

LANDSCAPE ACTION PLAN for the LIPTON'S SEAT TEA LANDSCAPE



Rainforest Alliance (RA)
Alliance for Sustainable Landscapes
Management (ASLM)

1. Executive Summary:

The Lipton's Seat Landscape is a unique and socially, environmentally and historically an important landscape facing unprecedented environmental and social challenges due to human actions as well as natural causes. In May 2017, 08th and 09th local stakeholders representing government agencies, civil society, Non-Governmental Organizations and the private sector gathered in Bandarawela to take a holistic view of these threats and challenges and collectively design actions that when implemented will lead to a more sustainable landscape over the long-term. During a two-day landscape planning workshop, the stakeholders selected six focal issues as priorities for attention: Degradation and conversion of natural ecosystems, Solid waste and waste water management, Landslides and soil erosion, Water scarcity and pollution, Low adaptive capacity of smallholder farmers and tea estates to climate change, Land ownership and tenure. For each focal issue, stakeholders applied their knowledge and expertise to define the array of threats and root causes underlying these six sets of issues. Then the stakeholders were asked to come up with strategies and actions to address the identified threats and root causes and prepare plans. These plans define the desired change to be achieved and how that change will be realized by implementing strategies and actions involving partnerships between different stakeholder groups.

In total 62 actions were identified and out of which 22 areas of collective action were prioritized with the consent of all the stakeholders and agreed upon through this planning process. These range from training of communities on waste and wastes water management, conservation management of important ecosystems, reduction of environmental degradation through different initiatives, different actions on land management to reduce the risk of landslides and soil erosion, water resources management, improvement of knowledge and introduce novel actions to improve the adaptation capacity of smallholder farmers to climate change and mechanism to improvement of local level coordination among the stakeholders.

Although it reflects the views and ambitious of a diverse set of stakeholders, an action plan alone will not transform a landscape. To implement the identified actions will require commitment and openness from all stakeholders, improved coordination and collaboration across sectors, and new funding sources to be secured. Therefore, together with the publication of this Action Plan will be the establishment of a multi-stakeholder platform to foster engagement, dialogue and cooperation among government agencies, private sector, NGOs, CSOs and community individuals and organizations committed to achieving real progress on the six key challenges. This integrated approach to management and implementation is the best – and perhaps the only – way to address complex environmental and social issues at Lipton's Seat landscape and achieve landscape scale impacts over time.

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A collaborative approach to improving tea productivity, addressing land degradation, and driving sustainable development in Lipton's Seat Tea Landscape, Uva Province, Sri Lanka.

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1. Why develop a Landscape Action Plan for this area?

The Uva Province is one of seven tea growing regions in Sri Lanka which enhances the tea with special character and flavour. This region is also famous worldwide as it is here that the well-known tea connoisseur Thomas Lipton's tea estates were located.

Uva is one of the main regions in Sri Lanka where ideal climatic conditions create the background for vegetable cultivations and the horticulture industry. Its naturally scenic locations and mild climate creates ideal conditions for the tourism industry to flourish and as a result, the area has become a popular tourist, attracting both foreign and local tourists.

Historically, tropical forest lands have been transformed into tea plantations and the resultant changes to ecosystems have created many environmental, social, cultural and economic issues while hampering sustainable economic growth. The issues have been further aggravated by the introduction of exotic forest plant species which have negatively affected native forests, grasslands, aquatic ecosystems and their ecosystem services.

The Lipton Seat Landscape is facing a range of environmental and climatic issues including degradation of ecosystems and biodiversity, irregular rainfall due to climate change, drying up of natural streams, soil erosion and associated loss of soil fertility, landslides and associated loss of lives and property, accumulation of waste and deterioration of water quality due to lack of waste water management. In turn, these threats are affecting the well-being of those communities within the area and living downstream, as well as impacting downstream economic activities that depend of water for drinking, power generation and agriculture. These effects are also strongly felt in tea producing areas. These impacts threaten the productivity of tea estates, smallholder tea gardens, vegetable farms, and home gardens of local communities. The visible and immediate consequences of these impacts include increasing cost of tea production, rising vegetable prices, conflicts related to sharing of water resources, water pollution in rivers and streams, encroachment of natural ecosystems and reservations, out migration of labour due to lack of opportunities and rampant poverty within tea plantation communities.

The issues mentioned above are deep-rooted and complicated, and addressing those using traditional approaches is often challenging. With the exception of a few cases, such attempts in past have not delivered fruitful results because such approaches lack collective planning and implementation and little cooperation among responsible agencies and communities. In addition, responsible agencies often look at implementing common solutions rather than solutions specific to that landscape level issues, and at a policy level, there remains a failure to implement practical policies and rules and regulations that look beyond the community sphere of interest.

Solving these issues while overcoming the challenges will require a new approach which seeks to link local site level actions to the broader landscape, recognise land use trade-offs, place local people's needs at the centre, and create new levels of cooperation and collective action within the landscape

through multi-stakeholder approaches. Specifically, this will require greater coordination between government, civil society groups, local communities, and the tea industry to work together on solutions that point toward common shared goals. This Landscape Action Plan represents an important step in bringing together key stakeholders in the Lipton Seat landscape to collectively develop and implement these solutions.

2. An overview of the Landscape Action Plan

A multi-stakeholder planning meeting was carried out on 8th and 9th May 2017 with the participation of 31 stakeholders (a full list of these stakeholders and their organizations can be found in Annex I) During this two-day meeting stakeholders conducted a detailed analysis of landscape challenges and opportunities, priorities for collective action, and potential solutions that could be achieved through greater coordination across sectors and communities in the Lipton's Seat Landscape. This plan captures the outcomes of the workshop and provides a basis for its participants and a growing set of stakeholders to collaborate on the priority actions identified.

This workshop was carried out under the project “Mainstreaming Sustainable Management of Tea Production Landscapes” funded by the Global Environment Facility through the UN Environment Programme and facilitated by technical experts from Rainforest Alliance (RA) and the Alliance for Sustainable Landscapes Management (ASLM). As this action plan was produced based on the ideas of and decisions taken by stakeholders who participated in the workshop, the implementation of the action plan will be carried out with support and leadership of the same stakeholders.

This Plan begins with a brief introduction to landscape management – the concept of integrating land management policies and actions across different stakeholder groups and sectors in a landscape to address challenging issues and improve outcomes (section 3). It then describes the planning process and how the actions proposed in this Plan were identified (section 4). Next, the Plan presents the stakeholders’ analysis of existing conditions, challenges, and underlying causes in the landscape, oriented around six focal issues (section 5). Based on this context, stakeholders identified a set of highest-priority actions for addressing the six focal issues (section 6). The Plan concludes with a set of proposals for establishing and sustaining a new level of cross-sectoral collaboration in Lipton's Seat Landscape to carry out the proposed actions (section 7). The last section (section 8) contains different steps when carrying out this action plan.

3. An introduction to landscape management

Landscape management recognizes that key economic, social, environmental, and political issues cannot be effectively managed by one land owner, one organization, or one sector alone. Instead, these issues are intertwined across property boundaries, watersheds, and communities. They are larger than the scale of an individual farm, forest or tea estate. While individual land managers or organizations can take action to support sustainability within their sphere of influence, without coordination or cooperation from other stakeholders, the effects of these actions may be limited, or could even risk undermining the needs of those with different priorities. For example, a tea estate alone can address issues such as poor renovation of tea bushes or low tea quality due to poor production practices, but many other issues such as soil degradation, landslides and water scarcity also affect tea estate lands. These factors are driven by actions and decisions taken upstream or on neighbouring lands.

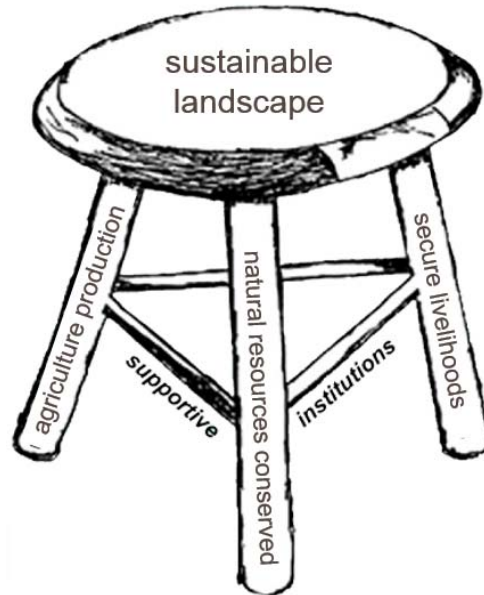
To effectively address such interactions requires bringing together multiple stakeholders to resolve complex issues that no one individual or organization can resolve alone. This so-called “landscape approach” is broadly defined as *“a framework to integrate policy and practice for multiple land uses,*

within a given area, to ensure equitable and sustainable use of land while strengthening measures to mitigate and adapt to climate change”¹ and it is a process of integrated management that is more likely to lead to sustainable landscapes in the long term. It does so by explicitly addressing trade-offs and synergies among stakeholders and between different parts of the landscape, and by identifying key areas for collaboration among various private-sector, public-sector and civil society groups.

Figure 1. Key pillars and characteristics of a landscape approach

Key characteristics of a landscape approach:

- Problem-solving at a landscape scale
- Landscapes are managed to deliver multiple values
- Improve coordination among different sectors, land users and policies
- A participatory process that supports adaptive management



The landscape approach, as characterized in the figure above, provided the orienting framework for convening stakeholders to develop this Landscape Action Plan. This approach is well-suited to address the kinds of complex challenges that affect the local tea industry, communities in the landscape, and the long-term sustainability and growth potential of the local economy. It is also well aligned with the “Mainstreaming Sustainable Management of Tea Production Landscapes” project, which aims to develop lasting solutions for a sustainable tea sector, while addressing land degradation issues at a landscape scale.

4. How was the Landscape Action Plan created?

Regardless of the context, an effective process for solving a problem or bringing about positive change usually follows a common sequence of adaptive management steps. These are as follows:

1. Understanding the context and nature of the problems in Lipton’s Seat Tea Landscape;
2. Designing and planning actions with collaboration of all stakeholders that will address the identified problems;
3. Implementing these actions and monitoring progress;
4. Assessing results and adapting actions accordingly

More specifically, the Action Plan for the Lipton’s Seat Landscape was developed through a series of steps summarized below.

¹James Reed et al 2014. What are integrated landscape approaches and how effectively have they been implemented in the tropics: A systematic map protocol. Reed et al. Environmental Evidence 2014 <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/2047-2382-4-2>

4.1 Baseline assessment of the Lipton's seat landscape

The first step was understanding the trends, challenges, and opportunities for natural resources management in the Lipton's Seat Tea Landscape. This step was an important pre-requisite for effective planning. To achieve this, a detailed baseline assessment was carried out by the Rainforest Alliance and the Alliance for Sustainable Landscapes Management with the assistance of two research assistants. This involved compiling spatial data and statistics related to the characteristics of communities and the livelihoods, land use patterns, climate change, natural resource management, tea production policy, legal and institutional frameworks for Integrated Natural Resource Management (INRM) as well as current stakeholder coordination mechanisms. Collected spatial data from different sources were compiled, analysed and digitised using GIS software to generate a set of maps presenting the project landscape boundaries, administration units, land use classes 1981 and 2013, topography and watersheds, hydrology, soil, agroecological zones, environmentally sensitive areas and large tea plantations. Furthermore, relevant information regarding the current status of INRM activities in the project landscape were compiled, analysed and presented to give meeting participants a sound baseline understanding of past and current efforts.

In addition, key stakeholders were interviewed to gain important perspectives on natural resource-related trends, challenges, and potential opportunities. Stakeholder questions were standardized to ensure synthesis of the findings. The following questions are asked:

- What are the specific geographic areas within the Lipton's Seat Landscape where you have an interest and/or influence, and why?
- What in your view are the most pressing threats to the environment and the livelihoods of communities within the Lipton's Seat Landscape?
- What do you see are the major social, economic, environmental or political factors that enable or add to the persistence of these threats you have identified?
- What do you see are the major opportunities to help mitigate these threats you have identified?
- Are you involved in any stakeholder initiatives that focus on designing and implementing sustainable land management activities within the Lipton's seat landscape? If yes, could you please describe these initiatives and your specific involvement?
- Are you interested in engaging in a new multi-stakeholder planning process to address some of the threats and root causes you have identified above?
- If yes, how would you see yourself engaging and what capacity and expertise would you bring to such a collaborative landscape planning process in the Lipton's seat landscape?

The map of the Lipton's Seat Landscape and results from the stakeholder interviews are presented in section 5.

4.2 Participatory planning to address land degradation and other key focal issues in the selected landscape

As previously mentioned, 31 representatives from different sectors and organizations (including two women and 29 men) gathered in Bandarawela on the 8th and 9th May 2017 to conduct a multi-stakeholder planning meeting. On Day 1, findings of the baseline assessment by ASLM were presented and was thereafter reviewed and validated by the participants. The participants collectively brainstormed on different issues and constraints related to tea production, livelihoods, economic development, and natural resources and agreed on the most pressing "focal issues" on which the landscape action plan should focus. They are 1) Degradation and conversion of natural ecosystems; 2) Solid waste and waste water management; 3) Landslides and soil erosion; 4) Water scarcity and pollution; 5) Low adaptive capacity of smallholder farmers and tea estates to climate change; and 6) Land ownership and tenure.

Based on the expertise and interests, the participants were divided into six small groups and asked to develop a situation analysis for each focal issue to describe the causal factors (threats, root causes and consequences) that contribute to current challenges in the Lipton's Seat Landscape. Problem flow diagrams were developed using coloured cards, flipchart paper. One representative from each focal issue group then presented the draft problem flow diagrams for discussion, validation and stakeholder's consent. Cleaned up problem flow diagrams were then transcribed into the modelling software DoView (www.DoView.com). These are presented in the Annex of this report.

Each problem flow diagram depicts the scope and complexity of challenges and root causes associated with a given focal issues. In developing the diagrams, it became clear that some causal factors can be readily addressed by local stakeholders, while others may be more difficult or even impossible to address, as they lie outside the manageable control of local stakeholders. Therefore, on day 2, the participants were requested to prioritize causal factors for each focal issue (threats and root causes) based on the level of feasibility to address through collective stakeholder action. Causal factors were sorted into the following three categories:

- **High feasibility:** Factors that local stakeholders can feasibly influence by devoting additional time and effort, either individually or collectively.
- **Medium feasibility:** More complex factors that local stakeholders can still influence, although cannot entirely control.
- **Low feasibility:** Factors that are outside the manageable control of local stakeholders due to complexity, scale, or origin of the problem.

Next, the focus of the planning meeting shifted from defining problems to identifying solutions and desired results. Participants gathered in the same small groups to agree on potential actions that improve coordination, collaboration, and scale-up of sustainable practices in the Lipton's Seat Landscape. Existing and new solutions were listed and then mapped into the problem flow diagrams. This collaborative work was then the basis for developing "results chains" that describe the short, medium and long-term results that stakeholders expect to achieve as a result of the proposed solutions. Section 7 presents these results chains for the six focal issue areas.

4.3 Design an ongoing multi-stakeholder platform to implement the Action Plan

The final session of day 2 focused on developing an effective mechanism for stakeholder coordination to implement the agreed-upon Action Plan. Due to insufficient time, participants were unable to develop a comprehensive platform for multi stakeholder coordination to implement the proposed strategies and actions. However, all the stakeholder representatives unanimously suggested to use the existing coordination mechanism available under the District Secretariat – the Environment Protection and Law Enforcement Committee Meeting (DEC).

In order to capture any missing steps, this draft report will be distributed among workshop participants and they will be requested to come up with the following: 1) participation, roles and responsibilities for stakeholders following the workshop, 2) establishing a mechanism to facilitate and coordinate implementation among different stakeholders, 3) opportunities for funding and other resource mobilization, and 4) expectations from stakeholders on support from the GEF Tea Project for the project's remaining duration.

5. Analysis of present situation in the Lipton's Seat Landscape

The purpose of this first adaptive management step was to develop an accurate and up-to-date picture of the current situation of the Lipton's Seat Landscape to understand the context and issues, as well as to identify a baseline on the different social, economic, environmental indicators. In order

to do that, different methods were adopted, including review of available literature, collection of secondary data, and interviews with different stakeholders from government agencies, civil society organizations, large plantations, tea smallholder societies, tea smallholders, and vegetable farmers. Landscape level spatial data were collected from different agencies and spatial data gaps were filled by collecting primary data from various sources. These included official records available at the Department of Census and Statistics, Divisional Secretariat Offices, Surveyor General's Department, Department of Land Use Policy and Planning, and Plantation Companies. Data available on different websites was also utilized. This assessment resulted in formulating an overall understanding of the current context, a categorization of threats root causes and opportunities, and an analysis of land uses and trends. This information set the foundation for the planning process outlined above.

5.1 General characteristics of the Lipton's Seat Landscape

The Lipton's Seat Landscape is located in the Badulla District on longitude 81° 01' 33.25"E and latitude 6° 58' 30.43"N from the North and longitude 80° 57' 40.01"E and latitude 6° 44' 49.65"N from the South and covers an area of around 206km², spreading across the four Divisional Secretariat Divisions of Haputale, Bandarawela, Ella and Hali-Ela. The area is mountainous and contains the three catchment areas of the Kirindi Oya, Menik Ganga and Uma Oya, as well as a large number of feeder river branches. The area is therefore important as it provides water to communities living downstream for their consumption and agriculture. Geology in the Lipton's Seat Landscape consists of highly weathered rocks, especially in the south-western and central part of the Island, and here a thick weathered mantle of clays and lithomarge rests on the top of the bed rock,. Higher slopes are characterized by highly leached red-yellow podsolis, mountain regosols, Mountancous, while the lower slopes have lateritic reddish-brown soils.

Lipton's Seat landscape is located in the Intermediate Zone which lies between the dry and wet zones. Sub montane forests, lower montane forests, cloud forests, planted forests, grasslands and dry *patana* ("montane grassland") habitats, intermediate zone rock outcrops, springs, streams and water fall habitats, home gardens, vegetable farms and tea plantations are found on this landscape. There are four important protected forest areas, i.e. Thangamale Sanctuary, Kalukele Forest Reserve, Haputale Protected Forest and Panketiya Forest. While the area is dominated by tea, within the landscape there remain patches of tropical lower montane forests, cloud forests, sub montane forests and dry *patana* grasslands. Planted forests with exotic species are also common, however.

The area is rich with biodiversity and harbours about 352 different species of flora and fauna. Of them, 69 species are endemic, four are critically endangered, 54 are endangered and 44 are identified as vulnerable according to a conservation status update carried out in 2012. Spreading of invasive species is a serious threat to the biodiversity and livelihoods in this area.

Land use in the GEF Tea project area is dominated by agriculture, predominantly by tea growing areas due to physical and environmental conditions that favour the crop. Other agricultural crops such as vegetables, *Chena* cultivations, fruit crops, cinnamon, pepper, rubber, paddy and homesteads (multi crops) are also evident. A large area of land is under forests and includes dense forests, open forests, scrubs, forest plantations and grasslands. Areas of infrastructure such as buildings, roads, urban lands, as well as rivers and streams, also utilize large areas of the Lipton's Seat Landscape.

Average annual rainfall in the project area in Bandarawela is 1,300mm, in Ella it is 2,500mm, Hali-Ela it is 2,500mm and Haputale it is at 900mm. The highest rainfall to the area is received during the North-East Monsoon in November and December and in Haputale, highest rainfall comes around January. The lowest rainfall is received during the South-West Monsoon (SWM) season in July and August. The annual temperature in the GEF-Tea project area in Bandarawela and Haputale averages

around 23C°, Ella and Hali-Ela at 25C° and the maximum is around 27C° in August and the minimum around 15C° in January. Over the last 50 years, variation in rainfall, long drought periods and increasing monthly temperature by around 0.5C° to 2C° have been increasingly evident due to climate change.

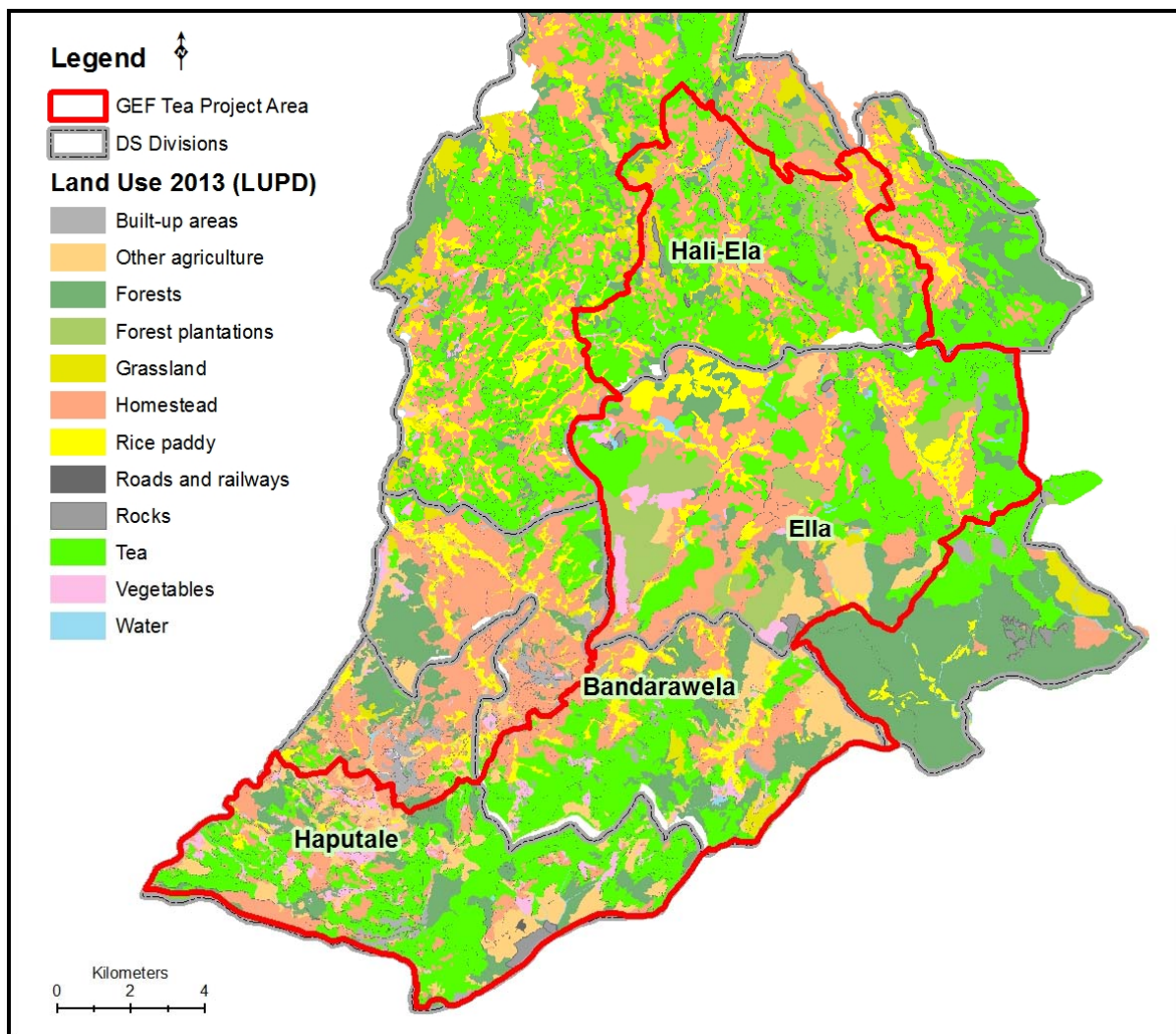
Over the years, the Lipton's Seat landscape has suffered a number of natural and man-made environmental hazards such as landslides, soil erosion, water pollution, drying up of streams and rivers and forest fires. Landslides, a result of poor land use planning, construction of settlements in highly sensitive areas, road construction on steep mountains, and extractive operations (e.g. metal quarries), have been identified as a serious problem in the landscape. The topography, high rainfall, and poor land use planning are the main reasons for soil erosion. In 2015, 74% of land in the project area was subject to soil erosion (categorised as high, very high and extremely high)², and in 2012 nearly 100% of the study area was demarcated as an erodible area by the Central Environmental Authority. As a result of the Uma Oya multipurpose river diversion project, ground water levels have drastically reduced, as low as 56.9 meters, and sinking of the ground has caused damage to around 2,800 houses. Furthermore, around 900 wells in the area, as well as springs and streams such as Heel Oya, dried up and damaged crop land used for tea, paddy, vegetable and other crops.

Within the boundaries of the Lipton's Seat Landscape there are 17 large plantations managed by three Regional Plantation Companies (RPCs), whose total managed land is around 11,242 hectares with a total production area of around 5,784 hectares. This is around 51.4% of the total land area managed by these three plantation companies. There are nearly 10,876 households within these plantations and the population is around 47,800, out of which 9,036 people (around 18.9%) work in the estates. The 17 large tea plantations produce around 27,500,000 million kg of green leaf and around 5,800,000 million kg of made tea. Annual per hectare yield varies from 1,266 kg to 7,006 kg per year. In the Badulla District, there are 9,020ha of tea smallholdings, of which 21.5% (1,939ha) exists within the study area with around 7,250 tea smallholders. On average, the land size per smallholder is around 0.27 hectares.

The total population in the project area is 126,227 and population per km² is 612.8. Of this population, 57% are Sinhalese, 37% Tamil, 5% Muslims and 1% other. 61% live in rural areas, 35% live in estates and 4% live in urban areas. The population in the area is for around 24% employed in the private sector, 20.4% employed in the agriculture and livestock sector, 15.6% in the government sector, while 11.5% work as labourers, 5.1% in the security forces, 4.9% are self-employed, and 2.1% work in foreign employment and the balance 16.4% unemployed.

²R.S. Dharmakeerthi and W.D. Wicramasinghe 2015: Status and National priorities of soil resources in Sri Lanka.

Figure 2. Land use classes in 3013 – Lipton’s Seat Landscape



The depicted map above shows the land use pattern in the GEF-Tea project area at Lipton’s Seat Landscape. The map shows a landscape dominated by agriculture, predominantly tea growing areas due to physical and environmental conditions that favours tea. Other than tea, the land area has been used for other agricultural crops as vegetables, paddy, Chena cultivations, fruit crops, cinnamon, pepper, rubber, paddy and homesteads (multi crops). Some area of land is under forest, including dense forests, open forests, scrubs, forest plantations and grasslands. Homesteads also cover significant area within the landscape. Infrastructure such as buildings, roads, railways, and urban lands, and infrastructure are also dominant land uses. In addition, rivers, streams and minor tanks are also found within the landscape.

5.2 Stakeholder perspectives

As a part of the baseline assessment, stakeholder interviews and focus group discussions were held to identify specific issues faced by different sectors in the economy, their impacts, reasons for the issues, previous involvement in similar work, interest in engaging in a new multi-stakeholder planning process to address some of the issues and root causes, and their capacity and expertise to be involved. Interviewed stakeholders identified similar issues, threats and root causes for sustainable natural resources management within the Lipton’s seat landscape.

Threats

- Negative impacts due to climate change on tea, other crops and natural resources such as water
- Soil erosion due to poor soil conservation/ management practices
- Landslides and Landslides
- Scarcity of water resources due to drying up of springs and streams and over use, and water pollution
- Land ownership and tenure issues
- Encroachment of aquatic ecosystems buffer zones, forests reservations, road reservations, irrigation reservations
- Degradation of natural ecosystems due to encroachment

Root causes

- Bad land use practices by estates workers, vegetable farmers carried out within plantations
- Poor enforcement of existing laws and regulations
- Widespread poverty in plantations and tea smallholding sectors
- Lack of effective land use planning and implementation
- Reluctance from farmers to adopt new knowledge to increase productivity and reduce soil erosion
- Lack of knowledge on best practices
- Lack of political interest to address environmental issues such as soil erosion, water pollution, and waste accumulation
- Poorly planned development activities
- Political and labour union influences on natural resource related decision making
- Inadequate investment natural resource management by key sectors
- Complex land laws
- Poor coordination among government agencies and other stakeholders
- Inadequate knowledge, capacity and resources to adopt climate change adaptation and mitigation measures

These interviews revealed that stakeholders are well aware of the issues, but a lack of public awareness, poor coordination among responsible government agencies and other stakeholders, and policy failures have hindered effective natural resource management in the Lipton's Seat Landscape. As a response to these barriers, all the stakeholders interviewed stressed the need for better coordination mechanisms to address such natural resources threats and issues.

6. Focal Issue problem flow diagrams

Out of a number of focal issues identified by the stakeholders, six focal issues were prioritised based on their importance in the Lipton's Seat landscape, the priorities of each stakeholder, and resource availability and expertise. The following six focal issue areas were identified as important to include in this action plan. Problem flow diagrams related to the six focal issue areas are presented under the Annex II.

- Focal Issue 1: Degradation and conversion of natural ecosystems
- Focal Issue 2: Solid waste and waste water management
- Focal Issue 3: Landslides and soil erosion
- Focal Issue 4: Water scarcity and pollution
- Focal Issue 5: Low adaptive capacity of smallholder farmers and tea estates to climate change
- Focal Issue 6: Land ownership and tenure

7. Strategies that require multi-stakeholder collaboration and investment

Based on the six priority natural resource management related focal issues (See annex II) the workshop participants proposed a set of strategies to address the direct causes and root causes outlined in the problem flow diagrams presented in the Annex II. This section presents initial action plans for each of these six focal issues. The plans focus on actions that address the causal factors identified in the problem flow diagrams that stakeholders felt were most feasible to influence through collective action of local stakeholders, including government, local communities, the tea industry, and residents within the Lipton's Seat Landscape. Action plans are presented here as "results chains" that diagram the expected short-term, medium-term, and long-term effects of the proposed actions, which are shown in green boxes at the left side of each diagram. Narrative explanations follow each diagram.

Under each strategy, a number of actions have been identified by the stakeholders to deal with the identified focal issue. Some of the actions require longer-term commitments as well as financial resources and capacity that are not currently in place. Therefore, stakeholders decided to select a manageable number of actions to implement within a shorter timeframe. The stakeholders have taken into account their capacity, mandate, and ability to achieve results within the given period in selecting and prioritising a subset of activities for immediate implementation.

The results chain analysis matrices of each action plan is attached as Annex III.

7.1 Focal Issue 1: Degradation and conversion of natural ecosystems

1. CARRY OUT AWARENESS RAISING PROGRAMMES FOR THE COMMUNITIES ON GOOD SOLID WASTE MANAGEMENT: Dumping of solid wastes in public properties such as natural ecosystems are a serious issue in the Lipton's Seat Landscape and solid waste causes degradation of ecosystems, affects wildlife, and is a hazard to local communities. Proper management of solid waste is the responsibility of individuals, households and business entities in the community as solid waste is an externality of their actions, including their consumption habits and production. Addressing improper solid waste disposal has major economic implications for the government and communities. Therefore, people in the Lipton's Seat Landscape should be made aware that the responsibility of waste management does not lie entirely with the government, but that it is also a responsibility of the individual who is responsible for generating the waste in the first place. The second step would be educating school children, businesses such as hotels, hospitals, Regional Plantation Companies (RPCs) and tourists using different communication methods to carry the message widely. People should be made aware on the need to reduce, reuse and recycling of solid waste, segregation of solid waste at the source and options for disposal. Existing programmes with the municipal councils and RA certified RPCs can be good models to expand. In addition, demonstration campaigns to show proper disposal of solid wastes can be organized at schools, government offices and RPCs to educate the public on proper solid waste management. **Short-term result of action:** *Awareness campaigns implemented. Key stakeholders: Local Government, RPCs and civil society organizations such as Tea Smallholder's Development Societies, water management societies.*
2. BOUNDARY DEMARCATION, IMPLEMENTATION OF A MANAGEMENT PLAN AND DECLARE IMPORTANT NATURAL ECOSYSTEMS AS PROTECTED AREAS: A lack of defined boundaries in natural ecosystems, poor management and poor enforcement of laws have resulted in encroachment, conversion, dumping of wastes, and exploitation of natural resources. Measures need to be taken to protect these existing natural ecosystems through proper boundary demarcation and enhancing their protection status by declaring these natural ecosystems as protected areas. Existing programmes with the Land Use Policy Planning Department (LUPPD) and Ministry of Land and Land Development to identify, map, demarcate and declare as protected, as well as ecosystem conservation programmes within the RA certified large tea plantations, are good models to expand upon. Initiatives to pilot natural ecosystems conservation measures can be done through a series of demonstration plots. **Short-term result of action:** *Natural ecosystems protection and conservation pilot initiatives implemented. Key stakeholders: Land Use Policy Planning Department (LUPPD), Ministry of Land and Land Development, Divisional Secretariat, RPCs and civil society organizations and community based organizations such as Tea Smallholder's Development Societies, water management societies and farmer Organizations.*
3. CARRY OUT A RESEARCH TO UNDERSTAND THE CURRENT STATUS OF INVASIVE ALIEN SPECIES (IAS) AS IN LIPTON'S SEAT LANDSCAPE: Spreading of Invasive Alien Species is a major threat to natural ecosystems within the Lipton's Seat Landscape, and as a result natural ecosystems are degrading rapidly. Current knowledge on the species and the extent and severity of the IAS threat is unknown and IAS management is not prioritized enough by the responsible government agencies in this area. Necessary data and information should be generated to convince government agencies on the need to immediately and effectively address this and implement actions to eradicate IAS. **Short-term result of action:** *A research report on the status of IAS in Lipton's Seat Landscape is carried out. Key stakeholders: Ministry of Environment and universities.*

- 4. DESIGN AN AWARENESS PROGRAM ON NEGATIVE IMPACTS OF FOREST FIRES AND SUSTAINABLE FOREST MANAGEMENT:** One of the main causes of forests and watershed area degradation are forest fires and associated damage to natural and planted forests in the Lipton's Seat Landscape. Raising awareness of the destruction caused by people in the area can contribute to a reduction forest fires. Such communities should be made aware of the negative impacts of forest fires and importance of collective actions to conserve and manage existing natural and planted forests.

Short-term result of action: *Awareness programme designed and implemented for the communities in Lipton's Seat Landscape.* **Key stakeholders:** *Forest Department and Future in Our Hands (NGO) and Community Based Organizations (CBOs) such as Tea Smallholder's Societies (TSHS), Farmer Organizations (FOs) etc.*

- 5. ESTABLISH COMMUNITY WATCH DOG GROUPS TO PREVENT AND COMBAT FOREST FIRES:** The capacity of authorities responsible for forest management is not adequate to deal with the issue of annual forest fires caused by communities. Community members are in a better position to help government agencies prevent and combat forests fires as they have better knowledge about local conditions. Members from Community Based Organizations (CBOs) such as Tea Smallholdings, Development Societies, members of farmer organizations and watershed protection societies in the Lipton's Seat Landscape can be selected as community watchdog groups. Their knowledge, capacity and skills on firefighting can also be improved through training programmes to play an important watchdog role. **Short-term result of action:** Community watchdog groups created to prevent and combat forest fires. **Key stakeholders:** *Forest Department, Community Based Organizations (CBOs) such as Tea Smallholder's Societies (TSHS), Farmer Organizations (FOs), Youth Societies.*

7.2 Focal Issue 2: Solid waste and waste water management

1. **EDUCATE PEOPLE ON WASTE AND WASTE WATER MANAGEMENT:** Reducing solid waste dumping and waste water discharge into natural ecosystems must be a priority in any policy making and investment decision making. Proper management of solid waste and waste water is a responsibility of individuals regardless of age, gender, or other social status and background, and institutions also have a responsibility to manage solid waste and waste water in a responsible manner. The proposed awareness programme on good solid waste management will target households, institutions such as RPCs, schools, hotels, temples, government departments and private businesses.. They will be trained on proper solid waste management and waste water discharge through demonstrations and will be set up with the support of individuals and institutions. **Short-term result of action:** *Awareness campaigns implemented.* **Key stakeholders:** *Local government, Regional Plantation Companies (RPCs) and civil society organizations.*
2. **SET UP GREY WATER PURIFICATION SYSTEMS:** Water from Lipton's Seat watershed areas is consumed by communities within the landscape as well as communities living in downstream areas. Therefore, provisioning of clean water to water users including downstream communities is the responsibility of the inhabitants in the Lipton's Seat landscape. Simple biological grey water purification systems should be introduced to a selected number of plantation households in RPCs, as well as to tea smallholder households. ASLM's training and technical assistance program for RPCs and tea smallholders is an ongoing initiative that should be used to introduce grey water purification systems. **Short-term result of action:** *Grey water purification systems installed in selected number of TSH households and estate worker's houses in RPCs.* **Key stakeholders:** *TSHDA, RPCs, Divisional Secretariat offices and NGOs civil society organizations.*
3. **PROVIDE WASTE COLLECTING BINS TO COMMUNITIES/HOUSEHOLDS AND MOBILIZE THEM TO SEGREGATE WASTE AT THE SOURCE:** Inadequate infrastructure at the point where waste is generated hinders the scaling up of sustainable waste management programmes in the Lipton's Seat Landscape. Strategies should therefore focus on providing direct training and assistance to some of the poorer households to help them better segregate waste at the source and make the job of waste collectors easier. Waste collecting bins can be provided to communities to practice what they learned. **Short-term result of action:** *Waste collecting bins are distributed among the households in the Lipton's Seat Landscape.* **Key stakeholders:** *Municipal councils, local government, Regional plantation Companies (RPCs), NGOs and civil society organizations.*

7.3 Focal Issue 3: Landslides and soil erosion

1. INSTRUCTIONS AND CODES FOR DIFFERENT LAND USE, CONSTRUCTIONS: There is a need to provide a common set of instructions and codes for different land uses in the Lipton's Seat Landscape as the area is highly prone to landslides and soil erosion. The topography, crops and cultivation practices, unsustainable development initiatives emphasize the need for proper instructions and codes for the communities to adhere to in order to minimise and prevent landslides and soil erosion. This should include guidance for proper soil conservation, land selection for settlements, building houses and other buildings, and infrastructure development. **Short-term result of action:** *A set of instructions and codes for different land use and constructions introduced.* **Key stakeholders:** Department of Agriculture, Tea Research Institute (TRI), National Building Research Organization (NBRO), Disaster Management Centre (DMC) and Central Environmental Authority (CEA).
2. ENFORCE RULES AND REGULATIONS TO PREVENT USE OF LANDS IN HAZARDS PRONE ZONES: One of the main issues preventing the use of lands in hazards prone zones is the improper implementation and enforcement of available rules and regulations by the responsible agencies. Rules and regulations can play a key role in preventing use of land in hazard prone zones, which could accelerate landslides and soil erosion and in turn cause loss of lives and damage to property. Therefore, pressurising responsible agencies to implement available rules and regulations should be carried out. This should be a collective effort of different civil society groups. An advocacy campaign should be carried out to push relevant authorities to implement available rules and regulations. ASLM, Future in Our Hands, Tea Smallholder's Development Societies can play an important role. **Short-term result of action:** *Advocacy campaigns organised to pressurise responsible authorities to enforce rules and regulations to reduce use of land in hazards prone zones.* **Key stakeholders:** ASLM, Future in Our Hands and TSDS.
3. UNDERTAKE NON-STRUCTURAL INTERVENTIONS SUCH AS TRAINING AND EDUCATION, MONITORING AND INCENTIVES: Educating communities in Lipton's Seat Landscape on sustainable land management, training them on adaptation of best soil conservation practices and providing incentives to implement best practices in their own lands can yield good results in reducing soil erosion and reducing the risk of landslides. Providing knowledge and technology alone is not adequate, adopting best practices should be based on incentives as tea smallholders, RPCs and vegetable farmers within the landscape do not get adequate profits to reinvest in their own lands. This activity can be started with the TSH and RPCs as they are being mobilised to obtain RA certificate. Tea Smallholder Development Authority, TRI and universities can play a significant role in training and education activities, and the Ministry of Plantation Development and NGOs can provide incentives. **Short-term result of action:** *Non-structural interventions such as training, education and incentives are provided to the TSH and RPCs.* **Key stakeholders:** TSHDA, Ministry of Plantations Development, universities.
4. IMPLEMENT REFORESTATION PROGRAMMES IN LANDSLIDE PRONE AREAS: Establishing reforestation programs and tree nurseries was identified as a practical solution for controlling soil erosion and landslides in the areas which have been identified as high-risk areas for landslides and soil erosion. Efforts will build on the Forest Department's initiatives to plant forest trees in government owned lands through community forestry programmes and RPCs effort to reforest marginal tea lands and highly eroded lands. Increased dialogue and collaboration between the Forest Department, Agriculture Department, NGOs and RPCs is also needed to integrate conventional forest management plans with reforestation programs. **Short-term result of action:** Landslides prone areas and erosion prone areas are reforested. **Key Stakeholders:** Forest Department, RPCs, TSHS.

5. ESTABLISH MECHANISM TO COORDINATE RESPONSIBLE GOVERNMENT AGENCIES AND RPC'S TO WORK COLLABORATIVELY AND EFFICIENTLY: Lack of coordination among different responsible government agencies was a major limitation pointed out by stakeholders over and over, especially in coordinating and implementing different initiatives. Government agencies have limited access into plantations managed by RPCS because of existing laws. Therefore, improving coordination among responsible government agencies and between government agencies and large tea plantations managed by RPCs is a must in dealing with soil erosion and landslide related issues. Establishing new mechanisms to provide space for government agencies and RPCs to work collaboratively would help in ensuring good initiatives to prevent soil erosion and landslides within the landscape. **Short-term result of action:** A new coordination mechanism is in place to coordinate interactions among different government agencies, and with the RPCs within Lipton's Seat landscape. **Key Stakeholders:** Forestry Department, Regional Plantation Companies (RPCs), TSHS and ASLM.

7.4 Focal Issue 4: Water scarcity and pollution

1. CONDUCT PROGRAMMES TO IMPROVE KNOWLEDGE OF AND AWARENESS AMONG COMMUNITIES ON SUSTAINABLE WATER RESOURCES MANAGEMENT: Improve knowledge and attitudes of communities living in the project area on the need for sustainable water resources management is a timely requirement. The communities are unaware of the detrimental consequences to downstream communities and the environment due to unsustainable water resource use. Some of the identified issues such as water pollution, over exploitation, destruction of watershed areas for alternatives uses occur due to lack of knowledge and awareness. Increasing such knowledge among communities on sustainable water resource management is the principle means to incentivize communities to adopt water conservation measures. Particular attention is therefore needed to train and educate communities on sustainable water management practices. **Short-term result of action:** Training and awareness programmes on sustainable water management is carried out. **Key Stakeholders:** Water Board, Irrigation Department, RPCs, Divisional Secretariats, RPCs, TSHS and ASLM.
2. REPLACE EUCALYPTUS AND PINUS FOREST PLANTATIONS WITH ENDEMIC TREE SPECIES: Tea Smallholder's Societies, civil society organizations, vegetable cultivators, government officers widely acknowledge that eucalyptus and pine plantations have disturbed forest ecosystem services and communities. This, in turn, has resulted in negative impacts such as soil erosion, loss of habitat for wild animals, drying up of springs, loss of biodiversity and deterioration of water quality. A recommendation made by the communities in the area was to replace the forest plantations, which have exotic tree species, with endemic plant species to improve watershed services. If the Forest Department permits, the TSHS are ready to undertake planting of endemic tree species in forest plantations after removing eucalyptus and pine. This Action Plan proposes a pilot project focused on planting endemic trees in selected eucalyptus or pine plantation plots and gather lessons on the feasibility and scalability of such initiatives. **Short-term result of action:** A selected eucalyptus or pine plantation area is replaced with local and endemic tree species. **Key Stakeholders:** Forest Department, Divisional Secretariats and TSHS.
3. TRAIN FARMERS ON SUSTAINABLE AGRONOMIC PRACTICES THROUGH TSHDA AND DEPARTMENT OF AGRICULTURE: Water scarcity and pollution can be addressed through the adoption of best agronomic practices. In order to do that, the tea smallholders and vegetable cultivators must be trained on sustainable agronomic practices. TSHDA and Department of Agriculture can play a key role in this regard. Good agronomic practices would help in reducing the use of water through promoting rational use of water, reduce pollution and contamination of water. **Short-term result of action:** Farmers in Lipton's Seat Landscape are trained on sustainable agronomic practices. **Key Stakeholders:** Tea Smallholder Development Authority (TSHDA) and Department of Agriculture.

7.5 Focal Issue 5: Low adaptive capacity of smallholder farmers and tea estates to climate change

1. CONDUCT TRAINING AND AWARENESS RAISING PROGRAMMES FOR TSH COMMUNITIES ON GOOD AGRONOMIC PRACTICES: Tea smallholders and large tea estates are highly vulnerable to climate change impacts, but their adaptive capacity remains low. Adaptation to climate change can be done through following good agronomic practices, because they provide methods and techniques that minimise the impacts of climate change on tea and increase the resilience of tea farms to extreme weather conditions. In order to increase the adaptation capacity of tea smallholders, their knowledge needs to be built. Thereafter the TSH can convert this knowledge into actions and follow good agronomic practices on their tea lands. Reducing soil erosion, improving the quality of soils, and better pest and disease management can be achieved through training and awareness programmes. The TSHDA can play a major role in carrying out training and awareness raising programmes, as they are the responsible government authority with sufficient infrastructure and capacity to do it effectively. **Short-term result of action:** Tea smallholders are trained on good agronomic practices. **Key Stakeholders:** Tea Smallholders Development Authority (TSHDA), TSH societies.
2. PROMOTE CROP DIVERSIFICATION FOR TSH AND RPC'S: Tea is a monoculture crop and fluctuations in tea yields due to climate change will lead to income sources being adversely affected. Tea is the main source of income for TSH and in the plantation sector workers entirely depend on income earned from work at large tea plantations or processing facilities. In order to maintain a fixed monthly income, alternative measures can be implemented. One such action is diversification of crops. In cases where tea crop is damaged due to climate change, income from other crops can help maintain monthly income and minimize their economic risk. With the support from the Department of Agriculture, civil society organizations and TSHDA, TSH farmers and RPCs can be mobilised to diversify the crops in tea estates. In this regard, knowledge, training and capacity building and incentives should be provided. Existing initiatives planting pears and oranges in marginal tea lands can serve as good models and be promoted further. **Short-term result of action:** TSH and RPCs are mobilised to diversify crops in the estates. **Key Stakeholders:** Department of Agriculture, civil society organizations, Tea Smallholders Development Authority (TSHDA) and RPCs. societies.
3. PROVIDE CLIMATE FORECASTS FOR THE COMMUNITIES TO SUPPORT SEASONAL CROP CULTIVATION PLANNING: Lack of accurate climate forecasts have resulted in crop damage due to extreme weather events. Providing climate forecasts in advance for farmers would help them plan their seasonal crop cultivation. A coordination mechanism needs to be set up between farmers and the Meteorological Department. **Short-term result of action:** Climate forecast information is provided to communities before they decide on seasonal crop cultivation. **Key Stakeholders:** Metrological Department, Department of Agriculture.
4. INTRODUCE NEW TECHNOLOGY SUCH AS IMPROVED COOKING STOVES, AND ENERGY SOURCES SUCH AS LP GAS, SOLAR POWER AND BIOGAS: A majority of households within the Lipton's Seat Landscape use fuelwood as the main source of energy for cooking and heating. In order to meet the fuelwood requirement, people exploit the tea fields, home gardens, forests and forest plantation. This results in a degradation of natural ecosystems. The smoke from biomass fuelwood also causes adverse health effects and contributes to climate change through emissions. Improved cooking stoves and alternative energy sources can be introduced to improve the efficiency of fuel wood and to reduce the exploitation of natural ecosystems for fuelwood. Some RPCs in the Lipton' Seat Landscape have commenced a programme to provide biogas for plantation workers. That programme can be promoted in other RPCs

within the landscape. For those who cannot afford new clean energy sources, fuelwood efficient stoves can be provided. **Short-term result of action:** Energy efficient stoves and clean energy sources are introduced to the TSH and workers in RPCs. **Key Stakeholders:** RPCs, ASLM.

7.6 Focal Issue 6: Land ownership and tenure

1. DEMARCATÉ BOUNDARIES OF PROTECTED AREAS, RESERVATIONS AND SENSITIVE AREAS AND MAP: Lack of defined boundaries in natural ecosystems, poor management and poor enforcement of laws have resulted in many issues which negatively impact sustainable management of government owned lands. Strengthening land ownership and tenure in government owned lands, which are managed by different government agencies, would help minimise or resolve land tenure and use related issues. Existing programmes with the LUPPD and Ministry of Land and Land Development to identify, map, demarcate boundaries and declare protected areas by gazette, as well as ecosystem conservation programmes within RA certified large tea plantations, are good models to expand. A pilot initiative of such natural ecosystems conservation measures can be done as a demonstration plot where interested Regional plantation companies and tea smallholders can visit these demonstrations and gain experiences. **Short-term result of action:** Boundaries of government owned lands as protected areas, reservations and sensitive areas are demarcated and mapped. **Key stakeholders:** Land Use Policy Planning Department (LUPPD), Ministry of Land and Land Development, Divisional Secretariat, RPCs and civil society organizations and community based organizations.
2. TRAIN FARMERS AND PROVIDE INCENTIVES TO INCREASE PRODUCTIVITY OF THEIR LANDS: Illegal encroachment for cultivations is a serious issue in the Lipton's Seat Landscape. The productivity of the existing farm lands is relatively low compared to the maximum potential productivity that can be reached through increasing productivity. Therefore, the farmers can be trained and provided with incentives to increase productivity of their existing farm lands. This would help in minimizing encroachments into estate owned or private land to expand their crop cultivations. Since a majority of farmers operate at their margins, incentives should be provided to increase the productivity levels of their land. The current initiatives of TSHDA and Department of Agriculture can be good models to expand. **Short-term result of action:** farmers in Lipton's Seat Landscape are trained and provided incentives to increase productivity. **Key stakeholders:** Tea Smallholders Development Authority (TSHDA), Department of Agriculture and NGOs.

Table.1 below shows the status of prioritised actions implement by the stakeholders. Ongoing actions implemented by the particular stakeholders are limited in scope and scale, for example within a plantation or a selected location with their own funding. Government sector stakeholders spend their

annual allocations and implement some activities. The RA certified RPCs have annual allocations to maintain and improve the SAN criteria within the farm. The new strategies have been prioritised by the stakeholders based on their importance, but still no initiatives, therefore fund raising and directing investments to implement new actions and expand the scope of the ongoing actions is necessary.

	Focal Issue/ Actions	New action/ Ongoing action	Implementing agency/Stakeholder
1	Degradation and conversion of natural ecosystems		
a	Carry out awareness raising programmes for the communities on good solid waste management	Ongoing action	Agarapathana Plantations (5 estates) , Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates)
b	Boundary demarcation, implementation of a management plan and declare important natural ecosystems as protected areas	Ongoing action	Provincial Land Commissioner’s Department, Land Use Policy Planning Department, RA/ASLM
c	Carry out a research to understand the current status of IAS in Lipton’s Seat landscape	New action	Central Environmental Authority (CEA), University of Uva Wellassa
d	Design an awareness programme on negative impacts of forest fires and sustainable forest management	Ongoing action	Department of Forest Conservation,
e	Establish community watch dog groups to prevent and combat forest fires	Ongoing action (only in few locations)	Department of Forest Conservation and Disaster management centre
2	Solid waste and waste water management		
a	Educate people on waste and waste water management	Ongoing action	Agarapathana Plantations (5 estates) , Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates)
b	Set up grey water purification systems	Ongoing action	Agarapathana Plantations (5 estates) , Finlays Plantations (5 estates), Totalagala Estate , Maskeliya Plantations (4 estates)
c	Provide waste collecting bins to communities/ households and mobilize them to segregate waste at the source	Ongoing action	Agarapathana Plantations (5 estates) , Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates)
3	Landslides and soil erosion		
a	Instructions and codes for different land use, constructions	Ongoing action	Local Government and NBRO
b	Enforce rules and regulations to prevent use of lands in hazards prone zones	Ongoing action	Local Government and NBRO

c	Undertake non-structural interventions such as training and education, monitoring and incentives	Ongoing action	NBRO, DMC, Provincial Council and District Secretariat
d	Implement reforestation programmes in landslide prone areas	Ongoing action	Department Forest Conservation
e	Establish mechanism to coordinate responsible government agencies and RPC's to work collaboratively and efficiently	New action (a platform needs to be established with the RPCs and relevant government agencies)	ASLM
4	Water scarcity and pollution		
a	Conduct programmes to improve knowledge and awareness among communities on sustainable water resources management	Ongoing action	Agarapathana Plantations (5 estates), Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates), TSDA
b	Replace eucalyptus and pinus forest plantations with endemic tree species	New action	Department of Forest Conservation, Tea Smallholder Development Societies, Timber Corporation
c	Train farmers on sustainable agronomic practices through TSHDA and Department of Agriculture	Ongoing action	TSHDA, Department of Agriculture, Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates), TRI
5	Low adaptive capacity of smallholder farmers and tea estates to climate change		
a	Conduct training and awareness raising programmes for TSH communities on good agronomic practices	Ongoing action	TSHDA, Department of Agriculture, Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates), TRI
b	Promote crop diversification for TSH and RPC's	Ongoing action	Danbetenna estate and Totalagala estate, TSHDA
c	Provide climate forecast for the communities to support seasonal crop cultivation planning	New action	TRI, TSHDA, Department of Agriculture, Meteorological Department
d	Introduce new technology such as improved cooking stoves, and energy sources such as LP Gas, solar power and biogas	Ongoing action	Agarapathana Plantations (5 estates) , Finlays Plantations (5 estates), Totalagala Estate, Maskeliya Plantations (4 estates), RA/ASLM
6	Land ownership and tenure		
a	Demarcate boundaries of protected areas, reservations and sensitive areas and map	Ongoing action	Provincial Land Commissioner's Department, Land Use Policy Planning Department, RA/ASLM
b	Train farmers and provide incentives to increase productivity of their lands	Ongoing action	TSHDA –tea replanting programme for smallholders

8. Beyond the workshop: Steps to implementing the Action Plan

The actions prioritised and presented in this report will be implemented within Lipton's Seat landscape, and these actions would require minimal additional funding and capacity. Some are already being implemented by stakeholder, but limited in scope. Therefore, the aim is to go beyond this status and implement the selected actions at a greater scale across the landscape. As next steps the following list of criteria mentioned below must be fulfilled to achieve this scalability.

- It is acknowledged that the existing coordination mechanism at the landscape level is inefficient for coordinating natural resources management related activities. Because some of the important stakeholders are not engaged with the current coordination mechanism, i.e. regional plantation companies, the stakeholders stressed on the need of a improving the existing coordination mechanism available under the District Secretariat – the Environment Protection and Law Enforcement Committee Meeting (DEC) by including all the important stakeholders within the landscape particularly to implement the GEF Tea INRM Action Plan. Therefore, improving the coordination DEC would be a multi-stakeholder platform that facilitates engagement, dialogue and cooperation among private sector (Including RPCs), NGOs and government individuals and organizations committed to implementing the agreed upon strategies in the report.
- Some of the identified and prioritized actions are implemented by different stakeholders at different scales. Most of the actions are small in scale and do not cover the whole landscape. For example, RPCs implementing activities on good solid waste management and Provincial Department of Land implement activities to demarcate environmentally sensitive areas while Land Use Policy Planning is doing the mapping of environmental sensitive areas and reservations. In order to go beyond this limited scale, and to implement more actions described in the INRM action plan, it is essential to engage with key stakeholders to clarify and formalize roles and responsibilities in implementing agreed upon strategies, including tying strategies to existing projects, policies, funding opportunities.
- Progress in implementing strategies should be tracked and to do that a monitoring and evaluation programme needs to be formulated and implemented. Beyond the workshop period, the landscape's multi-stakeholder process much also implement a basic monitoring and evaluation system to track whether planned strategies are being carried out to achieve results outlined in the results chains
- Lack of financial resources is the main limitation in implementing the identified strategies. Government agencies and NGOs get very limited funding to run their organizations and it is difficult to secure funding to implement actions to manage natural resources in their landscapes. Therefore, a key action as a diverse group of stakeholders must be to identify new funding sources & opportunities to support implementation of the agreed upon strategies.

Annex I - List of Participants for the INRM workshop

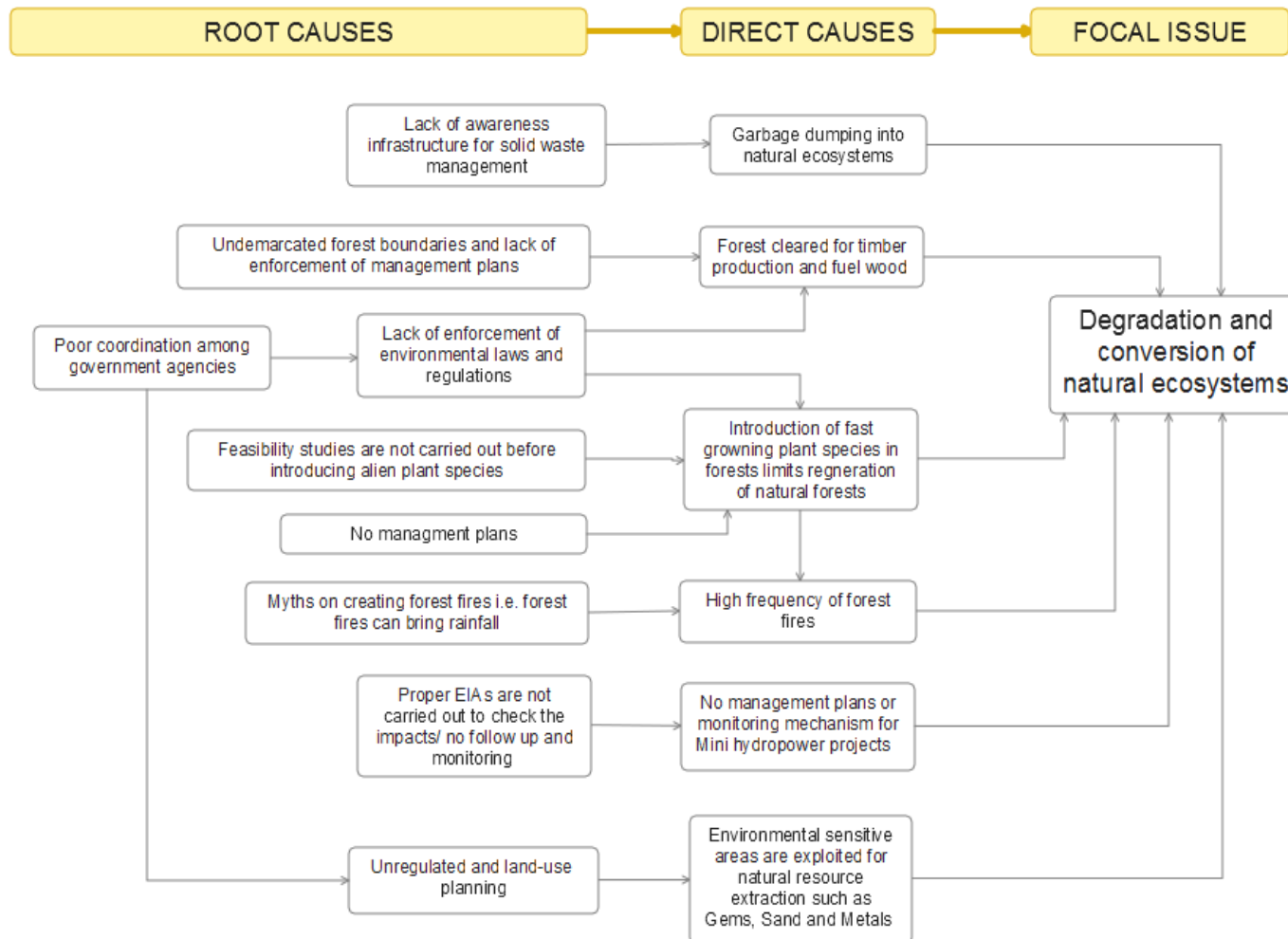
	Name	Organization	Title
1	Mr. J.M.C. Perera		Senior Assistant Manager
2	Mr. A.W.R. Senewirathne	Craig Estate,	Manager
3	Mr. B.B.S.P. Perera	Disaster Management Centre	
4	Mr. W.M. Wijerathne	Tea Smallholder's Development Society	
5	Mr. W.P. Wanigasinghe	Department of Forest, District Office	Assistant Divisional Forest Officer
6	Mr. G.N. Horadagoda	Ampitikanda Estate,	Manager
7	Mr. K. Gnanapragasam	National Union of Workers	
8	Mr. D.M. Amarasinghe	Tea Smallholder's Development Society, Heel Oya	
9	Mr. P. Sridar	Ceylon Worker's Congress, Badulla	
10	Mr. W. Rajamuni	Tea Smallholder's Development Society, Bandarawela	
11	Mr. W.A.P.P. Christopher	Uva Wellassa University	Lecturer
12	Mr. R.V.A.N.P. Wijeratne	Plantation Human Development Trust	Regional Director
13	Mr. W.D.P.C. Samarasekara	Provincial Land Commissioner's Department	Provincial Land Commissioner
14	Mr. S.P.P. Wijesinghe	Provincial Ministry of Agriculture	Assistant Director
15	Mr. D.M.P.T. Dissanayake	Central Environmental Authority	
16	Mr. H.M.I. Kahatapitiya	Agarapathana Plantations	Senior Assistant Manager
17	Mr. K.A. Jayasinghe Perera	Future in Our Hands (NGO)	
18	Mr. G.A. Prabath Kumara	Future in Our Hands (NGO)	
19	Mr. K.R. Piyadasa	Wildlife Office, Rawana Ella	
20	Mr. P.R. Rathnaweera	Tea Smallholdings Development Authority	
21	Dr. Sisira Ediriweera	Uva Wellassa University	Senior Lecturer
22	Mr. G.W.N. Nimalasiri	Land Use Planning Office	
23	Mr. Nihal Gunarathne	Divisional Secretariat, Bandarawela	Divisional Secretary
24	Ms. Thanuksha Abeywardane	Divisional Secretariat, Ella	Divisional Secretary
25	Mr. Sanjaya Prasad Weerasinghe	Divisional Secretariat, Haputale	Assistant Divisional Secretary
26	Mr. K.N. Kumarasiri	Tea Smallholdings Development Authority	
27	Mr. W.M.N.N. Gunasekara	National Water and Sanitation Board	Engineer
28	Mr. A.L.R.V. Kumara	Tea Research Institute	
29	Mr. Nalin Attanayake	Thotalagala Estate, Haputale	
30	Mr. D.M.P.C. Bandara	National Building and Research Organization	

31	Mr. Janaka Wijekoon	Provincial Irrigation Department	Engineer
32	Ms. Sunila Vithanage	Craig Estate	
33	Mr. William Crosse	Rainforest Alliance	Deputy Director
34	Mr. Giri Kadurugamuwa	Alliance for Sustainable Landscapes Management	Director
35	Mr. Thushara Ranasinghe	Alliance for Sustainable Landscapes Management	Programmes Manager NRM

Annex II: Focal Issue problem flow diagrams

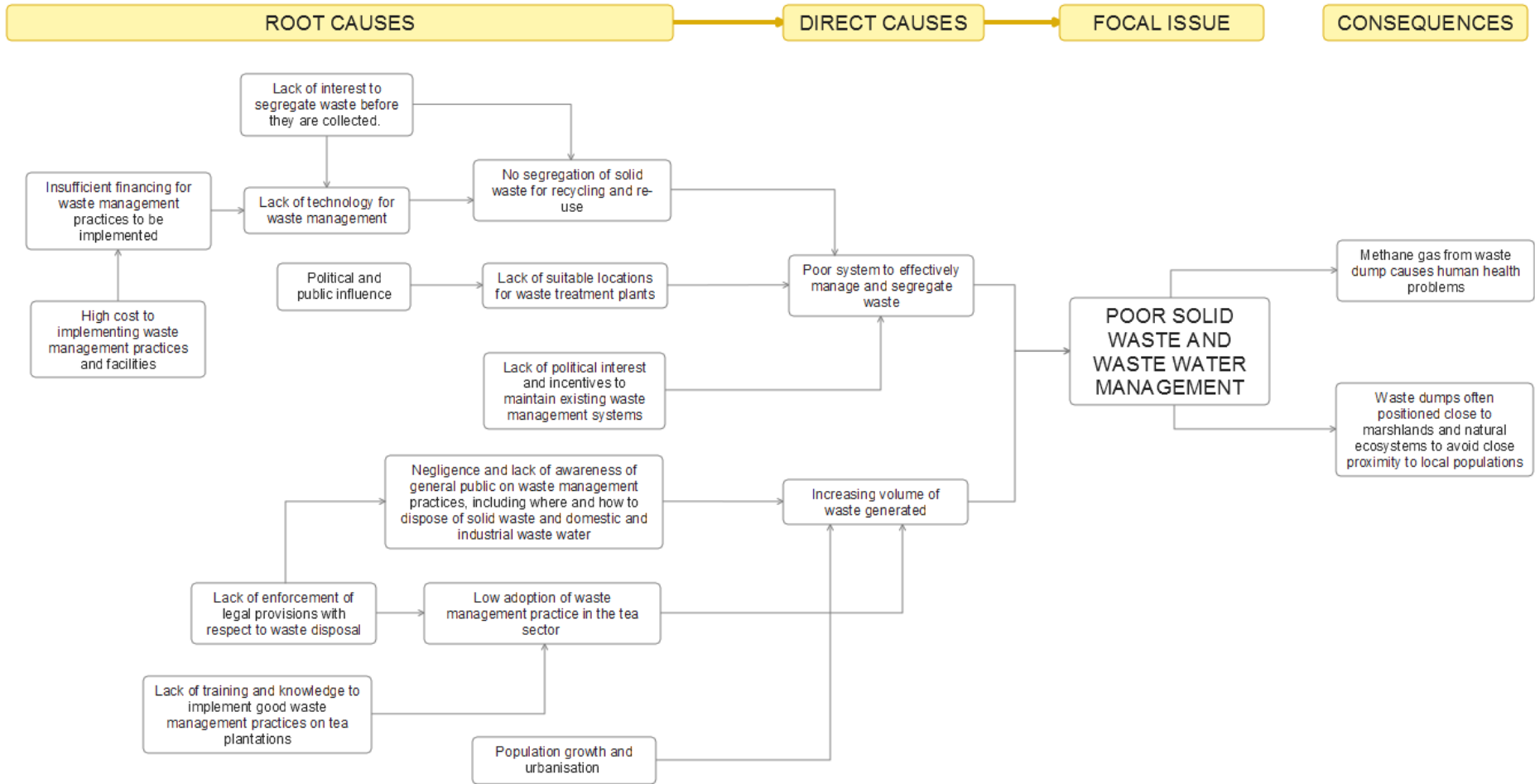
Focal Issue 1: Degradation and conversion of natural ecosystems

Focal issue: Degradation and conversion of natural ecosystems



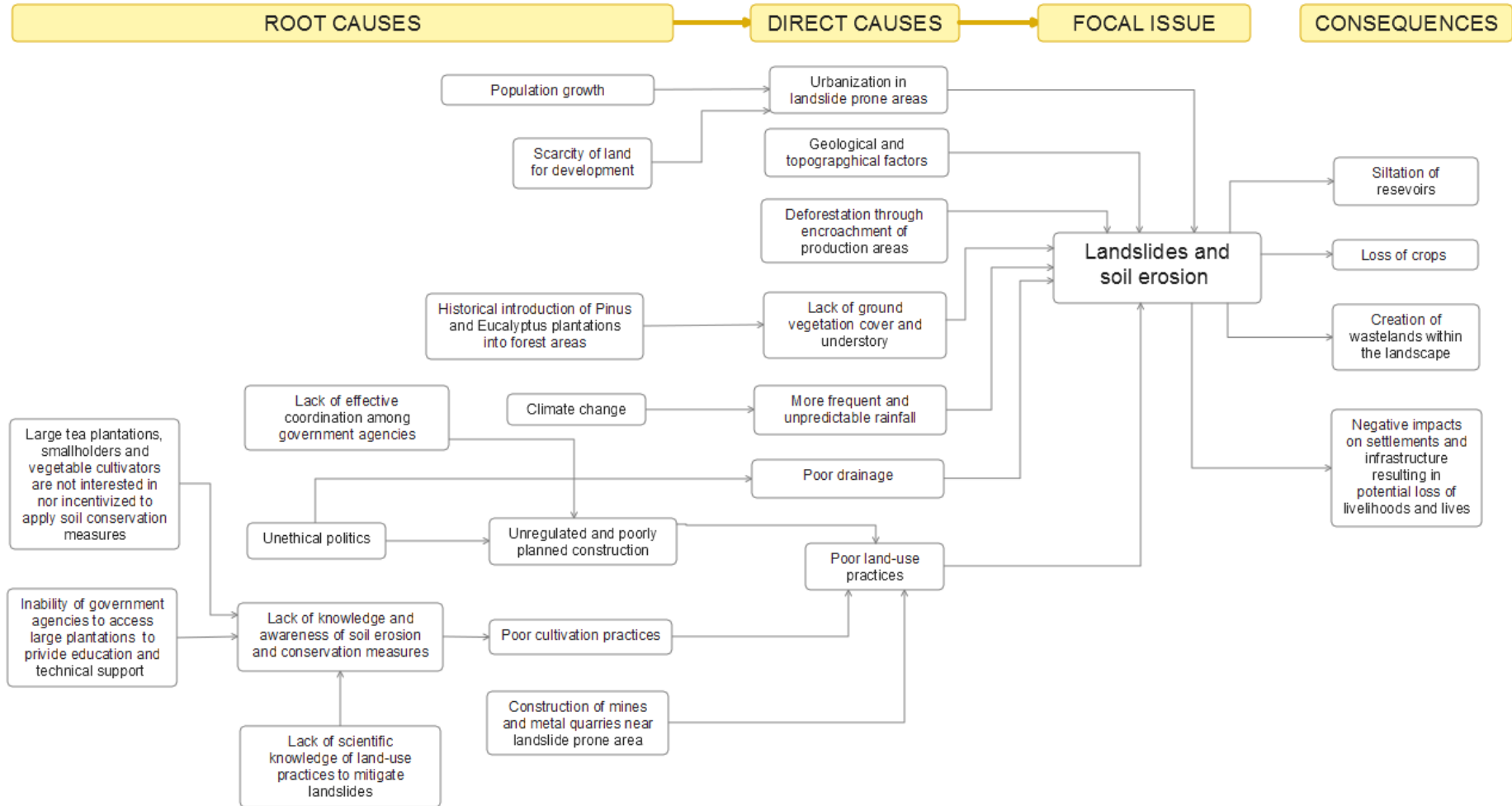
Focal Issue 2: Solid waste and waste water management

Focal issue: Solid Waste and Wastewater Management



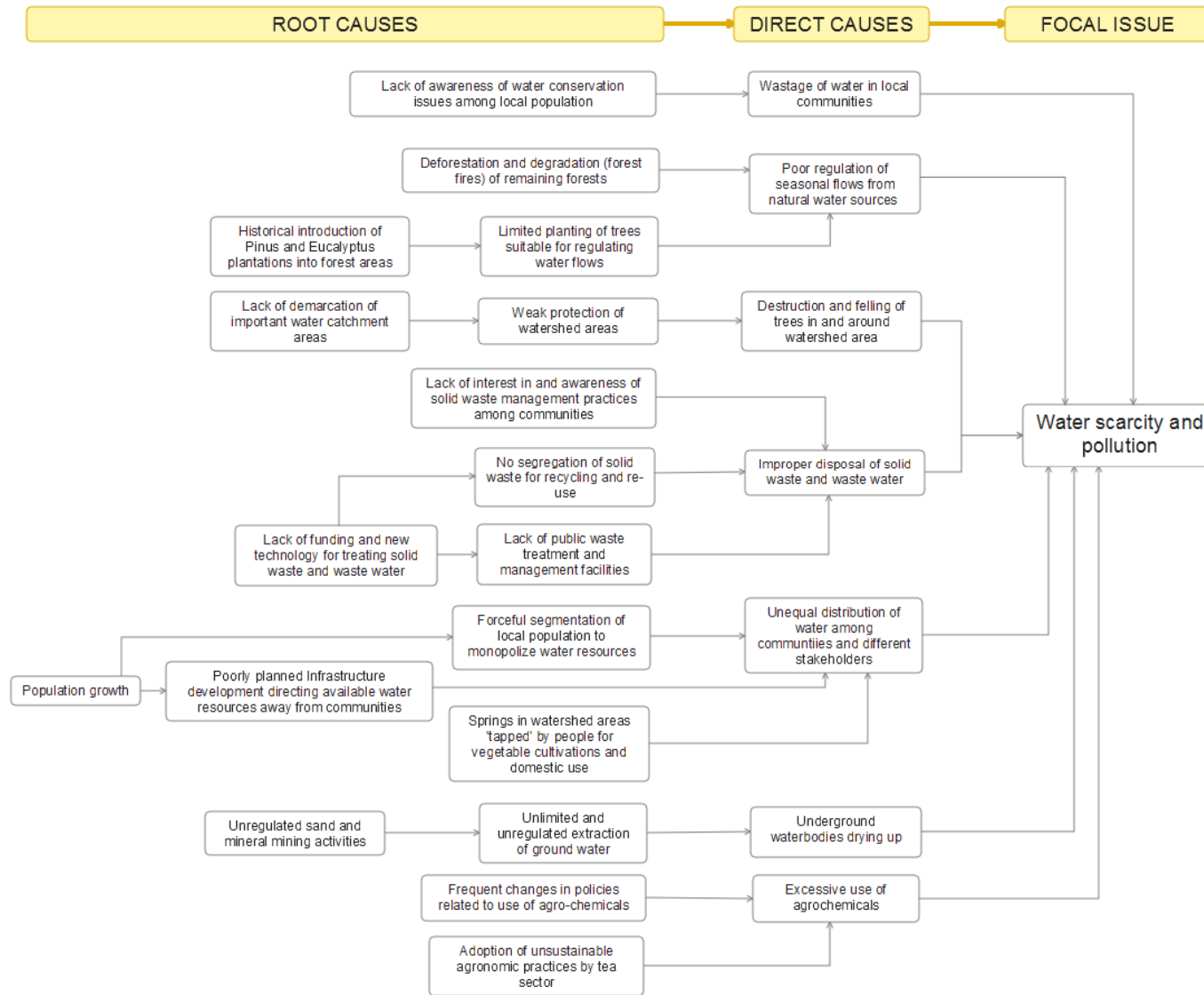
Focal Issue 3: Landslides and soil erosion

Focal issue: Landslides and Soil Erosion



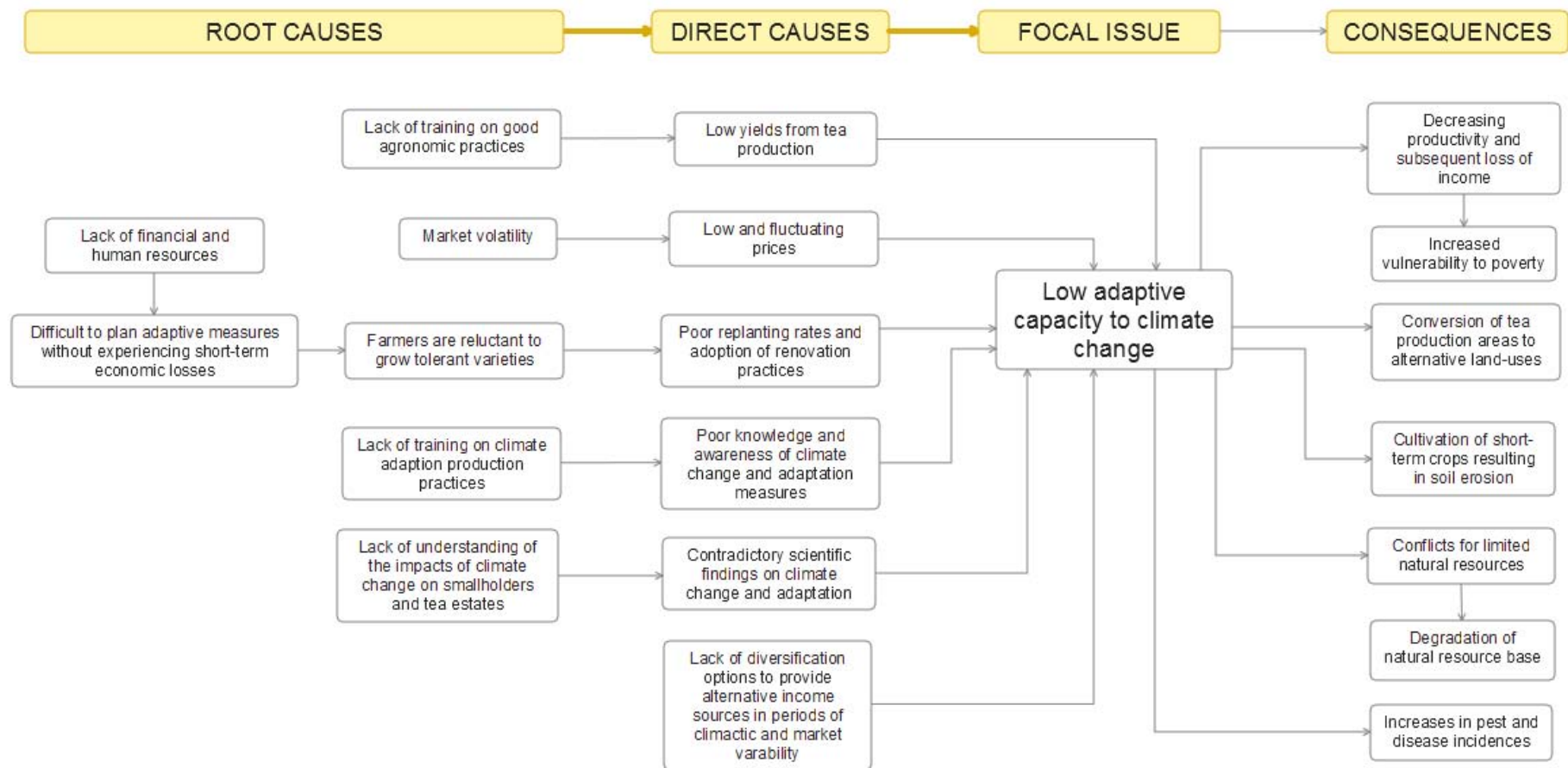
Focal Issue 4: Water scarcity and pollution

Focal issue: Water Scarcity and Pollution



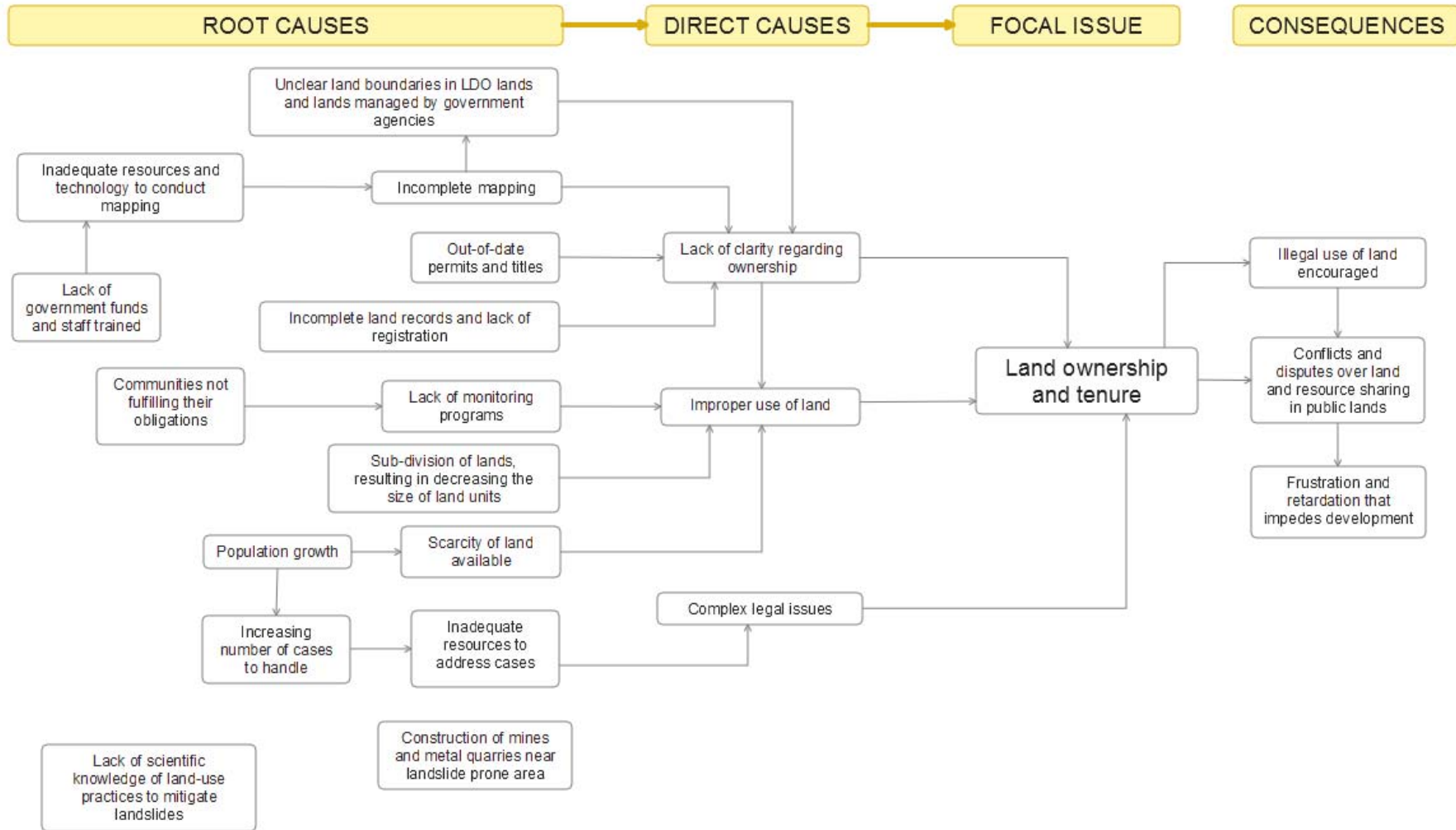
Focal Issue 5: Low adaptive capacity of smallholder farmers and tea estates to climate change

Focal issue: Low adaptive capacity of smallholder farmers and tea estates to climate change



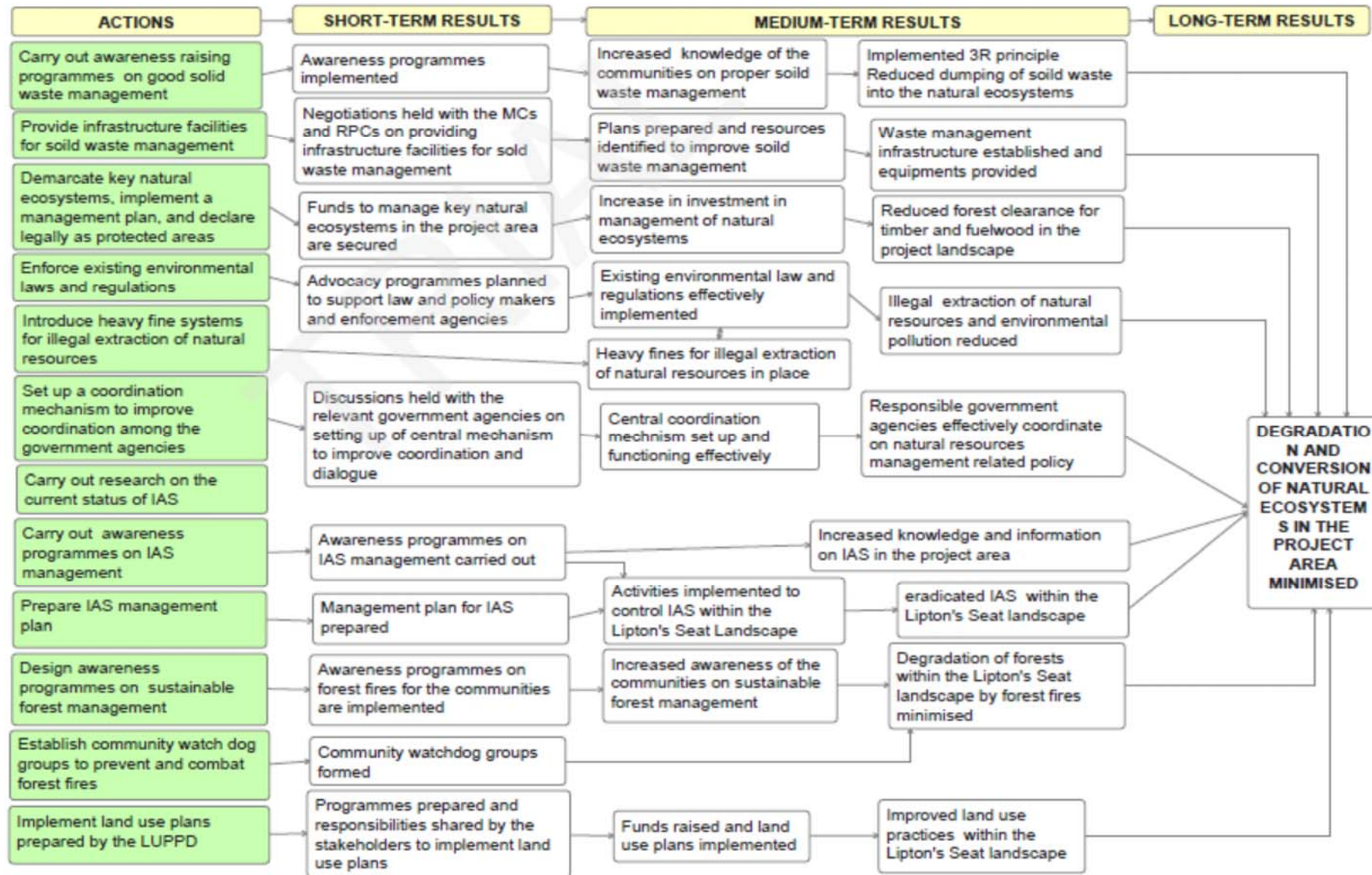
Focal Issue 6: Land ownership and tenure

Focal issue: Land ownership and tenure

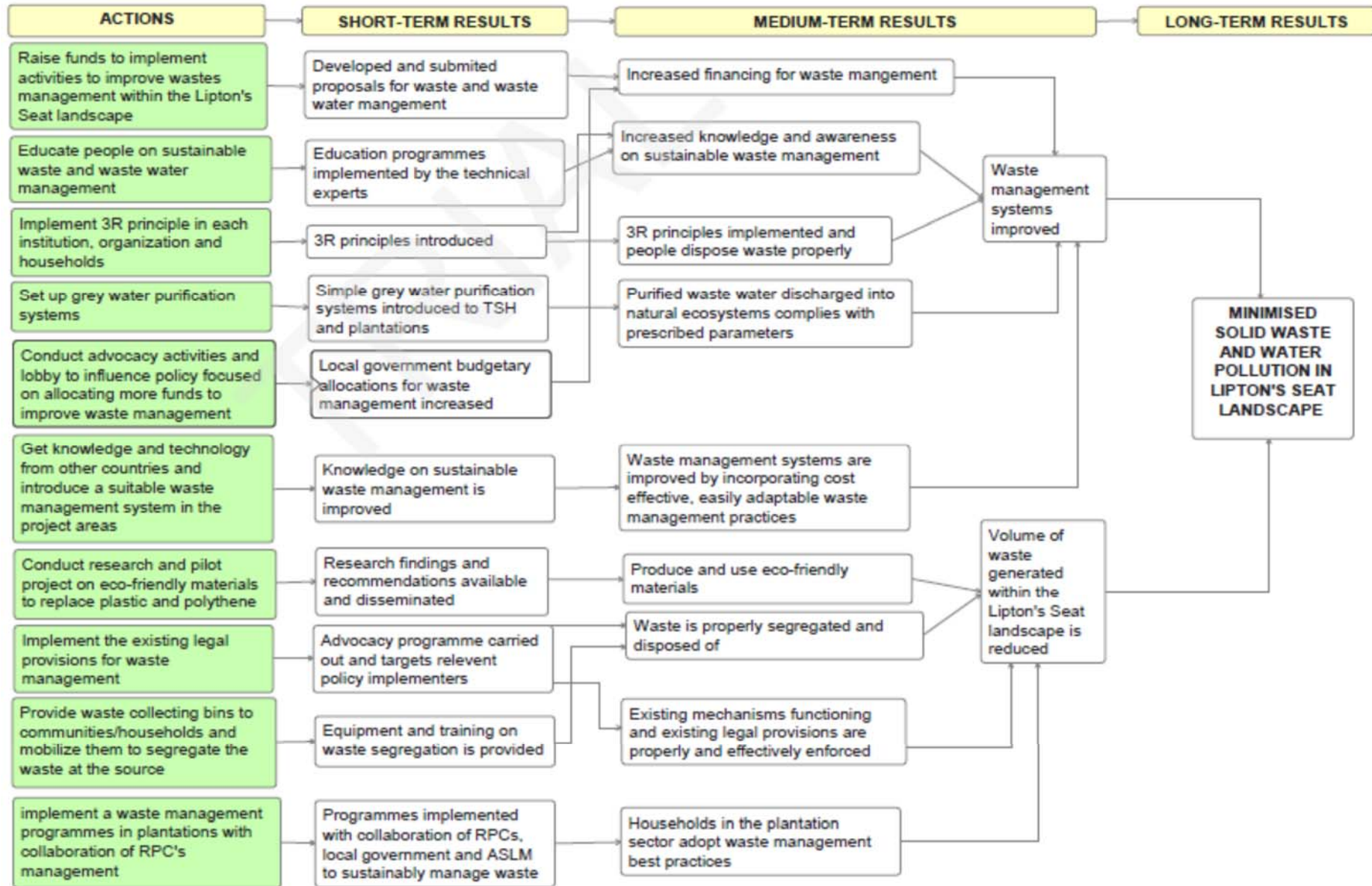


Annex III: Results Chains flow diagrams

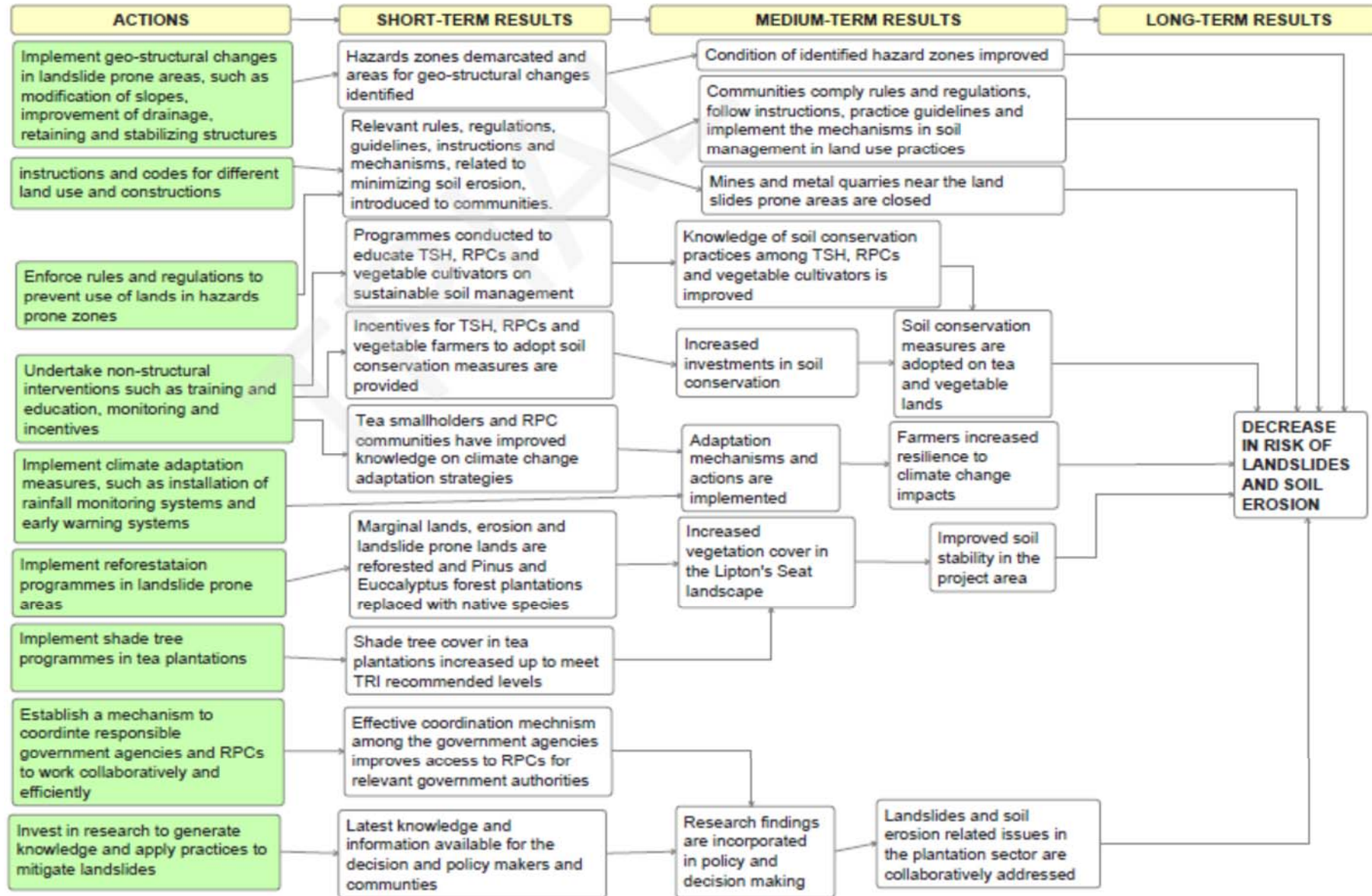
8.1 Focal Issue 1: Degradation and conversion of natural ecosystems



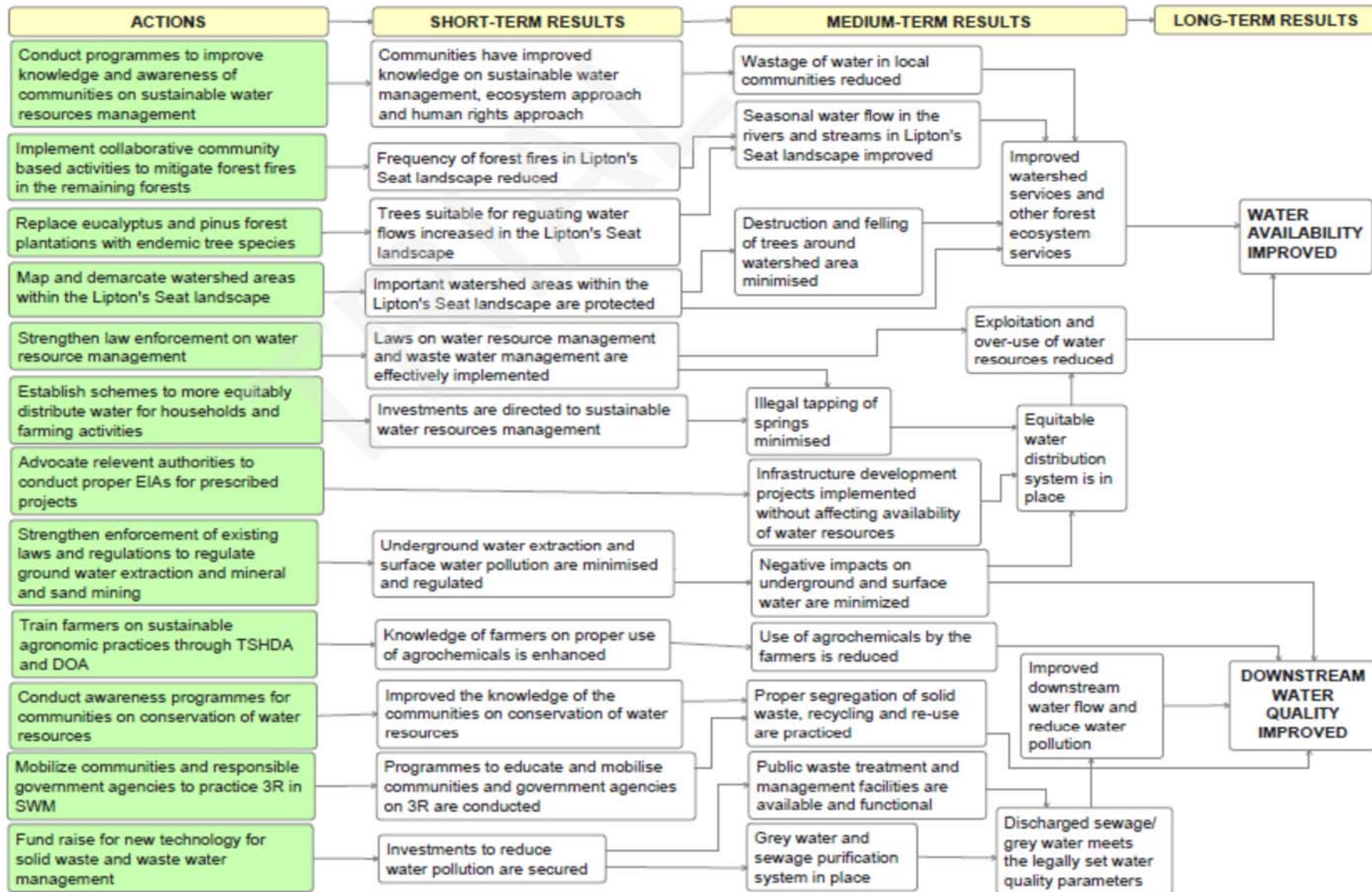
8.2 Focal Issue 2: Solid waste and waste water management



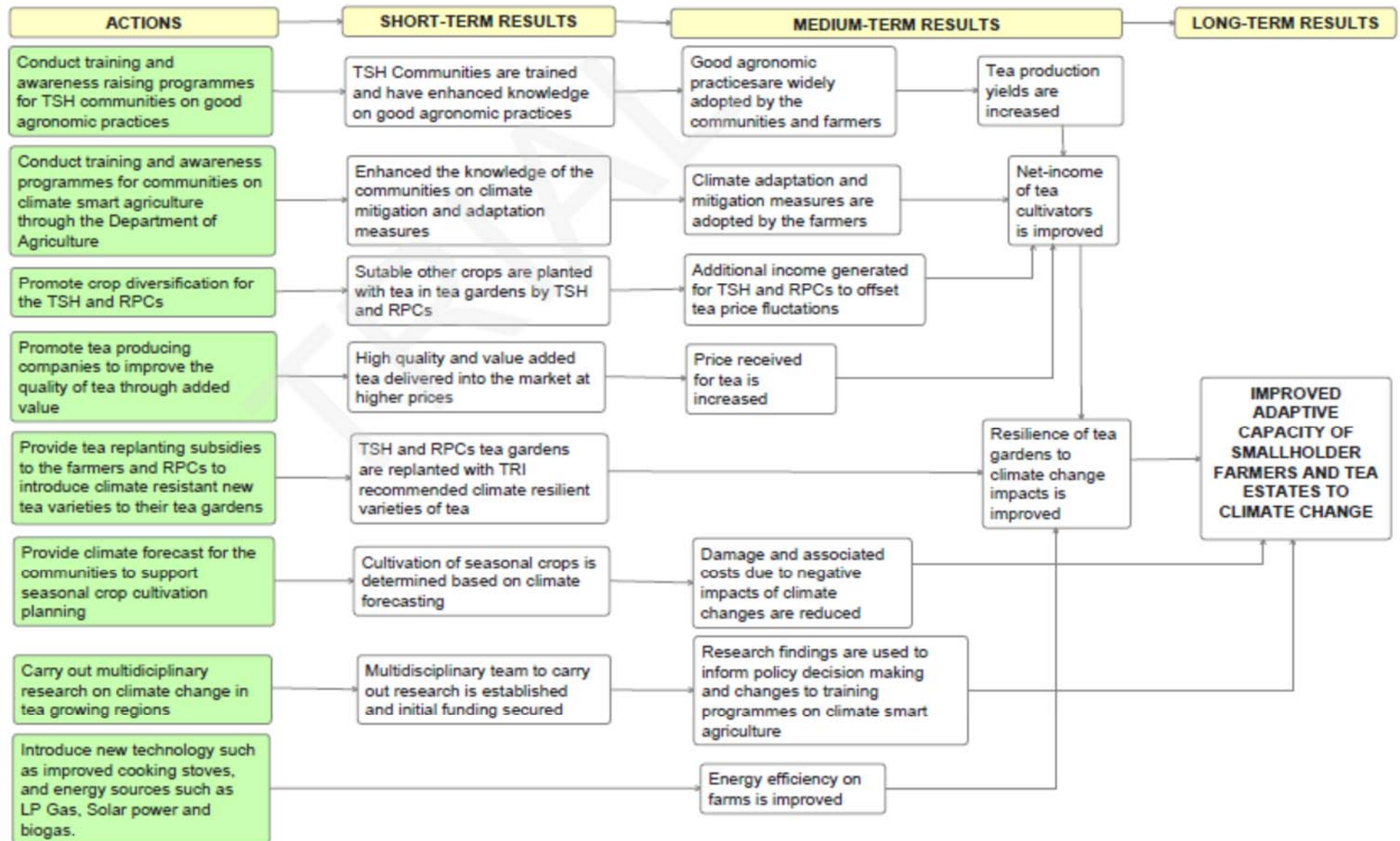
8.3 Focal Issue 3: Landslides and soil erosion



8.4 Focal Issue 4: Water scarcity and pollution



8.5 Focal Issue 5: Low adaptive capacity of smallholder farmers and tea estates to climate change



8.6 Focal Issue 6: Land ownership and tenure

