

Component - 1

BASELINE SURVEY

A base line survey will be conducted covering all 547 Nos. census villages of A & N Islands to compile a database of agricultural information where in efforts will be made to focus on the relevant parameter of farming system.

Expression of Interest invited at National Level for outsourcing NGOs or other competent agency to carry out the survey. Schedule for baseline survey will be developed as per the guidelines of NWDpra and Agriculture census.

Financial implication

No of holding to be surveyed: 20000 (approx) @ Rs.150/- per enumeration
= 300000/-

Total = Rs.30.00 Lakhs

Component - 2

AWARENESS

Awareness will be created among the farmers to motivated them to adopt scientific management of organic cultivation/farming. 80,000 holding will be targeted all over the Island for awareness programme.

The details of financial implication for organising awareness campaigns

Financial implication

100 Nos. Hoarding	:	Rs. 2.00 Lakhs
1000 Nos. Posters	:	Rs. 2.00 Lakhs
10000 leaflets /literature	:	Rs. 2.50 Lakhs
Mass Media	:	Rs. 1.00 Lakhs
Scrolling in electronic media	:	Rs.0.50 Lakhs
Print Media	:	Rs. 1.00 Lakhs
Street slows/Jatra	:	Rs. 2.00 Lakhs
Awareness-cum training	:	Rs.100.00 Lakhs
Total		Rs.115.00 Lakhs

Component - 3

HUMAN RESOURCES DEVELOPMENT (HRD)

For effective dissemination of technology of organic farming Human Resource Development is the key component of success as it will facilitate conversion of scientific expertise to field level do-how. The following component will be taken care under HRD

- Capacity building extension staff
- Capacity building of key farmers
- Exposure visit
- Workshop / seminar/ field days/ sefi (scientist-extn.worker-farmer interaction)
- Kisan mela / exhibition / competitions/ awards

TRAINING

Capacity Building Extension Staff

A group of at least 10 Middle to senior level officers of the Department of Agriculture identified as Master Trainer. They will be deputed to the reputed Institutes at mainland to undergo training on Organic Farming and thereafter they will train other field functionaries of Agriculture and allied department at Zonal level.

Capacity building of Key Farmers

The trained extension functionaries of the department will train atleast 5 key farmers of each Panchayat on regular interval.

Exposure visit

Groups of Departmental Staff as well as identified farmers will be deputed to various stations at mainland as well as inter Island on exposure visit to acquire knowledge & skills on organic farming practices.

WORKSHOP / SEMINAR/ FIELD DAYS/ SEFI (SCIENTIST-EXTN.WORKER-FARMER INTERACTION)

Programes like workshop/ Seminar, Field days/ SEFI (Scientist-Extn.worker-Farmer interaction) will be organised

KISAN MELA / EXHIBITION / COMEPTITIONS/ AWARDS

To attract, promote, encourage & motivate the farmers on Organic Farming aspect Kisan Mela / Exhibition / Competitions/ Awards

Financial implication

	Nos	Rate	Amount
Capacity building - Master Trainer	15	45000	675000.00
Capacity building extension staff	160	2500	400000.00
Capacity building of key farmers	335	2500	837500.00
Exposure visit	4	300000	1200000.00
Workshop / seminar	3	200000	600000.00
Kisan mela / exhibition / competitions/ awards field days/ sefi	10	150000	150000.00
Contingencies Lumpsum			100000.00
			3962500.00
		Say	Rs. 40.00 Lakhs

Component – 4

SOIL AND WATER CONSERVATION

The highly undulated topography and steep to very steep slopes of this Territory experiences high rainfall of about 3000 to 3300 mm annually causing serious soil erosion problems. Soil erosion is a major problem in these Islands particularly in the revenue land, which has been cleared from the forest cover. Splashing occurs when a raindrop falls on unprotected soil. Raindrops dislodge soil particles and lead to sheet erosion. This further takes up to Rill Erosion, Slip erosion and then to the serious form of Gully Erosion. Due to slope and high rainfall, the runoff is more that washes the rich and valuable top soil, transported to the nearby nallahs, and silted in the seabed. Therefore, it is necessary that the nature's gift of valuable top soil is prevented from its erosion by adopting suitable soil and water conservation measures. For the better use of the land, Soil Conservation Works are to be taken on watershed basis, so that side by side of the various soil conservation measures attempt can be taken for the over all improvement of the area by conserving

moisture and increasing the sub-soil water flow and there by raising water table.

For soil and water conservation appropriate measures will be taken as per the existing schemes This includes treatment of all exiting Nallahs in upper middle & lower riches including construction of check dams, Sunken ponds, Contour trenches, contour Bunds, so that the run off is reduced, more water is allowed to percolate in the soil, Water table is increased and moisture loss is minimized. In addition to this soil survey works and analysis of soil samples of the farm holdings will be analysed and accordingly Soil Health Card will be issued to the farmers.

Basic objective of Water Conservation Technology is to conserve both water and soil and to promote in-situ moisture conservation under NWDPR scheme. With appropriate measures attempt will be made to convert surface flow (run-off) into sub surface flow (deep-percolation) and reduce the velocity and volume of water going outside the watershed areas, and recharge the ground water table.

Component – 5

ORGANIC FARMING

“The plow is one of the most ancient and most valuable of man’s inventions; but long before he existed, the land was regularly ploughed, and still continues to be ploughed by earth worms. It may be (doubtful) whether there are many other animals which have played so important part in the history of the world as these lovely organized creatures”
... Charles Darwin, 1881

5.1 ESTABLISHMENT OF VERMICULTURE HATCHARIES

Vermiculture hatcheries will be established in departmental farms of Agriculture Department throughout the islands. Vermiculture hatcheries are required for rearing and multiplication of earthworms. After establishment of

adequate number of vermiculture hatcheries, the Department of Agriculture will be in a position to supply the required quantities of earthworms for 10,000 farmers. Individual/farmers groups/NGOs/Cooperatives/Agri clinics etc. from the islands will also be considered eligible to avail the benefit of the scheme.

Within 2 months (60 days) 4-5 kg of worms can be produced from 10-20 numbers of worms which can be utilized for farm scale vermi compost production (**Source: Page no. 70 of Micro business module published by CARI Port Blair**), which implies that approximately 1 worm multiples to about 250 nos. in 60 days.

Considering the scattered nature of islands 60 hatcheries will be sufficient to cater the need of earthworm required annually for 10,000 vermicompost units proposed to be established.

MODE OF IMPLEMENTATION:

Department will establish the vermiculture hatcheries in the Departmental farms. Wherever possible these hatcheries will be run by NGOs/SHGs/FG/FC after signing an MOU with the Department. These groups can sell the earthworms as per the market rate to the interested farmers/SHGs/individuals. Labour Charges for 2 persons for a maximum of 250 mandays per person as stated in the model project at Annexure-II for running the hatchery will be provided to the NGOs/SHGs/FG/FC. Individual/Farmers groups /NGOs /Cooperatives/ Agri clinics will also be considered eligible to avail the benefit of the scheme.

Interested NGOs/SHGs /FG/FC/Agri clinics/individuals should apply in prescribed format along with certified vouchers/documents duly recommended by the Zonal officers.

Financial implication

100% for Departmental Farms & 50% for individual/farmers groups/ NGOs / Cooperatives / Agri clinics etc. subject to a maximum of Rs. 94,500/- per unit.

Physical Target: 60 nos. Vermi Hatchery

Financial Outlay: Rs 113.4 Lakh (@ Rs 1.89 lakh per hatchery).

5.2 ESTABLISHMENT OF VERMI/ORGANIC COMPOST UNIT

Production and use of quality organic matter like Vermi/organic compost and its use is an important step towards the implementation of organic farming programme. Vermi/organic compost contains nutrients in easily available forms in addition to a number of plant growth promoting substances and humic acids. It is found to be highly economical to use vermi/organic compost in nursery beds for establishment of seedlings and also as rooting medium. It has to be practiced by the farmers himself, rather than buying the compost produced by others.

MODE OF IMPLEMENTATION: This component is proposed to be implemented through Gram Panchayats. Department will release the subsidy amount to the concerned Panchayats as per the target allotted to them. Fund to the Panchayats will be released after signing an tripartite agreement between the Pradhan, concerned NGO/SHG/FG/FC and the Zonal Officer of the Department. Concerned NGO/SHG/FG/FC shall inspect and supervise the progress of work from time to time and help the beneficiary to get the work done. The earthworms will be supplied by the NGO/SHG/FG/FC and/or department to the farmers on payment. For tribal areas department will implement the component.

After implementation, Gram Panchayats will submit the details of implementation to the Department.

Financial implication

The Department of Agriculture will provide subsidy @ 50% of the cost subject to a



maximum of Rs 10,000/two Vermi/organic compost unit/farmer through panchayat for production of 6 MT Vermi compost/ year.

Physical Target: 10,000 units

Financial Outlay: Rs 1000 Lakh.

5.3 METHOD DEMONSTRATION PLOTS

Based on the concept of "Seeing is believing and learning by doing" a method Demonstration will be conducted in plots measuring 0.40 hect. in farmer's field. Half of the field will be cultivated organically by adopting all the technological activities by using Organic inputs like manure, green manure, bio-fertilizer, bio-pesticides, pheromone etc. Whereas the other half of the demonstration plot will be laid out by adopting all the package of practices using chemical inputs.

Financial implication

Department will implement the components through ATMA.

Pattern of Assistance: @ Rs 30,000 per Demonstration

Physical Target: 400 nos.

Financial Out Lay: Rs 120.00 Lakh.

Expected Outcome

- Production of about 60,000 MT of Vermi/organic compost in the Islands.
- Reduction in the expenditure of the farmers on chemical fertilizers.
- Improvement in livelihood security of small and marginal farmers.
- Production of organic produce and opening avenues for its export.

DEPARTMENTAL FARMS & PLANTATION

As a trend setter to go organic the department should convert all the departmental farms into organic.

Financial implication

Total area under farms and plantation – 409.11 ha.

409.11 ha x Rs. 3000 = 12.2733 lakhs

All cultivation practices and technologies used in the farms should be organic

5.4 FOR KITCHEN GARDENS

For these islands to 'Go' organic farming other than conventional should be thought of as a whole. Hence special consideration needs to be given for kitchen and home gardens for the urbanized areas of each zone. Specially designed vermibed of size 4'x4'x2' of maximum maneuverability and durability could be supplied for compost production in every home at 50% cost subsidy.

Financial implication

Should be considered for urban and rural areas. Assistance at 50% subsidy or Rs. 2000/- whichever is less is to be provided for beneficiaries. Total 20,000, no. vermibed to be distributed in the three phase at the ratio of 30: 30:40

Component – 6

ORGANIC CULTIVATION OF FIELD CROPS

6.1 ORGANIC CULTIVATION OF FIELD CROPS

Human health and environment safety is the major concern of today. Due to indiscriminate use of inorganic agricultural inputs, detrimental effects are noticed on human health, environment and natural resources (soil health, water bodies etc.). Therefore to ensure the same Organic Farming, approach is being advocated as a safest mean to attain sustainability through recycling of available bio-mass and use of organic inputs.

In A&N Islands, presently paddy is cultivated in 9000 ha, vegetable in 5000 ha and pulses/oilseeds in 3000 ha. Farmers are cultivating these crops using inorganic agricultural inputs. Of all the crops, vegetables cultivation requires an immediate intervention of inorganic inputs. At certain pockets of UT, indiscriminate use of agriculture inputs is reported especially in vegetable cultivation. Since the islands are going to be organic in phased manner, farmers need to be encouraged towards Organic Cultivation of crops. Therefore specific assistances are proposed in demonstration mode for organic paddy, pulses/oilseeds and vegetables. Assistance to be provided for Organic Cultivation of these crops is proposed as under:

6.1 ORGANIC PADDY

Assistance will be extended for organic seed, plant protection measures, manures, weed control of Rs. 7500 for one ha. of paddy to be converted as organic with all required farm management practices. Area to be taken up under organic cultivation zone wise will be in the ratio of 30:30:40 of the cultivable area of different crops for three years.

Financial implication

$9000 \times 7500 = 675.00$ Lakhs

6.2 ORGANIC PULSES & OILSEEDS

Growing of pulses in itself is an organic measure as the crop fixes Nitrogen in soil. As a second crop after paddy, pulses production will be encouraged and taken up in a large scale to augment the land fertility and productivity. Objective is to implement both INM and IPM measures.

Total of 2200 ha is taken up for pulses cultivation as a second crop in A & N Islands. The total area will be included in the programme for 1 year itself to motivate farmers @ Rs. 2000 / ha. (Or 50% of cost) to enhance the area pulses in subsequent years.

Financial implication

$2200 \text{ ha.} \times \text{Rs.}2000 \text{ per hac} = 44.00$ lakhs

6.3 ORGANIC VEGETABLE

There is tremendous potential and production of vegetable in the islands due to congenial agro climate condition and soil. Certain islands known as the vegetable pockets produce large quantity of vegetable. Total area of 4599 ha. is under vegetable cultivation. Vegetable are important and essential dietary supplement as source of vitamins and minerals. Local customers are awakening and are averse to the chemicals i.e dumped for its cultivation to the fact that vegetable should be produced organically and this in itself would boost sale of organic vegetable. As initial measures subsidy provision for INM and IPM is to be given.

Financial implication

$5000 \text{ ha.} \times \text{Rs.} 1250/ \text{ per ha} = 62.5$ Lakhs

6.4 Organic Spices, condiments & medicinal plants

Cultivation and consideration of medicinal plant in its natural habitat is the first step in any type of organic farming. Rapidly dwindling forests have

resulted in depletion of medicinal plant wealth. Distraction of natural habitat and over exploitation without replanting, declining Micro agro climatic conditions are threatening the population and diversity of medicinal plants for the country and would fast catchup in these islands. Therefore it is imperative to protect and increase the production of indigenous medicinal plant species of the island in its natural habitat. Production shall be encouraged even if in conditions of staggered cultivation as a first step towards protection of biodiversity .

Financial implication

for promotion of medicinal and aromatics plants:-

An amount of Rs. 75,000/ ha. is allocated with 50% subsidy subject to a maximum of Rs. 37,500/- ha. for meeting the expenditure on planting materials and cost of materials for INM and IPM. In situ medicinal gardens are very important and are to be encouraged in the same norms.

Fund allocation under NHM = 1500 x 37500 = 562.50 Lakhs

6.5 Green Manuring

The method of incorporating green leafy matter directly into the soil is called Green Manuring. Green Manuring helps improve soil quality as it Increases organic content of soil, Increases nutrient availability, Improves the tilth of soil, Restricts growth of weeds, Helps in pest control and Increases biological activity in the soil. Green manure crops can be grown either before or along with the main crop. Growing of leguminous green manure crops increases nitrogen availability in the soil. Green manure crops act as a reservoir of nutrients. These nutrients are released in the soil when they are ploughed in. Some of the commonly grown green manure crops are *Crotalaria juncea* (Sun hemp), *Tephrosia purpurea* (Wild indigo), *Vigna radiata* (mungbean), *Vigna mungo* (Urd), *Sesbania aculeate* (Dhinch), *Leucaena Leucocephala* (Subabool), etc

Financial implication

Assistance @ 50% limited to Rs. 500/- per ha for growing green manuring crops and their incorporation in crops =

Component – 7

7.1 INM & IPM

Sufficient quantity of biodegradable materials is to be returned to the soil to increase or maintain its fertility and the biological activity within the system. Therefore, Integrated Nutrient Management approach with organic waste recycling without much dependence on external inputs is to be followed to ensure healthy palms & intercrops for higher productivity

50% of cultivable area is under plantation and orchards. INM & IPM measures have to be popularized. Areas under coconut & fruits would thrive and accelerate agro business if productivity and thereby production is increased. IPM & INM measures are the key factors to enhance yield / ha. This can be implemented through NHM at 50% cost subject to maximum of Rs. 2000 /ha.

In addition to recommended methods, traditional methods in practices by the community need to be approved and recommended for subsidy. The entire plantation area of 3500 ha. Will be taken up on a phased manner over three years in a ratio of 30: 30: 40

35,000 ha. X Rs. 2000 = 700.00 lakhs

Component – 8

Sector: Animal Husbandry

8.1 strengthening of cattle, buffalo production

For promotion of organic farming in Andaman and Nicobar Islands the major is availability of quality organic manure. **** as a first step in ***** the soil nutrient, available local resources should be considered i.e. **** of FYM is in practice since ages, only the quality needs to be improved and total quantum to be increased. Therefore, it is essential to strengthen the cattle / buffalo that are stat bred or confinement within the farms.

Mode of implementation : Department of Animal Husbandry and Veterinary Services will implement the component through RKVY.

8.2 Organic Fodder Development Programme

In order to make available instruction fodder for the animals, fodder cultivation will be taken up at several places in Andaman and Nicobar Islands. The fodder will be cultivated in the land allotted for grazing land or as intercrop in plantation. Production of organic fodder for cattle will in this produce quality organic manure.

Mode of implementation: Department of Animal Husbandry and Veterinary Services will implement the component through RKVY.

Component – 9

CROP INSURANCE FOR ORGANIC FARMING

All the farmers registered themselves for conversion to organic farming will be brought under the crop insurance scheme with the objectives to provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases; to encourage the farmers to adopt progressive farming practices, high value inputs and higher technology in Agriculture thus helping them for a stabilized farm incomes, particularly in disaster years.

During the period of conversion, Administration will bear the cost of the premium under this Crop Insurance scheme.

Component – 10

CERTIFICATION OF ORGANIC PRODUCE (NHM)

Certification procedures give a clear dividing line between organic and other farming systems primarily for creating marketing avenues. Production standards require farm inspection and certification to ensure that organic standards are adhered to. A minimum period of two years is required to convert and declare any farm as organic. Therefore in the first year all areas under default could be marked for the purpose of certification with considered effort of these areas. By the 2nd financial year can continue on actual basis. Area not on cluster basis.

PATTERN OF ASSISTANCE

Financial assistance upto a maximum of 5.00 lakhs for 50 ha. for 3 years the bifurcation will be 30: 30: 40

Component – 11
MARKETING

Consumer demand for organic product is gradually increasing. In response to concerns about environmental and health implication of industrial agriculture. Consequently there will be the need to tap into this local market. Export potential has to be strengthened by creating niche market at every zone. In an emerging market there is need to necessitate balance of supply and demand, strengthen investments, organize promotional campaigns and create avenues for smooth flow of produce till the market

Components to be strengthened are :-

1. Transport and storage (Both local and inter islands)
2. Campaigns and advertisement

One cool chamber / reefer structure shall be installed in inter island boats and ensure it plys three days weekly for the vegetable pockets and once for other islands

Areas accessible by road should ply trucks (preferably with cool / reefer chambers) from Port Blair to Diglipur for collection of vegetables. Opening of special Govt. aided outlets declared as organic operated through NGO's and SHG's shall be aided and encouraged.

Create special storage facility for Eco friendly farm produce

PATTERN OF ASSISTANCE
Under marketing stores :-

- i) Pack house / farm store house :-
Construction of pack houses or farm collection and storage unit .Maximum of Rs. 3.00 lakh per unit with size of 9m x 6m . 50 % of capital cost. 8 Nos. for each zone as an inceptor measures to encourage cultivators
8 x 3 = 24 Lakhs
- ii) Organic Retail market outlet - As I measure 8 No. in first year of implementation to help the farmers to sell their produce certified as organic and reap comparatively higher prices.
8 x 5,55,000 = 44.0 Lakhs

- iii) Static / mobile & vending cart – It's a mobile platform with cool chamber attached . Maximum Rs. 30,000/- unit, 50% subsidy of total cost to be given. 2 vending mobile cart for each zone.

RETAIL MARKET OUTLET:-

- 1) Rs. 10 L / unit credit linked back ended subsidy @ 40% of the capital cost of project for individuals entrepreneurs .
- 2) STATIC / MOBILE VENDING CART
It is a mobile Platform with cool chamber attached Rs. 15,000/ unit i.e 50% subsidy of total cost to be given.
2 vending mobile cart for each zone – 16 x15,000 = 2.40 Lakhs

REEFER VANS/ CONTAINERS

Subsidy to maximum limit of Rs. 24 L/ unit for 6 MT capacity credit linked back ended subsidy @ 40% of the cost of project. Entrepreneurs can create special storage facility for eco friendly farm produce .

Reefer container - 15 Nos.

Reefer Van - 4 Nos.

Cost of project = 456 lakhs

Construction of pack houses or farm collection and storage unit. 50 % of capital cost, Maximum of Rs. 3 lakhs per unit with size of 9 m x 6m .

8 Nos. one for each zone as a incentive measures

Project cost – 8 x 3 lakhs = 24 lakhs

Component – 11

MISSION MANAGEMENT

For any project in it mission mode there is need for the implementing agency to have a firm support and back up at various level. Strengthening should include living of technical hands administrative expenses, hiring / purchase of vehicle (as situationawareness generation through campaigns and advertisement (use of mass media is essential) utilizing information technology, development of software and procurement of stationeries, contractual engagement of office staff and contingency.

Financial implication

100 % assistance to implementing agencies

2010-11

S.No	Component / item	Physical / Fin (L)
1	Mission management administration expenses	50% of total annual expenditure on the basis of (SHM/ Implementing agency)
2	Institutional strengthening Purchase / hire of vehicle , hiring staff and manpowers	Project based 100 % assistance
3	Conducting seminars, conference, workshops, exhibitions, Kisen Mela Horticulture shows etc	

State level - Rs. 3 Lakhs / even (2 No. = 6 lakhs)

District level - Rs, 2 lakhs / event (2 No. = 4 lakhs)

PATTERN OF ASSISTANCE

100% of project based

Technical support group (TSG)

At state level for hiring expert/ staff , studies , monitoring and evaluation, man, media publicity , video conference etc.

100 % of cost Expenditure - 25.0 Lakhs