Approach Paper – Strategic Investment Framework for financing Climate Actions in Nepal by leveraging Green Climate Fund

Climate change vulnerability and disaster risk assessment of fragile mountain ecosystems and appraising the cost of adaptation and mitigation solutions to address climate risks

July 2017
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>BFI</td>
<td>Bilateral Financial Institutions</td>
</tr>
<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
</tr>
<tr>
<td>CDKN</td>
<td>Climate and Development Knowledge Network</td>
</tr>
<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td>GCF</td>
<td>Green Climate Fund</td>
</tr>
<tr>
<td>GLOF</td>
<td>Glacial Lake Outburst Flow</td>
</tr>
<tr>
<td>GoN</td>
<td>Government of Nepal</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MFI</td>
<td>Multilateral Financial Institutions</td>
</tr>
<tr>
<td>MoF</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>NAP</td>
<td>National Adaptation Plan</td>
</tr>
<tr>
<td>NPR</td>
<td>Nepalese Rupee</td>
</tr>
<tr>
<td>NAPA</td>
<td>National Adaptation Programme of Action</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>SFM</td>
<td>Sustainable Forest Management</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
</tr>
</tbody>
</table>
# Table of contents

Executive summary ................................................. 5

1. About Green Climate Fund ........................................ 7

   1.1. The six investment criteria of GCF ......................... 8
   1.2. Theory of Change ............................................ 9
   1.3. Logical framework .......................................... 10

2. Government of Nepal’s intention of developing projects for GCF ........................................ 12

   2.1. Components of a GCF proposal ....................... 13
   2.2. Approach to selection and evaluation of interventions – case study of Dholakha and Ramechhap 15
   2.3. How these interventions meet the GCF criteria? ........ 19
   2.4. Designing a strategic investment framework for financing climate actions ......................... 31
   2.5. Objectives of a strategic investment framework for climate responsive development .......... 31
   2.6. Dimensions and strategies of an effective investment framework ..................................... 33

3. Conclusion .......................................................... 41

References ............................................................. 42
List of Tables

Table 1: Distribution of Disbursements by GCF .......................................................... 7
Table 2: Components of GCF investment proposal ...................................................... 13
Table 3: Summary Results – Sustainable Forest Management ..................................... 16
Table 4: Summary Results for CBA of Sustainable Water Management ....................... 17

List of Figures

Figure 1: Financial Instruments adopted by GCF ......................................................... 8
Figure 2: GCF Investment Criteria and their definitions (source: GCF, 2014) ............... 9
Figure 3: Logical Framework from Paradigm Shift to Components ............................. 10
Figure 4: Approach to developing a logical framework ............................................... 11
Figure 5: Goals of Adaptation Programmes (CDKN 2014) ......................................... 12
Figure 6: Five step approach of developing investment plan for GCF ......................... 13
Figure 8: Approach for selection and prioritization of adaptation/mitigation measures: .......................................................... 16
Figure 8 Objectives of an effective Climate Investment Framework ................................ 32
Figure 9: Landscape of climate finance .................................................................... 34
Executive summary

The Green Climate Fund (GCF) is a new global fund created to support the efforts of developing countries to respond to the challenge of climate change. GCF is a fund established within the framework of the UNFCCC to assist developing countries in adaptation and mitigation practices to counter climate change. The objective of the Green Climate Fund is to "support projects, programmes, policies and other activities in developing country Parties using thematic funding windows".

The investment by GCF is based on the assessment of the six key criteria namely, 1) Impact potential, 2) Paradigm shift potential, 3) Sustainable development potential, 4) Responsiveness to recipient’s needs, 5) Promote country ownership and 5) Efficiency and effectiveness. The methodology used for calculating the indicators and values should be provided and the project proponents can complement quantitative indicators with qualitative ones. However, not all indicators are applicable to all activities and funding proposals are to focus only on those relevant to the proposal, country context and the priorities of the GCF the project focusses upon. A detailed proposal is required to be submitted for the same as per the extant guidelines of GCF and developing the investment plan for GCF is a five step approach as represented by the chart below.

With Government of Nepal (GoN) deciding on accessing funds from GCF (and other allied institutions) it is important that the Government embarks upon designing policies, institutions etc. to increase its readiness to access such funds and maximize benefits from utilization of such funds. The facilities from GCF are attached with specific objectives and the policies of GoN must address meeting such objectives. The broad objectives of the framework are identified and have been presented in the figure below.
This requires the Government to design and roll-out a comprehensive and effective investment framework with strategies aligned to the objectives of such funds. Therefore, this Strategic Investment Framework (SIF) has been developed to demonstrate the approach to identify and evaluate project ideas for GCF. The SIF has multiple dimensions to it that should be considered by the project proponent. It broadly include:

1) Bridging finance gap – using GCF to leverage other climate funds/ other finances
2) Ensuring interventions sustainable – exploring opportunities of a revenue projects
3) Ensuring private sector participation – creating business case for climate projects
4) Promoting an integrated approach – developing inter-departmental/ ministerial coordination for multi-disciplinary approach to project development

The SIF approach paper content has been developed based on field surveys/ studies conducted at Dholakha and Ramechhap (in Tamakoshi watershed) in consultations with policy makers/ regulators in various ministries, discussions with financial intermediaries and civil service organizations. Subsequently, the investments have been identified and a cost-benefit analysis has been carried out for the interventions identified for the two districts.

However, given the investment requirement, an important point of deliberation for the policy-makers is the strategies to generate sufficient funds for not just for meeting the CAPEX requirements but also for revenue expenditures during the entire life of interventions. Based on the stakeholder consultations across ministries, some strategies emerge as focus areas and would be of significance to the policy makers. These salient observation are as follows:

- A sound financing plan needs to be in place – for each project and all projects. The plan must uphold the principle of co-financing and country-ownership. The measure requires intense coordination among funds, their nature of disbursement and devising an effective way of blending finances from various sources.
- The policies and strategies must ensure that there is sufficient private sector participation. As a matter of fact, all efforts must be directed, in the medium to long run, to unlock the private capital for financing climate actions.
- There is need to explore mechanisms to identify the most efficient ways in which finances can flow from various sectors. The mechanism ought to include all actors in the financial space. With each actor having competing interests and priorities, the framework should address the economic interests of all entities.
- There is a need for policy reforms at various levels of governance and regulation. The reforms should be inclusive – in a way that takes on board all the stakeholders. The framework, if properly designed, can bring forth an investment grade policy regime in Nepal, not just in the context of climate change but in different spheres of development actions. Certain institutional reforms are also warranted to facilitate the financing objectives. While old institutions need to be strengthened in terms of capacity and capabilities, some new institutions may be required to ensure a seamless functioning of the climate and development financing system.
1. About Green Climate Fund

The Green Climate Fund (GCF) is a new global fund created by 194 parties at the 16th Conference of Parties (COP 16) at Cancun in 2010. This fund has been designated as an operating entity of the financial mechanism of the UNFCCC under article 11. The aim of GCF is to support the efforts of developing countries to act in response to the challenge of climate change. The fund is established within the framework of the UNFCCC to assist developing countries in financing interventions in the areas of adaptation and mitigation. The objective of the Green Climate Fund is stated as to "support projects, programmes, policies and other activities in developing country Parties using thematic funding windows".

Subsequent to the 2015 Paris Agreement, the GCF was given an important role in serving the agreement and supporting the goal of keeping climate change well below 2 degrees Celsius. GCF aims to catalyze a flow of climate finance to invest in low-emission and climate-resilient development, driving a paradigm shift in the global response to climate change.

The total expected fund size is USD 10.3 billion (based on commitment made by the parties). As of July, 2017, GCF has financed 43 projects benefitting 125 million people through increasing resilience. So far there has a balanced approach in terms of thematic areas, size of assistance and sectors covered.

Table 1: Distribution of Disbursements by GCF

<table>
<thead>
<tr>
<th></th>
<th>Disbursement by target</th>
<th>Mitigation: 41%</th>
<th>Adaptation: 27%</th>
<th>Cross-cutting: 32%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Disbursement by size of assistance</td>
<td>Micro: 12%</td>
<td>Small: 37%</td>
<td>Medium: 35%</td>
</tr>
<tr>
<td>2</td>
<td>Disbursement by sector</td>
<td>Public: 43%</td>
<td>Private: 53%</td>
<td>Public-Private: 4%</td>
</tr>
</tbody>
</table>

GCF embraces a host of generic instruments for financing mitigation and adaptation in the developing economies (GCF, 2013). A brief description of the instruments adopted by GCF is presented in Error! Reference source not found.. The options are deemed to be “flexible” and not mutually exclusive. Further the instruments “can evolve as the Fund grows” with the overall objective being de-risking investments, bundling small projects, attract private sector, develop public-private partnership and support innovation (GCF, 2017).
Given the objective of GCF, the Board of GCF has decided on a set of six investment criteria in its investment framework. While submitting the proposal for investment, the project proponent is expected to demonstrate the alignment of the project with these six investment criteria. It details out possible indicators (or indicative assessment factors) that enables the project proponent to quantify the impact potential of the intervention. The project proponent is required to select the relevant criteria/ indicators for the project as per the following:

- The activity-specific sub-criteria inform the approval process for project and programme allocation decisions and apply to both adaptation and mitigation actions.
- The indicators (indicative assessment factors) seek to provide clarity on how the sub-criteria can be assessed.

The methodology used for calculating the indicators and values should be provided and the project proponents can complement quantitative indicators with qualitative ones. However, not all indicators are applicable to all activities. Funding proposals are to focus only on those relevant to the proposal, country context and the priorities of the GCF the project focusses upon.

---

1 Source: (GCF, 2013).
1.2. Theory of Change

Given the goals of sustainable development, the economies are striving to evolve a holistic growth and development trajectories. It is suggested that economies must try to achieve a ‘transformative change’ and not ‘incremental change’ since the challenges faced by the economies in the world are numerous, nested and intricate (Rip & Kemp, 1998). Also, since 2000, the countries, at the behest of the UN, had taken a pledge to cover the three essential pillars of development – economy, society and environment. This was first pronounced as Millennium Development Goals and, later, in 2015, the countries again came together to declare that Sustainable Development Goals (SDGs) so that most countries of the world are guided by a uniform objective of development. Nepal is also a signatory to MDGs and SDGs declared by the United Nations.

Given this perspective, it transpires that the economies need to intervene – through policies, programmes, technology deployment and other means so that radical changes are visible in the form of economic gains (increase in productivity, employment), social reforms (gender equity, increase in social capital) and environmental sustainability (reduction in GHG emissions, increased resilience). It also means that any project/programme to address economic growth and development must also address the social and environmental gains, and vice-versa. No longer, one can look at the three important pillars of sustainable development in an isolated manner. They have to be considered and addressed simultaneously. However, this is easier said than done. To foster transformative changes in development interventions many experts (Weiss, 1995) have proposed a framework for designing, implementing and monitoring interventions. The framework, popularly known as The Theory of Change, embraces the following:

- All decisions to be data driven and information intensive as much as possible
- Outputs should be visible and outcomes must be measureable

![Figure 2: GCF Investment Criteria and their definitions (source: GCF, 2014)](image-url)
• Compulsory stakeholder consultation at each step of programme implementation
• Government assumes an enabling role in bringing together all stakeholders/actors thinking and working in unison
• Learning is passed on to the society and the future generations

Theory of Change also suggests need for reforms and rethinking on institutional mechanisms in order to achieve the desired transformative changes.

1.3. Logical Framework

The logical framework is one of the most common methods to articulate and clarify how a set of activities will achieve the desired outcomes and objectives of a project (or its ‘theory of change’). The logical framework represents a results map/results framework. It also captures the basic monitoring and evaluation requirements.

The project/programme’s logical framework is critical to determine the costs at the activity level required in the proposal template, the overall budget, and the timeline and key milestones. The logic of the model can then be verified by working from the baseline, up through the activities and onwards to the objective. The sequential process to develop the project description for the logical frame using is represented diagrammatically in the figure below.

![Figure 3: Logical Framework from Paradigm Shift to Components](image)

*Six levels of the logic model (adapted from GCF, 2014. Initial Results Management Framework of the Fund)*
Figure 4: Approach to developing a logical framework³

³ GCF Project Toolkit 2017, Acclimatise
2. Government of Nepal’s intention of developing projects for GCF

The inception of the United Nations Framework Convention on Climate change (UNFCCC) in 1992 acknowledged an international resolve to reverse the climate change trend. Consequently, the nations engaged in formulating policies that had initially focused on mitigation. Even the initial IPCC reports while focusing on mitigation had accorded too little importance adaptation, vulnerability and equity (Schipper, 2006). Overlooking adaptation as a policy goal in the initial climate related policies and strategies may be attributed to the then inadequacy of information on climate change and its overwhelming cross-sector impacts. It was assumed that if the anthropogenic cause of climatic variability i.e. GHG emissions were reduced the climate change can be slowed down. However, since the Marrakesh Accords in 2001 the importance of adaptation as a possible and significant policy option to address and minimize climate change impacts has gained attention.

The AR5 of the IPCC has, without undermining the need for mitigation, emphasized the need for mainstreaming adaptation measures in the regional, national, sub-national and local policies and programmes. AR5 recommends that effective adaptation strategies to be directed at achieving a set of overarching goals concerning development of nations and human welfare. Experts strongly recommend integrating adaptation measures in the long-range planning exercises.

Nepal is a low income developing economy. The country is in a process of transition – both in terms of governance and framing economic policies. It is progressively adopting liberal economic policies to promote economic development and a greater global integration. An important development issue confronting Nepal is promoting inclusive development while pursuing a trajectory of green growth. While green growth immediately focuses on mitigation strategies like low emission technologies and processes, inclusive growth underscores the need for equity and justice. In South Asia, poverty alleviation is a pervasive development challenge that the governments at all levels are addressing through a strategy focus on redistribution and equity (Bardhan, 1996). It is often argued “if social institutions and arrangements governing the allocation
of power and access to resources within a community, nation, or the globe assure that access to resources is equitably distributed” the adaptive capacity of the exposed hotspot increases (IPCC, 2001). Therefore, Nepal (and many other South Asian nations) with its large vulnerable population and emphasis on social justice and equity is aiming at adopting a portfolio of climate strategies that emphasizes on adaptation besides mitigation.

In its effort to mobilize resources for climate actions, particularly, adaptation and meet sustainable development goals, the Government of Nepal is also planning to access GCF funding. For this it needs to be equipped with the tools/techniques acceptable to GCF. A detailed proposal is required to be submitted for the same as per the extant guidelines of GCF. Therefore, as part of this assignment, M/s PricewaterhouseCoopers has developed this Strategic Investment Framework to demonstrate the approach to identify and evaluate project ideas for GCF. As illustrations of the approach the case studies for Dholakha and Ramechapp districts in the Tamakoshi watershed has been presented in this investment framework.

A detailed proposal is required to be submitted for the same as per the extant guidelines of GCF. Developing the investment plan for GCF is a five step approach as represented by the chart below.

Figure 6: Five step approach of developing investment plan for GCF

2.1. Components of a GCF proposal

GCF funding proposal development process is based on their extant guidelines. It requires the project proponent to address the following points in their funding proposal.

Table 2: Components of GCF investment proposal

<table>
<thead>
<tr>
<th>Section</th>
<th>Particulars</th>
<th>Detailed description</th>
</tr>
</thead>
</table>
| A       | Project/ programme summary| • Project/ programme title
• Basic information like executive summary, contact point, project focus (adaptation/ mitigation/ cross cutting) project size & lifespan |
<table>
<thead>
<tr>
<th>Section</th>
<th>Particulars</th>
<th>Detailed description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Financing cost/ information</td>
<td>• Description of financial elements of the Project / Programme - project financing information like co-finance, loans, GCF financing etc.</td>
</tr>
</tbody>
</table>
| C       | Detailed project/ programme description | • Political/ institutional information  
• Policy & institutional set-up  
• Objectives w.r.t baselines  
• Impact on climate change  
• Barriers address by the project/ programme  
• Project/ programme management structure |
| D       | Rationale for GCF involvement | • Value added by GCF involvement  
• Exit strategy |
| E       | Expected performance against investment criteria | • Impact potential - Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas  
• Paradigm Shift Potential - degree to which the proposed activity can catalyze impact beyond a one-off project/programme investment  
• Potential for knowledge and learning  
• Environmental, social and economic co-benefits, including gender-sensitive development impact  
• Country Ownership - beneficiary country ownership of, and capacity to implement, a funded project or programme |
| F       | Appraisal summary | • Economic and Financial Analysis  
• Technical evaluation  
• Environmental, Social Assessment, including Gender Considerations  
• Financial management and procurement |
| G       | Risk assessment and management | • Risk Assessment Summary  
• Risk Factors and Mitigation Measures |
| H       | Results monitoring and reporting | • Paradigm Shift Objectives and Impacts at the Fund level |
### 2.2. Approach to selection and evaluation of interventions – case study of Dholakha and Ramechhap

Vulnerability Assessment is the first step for preparing an investment plan for GCF. The need for vulnerability assessment is:

1. To identify the climate risks
2. To assess the extent of loss and damage
3. To understand how the system works
4. To identify key intervention points where vulnerability is greatest or adaptation action could be most useful.

Based on the vulnerability assessment, Tamakoshi watershed was identified as the most vulnerable to climate hazards and as illustrations for developing the project for submission to GCF, intervention of Sustainable Forest Management at Dholakha and Sustainable Water Management at Ramechhap districts in the Tamakoshi watershed. The approach for selection of and prioritization of adaptation/mitigation measures is presented in figure below.
Figure 7: Approach for selection and prioritization of adaptation/mitigation measures:

Detailed scientific analyses carried out during the course of this exercise have found that the upper Tamakoshi region is suffering from severe degradation of forests and grassland. This is one of the major reasons for landslides and drought in this area. The FGDs carried out in this area also confirm this finding. It has been found that there are several factors contribute to landslides in this area. The following are the major reasons:

- Degradation of forests and grasslands
- Presence of barren lands
- Erratic rainfall, floods and GLOF

Sustainable Forest Management (SFM) has been identified as an effective strategy to realize the goals of increasing coping capacity and resilience of the population residing in the selected areas of the Tamakoshi Watershed, in the face of climate change. SFM also aims at leveraging maximum benefits arising due to the potential eco-system services of forests.

Using a discount rate of 10% p.a., the present values of net benefits have been calculated for 5 (short term), 10 (medium term) and 35 (long term) years. The results have been furnished in table

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Particulars</th>
<th>NPV 5 Years</th>
<th>NPV 10 Years</th>
<th>NPV 35 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Net Benefits without CC</td>
<td>NPR Million</td>
<td>(499.82)</td>
<td>13.75</td>
</tr>
<tr>
<td>2</td>
<td>Net Benefits with CC</td>
<td>NPR Million</td>
<td>(378.88)</td>
<td>277.81</td>
</tr>
<tr>
<td>3</td>
<td>Total Cost of the Project</td>
<td>NPR Million</td>
<td>961.99</td>
<td>999.54</td>
</tr>
</tbody>
</table>
The following observations are important to note:

- The intervention is financially viable in the medium run and long run. Since forests take time to develop, all benefits do not accrue in the short term.
- Considering CC related benefits – mitigation and adaptation, the intervention becomes financially viable in the medium term.
- The climate relevance of the intervention is approximately 21% - out of the total net benefits from the intervention, 79% accrues from development benefit and the remaining 21% is attributable to climate benefits.
- Out of the 21% attributable to climate benefits, 20.97% accrues from adaptation while the remaining marginal value is on account of mitigation.

Therefore, this is not just an ordinary development project but promotes the harnessing of ecosystem services and leverages climate benefits.

Ramechhap district have been suffering from drought like situation due to decrease in rainfall. The FGDs conducted in this region, particularly hilly/mountainous areas, have confirmed that the situation is worsening as the springs and other natural sources of water are drying up. Consequently, the local community – mostly the poor and marginalised groups, face acute water stress, particularly during the dry seasons, as these natural systems are the only available potable water source in the region. To cope with the stress, the community then has to either decrease their water consumption or has to invest time and effort to ferry water from distant sources. Sustainable Water Management can be an effective adaptation strategy in such a situation and our approach to Sustainable Water Management comprises of 4 elements i.e.

- Rain water harvesting
- Gravity surface water irrigation
- River lifting through solar pumps
- Embankment

Using a discount rate of 10% p.a., the present values of net benefits have been calculated for 5 (short term), 10 (medium term) and 30 (long term) years. The results have been furnished in the table below.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>NPV 5 Years</th>
<th>NPV 10 Years</th>
<th>NPV 30 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Net Benefits without CC</td>
<td>NPR Million</td>
<td>(1,583.57)</td>
<td>605.65</td>
</tr>
</tbody>
</table>

**Table 4: Summary Results for CBA of Sustainable Water Management**
<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>NPV 5 Years</th>
<th>NPV 10 Years</th>
<th>NPV 30 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Net Benefits with CC</td>
<td>NPR Million</td>
<td>(815.30)</td>
<td>2,113.65</td>
</tr>
<tr>
<td>3</td>
<td>Total Cost of the Project</td>
<td>NPR Million</td>
<td>4,201.65</td>
<td>4,561.90</td>
</tr>
<tr>
<td>4</td>
<td>Benefits without CC</td>
<td>NPR Million</td>
<td>2,618.08</td>
<td>5,167.56</td>
</tr>
<tr>
<td>5</td>
<td>Benefits with CC</td>
<td>NPR Million</td>
<td>3,386.35</td>
<td>6,675.55</td>
</tr>
<tr>
<td>6</td>
<td>BCR (without CC)</td>
<td>Ratio</td>
<td>0.62</td>
<td>1.13</td>
</tr>
<tr>
<td>7</td>
<td>BCR (with CC)</td>
<td>Ratio</td>
<td>0.81</td>
<td>1.46</td>
</tr>
<tr>
<td>8</td>
<td>CC% [(7-6)/7]</td>
<td>Ratio</td>
<td>23%</td>
<td>23%</td>
</tr>
</tbody>
</table>

The following observations are important to note:

- The intervention is financially viable in the medium term (i.e. >10 years) mainly due to the returns from agricultural produce.
- The climate relevance of the intervention is approximately 23% - out of the total net benefits from the intervention and the remaining 77% accrues from the development benefits.
- With a conservative estimate of benefits accruing from the 3rd year of the intervention, it becomes economically viable in both the scenarios i.e. with & without considering climate change benefits.
- Considering anticipated climate change, it is found that intervention promotes adaptation and is moderately climate relevant with a CC percentage of 23% during the life of the intervention. It may also be noted that mitigation benefits have not been considered here. When such benefits are considered, the climate relevance is expected to increase further.
### 2.3. How these interventions meet the GCF criteria?

**Initial investment framework: activity-specific sub-criteria and indicative assessment factors**

The Accredited Entity will develop its funding proposal with due consideration of the investment criteria and the applicable and relevant activity-specific sub-criteria and indicative assessment factors. In the formulation of the proposal, the Accredited Entity is expected to respond to all six of the investment criteria but only the applicable and relevant sub-criteria and indicative assessment factors. Not all activity-specific sub-criteria and indicative assessment factors will be applicable or relevant for every proposal.

#### 1. Sustainable Forest Management at Dholakha

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact potential</strong></td>
<td>Potential of the programme/project to contribute to the achievement of the Fund’s objectives and result areas</td>
<td>Adaptation impact</td>
<td>Contribution to increased climate-resilient sustainable development</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key figures:**

- The population in the area comprising of forests, grasslands and meadows in Dolakha district will be directly benefitted.
- Average revenue generation from fuelwood plantation – 6400 NPR/ha
- Average Annual Revenue from Integrated Agro-forestry – 17664 NPR/ha
- Average Annual Revenue from rainfed Agro-forestry – 48000 NPR/ha
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Increase in productivity of unirrigated Winter Rice – 390 Kg/ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Increase in productivity of unirrigated Winter Wheat – 952 Kg/ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Increase in productivity of Rapeseed and Mustard – 643 Kg/ha</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Contribution to the shift to low-emission sustainable development pathways</td>
<td></td>
<td></td>
<td>• GHG mitigation benefit - Forests, agro-forestry and grasslands act as carbon sinks. Carbon sequestration will be a key benefit of this project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key figures:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The total forest area will increase by more than 1400 ha in the Dolakha district which will result in sequestration of more than 2100 tCO2e per year</td>
</tr>
<tr>
<td>Paradigm shift</td>
<td>Degree to which the proposed activity can catalyse impact beyond a one-off project or programme investment</td>
<td></td>
<td></td>
<td>• Revenue generated from agro-forestry/ livestock rearing/ sale of forest produce</td>
</tr>
<tr>
<td></td>
<td>Potential for knowledge and learning</td>
<td></td>
<td>Contribution to the creation or strengthening of knowledge, collective learning processes, or institutions</td>
<td>• Increase in ecosystem based services</td>
</tr>
<tr>
<td></td>
<td>Contribution to the creation of an enabling</td>
<td></td>
<td></td>
<td>• Development of novel practices in forest services management</td>
</tr>
<tr>
<td></td>
<td>Sustainability of outcomes and results beyond completion of</td>
<td></td>
<td></td>
<td>• Increase in revenue based Ecosystem services from forests</td>
</tr>
<tr>
<td>Criteria</td>
<td>Definition</td>
<td>Coverage area</td>
<td>Activity-specific sub-criteria</td>
<td>Indicative assessment factors (including indicators)</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>---------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>environment</td>
<td>the intervention</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Market</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>development &amp; transformation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potential for scaling up and replication, and its overall contribution to global low-carbon development pathways being consistent with a temperature increase of less than 2 degrees Celsius (mitigation only)</td>
<td>Innovation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of contributions to global low-carbon development pathways, consistent with a temperature increase of less than 2 degrees Celsius</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Potential for expanding the scale and impact of the proposed programme or project (scalability)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Potential for exporting key structural elements of the proposed programme or project elsewhere within the same sector as well as to other sectors, regions or countries (replicability)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SFM as a measure is highly replicable. The learnings from this project can be used for implementing similar project in other regions of the country which are prone to landslides, soil erosion and where forest is a major source of ecosystem services.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Definition</td>
<td>Coverage area</td>
<td>Activity-specific sub-criteria</td>
<td>Indicative assessment factors (including indicators)</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Sustainable development potential**| Wider benefits and priorities                   | Environmental co-benefits               | Expected positive environmental impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate | • Soil and moisture conservation  
  • Biodiversity conservation (increase in flora and fauna)  
  • Avoidance of landslides and soil conservation  
  • Increase in ground water recharge |
| **Social co-benefits**               | Expected positive social and health impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral levels, as appropriate | Expected positive social and health impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral levels, as appropriate | • There will be social co-benefits like reduction in morbidity and mortality, community cohesion, psycho-cultural improvements, etc. which are difficult to value. |
| **Economic co-benefits**             | Expected positive economic impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate | Expected positive economic impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate | • Revenue from:  
  — industrial timber logging,  
  — fuel wood cultivation,  
  — agro forestry  
  — step cultivation  
  — livestock rearing  
  • SFM will be an additional source of revenue for the |
traditional, the rural population at Dolakha have supplemented their earnings from agriculture and livestock with revenues from the sale of industrial timber. With climate change (leading to damage of forest areas, degradation of the quality of forests, this additional and important source of revenue is expected to be extinct. This is expected cause tremendous hardship among the poor rural population. On the other hand SFM helps to restore and augment this additional source of earnings.

- Incremental Revenue due to avoidance of Loss of Property
- Increase in revenue from eco-tourism and allied services

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs of the recipient</td>
<td>Vulnerability and financing needs of the beneficiary country and population</td>
<td>Vulnerability of the country (adaptation only)</td>
<td>Scale and intensity of exposure of people, and/or social or economic assets or capital, to risks derived from climate change</td>
<td>• Nepal being a Less Developed Country, a significant percentage of the population depend on fuel wood for heating/cooking medium. Due to unregulated/illegal markets, the community has to pay a premium for purchasing fuel wood. A regulated or community managed SFM could enable easy and economic access to fuel wood.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Definition</td>
<td>Coverage area</td>
<td>Activity-specific sub-criteria</td>
<td>Indicative assessment factors (including indicators)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Country ownership             | Beneficiary country ownership of, and capacity to implement, a funded project or programme (policies, climate strategies and institutions) | Existence of a national climate strategy                                         | Objectives are in line with priorities in the country’s national climate strategy  
Proposed activity is designed in cognizance of other country policies                                                                 | The SFM is aligned with the National Adaptation Plan of Action to Climate Change of the Government of Nepal. The NAPA programme under the Ministry of Environment of Nepal has been a core of mainstreaming climate change awareness and programme/ institutional development and capacity building in Nepal. Under the NAPA, the GoN has made adaptation commitments to address the needs of the vulnerable communities. |
| Engagement with civil society organizations and other relevant stakeholders | Stakeholder consultations and engagement                                  |                                                                                   |                                                                                   | During Focus Group Discussion with local people and district level stakeholder in Dolakha, the need assessment of forest resource management including from the perspective of gender was carried out and majority of them responded with the urgent need of intervention of sustainable forest resource management to maintain ecological services and reduction of women’s drudgery. |
| Efficiency and effectiveness  | Economic and, if appropriate, financial soundness of the programme/project | Cost-efficiency and effectiveness regarding financial and non-financial aspects   | Financial adequacy and appropriateness of concessionality                          | Key figures:  
- Volume cultivated - 193 m³/hectare  
- Average price of industrial timber - NPR 10000/m³  
- Cost of harvesting of industrial timber - NPR 16,000/hectare  
- Benefits/ Cost ratio >1 (medium to long term) |
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Industry best practices</td>
<td>Application of best practices and degree of innovation</td>
<td>SFM model is built on the entrepreneurial spirit of the local community in partnership with other agencies to develop novel practices of product development and forest management.</td>
</tr>
</tbody>
</table>
2. **Sustainable Water Management at Ramechhap**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact potential</strong></td>
<td>Potential of the programme/project to contribute to the achievement of the Fund’s objectives and result areas</td>
<td>Adaptation impact</td>
<td>Contribution to increased climate-resilient sustainable development</td>
<td>The lower Tamakoshi region has been suffering from water shortage due to decrease in rainfall. The FGDs conducted in this region have confirmed that the situation is worsening as the springs and other natural sources of water are drying up. Consequently, the local community – mostly the poor and marginalized groups, face acute water stress, particularly during the dry seasons, as these natural systems are the only available potable water source in the region. To cope with the stress, the community then has to either decrease their water consumption or has to invest time and effort to ferry water from distant sources. Irrigation linked water conservation can be an effective adaptation strategy in such a situation.</td>
</tr>
</tbody>
</table>
| **Paradigm shift potential**  | Degree to which the proposed activity can catalyse impact beyond a one-off project or programme investment | Potential for scaling up and replication, and its overall contribution to global low-carbon development pathways being consistent with a temperature increase of less than 2 degrees Celsius (mitigation only) | Innovation                                                                                       | - Solar power based pumping system is an economic and reduces the use of diesel powered pumps in remote areas where there limited access of grid electricity thereby contributing to global low-carbon development pathways.  
**Key figures:**                                                                 |                                                                                                                                                                                                 |
<p>|                              |                                                                                                       |                   | Level of contributions to global low-carbon development pathways, consistent with a temperature increase of less than 2 degrees Celsius            | - Total emissions from Diesel avoided – 8465.7 tCO2e per year                                                                                                                                   |</p>
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
</table>
| Sustainable development potential      | Wider benefits and priorities             | Environmental co-benefits                        | Expected positive environmental impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate | • Water conservation  
  Key figures:  
  • Estimated 60% increase in productivity due to irrigation  
  
**Social co-benefits** | Expected positive social and health impacts, including | • **Avoidance of adverse health related impacts from water borne diseases** - In the absence of readily available drinking water, the affected |
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Coverage area</th>
<th>Activity-specific sub-criteria</th>
<th>Indicative assessment factors (including indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral levels, as appropriate</td>
<td>communities collect and store - often in unhygienic conditions, water for future use. This practice leads to the incidence of various water borne diseases (jaundice, gastro-intestinal disorders, reflux disease, etc.). Approximately 45% of household suffer from such health impacts (ADB, 2012). There have been reports of increase in mosquito infestation, pests and diseases due to increasing temperature.</td>
<td></td>
</tr>
<tr>
<td>Economic co-benefits</td>
<td>Expected positive economic impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate</td>
<td>• Savings in costs incurred for purchasing water.</td>
<td>• Savings in health costs due to water borne diseases.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Avoided loss of agricultural income due to time spent in collecting water.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key figures:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Attractive return on Sustainable Water Management intervention such as River water lifting through solar pumps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender-sensitive development impact</td>
<td>Potential for reduced gender inequalities in climate change impacts and/or equal participation by gender groups in contributing to expected</td>
<td>• Women are extensively utilized as agricultural labour in Nepal. Women, sometimes, have to complete household work and join their male counterparts in fields as well. Watering the field has always been a challenge in Nepali hills and mountains. The major rivers lie relatively in lower elevation than the cultivated land. Operation of irrigation system, therefore, can reduce the drudgery work of fetching water for irrigation, and/or rely of rainfall for cultivation. Solar pump system for lifting the river water can further reduce women’s workload.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Definition</td>
<td>Coverage area</td>
<td>Activity-specific sub-criteria</td>
<td>Indicative assessment factors (including indicators)</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>---------------</td>
<td>--------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>outcomes</td>
<td>• Improved access to water supply may release women from water-collection chores and might allow women to invest more time in income-generating activities, such as agricultural production. If women are farming their own plots and have access to irrigation technologies, then the productivity of female-managed plots may increase, and income from the increase in productivity may also grow. They can invest their income particularly for girls’ education. It will reduce the workload of women and contribute to drudgery reduction. Hygiene and sanitation practices may also improve due to greater water availability and lead to important health benefits.</td>
</tr>
<tr>
<td>Needs of the recipient</td>
<td>Vulnerability and financing needs of the beneficiary country and population</td>
<td>Vulnerability of the country (adaptation only)</td>
<td>Scale and intensity of exposure of people, and/or social or economic assets or capital, to risks derived from climate change</td>
<td>Nepal being a Less Developed Country, a significant percentage of the population have limited access to potable water for cooking/drinking purposes. Due to erratic rainfall, longer dry spell and over extraction, water sources are drying up and therefore vulnerable communities have to invest significant time and resource for ferrying water from far off sources therefore impacting their productive time.</td>
</tr>
<tr>
<td>Country ownership</td>
<td>Beneficiary country ownership of, and capacity to implement, a funded project or programme (policies, climate strategies and</td>
<td>Existence of a national climate strategy</td>
<td>Objectives are in line with priorities in the country’s national climate strategy</td>
<td>The SFM is aligned with the National Adaptation Plan of Action to Climate Change of the Government of Nepal. The NAPA programme under the Ministry of Environment of Nepal has been a core of mainstreaming climate change awareness and programme/institutional development and capacity building in Nepal. Under the NAPA, the GoN has made adaptation commitments to address the needs of the vulnerable communities.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Definition</td>
<td>Coverage area</td>
<td>Activity-specific sub-criteria</td>
<td>Indicative assessment factors (including indicators)</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>institutions)</td>
<td>Proposed activity is designed in cognizance of other country policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency and effectiveness</td>
<td>Economic and, if appropriate, financial soundness of the programme/project</td>
<td>Cost-effectiveness and efficiency regarding financial and non-financial aspects</td>
<td>Financial adequacy and appropriateness of concessionality</td>
<td>Key figures:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Benefit/ Cost ratio &gt;1 (medium to long term) across all Sustainable Water Management interventions</td>
</tr>
</tbody>
</table>
2.4. **Designing a strategic investment framework for financing climate actions**

Effective mainstreaming of adaptation strategies in developmental planning would require an integrated and systemic approach. This can be achieved through a mix of interrelated issues (Burton, Diringer, & Smith, 2006):

- Information on past and future climate trends based on a reliable database
- Capacity generation through response strategies like early warning systems, hazard and vulnerability mapping, etc.
- Financial resource generation for investment in response technologies, deployment of resource to vulnerable hotspots, database creation etc.
- Institutional arrangement for adoption, implementation and management of the adaptation service at all levels of governance- local, regional, national and sub-national.
- An integrated approach where all actors – individuals, communities, government organizations, non-government institutions are involved in identifying adaptation needs and capacity generation.

The emphasis on adaptation does not imply that mitigation efforts should be completely ignored by Nepal. Climate change being a global good, all the stakeholders are responsible for strategizing to abate the process and/or to lessen the impacts as it would benefit all. There are views that some low-carbon development options may be less costly in the long run (as it minimizes the loss and damage induced by climate change) and might be able to offer new economic opportunities for the country. Therefore, given this argument Nepal stands to gain from integration of mitigation-adaptation led development approach (CDKN, 2014). Nepal, thus, needs to be proactive in exploring different alternative opportunities that promote adaptation and mitigation while upholding various other sustainable development goals. An integrated portfolio of such opportunities is required to be mainstreamed in the policies, plans and programmes of the country.

With Government of Nepal deciding on accessing funds from GCF (and other allied institutions) it is important that the Government embarks upon designing policies, institutions etc. to increase its readiness to access such funds and maximize benefits from utilization of such funds. The facilities from GCF are attached with specific objectives and the policies of Government of Nepal must address meeting such objectives. This requires the Government to design and roll-out a comprehensive and effective investment framework with strategic aligned to objectives of such funds.

It is important to mention at this point after years of political instability Nepal is undergoing governance structure, policies and politics therefore, it may be the right opportune moment to start designing the a strategic investment framework. This chapter discusses the broad objectives and dimensions of such a strategic framework. The content has been developed based on field surveys/studies conducted at Dholakha and Ramechhap, consultations with policy makers/ regulators in various ministries, discussions with financial intermediaries and civil service organizations.

2.5. **Objectives of a strategic investment framework for climate responsive development**

Mainstreaming climate considerations in planned investments is a complex task. This is because climate actions – both mitigation and adaptation, involves consideration of diverse and multi-layered social and economic priorities, has to address geographical diversities between regions, involve multiple stakeholders and effectively function within a tiered governance structure at the same time must also address the need for addressing pressing development challenges like poverty, illiteracy, migration, erosion of social capital, health etc. Nepal being a less developed economy has its priorities and in no way the framework for
investment in climate actions may contradict such priorities. In other words, adequate attention needs to be accorded to bring a synergy between climate action and human development in Nepal.

In view of the above, the broad objectives of the framework are identified and have been shown in the figure below. The rationale of the objectives has been deliberated on subsequently. The objectives are expected to make the framework conform to GCF criteria, able to attract adequate finances and make the climate actions effective and efficient, while, simultaneously aligning policies to the SDGs.

**Figure 8 Objectives of an effective Climate Investment Framework**

- **Adequacy of finance**
- **Inclusivity of stakeholders**
- **Decentralized planning**
- **Multi-disciplinarity of resilience**
- **Consolidate fragmented landscape**

**a. Leverage adequate finance:** In the South Asian context, it is estimated that the region requires approximately USD 74.00 billion annually until 2025 – to address both mitigation and adaptation issues. However, there are grave concerns about a possible finance gap – as only 20% to 30% of this requirement is available. (Cansa, 2013). The internal resource generation in Nepal (other South Asian countries) investing in climate actions has been rather slow. Policies, instruments and politics are yet to be in place to ensure adequate internal resource generation for financial actions. Further, given the emerging federal governance structure in Nepal, the issues of jurisdiction, governance, and disbursement of funds are still debated upon.

In this scenario the framework must try to address such issues, resolve conflicts and initiate institutions and mechanisms so that finances can flow from various actors – public, private and others to finance climate responsive and climate responsible interventions planned by the GoN. The framework must also address and spell out synergy between development agenda and climate agenda.

**b. Inclusivity of all stakeholders:** Principles of equity and justice of a welfare state like Nepal demands that the benefits of climate actions should be delivered to all vulnerable stakeholders. This inter alia implies that technologies, practices and strategies for addressing mitigation and adaptation must be delivered to all concerned stakeholders at the right time and in the right magnitude. GCF stresses on this inclusivity aspect of climate investments. This therefore requires that the framework must ensure that there is a continuous stream of dialogue between the vulnerable stakeholders, policy makers and
programme implementers for identifying the exact needs and promote the concept of inclusivity (UNDP, 2012)

c. **Facilitate decentralized planning systems**: Although climate change is a ‘global’ phenomenon, climate actions are inherently ‘local’. Therefore, the investment framework should aim at promoting downscaling of policy & programme design, capacity generation and strategies for implementation to suit local needs, leverage local resources and benefit local people. Therefore, the framework should support a paradigm shift – evolving a bottom up planning approach from the erstwhile/ existing top-down process.

d. **Accord importance to multi-dimensional resilience**: Adaptation strategies, in particular, often have potential to generate benefits in multiple dimensions – economic, social and environmental (UNDP, 2012). Similarly, the benefits from mitigation strategies may result in generating benefits that are not just confined environmental gains (in the form of reduced GHG emissions) but may have spill over benefits in the form increased job creation, rise in GDP, formation of social capital etc. Thus the framework should facilitate choice of a climate strategy mix after considering all dimensions of benefits. In other words, the framework should mainstream maximization of all types of benefits while planning for a climate action project.

e. **Address fragmented climate action landscape**: The network of actors in the climate action landscape of Nepal is highly fragmented – consisting of local micro-level actors, the affect, communities, local municipalities and other governance entities and also the macro level actors like the National Government, public and private actors, international donors, BFIs and MFIs, etc. The framework must lay out a roadmap that facilitates integration and co-operative collaboration among actors. This would reduce conflicts in the network of actors and promote a regime of common but differentiated responsibility and actions.

### 2.6. Dimensions and strategies of an effective investment framework

Although the strategic investment framework should primarily be designed to attract and utilize funds from GCF, it may also be utilized for attracting finances from various other sources. This would ensure that the adequacy of climate financing in Nepal. The framework is required to address the need for exploring and leveraging synergies between various sources of funds and meeting the criteria and conditions of different funds. This sub-section has been designed keeping in view the investment criteria spelled out by GCF. However, required attention has been accorded to addressing broad challenges of climate financing and designing suitable strategies.

**Dimension 1 – Bridging finance gaps**: Very often, the investments required for effective climate interventions are large and cannot be fully supported by GCF. Therefore, the terms of GCF financing stipulate a need for co-financing and exploring additionality of financing. The issue of country ownership addressed through allocating adequate funds from national budget as a possible means of co-financing. Further, adequate emphasis on co-financing from various sources, often backed by sovereign guarantees not only bridges the finance gap but also pronounces the national government’s support and commitment to the proposed climate actions. Given this perspective, it is imperative for GoN to explore sources of additional finance – from national budgets or otherwise, to bridge the finance gap, if any, for those climate interventions which are earmarked for funding through GCF facilities. The strategies that the investment framework must adopt and promote are the following:

- **Using funds from GCF to leverage other climate funds** - Literature on climate finance has described various actors as sources and intermediaries of climate finance across the world (CPI, 2015). The landscape for climate finance follows a structure that is globally identifiable in its composition –
with built-in country-specific deviations in the relationship between various institutions. The summary of the landscape of climate finance is presented in the following diagram.

**Figure 9: Landscape of climate finance**

The actors in the landscape are not essentially mutually exclusive but there exists a complex inter-relation between them. Various instruments have also been mapped with each actor in the climate finance space.

The Strategic Investment Framework (SIF) must layout a mechanism so that a part of finances from National Budget find their way in climate investments as grants or subsidies as per the requirement of the GCF and other DFIs. This is one of the ways for co-financing of projects through Government’s own sources and upholding the issue of country ownership. This strategy necessitates that GoN institutionalizes a robust process of budget allocation to certain dedicated ministries and/or to line ministries and local governments who are responsible for project implementation. Further, the GCF facility along with the budgetary allocation could be effectively used to leverage finances from other climate funds (Adaptation fund, GEF etc.) and/or various other BFIs (DFI D, USAID, etc.) and MFIs (World Bank, ADB, etc.). As a complementary process, finances from Government and other sources can also be used to leverage GCF finance. However, GoN must accord adequate importance to preparing a detailed roadmap that will guide the process through modalities.

- **Blending of finances and instruments:** GCF and other financing institutions have multiple instruments for financing climate actions. Additionally, as discussed above, GCF and most other financing institutions emphasize on co-financing of projects. The principle of co-financing has been upheld so that the desired scale and scope of interventions are not compromised with for the want of finance. Further, the portfolio of instruments has been chosen so that the investments are de-risked and adequate leverage is ensured. Given the availability of multiple instruments and sources of climate finance, an important strategy that the investment framework should adopt is to make GoN prepared for institutionalizing mechanism(s) to blend funds from multiple sources and blend instruments efficiently so as to: (a) reduce cost of funds; (b) attract private finances in desired scale; (c) reduce risk of projects; (d) ensure sustainability of projects, while, simultaneously, spelling out country-ownership and bridging finance gap, and avoid sub-optimal scale and scope of interventions.

The pooling in of finances can be internal or external in nature. Often funds with potential for enhancing climate actions do not rest in one place (Dinshaw, Dixit, & McGray, 2012). In the national context, various line ministries and departments manage and implement various funds meant for allied activities. Often, in economies like Nepal, the local governments lack in knowledge and capacity to coordinate between ministries and departments, BFIs and MFIs failing in this crucial exercise of pooling of funds. Hence, the investment framework must promulgate a formal, legally mandated mechanism to
coordinate, access, blend and deliver funds from multiple sources (Stienbach, et al., 2014). While the Ministry of Finance, GoN, can act as a coordinating agency, it has to pay adequate attention to build awareness and capacity among different stakeholders for this crucial exercise. A firm plan needs to be in place. Capacity building should start immediately after the mechanisms have been identified and mainstreamed into the financing plans. For example, in the context of Sustainable Forest Management in Dholakha, funds may be pooled form Ministry of Forest, Agriculture, Disaster Management, etc. and also from local government to create a common corpus for co-financing and attracting GCF investment. However, all these concerned stakeholders are to be brought under an umbrella mechanism that would facilitate pooling of funds and blending of instruments.

- **Ensuring certainty regarding investment requirements:** This strategy calls for a paradigm shift in the planning and budgeting process at all levels of governance. Climate considerations, so far, have been limited in the national, sub-national and local plans. Hence, strategies must be in place to mainstreamed climate actions in the national, sub-national and local plans and programmes. Detailed analysis concerning the investment requirement for various climate actions is required to be incorporated in such plans and budgets. While vulnerabilities are assessed for geographical entities with resolutions downscaled, the exercise of estimating investment requirements to cope with vulnerabilities must supplement the process (Cansa, 2013). This bottom-up approach can lead GoN to have a comprehensive plan for investment requirement for financing climate actions. Further, need assessment and prioritizing of projects merit immediate attention should effective use of funds be the objective (Stienbach, et al., 2014).

- **Capacity to access funds - trickle-down effect:** Internationally and nationally new funds are emerging for financing adaptation and mitigation. Also, the existing funds are evolving with new modalities of access. Although at the national scale the expertise for meeting eligibility criteria and accessing these funds exists, the same is, at best, trickling down to the sub-national and local levels (Huq & Rabbani, 2011), (Christensen, et al., 2012). Government of Nepal aims at increasing readiness among project developers at local level to prepare ‘bankable projects’ conforming to the rules and technicalities of various funds available for financing climate actions (Stienbach, et al., 2014). Given the objective of GCF to increase inclusivity, the exercise must not be restricted to the ‘public stakeholders’ but must also stretch to private entities.

**Dimension 2 – Making interventions sustainable:** GCF emphasizes that while planning for climate interventions sustainability of interventions over its life should be accorded due care. This implies that the financing plan for projects must adequately provide for recurring costs such as operation and maintenance, overheads, etc. and design a plan to cover such expenses. Else the interventions may become non-functional immediately after implementation. The planning horizon needs to be long-term so that the range of benefits – developmental, adaptive and mitigation are maximized. In the case of Dolakha (Sustainable Forest Management) and Ramechhap (Sustainable Water Management), the economic analysis carried out as a part of the present assignment, due care has been accorded to this principle and long term costs have been accounted for. The investment framework requires to mainstreaming this principle among all stakeholders of climate actions so that the financing plans are detailed, long-term and holistic. This would make investment invest plans prepared for GCF (and other financing institutions) meet the criteria of a paradigm shift and sustainability. It would also minimize risks in investments, particularly, for the private actors.

The SIF, must therefore, spell out a mechanism of financial planning that would ensure the economic sustainability of such interventions. The plausible strategies adopted by the investment framework may be the following:

- **Encouraging revenue generation from interventions** – Most low-income developing economies, and, even, emerging economies are locked in to a paradigm that climate projects are non-revenue projects. This has not only rendered many climate interactions short-lived, but also has deterred many private actors from seriously looking at climate actions as projects that merit interventions. To unlock private investments in private investments, there has to be an emphasis on revenue generation from climate projects (Roy, Ghosh, Ghosh, & Dasgupta, 2013). Therefore, wherever possible, the SIF must
encourage revenue generation from climate intervention projects. The revenue generated may be used for building a corpus to cover expenses during the life of the project. The SIF must accord importance to the provision of fiscal instruments, fees, charges, etc. to generate such revenue. The sharing of revenue between various tiers of the Government is guided by the provisions in the Constitution of Nepal and is being refined by the National Natural Resource and Fiscal Commission Bill. The seat of the pool may be at the national, sub-national or local level of governance, as decided by the GoN. However, the end-use of the pool of resources (whole or part) should be directed at ensuring sustainability of climate interventions. The SIF needs to recognize this issue and coordinate among stakeholders to evolve a robust mechanism in line with the extant provisions promulgated by GoN. This would increase the ‘bankability’ of investment proposals made to GCF.

In light of the above, it is recommended that the MoF embarks on preparing a long-term plan for this purpose and mainstreams such plan in the overall public finance architecture of Nepal.

- **Mainstreaming climate investments in local budgets and plans:** Climate actions are necessarily ‘local in nature’. While the national government is responsible for such actions, the role of sub-national and local governments cannot be denied. Climate considerations need to be mainstreamed into the budgets of all levels of government. The SIF must ensure that climate actions are incorporated in annual budgets and plans of national, sub-national and local governments. This would increase ownership of climate actions at all levels of government.

  It is extremely important that SIF devises a mechanism so that most plans and programmes at the sub-national and local levels recognize adaptation and mitigation benefits not just as co-benefits but as explicit objectives. Only when this has been done, climate actions can be deemed to have been mainstreamed into the plans and programmes and national budget prepared accordingly.

- **Removing bottlenecks (of supply chain) and ensuring last mile delivery:** The strategic investment framework must also seek to promote measures that ensure delivery of technology/services to the beneficiaries. There needs to be adequate incentives for the actors in the supply chain so that the last mile delivery of products and services is ensured. The framework should spell out the conditions and measures to address this issue. This will ensure the sustainability of interventions, together with ensuring inclusivity and participation of stakeholders. Further the strategy can also aid to enhanced private sector participation as there may be adequate opportunity of ‘business’ in the measures adopted as a part of this strategy.

**Dimension 3 – Ensuring private sector participation:** The understanding of climate change by the actors in the private sector in the South Asia has been rather limited (Stienbach, et al., 2014), (Roy, Ghosh, Ghosh, & Dasgupta, 2013). The participation of private sector in climate actions, therefore, has been slow and, often, halting. Apart from a section of large corporate entities most private sector actors have hesitated in participating actively in climate actions. The participation, if at all, has remained confined to mitigation actions – changing internal processes to reduce GHG emission, adopting energy efficiency practices, etc. Some private investments have also been channeled to installing solar and wind power facilities. Participation of private sector actors in adaptation actions and/or partnering the government in mitigation efforts at the grass root has been somewhat limited and unknown. This situation is more or less same in all the countries in South Asia, including Nepal.

Against this backdrop, as the GoN aims at garnering finances from the GCF, it has to take cognizance of the fact that GCF stresses heavily on the inclusion of the private sector in the climate actions. Not only GCF emphasizes on the fact that the finances from GCF should not substitute or deter investments from the private sector but also stipulates that the deployment of finances from GCF should be used so prudently so as to stimulate private sector participation. This principle has been advocated by GCF given the need for unlocking private sector finances for financing adaptation-mitigation actions (Hamilton, 2009). Hence, it is
an imperative for the GoN to incorporate principles in its strategic investment framework that can ensure participation of the private sector in terms of their investments and implementation efforts together with harnessing the technical expertise and professionalism of the private sector to carry the various interventions forward. The expertise of the private sectors brings on board an efficiency change paradigm that may be leverages to execute projects on-time, thus avoiding time and cost overruns, and, also ensure, sustainability of projects through their lives. Thus, the strategic investment framework needs to act as an enabler for including actors from the private sector in GoN’s effort to build a climate responsive development pathway. The private sector may be looked upon as partners to this effort.

For initiating and augmenting private sector participation in the climate actions by the GoN, the strategic investment framework needs to adopt a set of strategies. The general aims of these strategies are: (a) convincing the private sector about the need for their participation, (b) spell out, in clear and unambiguous terms the business opportunities that are ingrained in climate actions; (c) removing hurdles of private sector’s participation; (d) foster an investment grade policy regime so that the perception of risks in the actors from the private sector is partially, or, wholly alleviated. The discussions with the stakeholders in the Government, private sector forums and financial institutions, during the course of this assignment, points to some important strategies that the SIF may consider. These possible strategies are discussed below.

- **Articulate climate actions as ‘business opportunities’**: Private sector can be involved only when they are convinced that there exists an opportunity for doing business. Therefore, the SIF must strive to unearth and communicate, in clear and uncertain terms, the explicit business benefits that are in store for actors in the private sector when they participate in the climate actions proposed by the GoN. This can act as one of the enabling factors for harnessing willingness, finances and capacity of the private sector.

  This calls for GoN’s effort to identify various benefits accruing to the private sector. Such benefits can be financial or strategic. Financial benefits are return on investments, certain fiscal benefits, etc. On the other hand, strategic benefits may include increased market share, access to new technologies, enhancing markets for products or services, etc. The strategic benefits are merited by the private entrepreneurs as long term means to attain competitive advantage. It is equally important for the SIF to evolve a mechanism to develop market based instruments – both debt and equity to harness private capital in the climate action projects. Also, such a mechanism must ensure smooth take-off of joint-sector projects and provide a roadmap to develop fiscal or other incentives that may be used by the private sectors as one of the instruments to maximize their returns on investments. For example, GoN may issue tax-free bonds with an appropriate yield-to-maturity, specifically designed for climate projects. Many private enterprises may such instruments as lucrative investment opportunities. Further, the GoN may provide tax-breaks and/or subsidies to private sectors for their equity investments in climate action projects.

- **Facilitating access to finance by private sector**: In the context of South Asia, including Nepal, it is seen that in many cases although private enterprises, particularly, SMEs may have novel technologies and services that can be integrated into climate actions, the main deterrent is financial constraints faced by the private firms (Ghosh & Ghosh, 2016), (Ghosh & Roy, 2011). Access to adequate finance is a major constraint. However, if adaptation actions are to be broad-based and the full impact of the mitigation efforts realized, it is extremely important that policies of the Government(s) focus on this crucial hurdle and include both large corporates and SMEs in the span of planning.

  The financial constraints of the private enterprises in Nepal stems from a number of factors. Some of the important factors are:

  a) Private enterprises, particularly, micro, small and medium enterprises are unsure if banks and financial institutions will finance their novel ideas and plans for climate actions.
b) Even if some banks are ready to finance, it is very difficult, at most times, to comply with formalities associated with accessing loans from banks. The transaction cost for the firm escalates and erodes their motivation and anticipated profitability.

c) Most banks stipulate a debt-to-equity ratio, particularly, for term financing. It is difficult for the small enterprises to bring in the desired equity in the form of margin contribution.

d) Most banks in Nepal are still locked into a practice of collateral-based lending practice. While this minimizes the risks for banks (as the probability of loss given default reduces considerably, the loan becomes directly proportional to the amount of collateral security that an enterprise can offer. It is an important hurdle for the private enterprises to access debt-finance from banks.

e) In many instances, with the perceived risks in novel and new projects being high the interest rate charged by the banks is considerably high because of the risk premium. This worsens the interest coverage and debt service coverage ratios of a proposed project and deters flow of debt finance to the projects by SMEs.

Therefore, an important strategy that the strategic investment framework should adopt is to create an enabling environment that eases the access to debt finance for small and medium enterprises. One way of achieving this is by providing low cost loanable funds to designated banks and financial institutions for on-lending. The back-to-back financing arrangement may stipulate caps on interest rate/ collateral requirements/ margin (equity) requirements/tenor for advances made by the banks and financial institutions out of such funds. The back-to-back financing arrangement also reduces the cost of funds for banks and hence decreases the base rate on which the risk premium is added. Thus, the overall cost of capital for the private enterprises for investments made in climate action projects.

However, such a plan will entail the authorities designing the strategic investment framework take the Central Bank of Nepal on board as the strategy entails certain reforms in the banking sector. The impacts may also extent to calculation of risk adjusted capital for banks and other prudential norms, extant to the banking sector.

- **Introducing subsidies for climate projects**: Availability of subsidies is expected to stimulate interest among private sectors to explore business opportunities in climate interventions. The subsidies may be in the form capital subsidies and interest subsidies. The Government of Nepal has already experienced, with success, in the case of Revival Fund, how business can be stimulated and regenerated with the help of such subsidies. Needless to mention, such subsidies reduce the cost of the project and promises higher returns on investments for participants from private sector. The presence of such subsidies, with certain stipulations, can also induce private enterprises to remain involved and dedicated to the climate action projects for a considerable period and carry forward the projects. This is expected to maximize the benefits from the interventions.

The strategic framework needs to address this crucial issue. Together with deciding on the types of subsidies, the framework must also accord importance to deciding upon rates and modes of disbursement of subsidies. It is imperative that the subsidies are routed through the banks and financial institutions who have lent to the private sector enterprises so that, on one hand the leakage risks are reduced and on the other, the perceived risks by banks concerning the uncertainty of cash flows (available for repayment of debt and servicing of interest) is partially hedged. However, as before, the strategy necessitates that the authorities deciding on the framework consult banks and financial institutions and also, the Central Bank of Nepal. It would also have to consult the industry associations of Nepal.

- **According status of ‘productive sector’ to climate intervention projects**: In its reconstruction effort, post the earthquake in 2015, the GoN had accorded ‘productive’ status to certain designated
industries/sectors and had encouraged investments in these sectors while using the resources of the Revival Fund. Banks and financial institutions were provided a target of soft lending to the enterprises in the productive sector. Borrowing from this experience, with regard to climate interventions, selected industrial activities, directed towards climate actions and/or having synergy with various climate actions may be accorded the status of productive sector. Advances made by banks and non-banking financial institutions to these climate sensitive sectors/industries may be accorded the status of priority sector lending – with targets set and penalties (on default) spelt out. This is expected to motivate banks to lend to these sectors at concessional terms. Such a strategy may be regarded as an integral component of the strategic climate investment framework.

For designing this strategy effectively, the authorities entrusted with preparation of the investment framework have to consult various other institutions – different ministries, local governments, forum of industries, banks and financial institutions, and, last but not the least, the Rashtriya Bank of Nepal.

- **Initiate a process of setting up credit guarantee trust**: Credit risk in climate projects is multi-dimensional. First, the gestation period for such projects can be high. Secondly, returns may start accruing after a considerable delay. And, finally there exists a set of risks in the form of failure of technology, non-acceptance of solutions by user groups, etc. In presence of such risks, financing institutions, particularly lenders may perceive more than acceptable risks in such intervention projects. This impedes flow of adequate debt funds to private sector enterprises desirous of implementing climate intervention projects. Simultaneously, the debt may come with a high cost and hard covenants. Also, there is a possibility of non-willful default by the borrower because of the reasons cited above. Therefore, the investment framework must, by its design, try to partially hedge the risk faced by banks and other lending institutions.

One possible mechanism is initiating a credit guarantee trust that underwrites the debt (upto a certain limit) for non-willful defaults. The trust may be dedicated to climate intervention projects and may be created out of a corpus formed by contribution by the Government, consortium of banks and other lending institutions. The trust may provide credit guarantee (for non-willful defaults) to the lenders. The premium may be borne by the borrower.

The strategic investment framework have to dwell on the exact modalities of creating SPV, managing corpus and assessing extent of loans that may be underwritten and losses compensated for. But, a proper mechanism put in place, can ease the flow of credit to the climate related interventions – both mitigation and adaptation. However, the measure require, apart from creating a new institution, reforms in credit policy by Central Bank of Nepal and therefore, the SIF requires to work in close co-ordination with the Central Bank.

- **Mainstreaming climate considerations in project appraisal by lenders**: One important aspect that can make the economic policies of Nepal climate responsive is to integrate climate considerations during the project appraisal by lenders. This calls for a paradigm shift in the traditional lending practices and project appraisal techniques. Climate benefits (and sometimes, costs) are externalities and are hardly considered at the time of project appraisal. The investment framework must focus on the need for training and capacity building among banks and other lending institutions so that such external benefits and costs are internalized at the time of appraisal of certain specific projects. There are extant guidelines for this - (ADB, 2017), (ADB, 1997), (The World Bank, 1998) and banks and financial institutions need to learn the techniques. There must be adequate emphasis on this. This may help in reducing perception of risks, understand the impacts of the project better and increase flow of debt finance to the climate interventions project.

**Dimension 4 – Promoting an integrated approach**: Climate change actions are inter-disciplinary and cross-sectoral in nature, even one intervention can have benefits spilling over to different sectors and
that too, over a long time frame. The results chain is integrated in nature. The examples presented in the case of Dolakha and Ramechhap points to the integrated nature of benefits. In Dolakha, the intervention in the form of sustainable forest management generates benefits across sectors – livelihood, properties and infrastructure, agriculture, water resources, etc. apart from promoting biodiversity and harnessing mitigation benefits. On a closer understanding of the sustainable water management intervention in Ramechhap, the spilling over of benefits across sectors is evident. Hence, from climate interventions, multiple sectors benefit.

Recognizing this, promoting an integrated approach to project ideation, planning, implementation, monitoring and evaluation is a mandatory aspect that the SIF must embrace. The SIF is required to promote integrated and inter-disciplinary thinking among ministries and layers of Government. The strategies it may consider for adoption are:

- **Integrated project planning**: It is understood during the discussions with the stakeholders that that the National Designated Authority (NDA), in the case of Nepal, the MoF, will float request for proposal from various stakeholders. Since, the integrated approach must start from the very stage of ideating the intervention, the SIF needs to promote mechanisms to promote concepts jointly prepared by a set of Ministries, Departments, layers of Government and private sector.

  However, this will require inter-ministerial coordination and coordination between different cross-sections of stakeholders – public and private. Further efforts are required for exploring the mechanisms to strengthen the coordination process.

- **Integrated project financing**: As has been discussed earlier, resources may be pooled across Ministries, Department and levels of Government to arrange for co-financing. It is recommended that rather than making the process external, resulting in conflicts, financing plans from pooled funds should be encouraged by the NDA. This will also increase the ownership of projects by various entities. The strategic investment framework may dwell on this issue deeply to explore the mechanisms that can provide a roadmap to pooled financing of climate intervention projects. Certain reforms in the budgeting process may be anticipated.

- **Integrated approach to M&E**: Given the benefits (and costs) of climate intervention projects are cross-sectoral, the SIF must put in place a mechanism for ensuring integrated and coordinated approach to monitoring and evaluation. This would ensure that all necessary expertise are available on board for monitoring impacts in a holistic approach and shortfalls identified. The strategic investment framework has to put in place the provisions long with institutional arrangements upholding the principle of integrated M&E.

- **Foster an integrated and investment grade policy regime**: The discussions above suggest that various policy reforms may be needed to design an effective investment framework for climate actions using funds from GCF and other entities. The inter-disciplinary nature of policy reforms has to be respected. Therefore, from the onset, the SIF must try to bring on board policy makers from various disciplines so that the intended reforms can be achieved. The goal of the investment framework is to reduce policy uncertainties, conflict between policies and promote an investment-grade policy regime that would induce and encourage investments in the climate interactions by actors from both public and private spaces. While GCF may provide the initial impetus, the mechanism will facilitate Nepal leveraging funds from different sources in the short to long term. The strategic investment framework can prove to be a strategic asset of Nepal in the course of its sustainable development and meeting the common but differentiated responsibilities in the context of climate change.
3. Conclusion

This document on Strategic Investment Framework has been prepared after identifying the required climate interventions in vulnerable districts like Dholakha and Ramechhap. A brief description about the vulnerability assessment has been provided in this document. Subsequently, the investments have been identified and a cost-benefit analysis has been carried out for the interventions identified for the two districts. A brief note on the same has been presented in this document. However, given the investment requirement, an important question for the policy-makers is how to generate sufficient funds – not just for meeting the CAPEX requirements but also for revenue expenditures during the entire life of interventions? This is challenging. The challenge increases as the GoN plans to avail assistance from the GCF – since GCF has certain investment criteria and GoN must conform to the same. This calls for a Strategic Investment Framework for investments in climate actions – using GCF and other funds.

From the strategies recommended as focus areas of the investment framework a number of key points emerge. These are of interest to the policymakers and the salient observations are as follows:

- A sound financing plan needs to be in place – for each project and all projects. The plan must uphold the principle of co-financing and country-ownership. The measure requires intense coordination among funds, their nature of disbursement and devising an effective way of blending finances from various sources.

- Private sector can no longer be a fringe entity. The policies and strategies must ensure that there is sufficient private sector participation. As a matter of fact, all efforts must be directed, in the medium to long run, to unlock the private capital for financing climate actions.

- There is need exploring mechanisms to identify the most efficient ways in which finances can flow from various sectors. The mechanism ought to include all actors in the financial space. With each actor having competing interests and priorities, the framework need to make all economic entities happy with their rational interests satisfied.

- There is a need for policy reforms at various levels of governance and regulation. The reforms should be inclusive – in a way that takes on board all the stakeholders. The framework, if properly designed, can bring forth an investment grade policy regime in Nepal, not just in the context of climate change but in different spheres of development actions.

- Certain institutional reforms are also warranted to facilitate the financing objectives. While old institutions need to be strengthened in terms of capacity and capabilities, some new institutions may be required to ensure a seamless functioning of the climate and development financing system.

These systemic transformations are easier said than realized. It is an iterative process and a time consuming process. Therefore, GoN needs to start the process immediately – carrying out a proper understanding of the AS-IS situation; envisioning a TO-BE situation and then finding out the steps and processes required to bridge the gap. The task is arduous, though not difficult.
### References


