

E4412

**REPUBLIC DEMOCRATIC OF
TIMOR LESTE**

**COMMUNITY DRIVEN NUTRITION
IMPROVEMENT PROJECT**

(P145491)

ENVIRONMENTAL CODES OF PRACTICES

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Abbreviations and Acronyms

Acronym	Description
CDNIP	Community Driven Nutrition Improvement Project
CSO	Civil Society Organization
ECOP	Environmental Code of Practice
IA	Implementing Agency
RDTL	Republic Democratic of Timor Leste

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I. Objectives

The main development objective of Community Driven Nutrition Improvement Project (CDNIP) is **to improve nutrition practices targeted to children under the age of two and pregnant and lactating women in targeted least developed communities.**¹ In order to achieve this, the project will address the key underlying causes through: (i) community mobilization, participatory planning, and awareness raising about malnutrition causes and risks; (ii) community led delivery of nutrition-specific interventions through use of Community Nutrition Educators (focusing on messages that encourage positive behavior changes to improve nutrition)²; and (iii) community selected nutrition-sensitive interventions.³

The project will address a wide range of behaviors and practices which can lead to sustainable improvements in the nutritional status of target populations by linking nutrition specific and sensitive interventions through an integrated approach. The integrated approach incorporates community mobilization, beneficiary participatory planning, community mapping, educational nutritional specific messages that highlight behavior change and linkages to nutrition sensitive possible actions, action planning and implementation of nutrition sensitive promoted activities. Additionally this innovative approach will overcome barriers to behavior change by employing the efficient use of locally available resources to increase communities' control over their health and nutrition outcomes. The main development objective of CDNIP is to strengthen the capacities of Republic Democratic of Timor Leste (RDTL) Civil Society Organizations (CSOs) to reach and empower marginalized groups to improve their socio-economic conditions.

A recent review of nutrition sensitive agriculture interventions of RDTL⁴ identified the following as having positive impacts on nutritional outcomes at the household level: (a) increasing the availability and production of bio-fortified foods such as orange flesh sweet potato; (b) increasing vegetable production and homestead gardening combined with nutrition education; and (c) increasing aquaculture production, post-harvest handling and storage. This information was used to create the three nutrition sensitive intervention options for this component. The three options are 1) increased availability of nutritious staple and minor crops; 2) increased availability of vitamins and diversified food through homestead gardens; 3) increased availability of protein and Omega 3 through creation of household level fish ponds.

The physical investment of the project will focus on small scale or household type of agricultural activities to improve the nutritional status of communities. The likely types of investment that will be supported under Component 3 are promotion of organic and environmentally friendly garden farming, such as self-generating compost and organic pest

¹ Timor Leste has 13 districts, 66 sub-districts, 442 sucos (villages) and 2336 aldeias (hamlets). Community in this CN refers to aldeias

² Raew, Kathryn et al. (2012). *A Life Free From Hunger: Tackling Child Malnutrition*. STC. London. Page 20.

³ As defined within the Scaling Up Nutrition (SUN) framework, nutrition-specific interventions are programs and plans that are designed to address the direct causes of malnutrition and to have a specific impact on nutrition outcomes. These include: support for exclusive breastfeeding; appropriate complementary feeding; micronutrient fortification and supplementation; and treatment of acute malnutrition. Nutrition-sensitive approaches are strategies and plans that address the underlying and basic causes of malnutrition and take into consideration the cross-sector impact of nutrition including those related poverty reduction, education, agriculture and improved sanitation.

⁴ Tung, Curran and Fanzo (2013) "Nutrition Sensitive Agriculture for Timor-Leste: A Compendium of Resources"

control; small garden size fish ponds and/or tank/used drums aquaculture on community lands. The potential environmental impacts of the investments will be minimal, localized, and will be managed by adopting the best environmental practices.

The objective of these Environmental Codes of Practice is to ensure that the CDNIP activities are conducted in a manner that prevent and minimize impact on the environment. They promote the awareness and use of best practice in environmental management. They apply to capacity building, education, health, basic infrastructure, livelihood activities, etc. These ECOPs are designed to be used by IOs and their sub-grantees in sub-project design and implementation.

II. Environmental Responsibilities of Implementing Organization and Sub-Grantees

1. CDNIP Implementing Agency (IA) will not approve sub-grants or utilize CDNIP funds to finance ineligible activities and materials and substances prohibited under the project's negative list (described below).
2. IO and sub-grantees should be in compliance with the relevant environmental regulations and requirements in RDTL.
3. IO will ensure that sub-grantees implementing nutrition improvement activities are aware of the World Bank's environmental safeguard policies. This can be managed through support to sub-grantees in the development of sub-project proposals and project activity plans in order to ensure that sub-projects are designed in ways that prevent and mitigate potential environmental impacts.
4. Sub-grantees must consider a variety of alternative adjustment to activities that will not harm the environment while still bringing sustainable social benefits.
5. Sub-grantees are responsible to undertake a survey to prevent, reduce or eliminate potential environmental impacts, and prepare mitigation measures. This will be further emphasized in capacity building training to sub-grantees.
6. Even though exempt from comprehensive environmental impact analyses due to its small scale, the project sub-grantees are required to consider and mitigate potential negative environmental impacts of the selected activities. In analyzing potential environmental impacts, sub-grantees must be capable of identifying all sorts of potential impacts that might occur as a result of physical works. Environmental impacts are defined as those changes that occur directly as a result of development activities, both positive and negative.
7. The principle underlined by managing environmental impacts in the project is to minimize potential negative impacts and to maximize the positive impacts of project activities. During implementation, sub-grantees will report on a regular basis on the various measures that were carried out to prevent and/or mitigate negative environmental impacts.
8. Through regular reporting, monitoring and evaluation, the IA will ensure that local sub-grantees are carrying out sub-project activities in line with agreed work plans to ensure that they are in compliance with environmental safeguard policies.

III. Project's Negative List

The following activities are prohibited on or near the project site:

- a. Pesticide or herbicides: no subprojects using, purchasing or producing anorganic pesticide and/or herbicide materials will be supported/financed.
- b. Plant: no genetically modified organism/plant is allowed by the project.
- c. Tobacco or tobacco products: production, processing, handling, storage or sale of tobacco or products containing tobacco will not be financed by the project.
- d. Asbestos: no asbestos-containing materials will be financed. No asbestos allowed in the subprojects although purchased as own/parties contributions (linkage policy).
- e. Hazardous materials and wastes: no subproject will be financed that uses, produces, stores or transports hazardous materials (toxic, corrosive or explosive) or generates hazardous wastes.
- f. Coral: no mining or excavation of live and coral or coral reef.
- g. Protected areas: no activities inside or in the vicinity of any protected areas to be supported. This includes: forest protection area; river edges; marine/freshwater conservation areas; nature tourism park; areas surrounding lakes and reservoirs; coastal mangrove areas; water catchment areas; national parks; coastal edges; forest parks; cultural reserves; areas surrounding springs; nature conservation areas; and areas susceptible to natural hazards.
- h. River protection: no subprojects are allowed to alter any river courses.
- i. Reclamation: no land reclamation will be financed
- j. Project activities that may have a negative impact on indigenous populations and/or affect their basic human rights and dignity;
- k. Project activities that may cause people to move from their land in an involuntary or forced manner;
- l. Project activities that would degrade or damage cultural property, including not only physical artefacts and structures but also sites considered sacred or otherwise having spiritual importance.

IV. Environmental Codes of Practice

IA and Sub-grantees must consider a variety of treatments to activities that will not harm the environment while still bringing sustainable benefits. To identify the environmental impacts, one needs to consider and record information on negative environmental impacts that might occur as results of physical works.

The following are examples of potential negative environmental impacts that might occur as a result of physical works:

Construction: change in hydrology, which may result in increased erosion, siltation, flooding or reduced water availability; reduction in water quality; degradation of wetland, fisheries and wildlife habitat; loss of vegetation from land clearing.

Livelihood activities: shading by tree crown can lower the yield and quality of associated agricultural crops beneath the trees; competition between trees and associated crops for

nutrients and water can reduce crop production; competition for growing space can reduce overall crop yield; destruction of agriculture crops; loss of vegetation; pressure to protected areas; deforestation; fossil erosion; ground water and air pollution; hazardous waste.

Water supply and sanitation: bacteriological or chemical contamination of aquifer and surface water; creation of standing stagnant water, which breeds disease-carrying insects; soil erosion and siltation of surface water resources; degradation of terrestrial, aquatic, and coastal habitat and associated wildlife.

This section describes environmental codes of practice that are based on good environmental management practices. CDNIP sub-projects may make use of these practices to minimize the negative environmental impacts of applicable activities. These good practices are provided as examples, but measures are not limited to the ones described here. Some measures will be locally specific and can be adapted using the best locally available technology.

1. Site Management

Physical activities must be planned carefully to prevent negative environmental consequences, no matter how small they are. Activities that do not consider resource conservation policies, appropriate site selection, appropriate technology, and socioeconomic factors are likely to degrade the environment. Examples of measures for various physical activities are:

1. Provide ditches, berm, culverts, and other measures to mechanically retard and control runoff from the physical activities, to control surface water and to protect drainage courses.
2. Burn off of ground cover is strictly prohibited.
3. Keep the sites free of hazard that can cause contamination to the soil, ground water, wildlife, and the people living in the vicinity.
4. Minimize clearing of trees.
5. Consider to not have the activities close to river banks.
6. Make sure that river banks are stable.
7. Determine if the proposed physical activity site contains biological or socioeconomic resources that could be negatively affected. Identify alternative sites where the land is not being used or is already degraded.
8. Develop a plan during the project design phase to monitor environmental impacts.
9. Involve local government and the local community in sub-grant proposal development, when necessary. If they become aware of potential problems early, they will be better prepared to assist in mitigation and monitoring.

2. Homestead Garden Agriculture

a. Training

- 1) Train farmers and field staff in the use of field interventions, such as organic farming techniques, homestead gardens, and homestead fish production. Training may include site visits by farmers and field staff to promising livelihood activities.

- 2) Train the farmers to identify best appropriate plants for their specific location, to the extent possible that are resilient to the local climate.
- 3) Establish a partnership between the project and the farmers. Farmers should have an opportunity during project identification and implementation process to express their needs and preferences regarding biological and socioeconomic interventions.
- 4) Monitor and evaluate the implementation of environmentally friendly farming practices on a regular basis.

b. Provision of trees/plants seedling

The seedling must be:

- 1) in good condition
- 2) healthy (free from diseases, fungal, bacteria, and virus)
- 3) well-developed shoot and root
- 4) local indigenous species
- 5) certified from a known local provenance and source (if possible)

Seedling storage should be:

- 1) packaged in bales/polybag
- 2) moss bales/polybag need be watered until used
- 3) store in cool and well ventilated place
- 4) seedling may be dipped in slurry prior to shipping
- 5) protect seedling from extreme heat and cold
- 6) to figure out how many trees to plant, one must know:
 - a. area to be planted
 - b. spacing of seedling

3. Household Scale Animal Husbandry

Animal waste can maintain soil fertility and replenish soil nutrients if collected and treated appropriately. Otherwise, uncontrolled manure can be a water pollutant and health hazard for both humans and other animals. For example, manure is often a carrier of disease bacterial organisms and can contaminate drinking water supplies with nitrates.

Litter/manure moisture content can be managed by:

- a. preventing water from rain, irrigation sprinklers and surface water from entering livestock sheds and storage facilities;
- b. preventing overstocking in sheds;
- c. rotary hoeing of litter in breeder sheds;
- d. covering litter with fresh absorbent materials or organic materials, such as leaves;
- e. removing wet patches of litter/manure.

Manure odor complaints can be further minimized by:

- a. careful site selection and farm design with adequate buffer distances to sensitive environments, such as water source, residential and school;
- b. considering prevailing wind direction, especially during dry season;
- c. optimizing the frequency of shed clean-out;
- d. keeping dust levels low, as odors are absorbed and carried by dust particles;
- e. not exceeding recommended livestock stocking densities;
- f. ventilation that achieves the maximum possible dilution of odor strength during shed clean-out;
- g. using dense vegetation buffer screens to cause turbulent airflow (to disperse odor), filter dust and redirect odor away from sensitive areas;
- h. positioning tunnel sheds carefully in terms of the direction of exhaust vents;
- i. containing litter and manure under weatherproof covering, prior to removal from the property; and,
- j. using livestock feed that is nutritionally formulated.

4. Homestead Garden Fishery

a. *Fish seeds requirement:*

Good fish seed are:

- 1) Body shape: well-formed body.
- 2) Body colour: bright, shiny.
- 3) Scales: no spot of missing scales.
- 4) Movement: active and exhibit normal movement.
- 5) Reflex: immediately reach to touch and try to escape.
- 6) Touch: slippery texture of the body.

b. *Transport of fish seeds:*

- 1) Fish can be transported in oxygen packed plastic or polyethylene bags and open container like barrel, aluminium, etc.
- 2) The carrying capacity of these container/bag depends upon:
 - Size and health condition of seeds
 - Distance and time to be taken
 - Water temperature
 - Supply of dissolved oxygen
- 3) Usually 8,000 – 10,000 seeds (10 cm and 5 cm) can be safely transported in one barrel (200 litres) for 12 – 14 hours.
- 4) Use the following table for planning your fish seed transport for 5 to 6 hours.

Seeds size	Type of packing material			
	Hundies (30 litre capacity)		Barrels (200 litre capacity)	
	Total	Per litre	Total	Per litre
Spawn	50,000	1,700	-	-
1 – 2 cm	3,000	100	20,000	100
2 – 3 cm	200	30	10,000	50
10–15 cm	100	3	1,400	7

c. Ways to avoid of fish seeds mortality:

- 1) Check water quality in fishpond before release the seeds
- 2) Make sure the fishpond/tank is free of:
 - weed and predatory fishes
 - mollusk
 - predator like snakes, frogs, birds, insect, etc.
- 3) Ensure the fish seeds placed separately pond/tank by age and size group
- 4) Ensure the availability of natural fish feed
- 5) Use additional fish feed that is nutritionally formulated

5. Home Industry

1. Ensure that the management plan addresses the anticipated use of natural resources and potential impacts to the environment. Issues to address in the management plan should include:
 - description of the size, scale, and location of activities;
 - raw materials (e.g., wood, potable water, and fuel) and storage facilities required;
 - type and extent of polluting discharges;
 - assessment of the industrial activity's effects;
 - availability of sewage disposal facilities;
 - placement and disposal of solid waste.
2. Monitor and mitigate potential environmental impacts at each stage of the production process.
3. Ensure the financed activities do not use, produce, store or transport hazardous materials (toxic, corrosive or explosive) or generate hazardous wastes.

6. Water Supply and Sanitation

Careful planning for water and sanitation sub projects is required to prevent negative environmental impacts. Effective project design and community training (e.g., hygiene and equipment maintenance) are most important in preventing such impacts. The contamination of water resources can seriously affect the environment, and poor water quality can have serious health consequences. Examples of good practices are:

a. Water supply

- 1) Always implement good watershed management;
- 2) Protect and manage forested water catchment and watersheds;
- 3) Do not allow outsiders to clear large forest areas in hilly and mountainous watersheds;
- 4) Protect primary forest in watersheds;
- 5) Before using a new water source, take a sample for water quality testing;
- 6) Protect water sources from pollution and contamination;
- 7) Share scarce water source between different users;
- 8) Locate dug well a safe distance from septic tank;

- 9) Use household level water treatment where needed;
- 10) Always provide good drainage at public and yards taps.

b. Sanitation

- 1) Build a complete septic tank system and make sure all parts of the system are working properly;
- 2) Use septic tank for wastewater treatment, dispose of effluent, properly pump out septic sludge periodically;
- 3) Treat septic tank effluent before final disposal;
- 4) Always keep toilets clean;
- 5) Do not litter;
- 6) Collect garbage;
- 7) Separate waste at source and disposal for recycling;
- 8) Control flies and other vectors.