

Investments and annual recurrent costs of the SUD Model and returns on investment

Introduction

The SUD model for LGU implementation consists of the following schemes:

1. Landuse-Based Barangay Development Planning (LUB-BDP)
2. Upland Agricultural Extension Delivery for introducing Diversified farming Systems with upland farmers (UAED-DFS)
3. Barangay Forest Protection and Management (BFPM) of remaining forest pockets and ecologically critical areas in a barangay
4. Labour-Based Routine Barangay Road Maintenance and Repair (LBRBMR) of economically vital barangay roads

It is recommended that scheme one LUB-BDP, must be done first and always. The subsequent other schemes may be done jointly or one after another.

For an MLGU to establish the complete SUD model or only one or more of its schemes in a barangay, there are three types of costs:

1. Municipal level investment costs
2. Barangay level investment costs
3. Barangay level recurrent costs

In respect of the benefits of the SUD model only quantitative returns resulting from increased farm income are included and those from, for example, reduced erosion due to protection measures by the farmers, keeping natural forests intact and reforestation programmes, are not included due to the complexity of calculation. The same is true for increased coastal fish stock, as fishing grounds would improve as a result of reduced erosion.

Capability building is crucial in the model. As the SUD model was tested and implemented in Southern Mindanao, MLGUs in other parts of the country that would like to replicate the model can avail the necessary trainings etc. in Southern Mindanao.

Details on one time municipal level investments, one municipality

LUB-BDP

	Item	Cost in peso (2006 prices)
1	Equipments/software for map production (Computer + plotter, GPS, GIS software)	310,000
2	Training cost of MPDO team in Southern Mindanao including travel/or hiring of consultants	50,000
3	MLGU orientation by MPDO team to brief and get support from SB, LCE others	5,000
4	One time coaching by Service Provider (SP) for 1 st barangay or hiring of Consultant	50,000
5	Facilitators training by SP or Consultant	40,000
6	Installation of MIS on BDP-AIP Software	5,000
	Total one time investment MLGU	460,000

Details on one time barangay level investment, one barangay

LUB-BDP

	Item	Cost in peso (2006 prices)
1	Perimeter survey of barangay boundaries and production of base-map	10,000
2	Actual barangay consultations: profiling (PRA), community mapping, planning, general assemblies	19,000
3	Writeshop/packaging	10,000
4	Digitization and printing of maps	6,000
5	Culmination activity/legimization/approval	5,000
6	Billboard (display of Approved Landuse Plan)	10,000
	Total investment for one LUB-BDP BLGU	60,000

Details on municipal level investments, one municipality

UAED-DFS

	Item	Cost in peso (2006 prices)
1	Training of Municipal Extension Team (MET) in Southern Mindanao including travel	50000
2	Formulation Municipal Agricultural Extension Plan (MEP) and assignment of Agricultural Technicians (ATs)	5,000
3	Farmers Field Day (not necessarily in the 1 st year)	45,000
	Total one time investment MLGU	100,000

Details on barangay level investment, one barangay

UAED-DFS

	Item	Cost in peso (2006 prices)
1	Establishment and training of Community Based Extension Team (CBET)	70,000
2	Farm development of CBET members	40,000
3	Support for farmers in barangay (seedlings, goats) say 100 farms x Peso 3000/farm	300,000
	Total investment for Agri-extension per barangay	410,000

Details on Barangay level recurrent costs

UAED-DFS

	Item	Cost in peso (2006 prices)
1	AT annual costs including transport	200,000
2	Barangay Extension Worker (BEW) incentive	10,000
3	Refresher course for extension workers	15,000
4	M&E and review of MEP	10,000
	Total Barangay level recurrent costs for Agricultural extension	235,000

Details on municipal level investments, one municipality

BFPMs

	Item	Cost in peso (2006 prices)
1	Training cost of MENRO team in Southern Mindanao including travel or by hiring consultants	50,000
2	MLGU orientation by MENRO team	5,000
3	One time coaching by Service provider for 1 st barangay or with the help of consultants	45,000
	Total one time investment MLGU	100,000

Details on barangay level investment, one barangay

BFPMs

	Item	Cost in peso (2006 prices)
1	Perimeter survey and data collection	7,000
2	Actual barangay consultations/meetings: forest inventory, negotiations etc.	5,000
3	Training by MENRO for BLGU officials	10,000
4	Appointment and training by MENRO for Forest Guards	10,000
5	MOA signing/legal documentation	3,000
6	BFPMS implementation Plan, site management agreements in place	10,000
7	EACs, IEC activities like seminars etc.	5,000
8	Culmination/Actual Declaration of protected area	5,000
9	Fencing	30,000
10	Billboard	10,000
	Total investment for one LUB-BDP BLGU	95,000

Barangay level recurrent costs

BFPMs

	Item	Cost in peso (2006 prices)
1	Refresher trainings BLGU officials	25,000
2	Refresher trainings Forest Guards	15,000
3	M&E through ocular inspection of the protected area	10,000
	Total Barangay level recurrent costs for BFPMs	50,000

Details on municipal level investments, one municipality

LBRBMR

	Item	Cost in peso (2006 prices)
1	Training of Municipal Engineering Team in Southern Mindanao including travel	50,000
2	MLGU orientation by Engineering team	3,000
2	Formulation Municipal Barangay Road Maintenance Plan Plan (MBRMP)	10,000
	Total one time investment MLGU	62,500

Details on barangay level investment, one barangay, 5 KM

LBRBMR

	Item	Cost in peso (2006 prices)
1	Training of BLGU and Community Organization Officials on LBRBMR	14,000
2	Formulation Barangay Road Maintenance Plan (BRMP)	5,000
3	Training of maintenance crew	8,000
4	Provision of hand tools	13,000
	Total barangay level investment, one barangay, 5 KM	40,000

Barangay level recurrent costs

LBRBMR

	Item	Cost in peso (2006 prices)
1	Cost of implementing Labour contract routine maintenance between BLGU and Community Organization (wages)	180,000
2	Cost of implementing Rehab Labour contract between BLGU and Community Organisation (wages)	50,000
3	Other costs like fuel, oil etc within context of rehab costs	30,000
	Total barangay level annual recurrent cost one barangay, 5 KM	260,000

SUMMARY

INVESTMENT PER MUNICIPALITY AND BARANGAY

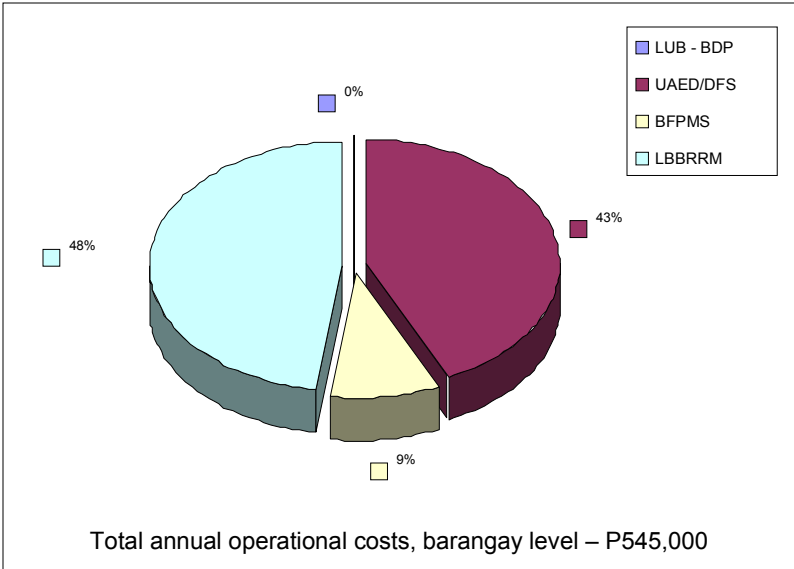
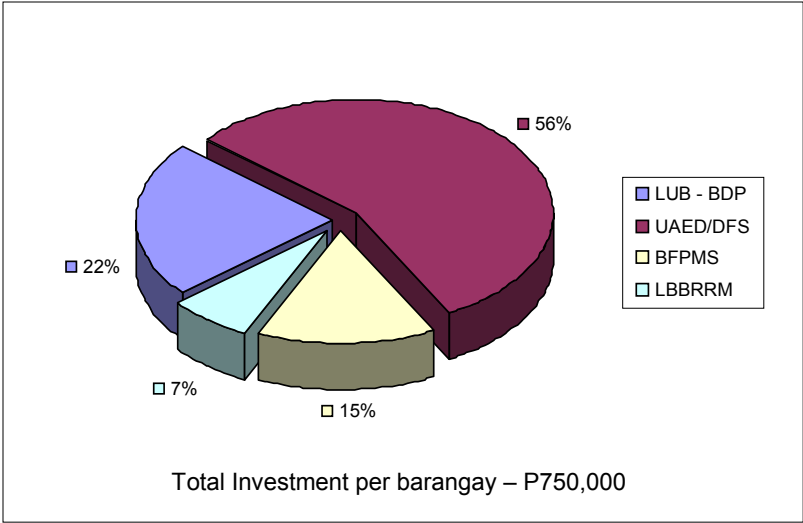
(pl note the more barangays covered the lower the cost per barangay)

In Peso, January 2006 prices	Per Municipality	Per Barangay
1.Land-use based BDP	760,000	152,000
2.Forest protection schemes	550,000	115,000
3.Agricultural extension	650,000	130,000
4.Farm inputs (seedlings/seeds) (100 farms/barangay)	1,500,000	300,000
5. Barangay road maintenance	<u>265,000</u>	<u>53,000</u>
Total investment	Peso 3,565,000	750,000

RECURRENT COST PER MUNICIPALITY AND BARANGAY PER YEAR

In Peso, January 2006 prices

	5 brgys	Per Brgy
1.Forest protection schemes	250,000	50,000
2.Agricultural extension (including wages/transport of 5 ATs)	1,200,000	240,000
3.Barangay road maintenance	<u>1,100,000</u>	<u>260,000</u>
Total annual cost	Peso 2,725,000	545,000



Benefits

One HA of the usual practice in the uplands i.e. mainly corn, on an average generates around 15,000 peso per year and declining due to productivity reductions as a result of dwindling top soil.

One HA of a diversified farm consisting of a small cornfield for subsistence plus short-term crops (tomatos, sweet peper, egg plant), medium term crops (bananas) and long term crops (lanzones, rambutans, durian) for commercial purposes, generates in terms of additional net income approximately in:

Year 2:	Peso 15,000
Year 3:	20,000
Year 4:	22,000
Year 5:	31,000
Year 6:	46,000
Year 7:	63,000
Year 8:	85,000
Year 9:	100,000
Year 10:	115,000

Assuming a farmer would till this one HA following the DFS, total additional income generated in 2006 prices over 10 years would be around Peso 500,000.

Looking at the SUD model from a public point of view, one might relate the LGU investment to the socio-economic-environmental benefits arising from such investment. Such benefits are extra income generated by the farmers and general returns as a result of, and reduced costs due to, better environmental management (less soil erosion and floods, sustained water supply and coastal fishing to mention a few).

The environmental benefits and costs are complicated to calculate therefore what has been calculated here are only those benefits per barangay arising from increased farm output.

Assuming again 100 farms per barangays the direct additional annual income generated would be as indicated above x 100.

As shown above the investment per barangay is around 750,000 and annual operating costs amount to Peso 545,000.

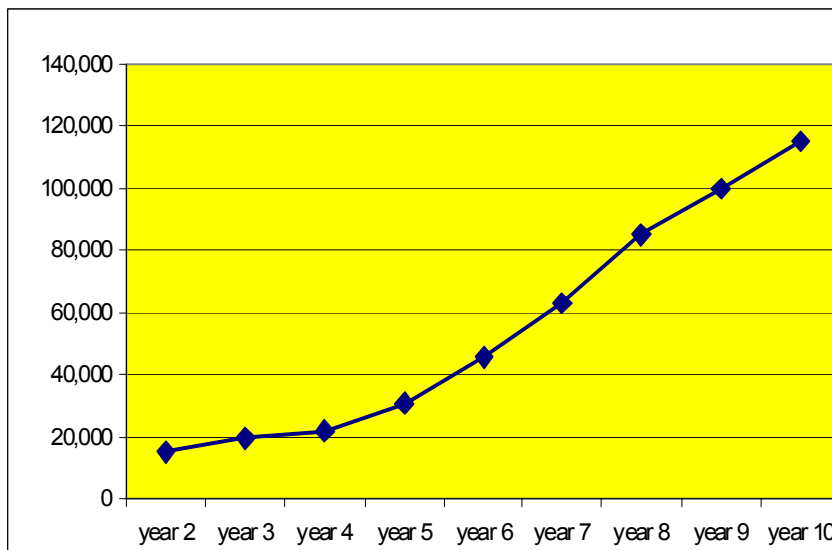
The economic cost-benefit analysis shows that the NPV (at 14 %) on the BLGU investment of around Peso 750,000 is approximately Peso 4.8 million with an IRR of more that 30%. Which seems to be very much profitable.

For the LGU to recover their costs, that is another thing. This will depend on how effective tax collections can be from those upland farmers that increase their incomes as a result of the LGU intervention.

THE BENEFITS

1 hectare of mainly corn = P15,000/year income for a farmer

1 hectare of diversified farm will generate in terms of additional net income approximately in



Sept.2006