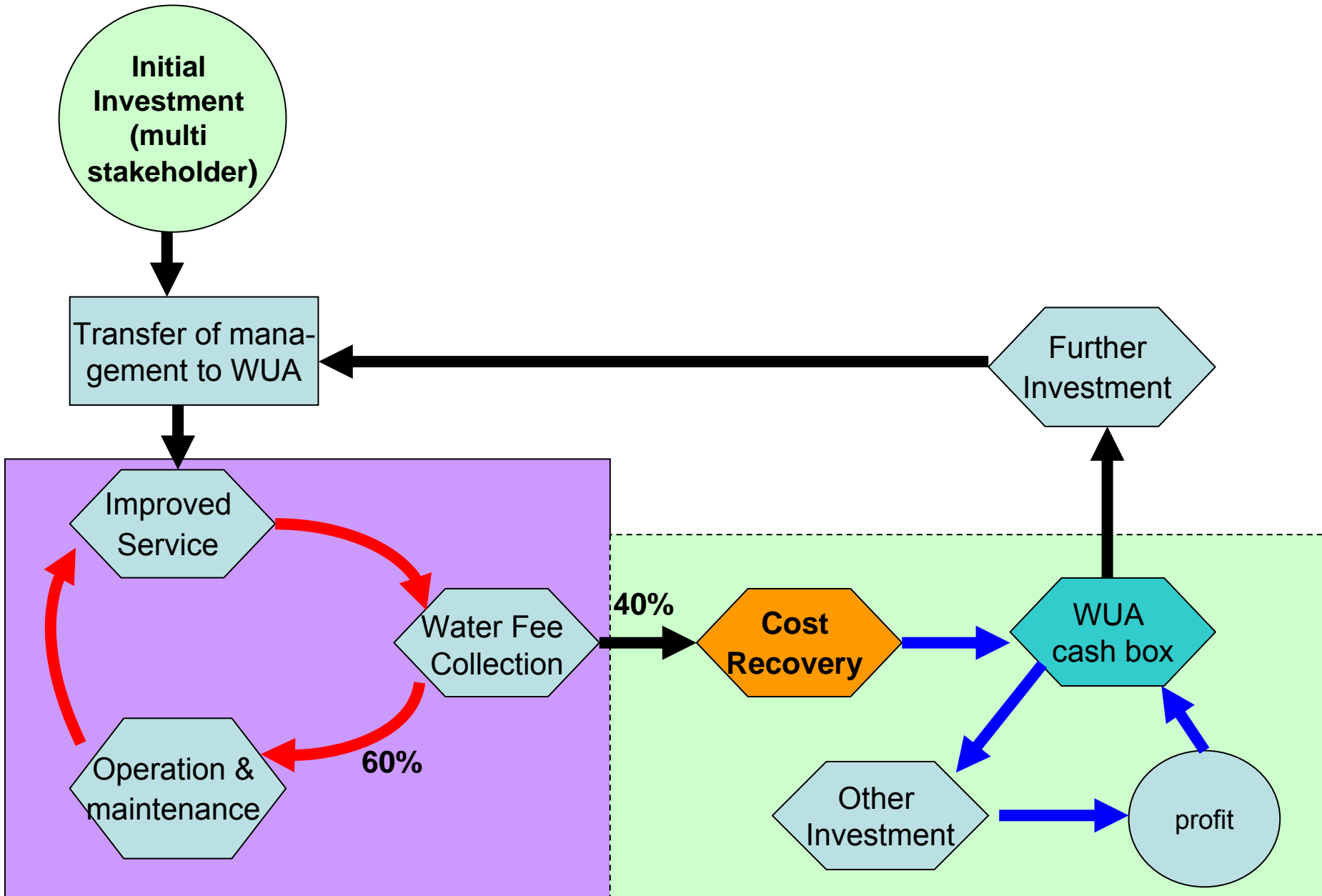
Farmer	District Irrigation Authority	Village Administration	SPFS FAO
<ul style="list-style-type: none"> • Reactivation/ Establishment WUA • Water Fee Collection • Partially implementing the improvement work • Self managing the system • Revolving the investment cost 	<ul style="list-style-type: none"> • Technical Assistance • Transfer of Management • Complementary Program at Secondary/Primary Level 	<ul style="list-style-type: none"> • Reduction of Village tax 	<ul style="list-style-type: none"> • Technical Assistance • Budget for Improvement • Capacity Building • Complementary Program (intensification and diversification)

New Paradigm on Farmer Managed Irrigation System: Revolving of Fund System of Investment

for sustainability



Revolving Fund System on Participatory Irrigation Management



Water Service Fee System

in Banjar, West Java

- **Season 1: for Irrigation Service**
 - 70 kg per ha per year
 - Equal to 1.6% of gross yield (4.5 ton/ha)
 - Nominal as per 2005 Rp 105,000 ~ US\$ 12 per ha

- **Season 2: Village Tax**
 - Max 70 kg per ha per year
 - For subsidizing village administration, rural infrastructure development.

Significant Impact

- Improve financial capacity of WUA
 - WUA has sustainable source for O&M
 - WUA has capacity for further development
 - Active WUA Institution
- Saving of investment cost in rehabilitation/improvement (by donor)
 - Less than US\$ 110 per ha

Empirical Case

- Irrigation Improvement in Banjar, West Java
- phase I: 2003, 320 hectares, 4 WUAs
- Phase II: 2005, 740 hectares, 6 WUAs

Progress after two years Implementation

No.	Indicator	Before				After			
		Gemah Ripah	Mukti Abadi	Tirta Rahayu	Tri Tunggal	Gemah Ripah	Muktri Abadi	Tirta Rahayu	Tri Tunggal
1.	Community work (in kind labor support for canal maintenance)	2 times per year (every season)	2 times per year (every season)	2 times per year (every season)	3 times per year (every season)	Not anymore (substituted by paid labor)	2 times per year (every season)	Not anymore (substituted by paid labor)	Not anymore (substituted by paid labor)
2.	Group meeting	never	never	3 times per year	never	2 times per year (every season)	2 times per year (every season)	4 times per year	2 times per year (every season)
3.	Financial Source	None	None	Service fee	none	Water fee, Service fee	Water fee	Water fee, Service fee	Water fee
4.	Saving	None	None	none	none	10% of water fee	None	10% of water fee	none
5.	Operational budget	None	None	none	none	50% of water fee	100% of water fee	60% of water fee	67% of water fee
6.	Administration budget	None	None	none	none	10% of water fee	none	10% of water fee	none
7.	Labor cost	None	None	none	none	30% of water fee	none	20% of water fee	33% of water fee
8.	Income (current status in Rp)	None	None	none	none	1,430,000	450,000	4,842,000	445,000

Figure as per october 2005

Cumulative Recovery Cost

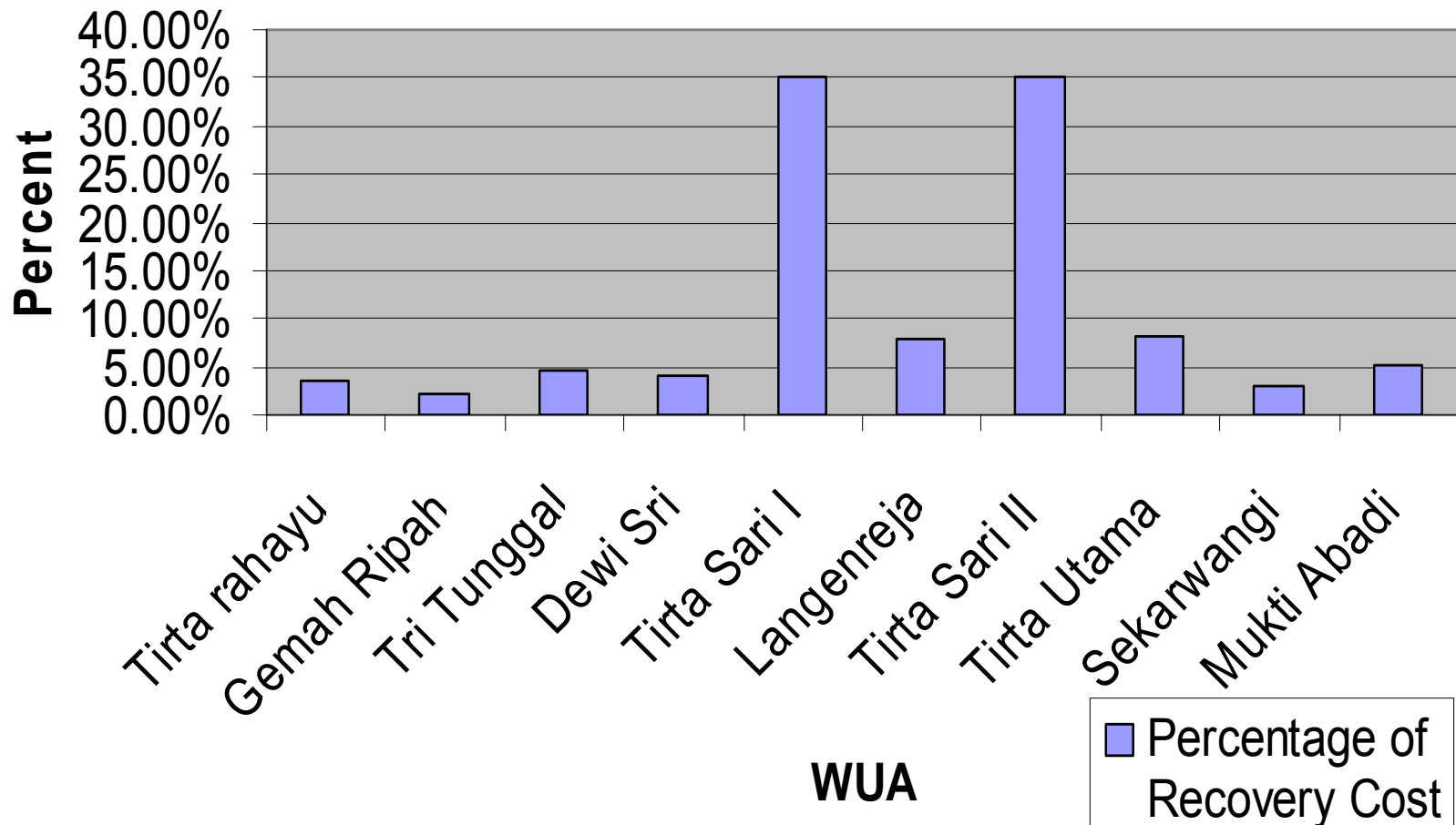
after 2 year implementation

No.	WUA	Cumulative Recovery Cost	Percentage of Recovery cost
1.	Tirta Sari I	4,300,000	35.15
2.	Dewi Sri	1,125,000	3.95
3.	Tirta Utama	2,000,000	8.16
4.	Sekarwangi II	1,785,000	3.08
5.	Tirtasari II	18,816,000	34.98
6.	Langenreja	1,035,000	7.84
7.	Mukti Abadi	2,800,000	5.28
8.	Tirta Rahayu	4,842,000	3.64
9.	Gemah Ripah	2,390,000	2.19
10.	Tri Tunggal	3,020,000	4.65

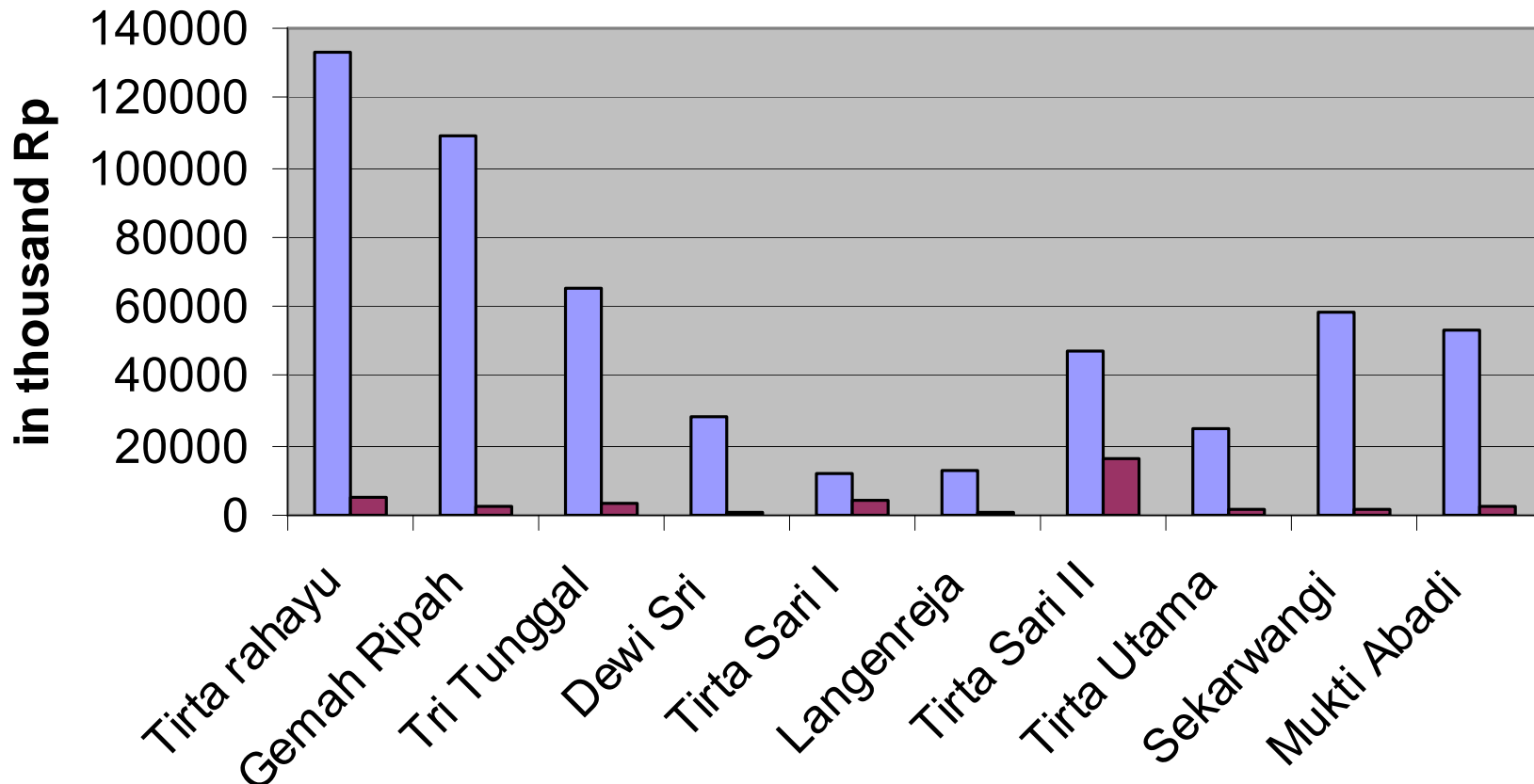
Average Recovery Cost : 7.34%

Figure as per May 2006

Percentage Investement Recovery Cost as per May 2006



Comparison of Investment and Recovery Cost



■ Investment
■ Cummulative Recovery cost 2005

WUA

Further Investment made by WUA Self financed

- Canal lining : up to 615 m
- New box construction : 4
- Culverts improvement : 10
- Canal normalization : 5,000 m
- Drainage canal : 1,500 m

Conclusion/Lesson Learnt

- **Key factor for sustainability:**
 - Capacity of WUA to generate fund from internal source (lead to flexibility O&M)
 - Adoption concept of water is not free by beneficiaries (farmer)
- **Concept of revolving fund system for Irrigation:**
 - Water Fee shall cover O&M cost and farmer managed Cost Recovery

Further Information

- **SPFS in Asia**

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