

Towards securing land rights for all in the Republic of Benin

**Ernst Peter OOSTERBROEK, The Netherlands;
Fabrice Gilles KOSSOU, Benin; Bène TOSSENOU, Benin**

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SUMMARY

The 4-year Benin Land Administration Modernisation Project (PMAF) is in its last year of execution. An LADM-based cadastral system is being developed and will contain all essential functionality by the end of 2022. Cadastral data of about 200.000 parcels are being collected and registered in the national system. Besides these two main axes of the project, there is a strong attention to the position of disadvantaged groups and advice is given in the field of the strategy and financial governance of Benin's national cadastral agency (ANDF) and the legal framework for land administration.

The Dutch financed project is performed by a Dutch consortium consisting of MDF Training & Consultancy, VNG International and Kadaster, with a strong involvement of local staff and consultants, whereas ANDF is the beneficiary.

In the paper the project, its results and its potentials are described following the 9 pathways of the United Nations Framework for Effective Land Administration.

RÉSUMÉ EN FRANÇAIS

Le projet de modernisation de l'administration foncière du Bénin (PMAF), d'une durée de quatre ans, est dans sa dernière année d'exécution. Un système cadastral basé sur le LADM est en cours de développement et contiendra toutes les fonctionnalités essentielles d'ici la fin 2022. Les données cadastrales d'environ 200 000 parcelles sont collectées et enregistrées dans le système national. Outre ces deux axes principaux du projet, une attention particulière est accordée à la position des groupes défavorisés et des conseils sont donnés dans le domaine de la stratégie et de la gouvernance financière de l'Agence Nationale du Domaine et du Foncier (ANDF) et du cadre juridique de l'administration foncière.

Le projet financé par les Pays-Bas, est réalisé par un consortium néerlandais composé de MDF Training & Consultancy, VNG International et Kadaster, avec une forte implication du personnel et des consultants béninois, ainsi que de l'ANDF en tant que bénéficiaire.

Dans ce document, le projet, ses résultats et ses potentiels sont décrits en suivant les 9 voies du Cadre des Nations Unies pour une administration efficace des biens fonciers.

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1. Context

Why this project

The Republic of Benin is an independent country in West-Africa, bordered by Togo, Burkina Faso, Niger, Nigeria and the Atlantic Ocean (Gulf of Guinea). The majority of its approximately 13.7 million inhabitants lives in the southern coastal region, in which both the political capital Porto-Novo and the economic capital Cotonou are situated. The total area of Benin is approximately 113,000 km². [CIA 2022]

Since 2010 Benin has been engaged in an in-depth reform of the land sector. This reform, which covers the legal and institutional aspects as well as the tools for securing land tenure, is based on the *Code Foncier et Domaniale* (Land and Domain Act, CFD), which was implemented in 2013 and modified in 2017. The code addresses the land issue in its entirety and creates a new institutional framework including the National Agency for Land and Property (ANDF) with 1 central and 14 communal offices.

This new legal arsenal also instituted the land register, defined as a tool for securing and managing all administrative and technical documents describing land ownership throughout the country. The management of the land register is legally one of the prerogatives of the ANDF. Despite the strong legal basis, out of the estimated 10 million plots of land in Benin, only about 60,000 have a land title. The main reasons for this small amount are the complexity to fulfil all the conditions for obtaining a land title and the costs of the title procedure. Especially the less wealthy rural and urban citizens do not feel an urgent need to have their property being secured by a land title and/or cannot afford the costs of the procedure. This is an almost general observation in the West African region.

To help ANDF in its important mission of realising tenure security and revitalising land management, the Embassy of the Kingdom of the Netherlands in Benin decided to support it through the Land Administration Modernisation Project (PMAF). The main axes of the PMAF include the development of the land information system and support for the collection of land data of 24 complete districts (*arrondissements*) located in 12 communes. An overarching principle of the project is the design of a lighter form of cadastral registration, which is affordable and efficient.

Earlier publications on the PMAF project

The PMAF project is a 4 year project, started in December 2018. It is executed by a Dutch consortium consisting of MDF Training & Consultancy, VNG International and Kadaster. The project staff are mostly Beninese.

The first two years of the project are characterised as a period of preparation and establishing the conditions for the two large tasks, the massive data collection and the development of the land information system. Both these tasks are in full swing at the moment, while at the same time much attention is paid to the inclusiveness of the land administration and to the strategic, legal and financial aspects of sustainable land administration.

Intermediate results of the project were reported in two articles for the FIG Working Week 2020 and the Land Journal 2021 respectively.

- Upscaling land administration in Benin towards national coverage - Balancing between time, quality and costs. [Mekking et al, 2020]
- Fit-For-Purpose Upscaling Land Administration - A Case Study from Benin. [Mekking et al, 2021]

Key intermediate results mentioned in these articles are:

- The land registration activities must be simpler and cheaper in order to be able to speed up and reach a nationwide coverage.
- A lighter form of registration is introduced, next to the formal land titles, which is expected to be affordable and provide a sufficient tenure security, especially in rural and poorer urban areas.

Fit for purpose à la béninoise

2. The approach and the results so far

The Land Administration Modernisation Project (PMAF) deals with the design and implementation of a Fit-for-purpose Land Administration approach in Benin. The approach and the intermediate results are explained in this chapter following the nine pathways of the Framework for Effective Land Administration.

Framework for Effective Land Administration.

The Expert Group on Land Administration and Management was established by the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM). This Expert Group prepared the Framework for Effective Land Administration (FELA), which was adopted by all UN Member States in the UN-GGIM session in 2020. FELA implements the nine strategic pathways as defined in the Integrated Geo Information Framework (IGIF), which was an earlier product by UN-GGIM. The nine FELA pathways are shown in the following figure.

FELA Goals	FELA Requirements	FELA Pathways
Transparency and accountability increased	Accountable and transparent governance	Governance, Institutions and Accountability* 
Gender-responsive and inclusive of vulnerable groups	Inclusive and recognizes all forms of tenure	Policy and Legal 
Affordable investments and economic return assured	Affordable with sustainable business models	Financial 
Reliable data and service quality attained	Data maintained, secure and not duplicated	Data 
Responsible and innovation oriented	Upgradable systems and approaches	Innovation 
Interoperability and integration supported	Considers internationally agreed standards	Standards 
Cooperation, partnerships, and participation leveraged	Strengthens partnerships and supports collaboration	Partnerships 
Capacity, capability, knowledge transfer and exchange attained	Facilitates capacity development and knowledge transfer and exchange	Capacity and Education 
National engagement and communication enhanced	Advocates for effective land administration	Advocacy and Awareness* 

Figure 1 The FELA Goals, Requirements and Pathways as mentioned in the final FELA report [UN-GGIM 2020]

Although PMAF started before the adoption of FELA, the text below will show that all pathways are taken into account. As there is no hierarchy in the pathways, the most practical order is chosen in the paragraphs below.

FELA Pathway Partnerships

The PMAF project is executed by a Dutch consortium consisting of MDF Training & Consultancy, VNG International and Kadaster. Both MDF and VNG have a Beninese branch office from which employees are involved in the project. The beneficiary is ANDF, while the Embassy of the Netherlands in Benin is the donor. In the consortium MDF is responsible for the project management and both VNG International and Kadaster bring in knowledge and experience in the field of land administration.

ANDF and Kadaster are both the national cadastral agency in their respective countries. These two sister organisations found each other in the preparation phase of the project. Kadaster can bring in experience from the Netherlands, where the land administration has had a nationwide coverage since 1832 and is maintained in an efficient way.

VNG International is the international department of the Association of Municipalities in the Netherlands. It supports municipalities in other countries in developing and organising municipal tasks. For this type of support VNG International has local branches abroad, among

others in Benin. Some members of this local staff are involved in the PMAF project, mainly because of their extensive experience with (local) land administration and land governance in Benin.

Partnership, being UN Sustainable Development Goal 17, as practiced in the PMAF project brings together the best of multiple worlds. It combines the Dutch (West-European) culture and experience with respect to land governance with the challenging mix of post-colonial and traditional West-African land governance in Benin. It needs to be said that 200 years of experience in the Netherlands have led to a land administration system with a lot of historical burden. When starting in a more green field situation, other choices would be made than were made in the Netherlands in the past. Benin can benefit from this knowledge when designing a modern, digital land administration.

FELA Pathway Standards

Land Administration Domain Model

FELA is both a reference itself and provides reference to international land administration standards. The use of standards assures interoperability over different domains and different areas, now and in the future. In the context of the PMAF project the Land Administration Domain Model (LADM) [ISO 2012] is the most relevant. This domain model was adopted by ISO as standard ISO 19152:2012. It is a general model in which you have to set country specific parameters, leading to the so called LADM country profile. Up till now such country profiles were developed for several countries and areas, among which are Portugal, Queensland (Australia), Indonesia, Japan, Hungary, The Netherlands, Russian Federation, Republic of Korea, Colombia and Mozambique. The country profile for Benin was composed in 2019, being a crucial step in the design of the national land administration. All cadastral data collection, data storage and data maintenance is based on Benin's LADM country profile. So the LADM profile had to be set before system development could start in 2020.



Figure 2 ANDF-PMAF interactive session for defining the LADM country profile for Benin

Coordinate reference system

As cadastral data are spatial data, the selection of a coordinate reference system largely influences interoperability. The Benin case is simple in this sense. UTM31N was already set as the standard coordinate reference system. Benin is completely situated in one UTM zone and no surveyor would even think of using another reference.

Interface specifications

In the course of the data collection process new demands for standardisation became clear. With over 20 different companies/consortia currently collecting data for the PMAF project, and not all using the same geographic software for it, the need for unambiguous standards for delivering data is imminent. The last details of these data delivery specifications are now being set. This opens the way to all parties, public or private, who dispose of cadastral data to deliver them to the national cadastre. Several parties already declared their willingness to do so. Of course they have to respect the specifications and meet some essential quality standards.

FELA Pathway Innovation

Both [Mekking et al 2020] and [Mekking et al 2021] describe the need and desire to apply a Fit-for-Purpose approach for the implementation of the national cadastre of Benin. These sources also describe the essential choices made by ANDF and other stakeholders in order to implement it optimally. In summary it can be described as follows.

The existing processes of obtaining and transferring land titles will be kept in place. In addition a lighter form of parcel registration in the national cadastre will be introduced. In generic terms, one could say that Benin is introducing a combined approach of title registration and deed registration. Once a plot of land has a land title, it will always keep this title. On the other hand, plots without a land title can retain this status for an unlimited period and can also be transferred to other right holders.

As far as the authors know, this dual track approach was not introduced anywhere else in the world. At the same time the stakeholders have approved it as being the most effective way of realising a nationwide land administration within a limited time frame. Those who need maximum tenure security and have the financial means to pay for the procedures (land surveyor, notary, ANDF and perhaps more services), can opt for the land title procedure. This will be suitable mainly in the urban areas and large scale agricultural enterprises. All others, who cannot afford the fees for the procedure to obtain a formal land title, can opt for the lighter procedure of cadastral registration. In most cases this will lead to a sufficient level of tenure security for the land owners.

The Benin dual track approach can serve as an example for other countries and areas for an effective implementation of land administration with nationwide (or areawide) coverage.

FELA Pathway Data

ANDF's director-general expresses a strong desire to be able to deliver products and services regarding land rights in Benin [29-03-2022 during a demonstration of the cadastral system in development]. The PMAF project is developing several such products and services based on the authentic cadastral database, the national cadastre. It goes without saying that these products and services can only be supplied for those areas where data are available.

Part of the PMAF project is the collection of data of at least 200,000 parcels. This data collection has two objectives.

1. By going beyond data collection in small pilot areas, it is proved that the approach of data collection is suitable for upscaling in such a way that for example 200 field teams could simultaneously collect data in order to realise a nationwide coverage within a reasonable time frame.
2. The areas of current data collection include some of the economic hotspots of Benin. So already in 2022 the country can benefit from better tenure security in these areas, which will facilitate all kinds of economic activities over there.



Figure 4 Geographic data collection in N'Dali



Figure 3 Social data collection in Cotonou

As mentioned in the paragraph on Innovation, the lighter procedure of cadastral registration, based on presumed ownership, prevents delays in the process of registration by the strict regulations of the land title procedure.

Besides this field data collection, the PMAF project focuses on disclosing all kinds of existing land right information. Among others MCA has produced many rural land inventories, the *plans fonciers ruraux*. Besides that, many municipalities have designed urban land development plans (*lotissements*) and inventories of existing urban settlements. All together it concerns over 1.8 million parcels. The quality of these data varies widely. In general it is possible to locate the majority of the parcels on the map. The data concerning the right holders are less reliable. The PMAF project aims at disclosing the information of these parcels, while clearly communicating the limited quality of the data. By doing so ANDF can demonstrate to the national politicians and to the population that cadastral data of good or limited quality is already available for 30% to 40% of the country, in terms of number of

parcels. It is important for ANDF to show such tangible results six years after its establishment. This is where the FELA pathways of Data, Governance and Policy meet.

FELA Pathway Capacity and Education

The purpose of the PMAF project is to assist ANDF in establishing the national cadastre and in collecting a significant amount of parcel and (presumed) property data. The keyword is 'assist'. This means that the project does not just deliver a system, partially filled with data. Assisting means that in the first place ANDF develops the cadastral system and collects the data and it does so with support by the PMAF project.

Assisting also means that the project is aiming at local capacity building for a future situation where ANDF can manage its own system development and maintenance and its own data collection and updating. The project is also aiming at preventing vendor lock-ins.

One can recognise these principles in the way the development of the cadastral system (named *e-Foncier Bénin*) is organised. The architecture, the information model (LADM) and the system development approach (Scrum/Agile) were decided in joint ANDF-PMAF workshops. Next, local IT-staff was hired for the actual system development, still with support by some Dutch members of Kadaster's IT staff.

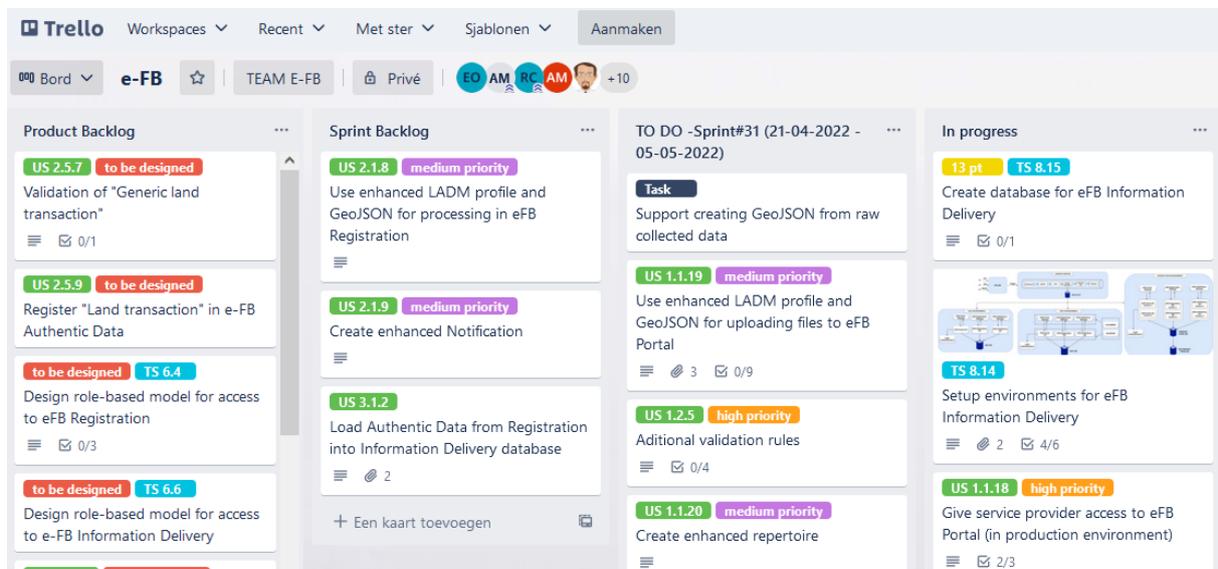


Figure 5 Part of the digital Scrum board for the daily management of the *e-Foncier Bénin* system development

There is not a single all-time valid answer to the 'make or buy question' concerning system development. In the Benin case the decision was taken not to buy a system from one of the well-known software parties in the domain of land administration, but to develop its own system, largely built on open source components and tools. Although existing systems may lead to quicker solutions on the short term, licence costs or dependencies of a specific software supplier may lead to high costs in the end.

FELA Pathway Governance, Institutions and Accountability

The in depth land reform of Benin that started in 2010, led to the Land and Domain Act (*Code Foncier et Domaniale*) in 2013. According to this law the national land administration is a responsibility on national level. The institutional consequence was the establishment of ANDF in 2016. It is a state agency with one general directorate and actually 14 branch offices spread over the country, with the purpose of gradually organising a branch office in each municipality.

Institutional setting in initial data collection

Up till here all is clear. One issue of cadastral registration is less clear. It is the collection of the cadastral data, especially the geographic data. The responsibility for the collection of the geographic data is not explicitly attributed to ANDF. Also the national geographic institute (IGN Bénin) feels a responsibility with respect to data collection.

In the meantime PMAF and ANDF try to find practical solutions in order not to delay the process of cadastral data collection. As mentioned before, private enterprises do the actual data collection. All contracted parties were obliged to involve a licensed surveyor for the collection of spatial data. ANDF and IGN have agreed that IGN delivers a base cartography for each area to be surveyed. This base cartography contains the boundaries of public spaces like roads, rivers, wetlands, nature preserves etcetera. Besides that IGN takes care of a check of the ground control points and it creates additional reference points where needed in the data collection areas. Yet another IGN task is a general check on the data and process quality.

Institutional setting in updating cadastral data

Once the initial data collection is completed in an area, the phase of updating starts for that area. During the national workshop on cadastre in July 2021 PMAF and ANDF have proposed an updating procedure in which the municipality has a crucial role. All parties in the workshop, among which the association of municipalities, the order of licensed surveyors, the association of notaries, several ministries and civil society organisations, have agreed on the global procedures for updating and the subsequent division of tasks.

Updating will start soon in two municipalities where data were collected first. These two will serve as pilot municipalities in order to 'learn on the job'. Besides the actual division of work, the legal conditions (*Code Foncier* and subsequent decrees) must be set, as well as the financial arrangements like cost-revenue balance, division of revenues between ANDF and municipalities, compared to their workload etcetera.

FELA Pathway Policy and Legal aspects

ANDF's statute and policy

In 2021 the president of Bénin signed the decree that defines the new statute for ANDF. In this statute ANDF is defined as a public enterprise. The strategic plan 2022-2026, which is currently composed, will define the strategic goals and positioning. Most of the pathways addressed in this paper are included in the strategic plan.

Legal Aspects

PMAF organised several workshops in which ANDF, stakeholders and legal experts proposed essential adaptations to the *Code Foncier et Domanial* (CFD) and certain decrees related to this code. These propositions are now under consideration at ministry level.

Article 17 : Toute vente d'un fonds de terre ou d'un immeuble doit être précédée de la confirmation de droits fonciers détenus sur ledit immeuble.

Article 516 nouveau : Dans un délai de dix (10) ans à compter de la promulgation du présent code, tous faits ou toutes conventions portant sur un immeuble dont les droits n'ont pas été confirmés, ayant pour effet de constituer, transmettre, déclarer, modifier ou éteindre un droit réel immobilier, pourront être constatés par acte notarié ou par acte sous seing privé déposé au rang des minutes d'un notaire ou par acte affirmé par l'autorité administrative du lieu de situation de l'immeuble. Passé ce délai, les dispositions de l'article 17 du présent code sont applicables.

Figure 6 Articles 17 and 516 CFD setting the obligation of having a land title for legal land transfers from 2023 onwards

Some modifications are urgent. If nothing is done, article 17 of the CFD will be put into action in 2023. This will hinder the real estate market, especially in the less prosperous urban and rural areas. Postponing the implementation of this article for another five year by modifying article 516 CFD would be the simplest option on the short term. It would even be better, besides postponing, to replace in article 17 CFD the obligation of having a land title before any transaction can take place, by another obligation, which is: having either a land title or a cadastral registration on the parcel to be transferred.

FELA Pathway Financial aspects

PMAF is a 4 year, 10 million Euros project. Within this time frame and this budget the infrastructure of the national cadastre is realised. This implies the information model, the roles and procedures and the technical systems. Besides that, a substantial amount of cadastral parcels and their owners is registered. But, by the end of the project still some 10 million parcels need to be registered and there will be a continuous need to modify the systems and work methods.

The development of the procedures and the systems and the data collection until nationwide coverage are one-time activities. On the other hand there will be continuous activities: the maintenance of systems and procedures, the development of new services and the updating of the data. The costs for these activities should be covered by the fees paid by citizens for updating services and for information services. The level of these fees must balance between cost coverage and affordability for the population.

There is still a financial gap to be filled between the end of the PMAF project and the moment when cost coverage will be reached. In this final year of the PMAF project a financial model is developed which calculates the total costs of the realisation of a nationwide cadastre, the

growing amount of updating and information services and the further development of systems and procedures. This calculation, combined with an outlook to a situation of cost covering operation, can be presented to multiple potential donors in order to make them willing to invest in Benin's national cadastre, and thus in Benin's development.

FELA Pathway Advocacy and Awareness

Mobilisation of the population

In general land owners are glad that their property is registered in the national cadastre. They understand that their property will be better protected and that the probability of land conflicts lessens. Nevertheless some people are hesitating, mainly because of fear that being registered will make them subjects to land tax claims. The experience up till now is that many land owners who are reluctant during the phase of data collection, ask to be registered during the phase of public inspection.

There is one special category of reluctant people. Those are the people who rent a house or a plot, mainly in urban areas. As renters they often do not want to indicate the parcel boundaries on behalf of the owner or even mention the name of the owner, because they do not know the consequences. Finding the owner however is sometimes hard for the data collection team. The data collection teams are well trained on how to handle such cases. They inform the general public in the area before the start of the data collection, but also during the collection phase they keep on mobilising the people through the channels that are well received in the area. This means in Benin for example messages on the local radio station, sending around public announcers twice a week and asking inhabitants to talk to their family and neighbours.

Disadvantaged groups

By law men and women, young and old, have equal rights in Benin. In reality we do not see an equal distribution in land rights. Young people and women are largely underrepresented as land right holders. This is mainly due to historical and cultural reasons.

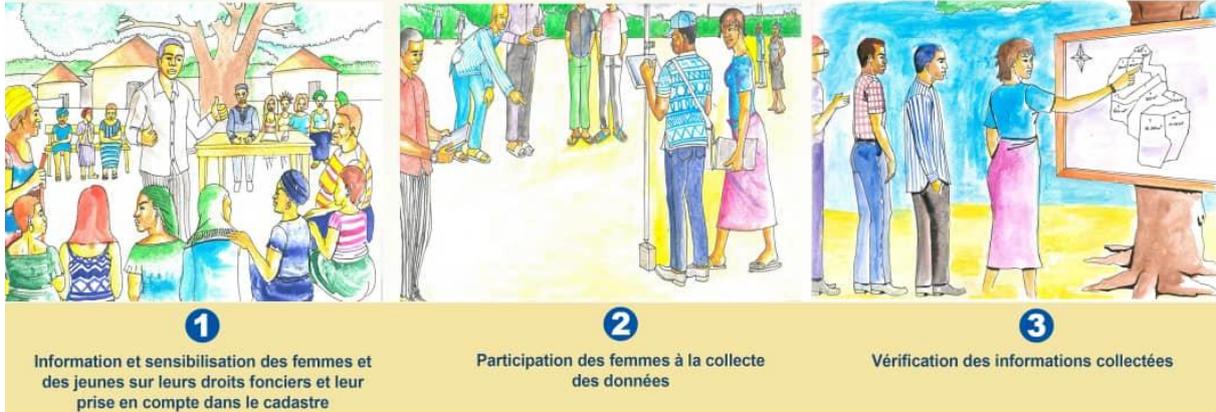
The tension between SDG 5 (Gender equality) and the Benin law on one hand and the historical and cultural habits on the other hand was a reason to define in the PMAF project a separate outcome aiming at implementation of policies to protect land access and ownership rights for socially and/or economically disadvantaged groups.

In all activities in the project the improvement of the situation of disadvantaged groups is taken into account. Local NGOs specialised in this subject are hired to take part in the data collection activities, by means of information sessions, posters, videos and meetings with individual right holders.



PROJET DE MODERNISATION DE L'ADMINISTRATION FONCIÈRE (PMAF)

Les femmes et les jeunes ont des droits fonciers



Ma terre doit être enregistrée au cadastre national !



Figure 7 Poster to mobilise women and youth to have their lands registered

Relation between politics and public service

Politics and public services often have a somewhat different focus, although both are government tasks and responsibilities. Politicians want to have tangible results before the next elections, so generally within 4 or 5 years. Public services are more focussed on reliable and continuous services. This difference in focus causes sometimes frictions in setting priorities in developments like the establishment of a national cadastre.

As technicians we do not have the ambition to change the politicians' behaviour. So it is the technicians' challenge to find the balance between creating sustainable solutions for the long term and showing tangible results on the short term. Also in the PMAF project this friction is felt, especially because it is the last project year. This is dealt with by giving priority to the development of a very simple information product through an SMS service while at the same time the information delivery environment is still being developed as a foundation for other types of information products or services. Also the development of information products and services is prioritised over the development of dedicated updating functions. On the short term updates must be done with a simpler generic updating function, which demands slightly more manual interactions.

Conclusions concerning the application of FELA

Although PMAF started before the adoption of FELA, all pathways turn out to be taken into account. It was a good checklist for the project. At the same time no activities in the PMAF project were found that could not be linked to one of the FELA pathways. So the dual conclusion from this case is that the FELA covers all important aspects of establishing a land administration on national level and that in Benin all components of the framework were taken into account.

Figure 8 When practicing FELA it is funny to find an informal street sign near Cotonou indicating a 'FELA Road'



3. Lessons learned and how to continue

The procedures designed, the digital system developed and the cadastral data collected up till now, have convincingly shown that the approach is applicable and leads to a form of land administration that supplies sufficient tenure security in most cases. These experiences also show that the approach is scalable.

In this last project year there are still some important results to be achieved.

- A clear and shared vision on the roles of parties like IGN (initial data collection) and municipalities (updating procedures) with respect to ANDF's own role.
- A financial model that will lead to revenues that cover the operational costs (ANDF and municipalities), while at the same time the fees for cadastral services like information delivery and updating, will stay affordable.
- A legal framework that postpones the obligation of having a land title for all transactions from 2023 and that will recognise the cadastral registration as valid presumption of property, suitable for performing a land transaction on lands without land title.

Probably the biggest challenge for ANDF is to organise the post-PMAF activities, especially their funding. Although it should be able to do the updating activities in a cost-covering way, the initial data collection will always need investments. It will probably need a multi-donor approach for nationwide coverage within a reasonable period.

4. Applicability elsewhere

Benin's challenges concerning the tenure security of its entire population are almost common in all of Western Africa and many other regions in the world. Therefore the Beninese approach with lighter forms of registration in a fully digitised technical environment, is applicable in many other countries. It is an effective way to be able to speed up the

registration process and to make both the initial registration and the updating procedures affordable for the entire population. It will always be possible to upgrade the light registration to the most secure type of registration which leads to formal land titles, either for entire areas or for individual parcels. But on the other hand, there is no strict necessity to do so. This is proven in the Netherlands, which has a highly reliable registration of deeds. It offers an almost absolute tenure security without issuing land titles.

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All web pages mentioned were accessed and verified between 31 March and 21 April 2022.

BIOGRAPHICAL NOTES

Ernst Peter **OOSTERBROEK** (1960) is Master of Science in Geodesy (Delft University of Technology, The Netherlands, 1983). Most of his career he has worked for Kadaster, the Dutch national mapping and cadastral agency, on a multitude of subjects: mapping and land consolidation projects, system development, user support, labour union, strategic planning, reporting and communication. Since 2018 he has been international advisor for Kadaster, currently based in Benin.

Member of *Geo-Informatie Nederland*, FIG's Dutch member association.

Fabrice Gilles **KOSSOU** has worked as Head of the Land and Technical Operations Department at l'Agence Nationale du Domaine et du Foncier (ANDF) in Benin since December 2016. He previously worked for almost 15 years at the National Geographic Institute of Benin where he held various positions of responsibility including Regional Director in the centre of the country. He worked on several projects in geodesy, topography, cartography and GIS. Before joining ANDF, he also worked for the German agency GIZ, and for his own account.

As a surveyor engineer Mr KOSSOU is member of *Ordre des Géomètres-Experts*, FIG's Beninese member association.

Bène **TOSSENOU** has worked for several international organisations. In the context of the Millennium Challenge Account he worked with GIZ IS on the project *Plans Fonciers Ruraux*. With VNG International he contributed to the project *Plans Fonciers Locaux* and the PMAF project, that currently supports ANDF in realising the national cadastre of Benin. Member of *Ordre des Géomètres-Experts*, FIG's Beninese member association.

CONTACTS

Ernst Peter OOSTERBROEK MSc

Kadaster

PO Box 9046

7300 GH Apeldoorn

THE NETHERLANDS

Email: ernst-peter.oosterbroek@kadaster.nl

Web sites: www.kadaster.com, www.projectpmaf.com

Fabrice Gilles KOSSOU

Email: gil_kossou@yahoo.fr

Website: www.andf.bj

Bène TOSSENOU

Email: btossenou.pfl@gmail.com