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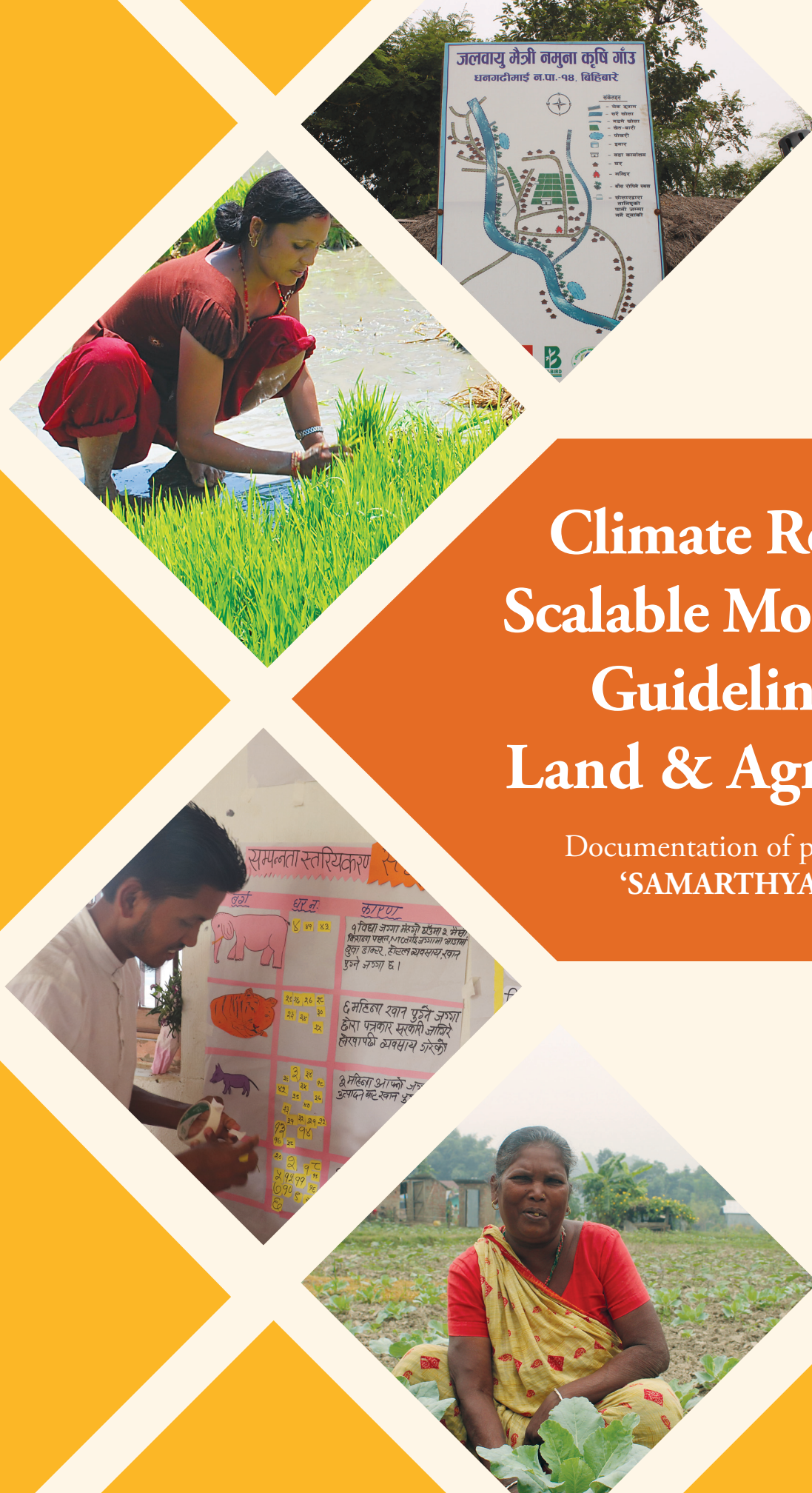धनगढीमाई न.पा.-१४, बिहिबारे

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Climate Resilient Scalable Models And Guidelines on Land & Agriculture

Documentation of practices from
'SAMARTHYA' Project

Foreword

CARE Nepal is proud to present this Climate Resilient Scalable Models and Guidelines on Land and Agriculture of SAMARTHYA Project: Promoting Inclusive Governance and Resilience for the Right to Food. The project contributed to develop climate resilient scalable models on land and agriculture, and strengthening peoples' organizations to become more effective in engaging with government at all levels.

Nepal is prone to multiple types of hazards and is disproportionately affected by the effects of climate change. According to the Global Climate Risk Index 2016 it ranks as the 17th most vulnerable country. Climate change impacts have a disproportionate impact on women, poor, vulnerable and socially excluded groups who often lack the resources, capacities, assets and power to adapt to or withstand such shocks and stresses. This is evidence enough to highlight the need for climate resilience building practices.

This project has identified, piloted and scaled number of models which will help reduce vulnerabilities and increase adaptive capacities in relation to climate change. This document consolidates the climate resilient scalable models on land and agriculture. These models will provide visible benefits so that small scale marginalized and women farmers adopt them with minimal external inputs, and also help promote them with local governments for subsequent implementation. The piloted and scaled up models aims to decrease vulnerabilities, build resilient and profitable livelihoods, reduce disaster risks; and address the underlying causes of vulnerability.

None of the work would be possible without partnership and strong collaboration at different levels. So I would also like to take this opportunity to thank all the partners of Samarthya Project for their role in identifying, piloting and scaling the model innovations. We hope this document provides its contribution in identifying climate resilient models which can be scaled through simplicity, cost effectiveness and collaborative engagement with local governments. I hope this new approach to developing models, up-scaling and jointly implementing them with local governments will guide in testing innovative models for building climate resilience and improving livelihoods of landless and small-scale farmers particularly women. I would like to thank everyone who directly or indirectly helped to make this document a success.

MONA SHERPA
Assistant Country Director
Program Quality
CARE Nepal

Acknowledgement

CARE Nepal has been implementing a "SAMARTHYA Project: Promoting Inclusive Governance and Resilience for the Right to Food" (2018 - 2021) with financial support from Danida through CARE Denmark. The project has a national coverage but has extensively been piloting in Siraha, Udayapur and Okhaldhunga districts in partnership with people' organizations; National Land Rights Forum (NLRF), National Farmers' Groups Federation (NFGF), Community Self Reliance Centre (CSRC), Clean Energy Nepal (CEN) and Local Initiative for Biodiversity, Research and Development (LI-BIRD).

The project is focused on developing Climate Resilient Scalable Models on land and agriculture, and strengthening peoples' organizations to become more effective in engaging with government at all levels in these areas. By following this approach, the project aims to address the problem of poor, vulnerable and socially excluded particularly women at climatic risks and hazards. To address the vulnerabilities and risks and enhance the resilience capacities of small scale farmers; our core partners have identified and screened few of the models using screening tools, and have been piloting them jointly with impact groups and local governments.

Considering the above, the project has developed Climate Resilient Scalable Models and Guidelines on Land and Agriculture to showcase the model works to local governments and stakeholders to apply as a guide for such agencies who are involved in model piloting, scaling up and scaling out process.

I am very pleased to share with you the Climate Resilient Scalable Models and Guidelines on Land and Agriculture. This document intends to introduce the simple concepts and approaches used in scaling up and scaling out with the hope that it may inspire concern authorities to know more about the methods and apply them to appropriate contexts. This work aligns to CARE global framework on She Feeds the World (SFtW), CARE 2020 program approach on Food and Nutrition Security, and Sustainable, Productive (including profitable & nutrition-sensitive), Equitable and Resilient (SuPER) food system approach contributing to CARE's mission towards fulfilling the rights to Food and Nutrition Security for women and small scale farmers.

I would like to express our thankfulness to the contributors of this document. I am equally thankful to the core partners, government officials, Rural/Municipalities for their ownership and contribution. I would like to express my sincere thanks to all the partners for their generous support, taking lead and effective collaboration to achieve the results. The generosity and support of various CARE Nepal colleagues and Samarthya Project Team primarily Mr. Jib Nath Sharma, Ms. Jyoti Baidya, Mr. Hansh Raj Joshi and Mr. Rahamat Hussain have been instrumental in preparation of this report. I would also like to thank CARE colleague Ms. Barsha Rani Gurung for support in document design.

Finally I would like to express my sincere gratitude to Mr. Binay Dhital and Mr. Shree Bhagavan Thakur, independent consultant, who supported this process documentation. Thanks also goes to CARE Denmark for inspiration and continuous efforts to bring the voices of the impact groups.

THAKUR CHAUHAN
Program Coordinator for Food and Nutrition Security, Livelihoods, Natural Resources and Climate Change
CARE Nepal

Abbreviations

ADS : Agriculture Development Strategy

AKC : Agriculture Knowledge Centre

CEN : Clean Energy Nepal

CIMMYT : International Maize and Wheat Improvement Center

CSOs : Civil Society Organizations

CSRC : Community Self-Reliance Centre

FM : Frequency Media

FY : Fiscal Year

Gov : Government

Ha : Hectare

HH : Household

ID : Identity

IDPs : Internally Displaced Person

IPCC : Intergovernmental Panel on Climate Change

LI-BIRD : Local Initiatives for Biodiversity, Research, and Development

LRPs : Local Resources Persons

MoLMAC : Ministry of Land Management, Agriculture and Cooperatives

MoLMCPA : Ministry of Land Management, Cooperatives and Poverty Alleviation

MuAN : Municipal Association of Nepal

NAPA : National Adaptation Programme of Action

NARC : Nepal Agricultural Research Council

NARMIN : National Association of Rural Municipalities in Nepal

NFGF : National Farmers' Groups Federation

NLRF : National Land Rights Forum

NPC : National Planning Commission

NPR : Nepalese Rupees

PGRs : Plant Genetic Resources

PVS : Participatory Varietal Selection

RM : Rural Municipality

VAT : Value Added Tax

WFP : World Food Programme

Landless dalit women during their monthly meeting, Bhagwanpur Rural Municipality, Siraha District

Contents

CONTEXT OF MODEL DEVELOPMENT AND SCALING WORK

CARE's frameworks for food and nutrition security and resilience to climate change including She Feeds the World (SFtW) and CARE 2020 Food & Nutrition Security Program strategy are to fulfil the rights to food and nutrition security for women and youth small holder farmers and their families, in food systems that are Sustainable, Productive (including profitable & nutrition-sensitive), Equitable and Resilient (SuPER). CARE Nepal SUSTAIN program builds on years of national and global experiences, in promoting an integrative approach to food and nutrition security. This not only promotes access to critical inputs like extension services, water, land, seeds, finance and access to markets; but also explicitly focus on nutrition, safety nets and social protection in times of crisis and puts women empowerment at the forefront.

In this mission, CARE Nepal in partnership with National Farmers Group Federation (NFGF) and Local Initiatives for Biodiversity Research and Development (LIBIRD) identified the food insecure, most marginalized and landless Musahar community as the impact group and brought concept of leasehold farming targeting Musahar, the landless agricultural tenants. As contract farming was an 'untrodden turf', CARE Nepal and its partners carefully decided to pilot this practice in Siraha district. The concept of contract farming was identified as an effective solution to avail fallow land to landless Musahar community. Assessment of the community's interest to engage in the piloting and required support and cooperation of the government authorities and key stakeholders was also a part of this process. NFGF supported formation of 40-members Dalit Women Farmers Group and engaged in the scheme enhancing their livelihoods significantly. Effective advocacy and lobbying by CARE partners led to introduce a Working Guideline Land Lease (2014/2015) which ensured the provision of leasing out government and private lands to landless and land poor farmers. Not limiting to policy contribution, this practice has been considered as a model to contribute towards optimum utilization of land, employment generation; and the country's socio-economic development in the long run.

The experience of contract farming in Siraha district was taken as an opportunity to learn and embed the best practices in future programming. Building on the experiences and learning from the CARE Nepal Civil Society Support Project on Right to Food (2013 to 2018), the new phase i.e. Samarthya project was designed aiming to pilot and scale the cost effective climate resilient models on land and agriculture through participatory screening process. CSOs having extensive network across the country, embracing the issues of climate vulnerable women, landless and small scale farmers has been considered as a key drivers of scaling tested models ensuring wider outreach. Thus, the project contributes to develop and sustain the capacities of NLRF & NFGF and their local federations by engaging with local governments on the issues of land rights, agriculture and resilience to climate change.

After a long period of transition, democratically elected local governments are finally in place across Nepal with mandates to improve people's wellbeing. Under this new dispensation, Local Government Operation Act 2018 has also been operationalized with different 22 exclusive jurisdictions delegated to them. Unlike previous centralized program, local government has the mandate to develop policy instrument and radially adopt new innovation. With its allies and boundary partners engaged in designing this model, Samarthya project partners discussed all 11 ingredients prescribed by CIMMYT PPP Lab for screening models which requires a model to score above 3 to become scalable. Initially eighteen (18) various practices were identified as climate resilient models by partners. Eventually, the team referred to the CIMMYT's PPP lab screening tool and selected nine (9) out of eighteen (18) climate resilient models. (See Annex for Guidelines).

The Samarthya project developed "Climate Resilient Scalable Models and Guidelines on Land and Agriculture" to showcase the model works to local governments and relevant stakeholders. This process documentation aims to serve as a guide for those agencies who are involved in model piloting and scaling process. This is a live document; henceforth there will be further refinement in the different phases by incorporating learning from ongoing practices.

[01]

Climate Resilient Leasehold Farming Practice

Leasehold Farming Practices by *Dalit* Women Farmers Group. Bhagwanpur Rural Municipality, Siraha District.

[01] CLIMATE RESILIENT LEASEHOLD FARMING PRACTICE

Rationale

In an agro-dominated economy like Nepal where two-thirds of the population is dependent on agriculture for livelihood, not only are farmers facing challenges in making this a viable source of livelihood, but the food imports are increasing as well. Poor families spend about 70% of their income on food requirements. Only 19.71% women have land ownership, although they make up majority of the country's agriculture labor force. Of the total arable land (412,100 Ha.) only about 21% is under cultivation. Landlessness is as high as 32.1 %. Over 44% *Dalits* in the Terai and 22% of those in hills are landless. On the contrary, about 30 % of cultivable land is lying fallow for various reasons. Land owners most often keep their land fallow fearing that if they give it to tenant farmers, they would start claiming their tenancy rights on the land.

Given this situation, National Farmers' Groups Federation (NFGF) initiated climate resilient leasehold farming practice engaging landless and land poor farmers in agricultural production through utilization of cultivable fallow land. NFGF tested this model in then Bhagwanpur VDC of Siraha district (currently Bhagwanpur Rural Municipality-1) engaging 40 marginalized and landless Musahar women. Most of their male counterparts were outside the country in search of jobs, while the women were barely meeting the families' daily essentials working as daily wage earners. To begin with, 80 Katthas (2.6 ha) of land owned by two absentee land owners were leased and divided between 40 members of the impact group by 2 katthas (0.06 ha) per member. As many of them have by now leased additional land with their own income, CARE/NFGF subsidy to them has been drastically reduced.

Bhagwanpur Rural Municipality (RM) has already adopted this model as part of its policy and programme, and scaled it out from Ward No. 1 to Ward No. 3 and 5. Belaka Municipality of Udayapur district has also adopted this model. Building on these outcomes NFGF is working for scaling up and scaling out this model in collaboration with local governments.

Why is this model unique?

This model's uniqueness lies in fostering a strong sense of collective responsibility among the farmers to uphold the obligations of the land lease signed by their group leader, while creating opportunity for individual member household to own its share of the land, make effort to produce more and earn more individually. This becomes a big motivating factor for them. This is a successfully tested model that focuses on land-poor women farmers and advocates to local government to institutionalize and scale it up by citing concrete evidence of success including return on investment analysis. It champions optimum utilization of land resource generating employment and improving livelihoods of the most marginalized land-poor and landless communities. For the local government this model provides a direct link to the most marginalized farmers and the opportunity to rid them of their socio-economic predicaments.

1. Name of the Model
Climate Resilient Leasehold Farming Practice

2. Partners Leading Development and Scaling of the Model
NFGF will be taking lead on bringing increased number of rural/municipalities on board. It is also working with other like-minded organizations for scaling out this model. It is the local governments which will ultimately own and lead the implementation of the model.

3. Target Community of the Model
Climate vulnerable and marginalized landless, land poor and women farmers in particular

4. Systems that the Model Aims to Change
Policy system: From government to government.

Extension: From farmer to farmer; from group to group, from one NFGF structure to another.

4.1 Type of System Change
Promoting leasehold farming practice: Creation of a win-win situation for the landless and land poor farmers, and land owners will be a mutually benefiting practice. Land owners will be guaranteed ownership of their land along with reasonable lease amount for long-term lease of their land, and the landless farmers will have land as a means of production.

Policy provisions for institutionalizing this practice: Successful piloting of the model and its promising results have already led some rural/municipalities to incorporating the model in their policies and programmes. Increased number of rural/municipalities are inquiring about this model with keen interest. This is indicative of the likelihood of this model's wider adoption and institutionalization.

Production: This model will contribute to bringing government provisions for subsidy like agriculture grant for input and financial facilities etc related to land lease within the reach of the target community helping them to access more lands lying fallow, produce more and contribute to agricultural productivity.

5. Phase of Model Development and Scaling
Institutionalization: This model has been tested successfully in Bhagwanpur rural municipality-1 bringing about positive changes in the impact group's socio-economic status. It has already been adopted and scaled up by the rural municipality. Other rural/municipalities including Belaka Municipality of Udayapur district are also in the process of adopting the model. Eventually, province 2 government has recognized the potentials of this model and has also pledged to replicate it across the province

6. Value Proposition
- This model helps boost the target community members' self-esteem, social status and recognition and enhance their confidence to negotiate with duty bearers and claim their rights and entitlements.
- It contributes to achievement of local government's policy objectives and actions regarding poverty reduction and prosperity of the target community through increased productivity and food supply.
- It also contributes to food and livelihood security of climate vulnerable families despite climate variability through selection of crop varieties tolerant to climate stressors.
- This model will open up opportunities for climate vulnerable target community to explore ideas and demand government support for climate resilient agricultural practice such as irrigation facility, mulching, agriculture extension services, weather

forecast and risk transfer measures like crop insurance and group saving (Hitkosh).

- It enhances access and control of women especially from marginalized community over income and productive resources. Likewise, decision making and leadership capacity of women at household and community level is increased due to improved access and spaces for negotiation with local government and other actors. Being part of farmers' federation connected from local to national level, it also provides space for them to advocate and negotiate in favour of marginalized community.

7. Cost and Duration of Model

The cost of implementing this model has been estimated at NPR 500,000 as follows:

AVERAGE SCORING 4.1

- [1] 3.5
- [2] 4.5
- [3] 4.5
- [4] 4
- [5] 4.5
- [6] 4
- [7] 3.5
- [8] 4.5
- [9] 4
- [10] 4
- [11] 4

[1] Technology and practice
[2] Awareness and demand
[3] Business cases
[4] Value chain
[5] Finance
[6] Knowledge and skill
[7] Collaboration
[8] Evidence and learning
[9] Leadership and management
[10] Public sector governance
[11] GESI consideration

- Lease amount for 2.6 ha of land- 0.06 ha/member for 40-member group

NPR 150,000

- Agricultural input (fertilizer, seeds, tools etc)

NPR 150,000

- Infrastructure development (irrigation, collection centre etc) **NPR 150,000**

- Capacity building and group mobilization

NPR 50,000

This is the cost incurred in the pilot phase. However, the cost is likely to go down when this model is institutionalized and scaled out widely with increased number of farmers' groups adopting this practice.
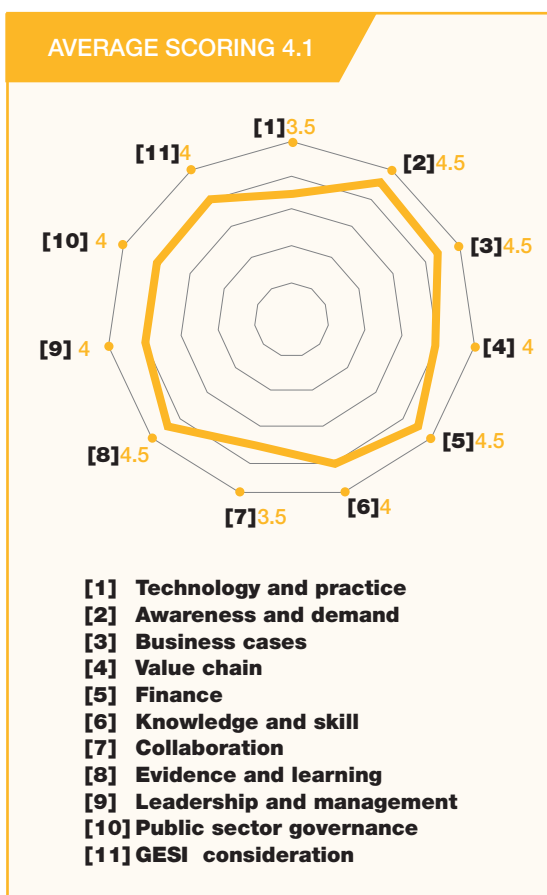
8. Model Screening Process and Result Summary

NFGF shared and discussed with it allies and boundary partners engaged in designing this model each of the 11 ingredients prescribed by CIMMYT PPP Lab for screening models. The discussion resulted in the following scoring on a 1 – 5 scale. As per the guidelines, for a model to be scalable its overall score should be higher than 3. The total average scoring of this model stands at 4.1 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

- **Working Policy for Registration and Leasing of Government Land 2014:** The policy provides for leasing out government owned lands to landless and land-poor farmers' groups and *Dalit*, Haliya and freed Kamaiya communities for commercial farming.
- **Provincial and local governments' policies and programmes address land lease issue:** The policies and programmes

for fiscal year 2018/2019 of Bhagwanpur Rural Municipality of Siraha district and Belaka municipality of Udayapur district have prioritized support for leasehold farming. The province 5 government's policy and programme for 2019/2020 has also made clear mention of leasehold farming.

10. Boundary Partners to be considered

- **Provincial governments:** Provincial governments will have an important role to play in making sure any policies or laws they develop do not contravene those formulated by rural/municipalities and vice versa. Therefore, coordination with provincial government is essential while adopting this model at rural/municipality level.
- **LI-BIRD and NLRF:** NFGF will be working closely with LI-BIRD and NLRF as key allies in making this model a success. While LI-BIRD will lend its expertise in climate change and agriculture to scaling the model, NLRF will contribute by mobilizing its large network in rooting for scaling of the model

11. Model's Link with Climate Resilience

- In the face of growing effects of climate change that the country is experiencing this model is an attempt to go beyond piloting and work for change in knowledge, attitudes, practice or skills among farmers and food system actors.
- It builds community resilience to climate change through risk transfer measures like agricultural insurance, mobilization of group saving (Hitkosh) and also enhances communal harmony.

- Effective scaling of this model also calls for coordinating policies on climate change, land and agriculture to create an enabling environment.

12. Model's Contribution to Promoting Inclusion and Governance

Selection of the right impact group: This model prioritizes ultra-poor, agriculture labours, *Dalits*, landless, marginalized, women and small farmers to be at the centre of this model. Prioritization of women as the model's impact group has already brought about evidenced change in their lives and their community.

Multi-stakeholder engagement: This model is designed to promote engagement of multiple stakeholders including the local, provincial and federal governments, NFGF structures at different levels and farmers' groups in the adoption and scaling of this model.

Enhanced self-esteem of target community members: This model empowers small scale and marginalized women by increasing the confidence to engage with local government for claiming their rights and create pressure on duty bearers for improvement of extension services. It will also enhance bargaining capacity of women's for fair wages both at government and community level.

This will significantly contribute in developing self-reliance of farmers on their own business which will transform the dependency relations with landlords.

13. Model Implementation Approach

01 Initial discussion with stakeholders

02 Reaching an understanding with local government

03 Incorporation of this model in local government policy and programme

04 Identification/ selection of land

05 Selection of participants, group formation, agreement between local government and NFGF

06 Programme orientation to participants

07 Group mobilization

08 Land preparation and crop selection

09 Construction of water efficient irrigation facilities (e.g: shallow tube well, water lifting pump, pipes etc.)

10 Group mobilization and cultivation

11 Crop cultivation and continuous care

12 Linkage with market for farm products

13 Return on investment analysis

14 Process reporting, documentation and publication

14. Model Scaling Approach

From government to government: At present when governments at all tiers are developing and implementing new policies on their own. Learning generated by one government will be adopted by the other.

Lead role of local government: NFGF, the target community and land rights forum will be working together with rural/municipalities and advocating for their leadership in scaling the model. They will support the local government in preparation of scaling procedures and ex-change of learning.

15. Strategies for Scaling

- Farmers to farmers: Members of the target community will spread out the changes brought about by the piloted model in the lives of the target community members and in their communities from one ward to other and from one village to another inspiring greater number of people to approach the local government (rural/municipalities) and demand for the adoption of the model.

- Multi-stakeholder involvement: Local government, CSOs such as NFGF, and boundary partners will make concerted effort for scaling out the model.
- Media partnership: The importance of the model, achievements and learning generated from the pilot phase will be publicized by local FM radio stations.
- Mobilizing NLRF and NFGF networks to scale up the model across the country.
- Model learning & sharing workshop and travelling seminar at national and sub-national levels.

15.1 Strength of Model

1. Government policy and guideline are in place on leasehold farming which explicitly provisions to utilize private and public land for leasing for farming.
2. Sufficient fallow land (both public and private) is available at local level.
3. Governments at all tiers have recognized and prioritized leasehold farming as an effective model for developing livelihood of landless tenants.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/little influence
1. Likelihood of policies and laws remaining un-implemented.	Discussion with elected representatives on barriers to implementing the policies and possible measures to overcome them. NFGF team will also pledge its technical support, should the lack of it, be part of the barriers.		
2. Difficulty in accessing market and getting fair price for farm produce.		Lobbying local government for support in market linkage, promotion and fair price.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include NFGF, NLRF, LI-BIRD, Rastriya Mukta Haliya Samaj Mahasangh Nepal (RMHS-FN), rural/municipalities, provincial and federal governments collaborating in the inception phase; and the other rural/municipalities willing to scale out the model.

Enabling factors: Provincial and local level government has prioritized investment on agriculture as a key to change through policies and programs especially targeting to women and landless tenants. Strong evidences generated from practice and its documentation by NFGF has provided an avenue to invest more on it to benefit women and landless tenants. Likewise, recognition of NFGF by all three level of government creates an enabling spaces for scaling up of this model.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Agreement is in place with rural/municipality on climate resilient farming practice.		
Local government allocates the budget in their policies and programmes for supporting climate resilient contract farming practice.		
Implementation of contract farming following the plan		
Like to See (Active engagement)		
Impact groups adopting climate resilient practices in leasehold farming		
Return on investment analyzed and documented		
Local government's directives on climate resilient contract farming practice developed and implemented		
Love to See (Deep transformation)		
Target community's internal fund is mobilized for the sustainability of climate resilient contract farming practice.		
Enhance livelihood opportunities of landless farmers through climate resilient contract farming		
Federal and provincial governments along with other development agencies promoting leasehold farming		

[02]

Farmers' Identity Card with Categorization

▶ Farmers receiving 'Farmers Identity Card' at Belaka Municipality, Udayapur District.

[02] FARMERS' IDENTITY CARD WITH CATEGORIZATION

Rationale

The government of Nepal has occasionally taken measures purportedly to make agriculture a dignified profession and attract more farmers to agricultural activities by establishing their identity. The national agricultural policy, 2004 (2061 BS) was developed with the commitment to identify and categorize farmers and provide them necessary facilities so that they can work for increasing agricultural productivity and contribute to Nepalese people's food and nutrition security. However, as several other government commitments, it also did not materialize. This necessitated continuation of advocacy both at policy and implementation levels to establish agriculture as a dignified profession, provide farmers their identity based on their realistic categorization; and ensure their access to services and facilities, and social security.

In the absence of identification and categorization of farmers based on realistic indicators, all the farmers, who make up two thirds of the country's population, are put in one basket. This has deprived the real small and marginalized farmers of any say in policy making and access to services and resources they direly need. Even the meager resources meant for farmers are being transferred to non-agricultural sectors, and the youth are detaching themselves from agriculture as it has remained a profession that does not have an identity. The government piloted distribution of identity cards to farmers in some areas but again it failed to do justice to real farmers as most of those who received the ID cards were non-farmers. Against this backdrop, National Farmers Group Federation (NFGF) has taken a concrete step to help farmers out of this predicament by designing and piloting this model.

The new practice includes both male and female members name as beneficiary. To focus on women headed households, it also clearly provisions to provide identity cards to womens' as farmers. This categorization practice has highly emphasized on identifying women, poor and vulnerable community to be linked with social service provisions and government's subsidy schemes.

Why is this model unique?

This model is meant for establishing the identity of a community hitherto forgotten by the State – the most marginalized landless, land-poor and women farmers including agriculture laborers and ensuring their access to government services and facilities. This model is also an attempt to make the government revise its subsidy provision in view of the specific requirements of different categories of farmers and ensure the subsidies reach those who need them the most. As detailed household inventories are prepared in course of farmers' categorization as per this model a wealth of data on the entire community will be available for the government to use as input for policy making, programming and planning purposes.

1. Name of the Model
Farmers' Identity Card with Categorization

2. Partners Leading Development and Scaling of the Model
NFGF will be leading the scaling of the model initially. Ultimately, the provincial and local governments will take charge of scaling up and scaling out the model.

3. Target Community of the Model
Landless marginalized women and small holder farmers and agricultural labourers.

4. Systems that the Model Aims to Change
Policy system: From government to government.

Extension: From farmer to farmer; from group to group, from one NFGF structure to another.

Policy and practice: Establishment of a practice and process of identifying farmers, categorizing them based on realistic indicators and providing them identity cards with the local government leading the process. This practice will be ultimately be institutionalized with the government formulating policy with provisions of subsidy and social security.

Information management: In view of the glaring absence of authentic data on farmers and their conditions in Nepal, this model intends to contribute to collection and documentation of realistic data and information on farmers including the level of their access to land.

4.1 Type of System Change
Farmer-friendly policy: Incorporation of this model of identifying and categorizing farmers, and providing them identity cards in the policies of government at all levels and their honest implementation will mean formal recognition of farmers.

Improved access to services: Based on their categories and ID cards farmers will be able to de-mand the kind of services and support they require from the government. Meanwhile, the government will have to eschew the practice of provisioning blanket service by putting all kinds of farmers in one basket. It will be required to develop policy provisions considering the specific service requirements of different categories of farmers.

5. Phase of Model Development and Scaling
Inception phase: NFGF has significantly contributed to translating into practice the concept of categorizing farmers and providing them ID cards accordingly. They worked closely with the local government (Belaka Municipality) and advocated for categorization of farmers only on the basis of realistic indicators. In response, the local government initiated the process of formulating municipal level agriculture act and guideline.

6. Value Proposition
- Improved access of the target community to public services, facilities, technology, resources and opportunities to bring change to their standards of living.
- Improved rapport of farmers with government stakeholders and gradual recognition by the latter of the farmers' contributions results in enhanced self-respect and social status of the farmers.
- Farmers will have the opportunity to influence government policies, programmes and budget related to land management and farmers' wellbeing.
- The exemplary practice of Belaka Municipality has generated evidences of success, which are expected to inspire the policies and plans at federal and province level. Increased willingness of other local governments to adopt this practice.
- This categorization practice has highly emphasized on identifying women, poor and vulnerable community to be linked with social service provisions and government's subsidy schemes. In the first round in Belaka Municipality, women headed household, *Dalits* and other

marginalized households are generally falls on 'D' category which is supposed to receive 100% subsidy on agriculture inputs from the government.

7. Cost and Duration of Model

This cost of implementing this model has been estimated at NPR 400,000 with a top-line breakdown as follows:

- Data collection and management

  NPR 250,000

- Coordination meetings, workshops etc

  NPR 50,000

- Printing identity cards   **NPR 50,000**

- Distribution of ID cards   **NPR 50,000**

AVERAGE SCORING 3.9

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[3] 4.3
[9] 3.5
[4] 3.3
[8] 4.3
[5] 4.3
[7] 3.8
[6] 3.3

[1] **Technology and practice**
[2] **Awareness and demand**
[3] **Business cases**
[4] **Value chain**
[5] **Finance**
[6] **Knowledge and skill**
[7] **Collaboration**
[8] **Evidence and learning**
[9] **Leadership and management**
[10] **Public sector governance**
[11] **GESI consideration**
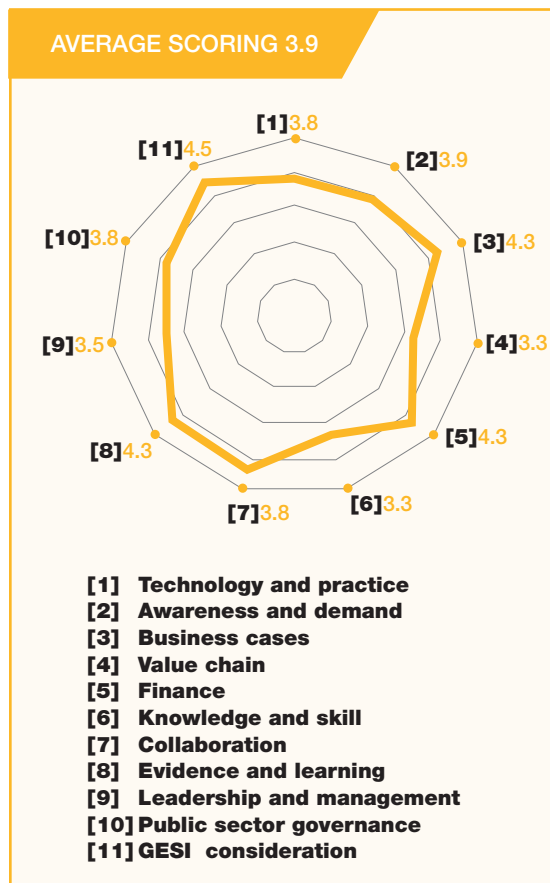
This cost incurred during the pilot phase might go down when larger number of local governments institutionalize the model and implement it at scale.

8. Model Screening Process and Result Summary

NFGF shared and discussed with it allies and boundary partners engaged in designing this model all 11 ingredients prescribed by CIMMYT PPP Lab for screening models which requires a model to score above 3 to become scalable. The discussion resulted in the following scoring on a 1 – 5 scale. The total average scoring of this model stands at 3.9 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

National Agricultural Policy 2004: The policy has provisioned food safety nets for land-poor farmers, farmers lacking production inputs like year-long irrigation facilities, and landless and marginal farmers lacking other sources of income in order to help them to cope with situations of climatic fluctuations and other disasters.

Ministry of Agriculture's 27-point commitment 2015: Recognizing that the current provision for providing blanket service and subsidy to all farmers has not benefitted small and marginalized farmers. The ministry has pledged to categorize farmers into four groups—commercial, subsistence, landless and farm labor—for the purpose of distributing identity cards entitling them to receive state subsidies and facilities.

Budget statement of 2014/15: The budget statement provisioned categorization of farmers based on realistic indicators and providing them identity cards thereby entitling them to services and facilities.

Farmers ID card (distribution and use) guidelines 2014: The guideline provides for farmers and tenants' easy access to agricultural inputs, and other facilities and subsidies for household, group, community and cooperatives farming on cultivable lands as prescribed by the government.

Agricultural development strategy 2016: The strategy stipulates that different crops classification be applied to different agro-ecological zones for the benefit of commercial, subsistence and landless farmers.

Farmers' social security scheme 2016: As per the scheme farmers should be categorized on the basis of the area of land owned and cultivated by them, productivity or market price of the farm produce and investment in farming.

Ministry of agriculture's 58-point road map 2018: The road map makes a clear mention of categorization of farmers on the basis of production and resources, providing them with ID cards and contributory pension based on the cards.

Agriculture act of Belaka Municipality 2018: The act clearly mentions the provision for categorizing farmers into four groups and providing them with ID cards.

10. Boundary Partners to be considered

- NFGF structures at different tiers: They make significant contribution in implementation of this model through capacity building of farmers' groups and their mobilization in scaling of the model.

- Local, provincial and federal government: They provide leadership in making the model a success through resource mobilization, building enabling policy environment, and monitoring for quality check and improvements.

- Community Self-Reliance Centre (CSRC) and National Land Rights Forum (NLRF): NFGF will be working in alliance with these organizations for both policy influencing and mobilization of the network members in encouraging the target community to actively take part in the categorization process.

11. Model's Link with Climate Resilience

- This model paves the way for priority access of climate vulnerable community to government services and subsidies based on their ID cards. This model proposes 100% subsidy for such farmers.

- Availability of realistic data on climate vulnerable farmers that this model will work for will lead to development and implementation of their adaptive capacity building plans and programmes.

- Access to government services, facilities and subsidies will help minimize climate vulnerable communities' exposure to climate stressors and enhance their resilience.

12. Model's Contribution to Promoting Inclusion and Governance

Reaching out to impact population: This model prioritizes women, poor, climate vulnerable small scale farmers, and tenants as impact population. Due to this inclusive and focused approach, the above mentioned population's needs and interests are heard and included in categorization and service delivery process.

Multi-stakeholder engagement: This model is designed to promote engagement of multiple stakeholders including the local, provincial and federal governments, NFGF structures at different levels and farmers groups in the adoption and scaling of this model.

Push for inclusive approach to policy making: This model advocates for the target community's direct influence in the development and implementation of government policies and programmes at all levels.

Geographical coverage: The model is designed to make sure farmers' categorization and distribution of ID cards takes place in all geographical regions from the Terai to the hills and mountains.

Milestone in promoting accountability: Successful implementation of this model has the potential to be a milestone in promoting accountability in governance due to participatory involvement of all the stakeholders including the target community in governance processes.

Promotion of equity and trust in government: The governments at all levels will provide services, facilities and subsidies to the farmers on the basis of their ID cards without any discrimination. This will lead to promotion of equity and enhances popular trust in the government.

13. Model Implementation Approach

01 Initial discussion with rural/municipalities

02 Second round of meeting with rural/municipalities and programme orientation

03 Selection of programme wards at Belaka Municipality

04 Development of work plan

05 Agreement with Belaka Municipality and other key stakeholders

06 Identification and recruitment of data collectors and data entry person(s)

07 Programme orientation to the stakeholders concerned

08 Orientation to data collectors and data entry persons

09 Orientation to settlement (Tole) development committee head and formation of support committee

10 Pre- testing in community for field work

11 Review meeting on field work progress, challenges and solutions

12 Orientation to the municipality on the concept of farmers ID card and indicators for it, and the Municipality's responsibility

13 Discussion on categorization of farmers and their ID cards and collection of suggestions

14 Data validation

15 Discussion with stakeholders concerned on sample of farmer's ID card

16 Printing of farmers' ID card

17 Distribution of farmer's ID card by the Municipality in the presence of all stakeholders concerned

14. Model Scaling Approach

From government to government: At present when governments at all tiers are developing and implementing new policies on their own, learning generated by one government will be adopted by another government.

Lead role of local government: NFGF, the target community and land rights forums will be working together with rural/municipalities and advocating for their leadership in scaling the model. They will support the local government in preparation of work procedures and exchange of learning

15. Strategies for Scaling

- Farmers to farmers: Members of the target community in one ward awaken their fellow farmers in the other ward to the need for actively participating in the categorization process and obtaining ID cards.
- Multi-stakeholder involvement: Local government, CSOs such as NFGF, and boundary partners will make concerted effort for scaling out the model.
- Media partnership: The importance of the model, achievements and learning generated from the pilot phase will be publicized by local FM radio stations.
- Mobilizing NLRF and NFGF networks to scale up model across the country.
- Model learning & sharing workshop and travelling seminar at national and sub-national level.

15.1 Strength of Model

1. NFGF's long experience working with the government for having the concept of farmers' categorization and distribution of ID cards materialized.
2. Government policies and plan supporting this model.
3. Farmers are enthused by the provision for categorization of farmers and distribution of ID cards.
4. Through this model, women are also legally recognized as farmers breaking the stereotype recognition of farmers in Nepal. Likewise, it intends to address needs and interests of women and poor marginalized population by reflecting these needs in government's priority. Thus, this model increases government's accountability towards improving services for women and poor marginalized community.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Despite the government's commitment to putting into practice farmers' categorization and distribution of ID cards and its inclusion in policy and parogramme at the federal government level, governments at all levels are hesitating to become the first mover.	As NFGF in collaboration with Belaka Municipality of Udayapur has already piloted this model successfully in the Municipality, sharing of the success story and learning with other governments at all tiers convincing them that this is doable.	Land rights forums at all levels, NLRF and CSRC will, from their respective quarters, lobby and advocate to the governments for honestly and speedily put the model into practice.	
2. Local governments in general have not yet geared up for taking up this responsibility.	Identifying some of the rural/municipalities, which are willing to adopt this model but are apprehensive of possible challenges; holding interactions with them to boost their confidence through the use of Belaka success case and pledging NFGF's technical support for adopting the model.		
3. Although Federal government has a plan to provide farmers ID card; they are not fully convinced yet on categorization based ID card.	Advocacy by NFGF based on evidence generated from Belaka Municipality.		

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include NFGF, governments at all tiers; and land rights forums at different levels.

Enabling factors: The prioritization of farmers and agriculture in all tiers of government policies and programmes, well evidenced and documented changes brought about by this model in Belaka Municipality, community demand and NFGF's working relations with governments at all tiers.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Agreement in place with rural/municipality on farmers' ID card preparation and distribution.		
Local government allocates the budget in their policies and programmes for supporting climate resilient contract farming practice.		
Community and household level land and agriculture related data and information well documented		
Like to See (Active engagement)		
Approval and validation of land and agriculture related data by the local governments.		
Local governments' guidelines on categorization of farmers developed.		
Love to See (Deep transformation)		
Climate vulnerable families receive ID cards provisioning higher level of subsidy based on categorization		
Climate vulnerable families have access to prioritized subsidy in agricultural input based on categorization		

[03]

Localized Agricultural Insurance Scheme

▶ Livestock tagging as a process of insurance. Sunkoshi Rural Municipality, Okhaldhunga

[03] LOCALIZED AGRICULTURAL INSURANCE SCHEME

Rationale

Nepal is one of the countries with highest vulnerability to adverse impacts of climate change. The country is experiencing growing climatic hazards like flood, landslide, drought, storms etc. Agriculture is the sector that is faced with serious climate and weather risks. As women, poor and marginalized people are mostly engaged in agriculture for their subsistence livelihood; are thus mostly suffered from the climatic adversity.

In view of this situation the government is taking some measures to implement crop insurance programme throughout the country. It has issued guidelines providing for subsidy on premium of crop and livestock insurance. As private insurance companies are reluctant to provide crop and livestock insurance service, the government adopted a strategy for making it mandatory for all 17 insurance companies in the country to expand this insurance service throughout the country with each company covering four to five districts. However, the companies and their service are limited to the district headquarters depriving the farmers in far flung areas of the benefits of the government scheme. So, because of this centralized and limited presence of service providers, women, poor and vulnerable farmers' have no or less access to such services.

National Farmers Group Federation (NFGF) is, therefore, working to promote crop and livestock insurance through this model by bringing on board the small and marginalized farmers, the local government and insurance companies and facilitating productive collaboration among them with a sense of common responsibility.

Why is this model unique?

Despite the federal government's effort to implement the national crop and livestock insurance programme requiring the country's all 11 insurance companies to expand their services to every nook and corner of the country, it is not taking off. The companies are still confining their services to the district headquarters depriving farmers in remote areas of these services. Challenging this status quo, this model has emphasized the local government's lead role in scaling out this service. Given their devolved mandates and their close proximity to the community people, rural/municipalities are well positioned to own and fulfill their leadership responsibility by making it mandatory for the insurance companies to cover also the remote areas. As evidenced by the Sunkoshi success story, such initiative of local government pays off well.

1. Name of the Model
Localized Agricultural Insurance Scheme

2. Partners Leading Development and Scaling of the Model
National Farmers' Groups Federation NFGF, which developed this model, will be leading the scaling of the model initially. Ultimately, the provincial and local governments will take charge of scaling up and scaling out the model.

3. Target Community of the Model
Landless, marginalized, women and small holder farmers affected by adverse effects of climate change.

4. Systems that the Model Aims to Change
- **Strengthening climate change and weather risk transfer mechanism through** constructive collaboration among the federal and local governments, farmers and insurance companies.

- **Demystifying insurance and addressing insurance illiteracy** among the most vulnerable farmers.

- **Policy initiative:** Institutionalization of this model through its incorporation in local government policies and programmes keeping the target community at its centre.

- **Extension education:** Promoting insurance literacy and values to be added by insurance among target community members and land rights forums at different levels, and dissemination of the Sunkoshi success story.

4.1 Type of System Change
Increased engagement of local government in promotion of crop and livestock promotion will bring two crucial results. Local governments will work with insurance companies requiring them to ex-

pand their outreach also covering remote wards and villages, demystify insurance and help the target community members understand the value to be added by insurance as part of their promotion activities. While the federal government has provisioned 75% subsidy on insurance premium for this model's target community, local governments will bear 50% of the remaining 25% of the subsidy. The ultimate goal of the model is to localize agriculture insurance scheme and change the overall insurance system of federal government.

5. Phase of Model Development and Scaling
Inception phase: NFGF piloted this model in Sunkoshi Rural Municipality of Okhaldhunga covering 500 farmers with the support from Samarthya project and the Rural Municipality. The initiative protected crops and livestock of the participating farmers from various climatic stressors and weather risks. Building on the experience, achievements and learning, which are well documented; NFGF is working for scaling the model through the local governments for impact at scale.
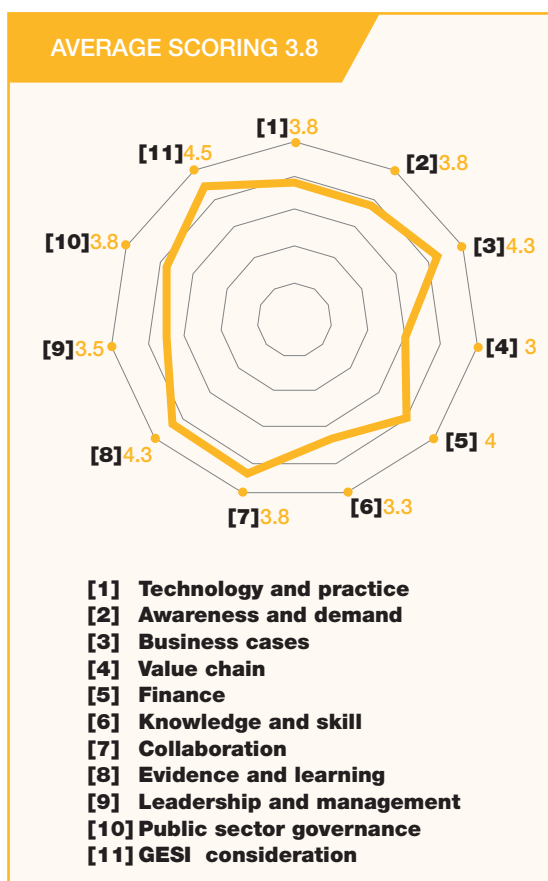
6. Value Proposition
- Individual farmers and/or farmers' groups will be insured for climate change and weather risks such as sudden onset events (storms, droughts, floods etc)

- This model contributes to creating risk awareness among the target community members, promotion of discussion and prevention measures, and development of coping strategies.

- Insurance will make the target community members to make long-term investment in cropping and livestock activities, enable local government to generate data and incentivize prevention, and strengthen individual farmers, their groups and the local governments to effectively manage risks before they occur and avoid impacts.

- Increased willingness of other local government to adopt this practice.

7. Cost and Duration of Model

This cost of implementing this model has been estimated at NPR 600,000, with the following top line breakdown. The cost incurred during the inception phase covered the insurance of 500 livestock. The cost was shared among the federal government (75%), local government (10%), farmers (8%) and CSOs like NFGF (7%).

- Data collection and management

  NPR 50,000

- Preparation and mobilization of insurance agents **NPR 50,000**

- Insurance premium **NPR 500,000**

AVERAGE SCORING 3.8

[1] 3.8
[11] 4.5
[2] 3.8
[10] 3.8
[3] 4.3
[9] 3.5
[4] 3
[8] 4.3
[5] 4
[7] 3.8
[6] 3.3

[1] **Technology and practice**
[2] **Awareness and demand**
[3] **Business cases**
[4] **Value chain**
[5] **Finance**
[6] **Knowledge and skill**
[7] **Collaboration**
[8] **Evidence and learning**
[9] **Leadership and management**
[10] **Public sector governance**
[11] **GESI consideration**

Institutionalization of this model and its wider replication my help bring down the cost, which might vary depending on the coverage and outreach.

8. Model Screening Process and Result Summary

NFGF discussed with its allies and boundary partners engaged in designing this model each of the 11 ingredients prescribed by CIMMYT PPP Lab for screening models, which requires a model to score above 3 to become scalable. The discussion resulted in the following scoring on a 1 – 5 scale. The average scoring of this model stands at 3.8 proving its scalability..

9. Government Policy Supporting Model Development and Scaling

- The budget statement of FY 2015/16 provisioned VAT waiver along with 50% subsidy on premium of crop and livestock insurance.

- The budget statement of FY 2016/17 went one step ahead announcing VAT waiver and 75% subsidy on premium.

- Local government policies and programmes have started giving priority to crop and livestock insurance. For example, Sunkoshi Rural Municipality of Okhaldhunga district has made special mention of sustainable agriculture through promotion of insurance scheme in its FY 2018/2019-policy and programme.

10. Boundary Partners to be Considered

The boundary partners include other civil society organizations and development partners, which are working to promote crop and livestock insurance for the larger benefit of farmers, particularly the most vulnerable ones. NFGF will be working in alliance with them for scaling this

model. Working with the media, especially FM stations will contribute to educating the farming community about the importance of crop and livestock insurance

11. Model's Link with Climate Resilience

- This model is an attempt to strengthen the mechanism of helping the target communities to protect their crops and livestock from climate change and weather risks such as floods, drought, storms and hailstorms etc.

- Risk transfer mechanism of this kind will lead to increased income and more secured food security of farmers and minimization of loss from climate and weather variability.

- This model will also boost farmers' confidence to make long-term investment in cropping and livestock activities.

12. Model's Contribution to Promoting Inclusion and Governance

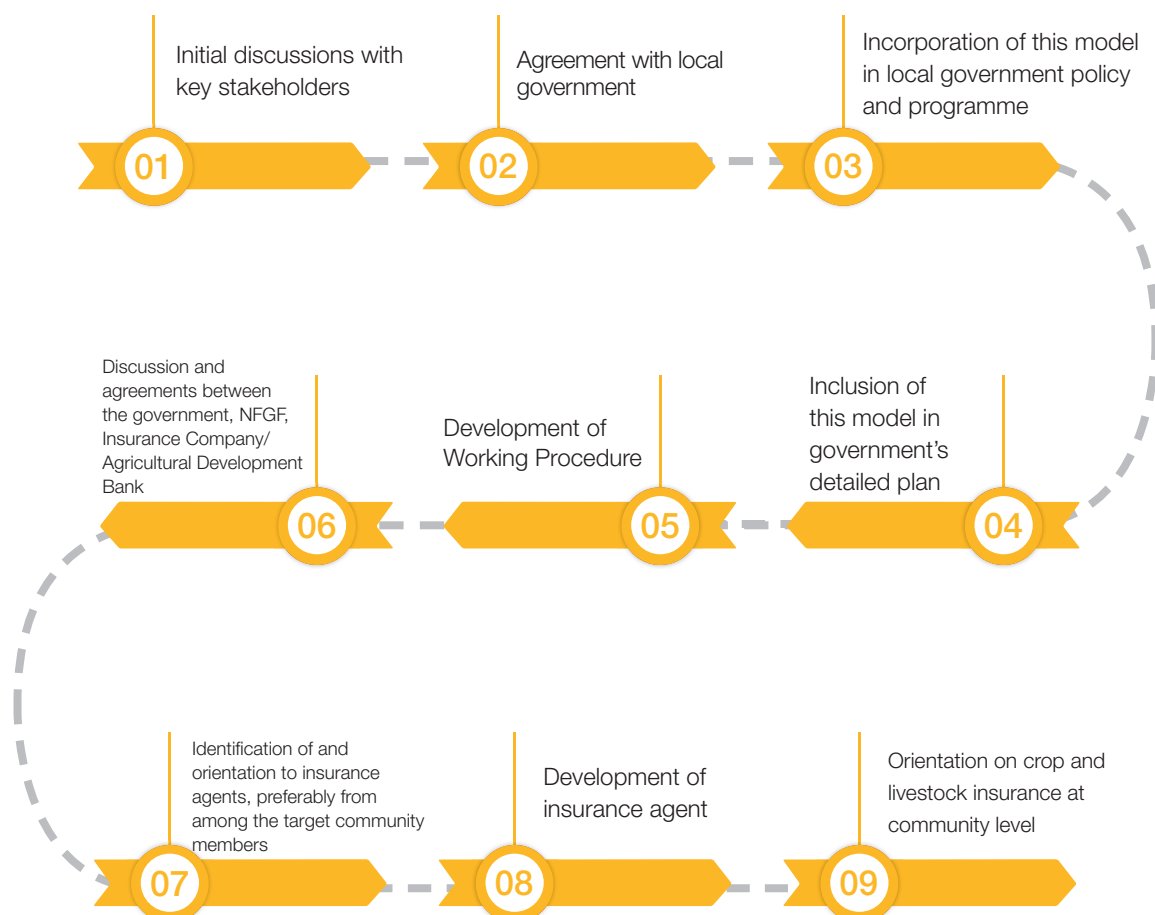**Reaching out to Impact population:** This model focuses on accessing the agriculture insurance services to women, poor, Dalits and other vulnerable households in their community. By accessing to this, women, and poor vulnerable farmers are entitled to the safety measures which decreases the risks. This enables them to cope with the possible loss created by hazards.

Multi-stakeholder engagement: This model is designed to promote engagement of multiple stakeholders -- the local, provincial and federal governments, insurance companies, NFGF structures at different levels and farmers' groups -- in the adoption and scaling of this model.

Milestone in promoting accountability: Successful implementation of this model will help the target community to access the federal government's 75% subsidy and 50% of the remaining 25% of the subsidy on insurance premium from the local government.

Promotion of people's trust in government: Government provision for VAT waiver and subsidies on insurance premium at all levels will encourage farmers to participate in and benefit from the crop and livestock insurance programme. This will lead to enhancement of people's trust in the government.

13. Model Implementation Approach

01 Initial discussions with key stakeholders

02 Agreement with local government

03 Incorporation of this model in local government policy and programme

04 Inclusion of this model in government's detailed plan

05 Development of Working Procedure

06 Discussion and agreements between the government, NFGF, Insurance Company/ Agricultural Development Bank

07 Identification of and orientation to insurance agents, preferably from among the target community members

08 Development of insurance agent

09 Orientation on crop and livestock insurance at community level

14. Model Scaling Approach

At present when governments at all tiers are developing and implementing new policies and practices on their own, this model will facilitate **sharing of learning generated by one government with the other.** This practice will prompt the latter to follow suit.

Identification of insurance companies with better sense of social responsibility along with their business motive and facilitation of dialogue among them, interested rural/municipalities and the target community.

Preparation of guidelines based on the practical experience and learning from the piloting phase (Sunkoshi RM Okhaldhunga) for promotion of crop and livestock insurance.

15. Strategies for Scaling

Lead role of local government: The model will require the local governments (rural/municipalities) to lead the strengthening of risk transfer mechanism for helping the target community's crops and livestock from sudden onset climate change and weather risks such as floods, drought, storms and hailstorms etc.

Awareness building: Demystifying insurance and building risk awareness among the target community members and promotion of discussions on prevention measures, and development of coping strategies will be another key strategy.

Dialogues among local governments, insurance companies and farmers: NFGF will initially facilitate interactions among these actors to explore mutually beneficial approach so that the farmers even in remote areas receive insurance service and subsidies. The insurance companies can promote their business with a sense of social responsibility, and the local governments get the opportunity to prove their accountability to the most vulnerable citizens.

Media partnership: Selected FM stations will be brought on board to educate their listeners about the importance of the model, achievements and learning generated from the inception phase; and the values to be added by crop and livestock insurance.
- Mobilizing NLRF and NFGF networks in scaling up the model across the country.
- Model learning and sharing workshop and travelling seminar for representatives of national and sub-national government and like-minded agencies.

15.1 Strength of Model
1. Federal government's provision for VAT waiver and 75% subsidy on crop and livestock insurance premium.
2. This model is built on practical experience and learning from its piloting in Sunkoshi Rural Municipality, Okhaldhunga.
3. Government policies and plan supporting this model.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Many remote rural areas are not yet reached by insurance companies.	Agreement with insurance companies willing to cover remote and rural areas. NFGF will advocate to make sure it will happen at the initiative of local government.		
2. Crop insurance is yet to gain traction among farmers due to insurance illiteracy and negative impression of insurance companies, which are generally known for focusing only on profit-making.	Discussion and collaboration with elected representatives and insurance companies to overcome the hiccups in enhancing popularity of crop and livestock insurance. Insurance companies will be required to add positive messaging to their promotion activities and live up to the messages. Creating awareness among farmers on localized insurance scheme	Advocacy for making a provision for insuring crop production not only input for production.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include NFGF, insurance agents, target community members; and insurance companies.

Enabling factors: Federal government level provision for VAT waiver and 75% subsidy on insurance premium; willingness of local governments to bear 50% of the remaining 25% subsidy; farmers' demand, government subsidy, NFGF's unwavering commitment to making this model a success, better coordination among actors, evidence of scalability of the model (Sunkoshi success story); and growing climatic and weather risks to agriculture pressing for urgent action to manage risks before they occur and avoid impacts.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Small holder farmers are aware of the benefits of crop and livestock insurance		
Rural/municipalities committing to adopt the model		
Insurance companies willing to reach out to remote areas and add social service face to their business identified.		
Local government's guidelines on promotion of crop and livestock model developed.		
Like to See (Active engagement)		
Agreement with rural/municipalities on development of crop and livestock insurance models focusing on the target community is in place.		
Local governments allocate budget for promotion of crop insurance in their policies and programmes.		
Love to See (Deep transformation)		
Small holder farmers benefitting from insurance scheme (Claiming and receiving benefits from it)		
Rural/Municipalities institutionalize and scale up insurance scheme		
Small holder farmers reporting resilience of production system		

[04]

Identification, Verification and Recording of Landless and Unplanned Settlers

▶ Community facilitators carrying out context mapping. Belaka Municipality, Udayapur.

[04] IDENTIFICATION, VERIFICATION AND RECORDING OF LANDLESS AND UNPLANNED SETTLERS

Rationale

Nepal's existing land administration system only deals with formal land tenure system including only registered land in national cadastre. Almost 28% of the country's total land area is arable of which about 75% is formally registered and tenure secured. However, 25% of the total arable land and settlements (about 10 million physical parcels) are outside the formal cadastre implying that a significant portion of the population (about 1.3 million families) is living in informality with unsecured land tenure and without formal spatial recognition[i].

Twenty-six percent of the Nepalese population, mostly members of the *Dalit* and Terai communities are landless and generally occupy a piece of informal holding for shelter fearing eviction at any time. Furthermore, these families may live in poverty and less dignified livelihood conditions due to insecure land tenure. The land cannot be bought or sold in the formal land market which means the government cannot impose any kind of property tax or levy registration fees on the land transactions. Because of unsecured tenure, the settlers hesitate to invest on the land and improve its productivity. According to the Fit-for-purpose land administration strategy - an innovative approach to implement land policies in Nepal 2019 - unrecognized land tenure may further restrict the settlers from getting any compensation and government grants and benefits in case of any climate-induced or other disasters such as earthquake and flooding[ii] as was witnessed in the post 2015 earthquake reconstruction and recovery. This kind of situation leads to further landlessness, encroachment of public and private land; and escalated poverty.

Why is this model unique?

Against this backdrop this model aims at a breakthrough in the country's land administration system with particular focus on the land and settlements that still remain outside the formal cadastre. Community Self-Reliance Centre (CSRC) designed and piloted this model in collaboration with the Federal Ministry of Land Management, Cooperatives and Poverty Alleviation (MoLMCPA) and Belaka Municipality of Udayapur district. Built on the impressive results and learning from its pilot roll out this model has been further refined for implementation at scale.

Availability of authentic data: Authentic data on landless and unplanned settlers and the lands they are informally occupying for residence and cultivation is non-existent. This model facilitates collection and recording of realistic data and information of this kind through application of localized "fit for purpose land administration tool". This will contribute to bringing lands and settlements under informal tenure within the formal cadastre and thereby to improving land administration system at the Municipality level. Women, poor and other vulnerable households are deprived from formal land entitlement. However, they are having informal land tenure and dwelling in such informal tenure system. Thus, this model will enable to transform such informal land tenure ship into formal. On top of this, government's affirmative actions on taxation and entitlement to women will ensure and facilitate women's access to formal land.

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[i] *Fit-for-purpose land administration strategy: an innovative approach to implement land policies in Nepal- 2019*
[ii] *Fit-for-purpose land administration strategy: an innovative approach to implement land policies in Nepal- 2019*

1. Name of the Model

Identification, Verification and Recording of Landless and Unplanned Settlers

2. Partners Leading Development and Scaling of the Model:

Currently CSRC is leading the piloting of this model in collaboration with MoLMCPA and Belaka Municipality. Leadership in scaling the model will gradually shift to local government (rural/municipalities).

3. Target Community of the Model

Landless and unplanned settlers

4. Systems that the Model Aims to Change

- Collection and recording of authentic data on landless and unplanned settlers and the land they are informally occupying for housing and cultivation
- Research based municipality level land use policy aimed at improved land administration
- Devolution of land management practice in true sense
- Policy initiative to institutionalize the practice of using realistic data for improved land administration and land use benefiting those most affected by its absence

4.1 Type of System Change

Research based policy making: Availability of such authentic data will be instrumental in formulation and implementation of evidenced policy or law at Municipality level for improving land administration system benefitting landless and unplanned settlers, who are denied land ownership and, because of that, various government services. Implementation of such a policy or law will positively impact on local government's revenue collection as well.

Devolution of land management in true sense: This model is an attempt to enable the rural/municipalities to undertake effective, efficient and re-

sponsive land administration. Adoption and scaling of this model by rural/municipalities will mark the successful devolution of land administration at the local government level.`

5. Phase of Model Development and Scaling

First mover: In agreement with Belaka Municipality of Udayapur district, federal MoLCPA and a development partner, CSRC is working on a practical tool and procedure for identification, verification and recording of landless and unplanned settlers; and the land they are tilling and residing in. For this purpose CSRC and the collaborating partners are drawing on an effective and efficient global tool known as "fit for purpose land administration". By incorporating the informed learning from Belaka Municipality, the aim is to develop guidelines for adoption of this model and share it with rural Municipalities for use as a resource material for improving land administration.

6. Value Proposition

- By paving the way for affordable and efficient land administration, this model will ultimately contribute to protecting the land rights of a huge population living in informality with unsecured land tenure and in constant fear of eviction.
- This model will significantly contribute to translating into reality the National Land Policy, which envisions "sustainable land management, prosperous life and development".
- Recognizing the centrality of land tenure in fighting climate change, this model has created an opportunity for the local governments to take into consideration the land–climate change nexus while formulating land use plan. The authentic data collected as part of this model will provide the basis for incorporating climate considerations into land administration and land use laws and plans.
- Land administration has now been delegated to the 753 local government tiers requiring

them to effectively deliver on this mandate. This model will facilitate productive collaboration among the local governments, CSOs with relevant expertise, and development partners in making land survey, registry and land administration affordable, effective, and responsive.

- This model promotes active engagement of the target community in its implementation. Target community members will participate in identification of landless and unplanned settlers, and collection of data and information on the status of lands they are residing in and cultivating etc. The participatory process will ensure the target community's ownership of the process and its outcome.
- This process ensures women's access to formal land entitlement.
- Besides accessing landless to formal land, local government will also have a formal data and revenue from the land.
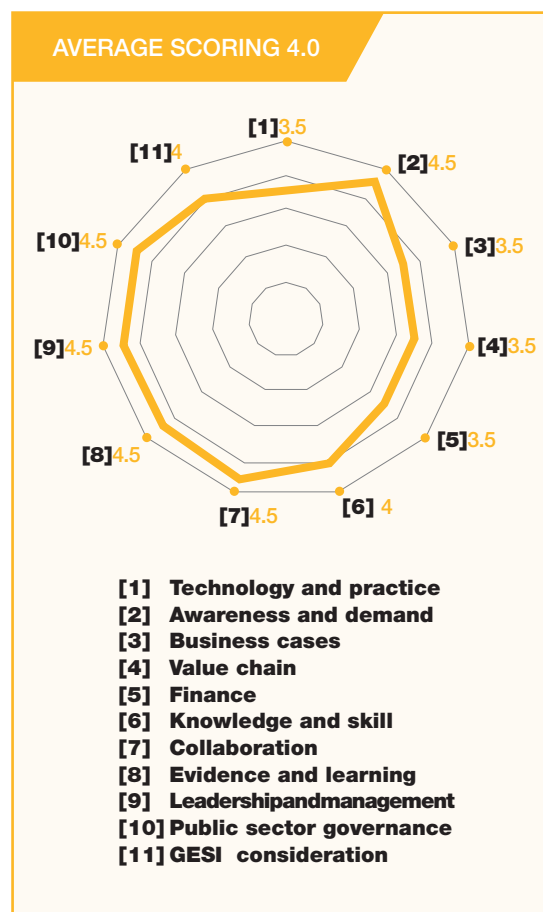
7. Cost and Duration of Model

The cost of implementing this model in the inception phase has been estimated at NPR 1,000,000 for each ward. However, the cost might go down while replicating it in other wards of the same rural/municipality if a cut down on management cost becomes possible. It takes about one and a half months to complete the task in a single ward. The total cost breakdown is as follows:

- Data collection: **NPR 500,000**
- Data entry, analysis and
  purchase of satellite map: **NPR 300,000**
- Management cost: **NPR 200,000**

8. Model Screening Process and Result Summary

CSRC shared and discussed with allies and boundary partners engaged in designing this model the 11 ingredients prescribed by CIM-MYT PPP Lab for screeing models. The discus-

sion resulted in the following scoring on a 1 – 5 scale. As per the guidelines, for a model to be scalable its overall score should be greater than

AVERAGE SCORING 4.0

[1] 3.5
[2] 4.5
[3] 3.5
[4] 3.5
[5] 3.5
[6] 4
[7] 4.5
[8] 4.5
[9] 4.5
[10] 4.5
[11] 4

[1]   **Technology and practice**
[2]   **Awareness and demand**
[3]   **Business cases**
[4]   **Value chain**
[5]   **Finance**
[6]   **Knowledge and skill**
[7]   **Collaboration**
[8]   **Evidence and learning**
[9]   **Leadershipandmanagement**
[10] **Public sector governance**
[11] **GESI consideration**

3. The average scoring of this model stands at 4.05 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

National Land Use Act, 2019 has assigned three tiers of government with formation of councils to implement the act. The local governments are required to form implementation committees under the leadership of the heads of the local governments. The provincial and local governments are also required to formulate land use laws, ward level land use plans, raise public awareness about conservation and sustainable

use of land, identify community land, and use them to the benefit of the communities.

The eighth amendment to Land Act 1964 opens up the opportunity to provide land to landless and unplanned settlers. As per the 8th amendment, tenant farmers will be provided land ownership certificates and unregistered land will be registered on time. Further, the act has also mandated the government to provide land (once for the last time) to landless *Dalits* across the country.

Local Government Operation Act 2018 has mandated rural/municipalities to address issues related to landless and unplanned settlers such as their identification and recording, and housing and livelihoods opportunities for them. Land management including formulation and implementation of land use policy, plan and programme, planned settlement, land development etc also fall within the jurisdiction of rural/municipalities.

10. Boundary Partners to be Considered

- **The Provincial Ministry of Land Management, Agriculture and Cooperatives (MoLMAC)**: Although this model will be put into practice at rural/municipality level, it is crucial that MoLMAC is engaged in the process and lobbied for formulating law with provision for adoption and scaling of this model.
- **National Land Rights Forum (NLRF)**: NLRF will have a crucial role in sensitizing the land rights forum at different levels to the importance of scaling this model, and mobilizing them in surveys to be conducted for identifying and verifying landless and unplanned settlers, and other related processes.
- **National Association of Rural Municipality in Nepal** (NARMIN) and **Municipality Association of Nepal** (MuAN) will work as allies in scaling this model.
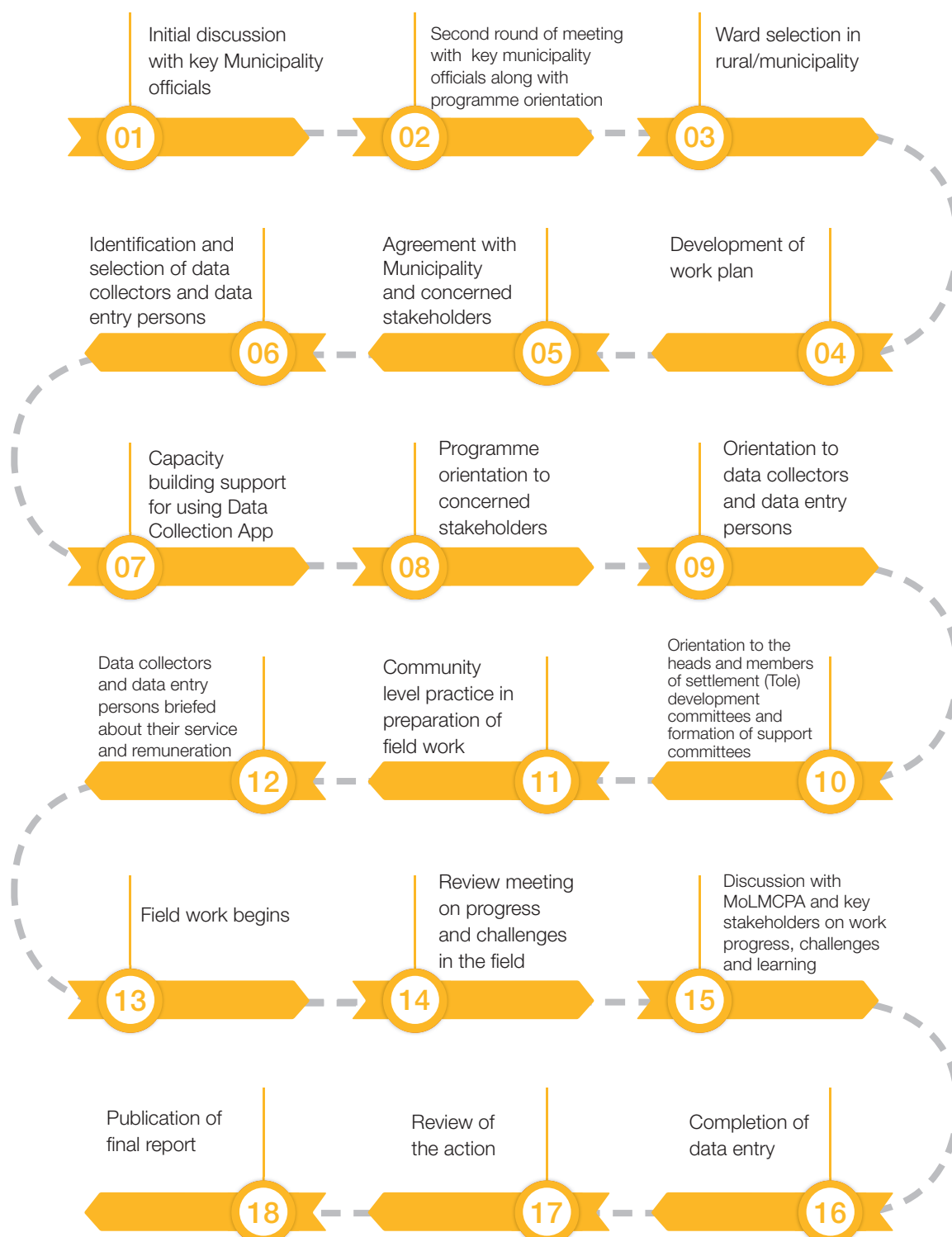
11. Model's Link with Climate Resilience

- This model contributes to the Land Use Policy's aim to mitigate the impact of climate change through conservation of government, public and community owned lands.
- In its latest report 'climate change and land', the Intergovernmental Panel on Climate Change (IPCC) has acknowledged that "land tenure is a key dimension in any discussion of land-climate interactions". This model emphasizes land ownership for an estimated 1.3 million families holding informal tenure as secure land tenure is crucial for enhancing resilience to climate change through mitigation and adaptation actions. If they legally own land, they feel secure enough to make long-term investment on land and efforts to manage forests and other natural resources.

12. Model's Contribution to Promoting Inclusion and Governance

- **Focus on the most vulnerable group:** This model contributes in promoting equity by protecting and enhancing rights of impact population especially women, poor, landless and unplanned settlers.
- **Multi-stakeholder Participation:** This model facilitates constructive engagement of multiple stakeholders - the local, provincial and federal governments, land rights network, farmers' groups and development partners. It makes the process of designing and roll out of the model inclusive and consensus oriented.
- **Increased transparency and accountability**: Engagement of government and non-government stakeholders including the affected (target) communities in the roll out of this model contributes to promoting transparency in the process and consensus based decision making. This provides space for the rights holders and other actors to demand implementation of the process and decisions as agreed and hold duty bearers to be accountable.

13. Model Implementation Approach

01 Initial discussion with key Municipality officials

02 Second round of meeting with key municipality officials along with programme orientation

03 Ward selection in rural/municipality

04 Development of work plan

05 Agreement with Municipality and concerned stakeholders

06 Identification and selection of data collectors and data entry persons

07 Capacity building support for using Data Collection App

08 Programme orientation to concerned stakeholders

09 Orientation to data collectors and data entry persons

10 Orientation to the heads and members of settlement (Tole) development committees and formation of support committees

11 Community level practice in preparation of field work

12 Data collectors and data entry persons briefed about their service and remuneration

13 Field work begins

14 Review meeting on progress and challenges in the field

15 Discussion with MoLMCPA and key stakeholders on work progress, challenges and learning

16 Completion of data entry

17 Review of the action

18 Publication of final report

14. Model Scaling Approach

a) Development of guidelines for putting this model into practice and discussion with local government and other key stakeholders on its effective dissemination and implementation.

b) Development of detailed plan for application of fit for purpose land administration in close coordination with local governments and key stakeholders.

c) Making sure that this model is incorporated in local governments' policies and programmes.

d) Learning sharing with NARMIN and MuAN, and engaging them in bringing all rural/municipalities on board.

e) Sharing achievements and learning from the model piloting phase with MoLMAC and lobbying the ministry for scaling up and scaling out this model.

f) Recording and dissemination of achievements and learning from the implementation of this model.

15. Strategy for Scaling

a) The guidelines for putting this model into practice will be shared with all local governments through MoLMCPA prompting them to formulate land related policies and laws using the guidelines as reference material.

b) Development of user-friendly computer software for collection, analysis and consolidation of data. Capacity building support will be provided to local governments to use the software.

c) Where possible, CSRC will facilitate interactions between rural/municipalities that have already piloted this model and rural/municipalities that can use the learning as inspiration to follow suit.

d) Preparation of resource persons to support smooth and effective implementation, and scaling of this model.

e) Mobilizing NLRF and NFGF networks in scaling up the model across the country.

15.1 Strength of Model

a) Local governments' keen interest in improving land administration and willingness to lead the improvement process.

b) With the land use act and land act (eighth amendment) currently in place the policy environment is favorable for this model

c) Decision to develop and scale up and scale out this model has been taken based on a written agreement with the MoLMCPA.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Despite the realization among the governments at all level, there is a need for effective and efficient land administration, there has been a delay in formulation of required laws at local government level, especially at province level.	Interactions with responsible provincial government officials underlining the need for provincial level law for the local governments to refer to while developing laws at their levels.		
2. Despite the availability of clear guidelines consisting of practical tool and process, local governments might hesitate to adopt the model fearing complications it might entail.	Seeking MoLMCPA's initiative to share the guidelines for scaling the model with the local governments and encouraging them to initiate work on adopting the model pledging necessary technical back up.	CSRC, NLRF, and land rights activists while pledging all possible support they can provide, launch advocacy for local government's prompt actions.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include CSRC, NLRF, MoLMCPA, rural/ municipalities and federal government collaborating in the inception phase; and other rural/ municipalities willing to scale out the model.

Enabling factors: Government has provisioned affirmative clauses to increase women's entitlement in land such as tax exemption on land registration in name of women and nominal charges for preparing Joint Land Certificate.

Likewise, the huge demand in favour of resolving long drawn out issues of informal land tenure of landless and unplanned settlers is also a key factor. In the federal context, local government has also exclusive rights to resolve such issues.

Along with these, the long back experience and recognition of CSRC and NLRF in the land and agrarian rights issues will enable in creating enabling environment for collaboration and cooperation among actors.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Agreements is in place with rural/municipalities on pursuing fit for purpose land administration.		
Local governments' policies and programmes include budgets for programmes focused on wellbeing of landless and unplanned settlers.		
Recording of data and information related to community and household level land and agriculture completed.		
Participation and influence of community people in development of local government's policy and planning processes.		
Like to See (Active engagement)		
Report on community and household level land data/information on land and agriculture endorsed by the local government. (number of rural/municipalities adopting this model)		
Climate Resilient Land Use and Agriculture Development Plan formulated at local government level based on the collected data and information		
Love to See (Deep transformation)		
Women, poor, *Dalits* who are Landless and unplanned settlers receive land ownership certificates which will enhance adaptive capacity of these impact population.		
Local government's land act includes provision for joint land ownership focusing on increasing women's land entitlement.		

[05]

Formulation of Participatory Land Use Plan at Municipal Level

▶ Community members involved in participatory context and stakeholder mapping. Chaudandigadhi Municipality, Udayapur.

[05] FORMULATION OF PARTICIPATORY LAND USE PLAN AT MUNICIPAL LEVEL

Rationale

Apart from its productive value linked to livelihoods and food security, land ownership for the marginalized communities in Nepal often becomes the determining factor between a life with dignity and security, and exposure to climate related and other vulnerabilities. Ironically, however, according to data available from Central Bureau of Statistics, the richest 5% own 37% of the total cultivable land leaving only 15% to be shared among the remaining 47% households. Over an estimated 30% of cultivable land is left fallow and landlessness is as high as 29 % which has deprived a huge population of their socio-economic rights.

This state of affairs persists despite the constitutional guarantee for land rights for all including the most vulnerable groups and several existing legal and policy provisions that benefit these groups. Currently, as mandated by the federal constitution the local governments are in a position to make and implement policies and laws with land act being one of them. Against this backdrop Community Self-Reliance Centre (CSRC) began advocating to governments at all three tiers to put the most vulnerable and marginalized people at the center of land use plan.

Why is this model unique?

This model aims at translating the devolution of policy and law turning authority to the local government level into reality. Most importantly it provides rural municipalities the opportunity to mark a departure from conventional exclusive approach to making laws which most often fail to reflect the realities of the citizens especially that of most vulnerable and marginalized communities. The model helps the local governments adopt and institutionalize inclusive and participatory process of developing and implementing laws which will enjoy the citizen's ownership and serve the people as they are expected to.

This is participatory women and marginalized led process. This process takes need and interests of impact population in account which will be reflected in land use plan and policies related to land and livelihoods at local level. Based on this land use plan; local government sets priorities targeting women and marginalized people.

1. Name of the Model

Formulation of Participatory Land Use Plan at Municipal Level

2. Implementing Partner Leading Development and Scaling of the Model

Led by CSRC the development of this model will as "first mover" work in bringing Rural/Municipalities on board. Ultimately, the local governments will take the wheel of scaling it up and out.

3. Target Community of the Model

Landless and unplanned settlers, land-poor women and tenants, particularly **Dalits, Haliya, Haruwa, Charuwa** and **freed Kamaiya**.

4. Systems that the Model Aims to Change

This model aims to have effective and responsive land use plan formulated and implemented at the municipal level. It puts an end to conventional approach to law and policy making, and helps the local governments institutionalize participatory policy and law making with a focus on the most vulnerable and marginalized people.

Traditionally, land use planning process used to be often men led and non-participatory. To break this stereotype, participatory land use plan is carried out which aims to identify and address needs and concerns of women. Through such participatory process and increased participation of women with duty bearers will ultimately ensure women's decision making roles in planning and policy making process.

4.1 Type of System Change

Successful scaling of this model will contribute to improved land governance at the local government level, taking into account the climate related and other vulnerabilities of the target community. Participatory process of making land use plan will provide the target community members the opportunity to put across the land issues affecting them, have a say in the process; and get their rights, interests and aspirations reflected in plan. They will own the plan formulated through such process and fully participate in its effective implementation.

5. Phase of Model Development and Scaling

CSRC has been advocating for participatory law making at government level since 2013 when it, for the first time, piloted community-led by-law making which brought out inspiring results and learning. Building on the learning, it piloted this model in collaboration with Belaka municipality of Udayapur and Dhangadhimai municipality of Siraha district generating promising achievements and learning which prove the scalability of the model. As of now, this model is at its "first mover" stage from scaling point of view.

6. Value Proposition

- Success of this model will prove a ground breaking initiative as it will lead policy or law making to no longer being an exclusive domain of only those in positions of power. Ordinary citizens, especially the highly vulnerable ones, will have a space to demand and defend their rights and interests in the process of formulating the land use plan.
- Effective implementation of the plan will significantly improve land administration and land use. This will ensure the target community's access to land for housing and cultivation which will protect and promote their right to productive resources and government services that they have been deprived of due to a lack of land ownership.
- Recognizing the centrality of land tenure in fighting climate change, this model has created an opportunity for the local government to take into consideration the land–climate change nexus while formulating land use plan.
- This model will pave the way for target community members to access land for leasehold farming and thereby an opportunity to improve their livelihood. It will also promote and protect the property right of women through joint land ownership which facilitates their access to resources for enterprising activities.
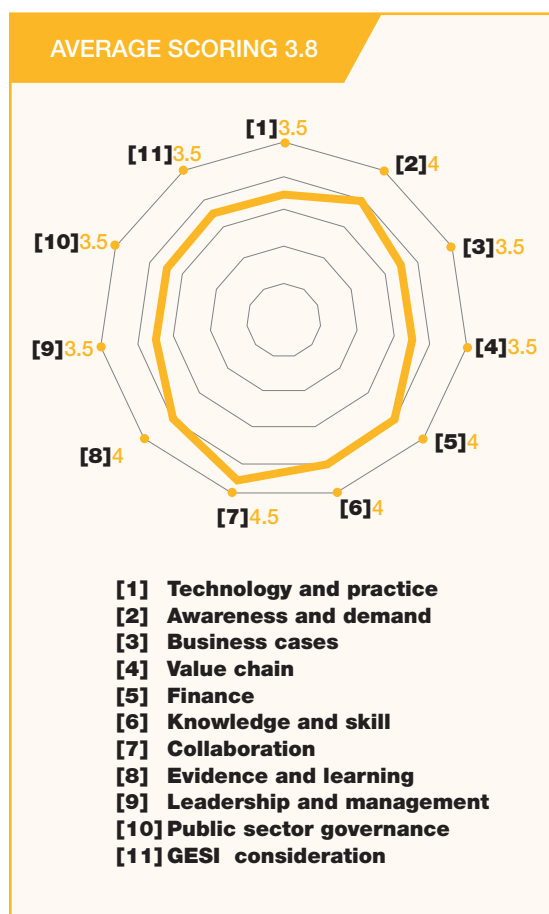
Federal level land use plan has already been endorsed by the parliament. This paves the way for local governments to develop their own municipal level land use plans. CARE, CSRC and MoLMCPA have entered into a joint MoU to develop model guideline on land use as to localize the federal land use plan.

7. Cost and Duration of Model

Based on the CARE Samarthya project practice, this is a very low cost model which can be replicated with the investment of only about NPR 100,000. Based on the piloting phase experience, application of this model in a ward takes about a month.

8. Model Screening Process and Result Summary

CSRC shared and discussed with its allies and boundary partners engaged in designing this model all 11 ingredients prescribed by CIMMYT PPP Lab for screeing models which says for a model to be scalable its overall score should be higher than 3. The discussion resulted in the following scoring for each ingredient on a 1 – 5 scale. The average total scoring of this model stands at 3.8.

AVERAGE SCORING 3.8

[1]3.5 [2]4 [3]3.5 [4]3.5 [5]4 [6]4 [7]4.5 [8]4 [9]3.5 [10]3.5 [11]3.5

[1] Technology and practice
[2] Awareness and demand
[3] Business cases
[4] Value chain
[5] Finance
[6] Knowledge and skill
[7] Collaboration
[8] Evidence and learning
[9] Leadership and management
[10] Public sector governance
[11] GESI consideration

9. Government Policy Supporting Model Development and Scaling

The constitution of Nepal has mandated the rural/municipalities to formulate and implement land use policy, plan, and programme; keep land records based on classification of land; formulate and implement planned settlement programme; regulate unplanned settlement; identify and keep record of landless squatters; and manage their settlement and livelihoods. They are also mandated to implement provincial policy, law, standards and plans concerning rehabilitation of landless *Dalit, freed Kamaiya, Haliya, Haruwa and Charuwa*; and leasing out of fallow or minimally used land.

National Land Use Act 2019 has assigned the three tiers of government with formation of councils to implement the act. The provincial and local governments are required to formulate their own land use laws and ward level land use plans based on the act, raise public awareness about conservation and sustainable use of land, identify community land; and use them to the benefit of the communities.

The eighth amendment to Land Act 1964 opens up the opportunity to provide land to landless and unplanned settlers. As per the 8th amendment to the land act, tenant farmers will be provided land ownership certificates and unregistered land will be registered on time. The act has also mandated the government to provide land (once for the last time) to landless *Dalits* across the country.

Local Government Operation Act 2018 has mandated rural/municipalities to address issues related to landless and unplanned settlers such as their identification and documentation; and housing and livelihoods opportunities for them. Land management including formulation and implementation of land use policy, plan and programme, planned settlement, land development etc also fall within the jurisdiction of Rural/Municipalities.

10. Boundary Partners to be considered

The Federal Ministry of Land Management, Cooperatives and Poverty Alleviation (MoLCPA): It is mandated to formulate federal level land policy, laws, standards and regulation; and facilitate the formulation and implementation of provincial and municipal level laws on land in conformity with the federal policy and law.

The Provincial Ministry of Land Management, Agriculture and Cooperatives (MoLMAC): Its mandate includes development of land use plan covering, among other areas, identification and documentation of landless and unplanned settlers; management of their settlement and livelihoods; and rehabilitation of landless *Dalit*, freed Kamaiya, Haliya, Haruwa and Charuwa; leasing out of fallow land; safe settlement and land integration. When/if municipal governments develop the act before the provincial governments do, the latter should make sure the provincial acts do not contravene the ones developed by municipal governments. Therefore, coordination with provincial governments is crucial.

Local Government (Rural/municipalities): It is ultimately the rural/municipalities which will adopt and scale up and scale out this model. They have the mandate to formulate and implement land use policy, plan, and programme, keep land records based on classification; and undertake other land administration functions. Adhering to the standards set by federal and provincial governments, they are to implement planned settlement programme, regulate unplanned settlement, identify and keep record of landless settlers, and manage their settlement and livelihoods. Rehabilitation of landless *Dalit, freed Kamaiya, Haliya, Haruwa and Charuwa;* and implementation of policy, law, standards and plan regarding leasing out of fallow land, safe settlement and land integration also fall within their mandate.

National Land Right Forum (NLRF): NLRF will have a crucial role to play in sensitizing the land rights forums at different levels for scaling this model. They will actively engage in advocacy and lobby work in their respective rural/municipalities demanding participatory formulation and implementation of land use plan and its institutionalization.

Likewise NLRF will engage with federal, provincial and local level governments in policy discussions and dialogues to ensure land use plan and guidelines are having provisions to increase women's land entitlement, prioritizing women in livelihood and entrepreneurship opportunities, women taking lead in natural resource management and utilization and regular consultation between women leaders and local government.

11. Model's Link with Climate Resilience

This model contributes to the Land Use Policy's aim to mitigating the impact of climate change through contribution to conservation of government, public and community owned lands.

In its latest report 'climate change and land', the Intergovernmental Panel on Climate Change (IPCC) has acknowledged that "land tenure is a key dimension in any discussion of land-climate interactions". This model emphasizes land ownership for an estimated 1.3 million families holding informal tenure[i] as secure land tenure is crucial for enhancing resilience to climate change through mitigation and adaptation actions. If they legally own land they feel secure to make long-term investment on land and manage forests and other natural resources. This will ultimately enhance the adaptive capacity of impact group.

A 'Model Land Use Guideline' has been developed by MoLMCPA in collaboration with CARE Samarthya Project. This guideline has primarily focused on building climate change resilience of the impact group. This will help the local governments to incorporate climate resilience considerations in the land use plans.

12. Model's Contribution to Promoting Inclusion and Governance

Selection of the right target group: This model puts at its center the most vulnerable and marginalized communities such as landless and unplanned settlers, landless, land-poor, women and tenants including *Dalits; Haliya, Haruwa, Charuwa, Freed Kamaiya and Kamalaris.*

Impact groups' direct participation: Informed by the suggestions of landless and unplanned squatters in the design phase, this model en-
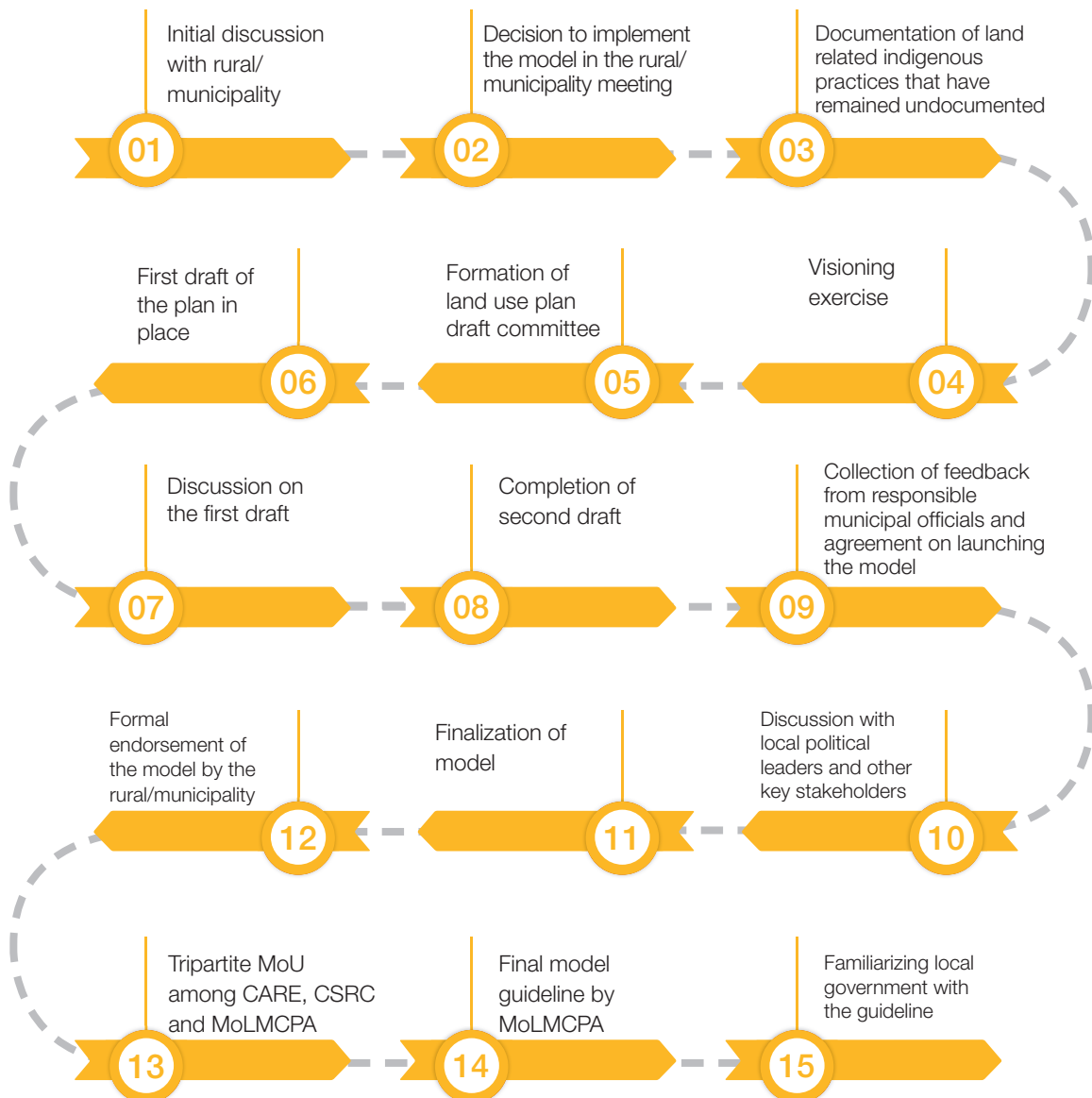
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[i] *Fit-for-purpose land administration strategy: an innovative approach to implement land policies in Nepal- 2019*

sures their active participation in the process of formulating and implementing land use plan. They will avail of this opportunity to speak up for equitable distribution of land.

Joint land ownership: The model emphasizes the provision for Joint land ownership ensuring women's property rights through land ownership which facilitates their access to productive resources and government services and facilities.

Bottom-up law making process: This model is an attempt to promote bottom-up policy and planning process bringing together the target community and the local governments. This creates an opportunity to make formulation and implementation of the land use plan inclusive, consensus-based and responsive. Such a process will significantly contribute to enhancing accountability and transparency in local governance.

13. Model Implementation Approach

01 Initial discussion with rural/ municipality

02 Decision to implement the model in the rural/ municipality meeting

03 Documentation of land related indigenous practices that have remained undocumented

04 Visioning exercise

05 Formation of land use plan draft committee

06 First draft of the plan in place

07 Discussion on the first draft

08 Completion of second draft

09 Collection of feedback from responsible municipal officials and agreement on launching the model

10 Discussion with local political leaders and other key stakeholders

11 Finalization of model

12 Formal endorsement of the model by the rural/municipality

13 Tripartite MoU among CARE, CSRC and MoLMCPA

14 Final model guideline by MoLMCPA

15 Familiarizing local government with the guideline

14. Model Scaling Approach

- CSRC will familiarize rural/municipality officials with the model guideline and help them make sense of the model and learn what it takes to adopt it. Improved rapport with them will lead to further discussion and decision on scaling the model.
- Keeping the provincial government informed about the initiatives at municipal level prompting them to follow suit or at least to make sure that if some Municipalities formulate provincial level land use plan, it does not run counter to the municipal level plan.
- Raising the target group's awareness of the importance of this model and their direct participation in the land use plan making process.

15. Strategies for Scaling

- CSRC will hold detailed discussions with National Association of Rural Municipalities in Nepal (NARMIN) and Municipality Association Nepal (MuAN) on the concept of formulating participatory land use plan. It will also brief them about the model's long term benefits to the citizens as well as the country, and secure their cooperation in promoting discussion on this participatory and inclusive plan making process at the entire local government level.
- Holding policy discussions with the mayors and Rural Municipality chairpersons on the model; sharing with them evidences of promising results from this model's piloting

phase and CSRC's years of work in this area; and pledging technical support for adoption of the model.
- Holding similar discussions with land rights forums and land rights activists at all levels and ratcheting up advocacy for participatory land use plan formulation at all levels.
- CSRC will facilitate interactions between the rural/municipalities where this model has already been piloted and the other rural/municipalities for using the results and learning to inspire the latter to follow suit.
- Documentation and dissemination of achievements and learning from the implementation of this model.
- Mobilizing NLRF and NFGF networks in scaling up the model across the country.

15.1 Strength of Model

1. This is an opportunity to initiate and institutionalize participatory law making and planning practice.
2. As it is the responsibility of local governments to implement several of the policies formulated to ensure citizen's constitutionally guaranteed fundamental rights, adoption of this model would promote their accountability to the citizens.
3. With the land use policy and act and land act (eighth amendment) currently in place the policy environment is favorable for this model.
4. Two municipalities are already in the process of adopting this model with drafts of their land use plan nearing completion.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Despite the realization among the governments at all levels of the need for effective, efficient and responsive land administration, there has been a delay in formulation of required laws and plans at local government level.	Interactions with responsible provincial government officials underlining the need for provincial level law for the local government to refer to while developing laws, policies and plans at their level. Regular interactions with responsible municipal officials on the gravity of land issues and their multi-pronged effect on all sectors. Reminding them repeatedly of their mandates and their accountability to the citizens, especially those most affected by unresolved land issues.		
2. Even if the municipal level land use plans are developed they might remain unimplemented.		Launch constructive and responsible advocacy building pressure on local governments to honestly and effectively implement the plan.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include CSRC, NLRF, NFGF, MoLMC-PA, rural/municipalities, federal government collaborating in the pilot phase; and the other rural/municipalities willing to scale out the model.

Enabling factors: Favorable policy environment; popular opinion in favor of resolving long drawn out issues of informal land tenure and landless and unplanned settlers' right to land; collaboration and partnership with government; and evidences that CSRC has generated from the model's pilot phase and its years of work in the areas of land rights.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Rural/municipalities prepare and endorse their land use plans using model guideline as reference		
Endorsed municipal level land use plan prioritize climate resilience and joint land ownership		
Like to See (Active engagement)		
Municipal level draft land use plan publicized for public awareness		
Plans and budget in place for implementation of land use plan		
Love to See (Deep transformation)		
Landless and unplanned settlers receiving land ownership certificates have enhanced adaptive capacity		
Landless, unplanned settlers, land poor couples obtain joint land ownership		
Landless, unplanned settlers, land poor and women farmers have access to land for leasehold farming		

[06]

**Community Based Land
Management Practice**

▶ Landless women after receiving land entitlement certificate. Chaudandigadi Municipality, Udayapur

▶ Participants of community based land management training. Bhumi Ghar, Thimura Chitwan

[06] COMMUNITY BASED LAND MANAGEMENT PRACTICE

Rationale

Apart from its value linked to livelihoods and food security, land ownership for the marginalized communities in Nepal often becomes the determining factor between a life with dignity and security, and exposure to climatic and other vulnerabilities. Ironically, 25% of the total arable land and settlements (about 10 million physical parcels) are outside the formal cadastre and about 1.3 million families (out of total 5.3 million in Nepal) have informal tenure on land . According to Central Bureau of Statistics' agriculture census (2001), 26% of the population - mostly members of the *Dalit* and other Terai communities - are landless and generally occupy a piece of informal holding for shelter fearing eviction anytime. Because of unsecured tenure, the settlers hesitate to invest on the land and improve its productivity. Land under informal tenure is, thus, causing huge loss to economy.

As the fit-for-purpose land administration strategy - an innovative approach to implement land policies in Nepal-2019 - puts it unrecognized land tenure may further restrict the settlers from getting any compensation and government grants and benefits in case of any climate-induced or other disasters such as earthquake and floods as was witnessed in the post 2015 earthquake reconstruction and recovery. The provincial and local governments are, currently, in a position to make and implement various policies and laws with land act being one of them. Against this backdrop National Land Rights Forum (NLRF) has developed this model to contribute to enforcement of law at local government level institutionalizing effective, efficient and responsive community based land management practice.

Why is this model unique?

Implementation of this model helps local government to protect and promote the most vulnerable group's (landless and land poor farmers, squatters, woman farmers) fundamental rights by ensuring their land rights, access to safe housing and livelihood opportunity. Instead of highlighting problems related to land management and their effect on the most marginalized communities, and simply demanding that the local government improve the land management system, this model provides solution to the problems. It also provides the local government evidenced recommendations along with tested process for their implementation. The process calls for local government's leadership role and the civil society's full support for introducing and institutionalizing community-based land management practice at the local government level.

1. Name of the Model
Community Based Land Management Practice

2. Partners Leading Development and Scaling of the Model
NLRF is currently taking on the lead role. It is the rural/municipalities which will ultimately lead the institutionalization of community-based land management practice by preparing municipal level land act.

3. Target Community of the Model
Landless farmers, women and men agricultural tenants who are deprived of safe houses and livelihood opportunities, highly vulnerable to different disasters, and socially discriminated (eg: Landless and land-poor farmer squatters, *Haruwa, Charuwa freed Haliya, Dalits* etc)

4. Systems that the Model Aims to Change
Practice: Practice of collecting realistic data and information of land having informal land tenure through community participation at the local government level.

Policy: Enforcement of local government level land act reflecting the rights and interests of the target community for sustainable management of land.

4.1 Type of System Change
Community-based land management model aims to change government land management system.

5. Phase of Model Development and Scaling
Inception phase: This model has been successfully piloted in Chaudandigadhai -6 in Udayapur, Molung-1 in Okhaldhunga; and Dhangadhimai -1 of Siraha. In each ward, detailed household survey (HH) has been completed generating authentic data on the status of lands the HHs are occupying, their sources of income, the crops they are growing, investment they have made in the land, houses and crops, the HHs' disaster vulnerability etc. Based on the survey findings reports have been developed and submitted to the respective rural/municipalities with practical recommendations for promoting community-based land management reflecting the rights and interests of the most marginalized and vulnerable groups. The model was piloted in agreement with the rural/municipalities, which have now accepted the data and pledged to make it the basis for developing policies, laws and plans on land management.

6. Value Proposition
- Recognizing the centrality of land tenure in fighting climate change, this model has created an opportunity for the local government to take into consideration the land–climate change nexus while formulating land act and land use plan.
- The local government will initiate development and implementation of landless community-centric plan and budget based on the land related information.
- This practice enhances the representation of target community in policy formulation and planning process of local government.
- An evidence based campaign led by target community helps to accelerate the process and enforcement of local government plan and policy on community-based land management.

7. Cost and Duration of Model
This cost of implementing this model has been estimated at NPR 750,000 for each ward with one thousand households, broadly allocated as follows:
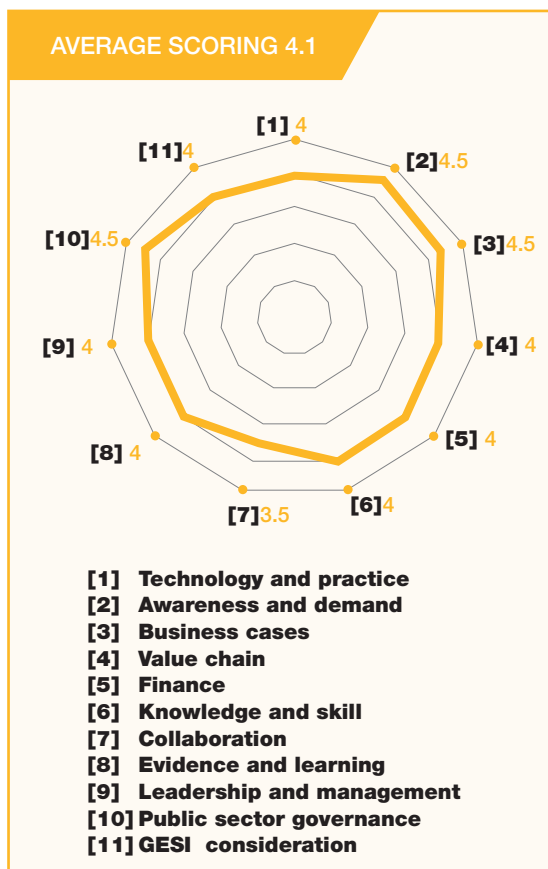
- Collection of data and information on land and the target community (training, data collection format printing, data/information collection, report preparation, discussions at community, ward and rural/municipality levels) **NPR 300,000**

- Drafting community-based land management policy (preparation of policy draft, and discussions at ward and rural/municipality levels) **NPR 150,000**

- Practicing land use planning (development of settlement level land use plan, stakeholder consultation, rural/municipality level meetings and contribution to planning) **NPR 300,000**

The above cost is for the inception phase only. The cost may go down with local government adopting, institutionalizing and scaling out the model widely.

8. Model Screening Process and Result Summary

NLRF shared and discussed with its allies and boundary partners engaged in designing this model each of the 11 ingredients prescribed by

AVERAGE SCORING 4.1

[1] 4
[2] 4.5
[3] 4.5
[4] 4
[5] 4
[6] 4
[7] 3.5
[8] 4
[9] 4
[10] 4.5
[11] 4

[1] **Technology and practice**
[2] **Awareness and demand**
[3] **Business cases**
[4] **Value chain**
[5] **Finance**
[6] **Knowledge and skill**
[7] **Collaboration**
[8] **Evidence and learning**
[9] **Leadership and management**
[10] **Public sector governance**
[11] **GESI consideration**

CIMMYT PPP Lab which requires a modesl to score above 3 to become scalable. The discussion resulted in the following scoring on a 1 – 5 scale. The total average scoring of this model stands at 4.1 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

The eighth amendment of Land Act 1964: The 8th amendment opens up the opportunity to provide land to landless and unplanned settlers as per which, the tenant farmers will be provided land ownership certificates and unregistered land will be registered in a timely manner. Further the act has also ensured that the government should provide land (once for the last time) to landless *Dalits* across the country.

Constitution of Nepal 2015: The constitution's Article 51 (e) guarantees provisions for, among other things, land management by pursuing land use policies, proper use of land while regulating and managing lands on the basis of, inter alia, productivity, nature of lands and ecological balance. Article 51 (j) provides for identification of freed bonded labours, kamlari, Harawa, Charawa, tillers, landless, squatters and their rehabilitation by providing housing, housing plot for residence; and cultivable land or employment for their livelihoods.

Local Government Operation Act 2018 has mandated rural/municipalities to address issues of landless and unplanned settlers such as their identification and documentation, and housing and livelihoods opportunities for them. Land management, formulation and implementation of local level land use policy, plan and programme, development of programmes for planned settlement etc also fall within the jurisdiction of rural/municipalities.

Right to Housing Act 2018 guarantees every citizen's right to housing without any discrimination based on caste, ethnicity, gender and economic condition, among others.

The Right to Food and Food Sovereignty Act 2018 guarantees every citizen's right to food and food security, regular and unrestrained access to

adequate nutritious and quality food to be safe from being in danger of life from scarcity of food.

Land Use Act 2019 has mandated local governments to prepare land use maps covering locations highly vulnerable to natural disaster. Federal, provincial and local governments are required to prepare land use plan by studying context/status of land, types of land, population growth rate, land requirement for food production and settlement, increment in demand of land for economic and infrastructure development.

10. Boundary Partners to be Considered

- **The Federal Ministry of Land Management, Cooperatives and Poverty Alleviation (MoLMCPA):** It is mandated to formulate federal level land policy, laws, standards regulation and facilitate the formulation and implementation of provincial and municipal level laws on land in conformity with the federal policy and law.
- **The Provincial Ministry of Land Management, Agriculture and Cooperatives (MoLMAC):** Although this model will be put into practice at rural/municipality level, it is crucial that MoLMAC is engaged in the process and lobbied for formulating law with provision for adoption and scaling of this model.
- **National Land Rights Forum (NLRF):** NLRF will have a crucial role in sensitizing the land rights forum at different levels to the importance of scaling this model, and mobilizing them in surveys to be conducted for identifying and vetting of landless and unplanned settlers, and other related processes.
- National Association of Rural Municipality in Nepal **(NARMIN)** and Municipality Association Nepal **(MuAN)** will work as allies in scaling this model.

11. Model's Link with Climate Resilience

- In its latest report 'Climate Change and Land', the Intergovernmental Panel on Climate Change (IPCC) acknowledges that "land tenure is a key dimension in any discussion of land-climate interactions". This model emphasizes land ownership for an estimated 1.3 million families holding informal tenure as secure land tenure is crucial for enhancing resilience to climate change through mitigation and adaptation actions.
- This model contributes to the development and implementation of government policies and plans aimed at minimizing the impacts of climate change. This model contributes to inclusion of measures to address the issues affecting the communities deprived of their right to land, and plans for building community resilience to climate change in local government programmes.
- As this model advocates for proper land use and its management for productive use of land and natural resources.

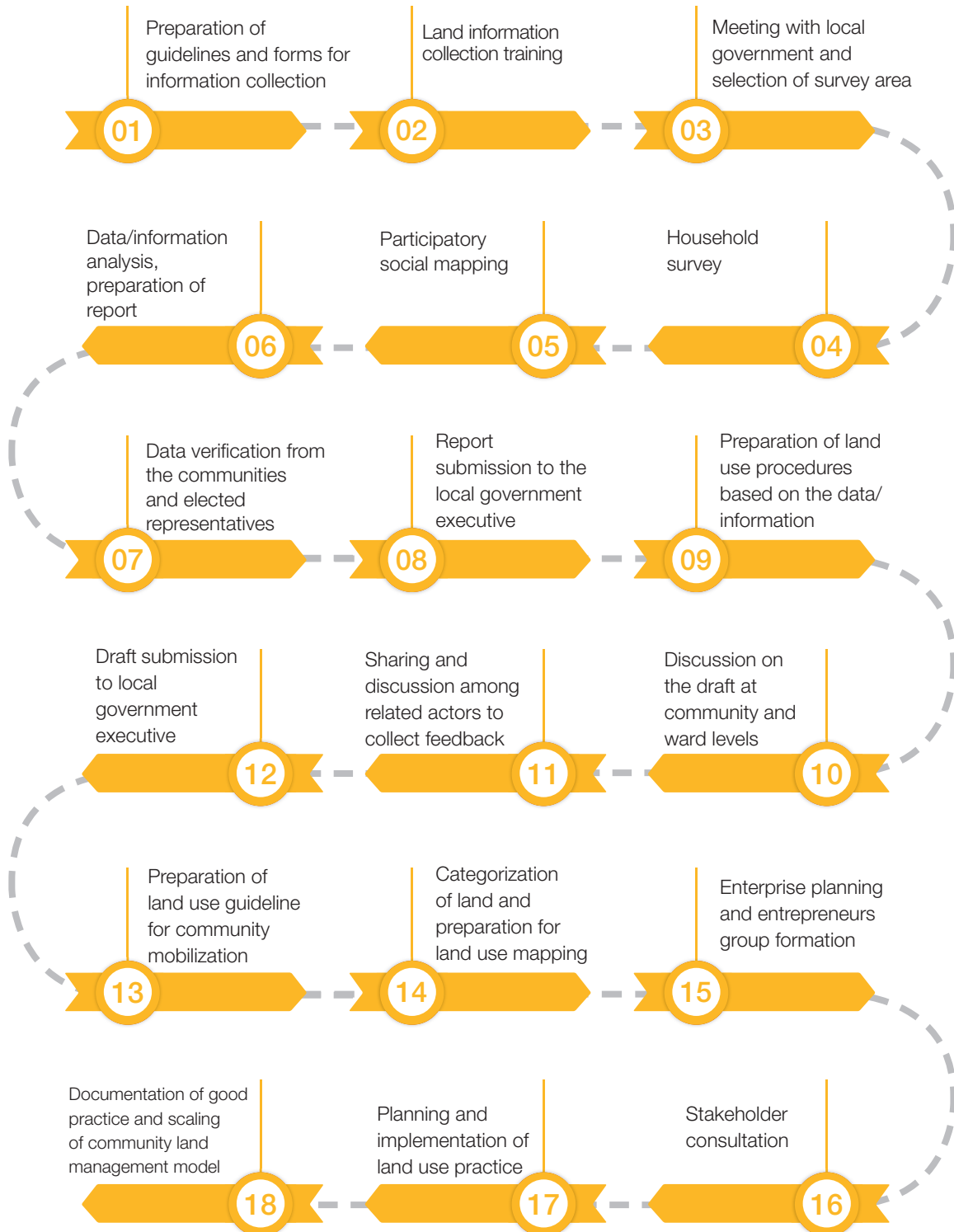## 12. Model's Contribution to Promoting Inclusion and Governance

Selection of the right impacts group: This model puts at its centre the most vulnerable and marginalized communities such as landless people, squatters, freed *Haliya, Haruwa, Charuwa, Dalits*, etc.

Multi-stakeholder engagement: This model is designed to promote engagement of multiple stakeholders including the local, provincial and federal governments; and NLRF structures at different levels in the adoption and scaling of this model.

Impact groups' participation in policy making process: As part of community-based land management practice, the target community will have a say in local government level policy making, planning and budgeting processes.

Reflection of target community's rights and interests in local government's land related policies: This model builds enabling environment for incorporation the rights and interests of the target community in local government policies and plans which opens up the opportunity of safe housing, livelihoods and protection from disaster and climate risks.

13. Model Implementation Approach

01 Preparation of guidelines and forms for information collection

02 Land information collection training

03 Meeting with local government and selection of survey area

04 Household survey

05 Participatory social mapping

06 Data/information analysis, preparation of report

07 Data verification from the communities and elected representatives

08 Report submission to the local government executive

09 Preparation of land use procedures based on the data/information

10 Discussion on the draft at community and ward levels

11 Sharing and discussion among related actors to collect feedback

12 Draft submission to local government executive

13 Preparation of land use guideline for community mobilization

14 Categorization of land and preparation for land use mapping

15 Enterprise planning and entrepreneurs group formation

16 Stakeholder consultation

17 Planning and implementation of land use practice

18 Documentation of good practice and scaling of community land management model

14. Model Scaling Approach

- Development of land use guidelines for putting this model into practice and discussion on the guidelines with NLRF structures at different levels for clarity and common understanding among all structures.
- NLRF representatives share about the community land management practice in rural/municipality meetings and review sessions.
- NLRF actively participates in settlement and ward level gatherings and thematic committee meetings ensuring the impact group's participation in the process of municipal level planning. It will accordingly influence the local governments to incorporate community based land management practice in their annual plans and budgets.
- Engaging land rights forums at rural/municipality level in scaling this model in collaboration with local stakeholders.
- Learning sharing with NARMIN and MuAN, and engaging them in bringing all rural/municipalities on board.
- Sharing achievements and learning from the model piloting phase with the provincial ministry MoLMAC and lobbying the ministry for scaling up and scaling out this model.
- Documentation and dissemination of achievements and learning from the implementation of this model and organizing observation visit for representatives of government authorities concerned to the areas where this model has brought about good results.

15. Strategies for Scaling

- Preparation of reference materials and knowledge products such as video documentary, success stories, brochure etc covering the key features of the model, its achievements and learning. NLRF will reach out to local government officials and community groups with these materials

so that they realize the importance of such model and the need for scaling it.

- Representatives of land rights forum will actively participate in settlement, ward and rural/municipality level plan formulation process and lobby the local government representatives engaged in the processes for replication and scaling of community-based land management practice.
- Identification of rural/municipalities that are taking innovative initiatives in land and agriculture sectors, and seeking collaboration with them for replication of this model as part of their initiatives.
- Preparation of selected community leaders and staff members of NLRF as resource persons to support smooth and effective implementation, and scaling of this model.

15.1 Strength of Model

1. As per existing policies and laws, local government can address most of the issues affecting the communities deprived of their right to land.
2. Local governments need to implement several policies aimed at ensuring citizens' fundamental rights and community-based land management practice is a crucial one.
3. The federal government has already enacted land use act for implementation of land use policy, and local governments are required to form land use councils and land use implementation committees. Thus adoption of community-based land management practice will be a timely initiative.
4. Based on the learnings and local law, local government will have mandatory provision of issuing either joint land entitlement or in the name of women as household head. This model will help transforming informal tenureship to formal which is a movable capital and creates economic opportunities. This will also increase women's recognition at household and community level.

[i] *Fit-for-purpose land administration strategy: an innovative approach to implement land policies in Nepal- 2019*

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/little influence
1. Despite the realization among the governments at all level of the need for proper land management, they are still not prioritizing it as land management is considered to be very complicated issue	Holding series of discussions with local government officials concerned on the benefits of community based land management and opportunities it can create.		
2. The local governments seem to be involved more in management and operational issues instead of working with a new zeal for exercising the powers given by the constitution and Local government operation Act.		Launch effective advocacy campaign in order to influence the local government into taking initiatives in accordance with existing policies, laws and the nation's priorities.	
3. To some extent, the local government's laws and policy formulation processes are constrained by the delay in formulation of federal and provincial policies and laws; as local level policy needs to be aligned with the key essence of federal level policies.		Designing and launching a campaign on community-based land management practice under the leadership of the target community.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include CSRC, NLRF, MoLMCPA, rural/municipalities, federal government collaborating in the inception phase; and the other rural/municipalities willing to scale out the model.

Enabling factors: Favourable policy environment; high demand for community based land management; evidences that NLRF has generated from the model's pilot phase and its years of work in the areas of land rights.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Landless people are informed and aware of community based land management		
Household level land related data and information is well documented		
Climate vulnerability of groups is identified based on the analysis of land related information.		
Like to See (Active engagement)		
Local government's land management procedure is developed		
Classification on the basis of land use mapping is completed in line with local government's land management procedure		
Context analysis report is prepared and shared with communities and stakeholders		
Love to See (Deep transformation)		
Local government prepares the land use plan based on the classification		
Context analysis report is endorsed by the local government		
Governments' plan is focused on addressing the vulnerability based on the classification (safe residence, livelihood, farming etc)		

[07]

Agro-met Advisory Service

२०७६/०९/१३) जारी समय : विहान ६:०० बजे

कृषि सम्बन्धी प्रश्न उत्तर	मौसमको जानकारी	कृषि प्रविधि
सफलताको कथा	कृषि मौसम बुलेटिन	प्रकाशन
कृषि कार्यालय	बजार मूल्य	माटो सम्बन्धि जानकारी
रोग व्यवस्थापन	प्रशिक्षण र विस्तार	कृषि नीति
जिज्ञासा तथा समस्या	जलबायु डेटा	कृषि बीमा

नयाँ जानकारी अपडेट गर्नुहोस

[07] AGRO-MET ADVISORY SERVICE

Rationale

In an agro-dominated economy like Nepal, where two-thirds of the population is still dependent on agriculture for their livelihoods, farmers are facing substantial challenges in making this a viable source of livelihood. Growing climate and weather risks such as temperature fluctuation, erratic rainfall, drought, flood and increase of unheard of crop pests and diseases are causing serious setback to agriculture.

Due to a lack of proper knowledge and information on the climate and hydro-meteorological risks, appropriate agronomic practices and market system; farmers in general but particularly women and other marginalized farmers have not been able to cope with such risks. Therefore, agro-met advisory services model is piloted aiming to develop the resilience capacity of women and other disadvantaged farmers from adverse impacts of climate change by providing weather and market based ago advisory services.

Why is this model unique?

On the one hand farmers in the remote villages are experiencing serious threat of climate change and weather variability to agriculture and their livelihood, while on the other they have no access to even existing useful information and services that would help them cope with the threats. www.namis.gov.np is a sincere attempt of Nepal Agricultural Research Council (NARC) at the federal government level to provide farmers with such information but it does not reach the farmers, who need it most despite the existence of local government and other institutional arrangements like municipal level agriculture unit, AKC etc. This is mainly because of a lack of political will and bureaucratic inertia at different levels of government. The model intends to break this inertia at local government level and energize the non-functional service delivery system demonstrating by example that farmers in remote areas can be served well in a sustainable manner should this model be adopted by the municipal level.

1. Name of the Model
Agro-met Advisory Service

2. Partners Leading Development and Scaling of the Model
National Farmers' Groups Federation (NFGF) will initially lead the scaling of this model with LI-BIRD's technical support. However, it is the local governments, which will ultimately take charge of it.

3. Target Community of the Model
Marginalized, small holders and women farmers.

4. Systems that the Model Aims to Change
- **Policy initiative:** This model intends to change local government level agriculture extension related policies and programmes.

- **Knowledge and Practice of farmers (target community):** This model aims to bring changes in the farmers' agricultural knowledge and practices keeping weather information at the center. .

4.1 Type of System Change
Adoption of this model by the local governments will help sustain the mechanism of reaching out to disadvantaged farmers in remote rural areas of the country with agro-met advisory services. The services will help build the small, marginal and women farmers' knowledge of climatic and hydro-meteorological risks to agriculture, appropriate agronomic practices, and market system, and change their practices to manage the growing climate and weather risks to agriculture. The farmers will receive weekly bulletin carrying information on weather and appropriate types and timing of crops, possible crop pests and disease invasion, and coping measures etc. With improved information and knowledge, the farmers will be able to address minor problems in the field on their own and will visit the municipal agriculture unit and Agricultural Knowledge Centre (AKC) for technical support, if new problems arise. Trained local resource persons (LRPs) and lead farmers will support other farmers to understand and practice as advised.

5. Phase of Model Development and Scaling
Inception phase: The model has been shared with farmers, local government officials concerned, local media actors and their feedbacks are incorporated in it. In this phase the agri-bulletin is extracted from www.namis.gov.np, which is a reliable government website, and then distributed to the farmers and their feedback collected as input for designing localized agro-met advisory services.
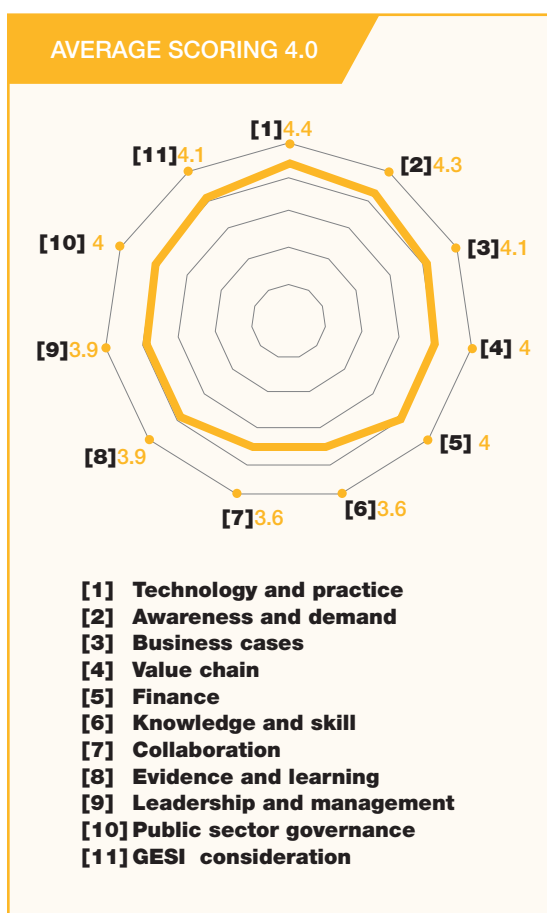
6. Value Proposition
- Farmers receive free of cost services: Development of a weekly bulletin as part of the agro-met advisory services involves minimal cost as the contents will be downloaded from www.namis.gov.np and printed into a customized form. Relevant mobile applications will also be used as other source of information to include in the bulletin.
- Increased security in the production process: The agro-met advisory services will help the farmers overcome their sense of insecurity from climate and weather risks to crops and livestock. The services will build farmers' knowledge and capacity to manage the risks and enhance their confidence to make long-term investment in cropping activities, which will result in increased production contributing to their food security and livelihoods.
- Feedback mechanism: Keeping the door open to continuous improvement, this model has provisioned collection of farmers' feedback on the model's effectiveness. The feedbacks collected on a weekly basis will be provided to the related authorities for necessary improvement. Eventually, the local government will be primarily responsible for collecting and addressing such feedbacks.

- Women farmers are receiving weather based information in their preferable language and customized information. Once the women receive the information they will be able to protect their crops and livestock from the adverse effects of climate change. This will enable women farmers to choose appropriate crops and varieties on their own. Ultimately, their leadership roles in the household and community level is also enhanced.

7. Cost and Duration of Model

The total cost of developing and implementing this model is estimated at NPR 170,000. The detail of the cost estimation is:

AVERAGE SCORING 4.0

[1] 4.4
[11] 4.1
[2] 4.3
[10] 4
[3] 4.1
[9] 3.9
[4] 4
[8] 3.9
[5] 4
[7] 3.6
[6] 3.6

[1] Technology and practice
[2] Awareness and demand
[3] Business cases
[4] Value chain
[5] Finance
[6] Knowledge and skill
[7] Collaboration
[8] Evidence and learning
[9] Leadership and management
[10] Public sector governance
[11] GESI consideration

- Materials and Refreshment cost

  NPR 50,000

- Training (for LRPs, technical persons from LGs, media and NFF members)& resource person   NPR 20,000

- Coordination and local media cost

  NPR 100,000

The above cost is for the inception phase only. It may reduce when local governments institutionalize and widely scale it out.

8. Model Screening Process and Result Summary

LI-BIRD with it allies and boundary partners engaged in designing this model discussed each of the 11 ingredients prescribed by CIMMYT PPT Lab for screeing models,which requires a model to score above 3 to become scalable. The discussion resulted in the following scoring on a 1 – 5 scale. The total average scoring of this model stands at 4.0 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

The 15th National Development Plan has adopted development and dissemination of climate-smart agriculture technology as a strategy for minimizing adverse effects of climate change on agriculture.

The Agricultural Development Strategy 2016 is another key government document that underscores the need to promote climate resilient agriculture.

The Climate Change Policy 2019 has recognized agriculture and food security as one of its priority sectors and has adopted the policy of improving food security, nutrition, and livelihood

through adoption of climate friendly agricultural system.

Jalbayu Prakop Samutthan Nirman Aayojana (*Agriculture management information system*) (www.namis.gov.np). It is a reliable source of information on agricultural practices, fertilizer calculator, insurance etc. The Agro-met advisory services in question draws on this website and such mobile applications as *NARC Krishi, Hamro Krishi, Krishi Guru, Smart Krishi* etc and customizes the information as per local requirements.

10. Boundary Partners to be Considered

- Nepal Agricultural Research Council (NARC): NARC, which, among other highly crucial research activities, develops and updates the content of the bulletin on www.namis. gov.np, is one of the most valuable boundary partners. Despite its continuous efforts, farmers, especially in the remote rural areas have not been able to benefit from NARC's existing agro-met advisory services. This model, therefore, intends to also serve as a bridge between the farmers, the local governments, and NARC at the federal level.

- Provincial Ministry of Land Management, Agriculture, and Cooperatives (MOLMAC): LI-BIRD, NFGF and NLRF will keep MoLMACs updated about this agro-met advisory service and seek their cooperation in making it effective and successful also by incorporating such services in the provincial policy and programme.

- Local Media: FM Radio programmes and local print media will be utilized to reach out to larger number of farmers with information in the agri-bulletin as part of the agro-met advisory services.

11. Model's Link with Climate Resilience

In the face of growing climate and weather risks to agriculture and agro-based livelihoods, this model facilitates the vulnerable farmers' access to knowledge, information and technical support enabling them to manage these risks. The farmers will be able to decide the correct time for agricultural practices which are largely dependent on rainfall and other climatic patterns. It will also help them to cope with climate shocks and stressors such as drought, flood, hailstorm, crop pests and diseases etc.

12. Model's Contribution to Promoting Inclusion and Governance

A bridge between service providers and farmers: Trained LRPs and farmers' groups will serve as a bridge between the local governments/AKCs and the farmers. They will bring within the farmers' reach necessary information and Services available at government level and apprise the government officials concerned of the farmers' needs and expectations. This modality will thus help to create an enabling environment for the duty bearers to improve service delivery and for the farmers to hold the duty bearers accountable.

Multi-stakeholder approach: Collaboration among multiple stakeholders such as NFGF, LI-BIRD, rural/municipalities, AKCs, NARC and farmers will promote their inclusive and transparent process of bringing this model into practice.

Mutual Feedback Systems: LRPs, lead farmers, LI-BIRD and Municipality technical staff will collect the farmers' feedback on the usefulness of the advisory services and seek their suggestions for changes in the agri-bulletin to make it more useful in local context. Technical persons from LI-BIRD and the Municipality will then make necessary adjustments in the advisory services. Should there be any delays in responding to the farmers' feedbacks from the Municipality technical staff, LI-BIRD, NFGF and

farmers will take up this agenda with the concerned authorities.

Vulnerable farmer-centric policy making: This model also aims at facilitating formulation and implementation of rural/municipality level policy institutionalizing a mechanism of dissemination of climate change, weather and agriculture related information to the benefit of the most vulnerable farmers.It will also prioritize gender-friendly climate adaptation technologies, which can also be used by their male counterparts. Where applicable, the bulletin will be translated into local languages to make it understandable to all local farmers.

13. Model Implementation Approach
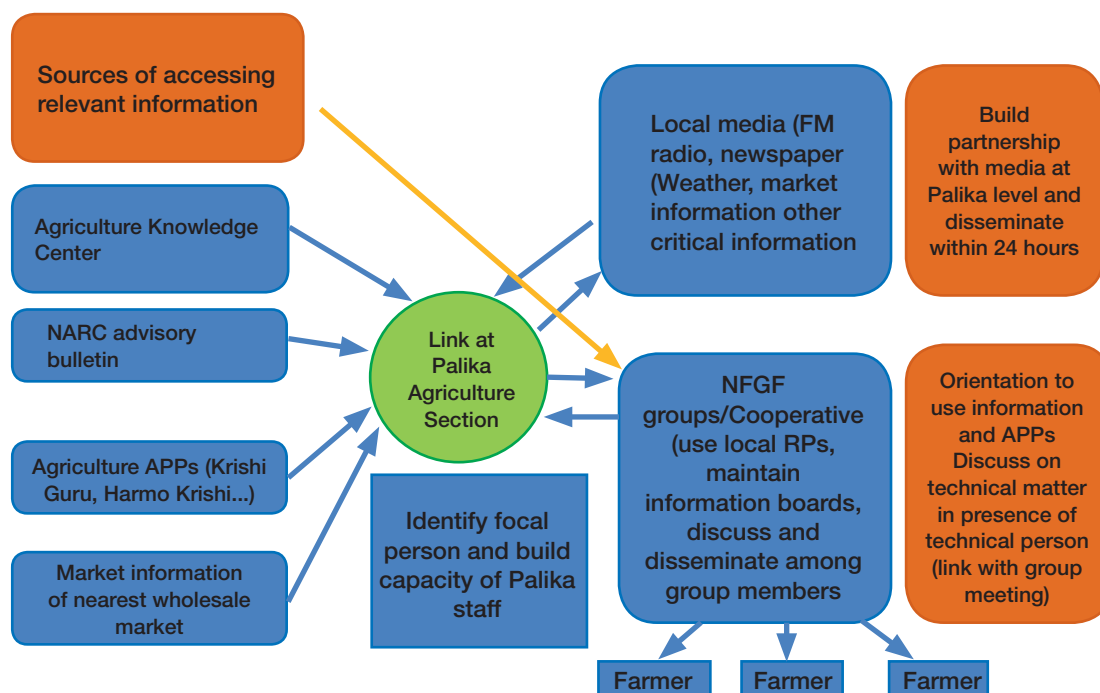
14. Model Scaling Approach

Dissemination of customized weekly bulletin: LI-BIRD and/or NFGF will customize the information downloaded from www.namis.gov.np and relevant mobile applications and include additional information in the bulletin as per local need. LRPs will help overcome language barriers, if any, and support farmers to benefit from the bulletin.

Improving farmers' access to services: This model facilitates farmers' access to the services of AKC, Livestock Expert Center and Veterinary Hospital and other available services. LI-BIRD and NFGF will facilitate the access initially and continue to have the model adopted and institutionalized by the Municipality.

Travelling seminars: LI-BIRD and NFGF will organize travelling seminars involving the key representatives from rural/municipalities, provincial ministries, senior officials and other decision makers. . They will visit the model implementation sites for on the spot observation of the model's effectiveness. These seminars combined with the regular lobbying are expected to lead to the government officials to positively considering institutionalizing this model.

15. Strategies for Scaling

Mobilization of NFGF groups: The NFGF-associated farmers' groups will play a crucial role in the scaling of the model through dissemination of information about the agro-met advisory services. They will make farmers groups and local government representatives aware of this service and its benefits to vulnerable farmers for protection of their crops and food security in the face of growing climate and weather risks, and advocate for its adoption at scale.

- **Media partnership:** The importance of the model, achievements and learning generated from the pilot phase will be publicized by local FM radio stations.
- **Mobilizing NLRF and NFGF networks** in scaling up the model across the country.
- **Model learning & sharing workshop** and travelling seminar at national and sub-national levels

Policy advocacy and lobbying: LIBIRD and NFGF will be regularly engaging the government officials based on the evidences generated from the model practices and influence the government to incorporate it in the government policy, plans, and programmes for its effective institutionalization.

15.1 Strength of Model

1. The model is simple, affordable and need based, and informed by the needs of women and other vulnerable farmers.
2. Services such as forecast of probable rainfall, temperature and drought help women and vulnerable farmers to take precautionary measures and protect crops and livestock from such climatic risks.
3. Women's as lead farmers, LRPs and local federations participation in mutual feedback and learning sharing with local government will create opportunities to strengthen the feedback mechanism and utilize the information effectively.
4. This model will support in localization of agro-advisory services reaching to needy women and vulnerable communities by strengthening and institutionalizing local government extension services and mechanisms.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Due to competing priorities rural/municipalities might put such initiative on the back burner.	Convincing the local government officials concerned about the importance of this model through frequent visits, and travelling seminars.	Collection of regular feedback, mobilization of NFGF network in lobbying duty bearers for scaling the model at government level; wide dissemination of agro-bulletin.	
2. LIBIRD/NFGF might discontinue the agro-met advisory services after SAMARTHYA phases out. If the local government did not adopt the model by then, the farmers might lose interest in such uncertain one-off services.	Project team will make every effort to give continuity to the services until the local government adopts it.	Teaching technology savvy youth farmers, to access required information from the government website and mobile apps for continuation of the services.	
3. Continuation of LRPs and their capacity building is contingent on continuity of the agro-met advisory services either as part of SAMARTHYA project or through local government.	Making effort to regularize LRPs until the local government owns the model and motivating them to enhance their capacity on their own without depending only on formal training.	Bearing in mind possible discontinuation of LRP services, collaborating partners discuss and come up with a contingency plan.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model include LI-BIRD, NFGF, rural/municipalities, NLRF, AKC, private service providers and NARC.

Enabling factors: Secured farmers' buy-in for this model; their demand for such services; rich experience, learning and commitment of LI-BIRD and NFGF; the federal structure that allows local governments to formulate and implement people-centric policies, plans and programmes.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Farmers are informed about the model.		
Farmers reached out with the agro-met advisory services.		
Rural/municipality and NFGF taking lead for adopting the agro-met advisory services model without LI-BIRD's technical support.		
LRPs equipped with basic (extension) knowledge of using and disseminating information to the farmers.		
Like to See (Active engagement)		
Procedures/guideline for agro- advisory model scaling developed.		
Farmers regularly provide feedback about the applicability of the model.		
Women farmers from each group are able to explain the benefits of Agro-met advisory Services. (At least 50%)		
Love to See (Deep transformation)		
Rural/municipalities, adopting the model.		
Farmers demonstrate changes to their knowledge and practice for managing climate and weather risks.		

[08]

Climate Resilient Local Seed System

► Women farmers with local bean seeds. Molung Rural Municipality, Okhaldhunga

[08] CLIMATE RESILIENT LOCAL SEED SYSTEM

Rationale

Marginal holdings in Nepal comprise 47.7% of all holdings, while only 14.7% of all cultivated land and small holdings make up 49.4% of all holdings[i]. Moreover, most of these marginal and smallholders are dependent on rain-fed agriculture which is largely affected by climatic adversaries[ii]. Nepal depends on other countries for accessing Plant Genetic Resources (PGRs) for research and development as about 73% of crop varieties released in Nepal have foreign ancestors and for crops like wheat, potato and lentil this is close to 80%[iii]. According to a research by LI-BIRD "Farmers Seed System in Nepal: Review of National Legislations", Nepal has formulated 17 policy instruments since 1988 when the first Seed Act came into effect. Of these, 16 are either on plant genetic resources for food and agriculture, or on seed or related to overall agriculture development in Nepal. However, few of them have been effective in creating positive changes in the seed systems. Evolution and development of private sector seed actors including community-based seed initiatives is something to be reckoned with.

Why is this model unique?

Dependency of Nepalese agriculture on imported seed, especially hybrid, is increasing day by day. If the trend continues unabated, someday Nepalese seed system will be completely dependent, its genetic resources will be completely lost and even the country's indigenous knowledge base seed system will be completely collapse. In view of this situation this model envisions a seed system that promotes climate resilient crop varieties through multi-sector engagement at the community level.

Imported seeds especially hybrid seeds is increasingly being used in Nepalese farming. This is creating high dependency on imported seeds which is unsustainable in Nepalese agriculture and food system. If this trend continues in the future, Nepalese traditional seed system and genetic resources will ultimately collapse which are highly adaptive to local climatic condition and requires less external inputs for production. Thus this model envisions to protect and promote local and sustainable seed system that decreases dependency on external inputs and increase adaptive capacity of women and vulnerable farmers. It also ensures multi-sector engagement of government, farmers group, seed producers and market actors at local level.

[i] *Chapagain, 2010*
[ii] *NPC-WFP-NDRI, 2010*
[iii] *Chaudhary et al., 2016*

1. Name of the Model
Climate Resilient Local Seed System Model

2. Partners Leading Development and Scaling of the Model
LI-BIRD in collaboration with National Farmers' Groups Federation (NFGF) and National Land Rights Forum (NLRF). Private sector also will be a part of the seed system. The model will be ultimately adopted and led by local government.

3. Target Community of the Model
Climate vulnerable women, poor and vulnerable small scale farmers.

4. Systems that the Model Aims to Change
This model will be scaled primarily through extension and also through market and policy systems. Therefore, this model intends to change the seed market and extension systems. It establishes strong linkage among seed value chain actors; producers, farmers' groups, agro-vets, cooperatives and seed companies. Eventually, it breaks existing monopoly on seed value chain.

4.1 Type of System Change
Individual farmer/groups: The model will help improve knowledge and practice among individual farmers and their groups. They will be able to distinguish between quality and sub-standard seeds. Farmers will no long be attracted by imported seed. They will rather start trusting in local and improved seed produced within national system.

Seed processing/grading industry/seed traders: Constructive interactions among the key actors in seed system (producers, farmers' groups, agro-vets, and seed industries and traders) results in promotion of a sense of mutuality among them thereby enhancement of business ethics and integrity the industry and traders. This will lead them to selling quality seeds to the farmers and also prescribing procedures of selling seeds. More importantly, this model enables a two-way feedback system. Both supply and demand sides benefit from the opportunity to provide feedback to each other.

Seed producer group and cooperatives: This model builds an enabling environment for seed producers' groups and cooperatives to produce seeds, preserve indigenous seeds and even envision development of a community seed bank.

5. Phase of Model Development and Scaling
Inception phase: During this phase, LI-BIRD conducted model socialization workshops bringing together boundary partners, representatives from rural/municipalities and farmers' groups, and agro-vets in Belaka Municipality of Udayapur and Lahan Municipality of Siraha district. In the workshops, LI-BIRD facilitated discussions on the country's changing farming landscape, possible ways to end monopoly on seed value chain, possibility of farmers growing into seed producers and the importance of productive linkage among producers, farmers groups, agro-vets and seed companies. All potential stakeholders of this model system found it appropriate to solve seed related problems at local level.

6. Value Proposition
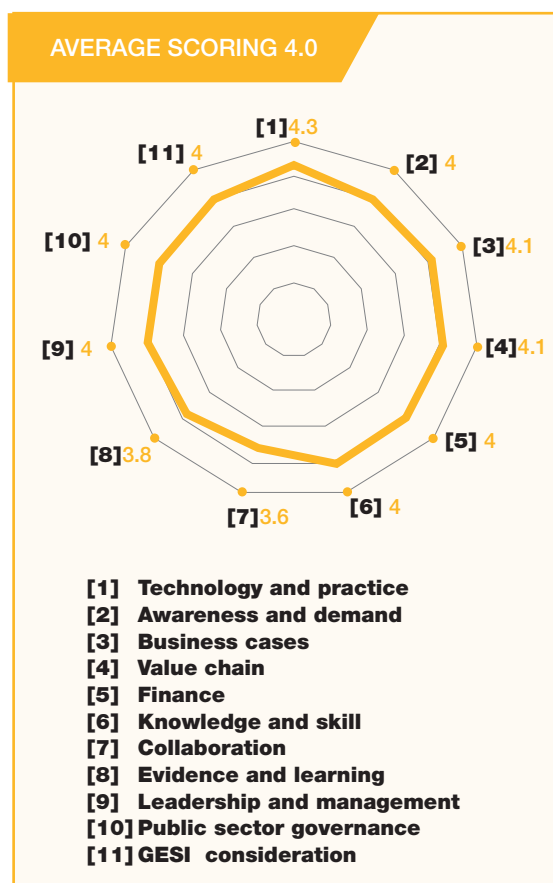**Promotion of climate resilient crop varieties:** In the face of growing climate and weather risks LI-BIRD, rural/municipalities, agriculture knowledge centre (AKC) and agro-vets will be working together for the promotion of seeds tolerant to climatic stresses. For example, drought or flood resistant seeds will be provided to the farmers and feedback collected from them. Seeds of crop varieties most preferred due to various attributes including tolerance to climate stress will be produced, promoted and supplied to the market by seed companies. LIBIRD brings in rich experience of promoting community based seed production and marketing practice.

Self-reliance on local seed system: This model aims to build technical skill, knowledge and practice of women and small scale vulnerable farmers to produce, preserve and utilize seeds by themselves from their own farming. This will reduce their dependency on external seeds. Further, It also helps in strengthening

local seed system. For instance, when there is surplus seeds; farmers can sell or buy from local market. It creates opportunities for women and small scale farmers earn income by selling surplus seed locally.

Possibility of developing community seed bank: This model will help farmers and their groups to take measures for managing climate and weather risks to crops and seeds, and seed protection. They will gain knowledge of producing seeds of diverse crops and conserve them by developing community seed bank.

Two-way business relation between farmers and companies: In this model farmers will not only buy seeds from the seed companies but they will gradually be able to produce quality seeds and sell them to the companies.

AVERAGE SCORING 4.0

[1] **Technology and practice**
[2] **Awareness and demand**
[3] **Business cases**
[4] **Value chain**
[5] **Finance**
[6] **Knowledge and skill**
[7] **Collaboration**
[8] **Evidence and learning**
[9] **Leadership and management**
[10] **Public sector governance**
[11] **GESI consideration**

Local government priority: Local governments have prioritized community based seed production in their programmes and this model is a good blend of technology and socio- economic solutions.

7. Cost and Duration of Model

This cost of implementing this model has been estimated at NPR 150,000. NPR 100,000 for series of coordination meetings with multiple stakeholders, communication, travel etc. Training for lead farmers is estimated to cost NPR 50,000. They will learn about cultural package of quality seed production, quality control and value addition. The cost presented above is for ideal condition which may vary depending on the size of community, their level of engagement and locality.

8. Model Screening Process and Result Summary

LI_BIRD discussed with its allies and boundary partners engaged in designing this model each of the 11 ingredients prescribed by CIMMYT PPP Lab, which requires a model to score more than 3 to become scalable. The discussion resulted in the following scoring on a 1 – 5 scale bringing the total average scoring of this model to 4.0 proving its scalability.

9. Government Policy Supporting Model Development and Scaling

Amended Seed Act 2015: The act stipulates that a minimum level of germination and purity of any of the notified seeds should be guaranteed. It requires that description be mentioned on the label of seed packets. This act allows farmers and farmers' groups to produce and sell packaged seeds with the labels bearing vital information about the seeds.

National Seed Policy 1999: The policy emphasizes use of modern biotechnology such as tissue culture to produce disease free seeds and seedlings by government, non-government, and the private sector.

Community Seed Bank Implementation Guideline 2009: The guideline shares a clear vision and

outlines strategies for coordination and collaboration with various governmental organizations and NGOs, for the complementary roles communities need to play, and for capacity-building and community empowerment plans.

Plant Variety Protection Act 2004: It allows farmers to register, control, reproduce and market their own varieties, if they meet distinctness, uniformity and stability criteria. The act also promotes export and import of seeds of farmer-released varieties and allows farmers to secure remuneration from the sale.

National Seed Vision (2013-2025): The document has a clear statement about community seed banks, gene banks, community-based seed production and capacity-building of seed producers to promote production of and access to high-quality seeds.

Agro-biodiversity Policy 2014: The policy puts emphasis on strengthening traditional seed production and distribution systems to protect farmer-to-farmer seed exchange and improve access to genetic resources.

10. Boundary Partners to be Considered
Seed companies, agro-vets and seed producer cooperatives/ groups are key boundary partners in scaling this model. They will facilitate farmers' access to quality seeds. They will also support interested farmers with technical knowhow for production of quality seeds tolerant to climatic and weather risks. Local government and AKC will also have crucial role to promote this model.

11. Model's Link with Climate Resilience
Use of crop varieties tolerant to climate and weather stresses: This model emphasizes selection and promotion of climate resilient crop varieties, which can withstand drought, flooding and other climate stressors for stable crop yields. It is widely agreed that locally produced seeds are more adaptive than the imported varieties.

Use of local production inputs: This model promotes production and use of indigenous and im-proved crop varieties, which require less fertilizer than hybrids and other imported varieties. As a promotional package LI-BIRD will share with the farmers comparative yields of different varieties along with their production input requirements.

Resilient seed system: This model facilitates a two-way seed exchange between seed producer farmers and seed companies and engagement of other seed actors within the network, which paves the way for establishing a resilient seed system at local level.

## 12. Model's Contribution to Promoting Inclusion and Governance
Multi-stakeholder participation (strong seed value chain): It has been learnt from ongoing engagement of LI-BIRD, NFGF and NLRF with rural/municipalities, AKC, seed companies, agro-vets that they subscribe to this model. Therefore, they will be participating in the implementation of this model. Success of this model will benefit all the stakeholders. The rural/municipalities will have the opportunity to demonstrate their accountability to the people by supporting them to access quality seeds; agro-vets will have direct connection with trusted seed companies; seed companies will get to increase their outreach and farmers will receive quality seeds at prices lower than before. Seed producer farmers will have incubation support from seed companies with ensured buyer.

Selection of the right impact group: Selection of land-poor, small holders, women and marginalized farmers as the target community of this model and provision for making available gender-friendly agricultural technology indicates the model's inclusive nature.

Collaboration among public, government and the private sector: Regular interactions seeking complementarity and mutuality in their roles, their buy-in for this model and willingness to work together for the good of the target community augurs well in terms of the possibility of improved service delivery and accountability and thereby improved governance.

Mutual feedback systems: This model will have an inbuilt feedback mechanism for farmers and seed companies to receive and provide feedback.

13. Model Implementation Approach
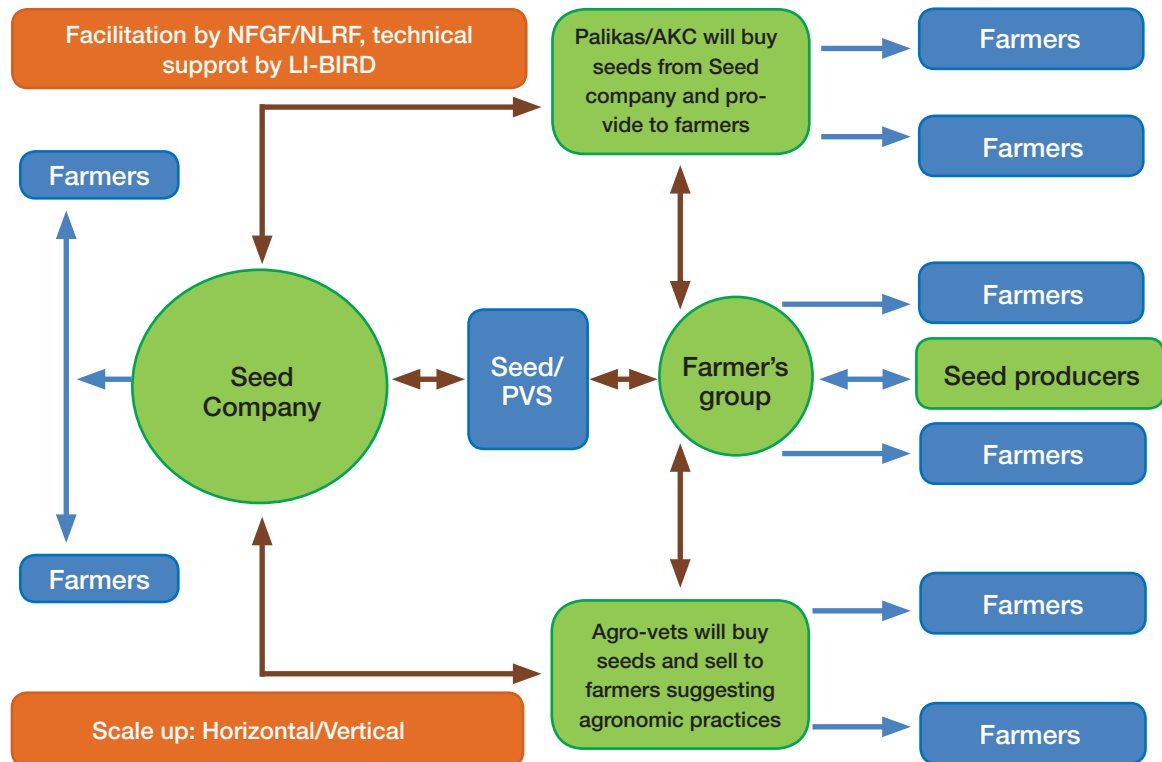
14. Model Scaling Approach

- Initially, at inception and early mover stage, LIBIRD will take lead on facilitating partnership among municipal, AKCs, seed companies, agro-vets, cooperatives/ groups and establishing a functional seed system. For this to happen, arrangements will be made to establish direct contact with trusted seed companies, which will be made responsible for ensuring the quality of seeds as well as for supporting farmers in different intercultural operations. This arrangement will protect farmers and agro-vets from getting confused by the presence of numerous seed traders. But at scaling stage NFGF take responsibility and continue this role.
- Feedback mechanism to hold the companies and farmers accountable: Rural/municipalities, will collect feedback from farmers about the performance of the seeds bought from the seed companies. The feedback will be taken up with the seed companies, which will thereafter take corrective measures, if required, so that the farmers feel confident to continue to use the seeds. Similarly, seed companies will pass on the feedbacks to producers using the same channel.
- Following the agreement NFGF and NLRF with the support of LIBIRD will also facilitate establishment of small trail Participatory Varietal Selection (PVS) plots on farmers' field which will boost their confidence about the variety.
- Establishment of a strong seed value chain at group and local government level will be part of the strategy.

15. Strategies for Scaling

Exposure visit for key stakeholders' to community seed bank will be organized to help them get first-hand information on the procedures of establishing and operating a seed bank. This will also be an opportunity for them to understand the importance of local genetic resources, learn the role of resilient crop varieties in food security and how all community people can access quality climate resilient seeds easily from local seed system and seed bank etc. through interactions with the bank operators and community people nearby.

As decision makers from government and non-government sectors and farmers' groups will be among the seed bank visitors, their positive impression of the benefits of seed local seed system and bank will lead to adoption of this model.

Large network of NFGF/NLRF will engage in scaling the model with technical support from LI-BIRD: As extension is the key channel of scaling this model NFGF and NLRF networks will play the central role in facilitating scaling and adoption of this model.

Incorporation of the model in local government plans and programmes: Regular lobbying by NFGF and NLRF citing the positive changes brought about by this model and the monitoring findings of the local government and provincial MOLMAC officials concerned will build local government's confidence to adopt and institutionalize this model.

Media partnership: The importance of the model, achievements and learning generated from the pilot phase will be publicized by local FM radio and print media.

Model learning & sharing workshop and travelling seminar at national and sub-national levels.

15.1 Strength of Model

1. **Low cost model:** This is a low cost model. Its implementation requires a small initial investment.

2. **Climate Resilient Model:** This model stipulates that seed companies sell seeds tolerant to climate stressors.

3. **Enable community to manage climate and weather risks:** Initiatives of using stress tolerant crop varieties support farmers to evolve into seeds growers, and establish local seed system thereby enhancing community resilience to climatic stressors.

4. **Local government has taken this model positively:** Local government and AKCs have initially pledged their support for implementation and scaling of this model.

15.2 Challenges and Way Out

Key challenges identified from above exercise	Action that the project team can take	What can project do in collaborating with others	No influence: Factors on which the project and partners have no/ little influence
1. Unfair profit-making tendency among seed company	Identification of companies with good previous records: expertise in seed production, label bearing trust worthy information on the seed packets and incubating to seed users.	Supporting the project to find a company with good previous record.	
2. Difficulty in turning farmers into seed producers.	Designing and conducting tailored training for interested and potential farmers.	Monitoring and legislation related support.	

16. Drivers and Collaborators for Scaling

Drivers and collaborators for scaling the model includes LI-BIRD, NFGF, local government, NLRF, AKC, private service providers, seed bank; and seed growers.

Enabling factors: Secured farmers' buy-in for this model: rich experience, learning and commitment of LI-BIRD and NFGF; Demand for local seed system, local government operation act that allows local governments to formulate and implement people-centric policies, plans and programmes, different agricultural policies, programme and plan from federal government promoting local seed system.

17. Model Progress Tracking

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Farmers are aware of the need to use climate resilient crop seeds from local seed system and reliable source (seed companies, agro-vets, seed producers etc).		
Farmers acquire technical skill on quality seed production practice through company incubation .Women farmers (at least 50%) benefitting from climate resilient seed (receiving seeds from reliable source at reasonable price).		
Like to See (Active engagement)		
Seed companies and local government collaborating for strengthening local seed network.		
Two-way feedback mechanism between farmer and incubating company is functional		
Love to See (Deep transformation)		
Women and small scale vulnerable farmers are producing and utilizing quality seeds which contributes in food and nutrition security		
Women and small scale vulnerable farmers are selling surplus seeds in local markets and earning income.		
Women and small scale vulnerable farmers are reporting on resilience against climate adversities		

[09]

ANNEX
Model Documentation Guide

[09] ANNEX
Model Documentation Guide

PART A: UNDERSTANDING SCALING OF INNOVATION

A.1 Scaling in the Context of Climate Resilient Model

Scaling is understood as a process of increasing the application of innovation and creative ideas in the form of new technologies, practices, and processes for increased (positive) impact on the lives of people at a large scale. Part of the scaling process should also aim at systemic change which leads to sustainability of such impact even in the absence of any facilitator ie project or donor. Scaling does not simply mean innovation, piloting and adoption in a defined area rather it complements social, economic and political process and approaches. Terms frequently used to describe scaling are scaling up and out. Scaling up is similar to increase in number, speed, size etc. whereas scaling out is related to expansion of innovation in terms of geographical spread, number of organizations involved in scaling etc.

A.2 Scaling Principles

Scaling a model in a complex socio-economic dimension of system entails dealing with complexities in a system associated with scaling. Strategies for wider scaling are specific to the model designed for scaling, however, some principles stand to be universal. Some commonly accepted principles are:

I. **Scaling should be regarded as a combination of three important dimensions**
a. Impact that benefits many people

b. Impact that remains for a longer period of time
c. Responsible to system change
II. **Successful scaling of technological innovations requires that attention is given to the complementary non-technological requirements**
III. **Models to be scaled should be simple and doable for targeted community**

A.3 Scaling Steps

Scaling of any innovation is shaped by complex socio economic condition. Various technical as well as socio economic determinants influence the scaling process and eventually the result. Each model is unique in its nature and the end users of model are diverse. Similarly, different model requires different systems and networks for dissemination and diffusion. Each success model passes through different scaling pathway and steps. It's difficult to define a concrete pathway and the steps for scaling all models. However, if an external force such as programs intend to engage in the scaling process, there are some steps generic to all types of model scaling. In the case of Samarthya project there are four steps for scaling.

Step 1. Building Scaling Ambition: The key prerequisite for setting a scaling ambition is to have a clear idea of what the impact will look like, who will be involved; and why the choice was made to scale it. Scaling ambition should not be

limited to change at the individual or household level; rather, it should aim for a systemic reform. Sector transformation framework is applied to bring wider changes from innovation through changes in system. To set the scaling ambition from the system perspective, simple key guiding questions are used to define the boundaries of the model scaling system and network. In addition, the system we intend to change along with people who will engage in and benefit from the model to be scaled are identified. Generally, we seek to answer the 5W and 1H (who, what, when, where, why and how) questions while setting the ambition.

Step 2. Assessing the Scaling Ingredients: Successful scaling efforts pay attention to ten "scaling ingredients". Ten ingredients are adopted from CIMMYT innovation PPP lab. On top of the suggested ingredients, Samarthya team has aded one more ingredient which is "GESI consideration". Though GESI is taken into account in all 10 ingredients, naming it as an ingredient is expected to provide it with more emphasis. The ingredients and sub-ingredients are discussed at length by using a model scanning sheet from the model scanning process. The eleven ingredients of scaling a model are given in the diagram below which has been derived from CIMMYT PPP Innovation Lab Excel Sheet.
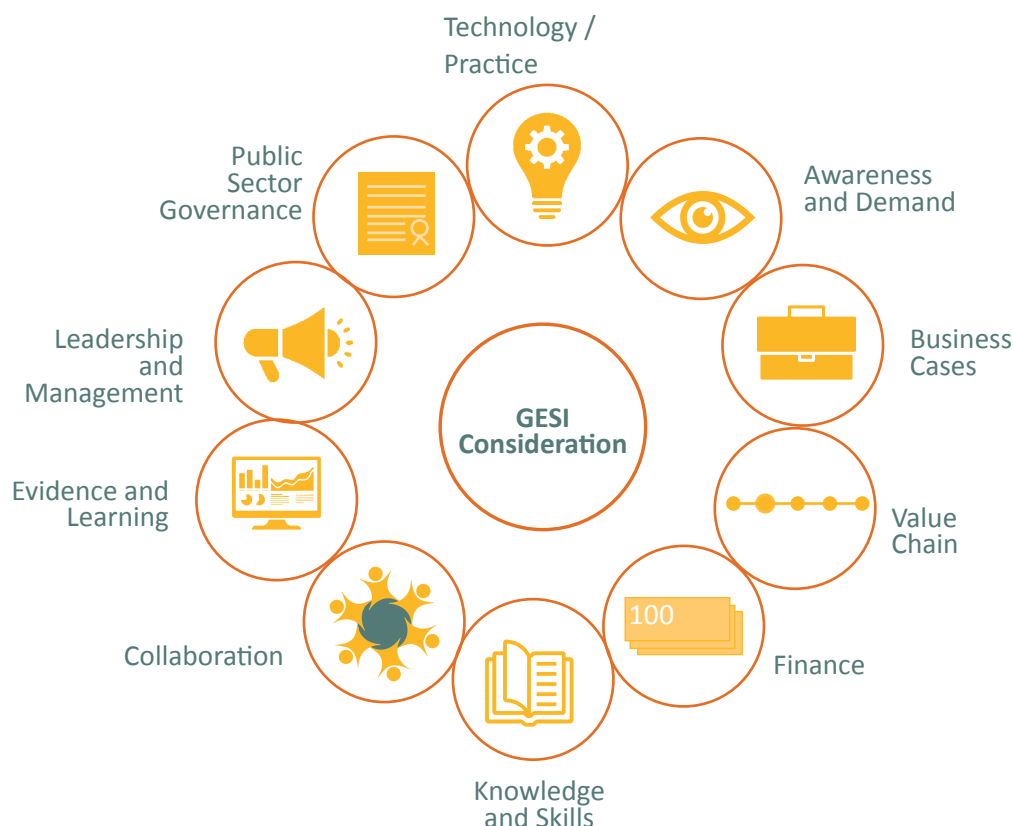
4 tactical questions per ingredient are answered and scored on a 1 - 5 scale to reflect the level of confidence with regards to each ingredient. Rating for each ingredient will be based on its clear definition. The team engaged in the scanning process may rate the sub ingredients as well on the same scale of 1 – 5. The following scoring criteria is used while providing score for each ingredient.

Score referrals:

1 = No, this is very uncertain OR not enough information to answer
2 = Serious doubts
3 = some doubts/unsure
4 = Quite confident
5 = Yes definitely, this is not an issue for my scaling case OR not applicable

Step 3. A Cleary Set Strategy for Scaling: So far no ready-made fit for all scaling strategy is available. While setting strategy for scaling, the first important initiative is to list out points of attention for implementation – analyzing the scaling ingredients and focusing on ingredients that have low scores. To improve the strength of weak ingredients, force field analysis identifying scale of strength and weakness can be conducted from which real gaps are recognized. Based on this exercise, the strategy is set up. The ingredients, rather than stand alone, are inter-contributory: at times ingredients having high scale may be due to the lower weightage/scale of another ingredient. This needs to be kept under care consideration.

Step 4. Identify and deal with challenges and opportunities: Often challenges preempt the success path of any initiative. Gap analysis helps identify challenges. Scaling ingredients having high gap are definitely associated with challenges. Once gaps are identified, the team involved in model scanning should assess the

causes of hindrance. Some of the challenges can be removed from project scope while others can be overcome through collaboration with stakeholders. There may be some challenges that are beyond the project's capacity. Finding a way out to deal with each challenge enhances the adoption and scalability of model practice.

A.4. Model/Innovation Spreading: School of Thought

There are two different schools of thought regarding the ways of spreading, diffusing and adopting a model. First school of thought believe that: once a model is generated, it is first adopted by some innovative people and then others start to copy it gradually. Copy and use frequency increases with time and moves on to dissemination and diffusion. The core idea of this thought is that innovation proved appropriate in a location works in other location having the same context. If products, processes or practices go to scale, positive impact will scale with it, hence the common approach of 'find out what works in one place and do more of the same (elsewhere)'. This concept is popularly known as "adaptation concept" of dissemination. The pathways of scaling is depicted as:

Innovation source -> Adaption -> Transfer -> Dissemination/ diffusion

On the other hand, second school of thought have faith in that "adoption" is the last step of spreading and use of innovation. This concept focuses on what technologies and practices works in a particular ecological, geographical or sociocultural area, do not necessarily work, and may even have negative effects, in other areas. This way of spreading ideas and innovation is termed as "scaling concept". The spreading/ multiplying pathway is summarized as:

Innovation source -> transfer and dissemination -> diffusion and adaption

A.5 Responsible Scaling

Scaling of any practice at a high pace and with larger coverage alone is not determinant of model success. There are other factors to be considered in model design and scaling work. Along with livelihoods, socio-environmental factors should be equally analyzed so that no negative consequences occur in the long run. Upon reviewing past practices around model design and scaling we can find some practices having high livelihood gains, but undesirable implications on the environment. For example, a rubber plantation in south China intending to reduce rural poverty was successful and was scaled rapidly with large coverage. However, it negatively impacted the environment and eroded the biophysical and cultural diversity. Despite government efforts to scale down the plantation for environmental protection reasons, the plantation continued its work at scale as it was proving to be beneficial for farmers and their livelihood. In Bangladesh and Panjab pumping ground water quickly became adopted at a wider scale which contributed to increased production. Conversely, the water profile level reduced in the course of time. Nowadays, various negative consequences in water ecosystem has been reported from which recovery is expected to take a long time. Mono-cropping of pine and eucalyptus plantation which was massively promoted in the past was later reported to having negative impact on peoples' livelihoods and bio-diversity in Nepal.

We can draw out lessons from these practices which were scaled tremendously but eventually proved to be detrimental and expensive from environmental point of view. It is very crucial to eriously considering the pros and cons of each model before deciding to move ahead with it. Such visionary analyses is called responsible scaling. Some key points to be considered while making the decision for model designing and scaling include:

a. Anticipatory: Anticipating 'what if this goes to scale?' as well as anticipating what emerging futures the scaling process may need to connect to (e.g. in terms of trends).

b. Responsive: Responding to both societal needs and societal concerns expressed by all stakeholders.

c. Reflexive: Reflexive and adaptive management informed by ongoing evaluation of the functionality of scaling up in view of a defined purpose, rather than mere rolling out of blueprint 'solutions'.

d. Inclusive: Inclusive in scope, inclusive in process, inclusive in effort and inclusive in terms of who benefits from model scaling. The difference in power relations that could result from the model implementation needs to be considered so that advantages are not exclusively given/taken by power holders/certain actors of the system.

e. Resilience: All innovation may not suit all users and sometimes may even have negative consequences on existing practices. Users may not be satisfied with the results from the latest innovation efforts in comparison to existing practices. The cost it exerts on users in the case of a failure or the cost for reverting back to the previous/existing practice needs to be considered. Who bears it? Apart from this. Is the model climate friendly?

A.6. Phase of Model Development and Scaling

It is important to indicate in which phase the scaling initiative starts and where you aim to reach within the duration of the timeline. The different stages include:
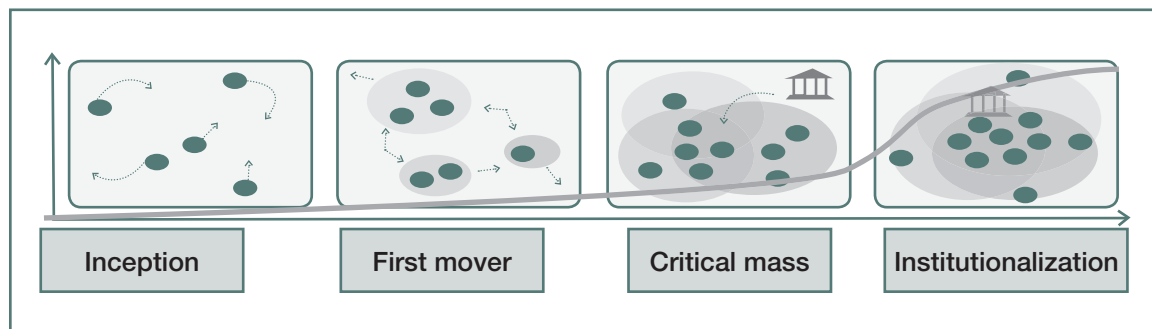
a. **Inception:** Community people realize that their problem is going to increase. The problem will not resolve unless initiatives are taken to deal with it. In order to deal with challenges people seek solution individually or collectively and find a way out in the form of success model.

b. **First mover:** Convinced by how a community has solved its problem using a certain model, another community in the vicinity also adopts the model as is or with some adjustments in order to localize it. First mover does have the opportunity to learn from the community where the inception of the model took place, thus, providing them with opportunity for more clarity on the implementation.

c. **Critical mass:** Different stakeholders realize that the adopted practice has been useful in solving problems or producing good result. They then start to cooperate with its innovator or first mover to learn and adopt it. They have the opportunity to learn from others and henceforth further shape the practice.

d. **Institutionalization:** Level playing field emerges and is perceived as the "new normal" by sector stakeholders. Leaders in the sector lobby for institutionalization of this new normal making it part of the legal instrument. Main legislation and plan player, particularly from government, is convinced that this model works for wider community. Afterward, they include it in their continuous program spontaneously/proactively or due to demand pressure.

A 7. Drivers and Spaces

a. Drivers: Champions, market, incentives, network, users demand etc work as pushing and pulling factor of model scaling.

b. Spaces: Policies, program, plan, politics, institutions, collaboration, partnership etc create conducive environment for model promotion.

Part A basically is a guide to develop idea on model scaling and is applicable for all kinds of model design including scaling. However, each model by nature is unique in itself hence is called a model. Each model maintains uniqueness over the process, pathway, system and impact. If someone is interested in model scaling and in learning from previous experience, s/he needs to be acquainted with different dimension of model scaling. That is why documentation of each model scaling canvas as well as experiences from practices are important. Scaling model is a reflective process which denies the use of blue print approach. It rather incorporates new genesis evolving from practice evaluation.

PART B: MODEL DOCUMENTATION FRAME (OUTLINE OF MODEL DOCUMENTATION)

1. Name of Model:

2. Partners Leading Development and Scaling of the Model:

3. Target Community of the Model:

This section intends to define targeted individuals/groups who will benefit from model implementation. In other words, it helps define the ultimate receivers as well as users of the model. This should also include niche coverage.

4. Systems that the Model Aims to Change:

Defining the larger development outcome that the model aims to contribute to is important to enable collaboration with those contributing to the same overarching development goal. Scaling goal should contribute to the wider and sustained changes or in other words should change "rules of the game" in the sector in which the model has to be scaled. Some examples of systems that the model intends to change could be households, supply chains, extension, policies etc. The guiding questions for system analysis include:

System Check: Does scaling ambition contribute to wider and sustained changes (rules of the game) in the sector this is being operated in? If so, what does that change look like once scaling ambition has been reached? This should provide useful analytical framework for positioning scaling initiative in sector change.

4.1 Type of System Change: What changes in the sector are required in order to reach scaling ambition? Please define which scaling channel is used for scaling the particular model. Some examples of system change and channels based on systems used by different models proposed as follows:

Market System | Extension system | Legal/ policy / System government
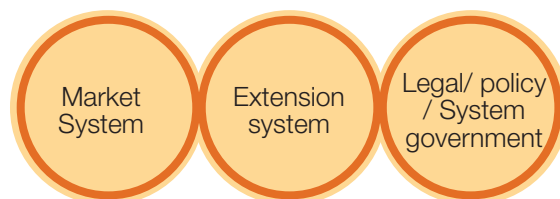
These examples provide a general idea, but other alternatives can be proposed given proper justification.

5. Phase of Model Development and Scaling:

Could be any of the phases as per the definition provided in the above section: a. Inception b. First Mover c. Critical Mass d. Critical Mass

6. Value Proposition:

What is the value that the model adds to the target/impact group? Does it bring something new in the system? What value does this provide the stakeholders engaging in development and adoption?

7. Cost and Duration of Model:

This section outlines the tentative per unit cost required during the model's implementation as well as the overall duration. Cost vary depending on the phase of the model. It is better to mention cost pertaining to each phase of model development and scaling.

8. Model Screening Process and Result Summary:

Describe the model screening process adopted and present the summary result achieved from the exercise. The model scanning sheet is the tool for screening. It is important to clearly present the summary derived from the exercise in the sheet. It can be in the form of spider web or the table given below. The screening work sheet can be shared in the annex.

Sample of table to be used

SN	Technology / Practice	Awareness & Demand	Business cases	Value Chain	Finance	Knowledge & Skills	Collaboration	Evidence & learning	Leadership & Management	Public Sector Governance	GESI Consideration

9. Government Policy Supporting Model Development and Scaling:

Review government policy, strategy, program, plan etc which provide productive ground for model development and scaling. Review existing policies and define how the policies support scaling and adoption of the model.

10. Boundary Partners to be Considered:

Map out stakeholders associated with model development and scaling and define their roles as well as level of engagement in model scaling.

11. Model's Link with Climate Resilience:

Samarthya project emphasizes climate resilience building particularly in land and agriculture. Similarly, the model you develop should address the needs of communities vulnerable to climatic risks. It is important to show the model's nexus to climate resilience building and describe how it addresses problems of small holder and landless tenant due to climate change.

12. Model's Contribution to Promoting Inclusion and Governance:

How does the model benefit PVSE exposed to climatic risk? What type of effects will the model scaling have on governance system? Is the model design informed by existing governance system and does it have the ambition to bring positive change?

13. Model Implementation Approach:

What is the process pathway to deliver the model? How does it reach end users and do they use it? Particularly in testing and inception phase.

14. Model Scaling Approach:

This section should describe means of how the model is transferred, disseminated, diffused and adopted as well as the means of scaling it etc.

15. Strategy for Scaling:

This involves tactics to be used for model scaling. Strategies are not predefined as different models require different set of strategies for scaling. Models require agents to amplify them. Agencies which are not on board in the process of model development require proof of successful delivery of the concept, approaches and strategies applied. Some points key to successful scaling could be:

a. Learning environment for scaling
b. Changing Farmer /users behavior
c. Scaling up technologies through value chains
d. Ways to meet implementation challenges
e. Network or institution involvement
f. Coordination, alliance building, partnership, advocacy, workshops, travelling seminar etc
g. Mobilization strategy
h. Identifying and overcoming challenges

From the result of model screening practice we normally assume the model is worth scaling if the overall score is higher than 3 with more than 7 out of the 11 ingredients scoring more than 3. Since model scaling is a challenging job, despite majority ingredients' strength many challenges

preempt scaling pace. Therefore, one should analyze thoroughly at least 4-5 possible challenges and strengths associated with scaling of each model. Finding way out for deal with challenges at the time of model designing helps for proper scaling of model.

15.1

| Strength of model (4-5) |
| --- |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

15.2 Challenges and Way Out

Please fill in the table with activities that should be part of the strategy to overcome the key challenges.

Challenges to scale (4-5)	Acton by team What can the project team do?	Acton collaborating with other What can project do collaborating with other	No influence Factors on which the project and partners have no/little influence

16. Drivers and Collaborators for Scaling:

Please sketch out model scaling pathway for each model including enabling factors and drivers for fostering scaling process. The below frame might be useful in identifying drivers and define spaces of each model.

CLIMATE RESILIENT SCALABLE MODELS AND GUIDELINES ON LAND AND AGRICULTURE
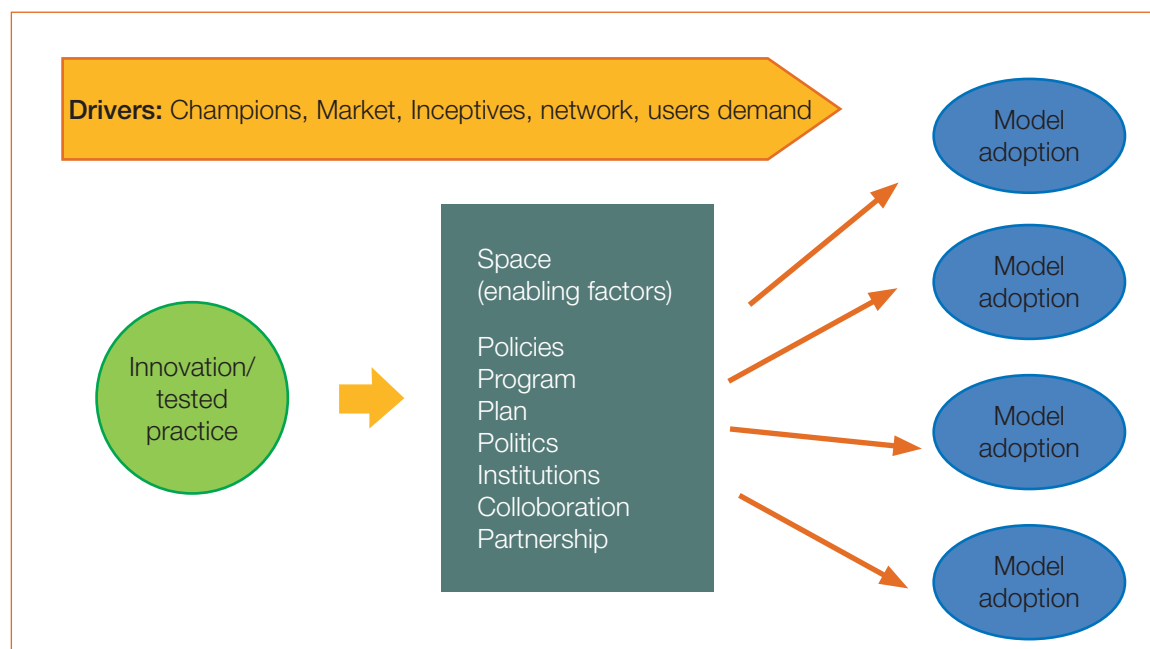
17. Model Progress Tracking:

The progress can be tracked by filling up the outcome journal as per the format given below.

Outcome Journal		
Name of the Model :		
Work dating from/to :		
Name(s) of the person(s) who compiled the journal :		
Progress Markers	**Observed Changes (Progress Observed and Significance)**	**Follow up/ Corrective measures**
Expect to See (Early positive responses)		
Like to See (Active engagement)		
Love to See (Deep transformation)		

18. Model Scaling Plan:

Prepare model scaling and follow up plan using below table.

Activity	Lead organiza-tion's role	Supporting organization's role	Scaling scale	Follow up plan

References

Wingboldus, S., L. Klerkx, C. Leeuwis, M. Schut, S. Muilerman and Jochemsen, H., 2016. Systemic perspectives on scaling agricultural innovations.Springer , Agron. Sustain. Dev. (2016) 36: 46

CIMMYT, Scaling Scan: A practical tool to determine the strengths and weaknesses of your scaling ambition

CLIMATE RESILIENT SCALABLE MODELS AND
GUIDELINES ON LAND AND AGRICULTURE