



**New Partnership for
Africa's Development (NEPAD)
Comprehensive Africa Agriculture
Development Programme (CAADP)**



**Food and Agriculture Organization
of the United Nations
Investment Centre Division**

GOVERNMENT OF THE REPUBLIC OF THE SEYCHELLES

SUPPORT TO NEPAD–CAADP IMPLEMENTATION

**TCP/SEY/2903 (I)
(NEPAD Ref. 05/07 E)**

Volume IV of VI

BANKABLE INVESTMENT PROJECT PROFILE

Agro–Processing Pilot Project

January 2005

SEYCHELLES: Support to NEPAD–CAADP Implementation

Volume I: National Medium–Term Investment Programme (NMTIP)

Bankable Investment Project Profiles (BIPPs)

Volume II: Sustainable Pork and Poultry Production

Volume III: Sustainable Vegetable and Fruit Production

Volume IV: Agro–Processing Pilot Project

Volume V: Evaluation and Commercialisation of Underutilized Marine Resources

Volume VI: Support to Wood Exploitation and Utilization

NEPAD–CAADP BANKABLE INVESTMENT PROJECT PROFILE

Country: Seychelles
Sector of Activities: Agribusiness
Proposed Project Name: Agro–Processing Pilot Project
Project Location: National
Duration of Project: 5 years
Estimated Cost: Foreign Exchange.....US\$1.63 million
 Local Cost.....US\$0.17 million
 Total..... US\$1.80 million

Suggested Financing:

<i>Source</i>	<i>Million US\$</i>	<i>Million SR</i>	<i>% of total</i>
<i>Government</i>	0.18	1.17	10
<i>Financing institution(s)</i>			
<i>Beneficiaries</i>	1.62	10.53	90
<i>Private sector</i>			
<i>Total</i>	<i>1.80</i>	<i>11.70</i>	<i>100</i>

(*) €1.00 = SR6.50

SEYCHELLES:
NEPAD–CAADP Bankable Investment Project Profile
“Agro–Processing Pilot Project”

Table of Contents

Abbreviations.....	iii
I. PROJECT BACKGROUND.....	1
A. Project Origin	1
B. General Information.....	1
II. PROJECT AREA.....	3
III. PROJECT RATIONALE.....	4
IV. PROJECT OBJECTIVES.....	5
V. PROJECT DESCRIPTION	6
A. Promotion and Export Centre.....	6
B. Training	6
C. Promotion	7
D. Supplying of Vegetables and Fruits	8
E. Production and packaging:	8
F. Testing of products:	9
G. Purchasing of Products	9
VI. INDICATIVE COSTS	9
VII. PROPOSED SOURCES OF FINANCING	10
VIII. PROJECT BENEFITS	10
IX. IMPLEMENTATION ARRANGEMENTS	11
X. TECHNICAL ASSISTANCE REQUIREMENTS	12
XI. ISSUES AND PROPOSED ACTIONS	12
XII. POSSIBLE RISKS	13
Appendix: Preliminary Financial Analysis of the Project.....	15

Abbreviations

BIPP	Bankable Investment Project Profile
CAADP	Comprehensive Africa Agriculture Development Programme
FAO	Food and Agricultural Organization of the United Nations
FTC	Farmers Training Centre
GDP	Gross Domestic Product
MENR	Ministry of Environment and Natural Resources
MIIB	Ministry of Industry and International Business
NEPAD	New Partnership for Africa’s Development
NIE	National Institute of Education
NMTIP	National Medium–Term Investment Programme
SEnPA	Small Enterprise Promotion Agency
SHTTC	Seychelles Hospitality and Tourism Training Centre

I. PROJECT BACKGROUND

A. Project Origin

I.1. The concept of this project stems from the agreement signed between the Government of Seychelles and the Food and Agricultural Organisation of the United Nations (FAO) to implement the *Comprehensive Africa Agriculture Development Programme* (CAADP) to restore agricultural growth, rural development and food security in African region. The proposed project encompasses activities relating to organically preserving fruits and vegetables for export as well as for local consumption, which falls well in line with the CAADP’s framework.

I.2. This project is an off–shoot of the previously launched *Commercial Kitchen* programme which has been implemented by the *Farmers Training Centre* (FTC) since 2003. The *Ministry of Environment and Natural Resources* (MENR), the *Ministry of Industries and International Business*, (MIIB) and the Honorary Consulate of USA co–financed some basic equipment. The FTC was the mandated agency to run the *Commercial Kitchen* programme.

I.3. The project as a whole was conceived after lengthy discussions, at high government level, about wastage of vegetables and fruits. It was felt that the amount of vegetables and fruits being wasted could be preserved.

B. General Information

I.4. Seychelles is an archipelago of 43 granitic and 72 coral islands in the Western Indian Ocean stretching over 1 200 km from northeast to southwest. The major islands are Mahé, Praslin and La Digue. The granitic islands have hills up to 940 meters high, some narrow coastal plain and coral reefs on the East coast. Coralline islands are flat but with no fresh water.¹

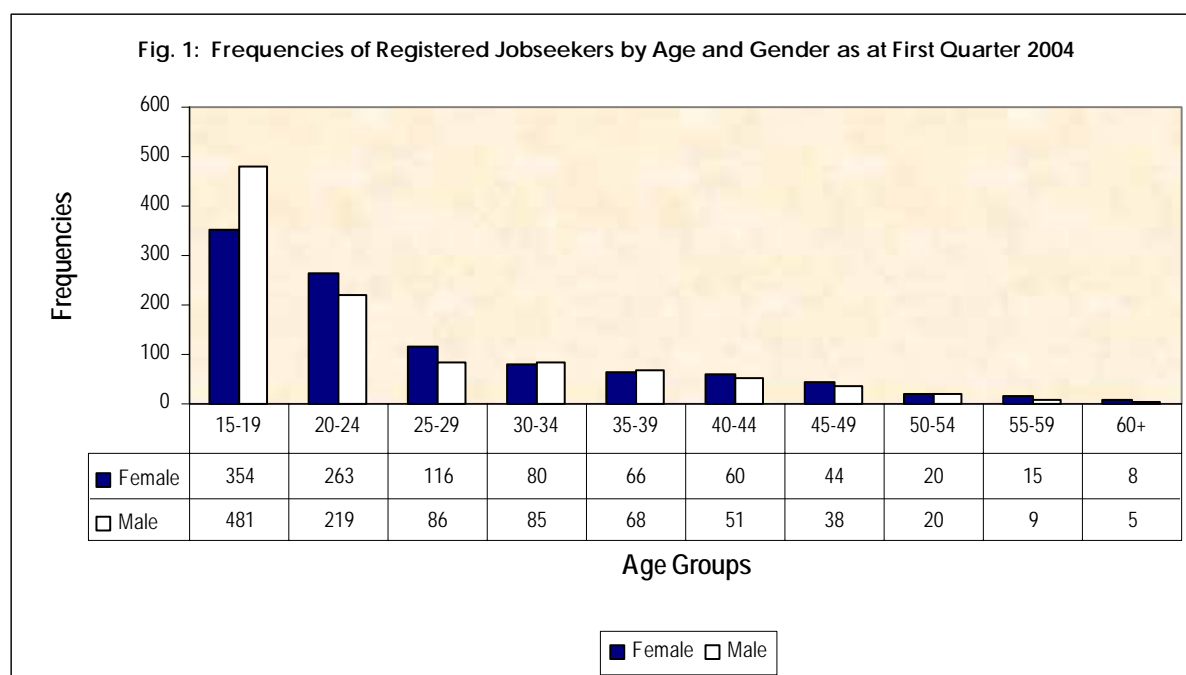
I.5. The climate is tropical with high humidity but breezy. Cooler weather brought by southeast monsoon from late May to September; northwest monsoon from March to May brings warmer weather. Mean average rainfall on Mahé is 2,880 mm at sea level and 3,550 mm on slopes.²

I.6. The Seychelles *Gross Domestic Product* (GDP) was estimated at US\$626 million for 2002 whereby agriculture contributed 3.1%, 26.3% by industry and 70.6% by services. The GDP per capita was US\$7,800 in that same year. The real growth rate was at 1.5 % whereas inflation was 0.5%. Unemployment during the first quarter 2004 has been an issue due to macro–economic slowdown. Figure 1 below shows the frequencies of jobseekers by age groups and gender thus indicating that 63.1% of the jobseekers are from the age groups of 15–19 and 20–24 years. This explains that these age groups consist of school leavers who are looking for employment; and from a gender point of view, the percentage was almost similar. It is important to note that according to the unemployment statistics for 2003, the estimated unemployment rate for 2004 would increase by 2%.³

¹ [http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field\(DOCID+sc0006\)](http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field(DOCID+sc0006))

² *Ibid.*

³ <http://globoledge.msu.edu/ibrd/CountryStats.asp?CountryID=129&RegionID=5>
and
http://www.workmall.com/wfb2001/seychelles/seychelles_economy.html



I.7. The total land area is 455 km², however, arable land amounts to only 2% (9.1 km²). Some of the major industries in Seychelles comprise fishing; tourism; processing of coconuts and vanilla, boat building, printing, furniture; and beverages. The agricultural sector, the second after the tourism sector, cultivates coconuts, cinnamon, vanilla, sweet potatoes, cassava (tapioca), bananas; broiler chickens; tuna fish and land for agricultural activities is increasingly on the decrease due to the boost of construction projects around the islands. The labour force across the board in 2002 amounted to 30,900 whereby the number for industry was 19%, services 71%, and agriculture 10%.⁴

I.8. Exports amounted to US\$235m (f.o.b., 2002) comprising mainly canned tuna, frozen fish, cinnamon bark, copra, and petroleum products (re-exports). Imports amounted to US\$380m (f.o.b., 2002) which included machinery and equipment, foodstuffs including preserved agro-processed products, petroleum products, and chemicals. Major trading partners are: UK, France, Italy, U.S., Spain, Japan, Netherlands, Thailand, Saudi Arabia, South Africa, Singapore, Taiwan.⁵

I.9. It is to be noted that neither rice — a daily dietary staple — nor other grains can be grown on the islands. However, through its 1992/93 policy governed by the philosophy of government disinvestment and revitalization of the private sector participation in the national economy. Government has privatized all state-owned farms and at present there are well over 250 families engaged in full-time production of foodstuffs, and an estimated of beyond 700 families working on a part-time basis. By means of its 2000–2010 policy document which aims for higher food security through sustainable agricultural production, many households cultivate gardens and raise livestock for home consumption. Initiative taken by government to reduce dependency on imported foods in the early 90s, including deregulating production and marketing, and reducing the trades tax on fertilizers

⁴ <http://globaledge.msu.edu/ibrd/CountryStats.asp?CountryID=129&RegionID=5>

⁵ [http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field\(DOCID+sc0006\)](http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field(DOCID+sc0006))

and

http://www.workmall.com/wfb2001/seychelles/seychelles_economy.html

and equipment has resulted in a boost in vegetables and fruits production ranging from 505 tons in 1990 to 1,170 tons in 1992.⁶

I.10. Given the fact that there are existing infrastructure and facilities at the FTC, this location has been chosen. However, this is not sufficient, given that the original planning of the project has not been implemented, issues being taken care of, partly in this project.

Table 1: Stakeholders Capabilities				
Sector	Institutions	Status of Stakeholders	Capabilities	
			Institutional	Budgetary
Government	Seychelles Bureau of Standards	Being beefed up	Technologies	Status quo
	The Ministry of Environment and Natural Resources	Functioning	Good	Good
	The Ministry of Health	Functioning	Good	Good
	The Ministry of Industries and International Business	Functioning	Good	Good
	Ministry of Education – NIE	Functioning	Good	Good
	Seychelles Hotel and Tourism Training Centre	Functioning	Good	Good
	Ministry of Tourism and Transport	Functioning	Good	Sound
	Farmers Training Centre	Needs beefing up	Good	Sound
Parastatals	Seychelles Industrial Development Corporation	Functioning	Good	Sound
	National Consumers Forum	Functioning	Good	Good
	Seychelles Marketing Board	Functioning	Good	Sound
Private	Individual Farmers	Functioning	Good	Sound
	Mr. Patrick Lesperance (Private Tutor)	Functioning	Good	Sound
	Mrs. Moyen Lesperance (Private Tutor)	Functioning	Good	Sound
	Mrs. Marie – France Marie (Producer)	Functioning	Good	Sound
	Mr. Cyril Larame (Producer)	Functioning	Good	Sound
Civil Society	Farmer’s Association	Functioning	Good	Sound
	Seychelles Hospitality and Tourism Association	Functioning	Good	Sound

II. PROJECT AREA

II.1. The proposed area for the project is at Anse à La Mouche, It is situated at the Southern part of Mahé, the main island whereby most of the economic activities are conducted. The exact location would be at the current FTC whereby the agricultural related trainings and recently the *Commercial Kitchen* training as a component of the overall training packages are being conducted at present.

II.2. The place is ideal for the project, given the fact that fruits and vegetables are available within this vicinity. Besides, with the given tourism activities in this area, the agro-tourism activities would be well suited.

⁶ [http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field\(DOCID+sc0030\)](http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field(DOCID+sc0030))
and
http://www.virtualeyechelles.sc/busi/busi_invest_agri.htm

II.3. The FTC compound has also been chosen in view that there were some existing facilities available to run the commercial kitchen programme. The fact that the programme was initiated by the MNRE, students following the Agricultural related courses were considered to be a ready made captive market for the Commercial Kitchen course.

II.4. It is expected that the participants for the course would be of 18 years old and above. Students from the FTC would participate on a part-time basis whereas those from outside the FTC, for instance the housewives, would have to participate in a three months intensive course and thereafter follow a nine months intensive course at an incubator level.

Table 2: Suitability of Stakeholders

Sector	Institutions	Suitability of Stakeholders	Capabilities	
			Institutional	Budgetary
Government	Seychelles Bureau of Standards	Suitable	Qualified Human Resources	Good
	The Ministry of Environment and Natural Resources	Suitable	Qualified Human Resources	Good
	The Ministry of Health	Suitable	Qualified Human Resources	Good
	The Ministry of Industries and International Business	Suitable	Qualified Human Resources	Good
	Ministry of Education – NIE	Suitable	Qualified Human Resources	Good
	Seychelles Hotel and Tourism Training Centre	Suitable	Qualified Human Resources	Good
	Ministry of Tourism and Transport	Suitable	Qualified Human Resources	Good
	Farmers Training Centre	Suitable	Qualified Human Resources	Good
Parastatals	Seychelles Industrial Development Corporation	Suitable	Qualified Human Resources	Good
	National Consumers Forum	Suitable	Qualified Human Resources	Good
	Seychelles Marketing Board	Suitable	Qualified Human Resources	Good
Private	Individual Farmers	Suitable	Qualified Human Resources	Good
	Mr. Patrick Lesperance (Private Tutor)	Suitable	Qualified Human Resources	Good
	Mrs. Moyen Lesperance (Private Tutor)	Suitable	Qualified Human Resources	Good
	Mrs. Marie – France Marie (Producer)	Suitable	Qualified Human Resources	Good
	Mr. Cyril Laramé (Producer)	Suitable	Qualified Human Resources	Good
Civil Society	Farmer's Association	Suitable	Qualified Human Resources	Good
	Seychelles Hospitality and Tourism Association	Suitable	Qualified Human Resources	Good

III. PROJECT RATIONALE

III.1. In-line with the CAADP framework, this project aims at encouraging sustainable use of natural resources, which in turn will further entice agricultural growth and additional economic activities in a ‘rural’ area on Mahé Island. As a result of such developments, it is expected that the Seychelles would be able to make available preserved food, thus assisting to reduce the food security problems at regional level, but at the same time make available some of these products on the international markets.

III.2. Despite the fact that sustainable land management is an issue, this project is not intended to take this as a priority to request additional land for agricultural purposes to support the project. The real issue here being that the use of the fruits and vegetables harvested must be optimised.

III.3. Besides, the issue of exportability of our products ought to be a priority. It is understandable that export is not something that is achieved overnight, especially because of our small production capacity, lack of economies of scale, and the issue of quality. These factors should not be excuses, given that solutions for such problems exist and could be explored. Market access to ease exportation of our produce would be a main priority.

III.4. Another reason for implementing this project would be that infrastructure for agro–processing in the rural area would be improved, thus creating training and employment opportunities for people around the island, especially those from the said area.

III.5. Food security in Seychelles, hitherto, is not a problem. However, given the fact that there is wastage of fruits and vegetables of which some could have been preserved for our local or international consumptions, this would definitely enhance food supply.

III.6. The development of the agro–processing plant would enhance research and development activities, encourage productivity growth once the project is in full swing and above all, ensure technological dissemination.

IV. PROJECT OBJECTIVES

IV.1. The *overall objective* of the project is to minimise the wastage of vegetables and fruits on Mahé, through an efficient system of harvesting, transporting and processing of those raw materials into preserved edible products for the local and export markets.

IV.2. The *objectives of the different components* of the programme are:

- To administer and manage the activities incorporated in the agro–processing project;
- To ensure the proper harvesting, transportation and distribution of the raw and packaging materials and finished products;
- To carry out market researches at both the local and international levels;
- To understand customers’ needs at the local and international levels;
- To produce products to meet the expectation of the customers at the local and international levels;
- To establish an efficient and formal protocol for the sales of the agro–processed products on the overseas niche markets;
- To adopt an aggressive sales strategy towards the identified international niche markets;
- To professionally package the products to be sold;
- To ensure that the products are tested online by the producers and off–line by the *Seychelles Bureau of Standards*;
- To promote the agro–tourisms activities;
- To ensure that the FTC train competent producers.

V. PROJECT DESCRIPTION

V.1. The project has been planned for 5 years during which time it is expected that a sufficient number of people have been trained in the field, thus the project would be up and running. Thereafter it is expected that the project would be economically sustainable. The project would comprise of the following components:

A. Promotion and Export Centre

V.2. The main problem associated with the wastage of fruits and vegetables at national level, is due to mismanagement. It is noticeable that during the appropriate season for a particular vegetable or fruit, wastage is everywhere. Farmers would not reduce the price of vegetables not sold, but would waste them. Fruits are also being wasted given that during their respective seasons, some are being harvested and sold at the markets; some would be used for domestic purposes, whilst others are either being thrown away, left to rot under their trees, or misused otherwise.

V.3. Alongside those problems, it is also worth noting that there is a lack of production of certain vegetables and fruits, and with the problem of wastage, this aggravates the problem.

V.4. The *Promotion and Exports Centre* would ideally be run by a private entrepreneur to take care of the logistic and marketing aspects of the project. Besides, it will also be responsible for the types of goods to be produced by sub-contracting to FTC graduates willing to embark on such a project. The entity would also be responsible for the provision of labels and recipients for the packaging.

B. Training

V.5. Capacity building in agro-processing related fields is of vital importance if the project is to be successful. At present there are a number of courses being run in parallel to the FTC programme. For instance, certain components are being taught at the *Seychelles Hospitality and Tourism Training Centre* (SHTTC) and also at the *National Institute of Education* (NIE). It is worth noting that at primary and secondary school level, home economics are also being instructed, which adds to the strength of the project.

V.6. It is therefore important that post secondary institutions such as the SHTTC, NIE, FTC work in partnership in planning and implementation of the training programs. To this effect, there is a need to re-design the *Commercial Kitchen* curriculum, taking into account the views of the above-mentioned post secondary educational institutions and above all the labour requirements. This would culminate into an agro-processing training manual which would include topics such as: (i) food handling certificate; (ii) quality assurance control; and (iii) nutritional aspects and value of the locally produced *Commercial Kitchen* goods, to name but a very few of such topics.

V.7. The training aspects should not shed light only on young school leavers but also matured students who would like to embark on such a program. Besides, in order to keep abreast with all new development the *Commercial Kitchen* field, there needs to be continuous training for the trainers.

V.8. However, this project addresses the issue of quality and timely production for the identified markets — local and international. It would be at a more industrial related level compared to the types of courses being run at present by institutions other than the FTC.

V.9. The issue of level of competence for students must come into play. The project should cater for different and yet incremental level of competence. With the launching of the new *Cottage Industry Policy*, its contents need to be communicated to students so that they become aware of the opportunities and mechanisms that exist for them to be assisted in starting their new ventures. For instance, there are a number of incentives and financial assistance at their disposition which would support them.

V.10. Therefore, the FTC would be the mandated educational institution to train and provide the necessary labour force for the production, testing and packaging of the agro-processed products. At present two in-service cohorts have been trained and the agro-processing components have been undertaken as subsidiary subjects. It is therefore hoped that this project would make the necessary arrangements for the agro-processing curriculum to be implemented in its own rights.

V.11. Trainees would be from the FTC — in-service students — as well as those from the community wishing to start an agro-processing cottage industry. The trainers have already been identified. Late last year a cohort of trainers were sent to La Réunion for training. Besides, throughout the educational system, there are a number of qualified people who would be more than willing to assist with the implementation of the project. The Seychelles Bureau of Standards will also input with regards to the issue of quality.

C. Promotion

V.12. The issue of promotion is another weak area that needs to be tackled. At present most of the local products are being sold locally. Very little research, if any, is being done to look at the needs of the local niche markets. A simple example would be the local tourism sector. It is often an afterthought that tourists envy tasting locally made dishes. Above all, there are a number of them who would wish to have first hand experience in cooking such dishes. This argument points at the need to promote a number of agro-tourism related activities.

V.13. Besides, demands for such products on the international markets have not been given due considerations. As can be noted, United Kingdom, Belgium and France could be the main markets for such organically preserved foods. Data for Africa on the matter is not available.

V.14. At a national level, a number of TV programmes have been aired to educate the public on the issue of cooking local dishes. However, despite the fact that the concept of cooking could incorporate the theme of food preservation; this is not always the case. The focal point of this project would be the latter concept — preservation but without disregarding the former.

V.15. As already mentioned before, at primary and secondary school level promotion of cooking locally available vegetables and fruits is ongoing. This is also the case at the NIE and SHTTC for a limited number of students.

V.16. Tourists visiting the islands do have a very limited number of places whereby they could procure locally preserved foods. For instance, they could go to the Victoria Market to find a limited number of such products on sale. Outlets in Victoria selling solely locally preserved foods as tourist gifts could be encouraged. Besides, hotels and tour operators could encourage tourists to visit the FTC whereby they could participate or even observe the processes involved in the preparation of such products. At the FTC compound, a Farm Shop is under construction for the promotion and sales of locally preserved agro-related produces. Adjacent to this, tourists could purchase those goods as gifts at a reduced rate.

V.17. It is no wonder that overseas promotion of locally preserved goods is in its infancy stage. To-date the only means to promote such products would be through relatives residing abroad, who would act as the promoters, selling such goods to the close-by Seychellois community. Otherwise, tourists who purchase certain preserved goods from Seychelles might promote such products among their relatives and friends.

D. Supplying of Vegetables and Fruits

V.18. Without the proper collection and supply of vegetables and fruits, the project would be a failure. This is one of the major problems, hitherto, given that there is no properly organised and reliable ways of harvesting, transporting and supplying of the needed vegetables and fruits. This project would make provision for a government agency to manage these activities, thus ensuring continuous supplies of the fruits and vegetables at reasonable prices.

V.19. The operational aspects would depend on the entrepreneur but as a general guideline, he would need to sub-contract the activities thus increase efficiency and effectiveness in the logistic system. It is worth noting that the storage of the fruits and vegetables falls within the scope of this activity, given that the prescribed demands for vegetables and fruits could be instantaneous as well as because if the fruits are not harvested when ripe, the issue of wastage would still be an issue .

V.20. Based on estimated figures for 2002 and 2003 on the amount of wasted vegetables, fruits, and other (tubers and spices), there is an indication that the trend is incremental. For instance for locally produced vegetables, there was an increase of 19%; fruits 4.3% and for others (24%). As for the proportion of such imported, there was of increase of 1% in wastage of vegetables, 12% for fruits and 6% for others. Tables 4 and 5 below indicate that the estimated amount of wasted locally produced fruits and vegetables; and imported fruits and vegetables is remarkable.

Table 3: Estimation of vegetables, fruits and other (tubers, spices) produced and wasted during 2002 and 2003

Crops	2002		2003	
	Estimated Production (tons)	Estimated Waste (tons)	Estimated Production (tons)	Estimated Waste (tons)
Vegetables	2,142	643	2,556	767
Fruits	1,088	327	1,137	341
Other(Tubers, Spices)	450	136	560	168

Table 4: Estimation of vegetables, fruits and other (tubers, spices) imported and wasted during 2002 and 2003⁷

Crops	2002		2003	
	Estimated Import (tons)	Estimated Waste (tons)	Estimated Import (tons)	Estimated Waste (tons)
Vegetables	4,863	1,459	4,911	1,473
Fruits	1,609	483	1,808	542
Other(Tubers, Spices)	174	52	183	55

E. Production and Packaging

V.21. Upon receipt of the vegetables and fruits at the *Promotion and Export Centre*, the sub-contractors will proceed with the production of the specified products as per the standards made available.

⁷ Ministry of Environment and Natural Resources, Planning Section, Statistics Unit.

V.22. Production is to be carried out only by producers who have been trained by the FTC. At the FTC, participants would have to go on intensive training for three months, followed by the setting up of and managing an agro–related business incubator for nine months before they graduate. Thereafter, those FTC graduates may wish to approach the *Small Enterprise Promotion Agency* (SEnPA) to have the setting up of their cottage industries facilitated. The whole process of going about the production of the organically preserved foods is crucial, to ensure that there is conformity in the product with regards to the respective standards and quality.

V.23. The issue of packaging is still of major concern here in Seychelles. A lot of efforts need to be put in designing appropriate labels and recipients for the products. With regards to labelling and food contents, the view of the ministry responsible for Health in Seychelles would be sought given that packaging encroaches with the *Food Act*, of which the Ministry of Health is the responsible authority. Besides, the issue of hygiene and safety within the production area are matters be tackled by the same ministry.

V.24. The FTC graduated entrepreneurs, sub–contracted to produce the goods, would be responsible to properly store the vegetables and fruits to be processed. Furthermore, they are not responsible to determine the types of products to be manufactured for the exporter but this will be done through market research carried out by the *Promotion and Export Centre*. Productions other than the ones stipulated by the exporter may be carried out, but for other markets.

F. Testing of Products

V.25. The testing of products is crucial to ensure that standards and qualities from the customers’ view points are satisfactory. To this effect, the *Seychelles Bureau of Standards* has identified a number of internationally recognised standards that should be used. At the point of production, testing of products should be an ongoing process. Therefore, the producers would have to be trained (at FTC) as to how to proceed with the tests. SBS would therefore be responsible to test those products as per their batch numbers, before they are being put on the local and international markets.

G. Purchasing of Products

V.26. It is crucial for this project to be market driven. Hitherto, most of the agro–related products have been originated from the producers rather than from what the market demands. It should be otherwise, especially when it comes to the international markets. There is a need for the producers to understand the exact product requirements if sales are to be good.

V.27. Furthermore, given the high production costs in Seychelles, the issue of price competitiveness should be borne in mind. On this note, the pesticide free or organic fruits and vegetables would be used and marketed, with the aim of creating and maintaining market niches for such natural products. Besides, products to cater for certain other special needs such as diabetic could also be catered for.

VI. INDICATIVE COSTS

VI.1. The actual building being used is adequate for the way the training is being conducted at present. However, this project makes provision for a double storey building to be built thus cater for the training space as well as for the incubator.

VI.2. Equipment is a problem, hitherto. There is a need to beef up the technologies being used by the training section of FTC. There would also be a need to properly equip the incubator with the needed technologies. Provisions are also being made for the procurement of two pick-ups to facilitate the transportation of the goods at the FTC.

VI.3. As for capacity building (training of the personal to carry out researches, product development, etc.) and institutional support (i.e. office and workshop equipments, research equipments, and transport) there needs to be heavy investment if the project is to be a success. There needs to be researches carried out to look at the locations of the various fruit trees around the islands and to get to know the seasons in which they bear fruits. This also applies for vegetables, except that the producers of the various vegetables and their locations are of concern. Reference materials for the courses as well as for the production side of the project would need to be catered for.

VI.4. The coordination of the program to ensure success is of paramount importance. Provisions have also been made in the budget so that the needed resources are available for the effective implementation and coordination of the project.

Table 5: Indicative Project Costs

Component	Local	Foreign	Total (US\$)	% Foreign Exchange	% Total Base Costs
1. Building (New)	40,000	360,000	400,000	90%	25%
2. Equipment	67,000	640,000	707,000	91%	43%
3. Capacity Building & Institutional Support	30,000	290,000	320,000	91%	20%
4. Programme Coordination	20,000	180,000	200,000	90%	12%
Total Base Costs	157,000	1,470,000	1,627,000	90%	100%
Physical Contingencies	9,420	88,200	97,620	90%	6%
Price Contingencies	7,850	73,500	81,350	90%	5%
Total Project Costs	174,270	1,631,700	1,805,970	90%	111%

VII. PROPOSED SOURCES OF FINANCING

VII.1. There would be mainly two sources of finance for the project, namely the Seychelles Government, which will be contributing in Seychelles Rupees whereas an International Financing Institution or development partner would be providing financial assistance in foreign currency. Hence, the Seychelles Government contribution would be about 10%.

VIII. PROJECT BENEFITS

VIII.1. This project would bring a number of benefits to Seychelles. They are summarised as bellow: In terms of employment, it is expected that graduates will embark on a cottage industry project in relation to the said activity. It is expected that around the actual number of students (20 per year) graduating from this part-time course could be tripled. Besides, those graduates could employ other people who will depend on the facilities available and the production demand.

VIII.2. Farmers and fruit tree owners who used to waste vegetables and fruits would now be in a better position to earn some cash from their products. From a larger perspective, once such products are being exported, the country would then benefit from foreign exchange earnings.

VIII.3. Another important factor to take into account, although no necessarily quantifiable, is the fact that women, especially housewives would be empowered economical once engaged in such activities.

VIII.4. From a national and international viewpoint, customers would have a wider variety of preserved goods from the Seychelles. This would also encourage the idea of agro–tourism especially at the national level. Coupled with this is the issue of additional employment creation in the tourism sector, although marginal.

VIII.5. From a science and technology viewpoint, it is expected that researches would be carried out and know–how and know–what is expected to be transferred to our local producers.

IX. IMPLEMENTATION ARRANGEMENTS

Table 6: Roles of Stakeholders			
Sector	Institutions	Roles of Stakeholders	General Responsibilities
Government	Seychelles Bureau of Standards	To ensure that information on quality, standards and technology is disseminated and products are tested.	To ensure that quality, standards are met and the appropriate technologies are acquired.
	The Ministry of Environment and Natural Resources	To ensure that availability of fruits and vegetables is sustainable and to minimise adverse effect on the environment.	To encourage households and farmers to grow fruits and vegetables and carry out EIA.
	The Ministry of Health	To ensure compliance to the Food Act and promote the benefits of organically preserved foods.	To ensure that the Food Act is implemented at Cottage industry level; and to raise public awareness on organically preserved food
	The Ministry of Industries and International Business	To facilitate agro–processing activities at cottage level. To entice exports and to promote the products to potential exporters.	To ensure the sustainable development of agro–processing cottage industries
	Ministry of Education – NIE	To provide training to teachers as per the FTC's guidelines.	To ensure proper training of teachers.
	Seychelles Hotel and Tourism Training Centre	To provide training to teachers as per the FTC's guidelines.	To ensure proper training of the tourism industry workers.
	Ministry of Tourism and Transport	To promote of the Agro–tourism Activities	To ensure efficient and effective promotion of the agro–tourism activities.
	Farmers Training Centre	To run and administer the training program including the incubator project	To ensure that participants
Parastatals	Small Enterprise Promotion Agency	To nurture cottage industries.	To facilitate the development of agro processing cottage industries.
	National Consumers Forum	To protect consumers' rights.	To assist consumers with complaints regarding the organically preserved products.
	Seychelles Marketing Board	Ensuring Food availability in Seychelles	To retail the organically preserved goods locally.
Private	Individual Farmers	Ensuring that availability of fruits and vegetables are sustainable.	To ensure sustainable provision of fresh fruits and vegetables
	Mr. Patrick Lesperance and Mrs. Moyon Lesperance (Private Tutors)	To provide training to the participants.	To ensure that graduates are competent.
	Mrs. Marie–France Marie and Mr. Cyril Laramé (Producers)	To produce quantity and quality of products for the local and export markets.	To ensure sustainable availability of organically agro–processed goods

Table 6: Roles of Stakeholders

Sector	Institutions	Roles of Stakeholders	General Responsibilities
Civil Society	Farmers' Association	To encourage the farmer to ensure sustainable availability of fresh fruits and vegetables.	To meet relevant authorities to discuss farmers' problems
	Seychelles Hospitality and Tourism Association	To raise the awareness of operators within the tourism sector on the issue of agro–tourism	To meet relevant authorities to discuss agro–tourism problems

X. TECHNICAL ASSISTANCE REQUIREMENTS

X.1. Technical assistance would be required for most of the project components both short– and long–term, in the following technical areas:

- Quality especially for the export markets;
- Customs laws and regulation of targeted importers;
- Production scheduling and implementation of schedules;
- Production system management;
- Research and report on resources assessment;
- Training of trainers' courses;
- Training for trainers;
- Agro–processing training manual;
- Two vehicles to transport fruits and vegetables;
- Chemicals for use in the SBS laboratory to support its quality assurance control services.

XI. ISSUES AND PROPOSED ACTIONS

XI.1. There are a number of critical areas which would need to be examined further as part of the project. A number of them are listed below.

XI.2. There needs to be proper research carried out as to how best to organically preserve fruits and vegetables. To this effect, preservation technologies need to be brought at the forefront through additional research to refine new and existing methods.

XI.3. Marketing of the products on the overseas niche markets need to be with vigour. The needs of the various niche markets identified would need to be explored further through in–depth researches.

XI.4. There would be a need to further train trainers of trainees to a higher degree level as to how to carry out research in agro–processing. This would enable Seychelles to put better quality as well as original products on the markets.

XI.5. Given the fact that at present Seychelles is experiencing foreign exchange shortages, it is of crucial importance that provision is made for the procurement of capital goods to be made prior to the funds being transferred to Seychelles. This will curb down on waiting time to access foreign exchange.

XI.6. At present, the issue of setting up a professional production system is new to many in Seychelles. To this effect, such a subject needs to be introduced as part and parcel of the project. It is therefore important that proper production systems are set up and information regarding its operational aspects is conveyed to the trainees.

XI.7. There is also the need for Seychelles to look at the possibility of controlling the white fly epidemic, including others that are currently affecting the fruits and vegetables all round the islands. This in effect is another means by which the fruits and vegetables are wasted. A study on the subject needs to be carried out thus propose more effective ways of eradicating this problem.

XI.8. There is also the need to look at the possibility to further encourage households to plant fruit trees as well as vegetables, not only for domestic consumption but also for selling to production centres, i.e. cottage industries which will definitely be involved in the project at a given point in time.

XI.9. Given the fact that some fruits are too expensive — e.g. a pineapple would cost SR50 — it would be by no means economically viable, if it was bought for value added purposes. To this effect, government needs to carry out a study to look into ways of reducing the price of such commodity.

XII. POSSIBLE RISKS

XII.1. A risk analysis was carried out and the following points were seen to be of importance:

- Shortage of seasonal fruits and vegetables could delay the production schedule to the extent that orders from the local and international markets may not be met.
- Shortage of foreign exchange for the importation of packaging materials, on a continuous basis will create a real problem for the entrepreneurs.
- Shortage of foreign exchange to start construction work and for the procurement of capital goods might be problematic.
- Lack of demands for certain products especially if a push marketing system is used, at the local and especially the international markets.
- The products may not be price competitive — there might be cheaper imported products, in the Seychelles or even on other markets.

NEPAD – Comprehensive Africa Agriculture Development Programme
Seychelles: Investment Project Profile “Agro-Processing Pilot Project”

Appendix: Preliminary Financial Analysis of the Project

All values are represented in SR'000						
Item	Yr. 0	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5
Investment	45.00	108.00	53.00	109.40	109.40	109.40
Expected Revenue(Sales)		90,000.00	90,000.00	90,000.00	90,000.00	90,000.00
Direct Costs						
Raw Materials		15,000.00	15,000.00	15,000.00	15,000.00	15,000.00
Packaging materials		18,000.00	18,000.00	18,000.00	18,000.00	18,000.00
Others		0.00	0.00	0.00	0.00	0.00
Tax (Trade tax & GST)		7,055.40	7,062.00	7,062.00	7,062.00	7,062.00
Total Direct Costs		40,055.40	40,062.00	40,062.00	40,062.00	40,062.00
Total Gross Profit		49,944.60	49,938.00	49,938.00	49,938.00	49,938.00
Operating Costs						
Salaries		47.00	47.00	47.00	47.00	47.00
Employers contribution		4.70	4.70	4.70	4.70	4.70
Rent		18.00	18.00	18.00	18.00	18.00
Stationery		1.00	1.00	1.00	1.00	1.00
Phone/Fax		2.40	2.40	2.40	2.40	2.40
Electricity/water		8.40	8.40	8.40	8.40	8.40
Fuel		30.00	30.00	30.00	30.00	30.00
Transport		0.00	0.00	0.00	0.00	0.00
Maintenance		0.00	0.00	0.00	0.00	0.00
Marketing		0.00	0.00	0.00	0.00	0.00
Loan repayment – Principal		18.94	20.57	12.46	14.04	0.00
Professional fees		0.00	0.00	0.00	0.00	0.00
Insurance		2.00	2.00	2.00	2.00	2.00
Miscellaneous		0.00	0.00	0.00	0.00	0.00
Total Operating Costs	0.00	132.44	134.07	125.96	127.54	113.50
Gross Operating Profit	0.00	49,812.16	49,803.93	49,812.04	49,810.46	49,824.50
Depreciation		1.90	1.90	1.90	1.90	0.40
Interest on loans		6.76	5.13	3.34	1.76	0.00
Net Operating Profit (Loss)	0.00	49,803.50	49,796.90	49,806.80	49,806.80	49,824.10
Taxes on Profit	0.00	19,903.40	19,900.76	19,904.72	19,904.72	19,911.64
Net Profits after taxes		29,900.10	29,896.14	29,902.08	29,902.08	29,912.46
<i>Discount rate (14%)</i>						
NPV	102,444.20					