



Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



Land Governance Project

Boosting Agricultural Productivity and Securing Land Tenure Rights

Journey of Change



Content

1. Challenges of Land Fragmentation 1
2. Land Governance Project Phase I: Establishing the necessary precondition to implement participatory land consolidation (LC) procedure 6
3. Land Governance Phase II: Establishing land consolidation as a key tool for land governance 14

Challenges of Land Fragmentation

Agriculture plays a crucial role in Ethiopia, providing livelihoods for up to 70% of the population and contributing to one-third of the country's gross national product. The majority of small-scale farmers often manage fragmented land parcels that are small, unstructured, and distributed over large areas. This hinders agricultural productivity and adds additional labor and transportation costs. It also results in crop losses, as monitoring and managing distributed parcels is difficult.

In the highlands of Ethiopia, land fragmentation is severe, with 50% of households having between 6 – 15 plots*. The trend towards smaller parcels is further exacerbated by high population growth, rapid land use changes, and a lack of progress in formalizing tenure rights.

Continued trends of land fragmentation could have negative impacts on various aspects of agriculture and rural communities, such as:

- **Hindering the transformation of agriculture productivity and food security by limiting the use of modern agricultural technologies and practices**
- **Discourage investments in agriculture**
- **Restricting access to basic agricultural infrastructure, such as irrigation systems, water management, and roads, thereby hampering the development of rural livelihoods**
- **Intensifying the adverse impacts of climate change, such as excessive rain and drought, and contributing to natural resource degradation**
- **Exacerbating land use disputes due to competing land use demands and conflicts over land boundaries**





To establish pre-intervention markers from a socio-economic, agricultural, gender and environmental perspective and to assess the conditions for future infrastructure measures associated with land consolidation, a study was conducted. Some of the findings are illustrated as follow:

1. Severity of land fragmentation

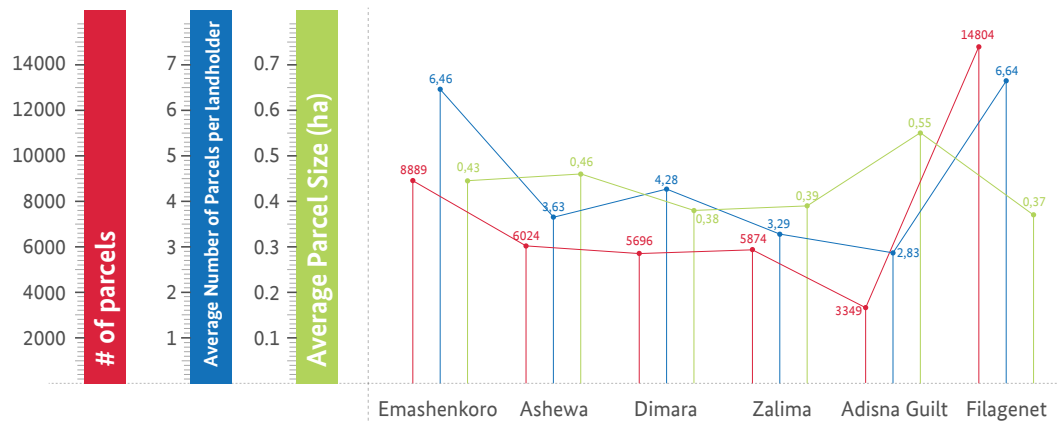


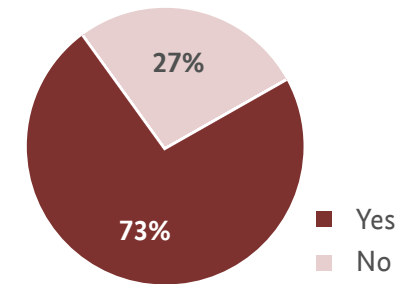
Figure 1 Severity of land fragmentation in the pilot areas

A total of **9562** landholders have participated in the Socio – Economic studies in the **6** pilot kebeles
 Among them, smallholder plots accumulate to a total of **44,636** parcels, implying an average number of plots per landholder of **4.67** with an average plot size of **0.41**ha.

2. Landholder perception of land fragmentation and its impacts

Question:

Do you perceive land fragmentation to be a problem for your household?



Identified issues of land fragmentation

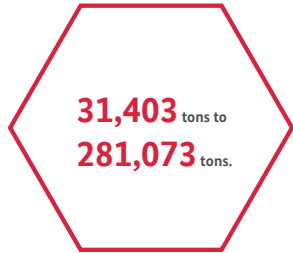
Wastage of labour	Higher risk of theft	Higher risk of damage/loss in production due to domestic animals	
	Adversely affects children's school attendance	Lower income from renting out parcels	Increased difficulty to manage pre/post-harvest wastage & by products
Wastage of time	Limitations to use modern farming technology	Increased risk of conflict (e.g., with other landholders of neighbouring plots)	Difficulties of access (e.g., no or limited or inadequate road access)
		Higher risk of damage/loss in production due to wild animals & rodents	Difficulties to get extension support

Figure 2 Landholders perception of land fragmentation and its negative impacts

Challenges of Land Fragmentation

3. Land fragmentation impact on grain loss due to distance and fragmentation

On a national level, grain loss due to land fragmentation:



Estimated grain loss due to parcels' distance from the homestead ranges from



Figure 3 Impact on grain loss

4. Landholders perception on land fragmentation and its impact on climate change

- Degradation of soil fertility
- Increased deforestation
- More severe / frequent flooding
- More severe / frequent draughts
- More severe / frequent erratic climatic conditions
- More severe / frequent animal plagues (e.g, locus)
- Absence in environmental conservation management

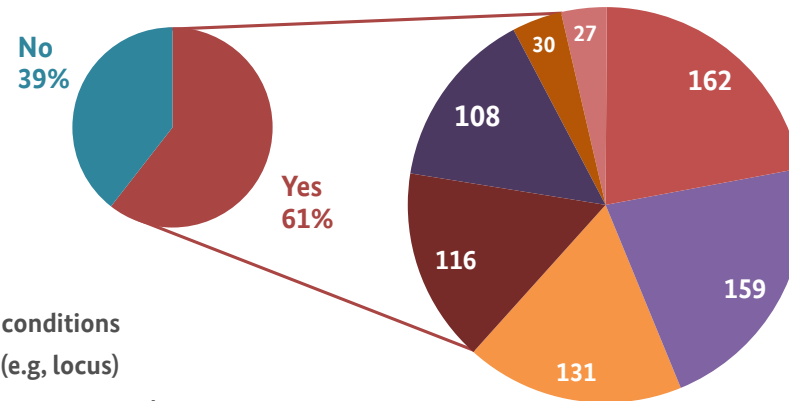


Figure 4 Impact of land fragmentation on climate change



'Ethiopia has a **high degree of risk** to hydro-meteorological hazards and natural disasters. Vulnerability is exacerbated due to the country's high level of poverty and its dependence on key sectors most likely effected by climate change: agriculture, water, tourism, and forestry.

While the country is at high-risk to natural disasters such as flooding as well as drought, its topographic diversity and highly marginalized make it vulnerable.'

Source: *Climate Change Knowledge Portal*

STEP 01

Use of agricultural inputs is positively related to household income.

STEP 02

Data indicates a substitutional effect between the use of irrigation and the need for agricultural inputs, i.e., the more irrigation is used, the less expenditure for fertilizers and improved seeds are needed.

STEP 03

It thus stands to reason that more irrigation leads to higher farmstead income (either through higher yields or reduced expenses for agricultural inputs).

STEP 04

Land consolidation-related infra-structure measures typically include water management designs, allowing a broader share of the community access to water productively

RESULT

Land consolidation measures are likely to have a positive, income-generating effect on agricultural production

Land consolidation impact on agricultural production

This translate practically to

Challenges of Land Fragmentation

The Ministry of Agriculture (MoA) at the federal level is dedicated to transforming the agricultural sector. The ministry aims to enhance agricultural productivity, integrate agricultural outputs into the broader economic sectors, and revitalize rural development. In pursuit of these objectives, the Ministry of Agriculture, Land Administration and Use Lead Executive Office within MoA is actively engaged in working towards achieving its goals by:



Reduction of Land Fragmentation

Encourage farmers to voluntarily exchange land and pursue land consolidation to increase agricultural productivity and establish stronger linkage to capital and labor. Furthermore, to harness modern farming techniques such as mechanization.



Modernization of the Land Administration System

Roll - out of digital cadaster digital system, the National Rural Land Administration and Information System (NRLAIS) to effectively and transparently manage land registration, land tenure rights and land information of rural areas.



Draft Revised Agriculture and Rural Development Policy
Implication for Responsible Agricultural Investment in Ethiopia

Strengthen the Legal Framework

To drive agricultural transformation and rural development, while prioritizing environmental stewardship & social inclusivity (with a focus on youth & women). Furthermore, to establish clear guidelines and mechanisms to effectively oversee and regulate land-related activities, ensuring responsible and accountable practices.

Project Overview

Project Name	Land Governance I
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Lead Executive Agency	Ministry of Agriculture
Lead Implementation Partners	German Development Cooperation (GIZ)
Budget	10 million
Duration	Until 03/2026

Federal level: Ministry of Agriculture, Land Administration and Use Lead Executive Office

Region: Amhara National Regional State

Region: Sidama National Regional State

Partner: Bureau of Land (BoL)

Partner: Land Administration & Use Directorate (LAUD)

Woreda Level: Land Office

- Woreda Technical Team – Established to implement land consolidation in each pilot areas

Community level:

- Land Administration Committee (LAC) : Elected representatives of Landholders

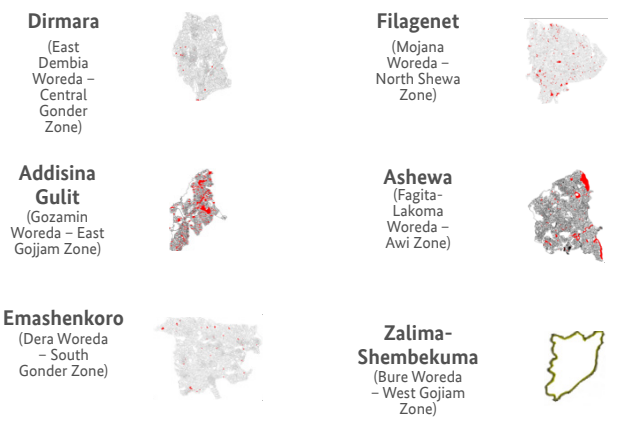
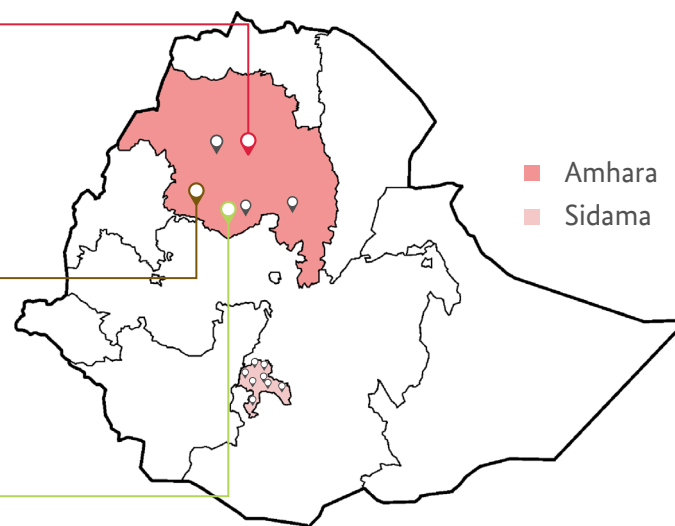
Community level:

- Land Consolidation Committee (LCC) – Elected representatives of Landholders

1 Deragon in Emashenkoro kebele (582 landholders, 3052 parcels, 1389 ha)

2 Ashewa in Ashewa kebele (410 landholders, 1382 parcels, 636 ha)

3 Shembekuma in Zelma Shembekuma kebele (187 landholders, 780 parcels, 268 ha)



Pilot Woredas for Land Consolidation Preparatory Measures

Pilot Woredas for Land Consolation Implementation

Land Fragmentation Mitigation Measures: Land Consolidation VS Voluntary Land Exchange

Majority-based Land Consolidation

Land consolidation is a multifunctional land management tool that supports planning and organizing the space in rural areas and transforms rural communities' quality of life. One of the primary objectives of land consolidation is to enhance agricultural productivity. By creating larger and more compact land parcels, farmers can implement modern machinery, irrigation systems, and optimized cultivation practices, leading to increased yields and improved farm operations.

Characteristics of Land Consolidations

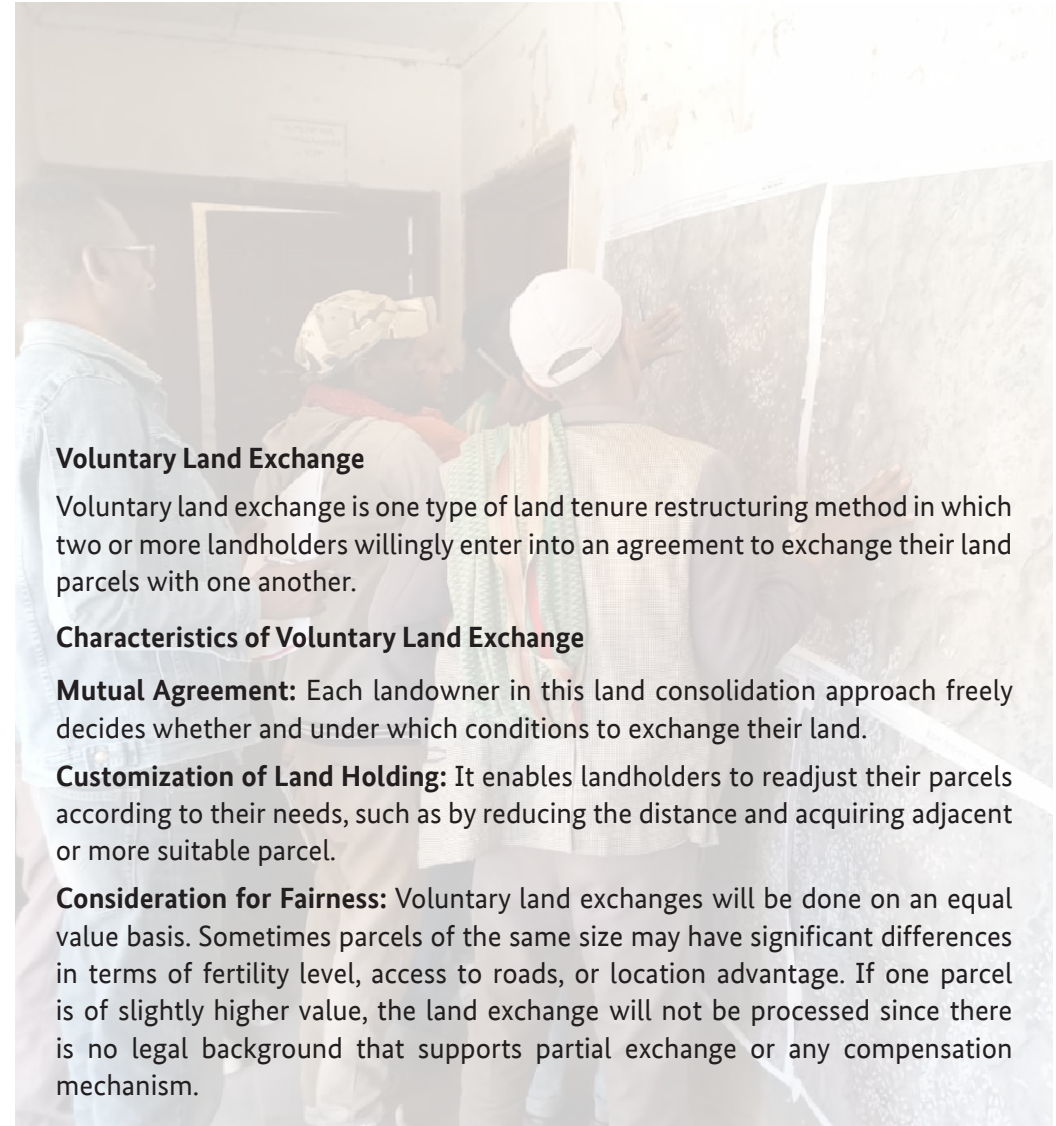
Majority-Based Approach: Land consolidation typically requires the cooperation and consent of landholders. The majority of landowners, ranging from 70% to 95%, are willing to participate and accept the consolidation of their land parcels, which fosters a collaborative and inclusive approach.

Merging of Land Parcels: Land consolidation involves the merging and reorganizing of small and fragmented land parcels into larger, compact, and structured plots of land.

Enhancing Access and Infrastructure: Land consolidation often involves the development or improvement of infrastructure, such as access roads, irrigation canals, drainage systems, and farm tracks. These infrastructure enhancements make the land more accessible, improving transportation and facilitating the efficient movement of agricultural inputs and outputs.

Formalization of Land Tenure Rights: Land consolidation supports the formalization and updating of land tenure rights. This process helps clarify and strengthen the legal ownership and use rights of landholders, providing them with greater security and stability in their landholding.

Environmental Benefits: Land consolidation incorporates environmental impact assessments and aims to protect valuable biotopes, archeological and historical sites. It facilitates the adoption of more efficient and sustainable land use practices, helping to conserve natural resources like forests, wetlands, and biodiversity.



Voluntary Land Exchange

Voluntary land exchange is one type of land tenure restructuring method in which two or more landholders willingly enter into an agreement to exchange their land parcels with one another.

Characteristics of Voluntary Land Exchange

Mutual Agreement: Each landowner in this land consolidation approach freely decides whether and under which conditions to exchange their land.

Customization of Land Holding: It enables landholders to readjust their parcels according to their needs, such as by reducing the distance and acquiring adjacent or more suitable parcel.

Consideration for Fairness: Voluntary land exchanges will be done on an equal value basis. Sometimes parcels of the same size may have significant differences in terms of fertility level, access to roads, or location advantage. If one parcel is of slightly higher value, the land exchange will not be processed since there is no legal background that supports partial exchange or any compensation mechanism.

Challenges to implementing land consolidation in Ethiopia and project’s intervention areas

Challenges

- 1 Weak legal & institutional framework regarding land consolidation
- 2 Lack of experience in implementing participatory land instruments such as land consolidation
- 3 Low technical and managerial capacities in steering complex participatory and technical processes
- 4 Little knowledge and awareness of land consolidation and other instruments to tackle fragmentation
- 5 Co-existence of multiple land tenure regimes (legal-administrative, informal-customary, and market-driven)
- 6 General skepticism towards state-driven land interventions due to failed historic land re-distribution efforts
- 7 Partly contradicting development strategies in the agriculture sector

Intervention

The Land Governance Projects phase I (01,2020 – 03.23) aimed to create the necessary precondition to implement participatory land consolidation (LC) procedures.

The project comprises 4 outputs, purposely designed to tackle land fragmentation by addressing legal, institutional, and administrative bottlenecks to implement land consolidation.

Outputs

- | | | |
|---|---|------------|
| 01 | Piloting LC preparation procedures | 2 4
5 6 |
| Gathering experience in land consolidation procedures and voluntary land exchange | | |
| 02 | Capacity development on land consolidation | 2 3 |
| Strengthening the capacities of authorities and private service providers engaged in LC | | |
| 03 | Strengthen legal, institutional, and policy framework conditions | 1 5
7 |
| Developing guidelines, supporting policy, and drafting law development for improving procedures of LC | | |
| 04 | Strengthen capacities on CALM implementation | 3 |
| Needs-based support in coordination with other partners | | |



Piloting of majority-based land consolidation in the Amhara region

During the pilot phase, preparation of majority-based land consolidation was piloted in six kebeles. Additionally, voluntary land exchange was piloted in an additional six kebeles. The experiences gathered from these pilots were instrumental in building political and institutional learning.

- Majority-based land consolidation requires the participation and consent of the landholders in the design and implementation of the process. Land consolidation is also a relatively new concept in Ethiopia. Therefore, to foster community engagement and raise awareness about the process of land consolidation, 8,800 landholders were reached and participated in the awareness-raising campaign.
- Landholders in the 6 pilot kebeles elected a Land Consolidation Committee (LCC), who could convey the landholders' interests and concerns while actively participating in the land consolidation process alongside regional and woreda land administration experts. To equip the LCC with the necessary skills and advise and guide landholders, comprehensive training was provided. The training focused on the objectives, processes, and potential benefits of land consolidation. The LCCs also received detailed information about the project and its intended outcomes.
- To establish a solid foundation and enable an evidence-based land consolidation process, a Socio-Economic Baseline Study of Land Consolidation was conducted. This study served as a reference point for understanding the current socioeconomic conditions and provided valuable insights. Building upon the piloting experiences, guidelines for decision-making in awareness-raising and preparation were developed and shared with the project partners for their input and consideration.



Community Meeting in Emashenkoro - Project Pilot Area



Capacity development on land consolidation

To ensure ownership, participatory management, and transparent implementation of land consolidation, more than 150 bureau heads, land administration experts from federal to Kebele level, and Woreda Technical Teams were trained.

The training focused on enhancing the technical, managerial, and soft skills of the relevant stakeholders in designing, implementing, and monitoring land consolidation.



Managerial: Integrating international best practices and local knowledge, training on the principles of land consolidation, methodology, and best practices was conducted. Through discussion and exchange with Land administration experts, a locally adopted land consolidation process was designed.



Technical: AutoCAD Civil 3D training was provided for land administration experts to enhance their technical capabilities and utilize the software to effectively design, analyze, visualize, and document the entire consolidation process, leading to more efficient and successful outcomes.



Soft skills: Rearranging land parcels, demarketing new boundaries, and assessing land value involves complex decision-making processes. In this regard, experts were also coached on stakeholder engagement and fostering collaboration with various actors.

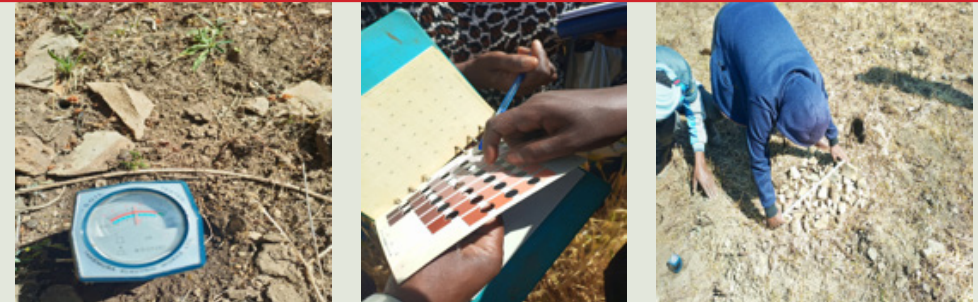
In addition to the trainings, a study tour to Germany was organized to expose land administration experts to innovative, sustainable, and best practices that could be adopted in the local context. It also opened the way for future collaboration and partnership between the two countries.



Strengthen legal, institutional and policy framework conditions

Based on the piloting experience, technical guidelines adapted to the local land tenure context were developed and submitted to the Ministry of Agriculture (MoA). These guidelines encompass various thematic areas necessary for proper land consolidation, providing a solid foundation for initiating and implementing a fair and transparent land consolidation process on a regional level, but also scaling up on a national level with adjustments to the specific regional socio-economic and geographic context and landholders' needs.

- A transparent and participatory assessment of the value of individual parcels is crucial for fair land exchanges. All landholders should be “better off” after the land consolidation. Elaborating a procedure for determining comparable land valuation to ensure equitable compensation for landowners is key. Thus, a guideline on land valuation and equitable compensation has been developed. Additionally, an Open Source-based GIS application called “Land Consolidation Toolbox” was developed and utilized, based on digital spatial information from the Amhara region, to automate land valuation, prepare re-allocation plans, and produce maps.
- Infrastructure development, such as access roads and irrigation systems, is an integral part of land consolidation. To integrate different sectoral planning needs, a plan of common and public systems (infrastructure plan) needs to be developed in land consolidation projects, taking into consideration the local context, available resources, and existing capacity. LaGo supported the development of a plan of common and public systems to standardize the infrastructure plans.
- Land consolidation is a process that involves the public authority and landholders for its design and implementation. It also requires various decisions to be made at that different stages of the process. To facilitate the decision-making process, a technical guideline on the decision-making process in the preparation and awareness – raising phase was developed.



Field Land Valuation

- Furthermore, the nominated national task force for law development has been advised on the development of a draft land consolidation law. This law is essential to provide the legal framework for conducting land consolidation activities, ensuring fairness, transparency, and effective implementation of land consolidation projects to benefit landowners, promote agricultural productivity, and drive rural development.
- Further studies on the socio-economic impact of land fragmentation in the highlands of Ethiopia, as well a baseline study for land consolidation, were conducted, and presented to the relevant partners.



Women landholders participating in the decision making process



Ato Tigistu giving a welcome speech during the National Land Conference



ToT on Natural Resource Land Administration Information System (NRLAIS)



Strengthen capacities on CALM implementation

More than 200 land administration experts underwent training on the utilization of NRLAIS to support MoA's digitization of land registration and issuance of SLLC under the national flagship Climate Action through Land Management (CALM) program. The training focused on experts working in the land administration bureau, and provided Training of Trainers (ToT) to experts to ensure the dissemination of knowledge and skills to a broader range of experts. Land administration experts were also directly trained to support them with their everyday utilization.

The trainings focused on:



- Enhance the capacity of land administration bureaus in effectively utilizing NRLAIS, leading to improved and streamlined land registration and certification services for landholders.



- Data accuracy and validity, with the goal of reducing land-related disputes and fostering better relationships between experts and landholders.

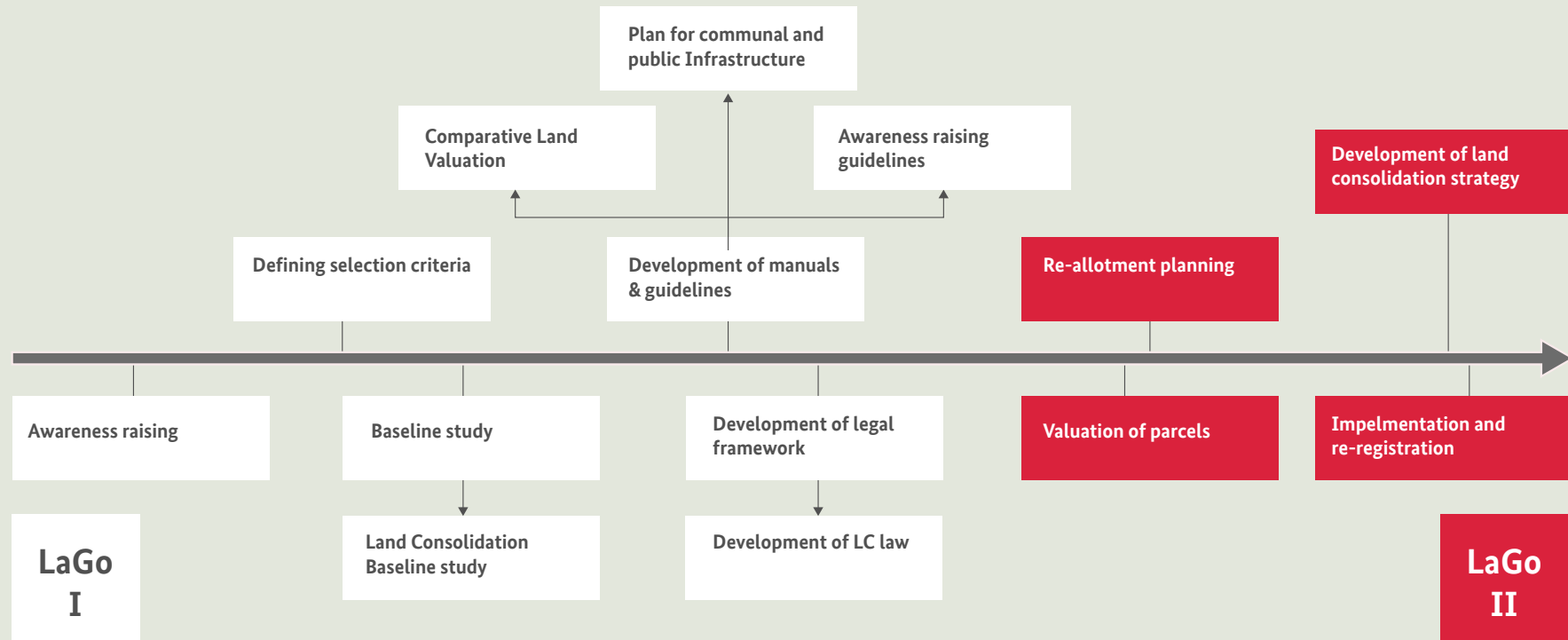


- Monitoring and evaluation of CALM to ensure proper implementation, draw best practices and address any shortcomings.

Additionally, the LaGo project, together with key project partners supported in organizing the first National Land Conference. The conference brought together more than 100 federal and regional political leaders, experts, scholars, and development partners. The multi-stakeholder dialog forum facilitated ideas exchange and encouraged local and international mechanisms and solutions to enhance rural land development.

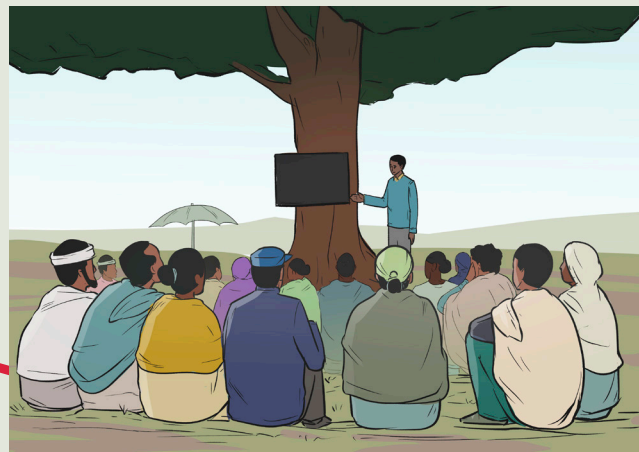
Land Governance Project

Land Consolidation Process and Project Progress



Mechanism for Land Consolidation Committee (LCC)

Constant exchange with the community to factor their interest, and needs and build consensus and cooperation throughout the process



Landholder support as key selection criteria for LC area

Woreda Technical Team established to moderate the public participation

The Land Governance II Project: following on the experience made during the preparation of land consolidation in the LaGo 1 project, the second phase of Land Governance project aims to establish land consolidation a tool to improve land governance.

The objective comprises of the following 3 components:



1

Successful implementation of land consolidation in the pilot areas, where the land consolidation process has been piloted, and developing a climate- and gender sensitive land consolidation implementation strategy based on piloting experience.



2

Embedding land consolidation into agricultural services provision and overarching agriculture strategies.



3

To enhance the technical capacities of land administration experts, to develop and implement land consolidation

Together with the Ministry of Agriculture (MoA), Amhara, Bureau of Land (BoL) and Sidama Land Administrations and Use Directorate (LAUD) a



Participative



Inclusive



Gender - Sensitive



Climate - Sensitive

approaches are followed in establishing transformative land governance.

Outputs

1

Successful implementation of land consolidation in the pilot areas

2

Land consolidation is embedded into agricultural service provision, and a comprehensive multi-instrument strategy to address land fragmentation is in place

Change process

- Learn from the pilot project experience to refine land consolidation procedure for further upscaling
- Based on the pilot experience, advising MoA on the legal and strategic framework of land consolidation, including a financing mechanism for future land consolidations
- Enhancing the capacity of land administration experts to conduct and monitor the land consolidation process.
- Elaboration of the developed manuals guidelines and provide recommendations for improvement.
- Capacity development of partner organizations to manage public participation, including a transparent complaints mechanism

- Capacity development of partner organization to streamline service to consolidated areas.
- Establishing a platform to facilitate collaboration between different public and private agricultural service providers
- Develop synergies and combinations with other methods to tackle land fragmentation and advise decision-makers in their application

All outputs and change processes leading to the development of **gender and climate-sensitive land consolidation strategy** to be used as a key instrument for land consolidation

Outputs

3

To enhance the technical capacities of land administration experts, to develop and implement land consolidation

Change process

- Organizational and capacity development for fit-for-purpose land administration from the regional level to the woreda level
- Roll-out of the cadastral network based on the existing NRLAIS
- Support the establishment of the Centre of Excellence for Land Administration, a training and further education mechanism



Land Governance II Project (LaGo II)

Boosting agricultural productivity and secure land tenure rights through land consolidation

Participatory Land Consolidation Process

To provide landholders with fewer, larger and better-accessible parcels



1 The project is formally announced by the local authorities and community members receive information on it.



2 The community nominates 6 - 10 trustful and knowledgeable persons into their Land Consolidation Committee.



3 To better understand the current situation, various information (e.g. on living conditions, soil quality, land valuation, infrastructure) is collected.

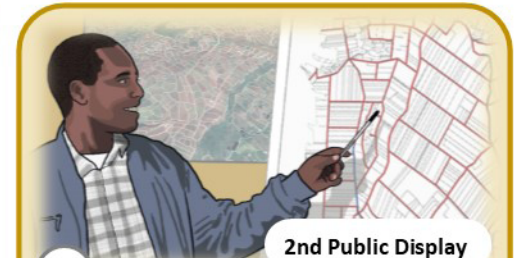


1st Public Display

4 All landholders confirm (or revise) the information on their landholdings and parcel values. All their preferences (e.g. farming locations) are documented.



5 A Land Consolidation Plan is developed based on the landholders preferences. This LC Plan is supported by an Infrastructure Plan.



2nd Public Display

6 The Land Consolidation Plan and Infrastructure Plan are explained to the community. Each landholder receives information on the proposed changes.



7 Several public hearings are organized to discuss the Land Consolidation Plan and supporting Infrastructure Plan. If needed, the plans can be adjusted.



8 Once the Land Consolidation Plan is approved by the community, the landholders agreements on the proposed land transfers are documented.



9 The new parcel boundaries are demarcated. The new landholders' rights are documented and second level land registration certificates issued.

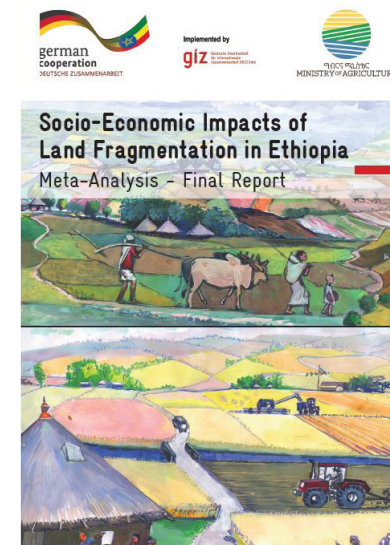
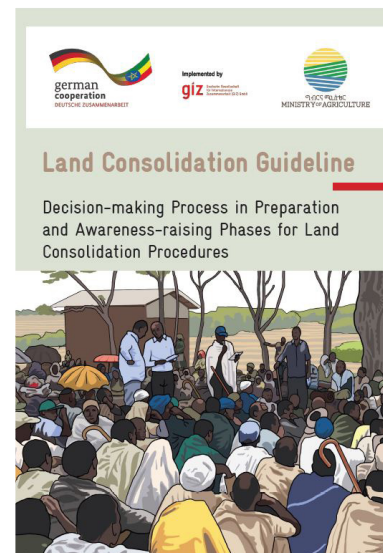
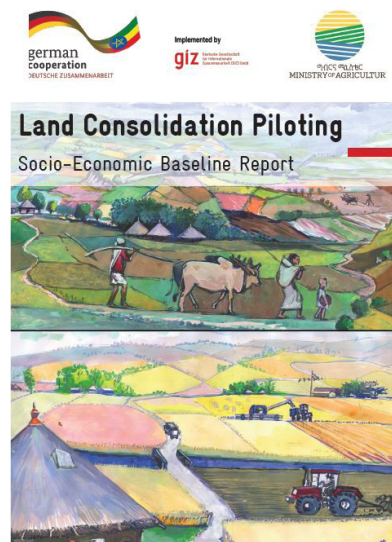
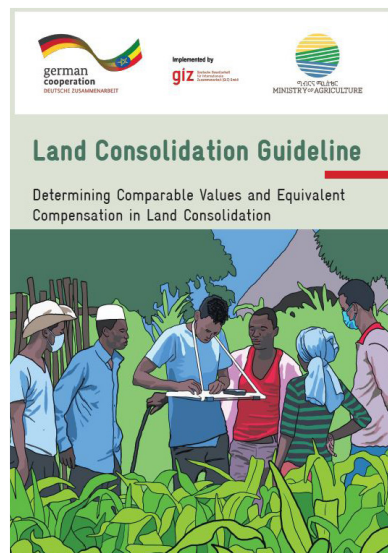


10 The supporting infrastructure is constructed by a local company with support from the community.

Publications

Project studies and technical guidelines developed as part of Land Governance I projects, together with our key stakeholders

1. Draft Land Consolidation law
2. Socio – Economic Baseline Study of Land Consolidation
3. Socio – Economic Impact of Land Fragmentation
4. Plan for Common and Public Systems (Infrastructure Plan)
5. Decision Making Process in the Preparation and Awareness Phases for Land Consolidation Procedures
6. Determining Comparable Land Value and Equivalent Compensation in Land Consolidation



Published by the

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices

Bonn and Eschborn, Germany

Land Governance II

Rahem Bldg, Diaspora Square, Megenagna
P.O.Box 100009, Addis Ababa, Ethiopia
Phone +251 (0)11 662 8880/84
Fax +251 (0)11 662 9975
<https://www.giz.de/en/worldwide/336.html>

As of

June 2023

Contact

Ulf Neupert
Project Manager
E ulf.neupert@giz.de
M +251 (0) 985054961

Design & Illustration

Eternal Media

Photo credits

GIZ/Abinet Shiferaw, 2019
GIZ/Abiyu Mekonen, 2022
GIZ/ Digital Birhan Communication, 2020
GIZ/LaGo, 2021
GIZ/ PILUP
GIZ/SUERD, 2019

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)

