



The Fit for Purpose Land Administration Approach of RELAPU

6

Responsible Land
Policy in Uganda
(RELAPU)





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Abbreviations

ADR	Alternative Dispute Resolution
ALC	Area Land Committee
CCO	Certificate of Customary Ownership
CoO	Certificate of Occupancy
COTS	Commercial off-the-shelf Software
CRISP	Cadastre and Rights Inventory Saving Paper
FFP LA	Fit for Purpose Land Administration
FIG	<i>Fédération Internationale des Géomètres</i> International Federation of Surveyors
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</i> German International Cooperation
GLTN	Global Land Tool Network
GNSS	Global Navigation Satellite System
ICT	Information and Communication Technology
LADM	Land Administration Domain Model
LIP	Land Inventory Protocol
MLHUD	Ministry of Lands, Housing and Urban Development
RELAPU	Responsible Land Policy in Uganda
SEWOH	Special Initiative One World No Hunger
VDRT	Village-based Dispute Resolution Team



Introduction

Uganda has been struggling to maintain a conventional (European-type) land administration system for a long time but has faced many challenges including lack of funding, inadequate skill force and long-winded procedures. Up to present, the country has only managed to record less than 20 per cent of the land rights. Similar circumstances can be found in many countries in the world. An often-cited estimate indicates that seventy percent of the world’s population is lacking security of tenure¹.

The aim of securing tenure rights for all citizens using limited financial resources and low capacities has led to alternative approaches popularly known as Fit for Purpose Land Administration (FFP LA) which focus on the main purpose of securing land tenure for all. The FFP LA was designed to meet the basic needs of the population, be the best “fit” for achieving the purpose (“as little as possible – as much as necessary”) and shall allow for incremental upgrading and improvements over time.

The FFP LA concept considers the cultural, social, economic and political context of a country to build the components of land administration to benefit all members of society. It is defined according to three broad characteristics: focus on purpose, flexibility and incremental improvement. Although the FFP approach is a relatively new concept, it has received recognition and endorsement by the World Bank, the International Federation of Surveyors (FIG), UN Habitat/Global Land Tool Network (GLTN) amongst others.

The GLTN has developed Guiding Principles for Country Level Implementation of FFP LA², which can be adapted to the needs and wishes by the countries. The guiding principles are not prescriptive but should provide direction and structured guidance for building the frameworks of land administration. The FFP approach is subdivided into three frameworks: spatial framework, legal framework and institutional framework. Each framework consists of four key principles:

The Key principles of the FFP Approach

Key principles		
Spatial framework	Legal framework	Institutional framework
<ul style="list-style-type: none">• Visible (Physical) boundaries rather than fixed boundaries.• Aerial/satellite imagery rather than field surveys.• Accuracy relates to the purpose rather than technical standards.• Demands for updating and opportunities for upgrading and ongoing improvement.	<ul style="list-style-type: none">• A flexible framework designed along administrative rather than judicial lines.• A continuum of tenure rather than just individual ownership.• Flexible recordation rather than only one register.• Ensuring gender equity for land and property rights.	<ul style="list-style-type: none">• Good land governance rather than bureaucratic barriers.• Integrated institutional framework rather than sectorial silos.• Flexible ICT approach rather than high-end technology solutions.• Transparent land information with easy and affordable access for all.

¹ McLaren, R. (2015). *How Big is Global Insecurity of Tenure?* GIM International, Nov. 2015. Available at:<http://member.gim-international.com/Geomares/magazine/gim/magazine.jsp>

² <https://gltn.net/download/fit-for-purpose-land-administration-guiding-principles-for-country-implementation/>



This brochure gives an overview how the project Responsible Land Policy in Uganda (RELAPU) matches the FFP LA approach by comparing the FFP key principles with its individual concept, including a focus on the spatial framework and the used data collection tool CRISP (Cadastre and Rights Inventory Saving Paper) used by RELAPU.

The GIZ project “Responsible Land Policy in Uganda (RELAPU)” aims to improve *“Access to land as a key prerequisite for poverty and hunger reduction in rural areas for certain population groups, especially women and marginalized groups, in Central and East Uganda”*.

RELAPU is working in Teso (Soroti and Katakwi districts), Eastern Uganda, Lango (Dokolo and Amolatar Districts), West Nile (Arua District) and in Central Uganda (Mityana, Mubende and Kassanda districts).

The project is part of the Global Project Responsible Land Policy and belongs to the Special Initiative One World No Hunger (SEWOH) of the German Federal Ministry for Economic Cooperation and Development (BMZ).

The component “Improvement of Land Governance in Uganda to increase productivity of small-scale farmers on private Mailo-land” (ILGU) is part of the RELAPU project and is co-funded by the European Union and the German Government. Both, RELAPU and ILGU, are implemented by the German International Cooperation (GIZ).

The Fit for Purpose Land Administration Approach within RELAPU

1. Spatial Framework

The spatial framework supports recording the occupation and use of land. In conventional land administrative systems, high standards for cadastral surveying and mapping are required. However, the FFP LA approach includes following principles:

1.1 Visible (physical) boundaries rather than fixed boundaries

The “visible boundaries” (general boundaries) approach presupposes that boundaries are easily identified in aerial/satellite imagery by physical features in the field such as fences, hedges, walls and ditches. Based on these boundaries, the connected land rights can be described and agreed to by the parties in a participatory process without further fieldwork. The advantage of this method is the avoidance of expensive and time-consuming field surveys and boundary monumentation.

The RELAPU approach: In Uganda it is not common to enclose rural properties. Most boundaries cannot be identified on aerial images due to landscape and vegetation and need to be captured by field surveys. In addition to that, the

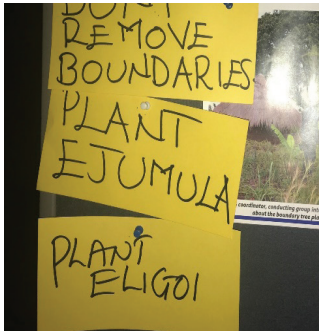
The Area Land Committee is the lowest land administration institution in the decentralized land administration structure of Uganda and is based at the sub-county level.



■ The Fit for Purpose Land Administration Approach in RELAPU

Ugandan land law prescribes the demarcation of corner points and the survey of the land concerned (fixed boundaries). The traditional systems promote the planting of boundary trees locally known as *Ejumula* (*Jatropha curcas*/Physic nut) and *Eligoi* (*Euphorbia tirucalli*/firestick plant) in Northern Uganda or Oluwanyi (*Genus of Dracaena*/) in Central Uganda that have special attributes of resisting drought, fire and do not spread across the boundary. This helps to prevent

boundary conflicts. The land law in Uganda not only allows for the use of customary boundary marks but expressly prescribes it for customary land. This reduces the costs of demarcation. Hence, the RELAPU project uses local planting material as a way to fix agreed upon boundaries. This is done during the land inspections by the Area Land Committees (ALC) in the presence of the owners, neighbours and any other interested persons.



Appeal for boundary demarcation



Tree planting during the land inspection by the ALC



Field assistant carrying Eligoi cuttings for boundary marking

1.2 Aerial/satellite imagery rather than field surveys

The preferred FFP option is the identification of boundaries from high resolution satellite imagery or ortho-rectified aerial images. Field surveys should be only done to complement image interpretation or where the boundaries may not be visible from the image. In this case low cost equipment such as handheld GNSS devices and open source software are recommended.

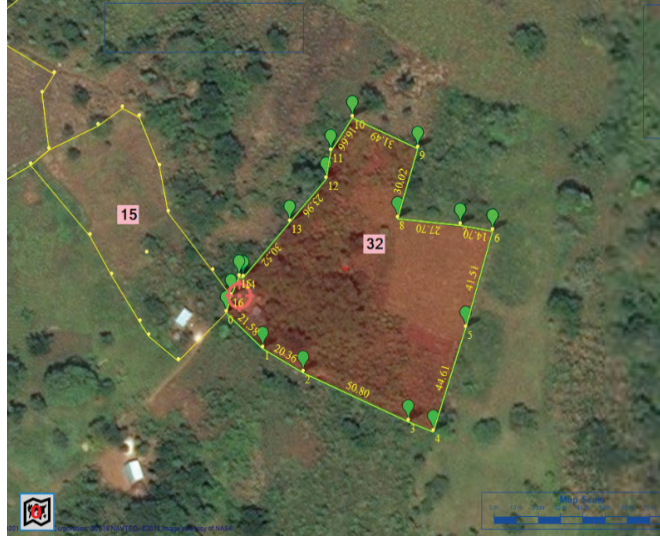
The RELAPU approach: RELAPU is using recent ortho-rectified aerial images as background maps (base map). The images were provided by the Ministry of Lands, Housing and Urban Development (MLHUD) taken in the years of 2017-2019. As it is not possible to extract the boundaries from the images, RELAPU is undertaking field mapping with low-cost GNSS (handheld ones on customary land and professional ones on poles on private Mailo land tenure in Central Uganda) and the

GNSS stands for Global Navigation Satellite System, and is an umbrella term that encompasses all global satellite positioning systems. This includes constellations of satellites orbiting over the earth's surface and continuously transmitting signals that enable users to determine their position.



open source software CRISP installed on tablets.

According to the Land Act but also customary practices, all owners, neighbours and witnesses need to walk around the portion to be mapped to certify the boundaries. It supports the acceptance and recognition of the process that the corner points are marked jointly with trees as well as the coordinates are captured together.



In field mapping, the boundaries are demarcated and documented using GNSS equipment and open source software (CRISP).

1.3 Accuracy relates to the purpose rather than technical standards

Meeting the technical standard requires advanced equipment which can put the cost beyond the value of the land. Instead, the value of the land and geographical conditions should determine the accuracy of mapping. Higher accuracy may be justified in urban areas where the parcels are small and more valuable. In contrast, most rural land is relatively large in size and of relative low monetary value.

The RELAPU approach: RELAPU is only working in rural areas, henceforth high accuracy in mapping is not necessary. The GNSS devices used are accurate within a 2-3m radius under open sky. This is adequate for the purpose of knowing the approximate size, shape, dimensions etc of

the respective piece of land as required by the Land Regulations. Spatial information is picked in the process of demarcating the corner points. This is the basis for portion maps and aids the Area Land Committee to draw their sketches on the official forms in a much higher quality than before.

1.4 Demands for updating and opportunities for upgrading and ongoing improvement

The used system should offer the possibility for upgrading and improvement. For example, the accuracy of mapping land parcels may be improved through cadastral surveys, e.g. when the value of land increases.

The RELAPU approach: The possibility of upgrading a Certificate of Customary



Ownership (CCO) to a Certificate of Title (Freehold) for land that is under customary tenure is already provided by the Land Act³. In such a case the land concerned has to be surveyed by a professional land surveyor under the Survey Act with a higher accuracy and can be registered under the provisions of the Registration of Titles Act, 1924.

The RELAPU project is working with its awareness raising partners to disseminate information to the communities about future updates in case of new births, deaths, subdivisions, transfers among others. This is to ensure that the people know what to do when they face these situations and to ensure that the documents will correlate with what is on the ground (up-to-date).

2. Legal / Regulatory Framework

The legal / regulatory framework refers to laws, policies, regulations and procedures of the land administration government. These should be designed flexible and recognize formal and informal rights. Hence, the FFP LA approach includes following principles:

2.1 A flexible framework along administrative rather than judicial lines

Processes such as adjudication, recordation and dispute resolution should be regulated through flexible and simple administrative lines.

The RELAPU approach: In Uganda, the processes of securing customary land rights are already organized in a decentralized environment at the lower local governments

(Area Land Committees, Physical Planning Committees, Recorders) and the districts (District Land Boards).

The RELAPU project is characterized by the intensive involvement of local Civil Society Organizations (CSO), local governments and land management institutions. GIZ is supporting the local partners logistically and financially, however the task and responsibility for implementation and control of the project remain with the partners. This promotes sustainability but also identification with the objectives of the project as well as acceptance by partners and population. In this way the capacities of the mandated local land administration structures at sub-county level are being established.

In addition to that, RELAPU works together with CSOs to provide Alternative Dispute Resolution (ADR) mechanisms to the communities, mostly through mediation. These approaches are usually easier to access, faster and less costly than the formal court systems which have proved to be very expensive, detached, and too bureaucratic and hence not beneficial to the underprivileged members of society. The judicial system is already blocked by land-related disputes and does not provide adequate solution.

ADR mechanisms also support harmony and peaceful coexisting in the communities, since the involved parties are working on solutions together. These solutions should be acceptable for all. Judicial systems tend to provide judgement whereby one party wins and the other loses.

Therefore, Village Dispute Resolution Teams (VDRT) are created within the RELAPU project areas, with the focus of incorporating traditional structures where possible.

³ Land Act, 1998 as amended





Customary land owners after solving their boundary conflict through ADR

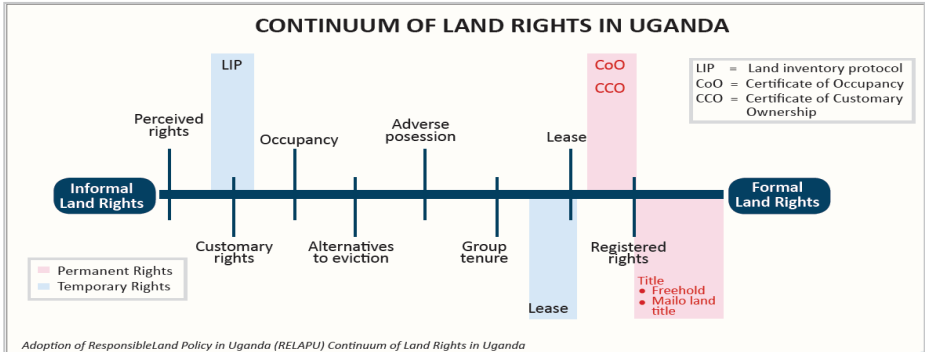


2.2 A continuum of tenure rather than just individual ownership

Apart from individual freeholds or leaseholds, other tenure systems like group tenure, informal tenure, occupancies and user rights should be recognised and recorded as well encompassing both de facto (in fact) and de jure (in law) rights.



The RELAPU approach:



All households will be supported to acquire informal Land Inventory Protocols (LIP) in a first step, which is a social document providing evidence of their claims. If they wish, Certificates of Customary Ownership (CCO) for customary tenure or Certificates of Occupancy (CoO) for land-use rights on private Mailo can be processed in a second step.

In the case of Teso, all stakeholders and the local leadership agreed to encourage willing households to immediately apply for CCOs. Today, almost 100% of all households interested in having their land ownership rights documented apply also for a CCO. In Central Uganda, the issuance of CoO is still at pilot stage as it is more complex in nature due to the dual, overlapping land rights of landlords and tenants. Here issuance of LIPs remains the main output.

In case of customary land portions are located near natural resources (wetlands, rocks etc), the two-step approach becomes relevant since not for all of the portions CCOs can be issued if they are fully or partially within the buffer zone around these natural resources. In these cases, at least LIPs can be issued to

document the claim of the household, with a potential of CCOs being issued in future once boundaries of wetlands and their buffer zones have been properly established by the relevant authorities.

The Land Act allows for conversion of customary land to freehold for those owners who want to see their land properly surveyed by a professional land surveyor.

2.3 Flexible recordation rather than only one register

The objective of the FFP approach is to develop a nationwide land administration system with special emphasize on providing security of tenure for all. However, flexible recordation should ensure the registration of legitimate land rights as well as rights that are not permitted in formal registers.

The RELAPU approach: The RELAPU project stores the data of land registration (GNSS coordinates and personal data of the land owners and tenants) in a digital database. Besides, the RELAPU project issues Land Inventory Protocols (LIP) a non-official



social document which entails information on the household (on customary land also with a family land rights and lineage tree, and the name of the clan), the boundaries of the land with coordinates, names of neighbours, the usage of the land and so on. It serves as social evidence of the land right claim for the household before a CCO is issued.

The final recordation of customary land rights at the Recorder's office in the formal register enables the integration of data in the National Land Information System (NLIS) in the future.

2.4 Ensuring gender equity for land and property rights

Despite progress on women's rights, rights to land and secure tenure are not enjoyed equally in many parts of the world. The rights of women and children should be considered during the process identification and recordation of land rights.

The RELAPU approach: Women and men have equal rights concerning land rights. The Ugandan Constitution 1995 recognizes women and men as equal (Article 26). Besides, the legislation allows the registration of land in the name of households which includes the recordation of land rights of men, women and children. Any scenario is possible, e.g. the registration of land in the name of three brothers and their two sisters.

The RELAPU project focuses on marginalized groups, like women and people with disabilities, and raises awareness about equal land rights in the communities

through trainings, awareness raising including drama plays in the villages, radio talk shows, radio spot messages, or bulk mobile texts.

3. Institutional Framework

The institutional framework provides the basis for stable institutions which are responsible for implementing land policies and distributing land equitably in accordance with the legal framework for land governance. The FFP LA approach is designed to manage the rights and use of land and natural resources and to deliver accessible services according to the following principles.

3.1 Good land governance rather than bureaucratic barriers

Good governance means that government is well managed, inclusive, and results in desirable outcomes. Features of good governance include accountability, political stability, government effectiveness, regulatory quality and rule of law, as well as control of corruption. Institutions should be located close to the people and processes for land administration should be simplified. This includes fast registration, easy access to information and simple land transaction.

RELAPU approach: The services are offered by the legitimate institutions and they are sustainable and locally responsive. Beyond that, the processes are well structured, and the involved personnel and institutions are well trained and empowered by the RELAPU project.



Due to intensive awareness raising measures, the application, mapping and registration processes are transparent to beneficiaries and stakeholders. Additionally, land clinics and alternative dispute resolution measures are offered to the beneficiaries to solve emerging land conflicts.

However, due to legal requirements the entire process (e.g. documents for application and land inspection, inclusion of physical planning aspects) remains quite bureaucratic and cumbersome.

Attempts are being made to simplify the process, for example to digitally produce the certificates and have them printed instead of using type writers.

3.2 Integrated institutional framework rather than sectorial silos

To improve the land administration service, responsible institutions should be coordinated to conduct joint planning and exchange information.

RELAPU approach: The RELAPU project focuses on customer needs and involves all relevant institution of different levels⁴. Besides, it engages clan leaders to infuse their social governance role into the management of customary tenure. The key of the success of the project is the involvement of all stakeholders and the communication and agreement between them.

3.3 Flexible ICT approach rather than high-end technology solutions

The technological solutions should be cost-efficient and should follow a sustainable user-driven design. Instead of commercial-off-the-shelf software (COTS), open source solutions are recommended.

RELAPU approach:

- This principle is connected very much to RELAPU's spatial framework approach where low-cost GNSS devices and field tablets are used.
- The RELAPU project chose an open source software named CRISP⁵ as a flexible and cost-efficient technological solution for mapping and data capturing customized to the interest of the user groups, with inputs from the stakeholders whose engagements are critical such as the Ministry.
- Open Source PostGres/PostGIS and QGIS are used for spatial data management and viewing, editing and analysis.
- Taking into account the very limited technical infrastructure at sub-county level no ICT solution is provided by the project for the registration component but RELAPU supports analogue registration.

⁴ This includes the Ministry, Districts, Sub-Counties, CSOs and clan leaders at all levels.

⁵ CRISP will be presented in detail in the second part of the brochure.



3.4 Transparent land information with easy and affordable access for all

The process of land registration and administration should be participatory. Therefore, the information in custody of land institutions should be freely accessible in consideration of private and confidential data. Although the Government of Uganda did not yet implement an Open Data Policy such principles are already enshrined in the Access to Information Act, 2005. This act provides for the right of access to information pursuant to article 41 of the Constitution and it states that “Every citizen has a right of access to information and records in the possession of the State or any public body, except where the release of the information is likely to prejudice the security or sovereignty of the State or interfere with the right to the privacy of any other person.”

RELAPU approach: RELAPU is supporting and capacitating the recorders at sub-county level which will ease access to land information. All necessary tools for the recordation are provided.

As explained earlier, the RELAPU project issues LIPs before CCOs are issued. This provides the households with information about their land before the process is completed. The LIPs are then also used as supporting documents during the review process of the CCO applications by the District Land Boards.

Conclusion

Comparing the GIZ RELAPU approach with the key principles of the FFP LA it is evident that the project is following all three frameworks, especially in legal and institutional terms. Also, the spatial framework principle is observed largely, however the RELAPU approach had to get adapted to the legal requirements existing in the project areas: demarcation of corner points, planting of boundary trees and adjudication on the ground. Hence, field mapping is undertaken with low-cost GNSS and the open source software CRISP installed on tablets, instead of the exclusive use of orthophotos.

KEY PRINCIPLES		
Spatial framework	Legal framework	Institutional Framework
<ul style="list-style-type: none"> ✓ Visible (physical) boundaries rather than fixed boundaries. ✓ Aerial / satellite imagery rather than field surveys. ✓ Accuracy relates to the purpose rather than technical standards. ✓ Demands for updating and opportunities for upgrading and ongoing improvement. 	<ul style="list-style-type: none"> ✓ A flexible framework designed along administrative rather than judicial lines. ✓ A continuum of tenure rather than just individual ownership. ✓ Flexible recordation rather than only one register. ✓ Ensuring gender equity for land and property rights. 	<ul style="list-style-type: none"> ✓ Good land governance rather than bureaucratic barriers. ✓ Integrated institutional framework rather than sectorial silos. ✓ Flexible ICT approach rather than high-end technology solutions. ✓ Transparent land information with easy and affordable access for all.



CRISP: Cadastre Register Inventory Saving Paper

Introduction

The FFP LA approach is focusing on establishing a spatial framework to secure land rights for all. This is due to the concern of over-prescribed requirements for surveying and marking that can be a major barrier in terms of costs, time, and available capacity. In addition, there is often an over-prescription of systems with high-end, expensive to maintain, enterprise geographic information systems and relational databases. FFP LA considers open source solutions.

GIZ RELAPU is following this consideration and relies in the process of capturing and management of land rights data on an open source software called Cadastre Register Inventory Saving Paper (CRISP). CRISP has been commissioned by GIZ and was developed on the Land Administration Domain Model (party, right, and parcel). The software has been designed to fit to the specific context and needs of land administration in several countries.

In Uganda, it can be used for registration of customary land

Did you know?

The term “open source” refers to something people can modify and share because its design is publicly accessible.

Open-source software (OSS) is a type of computer software whose source code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose.

“Source code” is the part of software that most computer users don’t ever see; it’s the code computer programmers can manipulate to change how a piece of software—a “program” or “application”—works.

Open-source software should meet the following criteria:

- The program must be freely distributed
- Source code must be included in the program
- Anyone must be able to modify the source code
- Modified versions of the source code may be redistributed
- The open-source software license must not require the exclusion of, or interfere with, the operation of other software



rights and rights of tenants by occupancy on Mailo land. All attributes related to the right claimants as required by the Uganda Land Regulations 2004 are captured in CRISP, using simple tablets.

WHAT is the Land Administration Domain Model?

An international group of *land administration* professionals initiated the development of a standardized data model for land administration (ISO 19152:2012). The Land Administration Domain Model (LADM) covers basic information-related components of land administration including those over land, in water, below the surface, and above the ground.

The common pattern for land administration consist of a “triple”: Object (Spatial Unit) – Right (Rights in rem and/or personal rights) – Subject (Party of the right). The triple is the basic structure for LADM. The standard is an abstract, conceptual model with three packages related to:

- parties (people and organisations),
- basic administrative units, rights, responsibilities, and restrictions (ownership rights),
- spatial units (parcels, and the legal space of buildings and utility networks) with a sub package for surveying, and representation (geometry and topology).

WHAT is CRISP made for?

The collection of land use and users’ data involves a disparate set of skills. CRISP is a software tool for collecting and editing land

use and land user information by means of a variety of surveying and database techniques.

CRISP aims to produce an integrated tool that will allow local field teams to perform everything from the moment they enter a village to the handing over of documentary evidence and the final reports.

WHAT are the technical requirements?

CRISP consists of three software components: a database (PostgreSQL), a spatial database add-on (PostGIS) and the CRISP tool itself. The user is always interacting with the CRISP tool. When operating CRISP, it talks to the other components to collect/access and store data.

CRISP is designed to run on Windows based PC, laptop and tablet computers. Windows 10 is preferable. The software is designed to operate with a mouse, finger/touch screen or stylus, but for rapid entry of textual data, a keyboard is preferable.

One key requirement is that all hardware must have a standard image capturing device (camera) or - if not built into the computer - a USB webcam. However, photos can also be taken and stored with external cameras like smart phones. The system would also allow for the integration of fingerprint readers.

INTEGRATION of background maps and other geometric information

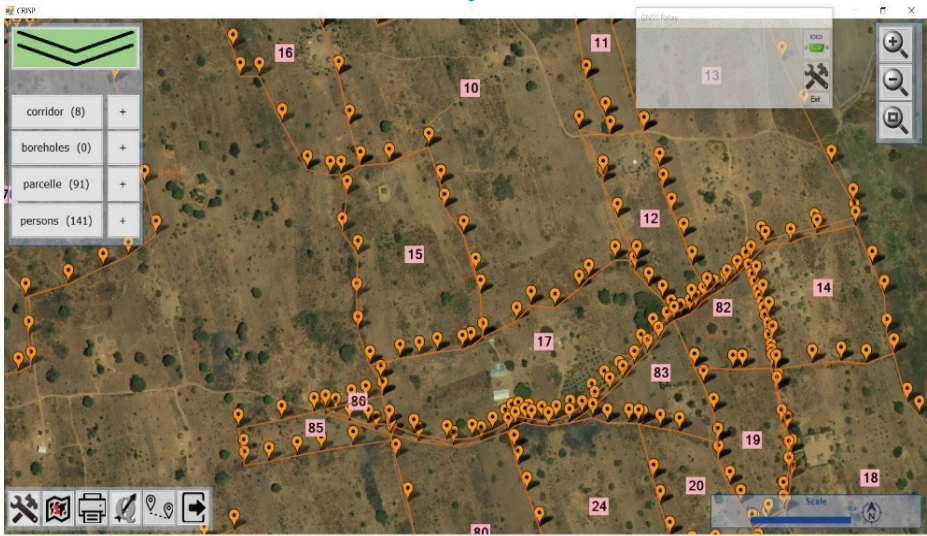
The CRISP map window is the largest item and will display the selected map types and point to the last place it was used.



Shapefiles

The shapefile format is a popular geospatial vector data format for geographic information system (GIS) software which makes geospatial data widely interoperable.

Geographic features in a shapefile can be represented by points, lines, or polygons (areas), representing, for example, water wells, rivers, lakes, administrative boundaries or land parcels.



There are several ways to use digital mapping and aerial or satellite imagery in CRISP. The easiest method is to use CRISP with an online connection to map services like Google Maps or Bing Maps. However, usually the user might not have internet connection in the field. In this case maps can be prestored or the user can also run CRISP with own orthophotos (rectified aerial imagery) which are stored on the computer's hard disk.

CRISP is using a spatial database add-on (PostGIS) which adds spatial field types to the underlying PostgreSQL database. Shapefiles (e.g. village boundaries or wetland boundaries) can be imported and exported directly from this database.



COLLECTION OF PERSON'S DATA

Personal Information can be easily entered into CRISP and it is imperative that this is done before collecting other information, since other records like parcels refer to a person's data that must have already been entered.

Various information can be recorded by photographing: face picture, National ID card or equivalent information such as a thumb print and a family tree (sketch on paper of their family relationships).

It is also possible to collect data of legal entities (juridical persons like churches, NGOs or schools).

SURVEY OF LAND

After data of persons and legal entities have been collected, the user is ready to collect data on portions and their presumed legal relationship to right claimants. This involves not just textual data entry (claimants, neighbours, witnesses, rights and restrictions), but also physical surveying by capturing GNSS data using single GNSS devices or a dual base/rover setting. Collecting positional data with a GNSS receiver is done with the CRISP GNSS relay tool. This tool communicates with the GNSS device and delivers accurate positional data to be logged in CRISP.

CRISP has a variety of tools for making a map of a portion. These have been designed to allow complex survey techniques and equipment to be used even by non-surveyors in the easiest possible way. However, it is also possible to simply digitize positions from the background map (aerial photo) or to snap existing points.

The portions are generated automatically in CRISP, eliminating the errors from post cartographic or map development processes since the lines between captured boundary points are drawn automatically.

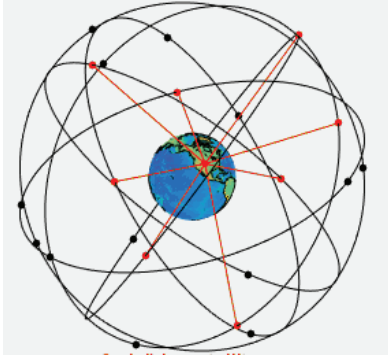
GNSS Survey Methods

GNSS stands for Global Navigation Satellite System, and is the standard generic term for satellite navigation systems that provide autonomous geo-spatial positioning with global coverage.

GNSS refers to a constellation of satellites providing signals from space that transmit positioning and timing data to GNSS receivers. The receivers then use this data to determine location.

Land Surveying is a technique and science of accurately measuring the distances and angles between different points, on the surface of Earth. GNSS is a survey method which uses signals transmitted by satellites that can give you a position with the accuracy the GNSS receiver allows: from cm to several meters.





CRISP also allows for additional pictures of permanent developments on the piece of land and a group photo of the participants at the time of mapping. In addition to that, a sketch map with the screen's content is captured. The sketch map will display the dimensions of the boundaries and the numbers of the corner points.

LAND INVENTORY PROTOCOLS (LIP)

A Land Inventory Protocol (LIP) is a form that is the end-product of the collection process and shall be given to the rights

claimants. Furthermore, it includes additional information e.g. a family land rights tree⁶ (in the case of customary land). It is produced as a PDF file and contains most of the information collected on one individual parcel and the people related to it. The LIP is quicker, cheaper and easier for the households to get than a formal certificate.

Unlike the hand-drawn sketch map which is prescribed for a CCO, a LIP provides a map of the land in scale. The boundary points are georeferenced in a point coordinate register. Nevertheless, a LIP is a social document that provide for evidence of customary land ownership or land occupancy rights as claimed by the person(s) indicated in this document and ascertained by the Area Land Committee, after an inspection of the land. The LIP is issued by the chairperson of the respective Area Land Committee. It serves as a support in case a household applies for an official CCO or CoO and it enables an easy restoration of boundary points. Captured user rights data will form the basis to increase transparency over land use and to subsequent official registration or, in the case of Mailo land, for amicable negotiations with the landlord.

6 Teso only.







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