

WITH PROJECT

VARIOUS ENTERPRISES IN NEW PROJECT

1. Yields from Medicinal and aromatic plants in 0.5 ha are obtained from 3rd year onwards Benefits: Rs 25000/year and Costs: Rs.10,000/year
2. Production from Fisheries obtained from 3rd year onwards Benefits: Rs 50000/year Costs: Rs. 25000/year
3. Biodiversity spot: 4 years No income
4. Value addition centre: Economic production expected from 5th year onwards Benefits Rs. 20,000/year costs: Rs10,000/year
5. Milk, eggs, meat, birds production from Animal husbandry expected from 1st year-Benefits: Rs 1lakh/year Costs: Rs25,000/year
6. Fruit yield expected from 4th year onwards Benefit: Rs 30,000/year Costs: Rs 10,000/year
7. Yields from Nursery from 3rd year onwards Rs 5000/- costs: Rs.2000/-
8. Production from crops starts from 1st year onwards. In 5.5 ha benefits obtained shall be Rs.50,000 and Costs incurred were Rs. 20,000
9. Ecotourism starts giving benefits from 5th year onwards. Benefits Rs. 6, 00,000 Costs: Rs. 4,00,000

WITHOUT PROJECT: Crops (**only**) were cultivated in 15 ha. Benefits obtained in 15 ha=Rs 4,50,000/year (@30,000 per ha) and Costs- Rs75,000/ha/year and these figures were kept constant for all 10 years.

With project (benefits and costs were computed from varied enterprises in 15 hectares of land)

	1 st year	2	3	4	5	6	7	8	9	10
Benefit (Rs)	1,50,000	1,50,000	2,30,000	2,60,000	2,80,000	8,80,000	9,00,000	12,00,000	15,00,000	20,00,000
Discount rate	9%		9%	9%	9%	9%	9%	9%	9%	9%
Discount factor	$\frac{1}{(1+9\%)^{1-1}}$ = 0	$\frac{1}{(1+9\%)^{2-1}}$ = 0.917	$\frac{1}{(1+9\%)^{3-1}}$ = 0.8416	$\frac{1}{(1+9\%)^{4-1}}$ = 0.7722	$\frac{1}{(1+9\%)^{5-1}}$ = 0.708	$\frac{1}{(1+9\%)^{6-1}}$ = 0.6499	$\frac{1}{(1+9\%)^{7-1}}$ = 0.596	$\frac{1}{(1+9\%)^{8-1}}$ = 0.547	$\frac{1}{(1+9\%)^{9-1}}$ = 0.501	$\frac{1}{(1+9\%)^{10-1}}$ = 0.460
Present value (Rs)	0	137550	193568	200772	198240	571912	536400	656400	751500	92,00,00

Without project

	1 st year	2	3	4	5	6	7	8	9	10
Benefit	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000	4,50,000
Costs	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000
Net benefits	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000

With project

	1 st year	2	3	4	5	6	7	8	9	10
Benefit	1,50,000	1,50,000	2,30,000	2,60,000	2,80,000	8,80,000	9,00,000	12,00,000	15,00,000	20,00,000
Costs	20,000	20,000	57,000	67000	77,000	4,77,000	5,00,000	6,00,000	7,00,000	9,00,000
Net benefits (with project)	1,30,000	1,30,000	1,73,000	1,93,000	2,03,000	4,03,000	4,00,000	6,00,000	8,00,000	11,00,000
Net benefits (Without project)	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000
Net incremental benefit (net benefits with project-net benefits without project)	-245000	-245000	-202000	-182000	-172000	28000	25000	225000	425000	725000
Present Value of Incremental net benefit (net incremental benefit*discount factor)	0	-224665	-170003	-140540	-121776	18197	14900	123075	212925	333500
Economic Net present value (sum of all Present Values of incremental net benefits)	Rs 45613									

The project is considered to be worth undertaking as the NPV is above 0 and positive.

OUTLINE OF BASIC STRUCTURE OF THE CASE STUDY

S.NO	ITEM OF COMPARISON	WITHOUT PROJECT	WITH PROJECT
1	Number of enterprises	Single (only crops)	Multiple (crops, ecotourism spot, value addition center, fisheries, poultry, cattle rearing, nature cure center, nursery etc)
2	Risk	More as it has only crops	Less, Risk is spread, good yields in one enterprise neutralizes losses in another.
3	Initial investment	Less	More comparatively
4	Net returns	Low	High
5	Type of farm produce	Chemical loaden	Chemical free-Organic
6	Environmental benefits	Less	More. Soil and moisture conservation, prevents air pollution, improves soil fertility due to use of organic manures produced in farm.
7	General benefit to public	Supply of farm produce	Entertainment (ecotourism spot), practical exposure to students and children, chemical free farm produce, supply of animal and aquatic produce, conservation of biodiversity etc
8	Net returns	Low	High

Projects that have scope for intervention in the new project:

1. **MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act)** a centrally sponsored rural development programme- it's a wage employment programme that offers works and wages to rural labour. If the labour employed in the project can be covered under this national programme it is beneficial for government and project too as it is eco friendly.
2. **National Horticulture Mission (NHM):** This Mission endeavors for holistic development of horticulture sector duly ensuring forward and backward linkages by adopting cluster approach, with active participation of all stakeholders, it works on mission mode for improving farm income, livelihood security and for employment generation in areas of fruits and vegetables. This project can be taken help in certifying organic farm produce produced in the new project and also it is a source of funds for fruit orchards and vegetables proposed in the

project. Under this project encouragement is also given for entrepreneurs working on value addition and marketing of these processed fruit and vegetable products.

3. **National Mission on Sustainable Agriculture (NMSA):** NMSA as a programmatic intervention will primarily focus on synergizing resource conservation, improved farm practices and integrated farming from enhancing agricultural productivity especially in rainfed areas. Key deliverables under this Mission were:

- (a) Developing Rainfed Agriculture;
- (b) Natural Resource Management;
- (c) Enhancing Water Use Efficiency;
- (d) Improving Soil Health; and
- (e) Promoting Conservation Agriculture.

This project is a good source of funds and technical advice for soil and moisture conservation practices undertaken under the new project.

4. **National Project on Promotion of Organic Farming:** Under this project, farmers and entrepreneurs are encouraged in production and use of organic and biological sources of nutrients like biofertilizers, organic manure, compost for sustained soil health and fertility and improving soil organic carbon and to promote production and use of bio pesticides, bio-control agents etc. as alternative inputs in organic farming.

This project is also a good source for funds and technical advice for production of organic products (bio pesticides, biocontrol agents, bio fertilizers etc) under the new project.

SOCIAL CONSEQUENCES OF THE PROJECT

1. **Environmental consequences:** Since the new project mainly aims at eco friendly techniques, it is said to have desirable effects on environment, it reduces air pollution, cool climate, stress relief, aesthetic look etc as it has a well planned ecotourism park.
2. **Cultural Consequences:** As the project comprises of traditional crops grown under protected conditions under Biodiversity spot, the rich cultural heritage can be preserved. Rural people can collect the seeds from this spot and sow the traditional crops thus restoring their traditional knowledge on crop cultivation and preparation of traditional recipes. This also helps the country in protection of its varied and rich cultural heritage. Also the project reminds the visiting farmers to restore their old culture i.e. cultivation of combination of crops, cattle, poultry, fisheries etc and motivates them to replicate the model, though in a small way in their own farm.
3. **Physical consequences:** The new venture conserves the soil and water. Hence the ground water levels of surrounding areas will definitely increase. As the project has nature cure centre it helps in curing ailments of many diseased.
4. **Economic Consequences:** The project aims to demonstrate the visitors (farmers or beginning farmers) on how to attain good economic returns from beginning (starting the venture to marketing of produce) to end. So it definitely improves the economic standards of those who replicate this model. Also due to increased number of visitors, the land value of surrounding area will increase which is also an important factor influencing living standards of rural people.

5. Undesirable consequences: Problems with parking, increased human traffic interrupting the peaceful life of rural people, snakes and other such harmful creatures troubling the surrounding residents were some of the minor undesirable consequences arising out of new project which can be very easily taken care of with meticulous planning.