



Food and Agriculture  
Organization of the  
United Nations



# Innovative financing mechanisms for promoting sustainable land management





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## Contents

Contributors .....	v
Acknowledgements .....	vi
Acronyms and abbreviations .....	vii
Executive summary .....	ix
Introduction .....	1
Identifying innovative financing mechanisms for SLM .....	3
Potential innovative financing mechanisms .....	4
1. Payments for Ecosystem Services (PES) .....	4
2. A) Sustainability standards (formal) .....	4
2. B) Sustainability standards (informal) .....	5
3. Argo-ecotourism .....	5
4. Corporate Social Responsibility (CSR) .....	5
5. Re-allocating public budgets .....	5
6. Risk schemes .....	5
7. Green lending .....	5
Guideline for implementing the innovative financing mechanism .....	6
Possible barriers for implementation .....	10
Approach for identifying the most suitable IFM .....	10
Findings 11	
Identification of innovative financing mechanisms for the RDAL project .....	21
Innovative finance mechanisms related to supply chains of hotels and retailers .....	22
Certification schemes .....	22
Agro-ecotourism .....	24
Innovative finance mechanisms related to the finance sector .....	25
Agricultural (Green) loans .....	25
Impact bonds .....	26
The Re-allocation of public budgets as an innovative financing mechanism .....	28
Payments for ecosystem services as an innovative financing mechanism .....	29

Other significant considerations.....	29
Conclusion .....	30

## Figures

Figure 1. Identity preserved or track and trace model and segregation models pertaining to traceability (Mol & Oosterveer, 2015).....	23
Figure 2. Proposed system of IFMs involving the hotel and retail sector .....	24
Figure 3. Proposed combined IFMs – Agri-loan and Impact Bond Scheme.....	27

## Tables

Table 1: Private sector organisations contacted and met for IFM discussions .....	11
Table 2: Key findings from discussions with retail (supermarket) sector.....	12
Table 3: Key findings from discussions with tourism/hotel sector .....	14
Table 4: Key findings from discussions with tea sector.....	16
Table 5: Key findings from discussions with finance sector .....	18

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## Acronyms and abbreviations

ASH	Aitken Spence Hotels
BIOFIN	Biodiversity Finance Initiative
BoC	Bank of Ceylon
CB	Commercial Bank of Ceylon PLC
CBSL	Central Bank of Sri Lanka
CSR	corporate social responsibility
DOA	Department of Agriculture
ES	ecosystem services
FAO	Food and Agriculture Organization of the United Nations
GAP	Good Agricultural Practices
GEF	Global Environment Facility
GM	Good Market Sri Lanka
GN	Grama Niladhari
GOSL	Government of Sri Lanka
ICT	information and communications technology
IFAD	International Fund for Agricultural Development
IFMs	Innovative Financing Mechanisms
IUCN	International Union for Conservation of Nature
JKM	Jaykay Marketing
LUPPD	Land Use Policy Planning Department

MHPP	Mini Hydro-Power Project
ODA	Official Development Assistance
PES	payments for ecosystem services
RDAL	Rehabilitation of Degraded Agricultural Lands
SaB	Sampath Bank PLC
SB	Seylan Bank PLC
SLH	Shangri-La Hotels
SLM	sustainable land management
SO	Saaraketha Organics
USD	United States Dollars
WFP	World Food Programme

## Executive summary

Projections indicate the need for food and feed production to increase by about 60 percent by the year 2050. However, due to environmental issues such as climate change, it is challenging for the developing countries to finance such an effort with conventional sources of finance. Innovative Financing Mechanisms (IFMs) could assist in bridging this funding deficit and/or provide assistance to the farmers to save on expenses borne by them. IFMs can also support agricultural production indirectly by reducing uncertainties and risks borne by financial institutions that provide financial solutions to farmers, and also by assisting farmers to overcome transaction costs related to supply chains. The finances directly received or the savings which the farmers make as a result of operationalizing IFMs can be used to subsidise sustainable land management practices undertaken by farmers on their lands.

The report aims to develop a set of guidelines on how to identify and develop IFMs for sustainable land management within the Rehabilitation of Degraded Agricultural Lands (RDAL) project area, and also to describe the process followed by IUCN to identify potential IFMs which are suitable for the RDAL in Kandy, Badulla and Nuwara Eliya Districts in the Central Highlands Project area.

The IUCN team initially referred to the Biodiversity Finance Initiative (BIOFIN) documentation to identify a list of potential IFMs and this list was reviewed by a panel of experts as well. Considerations were also made by the IUCN team to explore the possibility for IFMs to also address certain barriers which the RDAL project had identified as being in the way of operationalising SLM practices. Next, the IUCN team developed a set of guidelines suited for the selected IFMs. This would inform the development process of the IFMs.

Due to the nature of the IFMs which were selected, it was considered that the potential stakeholders best suited to partner with the RDAL project in implementing them would be identified from the private sector. This was accomplished by exploring past initiatives by various organisations which were recognized by the presidential environment awards. Fifteen organisations from the sectors of Tourism, Tea, Retail and Finance were selected. Discussions were held with representatives from each of the organisations to collect the data required by the guidelines. Following the discussions with the private sector as well, the IFMs that were finally considered worth exploring were:

1. Payments for Ecosystem Services (PES)
2. Re-allocation of public budgets
3. Agro-tourism
4. Green loans
5. Corporate Social Responsibility (CSR)
6. Certification schemes
7. Market access
8. Insurance schemes

One of the main findings was that, of the companies consulted, the IFMs most suited for them were those which were in line with their mainstream activities. One organisation in the Tea Sector and the banks had activities which were in line with IFMs and yet somewhat decoupled from their mainstream activities. Sector specific data was also collected to help better

contextualise the IFMs and identify potential risks and potential solutions for them. For example, the banking sector was more interested in contributing to the project by conducting CSR activities and were risk averse to providing banking solutions/financial products.

Following the activities described in this report, the IUCN team described five IFMs which could be implemented within the project areas. Of these, three were selected and detailed proposals were developed following further discussions with all relevant stakeholders.

## Introduction

Innovative financing mechanisms (IFMs) have been in operation in the broader field of development for some time (Leading Group on Innovative Financing for Development, 2012). Such mechanisms are innovative as they provide 'new resources' for a particular development objective whether it be healthcare, education or biodiversity conservation (SADC, 2007). In the field of agriculture, IFMs can generate new resources or increase the transfer of existing resources to promote agricultural practices that are sustainable and that will conserve and enhance the delivery of agricultural ecosystem services.

The leading agencies in agriculture (FAO, WFP, IFAD) agree that food and feed production will have to increase by 60 percent by the year 2050 in order to meet global demand (FAO, WFP and IFAD, 2012; Leading Group on Innovative Financing for Development, 2012). Most of this demand will be met through increased production in developing countries where there is greater capacity (Leading Group on Innovative Financing for Development, 2012). The FAO has calculated that developing countries will need to spend an additional USD 83 billion per year (a 50 percent increase of current level) in order to meet the global demand (Leading Group on Innovative Financing for Development, 2012). Although the productive potential is large in developing countries, the risk of climate change impacts is higher and their capacity to finance this gap is limited, therefore the development of innovative financing mechanisms will be of great significance in agriculture.

Agricultural production in Sri Lanka is the backbone of the economy and it mainly consists of small-scale farmers. Approximately 80 percent of the country's population lives in rural areas, and almost half of poor<sup>1</sup> rural people are small scale<sup>2</sup> farmers (IFAD, 2019). One of the underlying reasons for the insufficient investment on sustainable land management practices (SLM) is that the Government of Sri Lanka and the farming community haven't accounted adequately for the real cost of land degradation and benefits of SLM to individuals as well as the economy. In effect, the costs of not implementing SLM is borne by the society as a whole (negative externalities) and the public benefits of adopting SLM are not fully valued directly by farmers and landholders. Therefore, there is a critical need to understand on-farm and off-farm effects of land degradation and evaluate the ecosystem services generated by well-managed agricultural lands, so that such information can be used in developing appropriate financing mechanisms to promote SLM. Furthermore, as investments in SLM generate greater social benefits compared to short-term individual gains, there is a rationale to encourage and provide incentives to smallholder farmers to utilise sustainable practices on their farmlands. Developing IFMs can provide further assistance (financially or in kind) to farmers to help them overcome certain transaction costs, while also facilitating financial institutions to overcome uncertainties and risk related to the agriculture sector. It is expected that by operationalising Innovative financing mechanisms (IFMs) individually or collectively, farmers can be encouraged to conduct SLM practices on their lands by building on private sector investments and/or government funds.

Developing innovative financing mechanisms that are tailored to the environmental, economic and socio-cultural context of paddy, vegetable, home garden and tea farmers in the central highlands of Sri Lanka will enable and promote the use of SLM practices which in turn will contribute to the rehabilitation and prevention of further degradation of these lands.

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<sup>1</sup> Living on less than USD 1.25 a day (UN definition of poverty)

<sup>2</sup> The definition for small scale farms adopted by IFAD/FAO is 2 ha or less. But there is variation in how smallholder farmers are characterised by marginalisation, in terms of accessibility, resources, information, technology, capital and assets (IFAD, 2013).

Although IFMs can cover a wide range of tools, the Leading Group on Innovative Financing for Agriculture, Food security and Nutrition, has identified several key characteristics of an IFM. These include stability, predictability, complementarity to Official Development Assistance (ODA), new partnerships and strong linkages ((Leading Group on Innovative Financing for Development, 2012) See Box 1 on p. 3).

An IFM, for example, could be in the form of a mechanism to strengthen governance, or one which involves regulatory policies or one which involves economic incentives. A few mechanisms such as Cess funds for the tea industry, subsidy schemes for soil rehabilitation, new planting or re-planting, and budgetary reallocations for the prevention of soil erosion are operational in Sri Lanka. However, these are not sufficient to promote sustainable land management. There still is a lack of funding to incentivise SLM and therefore the broader FAO/GEF project will develop and implement IFMs in order address this issue. Previous reports of this project developed by IUCN demonstrate the importance in identifying the ecosystem services used and generated by different agricultural lands, and in understanding how agricultural practices may affect the availability and delivery of these ecosystem services. This information will be useful in selecting and tailoring an innovative financing mechanism that will enhance the ecosystem service and broader social benefits.

This report is divided into two main parts: the first part is a general guideline to aid the identification and development of potential IFMs for sustainable land management in agricultural lands in Sri Lanka; the second part outlines the process followed by IUCN to identify potential IFMs for the RDAL project.

The sections of the report are as follows:

1. General guidelines on:
  - a) How to identify innovative financing mechanisms.
  - b) How to implement innovative financing mechanisms.
2. Approach used for identification of five potential IFMs for the Rehabilitation of degraded agricultural lands in Kandy, Badulla and Nuwara Eliya Districts in the Central Highlands Project (RDAL) project. This involves:
  - a) Providing an understanding about the ongoing agriculture related IFMs in operation by different categories of stakeholders.
  - b) Assessing the gaps for potential IFMs and providing insights into their implementation.

### **Box 1. Characteristics of IFMs** (leading group on innovative financing for development, 2012)

**Stability:** stable financing mechanism is essential for agricultural development because interventions are in the long run.

**Predictability:** financing resources must be predictable over the time frame required by agricultural development projects, so as to make possible a planning of activities. This requires that resources must be quantifiable, which implies resource mobilisation mechanisms clearly formulated and applied by all contributors.

**Complementarity to traditional ODA:** Innovative financing should complement traditional ODA and ODA can meanwhile serve as a catalyst for attracting private resources which would otherwise not be invested in agriculture.

**New Partnerships:** This criterion calls for mechanisms implying in their management and utilisation of resources the civil society and private sector as well as contributors.

**Existence of a linkage between the source and the utilisation of funds** in order to avoid the risk for the new resources to be reallocated to the other sectors than the one it was originally designed for.

**Contributor's acceptability:** innovative financing would have little chance of success if potential contributors are not convinced of the interest of their contribution.

**Feasibility:** Selected mechanisms must be relatively easy and fast to set up. The methods of collection and transfer of resources and the control of utilisation must be transparent. This is difficult to assess at concept stage or when the mechanism has not been experimented in other sectors.

**Anticipated amount of resources:** This is an essential criterion for the selection of future mechanisms, given the considerable financial requirements of the agricultural sector in the developing countries.

**Resource mobilisation cost:** the transaction cost for leverage funds should be minimised as compared to financial contributions.

## **Identifying innovative financing mechanisms for SLM**

Innovative financing mechanisms cover a wide range of methods to generate resources, and therefore, fully understanding the context in which the IFM is to be applied is key in selecting an effective IFM. The following should be considered when choosing an appropriate IFM:

- The agricultural land use type – i.e. home garden, vegetable plot etc.
- The issue to be addressed: which SLM practice(s) needs to be incentivised and/or which ecosystem services are affected and how can it be protected/enhanced?
- The type of mechanism: is it for governance strengthening, regulating or economics incentive mechanism?
- Evidence of success: has it been implemented in Sri Lanka and/or has it been implemented elsewhere, and what makes it successful or how effective is the mechanism?
- Are there possible barriers to implementation?
- Is there a general level of awareness of the IFM?

Streck, *et al.* (2015) has come up with a finance guide for decision makers which lists policies and measures with specific actions, types of costs incurred, common financing instruments, points of access to those instruments and specific examples (Annex 1). The Leading Group on Innovative Financing for Development (2012) identifies characteristics of IFMs (Box 1) and analyses different types of IFMs according to criteria – political feasibility or acceptability by contributors; stability or predictability of resource; management effectiveness; flexibility of implementation; win-win criterion and ethical risks; resources mobilisation capacity; probability of effective use of resources; and impact (Annex 3). Similar information as described in these two studies are covered in the guidelines under the two sections ‘how to identify’ and ‘how to implement’, in a more practical manner that is applicable to Sri Lanka (See Box 2 on p. 6 and Box 4 on p. 9).

## Potential innovative financing mechanisms

As part of the process in identifying the potential financing mechanisms, the IUCN team drew information from the Biodiversity Finance Initiative (BIOFIN). The BIOFIN catalogue (IUCN, 2018) was created through several rounds of consultative workshops with an end result of over 100 IFMs for biodiversity conservation. Further discussions and a validation workshop focused the catalogue to 46 applicable IFMs. It was this final validated list that was consulted, and with the use of in-house expertise, potential IFMs for the promotion of SLM in the central highlands of Sri Lanka were identified.

At the stakeholder consultation workshop held on the 10 September 2019, feedback on the list of potential IFMs and inputs on any other possible IFMs were obtained and this list is provided below. Consultations with stakeholders from a range of sectors and a workshop organised with an expert group held on the 25 November 2019 were conducted subsequently in order to identify the most suitable IFMs to be conducted by the RDAL project.

### 1. *Payments for Ecosystem Services (PES)*

In broad terms, payments for ecosystem services is an approach which uses positive incentives to change behaviour in order to better manage ecosystems that provide benefits (or ecosystem services) to society (Van Hecken, *et al.*, 2015). In its simplicity, a PES scheme is where a beneficiary or a user of an ecosystem service(s) pays the provider (monetarily or in-kind) to ensure the provision of that ES through better management. There are variations of PES in which an intermediary or government institutions may be involved. In watersheds for example, upstream farmers or landowners would be paid to manage their lands and adopt practices that will ensure regular, clean water flow to downstream users (Grieg-Gran & Porras, 2012) (See Case Study Box 3 on p. 7 for detailed example).

### 2. *A) Sustainability standards (formal)*

A sustainable standard is a set of rules or principles that define good environmental and social practices that producers, traders, retailers, manufacturers or service providers can follow for their product (Green Palm, 2016; UNFSS, n.d.). Examples include fair-trade certification and the Good Agricultural Practices (GAP) certification in Sri Lanka, which recognises farmers for ensuring “quality and safety of agricultural commodities” (DoA, n.d.). The voluntary certification promotes agribusiness by increasing market linkages and increasing the profits of farmers, and incentivises farmers to adopt sustainable practices.



## **2. B) Sustainability standards (informal)**

A sustainability standard can have a more formal process as described above, where a distinctive label proves that a company's product follows recognized eco/environmental standards, or it can have a more informal process established through trust and social capital. For example, the relationship between the farmer selling organic produce to a customer (hotel or restaurant) is based on the farmer's word that good environmental and social practices were adopted in farming.

## **3. Argo-ecotourism**

Eco-tourism for spice gardens, tea plucking, organic farming and other curated experiences is a potential area for development of financing mechanisms. In addition, partnering with hotels pursuing sustainability will provide opportunities for direct market linkages, where the farmer has an incentive to pursue SLM practices and the hotel can advertise a farm to table concept.

## **4. Corporate Social Responsibility (CSR)**

CSR helps companies live up to their responsibilities as global citizens and local neighbours. A coherent CSR strategy based on integrity, sound values and a long-term approach offers clear business benefits to companies and a positive contribution to the well-being of the society and planet. CSR include both business process re-engineering as well as the funding of charitable activities, both of which could be directed towards the promotion of SLM practices in agriculture.

## **5. Re-allocating public budgets**

This mechanism looks at the possibility of re-allocating public budgets towards sustainable land management. For example, an agriculture subsidy that directly or indirectly harms biodiversity and/or contributes to land degradation can be eliminated or phased out. Subsidies can include (indicative) price support, direct income support, tax incentives, subsidized inputs and extension services.

## **6. Risk schemes**

Disaster risk insurance - Insurance schemes that cover (against a premium) the costs incurred by the insured entity from extreme weather and natural disasters (i.e. such as earthquakes, floods). If the risk occurs, the insurer refunds a percentage of the costs incurred. Insurance schemes are widely used to increase households and enterprises resilience to external shocks by reducing future expenditures.

Environmental risk insurance - Insurance schemes that cover against environmental liabilities (i.e. the financial risk associated with environmental pollution and contamination) in exchange of a premium. In addition to prevent future expenditures to realize and reduce businesses' risks they provide contingent resources for immediate remedial action in the event of an environmental disaster.

## **7. Green lending**

Lending facility by a development or commercial bank that is dependent on environmental criteria for the planned use of funds. These criteria can include an identified sub-sector (e.g. climate change adaptation) or reference to certain best practices (e.g. via certification of sustainable agricultural/forest management practices).

## Guideline for implementing the innovative financing mechanism

Once an appropriate IFM has been identified, further details need to be gathered in order to implement the mechanism. A set of general guidelines has been developed in order to ease the process of implementation. However, all details may not be applicable to every IFM and the required content will vary from one IFM to the other. If the guidelines were developed to be more specific, potential IFMs may be left out at the identification and implementation stage. Therefore, a broad set of guidelines was developed in order to consider all possibilities for generating resources to promote sustainable land management.

### Box 2. Information required for the development of IFMs

Name of IFM: .....

Potential Location (if applicable): .....

Geographic Scale: .....

Agricultural land use type (if applicable): .....

Brief description of mechanism/modality: .....

    Stakeholders: .....

    Activities/Outcomes: .....

Costs involved: .....

Cost bearer: .....

Duration (if applicable) and timelines: .....

Monitoring & Evaluation entity: .....

Legal documents/agreements required: .....

Supporting policies (if required): .....

Validation of mechanism and process: .....

Further Assessments required: .....

Notes: .....

At this stage of developing the appropriate IFM, further assessments need to be conducted and the information obtained at the identification stage will be detailed to form the mechanism. It is very important to understand ‘what needs to be done by whom’, and identifying the key stakeholders is crucial to working out the modality of the mechanism (Box 2). In-depth research, expert working group meetings and stakeholder workshops will be extremely useful for this process. The economic rationality i.e. what are the associated costs and what needs to be paid by whom, and any required legal agreements or processes also need to be identified at this stage. All aspects of information required to develop an IFM is presented in Box 2, and an example of an IFM is described according to these aspects in Box 3. Instructions or general guidelines on how to obtain and utilise this information is described in Box 4.

The general guidelines were presented at the stakeholder consultation workshop on the 10th of September, where the objectives of the workshop were to understand whether the structure of the guidelines were useful and whether the potential IFMs were applicable. This was achieved through a group activity where participants were asked to fill out an example of one of the listed IFMs according to the format in Box 2, and to propose any other IFM they considered useful (Annex 4). The exercise was effective as participants were able to fill out a certain level of detail for each IFM and identify which factors need further research.

### Box 3. Case study of IFM for SLM - payments for ecosystem services pilot project

**Name of IFM:** Ganthuna Mini Hydro-power project (MHPP)

**Brief description of mechanism/modality:** The Ganthuna MHPP is located in the upper catchment of Gurugoda Oya basin, which is one of the main sub river basins of the Kelani River.

The hydropower operator of the Ganthuna MHPP will provide financial inputs to upstream farmers/communities in order to better manage lands and restore the catchment areas, so that the operator may benefit from the ecosystem services - steady water flow and good water quality.

**Stakeholders:**

The ES beneficiary: in this regard would be Vidullanka Pvt Ltd – the mini hydro-power operator. The ES provider: farmers/communities in the catchments of the two weirs (Diversion Weir Catchment 1 – Ganthuna Medagama GND and Jambugasmadama GND, Main Weir Catchment 2 – Jambugasmadama GND).

**Intermediary:** Several Rural Development Societies have been identified as potentials, however final selection needs to be conducted.

**Coordinating Committee** – to develop and agree on watershed management plan, and provide technical inputs. Local level coordination committee includes: Officers of the Aranayake Divisional Secretariat, LUPPD, Department of Agrarian Development, Agriculture Extension officer, Regional Forest Officer, Tea Estate management, representative of selected rural development society, community members, representative of Vidullanka, and any other agency representative in the area on need basis.

**Activities:** The activities proposed for this pilot project include: streamside forest restoration, open forest restoration, agro-forestry, soil and water conservation on identified intervention areas. Further site specific locations have been identified along with applicable interventions, the extent of the area and detail such as proposed plant species for forest restoration – streamside and other forest areas. The implementation plan included monitoring the improvements of the catchments due the proposed interventions over a period of five years.

**Geographic Scale:** Watershed level

**Costs involved:** Initial budget plan for watershed management of Ganthuna MHPP was formulated based on the template given below;

Specific intervention area	Type of specific intervention	Extent of specific interventions			Cost norms			Activity cost (LKR)		
		High	Med	Low	Unit cost	Unit	Source	High	Med	Low
Stream Banks	Forest Restoration					LKR/ha	FD			
Open Forest	Forest Restoration					LKR/ha	FD			
Forest Plantation	Soil and water conservation					LKR/ha	NRMC			
Tea	Soil and water conservation					LKR/ha	NRMC			
<b>Total activity cost under each scenario</b>										
<b>Implementation cost (25% of the activity cost)</b>										
<b>Approximate commitment from MHPP for 5 years</b>										

**Cost bearer:** Vidullanka Pvt Ltd has agreed to bear 50 percent of the catchment restoration costs and funding for the remaining amount needs to be sourced.

**Duration (if applicable) and timelines:** Initial plan is over a period of five years (as detailed in cost Table above).

**Monitoring entity:** IUCN will monitor the changes in baseline conditions for the first one and a half years with the assistance of University of Peradeniya and University of Kelaniya. Following which a different monitoring entity may need to be identified, or capacity of the intermediary strengthened to take on the role.

**Legal documents/agreements required:** Agreements need to be formed and signed between the beneficiary and provider, with the intermediary present.

**Supporting policies (if required):**

**Further assessments:** Baseline assessment of the state of the watershed needs to be conducted. Furthermore, an institution which can play the role of an intermediary needs to be identified as well.

**Validation of mechanism and process:** The development of this PES scheme occurred under the BIOFIN initiative and has already gone through several rounds of assessments and validation workshops, and with the creation of a coordinating committee with representatives of each involved institution the validation process is streamlined.

*Source: IUCN (2019) Piloting a Payment for Ecosystem Services (PES) Mechanism in Sri Lanka: Conservation of Watershed Ecosystem Services with a Private Sector Owned Mini-Hydro Project. BIOFIN-UNDP.*

#### **Box 4. Guidelines on innovative financing mechanisms for sustainable land management**

Innovative Financing Mechanisms – tools or methods to generate new or transfer existing resources to a particular development objective. In this case the objective is to promote sustainable land management practices among farmers.

1. **Identify agricultural lands or farmers** as potential areas for promoting SLM practices through the implementation of an IFM – *this involves identifying types of agricultural lands, geographical scale (or number of farmers), level of land degradation, soil and water quality assessments where applicable and the benefits of adopting SLM practices to the farmer.*
2. From the selected lands, conduct a socio-cultural study to **understand farmer perceptions** – *this involves understanding reasons for not conducting SLM practices, willingness to change agricultural practices, land ownership and socio-economic details.*
3. Based on these two assessments, **identify one or more suitable IFMs** or types of IFMs – *i.e. direct market access, green/agricultural loans, economic incentive based IFMs, government regulations etc.*
4. **Identify potential stakeholders** for the mechanism and conduct an initial round of meetings – *assess organisations' willingness to participate, if the IFM is a government regulation type then assess policies to be developed/changed in partnership with relevant government entity.*
5. **Develop the details of the IFM** – *based on the discussions and assessments, develop specific IFM(s), location/scale of implementation, the number of farmers/farmer groups benefitting, the key stakeholders (private sector or public or partnership), and the modality of the mechanism (i.e. who is responsible for what).*
6. Further discussions with stakeholders to **finalise details** – *agree on the mechanism and modality with all stakeholders, conduct awareness programs for farmers, formulate legal documents/agreements where necessary, develop an initial five year/three-year plan (if mechanism is not streamlined and ongoing in operations), identify costs of mechanism and bearer of costs (relates to point 5).*

\* It may be helpful to implement the mechanism as a pilot initially with room for scaling up if successful.

\*\* Important to note that the above steps may not be followed for all IFMs, and due to the broad nature of mechanisms the level of details and types of detail will vary from one mechanism to the other.

## Possible barriers for implementation

The larger FAO project has identified priority issues (and their causes) which can affect the implementation of SLM practices in Sri Lanka. From this list, some issues can potentially be addressed through IFMs and others may be potential barriers for the implementation of IFMs. These include:

- Inadequate public knowledge of cost and benefits of un-sustainable land management practices and farming systems.
- Poor or lack of implementation of existing land use and environmental protection related laws and regulations, weak law enforcement and monitoring activities.
- Land ownership traditions and customs, weaker property rights and tenancy laws.
- Lack of effective regulatory mechanisms.
- Barriers and impediments to relevant authorities to fully implement existing laws and control such harmful and illegal activities.
- Inconsistent policy directives issued time to time, outdated information used to inform policy and poor coordination among departments and institutions.

IFMs can be tailored to address these barriers to a certain extent, however there may be instances where several mechanisms and collective efforts may be required to address land management issues. These guidelines are intended to be a simple, practical and effective measure to be used by the Government of Sri Lanka for the development of IFMs in the field of agriculture.

## Approach for identifying the most suitable IFM

In the process of identifying the most suitable IFMs for the RDAL project, it was first considered important to better understand ongoing initiatives related to agricultural IFMs in Sri Lanka. Given that almost all of the eight potential IFMs listed above (page 4-6) would involve the participation of the private sector, steps were taken in identifying several key stakeholders and discussions were held to document lessons learned. Under the broader sectors of Tourism, Retailers, Finance and Tea Sector, several stakeholders were identified via recognition of past initiatives through presidential environment awards lists and reputation in their respective fields. Requests were made to representatives of the organisations from the four sectors and meetings were arranged with twelve organisations (Table 1).

**Table 1. Private sector organisations contacted and met for IFM discussions**

Sector/ Industry	Organisation(s)
<b>Tourism</b>	Aitken Spence Hotels, Jetwing Hotels, Shangri-la Colombo
<b>Tea Sector</b>	Talawakelle Tea Estates PLC, Dilmah Tea Services (MJF Charitable Foundation, Dilmah Conservation, Kahawatte Plantations) and Amazon Tea
<b>Retail</b>	Jay Kay Marketing Services (PVT) Ltd (Keells Supermarkets), The Good Market, Saaraketha Organics
<b>Finance</b>	Bank of Ceylon, Commercial bank of Ceylon PLC, Sampath Bank PLC, Seylan Bank PLC, Nations Trust Bank

Initial, open discussions with each of the organisations allowed for a deeper understanding into the ongoing/past agriculture related initiatives where some were integrated into the operations of the different organisations and others were separate projects. Insight into the supply chains or mode of operations and the products and services provided by these organisations enabled the identification of potential entry points for the RDAL project and increased engagement with smallholder farmers. The IUCN team met with representatives chosen by these organisations and depending on the organisation the representative's role varied from being part of a designated sustainability and/or CSR division or a part of the mainstream operations. The main findings of these discussions are described (below) in a manner corresponding with the general guidelines on how to identify IFMs. However the type of details differ from one sector to the other and there is further information required to fully conceptualise IFMs.

For the public sector related potential IFMs, such as the re-allocation of public budgets, the subsidy scheme for chemical fertilisers was reviewed and suggestions are made in the section below.

## Findings

In general it was found that almost all of the 15 organisations realise the significance of encouraging sustainable land management practices in agriculture and the impact it has from a business standpoint. Given the reliance of most of these organisations on good-quality ethically-produced sustainable agricultural products, the initiatives conducted form part of or entire business/operational models of the organisation. Only the philanthropic (or CSR) arms of the Dilmah Tea Services (MJF Charitable Foundation and Dilmah Conservation) and the banks had initiatives somewhat decoupled from the mainstream activities of the respective companies. However, with regards to the former the business philosophy of the founder suggests that the company strongly considers the operations of the philanthropic activities as part of their company's overall vision.

The key findings of each discussion with the private sector organisations are described in the tables below, and is presented according to the key points highlighted in the general guidelines for identifying IFMs. It was observed that the retail (supermarkets) and tourism sectors operate mainly in vegetable, homegardens and paddy of the agricultural land use types. The finance sector potentially operates in all agricultural land use types, and private sector tea companies were contacted specifically due to tea smallholders being beneficiaries of the RDAL project.

Table 2. Key findings from discussions with retail (supermarket) sector

Retail sector stakeholder	Operational model	Type of IFM(s) practiced	Interest to work with project	Challenges
<b>The Good Market – Sri Lanka (GM)</b>	Has two stores: one market and over 1000 vendors supplying organic produce since 2012. Uses the Participatory Guarantee System (PGS) which is a local certificate accredited by International Federation of Organic Agriculture Movements. It's the farmer's task to bring the produce to the city. Good market does not provide collection/transport services. However, does provide trainings and crop planning guides to farmers, maintains contact and provides advice through the one year transition period to organic cultivation (for new farmers).	Certification + market	<ul style="list-style-type: none"> <li>• Currently working with commercial (mid-level) farmers, but very keen on working with smallholders if some obstacles can be solved.</li> <li>• Can provide support through training programmes to farmers.</li> </ul>	<ul style="list-style-type: none"> <li>• No consistent supply of crops – have developed a recording system (report card) for farmer to keep track of crops on a weekly basis.</li> <li>• No transport/collection systems – homegarden owners and small scale farmers are not willing to travel to the city. GM hopes to build capacity and appoint a collector from within the village to avoid higher prices from middlemen.</li> <li>• Lack of good quality organic seeds.</li> <li>• Farmer lands may be contaminated due to practices of adjacent lands.</li> <li>• Farmer income level drops during transition phase to organic cultivations – GM encourages diversification and processing of dry foods.</li> </ul>
<b>Jaykay Marketing Services (Pvt) Ltd (Keells Super) (JKM)</b>	Keells has collection centres all over the country, and each centre has a manager and farmer base. The manager contacts the farmers whenever there is an order for specific produce. Farmers bring their harvest to these centres and from there it is transported by Keells to Wattala where it is then sent out to the supermarkets. This process occurs on a daily basis. Keells operates with the Control Union	Certification + market (with collection and transport of produce)	<ul style="list-style-type: none"> <li>• Potential to expand the farmer base through the project, however currently farmers are approaching their collection centres.</li> <li>• Expressed a need and keenness for training of new and existing farmers (of the farmer base) in SLM practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Consistency in produce (in size and shape) is the main issue faced by Keells.</li> <li>• Main obstacles for farmers is lack of knowledge, lack of finances and lack of engagement with government extension officers.</li> </ul>



Retail sector stakeholder	Operational model	Type of IFM(s) practiced	Interest to work with project	Challenges
	<p>Certification but there are some instances where Sri-Cert is accepted.</p> <p>Although there is no guarantee to the farmers that all their produce will be bought, there is a guarantee of a market. Farmers have the option of selling to other retailers, economic centres, etc.</p> <p>Keells has their own extension officers who conduct trainings for farmers and monitor practices conducted on agricultural lands.</p>			
<p><b>Saaraketha Organics (SO)</b></p>	<p>Utilise a forward purchasing agreement with individual farmers or farmer organisations to collect organic produce. Quality and quantity needs to be ensured by farmers and a guaranteed premium price would be offered (10-15% higher than market). The model currently involves vegetables, spices and grains, with room for expansion into other crops. Saaraketha Organics does not support in the procurement or payment of the certification schemes but does provide capacity building and trainings for farmers.</p> <p>It operates with EU and USDA certifications.</p>	<p>Certification + market (with collection and transport)</p>	<ul style="list-style-type: none"> <li>• Expanding their farmer contacts/supply, given that the produce is a good quality and steady quantity.</li> <li>• Interested in expanding to traditional crop varieties and traditional farmers.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>The operations of Saaraketha Organics is similar to the retail operations of The Good Market. However, the supply chain is more integrated which helps to overcome most of the challenges faced by the Good Market.</i></li> </ul>

**Table 3. Key findings from discussions with tourism/hotel sector**

Tourism sector stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
<p><b>Jetwing Hotels</b></p>	<p>Provides the capital required for farmers to cultivate on the hotel's lands and forms an agreement where 50 percent of the harvest of each farmer is given back to the hotel. The remaining 50 percent produce belongs to the farmer to use/sell. This concept is mainly done for Paddy and the organic produce is generally bought by Jetwing at a higher price. There are currently 31 farmers operating in this program at Kaduruketha.</p> <p>Jetwing also has started a pilot programme to help suppliers to obtain certifications such as GAP, GMP, PGS.</p> <p>The revenue from some of the biodiversity tours (e.g. frog tours) is provided to farmers to ensure safe levels of chemical fertiliser use as some of the tour sites include homegardens and farmlands.</p>	<p>Market + Agro-tourism</p>	<ul style="list-style-type: none"> <li>• Potential to support farmers in obtaining certifications – not clear in what capacity.</li> <li>• Potential for developing agro-tourism concepts.</li> </ul>	<ul style="list-style-type: none"> <li>• No significant challenges other than getting youth involved in agriculture – developing a farmer school with a NVQ level certificate is in the pipeline.</li> </ul>
<p><b>Shangri-la Colombo</b></p>	<p>Has a <i>Rooted in Nature</i> programme which encourages organic/sustainably cultivated local produce and is based on trust-basis from farmers. The business model looks at quality, quantity and price. The larger suppliers have economies of scale and are able to provide a steady source of product, and the project currently operates with Colombo adjacent/western province farmers. Through the programme they train suppliers on international standards of hospitality and food quality etc.</p>	<p>Market</p>	<ul style="list-style-type: none"> <li>• Looking to buying good quality produce on a daily basis so that storage is not required and is interested in linking up with models like Good Market and Saaraketha.</li> <li>• Potentially provide support for training programmes for farmers.</li> </ul>	<ul style="list-style-type: none"> <li>• The supply chain is less integrated therefore it was implied that the process of supplying quality produce at acceptable quantities for the <i>Rooted in Nature</i> for the hotel could be improved.</li> </ul>

Tourism sector stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
<b>Aitken Spence Hotels</b>	<p>It is preferred that 40 percent of the procurement budget goes towards obtaining perishables (fruit/veg) from a 2 km radius from the hotels. When a farmer is introduced to the system, he/she is given a “first supplier status” where there is a transition period of three years with less scrutiny. If the farmer can comply to the standards expected by the hotel, a longer term relationship is considered. The farmer is given a guaranteed price that is estimated monthly, and seasonal changes on food demands are taken into consideration.</p> <p>Organic tea is produced in their own gardens and organic vegetables are sourced on a one-on-one basis.</p> <p>The hotels segregate their waste into 21 categories and are considering ways to upcycle their waste and freely distribute it to anybody from the neighbouring community as long as the hotel can procure the products.</p>	Market	<ul style="list-style-type: none"> <li>• Not against working with smallholders and willing to expand supply base.</li> <li>• Willing to assist financial sector by providing credit history.</li> </ul>	<ul style="list-style-type: none"> <li>• The supply chain is more integrated with forward purchase agreements and grace periods for new entrants to the supply chain which makes the supply chain more robust.</li> </ul>

Table 4. Key findings from discussions with tea sector

Tea sector stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
<b>Talawakele Tea Estates PLC</b>	Does not currently deal with bought leaf (from smallholders), but if the project can incorporate third party verification for quality control purposes, they can consider dealing with smallholders.	<i>(Potential. See next column)</i>	<ul style="list-style-type: none"> <li>• Keen on receiving support and technical expertise for SLM on plantations, but understood this is outside the scope of the project.</li> <li>• Interested in developing a programme for certification schemes such as UTZ and ethical tea partnership. However proximities of the farmers to each of the factories needs to be assessed.</li> <li>• Prior to considering an IFM associated with the company, it is important to prove that a bought leaf programme is economically viable in the project area.</li> </ul>	<ul style="list-style-type: none"> <li>• Labour shortage</li> <li>• Technology for harvesting</li> </ul>
<b>Dilmah Tea Services, Dilmah Conservation, Kahawatte Plantations</b>	<p>There is an existing bought leaf programme taking place in Nawalapitiya at a small scale (20 percent of Kahawatte plantation production).</p> <p>MJF charitable foundation currently has a Yams project involving 55 farmers, and potentially linking to 35 more. The focus is providing equipment and market linkages.</p> <p>Organic farming project was conducted but main challenge was the pesticide/chemical fertilizer overuse by adjacent farmers.</p>	<i>(Potential. See next column)</i>	<ul style="list-style-type: none"> <li>• Interested in developing a plan with FAO/IUCN and Kahawatte Plantations for the bought leaf programme. Education/trainings will also be part of the programme.</li> <li>• Prior to considering an IFM associated with the company, it is important to prove that a bought leaf programme is economically viable in the project area.</li> </ul>	<ul style="list-style-type: none"> <li>• For farmers – lack of market links, diversification and access to technology.</li> </ul>

Tea sector stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
<p><b>Amazon Trading (Pvt) Ltd.</b></p>	<p>Deals with several entities; those relevant to the project geographical area include two farmer associations: Marginalised Organic Producers Association (MOPA) and Small Organic Farmers Association (SOFA). These were founded by Bio Foods which provide the tea to several factories that Amazon deals with.</p> <p>In 2018, a total of 186,000 USD was invested on developing local farmer clusters, 44 percent of which was spent on Projects at Farms, 26 percent on Reconceiving products and markets; 17 percent pm Cash flow support to farms; 9 percent on knowledge sharing and 4 percent on social empowerment.</p> <p>Keen on engaging with the entire value chain – “creating shared value” (CSV). Under this, funding is allocated for certification process and knowledge sharing. Documentation for the certification process is handled by primary producers which is an institution such as the factory or representatives from both factory and farmers.</p>	<p>Certification+ Market</p>	<ul style="list-style-type: none"> <li>Interested in linking farmers to MOPA and SOFA, and farmers would benefit from CSV activities. However discussions need to be had with Bio Foods, as they have their own CSR.</li> <li>Interested in taking part in a study to quantify ecosystem services by SLM practices, as currently considering measuring impacts of organic farming on biodiversity.</li> </ul>	<ul style="list-style-type: none"> <li>(none provided)</li> </ul>

Table 5. Key findings from discussions with finance sector

Finance sector <sup>3</sup> stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
<b>Nations Trust Bank</b>	<p>The CSR work conducted by the bank for the last 10 years include: wildlife rescue and rehabilitation with Wildlife conservation society and WNPS, forest restoration work with IUCN and others, educational and awareness programs, and patron member of BSL.</p> <p>Does have some green loans e.g. for solar and drip irrigation but these were not successful due to risks involved.</p> <p>Part of the sustainability banking initiative with 17 other banks – the Central Bank dictates that 10 percent of the portfolio</p>	CSR, attempted Green Loans	<ul style="list-style-type: none"> <li>Interest to develop new products which could be rolled out initially as a CSR and then mainstreamed.</li> <li>For example: Blended financing with risk sharing, with a partner such as the Central Bank.</li> <li>SL development bonds/impact bonds – a government forward contract where if the private sector invests now (based on biodiversity criteria or similar), the government pays back with a premium.</li> <li>For agro-loans – a dependable guarantor is required. For example a mechanism like the Tropical Land Finance Facility.</li> </ul>	<ul style="list-style-type: none"> <li>Incorporating financing mechanisms into business is difficult, requires a longer process that has to have a business proposition and go through approval.</li> </ul>
<b>Sampath Bank PLC</b>	<p>CSR activities under two broad themes:</p> <p>Developing entrepreneurship by engaging with village level institutions such as women and youth societies – currently conduct a project for organic farmers in partnership with the Dept of Agriculture. Trained farmers in marketing, finance and developed a market in Kurunegala for</p>	CSR	<ul style="list-style-type: none"> <li>Although tank restoration is the key focus under the current strategic plan of water sustainability, the bank is keen on funding initiatives that will deal with water contamination.</li> </ul>	<ul style="list-style-type: none"> <li>Bank was not keen on developing financing mechanisms because one of the issues highlighted involve collateral – lands most likely are not owned and a guarantee scheme would need to be implemented.</li> </ul>

<sup>3</sup> It must be noted that while the Central Bank of Sri Lanka (CBSL) states that 10 percent of the lending portfolio of commercial banks should consist of agriculture related lending (Bank Supervision Department Central Bank of Sri Lanka, 2013) there was variability in the list of agriculture related financial services provided by the GOSL or CBSL (which are expected to be implemented by financial institutions such as commercial banks eg. Comprehensive Rural Credit Scheme from GOSL and Saubagya Loan Scheme from CBSL (Central Bank of Sri Lanka, n.d.)) specifically mentioned by the participants, therefore judging by the findings mentioned in Table 5 it is not clear as to which of these schemes were not offered by these banks

Finance sector <sup>3</sup> stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
	<p>organic farmers. This is 100 percent funded by the Bank.</p> <p>Water sustainability – mainly consisting of tank restoration activities.</p> <p>Also involved with the sustainable bank initiative.</p>			
<b>Seylan Bank PLC</b>	<p>Programme for smallholder farmers called the New Comprehensive Rural Credit Scheme – loans for cultivation based on Central Bank instructions. Mainly involves vegetable farmers and includes aspects like land preparation and soil rehabilitation. Bank recognizes that poorly managed agricultural lands increase risk and affect farmer ability to pay back the loan. Therefore, considers promoting SLM as good business.</p> <p>Conducted programmes for farmers with USAID and ADB, including financial literacy.</p> <p>The bank is in the process of developing a set of general guidelines in the form of an Environment and Social Management System associated with finance projects.</p>	Agricultural loans, CSR	<ul style="list-style-type: none"> <li>Criteria of loans need to be worked out, for which the bank does not have technical expertise.</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring is important – agricultural extension officers need to ensure that correct practices are being conducted on the farm, trainings for these officers are required as well.</li> </ul>
<b>Commercial Bank PLC</b>	<p>Agriculture related savings, loans and fund transfers include: comprehensive rural credit scheme, commercial scale dairy development scheme, agribusiness loan scheme and micro loans.</p> <p>Conducted awareness programs for farmers and agriculture extension officers</p>	Green finance schemes (solar energy), agricultural finance schemes	<ul style="list-style-type: none"> <li>Piloting or considering – crop insurance mechanism. But insurance is not attractive or expensive and claiming payments is cumbersome.</li> <li>Debt protection – if a state or entity can provide insurance</li> </ul>	<ul style="list-style-type: none"> <li>(none provided)</li> </ul>

Finance sector <sup>3</sup> stakeholder	Operational model (brief description)	Type of IFM(s) practiced	Interest to work with project	Challenges faced
	on financial literacy and how to minimise risks.		mechanism to re-settle the loan then the bank can provide a loan for the next season.	
<b>Bank of Ceylon</b>	Has a programme called Mithuru Societies developed with BOC funds. Small groups are formed and development officers provide trainings for financial capacity of the participants. The groups can then develop a proposal to obtain a loan. Objective is to engage with those who do not have access to banking and introduce them to the system.	Financial products, CSR	<ul style="list-style-type: none"> <li>• Keen on discussing programmes with FAO/IUCN to provide financial assistance.</li> <li>• Interested in developing and providing technological support to farmers as well.</li> </ul>	<ul style="list-style-type: none"> <li>• IFMs could face high risk and fail due to:</li> <li>• Lack of engagement with the entire value chain (including stakeholders such as seed suppliers and tractor operators).</li> <li>• Lack of formal agreements between farmers and retailers such as buyback guarantees and other two party agreements.</li> </ul>



From the discussions, market access through private sector organisations seems to be the predominant mechanism. Most of these entities operate with certification schemes, but some provide more support than others to farmers in obtaining certifications. There are only a few examples of agro-tourism in place with potential for development. However, discussions were held with only three companies from the tourism sector, and there may be greater potential with smaller hotels/guesthouses in the area.

From the finance sector, green/agricultural loans are provided by one or two private banks (under the requirements of the Central Bank), but mainly not pursued due to the high risk involved. Most of the banks still operate through CSR activities and have expressed interest in partnering with the project under certain thematic areas.

Regional plantation companies are more concerned with engaging in sustainable land management practices on their own lands. However, companies with bought leaf programmes are interested in partnering with the project to expand their base of smallholder tea growers in a manner that is economically feasible. Retailers in this sector, like Amazon tea, are important in providing the market link, but when the value chain is fragmented (and more players are involved) the initiatives conducted may not be as effective.

It is important to note that the above discussions only provided an insight into some of the types of agricultural IFMs currently operational in the private sector in Sri Lanka, the needs and concerns expressed by these organisations, and the gaps in which the project may be able to assist. In order to develop an IFM to implementable stage, further research and detailed discussions need to be conducted with all key stakeholders (company, farmers, implementing agency etc.).

### **Identification of innovative financing mechanisms for the RDAL Project**

The findings of the private sector discussions depict three of the previously identified IFMs either currently in operation or having potential for implementation and the promotion of sustainable land management practices. These include the certification schemes, green/agricultural loans and CSR. Access to markets, although not identified amongst the seven IFMs identified initially, were in fact the main mechanism provided by private sector entities. However market access often does not function in isolation, but rather works in conjunction with other mechanisms such as certifications. Furthermore, synergies between financial institutions requiring a means of reducing credit risk and credible buyers who can provide proof of a reliable market in the form of issuing forward purchase contracts (which guarantee a floor price) were not only highlighted in the consultations conducted with the potential stakeholders, but were also described by Onumah & Meijerink (2011) as a potential means of value chain financing. Similarly, Jager, *et al.* (2019) also proposed that IFMs are implemented collectively to ensure a sustainable means of directing private sector investment and government funds towards supporting/encouraging sustainable forms of agriculture.

Therefore it is clear that it may be important to develop several IFMs along a value chain in order to ensure the adoption and sustainability of land management practices by farmers. For instance, a low interest rate agricultural loan will enable the farmer to transition from conventional farming to more sustainable/organic farming methods while a retailer can provide direct market access including collection/transportation of produce, and the certification scheme can ensure that a higher price is obtained and that good practices are being conducted. Furthermore, CSR activities can further build capacity of farmers and farmer organisations. Monitoring services can be provided by retailers, third party certifications, state extension services and banks issuing green/agricultural loans with a set of SLM related

criteria. Although Insurance schemes (such as crop insurance) exists in Sri Lanka, this isn't readily adopted and can be a potential area for further research (Wickramasinghe, 2016).

During the expert group meeting held on the 25 November 2019, it was also agreed that there is a need to provide due consideration to the views and expectations of the farmers regarding the implementation of IFMs, including their views on IFMs to promote SLM and Ecosystem Services prior to implementation, as interests in a particular incentive(s) may vary from farmer to farmer. This was a sentiment shared by authors such as Teixeira, *et al.* (2018) who studied the relationship between motivations of farmers and their farming practices, and posited that large scale farmers who practice a more capitalist way of farming maybe more interested in sustainable forms of farming if it is profitable, while for smaller scale farmers it may be crucial to provide access to knowledge, credit and extension services while also valuing their identity and culture.

The preference to work with farmer societies was mentioned fairly consistently during the consultations. Furthermore, the literature shows that collective action via social organisations (including cooperatives, farmer associations, and groups) could also help the farmers by:

1. Improving access to:
  - a) markets
  - b) means of managing natural resources
  - c) knowledge
  - d) policy making processes
  - e) needed services
2. Reducing
  - a) high transaction costs
  - b) Market risks
3. Improving
  - a) product quality
  - b) returns
  - c) Bargaining power
4. Helping to engage, empower and give voice to farmers  
(FAO, n.d.; FAO, 2015; Teixeira, *et al.*, 2018).

Therefore, establishing farmer organisations would be an important step in implementing these IFMs.

### ***Innovative finance mechanisms related to supply chains of hotels and retailers***

#### **Certification schemes**

Certification schemes are considered as a potential IFM, for they provide an avenue for farmers/vendors to get their environmental and social impacts independently assessed and made transparent. This will provide them with access to premium markets based on the condition that farmers adhere to a set of acceptable environmental standards. It is expected that farmers can be encouraged to practice more sustainable forms of farming.

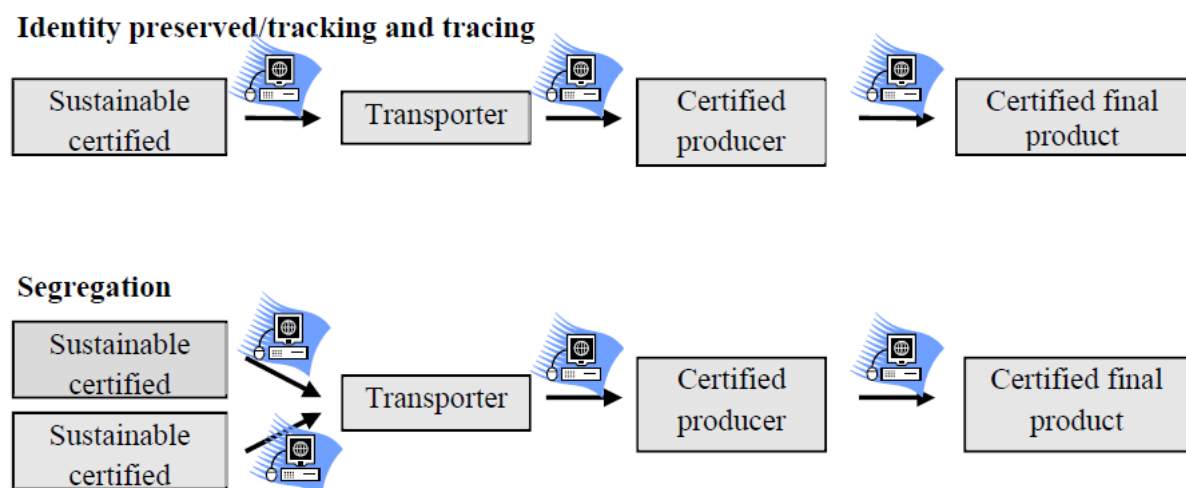
Considering the modalities used by the supermarket/retail sector and the hotels (Tables 1 and 2, and Annex 5 and 7), there appears to be two main pathways which the quality of the products are validated.

- Pathways reliant on traceability mechanisms
- Pathways reliant on formalized procurement systems

Saaraketha Organics (SO) and the Good Market Sri Lanka (GM) are reliant on certification processes which ensure traceability, and as a result, facilitates entry of sustainably produced goods into premium markets. Additionally, SO even provides pathways to the global market. However, it must be noted that of the SLM practices, the certification processes followed by these vendors focus more on reducing use of agrochemicals.

Global demand for sustainably produced products have resulted in four different models to ensure traceability: *identity preserved or track and trace*, *segregation*, *mass balance*, and *book and claim*. The tracing systems which are in operation among the stakeholders are mainly of the *segregation* model where it is assured that the production processes (including storage, transportation, processing, trading, packaging and selling) of a product in question follows a particular set of standards and these products are kept separate from non-certified products at every step. However, owing to mixing of certified and non certified produce during transportation and trading, it is not possible to trace products to an individual site of production. That being said, it is apparent that SO is attempting to make use of information and communications technology (ICT) to introduce a system which is similar to the *identity preserved or track and trace* type where the product which is delivered to the end user can be related to the identity of the resource base from which it was procured (Mol & Oosterveer, 2015).

**Figure 1. Identity preserved or track and trace model and segregation models pertaining to traceability**



(Mol & Oosterveer, 2015)

Jaykay Marketing (JKM), Aitken Spence Hotels (ASH) and Shangri-La Hotels (SLH) seem to be more reliant on formalised procurement systems. Such systems can be described as being characteristic of modern supply chains which exhibit coordination practices which follow pre-arranged agreements. Intermediaries are minimised and as a result of tighter linkages along the supply chain coordination processes are improved which reduce transaction costs. These

systems are differentiated from traditional markets which rely on more traditional procurement processes where a wholesaler differentiates products based on size, colour and other characteristics which are easily observed, and information such as the sustainability related practices which were involved during production. (Mol & Oosterveer, 2015).

However ASH, SLH, GM and to a certain extent SO are currently somewhat reliant or expressed the need for a sort of specialised intermediary. The specialised intermediary in this instance could be a farmer or youth representative from within the village or farmer organisation itself, where it is expected that in this socio-cultural context a better record of the quality of the produce will be maintained and equitable means of collection and transportation provided. On the other hand, if produce is provided at scale which could help offset the cost of logistics and management, entities such as SO have experience in bypassing intermediaries altogether. Such an arrangement could guarantee better quality control by ensuring that the certified products are separated at an early point of the supply chain and also ensuring that spoilage is reduced (McCullough, *et al.*, 2008).

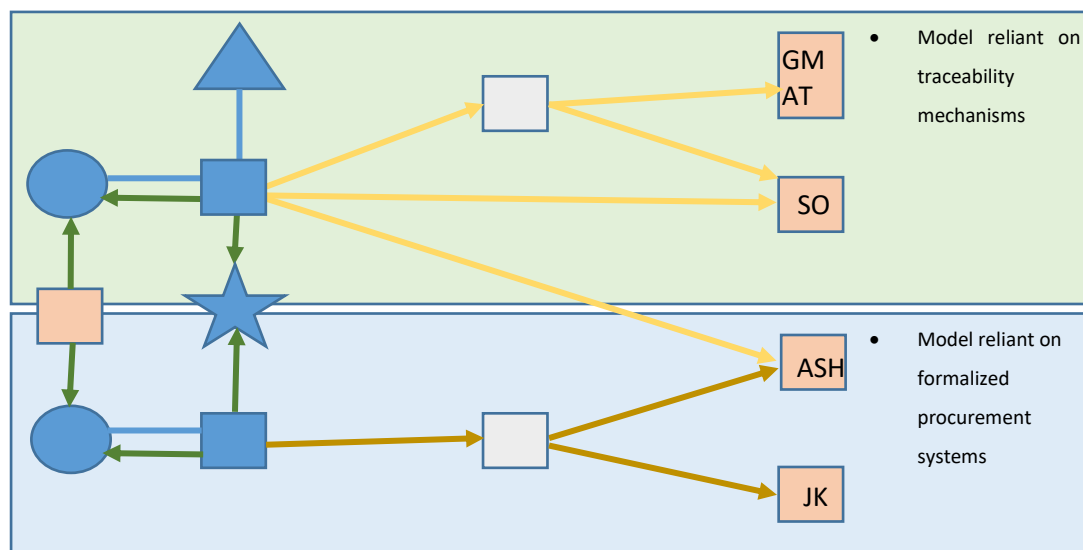
### Agro-ecotourism

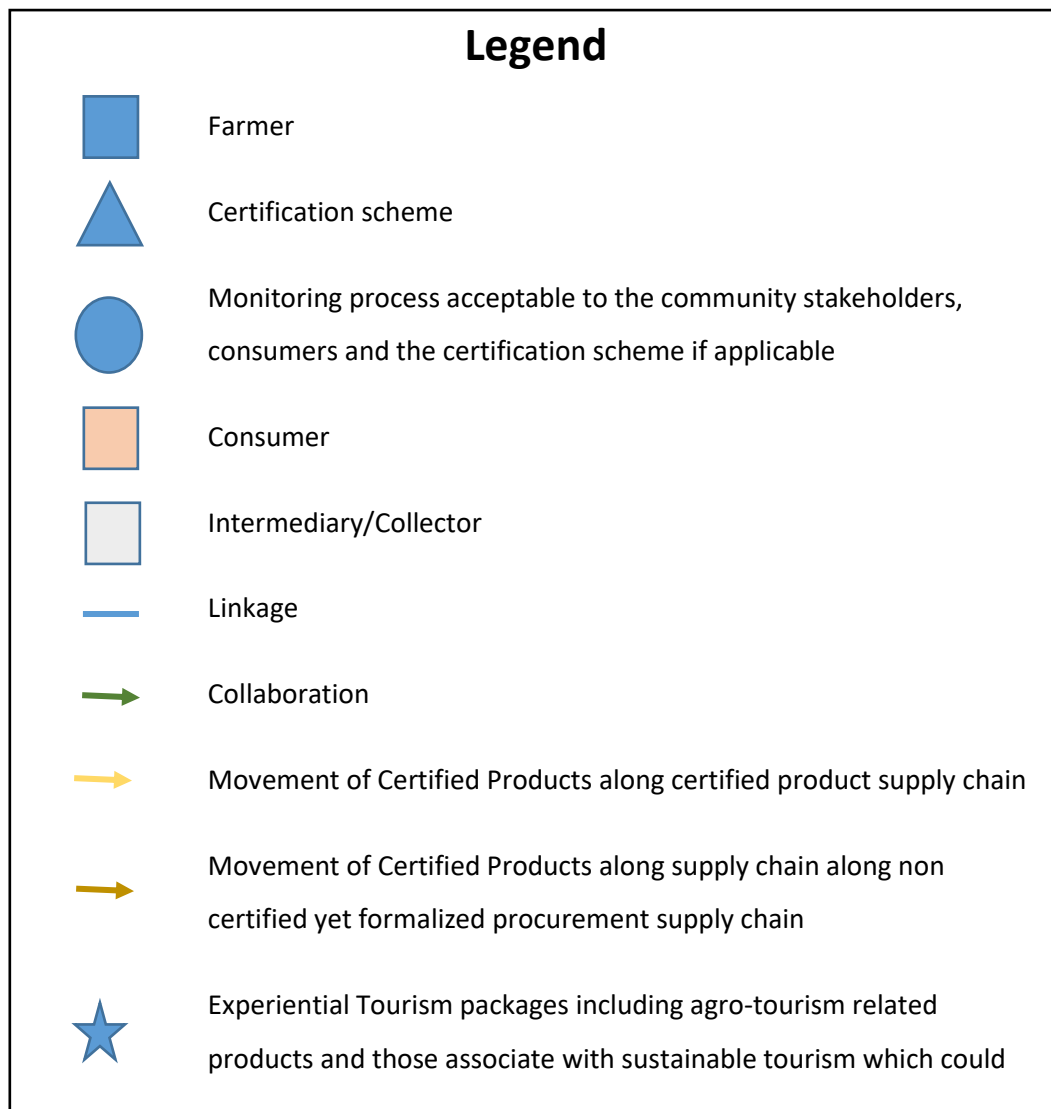
IFMs can also provide monetary benefits to communities engaging in sustainable land management practices via tourism related products/experiences (as in the case of Jetwing Hotels, Table 2) such as:

- Agro-tourism, which can involve immersive experiences in village communities for example, and
- Biodiversity tours (such as frog tours or bird-watching) associated with agricultural landscapes.

It was observed that only one entity from the discussions is engaging in some form of Agro-tourism, and therefore, further research with a wider range of stakeholders from the tourism sector is required to fully understand its potential. However, given that tourism in Sri Lanka is on the upward trend and landscapes in the central highlands are one of the key tourist attractions, agro-tourism can still be considered a potential IFM. During the consultations with the experts on the 25 November, it was suggested that the RDAL project may explore the potential to partner with the smaller tourism operators.

**Figure 2. Proposed system of IFMs involving the hotel and retail sector**





Considering the views of the retail and hospitality sectors, a combined mechanism involving the farmers of the RDAL project and the Retail and Hotel sector is depicted in Figure 2.

### ***Innovative finance mechanisms related to the finance sector***

#### **Agricultural (Green) loans**

Considering the feedback received from the banking/finance sector (Table 5 and Annex 7) it was apparent that while the financial institutions were interested in interacting with farming communities, they were however somewhat risk averse when considering creating new products such as agricultural loans focused on promoting SLM. The main reasons include:

- Lack of information to assess risk of defaulting and information asymmetries pertaining to insurance schemes.
- Lack of an accepted set of standards to:
  - Facilitate the specifications of the financial scheme,
  - Measure the conditions on the ground quantitatively/qualitatively to assess impact the finance scheme has had on the land management practices.

- Lack of land tenure security and formal property titles makes it harder for farmers to use land as collateral.
- History of previous schemes failing due to farmers defaulting.

These were among the main financial constraints faced by smallholder farmers which authors such as FAO, (2015) and Onumah & Meijerink, (2011). Considering the issues mentioned above, it is assumed that a set of standards which are acceptable to all stakeholders could be agreed on and there exists the human resources capable of measuring these standards objectively. The proposed IFM in Figure 3 introduces solutions which would answer the first concern mentioned above by providing information to the financial institution via two ways:

- The vendors and consumers in the IFM described in Figure 2 (hotels and supermarkets) could provide the documentation which could provide information such as forward purchase contracts and other contracts to prove a steady state of income, and other information which could be used in place of formal financial histories certificates to prove access to premium markets etc.
- The establishment of a monitoring mechanism consisting of state and/or private sector institutions. Officers from the Department of Agriculture were mentioned as partners some of these institutions were interested in.

It is expected that an institutional setup depicted in Figure 3 would resolve some of the issues mentioned above. This would also be an ideal platform to explore how ICT platforms could communicate information in a manner which would be useful to multiple stakeholders in the sectors of retail, finance, agriculture and policy generation in general.

## Impact Bonds

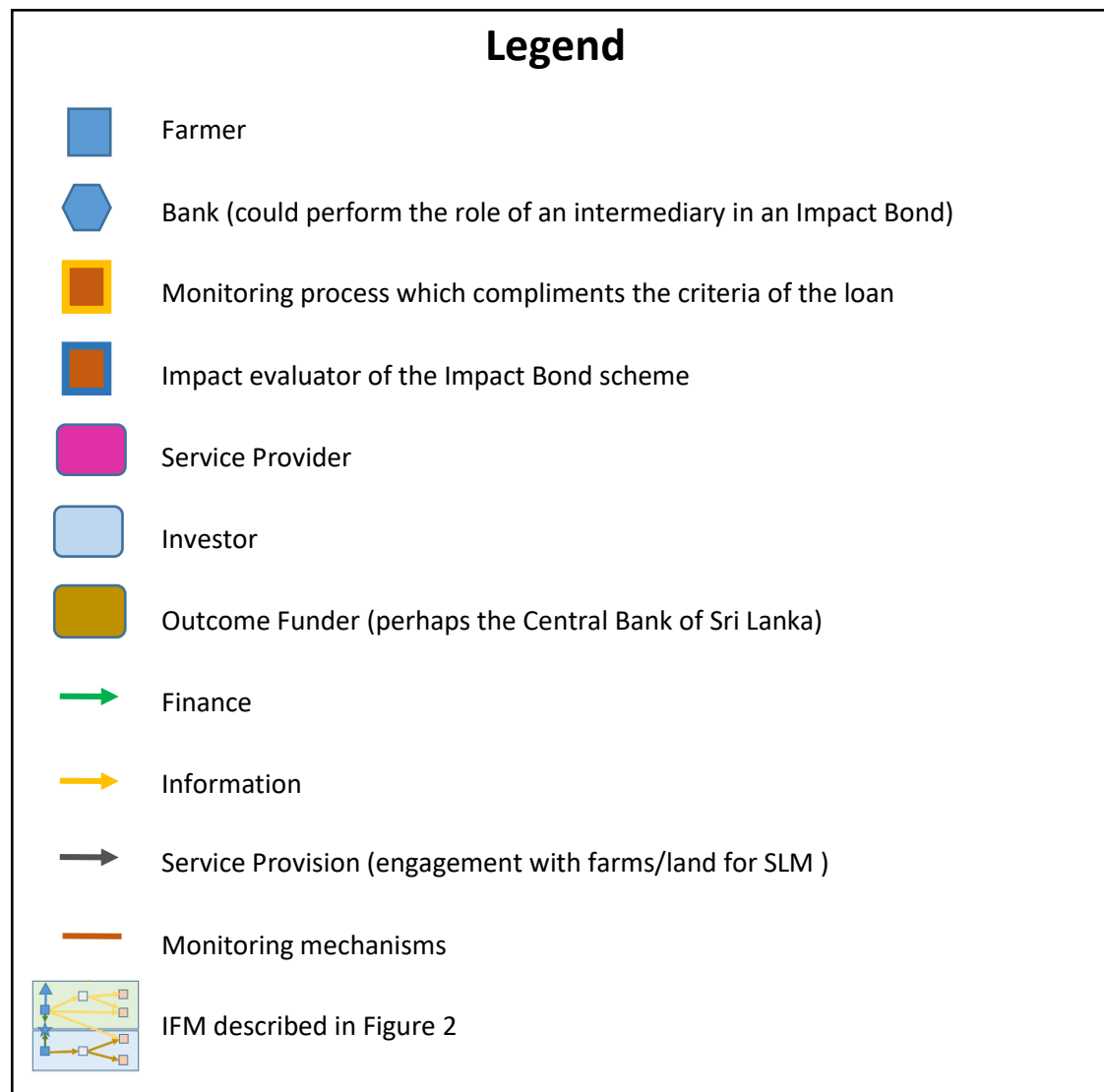
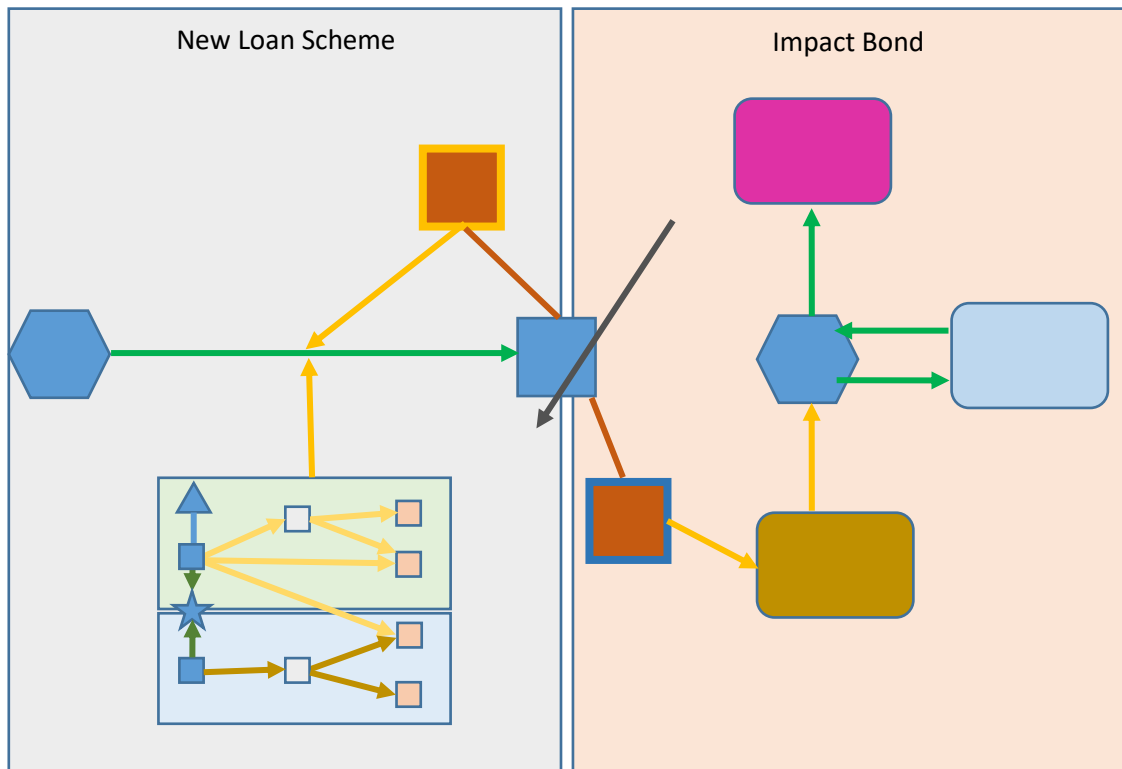
Impact bonds are also a potential IFM that is implementable (See Annex 7). A public-private partnership in the form of a contract between an **investor**, an **outcome funder** and a **service provider** with the intention of resolving a social or environmental challenge. An investor will provide the capital to achieve the expected result, the service provider will seek to achieve the expected result, while the outcome funder will repay the investor at a premium upon achieving the results. It needs to be kept in mind that impact bonds differ from conventional bonds for they cannot be traded. Although impact investing focused on channelling private capital to solve specific issues in the social and environment sphere has been operationalized by the Lanka Impact Investing Network, impact bonds have yet to be implemented. Four basic criteria need to be considered prior to implementing an impact bond:

- Outcomes should be meaningful and measurable.
- Reasonable time horizon to achieve outcomes.
- Evidence of success in achieving outcomes.
- Appropriate legal and political conditions.

(Gustafsson-Wright, *et al.*, 2015)

It must be kept in mind that operationalising an Impact Bond scheme is a complex endeavour and it would be a challenge to develop an Impact Bond contract particularly because each programme would involve a unique combination of stakeholders with different motivations. Therefore developing an Impact Bond would also be somewhat costly when considering the time and effort needed.

Figure 3. Proposed combined IFMs – Agri-loan and Impact Bond Scheme



### ***The Re-allocation of public budgets as an innovative financing mechanism***

Governments tend to provide subsidised yield enhancing inputs for agriculture as a means of supporting farmers who might require more financial support. However, studies do seem to suggest that this approach is not cost effective nor sustainable (Onumah & Meijerink, 2011).

The reallocation of public budgets towards sustainable land management is considered under the broad umbrella of IFMs. However, developing such an IFM and implementing it in Sri Lanka would be complex due to the various institutions involved and the structural hurdles. When considering a fertiliser subsidy for instance, a cabinet decides the quotas of fertilizer allocated for each of the 17 companies that are currently importing fertilizer into the country (National Fertilizer Secretariat, 2019). A fertiliser 'needs assessment' is conducted prior to the relevant growing season and this involves taking into account the cultivation targets and the recommendations made by the Department of Agriculture which in turn are based on matters like the Agro-ecological zones and irrigation systems (National Fertilizer Secretariat, 2019b).

In 2019, the Government of Sri Lanka decided to implement the subsidised Fertilizer Distribution Programme for the Yala season for Paddy lands. Accordingly, steps were taken to provide a 50kg bag of fertilizer consisting of three ingredients – Urea, Triple Super Phosphate and Muriate of Potash, at Rs 500 to paddy farmers cultivating less than 2 ha of land. The subsidy is also provided to paddy farmers cultivating other crops during the dry season when the climatic conditions are not conducive for paddy cultivation. However, the farmer needs to assure that his farming activities would not prevent cultivating paddy during the next season (National Fertilizer Secretariat, 2019b).

The stakeholders involved in planning and implementing this subsidy programme include the Ministry of Agriculture, Rural Economic Affairs, Irrigation and Fisheries and Aquatic Resources Development and the National Fertilizer Secretariat, Provincial Councils, District Secretaries /Government Agents, District Fertilizer Coordination Committees, Department of Agrarian Development, Department of Agriculture and Provincial Departments of Agriculture, Sri Lanka Mahaweli Authority, Irrigation Management Division, Ceylon Fertilizer Company and Colombo Commercial Fertilizer Company (National Fertilizer Secretariat, 2019a).

The main objectives of the subsidy programme are:

- To minimize cultivation costs and thereby production costs in the paddy farming sector.
- To encourage farmers to cultivate paddy.
- To convert abandoned paddy lands in to productive lands.
- To increase productivity and production.
- To increase farming income and make paddy farming an economically viable agricultural practice.
- To eliminate rice scarcities in the domestic market and to ensure food security.
- To export traditional rice varieties to international market at very high prices.

(National Fertilizer Secretariat, 2019b)

It can be assumed that reallocating money from this programme to another public spending scheme(s) could be justified if the scheme(s) can be proven to provide these very same benefits.

Kanthilanka & Weerahewa, (2018) concluded that overuse of fertilisers does not occur under the subsidy scheme due to the quota system. Nevertheless it has been observed that methods



of application are poor and this may lead to negative environmental impacts (Ekanayake, 2009). The study (Kanthilanka and Weerahewa, 2018) also found that profit maximising farmers will continue to use fertilisers even if the subsidy is removed. Given that the fertiliser subsidy scheme for small scale paddy farmers is considered to be the most expensive government funded initiative for the paddy sector, and has accounted for 2-2.5 percent of government expenditure from 2005-2013 (IPS, 2014), further assessments can be conducted and the criteria of the subsidy scheme revisited to perhaps provide targeted fertiliser subsidies for lower income smallholder farmers. The costs saved could potentially be re-allocated towards organic fertiliser to encourage sustainable management of agricultural lands.

In other countries, chemical fertilisers are taxed to prevent overuse and associated environmental risk and organic fertilisers are subsidised (UNDP, 2017). However, in the Sri Lankan context awareness and trainings for farmers are key in phasing out one subsidy and introducing others. In order to successfully rehabilitate degraded agricultural lands, it is important to fully evaluate subsidies such as the fertiliser subsidy, understand links to overuse of fertilisers and assess the environmental impacts to provide alternative solutions. It is known that soil and water contamination in Sri Lanka (and in the project districts) is high due to numerous reasons and fertiliser overuse being one such reason (FAO, 2018). Addressing management practices of farmers through IFMs above may have little impact if appropriate policies are not supporting SLM. There is a need for conceptualising public investment in agriculture as a means of creating an environment which would attract and foster socially and environmentally sustainable private investment in agriculture (Lowder, *et al.*, 2012; Zorya, 2006).

### ***Payments for ecosystem services as an innovative financing mechanism***

In broad terms, payments for ecosystem services is an approach which uses positive incentives to change behaviour in order to better manage ecosystems that provide benefits (ecosystem services) to society. In its simplicity, a PES scheme is where a beneficiary or a user of an ecosystem service(s) pays the provider (monetarily or in-kind) to ensure the provision of that ES through better management. There are variations of PES in which an intermediary or government institutions may be involved. Although the field visits from the previous assessments (see ES identification) and discussions with the private sector did not bring about an opportunity for a PES scheme, the previous experience of IUCN shows that such a scheme has potential for development in Sri Lanka. The PES scheme for Ganthuna Mini Hydropower Project is in its final stages of development (See Box 3 on p. 7) and this demonstrates the potential for a similar scheme in the Kandy, Badulla and Nuwara Eliya Districts. However it is important to note that the development of a PES scheme is complex and requires further in-depth research, as was experienced in the development of the Ganthuna PES scheme to implementable stage which took at least one year.

### ***Other significant considerations***

- The RDAL project would benefit from a discussion and potential collaboration with the IFAD funded Smallholder Agribusiness and Partnerships Project (SAPP) which has a nationwide coverage and utilises the 4P model (Public-Private-Producer Partnerships) to improve the level of income and nutrition of smallholder farmers in Sri Lanka. SAPP also has a rural finance component in which a low interest loan of 6.5 percent is made available to smallholder farmers, and several private sector banks are involved through the operations of the Central Bank.

- Almost all of the private sector discussions and a key finding of the sustainable land management assessment (see ES identification report) depict the significance of conducting awareness and training programmes on SLM practices, financial management, and in general capacity building of individual farmers and farmer organisations. This is an important area of intervention for the RDAL project, where a holistic training programme can be developed and conducted in partnership with some of the organisations above (see Tables 3.1 – 3.3.) and in coordination with the agricultural extension officers the project is currently engaged with.

## Conclusion

As described in the general guidelines section of the report, details of the recommended Innovative Financing Mechanisms are only considered after identifying the appropriate IFMs. For the RDAL project, IUCN was able to conduct initial discussions and identify IFMs for project involvement. These findings were then presented to an expert group on the 25 November 2019 where participants ranked IFMs in order of their individual preference.

The following is the list of IFMs ranked according to the preference of the group once the individual lists were tallied.

1. Payments for Ecosystem Services (PES)
2. Re-allocation of public budgets
3. Agro-tourism
4. Green loans
5. Corporate Social Responsibility (CSR)
6. Certification schemes
7. Market access
8. Insurance schemes

IUCN and FAO will explore further how the IFMs could be implemented in the project area by order of rank and select the five most practical IFMs given the time and resources available, of which IUCN would develop proposals for three IFMs.

At the proposal development stage there would be other factors which would need to be taken into consideration. Social, political and technical processes and institutional arrangements need to be conducive to the outcomes envisioned by the IFMs regardless of whether it is to improve access to markets (Dorward, *et al.*, 2003). During the expert group meeting it was also mentioned that aspects such as the preferences of the farmers to engage with each type of IFM and/or engage with the relevant stakeholders, the available institutional capacity at the community level, availability of infrastructure and readiness to adopt new practices would also need to be explored.

Therefore, participatory discussions would compliment the guidelines mentioned in this report during all stages of planning and development of IFMs in order to ensure that the interests of the smallholders are also given due consideration.

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## Annex 1. Finance guide for decision-makers

Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
Land-use planning (zoning)	Planning and transaction costs:	International public finance:	Bilateral development agencies	Country coordinators and officers, program managers	Ethiopia's participatory land-use planning supported by the Sustainable Land Management Program (SLMP) of the World Bank
	Stakeholder consultations, measurements, etc.	Grants, technical assistance or public sector loans, often linked to agricultural or forestry programs	MDBs, UN and other international organizations	Country focal point at MDB, agricultural officer in the field	
	Implementation costs:	Domestic public finance:	Finance, planning, forest or environment ministries	Ministers of agriculture and/ or planning, responsible staff in the line ministry	
Clarification of title and property rights (often part of land-use planning and zoning)	Planning and transaction costs:	International public finance:	Bilateral development agencies	Technical assistance and legal support programs, contact via country offices or assigned officers in headquarters (HQ)	
	Stakeholder consultations, setting up land registries, adoption of legislation protecting land rights, etc.	Grants often linked to technical assistance, support of legal assistance programs	MDBs, UN and other international organizations		
	Implementation costs:	Domestic public finance:	Planning, interior or justice (legal affairs) ministries	Line minister, responsible staff in the line ministry	
	Land demarcation, issuance, registration of titles, etc.	Ministry budgets: tax revenues or fees			

Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
Creation or enhancement of extension services, technical training	Planning and transaction costs:	International public finance:	Bilateral development agencies	Agricultural and rural devel- opment officer (in country or HQ) often to be negotiated as part of a larger rural development program	Training pro- grams, which are necessary for participating in contract farming (outgrower) systems, are often promoted by the public sector. Training is organized through exten- sion services.
	Definition of training needs, identification of training provid- er, allocation of responsibility be- tween private and public partners	Grants, technical assistance, pub- lic sector loans	MDBs, UN and other interna- tional organizations.		
	Implementation costs:	Domestic public finance:	Agriculture, plan- ning, forest or envi- ronment ministries, national investment agencies (establish- ing links to interna- tional investors)	Line minister, responsible staff in the line ministry	Investment comes from the private sector (e.g., Rural Income Promotion Programme and Support Programme for the Rural Microenterprise Poles and Regional Economies).
Delivery of the training program, farmer outreach		Ministry budgets (budgetary finance), as part of a public- private partnership (PPP), with private co-financing, as part of agricul- tural subsidies			
		Private finance:	Impact investors, agribusiness companies	Investment officer (impact investors), sustainability or procurement officers of supply chain companies	Brazil's Low-Carbon Agriculture Program, Outgrower Schemes
		PPPs (see Table 6), in-kind support, off-take agreements, contract farming			

Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
Improvement of law enforcement	Imple- mentation costs:  Increase institu- tional capacity (personnel), build new agencies, decentralize, procure equip- ment, train staff	International public finance:	Bilateral devel- opment agencies	Investment officers, coun- try or HQ staff, programs that support REDD+ (e.g., Germany's REM program)	Kenya's forest law enforcement and governance, including detec- tion, prevention and suppression, to enhance com- pliance with for- mal regulations that endorse sus- tainable forest management (SFM <sup>1</sup> ) ; the EU's FLEGT program to promote SFM, through measures that tackle illegal log- ging countries <sup>2</sup>
		Grants, technical assistance, public sector loans (as part of sectoral programs and investment packages), payments from results-based finance programs	MDBs, UN and other internation- al organizations	Investment officers who develop sectoral programs, administrators of special programs, (e.g., EU FLEGT)	
		Domestic public finance:  Ministry budgets: tax revenues or fees	Finance, planning, forest or environ- ment ministries	Line minister and responsible staff of the ministry	



Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
Implementation of standards (technology- or performance-based), often combined with a certification requirement	Planning and transaction costs:	International public finance:	Bilateral development agencies, Development Finance Institutions (DFIs)	DFIs that support private sector investments (e.g., IFC, OPIC, DEG, etc.), investment officers for the respective country or region	Bolivia's SFM project (BOLFOR) includes SFM certification in forestry legislation <sup>5</sup> . Forest certification with the Forest Stewardship Council (FSC) is mandatory in order for both communities and industrial groups to obtain and maintain forest concessions in the Maya Biosphere Reserve in Guatemala.
	Definition of performance goals or technologies to be used	Sector loans, PPPs (see Table 6) and guarantees; banks may make the application of certain standards obligatory.	MDBs, UN and other international organizations		
	Implementation costs:	Domestic public finance:	Environmental or forestry ministries to establish standards, agricultural and forestry ministry to support standards via land investments		
	Training, enforcement costs, certification of outcomes	PPP, private finance entities (e.g., FSC <sup>6</sup> , CCBA <sup>7</sup> ) or public standards are conditional on public programs (subsidies).			
		Private finance:	Impact investors, dedicated funds, quasi-public finance organization, domestic banks	Desk officer of finance organization (national) who supports an investment program, investment officer of the respective fund, potentially also timber companies (supply chain investors)	
		Private sector to finance sustainable operation with public support for training (extension), combined with certification			

Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
<b>Economic Incentive Mechanisms</b>					
Creation or expansion of a Payments for Ecosystem Services (PES) program	<p>Planning and transaction costs:</p> <p>Program design, selection of areas, consultations, legal and institutional assessment, opportunity costs calculation, financial planning</p> <p>Implementation costs:</p> <p>Program administration, maintenance of institutional capacity, costs associated with incentive payments</p>	International public finance:	Bilateral development agencies, DFIs	AfD, DfID, USAID, KfW program officers, REM, NICFI, FCPF, for results-based payments for REDD+ Country focal point or responsible regional / country manager at HQ, technical assistance officers (e.g., GIZ)	<p>CONAFOR's subsidies and PES programs (see case study Mexico, Chapter 6); Ecuador's Socio Bosque Program<sup>10</sup>; Costa Rica's Payments for Environmental Services Program (PPSA)<sup>11</sup>, Mexico's Payments for Forest Environmental Services Program (PSA)<sup>12</sup>, the Sloping Land Conversion Programme or the "Grain for Green" initiative in China that pays farmers to set aside land for afforestation</p>
		Grants to set up PES, loans, results-based payment programs	MDBs, UN and other international organizations (e.g., GEF)	Country focal point at MDB HQ, environmental, agricultural, forestry officer in country office, GEF secretariat	
		Domestic public funding: National budgets, fees and fines, user fees	Finance, forest, water, agriculture, or environment ministries, fees (e.g., water management districts, large water users, national park fees, tourism taxes)	National PFIs as PES-implementing agencies (e.g., Mexican Forest Fund, BNDES in Brazil, FINAGRO in Colombia, or FONAFIFO in Costa Rica)	
Private sector funding: Grants (establishment of PES). Results-based payments, equity or debt investment (implementation of PES)	Philanthropy, foundations, carbon investors, sustainable timber investors	Country or program officers Investment officers at dedicated carbon funds (e.g., Althelia Ecosphere Fund), timber, impact funds			

Policy/ Measure/ Action	Cost categories involved (see section 4.2.1)	Financing instrument options	Instrument providers	Typical points of contact for accessing instruments	Examples
Tax reform: tax credits, preferential tax treatment, envi- ronmental taxes	<p>Planning and transaction costs:</p> <p>Legal assessment, opportunity costs calculation, financial planning</p> <p>Imple- mentation costs:</p> <p>System operat- ing costs (in- stitutions) and program costs (payments, tax credits, etc.)</p>	<p>Domestic public finance:</p> <p>Tax waiver, reduction, credits, increased taxes for activities not in line with pub- lic policy goals</p>	Financial ministries, with the support of line ministries	Finance min- ister and re- sponsible staff at the ministry	Brazil's ecological value-added tax (ICMS-E) <sup>13</sup> ; Ma- laysia's tax incen- tives for forest plantations <sup>14</sup>
Establishment of loans and rural credit programs	<p>Planning and transaction costs:</p> <p>Program design, opportunity cost assessment, institutional strengthening, capacity building, technical assistance</p> <p>Imple- mentation costs:</p> <p>Program adminis- tration, mainte- nance of institu- tional capacity, costs associated with loan-making</p>	<p>International public finance:</p> <p>Loans, guarantees, public results-based programs (aid on delivery or carbon payments)</p>	<p>Bilateral develop- ment agencies, DFIs</p> <p>MDBs, UN and other international organi- zations (e.g., GEF)</p>	<p>Investment officers (e.g., IFC, DEG, etc.), results-based payments via FCPF, BioCarbon Fund, NICFI or KfW/REM</p>	Brazilian Central Bank's rural cred- it in the Amazon (see Box 2); Brazil's Low Carbon Agriculture Program, a credit and capacity- building initiative that provides farmers with access to credits at low interest rates and offers a prolonged repayment period <sup>15</sup>
		<p>Domestic public finance:</p> <p>Loans, mobilization of establishment costs via national budgets, possibly also via green bonds</p>	<p>National DFIs and quasi-public finance organizations, imple- menting agencies</p>	<p>Investment officer at public finance organizations</p>	
		<p>Private finance:</p> <p>Private capital</p>	<p>Commercial banks, investors in agricul- tural and for- estry activities</p>	<p>Investment officers in private banks</p>	


Source: Streck *et al.* 2015.

## Annex 2. Presentation on general guidelines for IFM to promote SLM practices

9/26/2019

**IUCN**

### General Guidelines for Innovative Finance Mechanisms to Promote Sustainable Land Management Practices



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**IUCN** What are Innovative Finance Mechanisms (IFMs)?

- Methods to generate *new* resources or *increase the transfer of existing* resources towards a development objective – such as promoting sustainable land management practices in agriculture
- Characteristics: stability, predictability, complementarity to official development assistance, new partnerships, strong linkages ...

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**IUCN** Programs and Policies for Conservation

- Regulatory/Command and Control
  - Legislation – ESA
  - National and State Parks
- Incentive Based Policies
  - Easements and tax credits
- **Financing Conservation and Sustainable Land Management**
  - PES programs
  - Eco-labels



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**IUCN** IFMs in the context of Agriculture:

- Rationale: Current agricultural practices in the central highlands of Sri Lanka contribute to land degradation, affect the delivery of certain ecosystem services and therefore negatively impact human wellbeing. IFMs will generate new or transfer existing resources to incentivise farmers to adopt sustainable land management practices that will contribute to rehabilitation of lands and ensure healthy agro-ecosystems.
- Types of IFMs – Wide range, for e.g. Governance strengthening (increasing capacity of extension officers), Regulating policies (taxing/banning polluting activities), Economic incentives (payments for ecosystem services).

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**IUCN** Larger FAO/GEF Project Outcomes:

- Develop general guidelines for the selection and implementation of IFMs in agriculture
- Identify 5 potential IFMs to promote SLM practices in Kandy, Badulla and Nuwara Eliya Districts
- Develop 3 full proposals out of the 5 IFMs



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**IUCN** Considerations for selecting an IFM for SLM:

- What is the agricultural land use type?
- What is the issue to be addressed and which SLM practice needs to be promoted?
- What type of mechanism is most suitable? - governance strengthening, regulating, economic incentive or?
- Are there possible barriers to implementation?
- Evidence of success: has it been implemented in SL and/or has it been implemented elsewhere, and what makes it successful/ how effective is the mechanism?
- Is there a general level of awareness of the IFM?

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**IUCN** Our IFM selection process:

- Consulted the comprehensive Biodiversity Finance Initiative (BIOFIN) catalogue which has over 100 IFMs
- Validation process resulted in 46 applicable IFMs
- In-house expertise to select appropriate IFMs for SLM

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**IUCN** Potential Selected IFMs for SLM:

1. Payments for Ecosystem Services
2. a) Sustainability standards/certification
2. b) Eco-labels (informal certification)
3. Eco-tourism
4. Corporate Social Responsibility (CSR)



Other:

6. Re-allocation of public budgets
7. Risk schemes
8. Green Lending



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**IUCN** Guidelines to Implement an IFM:

- **Step One:** Once the issue/context has been understood and an appropriate IFM has been selected, further details of the modality need to be determined - The workings of mechanism/modality, SLM practice(s) promoted and key stakeholders involved (i.e. what needs to be done by whom).
- **Step two:** Determine the costs involved, the bearer of costs, the monitoring entity, the duration of IFM/ timelines and the geographical scale of the IFM.
- **Step three:** Understand and generate the necessary legal/policy documents, agreements between stakeholders, address barriers to implementation if any, and validation of process.

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**IUCN** Payments for Ecosystem Services

**Definition:**

PES can be defined as a **voluntary transaction** where a **well-defined ecosystem service (ESS)** is 'bought' by at least one ESS buyer from at least one ESS provide, if – and only if – the ESS provided secures ESS provision (**conditionality**).

*Adapted from Wunder, 2005; TEEB Training*

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**IUCN** Payments for Ecosystem Services

**PES Quick facts:**

- In 2010 over 300 PES programs existed globally
  - Broad estimate of the value being captured: \$8.2 billion
- In 2018 over 550 active PES programs
  - **Over \$36 billion in annual transactions**
  - Largest growth in watershed service (\$24.7 billion in 62 countries in 2015)

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Salzman et al 2018, TEEB Training

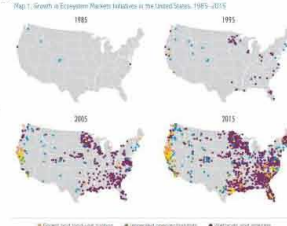
**IUCN** Payments for Ecosystem Services

**PES Quick facts:**

**U.S. Markets**

Fig. 1.1. Growth in Ecosystem Markets Subsectors in the United States, 1985–2015

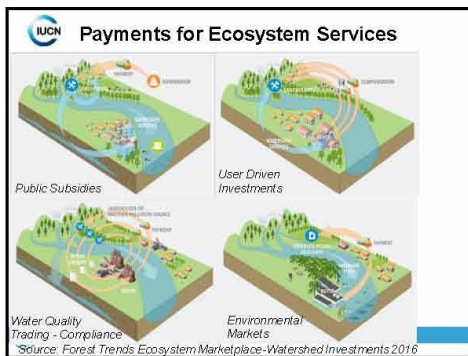
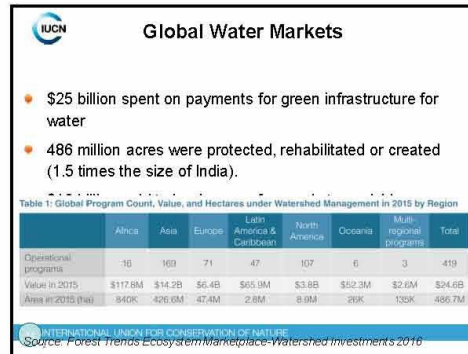
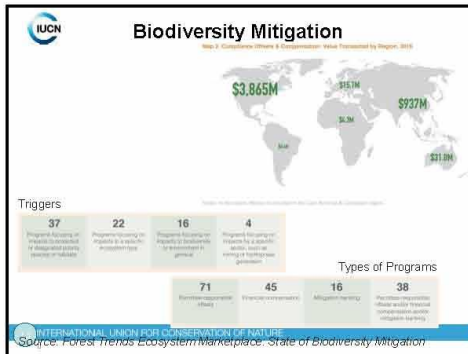
- Trend is similar in U.S. markets
- \$2.8 billion/year



Watersheds and streams >\$2,000M/year  
Watersheds \$383M/year  
Impervious surfaces/habitats >\$200M/year  
Forest and land-use values \$28M/year

Forest and land-use values  
Impervious surfaces/habitats  
Watersheds and streams  
Watersheds  
Forest and land-use values

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Source: Forest Trends Ecosystem Marketplace



### Case Study: Ganthuna Mini Hydro Power Project

**Type:** Economic incentive – PES

**Modality:** The hydropower operator of the Ganthuna MHPP will provide financial inputs to upstream farmers/communities in order to better manage lands and restore the catchment areas, so that the operator may benefit from the ecosystem services - steady water flow and good water quality.

**Stakeholders**

**The ES beneficiary:** Vidullanka Pvt Ltd – the mini hydro-power operator

**The ES provider:** farmers/communities in two catchments

**Intermediary:** Potentially rural development society

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### Case Study: Ganthuna Mini Hydro Power Project

**Activities:** streamside forest restoration, agro-forestry, soil and water conservation on homegardens and tea lands

**Geographic scale:** Watershed level

**Costs involved:** initially over five year period LKR 6.2 million


**Cost bearer:** Vidullanka Pvt Ltd agreed to bear 50%

**Duration:** initial plan is developed for 5 years

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**Monitoring entity:** IUCN for first 1.5 years  
**Legal documents/agreements required:** Agreement between beneficiary and provider with intermediary  
**Supporting policies:**  
**Further assessments:** Baseline assessment of watershed



**Validation of mechanism and process:** several rounds of assessment and validation workshops completed, creating of coordinating committee helps to streamline the process

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Thank you!


Questions?

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**IUCN**

Group Activity!

- You will be allocated into a group – total of 5 groups
- Each group will be given one of the five selected IFMs and a set of guidelines
- The task is to fill out some details of the guideline with the IFM you have been allocated
- If time permits, please come up with an IFM within your group and fill out the same set of guidelines




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Group Activity!

- Objective is twofold:
  1. To see whether the guidelines work – what needs to be changed? Is it too broad or too detailed?
  2. To understand whether the IFM will work – your feedback and inputs are important.



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## Annex 3. Financing mechanisms

Criteria	Political feasibility or acceptability by contributors	Stability and predictability of resources	Management effectiveness	Flexibility of implementation	Win-win criterion and ethical risks	Resources mobilization Capacity	Probability of effective use of resources and impact
<b>Taxes</b>							
<b>Tax on fertilizers + Pesticides</b> Small rate taxation on fertilizers and pesticides consumption in G20 countries	Weak (but remains to be assessed) possible opposition of agricultural lobbies in the exporting countries	Strong	Strong (feasibility already studied); the management organization is already existing; good control and harmonization through the co-financing mechanism	Average: can be implemented only by a limited number of countries, provided the main exporting countries adhere	Strong (reduce pollution in the over using countries; contributing States are those who benefit more from food price increment)	High (250MM)	Strong impact on agricultural income and food security (fertilizer effect) demonstrated; effectiveness of the distribution system
<b>Tobacco tax</b> Excise duty on tobacco consumption in Southern countries to finance prevention of addiction and conversion of cultivation	Weak: transfer of funds between Southern countries; targeting a small number of producing countries, possible resistance from consuming countries	Strong	Weak (importance of smuggling)	Strong (tax can be decided at the national level with specific mechanisms in each country)	Positive aspect: reduces tobacco consumption in the South; negative aspect: the payers are the poor consumers of the South; can be improved if developed countries also contribute	Weak: strong global potential, but the mobilization on food security is targeted on a limited number of producing countries	Weak (main impact on the public health; impact on food security in a few countries, but no positive impact on agricultural income)
<b>Voluntary contributions</b>							
<b>Food security branding</b> Food security label for brands devoting a percentage of their margin to food security projects	Strong (no foreseeable opposition)	Weak (depends on the marketing success of the brand)	Weak (high promotion cost of labels; need for a strict control of the utilization of brands)	Strong (can be implemented at the State level or among group of states)	Equitable, in as much as consumers of the North contribute to development in the South	Weak	Weak; positive aspect: new actors (so far as the holders of brands decide on their actions of development; negative aspect: risk of diversion towards marketing and visible rather than development effective actions)



Criteria	Political feasibility or acceptability by contributors	Stability and predictability of resources	Management effectiveness	Flexibility of implementation	Win-win criterion and ethical risks	Resources mobilization Capacity	Probability of effective use of resources and impact
<b>Call to the financial market</b>							
<b>International finance facility Bonds</b> Bonds guaranteed by donor countries sold on financial market for rapidly financing food security and nutrition projects	Weak to average: the mechanisms imply that donor States must make new debts (or guarantee debts) which is a problematic in the current economic situation	Strong: could plan resources on a 20 years period, if donor countries accept to commit themselves	Average: the management is entrusted to an independent institution (the GAVI for health), which adds supplementary bureaucracy	Strong (even a limited number of countries can take part)	Not relevant	Weak: no complementarity to ODA in the long term, but allow to mobilize funds more rapidly	Weak to average: food security requires long term commitment rather than quick disbursement
<b>Remittances and diaspora investment in agriculture</b>							
<b>Diaspora Bonds</b> Developing countries issue bonds to their emigrants for a fund dedicated to food security	Very weak; not adapted to African poor countries: increases governments indebtedness, risk of insolvency, exchange rate risk, lack of confidence in government, low contribution capacity of migrants	Weak (depend on the success of bond emissions; regularity not ensured)	Weak; the guarantee for repayment implies complex implementation	Strong, as the mechanism is implemented at national level	Less equitable: financing and risks are borne by fact of supporting the load of financing and the risk of the migrants, who constitute a poor migrants, who a poor population in the migration countries	Weak for Africa (low contribution capacity of migrants)	Neutral: Governments decide on allocation of funds; no new actor
<b>Development Impact Bonds (DIB)</b> Bonds guaranteed by developing countries and/or donors sold on financial market for financing outcome-based service delivery	Weak to average: need long-term financial commitment from developing countries and/or donors	Strong (if countries accept to commit themselves)	Strong: the management could be hosted by existing independent institution to avoid supplementary bureaucracy	Strong (even a limited number of countries can take part)	Neutral	Strong leverage capacity (return comparable to commercial ones, with the advantages of public guarantee)	Strong: the outcome-based mechanism creates strong incentives to reach result and maximize impact if the expected outcomes are adequately targeted

Source: leading group on innovative financing for development, 2012.

## Annex 4. Discussions with retail sector companies

Both the Good Market (GM) and Saaraketha Organics (SO) rely on products adhering to organic standards. However, GM adheres to the Participatory Guarantee System standards (PGS) while SO follows the EU and USDA third party certifications processes. SO also plans to add value to products by enabling product traceability for consumers which uses Blockchain technology to provide information on Product Quality, Safety (details about the col chain, date of production etc.) and Compliance (details about certification), Environment (farming systems which were in use) and details about the community from which it was sourced.

In the PGS system both producers and consumers volunteer their time to not only develop standards and systems which will be operationalized under this mechanism but also would take the time to conduct the farm visits. This ensures lower costs and in turn lower barriers for entry. It is also recognised as a potential stepping stone for small scale farmers to be certified under third party certification schemes which would allow entry to export markets (Good Market, 2018). Both the GM and SO have retail operations where the former engages in the local market (which includes two stores and one market, they also mention that the hospitality sector has expressed interest in their products as well) while SO operates mainly in the Foreign Market.

The nature of the issues and strength faced by these two entities are reflective of the characteristic features of the value chains in operation. Oguoma, *et al.*, (2010) states that there are four conditions of supply and demand which includes place, time, quantity and quality, and middlemen play a role in reducing the uncertainty of buyers and sellers by reducing the gaps between these conditions. While The GM relies on farming societies to self organise and use collectors to supply them, the operations of SO provides logistical services to the farmers they work with so long as the supply is at economies of scale. The premium markets SO operates in enables them to recover this cost owing to the value which the third party certification provides (in providing access to the premium markets). They also have forward purchasing contracts with farmers across the country which helps to ensure a steady supply. In contrast the modality of replacing the middleman by a member of the community (who is adequately trained) and the comparatively lax contractual obligations of the suppliers to GM has resulted in issues of procuring a steady supply reliably. However, the logistical setup operated by the GM has ensured that the farming community maintains more of an ownerships over the supply chain compared to that of SO.

The standardising process in operation by both are dependent on not only the practices of a particular farmer, but also is dependent on those of his/her neighbour as well. Therefore, it must be ensured that materials which are not allowed by the standards do not flow from adjacent lands (those on either side or particularly those at a higher elevation). This makes certifying paddy lands particularly challenging due to the integrated nature of paddy fields.

Both GM and SO provide training to farmers to engage in farming activities and also provide entrepreneurial skills as well which further enables the farmers to make use of their lands in the most profitable manner which further improves the value chain's operations. SO further handles the documentation related activities (although they do not finance the certification). Both entities highlighted the importance of minimising the risk of farmers becoming discouraged over their efforts not being adequately compensated and such services help to not only strengthen the farmer's revenue streams but also helps to stabilise markets. The transition period between when a farmer begins to shift his practices from a conventional farming system to an organic system is also an instance when farmers could get discouraged due to the additional effort not being compensated adequately. The GM mentioned that farmers should be encouraged to produce value added products (eg. dried chillies and dried

turmeric as opposed to the wet product) during this period which are fetch higher prices in the market. SO is also interested in niche products such as native varieties of fruits, vegetables, pulses and grains (organic certified) and GM mentioned that there is a niche market that exists for organically certified seeds.

It seems feasible to also consider tapping into some of the alternative supply chains which are mentioned in this document during this period; if the farmer engages in practices in line with the standards dictated by PGS, EU Organic production and USDA certificates, the production modalities would be using organic inputs and cleaner production methods which are monitored by the certification mechanism.

The procurement activities of Jay Kay marketing Services (PVT) Ltd (JKM) which is part of John Keells Holdings PLC operates at a much larger scale than that of GM and SO. It has collection centres all over the country with one in Nuwaraeliya and Keppetipola (Badulla).

Due to the geographic spread of the procurement activities, JKM's governance structure of the supply chain is somewhat decentralised with the managers of collection centres interacting with the farmers. JKM has their own extension officers who conduct training programmes and monitoring activities. They also encourage the use of technology such as greenhouse cultivation and sustainable farming practices such as drip irrigation (as opposed to sprinklers), crop diversification and how to plan the crop profiles.

JKM however does not guarantee a market although they have expressed interest in expanding their operations while also promoting Sustainable Land Management (SLM) practices. They deal with organic products at a smaller scale. However, they accept the conventional third party verified certification systems and also Sri-Cert which is a local certification scheme. Although a higher price was not pledged having the means of engaging with an institution with a large operation such as JKM (while also getting their support services) would help the operations on the ground to be more adaptable and capable of buffering any demand related shocks in other supply chains which farmer groups of the RDAL are engaging in.

## Annex 5. Discussions with tourism sector

Aitken Spence Hotels (ASH) currently manages 4 properties within the project area:

- Earl's Regency – Kandy
- Earl's Regent – Kandy
- Bandarawela Hotel
- Heritage Tea Factory – Nuwara Eliya

It must be noted that depending on the market conditions, engaging with ASH could facilitate access to supplying to other properties located in Sri Lanka and also abroad (except India).

Shangri-La Hotel (SLH) has two properties in Colombo and Hambantota

Both ASH and SLH are interested in sourcing local produce. The former dedicates 40 percent of the procurement budget for perishables is spent in order to give farmers within a 2km from its hotels priority the latter has a programme in operation in all its chains across the world where they pledge to serve 75 percent more sustainably sourced food on every hotel menu. The Rooted in nature programme will also focus on sourcing agricultural products which are pesticide free and local. ASH Ayurveda Mahagedara also procures herbal medicinal plants at smaller quantities, although these are usually sourced from small scale vendors, there are individuals who have begun to cultivate these plants at a larger scale.

Both ASH and SLH mentioned that what is important for them is the ability to provide produce which meets the quality standards at adequate quantities and acceptable price. Both hotels acknowledged that an intermediary would need to represent the producers while refraining from exploiting them. ASH added that in the past they had attempted to work with a group of farmers operating as a cooperative, but over time the cooperative failed and the farmers began relying on a middleman. The organic produce ASH procures at smaller quantities are done so with one on one engagement between the hotels and the farmers rather than representatives.

The procurement process of ASH provides a grace period of 3 years to a vendor who is newly appointed as a supplier. During this period the vendor is shielded from scrutiny to some extent and is allowed to slowly improve his/her capacity to provide produce of acceptable quality at required quantities. If the vendor reaches acceptable standards, a longer term relationship is considered with the individual. Vendors are also provided a guaranteed price which is updated monthly. However, it is accepted that a hotel might change its menu depending on the weather conditions (which would impact the profile of available fresh produce).

The hotel also segregates its waste into 21 categories with the intention of upcycling it: wet food waste is available for piggeries; used oil can be used to make soap; and metal glass and plastic waste can be collected if anybody needs it. However, the end product needs to be sold back to the hotel (eg. part of the pork from the piggeries need to be sold back to the hotel). ASH does not consider this to be part of a sustainability programme. Rather, it is considered to be part of their Sustainability Programme which incorporates philanthropic activities with business related activities.

SLH Hambantota currently provides training programmes to the farmers and might be a better venue to popularise agro-tourism related products to the guests.

Jetwing Hotels (JWH) also considers that CSR is not a space they are interested in; instead, they opt to seek ways in which philanthropy and business could go hand in hand. They are conducting a project named Kaduruketha. In this programme, paddy farmers are working on

a paddy field (owned by the hotel) using organic methods. The hotel will provide the capital that is needed while the farmer reciprocates this activity by providing the hotel with 50 percent of the harvest. JWH is also interested in developing the capacity of farmers by sharing knowledge with them in partnership with the Sabaragamuwa University. This endeavour would be in the form of a Farmer School where students are expected follow a NVQ level qualification which might encourage more youth to join this sectors. In one of the properties the hotel encourages neighbouring farmers to reduce the usage of pesticides which would make it possible to conduct successful tours to view wildlife (frogs in particular). Part of the revenue will be shared with the community. As a company they are interested in hearing about other tourism related products which might promote SLM practices such as agro-tourism packages to engage in sustainable farming.

## Annex 6. Discussions with banks/finance sector

Interviews were conducted with representatives of three commercial banks and one state bank. These are:

- Bank of Ceylon (BoC)
- Commercial bank of Ceylon PLC (CB)
- Sampath Bank PLC (SaB)
- Seylan Bank PLC (SB)

Almost all of the commercial banks expressed past projects which were focused either on the environment or developing entrepreneurial capacity in rural communities.

Private Banks are said to have been instructed by the Central Bank to maintain 10 percent of its loan portfolio focused on the agriculture sector. With regards to agriculture, many banks provide services which collaborate with state institutions to provide access to finance agriculture related activities. For example, the The *Kapruka* Credit Scheme is a concessionary Financial Assistant service conducted by Coconut Cultivation Board (CCB) in collaboration with Participatory Financial Institutions (Banks) in order to provide investment capital for the development of coconut lands. Certain finance related services which are state funded such as the Revolving fund loan scheme of Tea Development are focused on a single crop are products which are offered by the commercial banks in partnerships with the Tea Small Holdings Development Authority which provides the monitoring services.

Furthermore, the Central Bank of Sri Lanka (CBSL) “coordinates, facilitates and implements various refinance schemes, interest subsidy schemes and credit guarantee schemes while delivering credit supplementary services through Regional Development Department (RDD) of the CBSL” (Central Bank of Sri Lanka, n.d.). The New Comprehensive Rural Credit Scheme (NCRCS also known as the *Sarusara* loan scheme) which functions as an interest subsidy scheme and a credit guarantee scheme was one such Government funded scheme which the private banks which IUCN interviewed mentioned. Another scheme which is under the oversight of the CBSL which was discussed by many banks is the Commercial Scale Dairy Development Loan Scheme which is a refinance loan scheme and an interest subsidy scheme. According to the interview, many of the customers who have obtained the services of the NCRCS from SB have been vegetable farmers and have used it for preparing their lands. The *Saubhagya* loan scheme is focused on serving micro, small and medium scale entrepreneurs engaged in production and services in many sectors including agriculture (Central Bank of Sri Lanka, n.d.) (Daily FT, 2015).

Apart from the above, certain commercial banks provide solutions which were developed in house. For example, the Commercial Agri-Loans For Professionals offered by the CB is a credit scheme with the objective to encourage professionals to invest in the field of agriculture by offering loans with lower interest rates and a longer repayment period with flexible repayment programmes (Commercial Bank, n.d.). The Nations Trust Bank’s green loans are focused more towards popularizing solar power and promoting the use of technology in agriculture such as drip irrigation systems.

It is important to note that the banks which were interviewed had subscribed to the Sustainable Banking Initiative which according to Sri Lanka Bank's Association, (n.d.) was launched by the Sri Lankan bankers Association (SLBA), and is a set of 11 principles developed by a committee of consisting of a committee representing the participating banks. The 11 principles

focus on different ways in which concepts pertaining to social and environmental concerns can be acknowledged, prevented and resolved. Due to these principles being framed as policy suggestions, each bank would operationalise these principles somewhat differently.

During the interviews, it was mentioned that developing new finance mechanisms from the banking sector would be a lengthy process and will need to be developed as a business proposition in order to get the approval of certain banks. When implementing a newly developed Innovative Finance Mechanism incorporating the banking sector, it might be best to propose it as CSR activity which could later be operationalised as part of the bank's portfolio.

From the interview with NB, a potential new product that was mentioned was Impact Bonds. Such investments fall into the category of Blended finance options which are described as “the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries” (OECD, n.d.). This is a public-private partnership in the form of a contract between an **investor**, an **outcome funder** and a **service provider** with the intention of resolving a social or environmental challenge. An investor will provide the capital to achieve the expected result, the service provider will seek to achieve the expected result while the outcome funder will repay the investor at a premium upon achieving the results. It needs to be kept in mind that impact bonds differ from conventional bonds for they cannot be traded. Such investments are largely targeting investors who are looking for a social or environmental impact resulting from the money they are investing, apart from the financial return on their capital (World Bank, 2019). It is accepted that there are significant transaction costs to bear when designing an impact bond contract. The United Nations Development Programme is part of the International Development Bonds Working Group which is a platform with a membership of a host of organisations representing public aid, philanthropy and multilateral financial institutions. They are working on an initiative that is proposing a design grant facility for Sustainability Impact Bonds and Development Impact Bonds (Hurley, 2019). NTB may consider exploring the option of developing Blended Financing solutions provided a partnership with the Central Bank is developed based on risk sharing.

Banks such as NB which had implemented risk mitigation schemes in the past in the form of agriculture loans expressed that they had failed due to the high risk of defaulting. If a mechanism is operationalised where a dependable guarantor (perhaps the state) is identified, this could be considered favourably by the commercial banks. The modality of the Tropical Landscapes Finance Facility that is operating in Indonesia was described as also being worthwhile to consider. “Consisting of a loan fund and a grant fund, the facility will help Indonesia promote economic development while contributing to hitting its climate targets under the Paris Agreement. The facility will use public funding to unlock private finance in renewable energy production, and sustainable landscape management that reduces deforestation and forest degradation and restores degraded lands” (United Nations Environment Programme, 2016).

SaB in partnership with the Department of Agriculture (DoA) have identified and trained farmers to improve their entrepreneurial skills and their skills in marketing and finance. They have also developed a Saturday market in Kurunegala where farmers can sell organic products. This initiative named *Wayamba Isura* uses DoA's extension services to monitor the farmers and conduct on the spot audits to validate whether or not farmers are conducting monitoring activities. The activities are 100 percent sponsored by SaB. SaB's main focus is on the theme of Water Sustainability under which the bank has invested in tank restoration activities. Due to the keen interest of SaB to fund initiatives which may contribute towards reducing the contamination of water by agro-chemicals, it might be possible to engage with their CSR work to finance on the ground activities of the RDAL project.

Representatives of SB pointed out that prior to developing new products it would be important to explore the interests of farmers prior to exploring options for a new product. This would require an effective manner in which to communicate the finance mechanism. Perhaps, most importantly it was pointed out that a new finance mechanism aimed at promoting an outcome such as the practice of SLM practices would require a specific set of criteria to measure the impact that the finance mechanism has had on the on the ground, and an effective monitoring mechanism be implemented to compare the impact to the criteria. Regarding monitoring mechanisms, a modality similar to that of the *Kapraka* scheme was recommended by several interviewees. The representatives of BoC further suggested that stakeholders who are conducting the monitoring activities could also assist in channeling the finances. An alternative modality that was suggested was one similar to the *Mithuru* Societies: small groups are created and provided with the means to develop the financing capacity and encourage the saving habit; the participants are then encouraged to develop a project proposal based on which they could potentially obtain a loan. If designing credit and microfinance solutions, the representatives from CB mentioned that it is important to make the scheme location specific.

The representatives from BoC warned about the importance of considering means by which to reduce the risk incurred by the bank. Ensuring buy back guarantees and engaging with all parties related to the supply chain would be important (eg. operators/owners of the relevant machinery, entities supplying agricultural inputs). Regarding studying viable case studies that would suit the context of the project, they recommended that Agri Business Partnership programme be consulted. They further expressed their interest in providing financial assistance to develop ICT technology based solutions such as Apps which might be useful for farmers to assist with mitigating the uncertainties that farmers face.

The lack of information seems to be an issue voiced by many in the banking sector which increases the risk which the bank faces. In the case of providing agricultural insurance, Zhou, *et al.*, (2018) states that “agricultural finance markets are subject to highly asymmetric information”. This could lead to manifestation of the moral hazard problem and the adverse selection problem See Box 5 below.

#### **Box 5. Moral Hazard problem and Adverse Selection Problem (Quiggin, *et al.*, 1993)**

**Moral Hazard Problem** — The act of getting insured reduces the loss which is associated with the insured event. This could cause a reduction in the incentive to be averse to that event, which in-turn could make the event more likely to happen.

**Adverse Selection Problem** — People who are more likely to face the insured event would be more likely to opt for insurance.

The representatives from BoC specifically mentioned that small-ticket projects are particularly harder to implement. Zhou, *et al.*, (2018) described this as being an issue faced by large formal financial institutions in general. However, the fact is that ‘those who provide forward purchasing contracts and other forms of formal relationships with the farmers were willing to share documentation and information with financial institutions to better gauge credit risk’. This would contribute towards resolving the issue of asymmetric information. Zhou, *et al.*, (2018) also mentioned instances where “peer assessment of lender credit worthiness” being implemented to adapt to the situation where there is a lack of credit records.





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