

Project Proposal

Innovation driven Integrated Development Plan for Tree Crops-based Food Industries for Improving Food & Nutrition Security

Coconut (Cocos nucifera L), Kitul (Caryota Urens L), Palmyra (Borassus flabellifer L)

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Objectives

Overall Objective: The overall objective of the Integrated Development Plan is to harness the development potential of Tree Crop-Based Industries (TCBis) through sustainable development initiatives to strengthen the Government of Sri Lanka's initiatives to enhance the export income.

Immediate(or Primary) Objective: The Immediate objective of the development plan is implementing sustainable development initiatives through programs and projects identified as strategic solutions to address the constraints for the development of TCBis.

Secondary Objectives:

Developing operational tools for cultivation and value addition to coconut to facilitate growth of TCBis.

Recommending public policy instruments to the National Policy and proposing institutional infrastructure required for enabling environment for the growth of CBis.

Benefits/Beneficiaries

Export income from the TCBI, more and downstream value added products

Minimize the resource waste in TCBI

Conceptual adaptation of era of renewable resources

Women and their families in rural areas whose lifestyles are closely linked with TCBI

The growing elderly population who need stability of access to income.

The tourism industry by providing organic food for increasing number of tourists.

The estimated arrival of tourists in 2016 is 2.5Mn.

Creates job opportunities and improves quality of living standards of people.

Development Targets - Coconut Base Industry (CBI)

Increase the export income from CBI to 5bn USD by 2025

Increase the export income from CBI to 2bn USD by 2020

Downstream and high end value addition to CBI

Background/Introduction

Coconut is an agricultural commodity which takes part in food and non food applications. Sri Lanka is holding the 5th place of the world in coconut production

<http://www.factfish.com/statistic/coconuts,%20production%20quantity>

Sri Lanka's annual production is calculated as 2,500,000 MT and 3,000,000 nut equivalent.

<http://www.factfish.com/statistic-country/sri%20lanka/coconuts%2C%20production%20quantity>

Background/Introduction

Out of total production, 60% is consumed domestically and 40% contributes to the export market. As per 2016, 763 companies have been registered as manufacturing facilities.

(https://docs.google.com/forms/d/1_v49MBylMhshMYdi6MQJ3aL3iyLavJi_RtxGB-iQ6Ms/viewanalytics). Mostly concentrated in the coconut triangle and engaged in kernel as well as non kernel sectors.

Scope of CBi

The Integrated Development Plan will be focusing on following areas through innovation driven approach.

(i) Upstream- Promotion and development of cultivation/plantation by development of high quality planting material with characteristics of high yield, food value and easy harvest.

(ii) Midstream- Postharvest management aiming at minimizing postharvest losses.

(iii) Downstream- Value addition and supply chain development by developing product/process manufacturing technology, food safety Certification, and by upward and downward linking with the markets and producers.

Upstream -

Role of CCB and CRI.....

Role of Palmyra Board.....

Role of Industrial Development Board Kitul

Midstream

Current issues.....

Skilled labour for de-husking, de-shelling and paring operations

Coconut water collection system

Processed coconut products for the local community

Improvement to the current white coconut oil production technology

Effective sap collection method

Midstream.....

Current issues.....

Coconut shell collection system - Domestic

W2E Conversion in factories

Husk collection - Domestic

Treatment of chemical wastes - Substrate industry

Midstream.....

Current issues.....

Lack of raw material for substrate industry

Quality of raw materials

Downstream

Current issues

Loss of competitive advantage in DC Industry

Contaminants in VCO - Mould effect, PAH

Low quality of substrate materials

Loss of competitive advantage in fiber industry

Common issues

Issues related to legal enforcement (Gazette notification)

Practical issues in implementation of regulatory mechanism

Solution..... Mega Zone

Basically,

Kernel

Non kernel



DC based Industry



Substrate Industry

Oil based Industry



Fiber

Industry

Export performance 2015

Sector	Bn LKR 2015	Growth
Kernel Products	41.6	12 %
Fibre	4.6	-29 %
Shell	10.2	-4 %
Finished products	18.5	1 %
Total	75.25	3 %

Best performing products

Virgin Coconut oil	10.1	95 %
King Coconut	0.288	119 %
Coconut cream	1.2	55 %
Coconut Milk	4.6	45 %
Vinegar	.011	71 %
Coir yarn	.255	16 %
Coir fiber pith	7.2	12 %
Husk Chips	1.036	17 %
Coconut Water	.444	320%

Need to divert 1 bn nuts for industry

1bn nuts are sufficient to operate another 55 industries @ 60,000 nuts /day

- 60% used in SL market as liquid milk @ lower price
- 40% used for growing industrial sectors (recover from domestic wastage)
- Dedicated Mega zone can be utilized to divert coconut

Achievement plan 2bn USD, 2020

Virgin Coconut oil	10.1	95 %	40
King Coconut	0.288	119 %	1
Coconut cream	1.2	55 %	7
Coconut Milk	4.6	45 %	75
Vinegar	.011	71 %	0.5
Coir yarn	.255	16 %	1
Coir fiber pith	7.2	12 %	20
Husk Chips	1.036	17 %	5
Coconut Water	.444	320 %	75

Achievement plan 5bn USD, 2025

Limitation - Nut availability. Hence execution

- Fractionated oil (Liquid coconut oil, MCT, Lauric acid in virgin)
- Advanced technical oil such as transformer oil
- Advanced application of coco fiber - Bio toothbrush
- Self digestive substrate applications
- Soluble food fiber, Coconut protein isolates

