

**THE GLOBAL ECONOMY AND ADAPTATION OF CUSTOMARY TENURE REGIMES:  
CAPTURING GLOBAL MARKET OPPORTUNITIES THROUGH THE TRANSFORMATION  
OF SURFACE AND SUB-SURFACE CUSTOMARY TENURE REGIMES IN DIAMOND  
MINING AREAS OF NORTHERN CÔTE D'IVOIRE**

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## ABSTRACT

Peripheral regions of the international economy have long been integrated into the global economy, like the West African Sahel and Sudano-Guinean zones. Both statutory and customary tenure systems have evolved and adapted to meet new international market opportunities. This paper describes how two diamond mining areas of northern Côte d'Ivoire (Séguéla and Tortiya), long integrated into the international export of diamonds, are evolving in an astonishingly rapid fashion to meet new regional and international market opportunities, and as a result, how customary tenure systems over surface and sub-surface natural resources are adjusting to these new markets. Guided by a conceptual premise that rising values of natural resources often leads to contestation and sometimes overt conflict, this paper argues that resource conflict leads to readjustments in customary and statutory tenurial institutions and local level rule-making. Indeed, traditional rural institutions in northern Côte d'Ivoire actively plan for the future use of their territorial spaces by redefining traditional land use norms and resource tenure arrangements. Informal community land use planning is often more efficient, effective, and adaptable than those more formalized practices conceived by government land use planning policies and land use development plans. Weak states, confronted with severe staffing constraints and budgets, should encourage these endogenous planning processes rather than imposing cumbersome land use planning.

**Key Words:** cash crops, customary tenure, land-use planning, land law, surface rights

## INTRODUCTION

The rural land base is the pillar of economic growth for Côte d'Ivoire. Arable agricultural land constitutes 75 % of the national territory and agriculture accounts for 25 % of GDP and 60 % of export receipts. The agricultural sector employs two-thirds of the population. The small farmers of Côte d'Ivoire produce for the global market 30 % of the world's total consumption of cocoa; the country is the world's top cashew producer supplying 41 % of market demand; and it exports significant quantities of rubber, cotton, palm oil, and bananas. Côte d'Ivoire is experiencing rapid growth in the mining sector. Since 2017, the country increased exports of gold, and industrially mined manganese and nickel. After the lifting in 2014 of a UN Security Council embargo on diamond exports, legal diamond production took off from the two major diamond mining areas of the northern reaches of the country – Séguéla and Tortiya. Diamonds are mined by artisanal and small-scale miners for sale on the international market. Integration of these two diamond mining areas into the international economy is resulting in profound, rapid, and unprecedented ecological and social changes.

This paper describes how the two diamonds mining areas of northern Côte d'Ivoire are evolving in an astonishingly rapid fashion to meet new regional and international market opportunities, and as a result, how customary tenure systems over surface and sub-surface natural resources are adjusting to these new markets. Guided by a conceptual premise that rising values of natural resources often leads to contestation and sometimes overt conflict for control to valuable assets, this paper argues that resource conflict leads to readjustments in customary and statutory tenurial institutions and local level rule-making. Indeed, traditional rural institutions in northern Côte d'Ivoire actively respond to market integration by taking proactive steps to plan for the future use of their territorial spaces through redefining traditional land use norms and resource tenure arrangements intended to rationalize the use of various ecological niches within the landscape.

The USAID PRADD II project<sup>1</sup> arrives at this conclusion from its experience of supporting the government of Côte d'Ivoire to test formal land use planning approaches and procedures leading to the preparation of land use development plans in the two diamond mining communities. From this

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<sup>1</sup> The Property Rights and Artisanal Diamond Development II (PRADD II) Project supports governments to implement mining best practices in Côte d'Ivoire and the Central African Republic, and promotes good governance of the mining sector at the international level through the Kimberley Process, the international mechanism that prevents rough diamonds from fueling conflict. The objective of the project is to increase the number of alluvial diamonds entering the formal chain of custody, while improving the benefits accruing to diamond mining communities. Drawing upon the fields of property rights, economic development, governance, and behavioral change, PRADD II bases its approach on the premise that secure property rights create positive incentives for miners to be good stewards of the land. When an artisanal miner's rights to prospect and dig for diamonds are formal and secure, they are more likely to sell through legal channels, enabling the government to track the origin of diamonds and prevent them from fueling conflict.



experience, the authors conclude that contrary to popular conceptions by government officials, land use planning by local communities is more efficient, and more cost effective, than those proscribed by the state. Weak states, confronted with severe staffing constraints and budgets, should encourage these endogenous planning processes rather than imposing cumbersome land use planning.

## **ECOLOGICAL AND SOCIOECONOMIC TRANSFORMATIONS IN DIAMOND MININGS AREAS OF CÔTE D'IVOIRE: SÉGUÉLA AND TORTIYA**

To set the stage for discussing how integration of rural communities into the global economy transforms profoundly the physical environment as well as the institutions of resource tenure, both statutory and customary, we summarize in a cursory fashion the recent economic and ecological history of the two very different diamond mining communities. Despite the quite close geographical proximity between the diamond mining areas of Séguéla and Tortiya, the resource use arrangements and land tenure dynamics are remarkably different. This exemplifies how the history of place determines to a large degree the resource tenure dynamics in rural West Africa. Background information for this paper was derived from the extensive participatory research and community dialogues carried out by the USAID-funded PRADD II project and coordinated by the authors from 2013 – 2017. From this contextual background, we describe how resource tenure institutions and practices of land use planning are evolving to confront profound ecological and economic ramifications brought about by incorporation into international economies for both agricultural and mineral resource exports.

### **Economic History of Diamond Mining in Séguéla**

Diamonds were discovered in the northern regions of Côte d'Ivoire and especially the localities of Séguéla and Tortiya as far back as 1927. Séguéla is currently the main diamond producer region in Côte d'Ivoire (See Figure 1). Artisanal and small scale diamond mining (ASM) takes place in 4 sub-prefectures, Bobi, Diarabana, Dualla and Massala. Geographically, Séguéla is located in the further northwest reaches of Côte d'Ivoire, in the region of Worodougou, north of the transitional zone between dense humid semi- deciduous Guinean forests and the Sudanian wooded savanna. About 10,000 people live in these diamond mining areas. The ethnic composition is divided into indigenous groups (autochtones) of "Worodougoukas," foreign born (allochtones) from different parts of the country (mainly Sénoufo from the north and Baoulé from the center of the country) and non-native Ivoirian communities from Burkina Faso (called locally the Mossi, but often of other ethnic groups), Mali, Niger, Guinea,

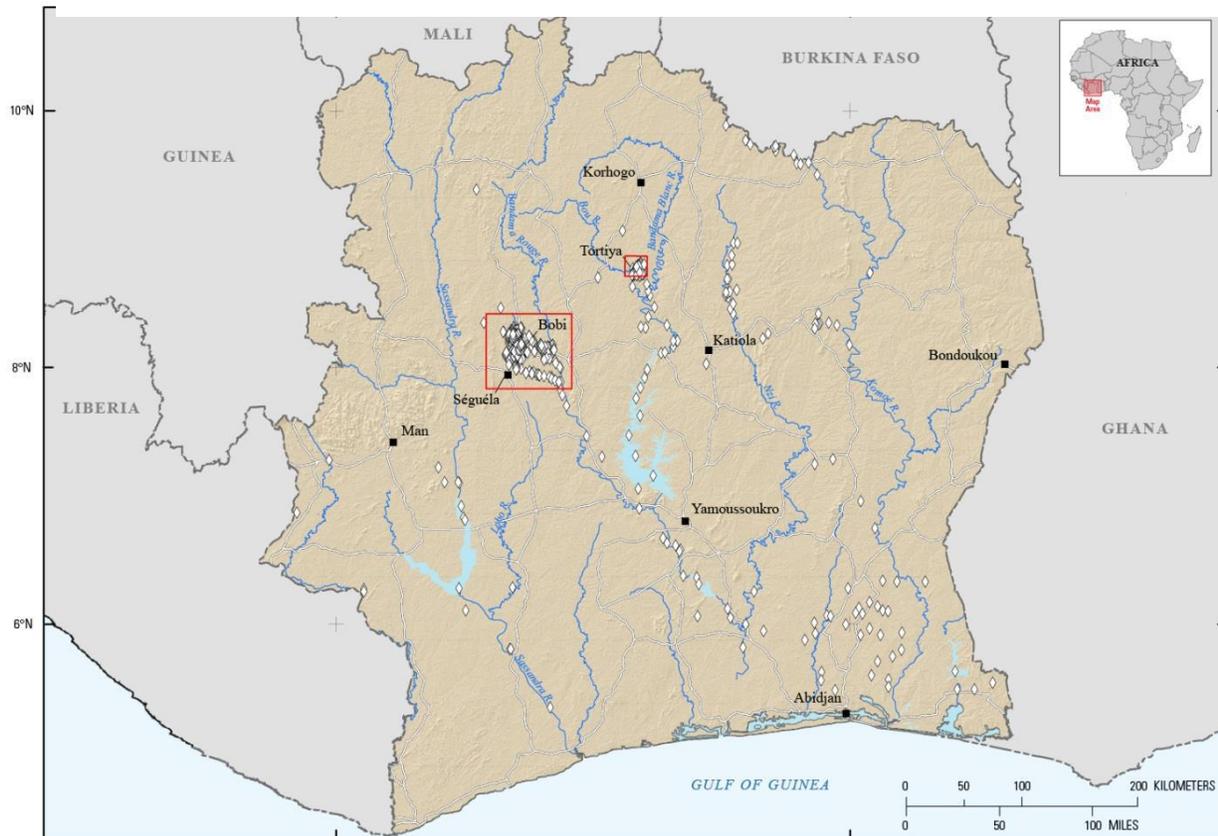


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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



**Figure 1: MAP OF DIAMOND OCCURRENCES IN CÔTE D'IVOIRE**



Ghana. The regional economy was based primarily on diamond extraction, even though the region was well known to produce some cotton. Diamond production was led from 1952 to the early 1960's by a medium sized mining company. Following the its departure, the parastatal company, *Société d'Etat pour le Développement Minier de la Côte d'Ivoire* (SODEMI), took over diamond production, with a focus on extracting diamonds from the Kimberlitic dikes, or veins, of the area. Despite the attempts by these mining companies to control access and extraction of diamonds, significant artisanal diamond mining occurs by the many non-indigenous groups attracted to the region by the rich alluvial diamond deposits. During the military coup and even after the suspension of all exploration and sales of diamonds in 2002, the Kimberlitic and alluvial diamond deposits fell into the hands of rebels groups. Illegal exports fed the war effort.

When the international embargo on diamond exports was lifted in 2012, the labor force that had been largely devoted to diamond mining diversified into cashew, cacao, and food crop production. International market incentives stimulated the expansion of cashew production in the drier western



reaches of the Worodougou province, but cacao in the more humid eastern parts. The expansion of both cashew and cocoa production to meet high demand on the international market led to renegotiation of customary land management dynamics, a process described further in the sections below.

## **Transformations in the Physical Landscape of Séguéla**

The landscape of the Séguéla surroundings has been fundamentally shaped by the diamond mining of the past decades. In contrast to Tortiya where diamond mining largely came to a halt following the closure of a semi-industrial diamond mining company, diamond mining today is still prevalent and it constitutes a significant contribution to the local economy. Past industrial as well as artisanal scale mining have deeply scarred the environment and especially those of the lowland riverine ecologies of riparian forests. As Figure 2 illustrates below, from 1986-2017, the primary forests have become more fragmented, especially to the east, but most interestingly, a massive expansion of cashew trees has occurred primarily in the west and cacao to the east. In only 30 years, the physical landscape has been converted into an increasingly wooded landscape, not of primary forests, but of dense plantations of cacao and cashew trees. Yet, during this time, from 1986 to 2002, 966 hectares of riparian forest were destroyed primarily around the diamond mining villages of Niongonon, Bobi and Sangana. While natural regeneration is leading to some unassisted recovery of these ecologically sensitive riverine forests, but seems that about 30-40 years is needed for these biodiversity rich forests to bounce back.

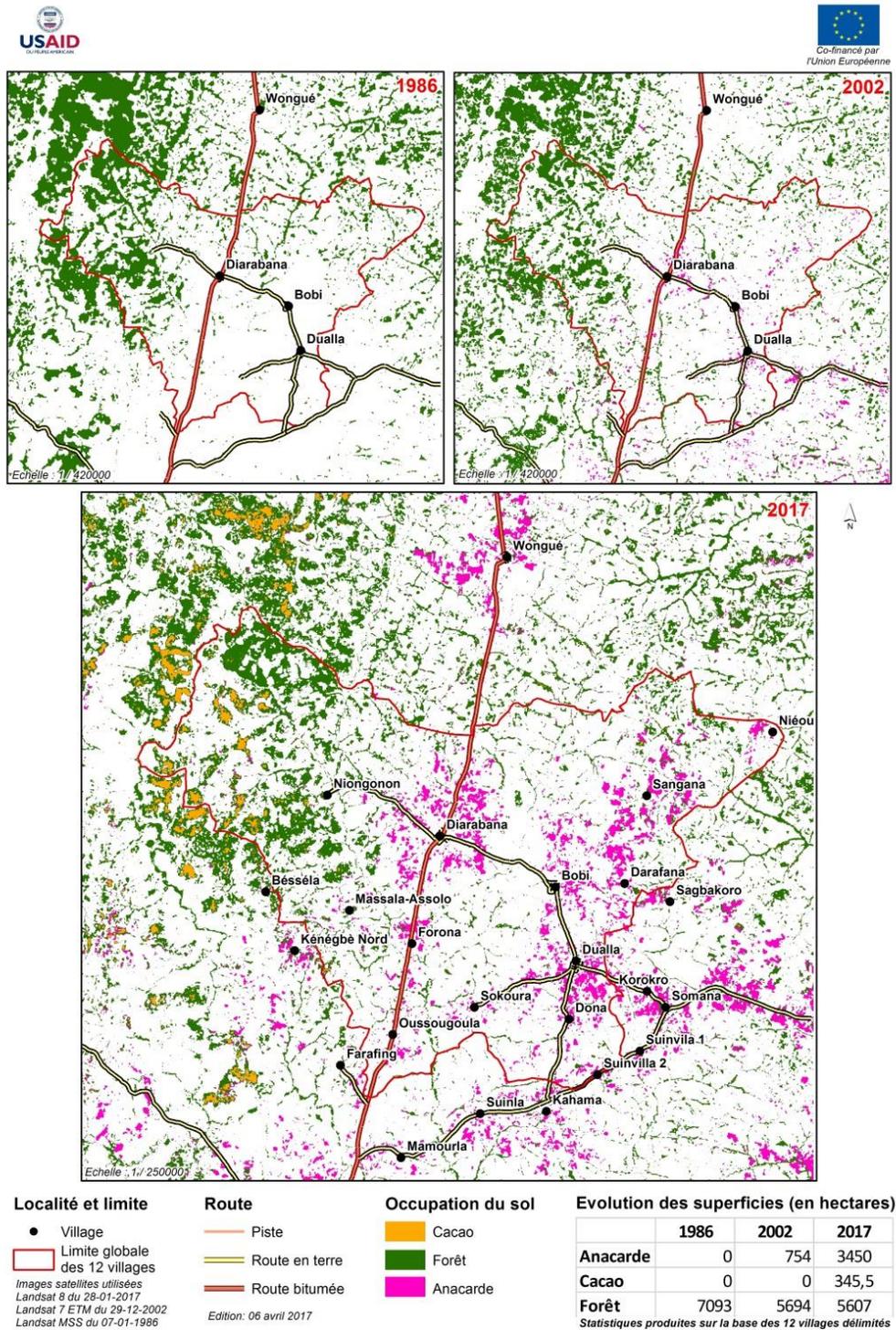


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WASHINGTON DC, MARCH 19-23, 2018



Figure 2: Map of Evolution of the Séguéla Landscape



Source : PRADD II Ecological study of riparian forest in Séguéla diamond mining villages, July, 2017.



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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



The dramatic increase in the space devoted to cashew and cacao production is due to the investment of labor and capital by both indigenous and non-indigenous former diamond miners. The greatest growth in cashew plantations occurs around the diamond mining villages of Diarabana and Bobi, villages that to this day continue to extract diamonds using simple artisanal mining techniques. Contrary to what happens in the humid tropical zones of Côte d'Ivoire, the expansion in cashew growing is not at the expense of primary forests, but of savannah grasslands. That said, the emergence of cacao plantations is a very recent phenomena and this is confined to more humid areas and wetter soils characteristic of primary forest formations found near the villages of Niogonon and Massala-Assolo. To the consternation of the local communities, the amount of land devoted to food production (maize, manioc, beans, and other food crops) is declining at a time when revenues from tree crop production and diamond extraction is also being invested in livestock raising, primarily cattle. Competition for access to land for these different livelihood practices is contributing to adjustments in the customary land tenure systems of the Séguéla diamond mining areas, itself the consequence of growing tensions and conflicts over competing land uses. This is the crux of the situation described more fully below.

## **Economic History of Tortiya**

While diamonds were first discovered in Côte d'Ivoire in 1928, exploitation first began in the 1940s in Tortiya town, by the French company SAREMCI (*Société Anonyme de Recherche et d'Exploitation Minières en Côte d'Ivoire*). Tortiya is situated 140 kilometers northeast of Séguéla in the region of the Bandama river watershed. Tortiya's climate is semi-humid tropical, and the vegetation type is Guinea savanna (Chirico, 2015). Industrial diamond mining activities were launched around what is now the small town of Tortiya, and continued through 1975. SAREMCI closed that year because diamond extraction became economically unviable since the richest lodes discovered at the time were exhausted and international prices collapsed. Today, most of the inhabitants Tortiya town are either former workers of SAREMCI or their descendants. Following the closure of SARECI, most of the workers of the time migrated the diamond mining villages of Séguéla and brought with them the skills to extract diamonds from the alluvial deposits. Today, Tortiya is a sleepy ex-company town comprised of a multiplicity of ethnic groups who call themselves "indigenous" Ivorian-born Nafana and Tagbwana, from the Senofo group; many ethnic groups from different regions of Côte d'Ivoire; and a significant community of non-native Ivoirians calling themselves the "CEDEAO" group, a popular reference to their origins from the economic community of West Africa. In the villages surrounding Tortiya, farmers are engaged in cotton



production, and through this, they too are integrated into the international market economy and respond to the vagaries of the market as well described elsewhere (Basset, 2001).

Both diamond extraction and cotton production have transformed significantly the physical landscape. Diamond production occurs along alluvial riparian forests. Deep trenches are dug into the ground, leaving moonscapes of red lateritic soils inhospitable to rapid natural regeneration. Many places mined during the 1940's and 1950's have failed to recover since SAREMCI mining operations removed all soil down to the bedrock. Similarly, cotton production requires extensive forest clearing.

In the face of the closure of SAREMCI and the volatile international cotton market, farmers did not remain idle. Rather, they used revenue from diamond mining and cotton production to massively convert into cashew tree and livestock (cattle) production. Cashew farming was introduced in the early 1960s in Côte d'Ivoire to fight against soil erosion and desertification in the dry north. Since then, the Ivorian government has launched several cashew development initiatives. In response to subsidies of trees and technical assistance from government, farmers started planting the hardy cashew trees on old mining sites where very little would grow. To this day, in these sites, deep pits dug by artisanal miners are still evident, and indeed, pose hazards to the unsuspecting wanderer. Even though the landscape was so profoundly altered, women rehabilitated several old SAREMCI mining sites along the Bandama river for vegetable gardening. As in the case of Séguéla, the physical landscape began to change very quickly due to the growing international demand for cashews.

### **Transformations in the Physical Landscapes of Tortiya**

Diamonds were initially mined industrially in Tortiya town from 1947 to 1975. Heavy equipment was used to remove the vegetation and soil until the thin layer of diamondiferous gravel was located. Exploration located numerous sites in both upland and alluvial areas. As a result, mining activities severely altered ecosystem functions of the surrounding riparian forests. The Bandama river and its tributaries filled up with silt. Significant farmland was lost. Yet, as has been the case in Séguéla, the local population did not stand by idly. Rather, as the time series map shows in Figure 3, the residents invested profits from diamond mining into cashew tree planting. The tree cover changed dramatically, not through regeneration of primary forests, but through the dense cultivated plantations of cashew trees. Today, Tortiya consists of three different landscape features. The first concentric zone is that of residential housing, social infrastructures, and administrative offices occupying the center of town. Few trees are planted in public spaces, though mango and other fruit trees are found within compounds. The second concentric zone is the place where abandoned or highly degraded lands once exploited for diamonds has



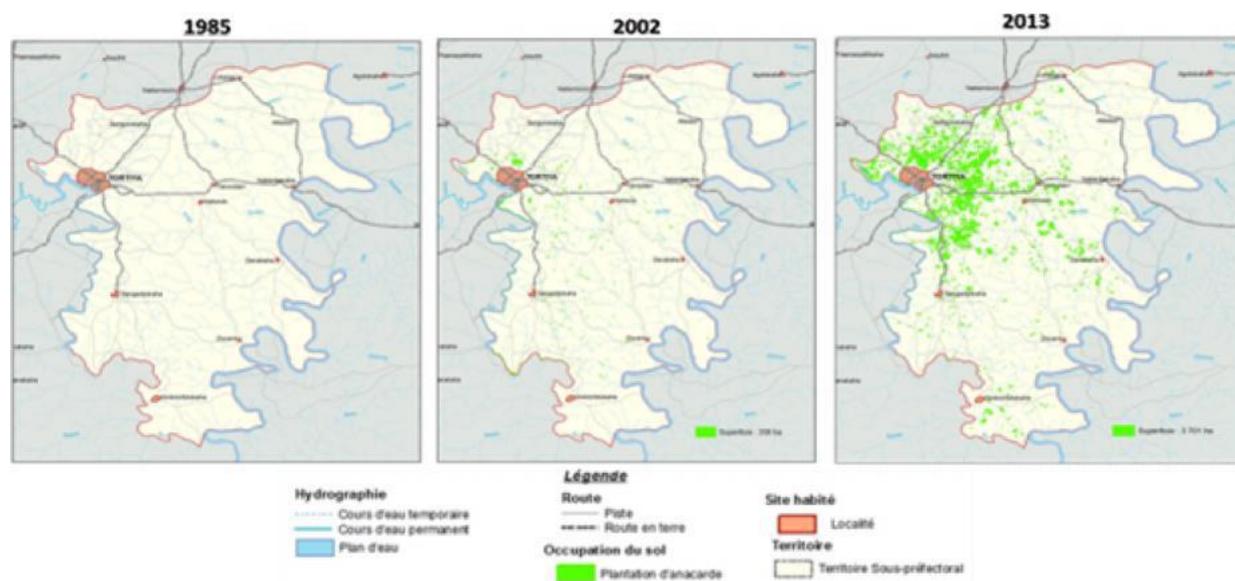
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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



been converted into cashew tree plantations. While some patches of bedrock remain, many areas are now dense cashew tree plantations. The revegetation is remarkable because it represents the reconstruction of nature, not as the original savannah bush, but rather as an anthropogenic expression of international market dynamics. The third zone consists of the lowlands along streams and rivers once riparian forests, but now where rice and vegetable production takes place. This ecological niche is especially prized by women who have taken the lead in rehabilitation of these damaged areas. The ecological niche has become a prized tenurial niche for women growing vegetables for the town market and personal consumption, a production system in part supported by the USAID PRADD II project.

**Figure 3: Transformation of Tortiya Landscape**



Source : PRADD II and USGS, Mapping study of land use in Tortiya, Dec. 2014.

Cashew production is currently the major economic activity in Tortiya, with the space devoted to tree crop production doubling in the past 5 years. Cashew orchards now cover 29% of the land surface in Tortiya town and around 20% for the villages of Katoron and Ténindieri. Former migrants who worked as diamond miners for SAREMCI played a key role transforming profoundly the landscape. While diamond revenues were initially invested in planting and caring for cashew trees, research carried out by the PRADD II project showed that subsequent revenues from cashew fruit sales were in turn re-invested in the purchase of cattle. In Côte d'Ivoire, as in other West African countries, investment in livestock raising is considered a good means of savings since financial institutions rarely serve rural areas.



## **EVOLUTION OF CUSTOMARY AND STATUTORY LAND TENURE REGIMES**

The resource tenure situation in Côte d'Ivoire is like that of many West African countries because of the presence of dual, and often competing, statutory and “customary” tenurial systems to both surface and sub-surface resources. The coexistence of a complex corpus of national land and mineral law, combined with the historically derived institutions, beliefs, and behaviors of rural peoples of varying ethnic origins contributes to a very complex mosaic of land use practices. Neither statutory land and mineral law, nor “customary” systems, remain static and unchanging. Rather, interactions between the two result in transformations in institutions and land use practices.

### ***The National Land Tenure Regime***

At independence in 1960, Côte d'Ivoire adopted policies and institutional arrangements to integrate itself further into the international free market economy, a trajectory launched by the French colonial power. The country has become a powerhouse producer by small farmers of coffee, cacao, and cashews. While there was initially no shortage of land to grow these crops, the country's indigenous human resource base could not alone generate sufficient labor required for agricultural cash crop commodities. The recourse was to encourage the migration of labor, mainly of Burkinabe origin, to meet the needs of its commercial and export agriculture (Ivorian planters turn to hired labor only for cash crops and use unpaid family labor for food crops). Similarly, policies and programs to incentivize migration from neighboring countries served well the diamond mining sector. The town of Tortiya was founded by diamond miners working for SAREMCI and arriving from all over the Côte d'Ivoire as well as neighboring countries.

As early as 1961, the new government of Côte d'Ivoire sought to abolish customary forms of land ownership. The new leadership viewed customary tenure as outdated and a hindrance to agricultural development. The spirit of this view was well reflected in a 20 March 1963 statement by the National Assembly at the time of debate about a proposed new land law - “what is not developed must return to the State... what is developed must belong to the person who developed it”. This ethos encouraged West Africans from Mali, Burkina Faso, Niger and other neighboring countries to settle in Côte d'Ivoire to farm the fertile western and southwestern parts of the country. The proposed land law was never promulgated, for fear, so it seems, of the negative reactions of the customary authorities who feared loss of control over their territories. But this tactical retreat on the part of the state did not constitute a repudiation of the proposed law's provisions. Non-local born and non-Ivorians continued to migrate into the country, and so long as they contributed to the development of cash crops, the indigenous



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



communities received them with quite open arms. In diamond mining communities Séguéla and Tortiya, the indigenous peoples gradually, and nearly imperceptibly as noted by many, lost control over their territorial resources. In effect, as the landed elite now recollect, the majority of farming and diamond mining is now carried out almost exclusively by migrant farmers and miners. This arrangement initially worked well, for it contributed to the Ivorian “economic miracle” of the 1980s so widely lauded in development circles. But, following the collapse of world cocoa prices in 1990’s, a crisis was born.

The economic stagnation of the early 1990’s led to the return by educated Ivorian youth to their home villages. But, to their surprise, they found that most of the land was occupied by migrants, and on very uncertain terms. Contrary to many customary tenure arrangements found throughout Africa, adjustments were made to allow migrant families to plant trees, like cacao and cashews. While various informal leasing arrangements, and payments-in-kind for “borrowing” the land often existed, the reality remained that Ivorian residents felt excluded from their own lands. In places like Séguéla and Tortiya, resentment against migrants from other regions of Côte d’Ivoire and “foreigners” grew. This resentment translated into calls by indigenous Ivorians for the revocation of land and voting rights granted to migrant workers during previous decades. Faced with these calls to return land to the original residents, customary land chiefs, village elders, and local government officials could not sort out informal agreements governing settlement of the outsiders as well as many fraudulent land sales. Boundary demarcation between villages and temporary settlements, called *campements*, were particularly thorny issues.

The government of Côte d’Ivoire responded to this land crisis by enacting the Rural Land Law of 1998 (No. 98-750 of 23 December 1998), amended subsequently in 2004, that remains in force today. The Rural Land Law is an elegant corpus of rules and regulations that recognize and formalize customary land rights by setting out procedures and conditions for conversion of “customary” tenure holdings into title deeds, thereby transforming customary land rights into private property regulated by the state. When rural communities clarify who possesses customary rights to land, a transitional land certificate is issued, and this can be converted into a land title after 3 years. The 1998 Land Law grants ownership titles to only Ivorian citizens. This provision has been reinforced by the 2016 Constitution, which confirms that rural land ownership is reserved only for Ivorian nationals. For this reason, the question of nationality becomes critical to the land equation. Non- Ivorian migrants who farmed land for cash crop production are allowed to remain on the land, but only through acquisition of a long-term land lease. The 1998 Rural Land Law enables Ivorians from other regions of the country ways to obtain land titles so long as approval is obtained from customary rights by traditional or customary land owners to specific pieces of land. In effect, the 1998 Land Law strengthens the hand of traditional customary land owners to determine who



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



may obtain land certificates and land leases, though provisions in the law require greater public consultation with land chiefs, representatives of women and youth, and migrant community leaders to identify and register land claims. Conflict resolution procedures are built into the law with arbitration possible to the administrative authority - the sub-prefecture.

The government of Côte d'Ivoire has instituted other changes in the legal corpus to address the consequences of growing commodity chain integration into the international economy. For instance, the 2014 Mining Code contains a chapter dealing with the rights of surface owners in relationship to sub-surface mineral extraction. The code refers to "land occupants" – a physical or legal person who has put a piece of land to effective use, and distinguishes this from a "legitimate land occupant" - a physical or legal person who has acquired permission from the State to occupy a parcel of land or by a person who has occupied and used a parcel of land for generations, to define whose is entitled to compensation for occupying and putting to good use land for mining. This definition affords more rights to those occupants who have permission from the State and/or put the land to use than those who make some historical or customary claims to ancestral land. However, the code does not clarify how the state defines or certifies these claims. It leaves this to a case-by-case negotiation (Freudenberger et al., 2015). In the same fashion, the 2014 Forest Law allocates ownership over trees to the land owner (individual or a group). While this provision reinforces the tenure security to the individual or collective land owners, it leaves the tree owners of migrant status with a degree of high tenurial insecurity. As the PRADD II research showed in Tortiya and Séguéla, owners of trees are not always customary owners of land.

## **Complex, sophisticated, but generally non-workable legislation**

While the Rural Land Law as well as the Mining Code and the Forest law clarified many resource ownership matters, these laws have thus far not provided greater tenure security for rural populations. From the experience of the PRADD II project in Séguéla and Tortiya, we find that the law remains difficult to implement. Execution of the many provisions and procedures of the law requires considerable investment of administrative, financial and human capital. Until now, the financially strapped country depends on donor funded projects to implement the elegant, but very complex, land certification and land titling provisions. As of March 2017, only 3497 land certificates were issued (of which 290 were for women) for a total of 96 409, 6191 ha counting for around 10% of the rural land in Côte d'Ivoire; 285 villages have been demarcated against 8571 villages estimated suitable for certification (3.33% of the total). Despite the constant effort made by the Government to ensure that the 1998 land law is



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



appropriated by rural communities nationwide, nearly all land transfers continue to be done informally and generally using customary tenure practices which vary from village to village.

The PRADD II project has observed in Tortiya and Séguéla that communities are suspicious of any government procedures that impose complex procedures but without providing clear short or medium-term benefits. These insights were learned through PRADD II mandate with the government to assist villages boundary demarcation in 15 mining villages around Tortiya and Séguéla. The project successfully completed territorial demarcation for 11 out of the 15 villages. Yet, two boundary disputes involving four different villages have so far halted village demarcation.

Implementation of the Rural Land law with regards to village demarcation and the issuance of land certificates takes an inordinate amount of time and financial resources. The anticipated cost of certification estimated by the World Bank (Cote d'Ivoire, ELGAF 2017) is 700 000 CFA/hectare (around \$1300 USD/hectare) - a very high figure relative to the annual revenue a land owner gains from cash crop production on a plot of land. A PRADD II study of village income found that the average annual household income is \$1447 USD per household in Séguéla and \$2090 USD in Tortiya. The process itself required in the law to clarify and attribute rights of ownership can be quite onerous for it requires much skill of external mediators to find compromises among land holders. When compromises are negotiated, such as the location of village territorial boundaries, these are considered by the government and the local community as definitive. But in the cultural context of Séguéla and Tortiya, people are used to negotiate and renegotiate agreements in response to new and changing social and economic circumstances. As one villager summed up the situation, "boundary demarcation processes should be for the benefit for all, the administration and the communities involved; however, because it obliges nearby brother villages to share the land they used to exploit for the wealth of all, it created divisions between villages, representing a serious challenge for social cohesion."

Despite the revenue gained from cash crop or diamond mining, communities still view the cost for titling as very high when compared to the total revenue earned from the land. The PRADD II project and other donor funded initiatives supporting the implementation of the 1998 Rural Land Law have identified and communicated to the authorities concerns around the feasibility of the law. Nevertheless, a new rural land policy was adopted in January 2017 that confirms the government's intention to identify and formalize the boundaries between rural villages, and to clarify the property rights of rural landholders. Implementation of the new rural land policy is entrusted on a newly-established Rural Land



Tenure Agency (AFOR) mandated to implement the rural land policy and associated land title registration from 2017-2027.

### **Other Opportunities for Rural Tenure Security – the “Farm Certificate”**

The 1998 Rural Land Law structures the process for converting customary tenure claims for individual plots of land into a land certificate and eventually, a land title. Yet in the search for a piece of paper to justify claims to land, rural land holders can also resort to a “Farm Certificate” issued by the Ministry of Agriculture. The Farm Certificate is a document introduced in 2013 intended to clarify ownership of tree plantations, a major priority for those involved in cacao production in the more tropical parts of the country. The certificate notes the area placed under cultivation, the land holding status of the applicant (land owner or renter), and the various agreements and conditionalities for the use of the land. PRADD II found in Tortiya that many cashew tree planters have resorted to this certificate to note the size of plantations, the planting date of the trees and the name of the owner. The PRADD II project works with cashew tree owners in Tortiya to introduce GPS coordinates to the map of neighboring farms and plots and to file the documentation not only with the regional Ministry of Agriculture, but also the cooperative itself. By registering the certificate at the cooperative level, the community can also record sales and inheritance transactions associated with the plantation. While the Farm Certificate does not meet the full intent of the 1998 Land Law, farmers using the Farm Certificate are in a good position to convert this to a land title. For instance, in the rubber growing areas of the country, one project used the slogan “one rubber orchard one land certificate” to encourage farmers to apply for a land title.

Even though a Farm Certificate is appreciated by rural communities, the PRADD II project found that both long-term resident farmers and migrants usually perceive tenure as secure without it. The issuance of certificates, either a Land Certificate or a Farm Certificate, may not improve tenure security any better than the customary practices so predominant in Séguéla and Tortiya. For now, there is no evidence that registered land encumbered with a certificate can serve as collateral for credit. Informal agreements governing the use of land and labor continue to be the most efficient way to generate revenues for those living in mining communities. Work sharing arrangements, crop harvest loans, and land rentals still tend to be the best option for rural communities to generate the income for improved livelihoods. Rather than advocating for the registration of land through the complex government legal process, it may be much more effective to record land transactions at the local level by registering agreements at the community level (ie: traditional land chiefs or commune) like in the villages of Niongonon or Forona are already doing through their customary land authorities. The legal framework in Côte d’Ivoire is simply



too complex, expensive, and cumbersome for widespread adoption by rural communities. Trust in the traditional land authorities, or “customary tenure,” still generates strong perceptions of tenure security in rural communities of Séguéla and Tortiya.

## **EVOLUTION OF SÉGUÉLA LAND TENURE REGIMES IN SÉGUÉLA AND TORTIYA**

### **Evolution of the customary land tenure system in Séguéla**

The “customary” land tenure system in the Séguéla diamond mining communities reflects the unique social, economic, and environmental history of each village. Land traditions remain strong in these communities. As in many parts of West Africa, the land is managed by the first occupant or their descendants. The land chief (chef de terre), is a male representative of the first occupant designated to manage the land on behalf of the entire community. The Chef de Terre acts as guarantor of land governance traditions and supervises land allocation to those in need of for artisanal diamond mining or agriculture, either by long-term indigenous members of the community or those from the outside. As a general rule, the principle of first occupant is primordial, and also governs relationships between villages. When a family sets out to establish a new village, they are “installed” by the land chiefs of the village that governs that territory. In Séguéla, land is considered communal and under the authority of the land chief, but the notion of private family property is gradually being introduced especially through plantings of cashew and cacao trees. In villages where the first occupant family still holds the village chieftaincy (ie. Forona, Dona, Sokoura), unoccupied land is not sold; neither is it permanently transferred to an outsider. Inalienability does not hinder individuals or groups within the community to make commercial use of the land through land leases, rentals, or loans. Common areas set aside for grazing cattle exist, though these areas are managed by the descendants of the first occupants. In effect, the land owning families in villages like Dualla, Massala Assolo, Diarabana, Oussougoula, Sangana, Niongonon and Bobi) define the rules of access and use, but the details can vary from family to family. The result is a very complex system of land transactions, but one that works for the time being. For instance, in a village called Niongonon, the two major land owning families have quite different land management principles. One family, or clan, manages the land as if it is private property. In this case, there is not even an obligation to inform all clan members of deals or sales. This family rents and sells land to outsiders. In the other village, the clan rigorously applies the principle of inalienability. The reason for these major differences is rooted in this history of the community. The land selling community faces the influx of migrant workers seeking access to land for cashew and cacao planting as well as diamond mining. This stimulates the emergence of land markets.



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



## *A model of organizing artisanal mining activities by defining a taxation scheme on diamond revenues for community development*

Customary land tenure is still strong in Séguéla communities because the “customary” system constantly adapts to the changing social and economic context. This flexibility in the tenurial system is well illustrated in this locality by the way in which the community profited from the presence of a parastatal mining company, called SODEMI, which was granted a large mining concession by the government of Côte d’Ivoire. The diamond mining company organized miners into village-based cooperatives.<sup>2</sup> The membership of these cooperatives hinged on being a member of the indigenous community, in effect, the major land owners. SODEMI allocates land to be mined for diamonds by cooperatives of artisanal miners. The cooperatives manage for themselves the spaces set aside for artisanal mining. Through the SODEMI system, the cooperatives also serve the role of village development committees. Working collaboratively with SODEMI and under the Kimberly Process Certification traceability requirements, the cooperatives monitor closely, and very publicly, the first point of sale of diamonds to diamond buyers. SODEMI and the cooperatives tax the value of diamonds at this first point of sale. SODEMI keeps 8% of the share, the cooperatives receive 12%, the diamond buyers the rest. This 12% of the initial value of the diamond is then used to fund the cooperatives’ village development efforts. Since the sale of the diamonds is public, and all transactions and cash payments are open for all to see, the cooperative leadership is forced to employ the funds in a responsible fashion. The cooperatives have invested in the construction of social infrastructures like schools, mosques, roads, and water systems. Thanks to the success of this internal taxation system, the diamond mining villages of Séguéla are using the same approach to tax a percentage of rice and cashew harvests and cattle sales. A portion of the harvest or sale of livestock, especially of the “outsider migrants,” goes to their “tutor”, another portion to the village, directly to the village chief or through the cooperatives, creating in effect a land tax on agricultural production destined for investment in community infrastructures and development projects.

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<sup>2</sup> For a more in-depth presentation of the SODEMI model, see Terah DeJong, “Managing Conflict and Fostering Cooperation between the State and Customary Land Owners as a Precondition for the Effective Formalization of Artisanal and Small-Scale Mining in West Africa: The Case of Diamonds in Côte d’Ivoire,” World Bank Land and Poverty Conference, March 19-23, 2018.



The diamond mining communities of Séguéla manage quite effectively the territorial commons like sacred thickets and riparian forests. This does not mean that all is rosy. For instance, when the PRADD II project sought to clarify boundaries between villages, this opened up many latent disputes. Disputants made reference to former written and oral agreements, some of which were hard to prove. Paper documents have been lost or destroyed, memories are fallible. From an equity standpoint, the customary system serves quite well the interests of the first occupants and their descendants. But, the majority of the labor force in these villages are migrants generating the largest share of tax revenues for community development projects. These are often the people denied strong land rights. Inter-generational and gender issues are also surfacing. Tensions are high in villages where the land chiefs fail to inform women and young people of land use decisions and the uses of revenue gained from various taxes on diamond and agricultural production. In these cases, the elders believe they have full control over revenues generated, but the youth and women increasingly question this principle.

With very few exceptions, decisions over land access and use is concentrated in the hands of very few community members, mainly the elders in the villages or heads of family clans. Integration into the international economy to export diamonds, cacao, cotton, and cashews have strengthened, rather than reduced, the power of the customary tenure systems. Even though power is concentrated in the hands of the few landed elites, they are under pressure to ensure a peaceful cohabitation and integration of migrant labor into the village sociocultural life because these outsiders contribute financially as well to development projects as building schools, health center, local authority's offices and houses, water facilities, etc. It leads to a constant renegotiation of existing agreements, as rural land management rules are reactive in general, define to response to a situation (mainly conflictual) that unfold.

### **Evolution of Tortiya Land Tenure Regimes**

Tortiya was founded as a mining town, and for this reason, its territory is divided up and managed by four different authorities and villages. Housing, administrative offices and social infrastructure at the center town are under the control of the Tortiya Municipality. When the SAREMCI company arrived in the 1940's it carried out a customary ceremony—in addition to gaining a large concessionaire permit from the state—in which customary rights to the land were completely purged in and around the town. SAREMCI became a classical company town with all municipal functions vested in the company. Now that SAREMCI is closed, land has been transferred back to the state and re-allocated to the urban area of the Tortiya Municipality created in 1986. All the land and infrastructures of the central part of the town are inherited from the diamond mining company SAREMCI. The lands around the town of Tortiya are controlled by powerful land chiefs. Four village land chiefs allocate use rights to the lands under their



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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



jurisdiction. Outsiders wanting to settle and farm must ask authorization from the land chiefs, practice not unlike what one finds throughout West Africa.

Even though Tortiya has a different land tenure reality than Séguéla, it faces many of the same challenges as Séguéla with regard to the role of the statutory system in governing sub-surface resources. The Ministry of Mines sub-divided the land into 100-hectare square lots and issued 19 licenses for artisanal or semi-industrial diamond extraction. To those villagers, mostly ex-SAREMCI employees, they consider these licenses the same thing as land titles. Cashew trees were planted on these lands to meet the growing international demand for the fruit, and as in many cases throughout West Africa, the tree planting further reinforced the tenurial claims of the tree planters. The debate around the functions of the licenses emerged because of a conflict between the two clans occupying the land around Tortiya. Neither can agree on who has legitimate claim to the land outside of the town center. In the absence of a recognized role of a customary land tenure authority, the claimants fall back on a statutory mechanism to reinforce their rights. To complicate further the situation, the Ministry of Mines and the Town Council also claim some parts of the rural lands surrounding the town. In light of this complex situation, implementation of the 1998 Land Law remains challenging for determining customary rights of third party land transfers. The first occupants transferred land ownership to a second occupant who in turn transfers the plot to a third occupant. Since the rights of the first occupants are still not clearly legitimated, those holding second and third order claims are not certain of their status. For this reason, it is still unclear how customary rights can be identified for formal land certification.

The SODEMI parastatal obtained in 2016 a research exploration permit for the former SAREMCI concession lands, and as in Séguéla, the Ministry of Mines directed the company to organize artisanal miners into cooperatives and institute the Kimberley Process Certification traceability system. This introduces a considerable level of insecurity for the holders of the original mining licenses because SODEMI could develop industrial scale diamond mining in any place, and therefore, open up the debate on who has legitimate rights to the land. PRADD II is supporting SODEMI to identify the most appropriate scheme to develop artisanal mining in this area while ensuring the respect of customary rights of it highly diverse migrant's communities, and the development of other agriculture and cattle-raising activities.



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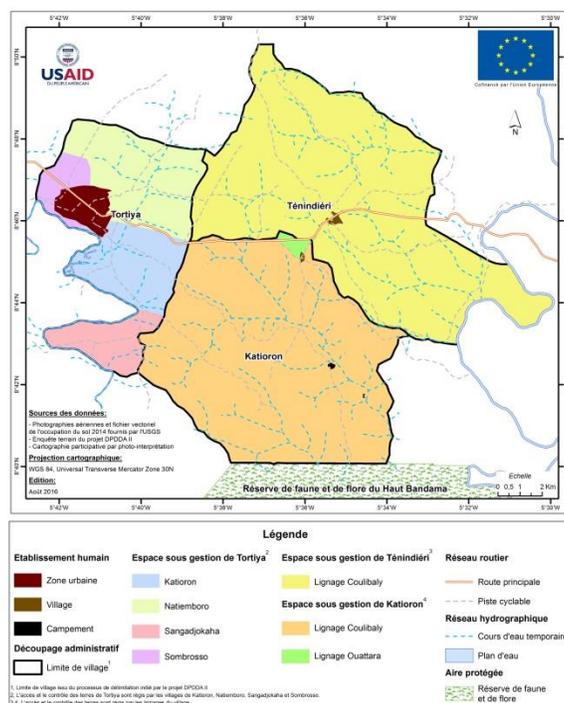
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WASHINGTON DC, MARCH 19-23, 2018



## Traditional land owners continue to exercise strong ownership over their territorial resources

The consequence of the historical precedents created by the installation of the SAREMCI mining company during the colonial period play out to this day. While the ownership of the Tortiya town center is quite clear, as well as the more remote areas of the commune, it is the landscape most propitious to diamond mining where a defacto open access regime now occurs because of the competing and conflicting claims to the land. The tensions in this area is acknowledged by the community as a potential source of serious conflict, but most are open to resolving the situation through a community land use planning process and the creation of new rules to manage the contested spaces. Though a carefully constructed mediation process, the Tortiya community has indeed embarked on a land use zoning process, though one that engages fully the two land chiefs. The PRADD II project facilitated discussions between the two land chiefs, and in effect, subsidized the costs of mediation and negotiation. This raises the question of how financially strapped regional and local government authorities will have the means to embark on a similar time-consuming process.

**Figure 4: Map of clan occupation in Tortiya**



Source : PRADD II mapping of customary rights over land in Tortiya, 2016.

The complex relation of people with the land in the Tortiya municipality forces community leaders to seek ways to ensure tenure security within their village, and without discriminating against



migrants. Common rules around sacred forests and water uses set the foundations for village land use planning. The PRADD II participatory research process carried out with the local communities found that many rules exist to regulate tree cutting, hunting, and the timing of bush fires. By recognizing the land use planning capabilities of the local communities, PRADD II found it quite straight forward to introduce more formalized territorial land use planning practices promoted by the government.

The land use planning exercise in Tortiya revealed that the notion of customary land ownership is very similar to private ownership when it comes designating land for specific uses (i.e: artisanal mining, cash crop production, food crops, livestock grazing areas). Community members expressed clearly the view that land held under clan or family control would be managed by that entity, and no other. For others to use the lands, even for grazing, consent must be negotiated with the family elders, generally the descendants of the first arrival families. For this reason, sometimes the true locus of land use decision making is found in villages that are quite far from a place near Tortiya town.

## **COMMUNITY VS GOVERNEMENT LAND USE PLANNING PRACTICES**

### **Community Land Use Planning in Tortiya Area**

Community-based land use planning in Tortiya is shaped by culturally derived norms and practices handed down orally through the generations. The main pillars are the land chiefs who until recently paid most attention to protecting sacred forests and allocating land to outsiders. Increasingly, the land chiefs are brought into other land use decision making. For instance, as lowland swamp land becomes increasingly prized for gardening by women and rice production, the land chiefs are required to mediate competing demands for these spaces. With cattle production expanding due to the investment of revenues from cashew sales and some diamond mining, livestock water points must be managed so as not to damage gardens or rice fields. In Tortiya villages, the chiefs also play a key role in resolving conflicts between farmers and cattle herders. Land chiefs and other elders are increasingly obliged to set aside land for grazing and to enforce payment of compensation caused by cattle damage to field crops.

### **Community Land Use Planning in Séguéla**

In the diamond mining areas of Séguéla, land pressures are rapidly growing due to the expansion of cashew and cacao tree plantations, but also to other competing land uses from the artisanal mining sector. Overlapping and competing demands on the same piece of land are forcing the communities to engage in more comprehensive territorial land use planning, not imposed by the state, but through the need to balance the growing demand for land. For example, in response to a rapidly growing population of cattle,



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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018

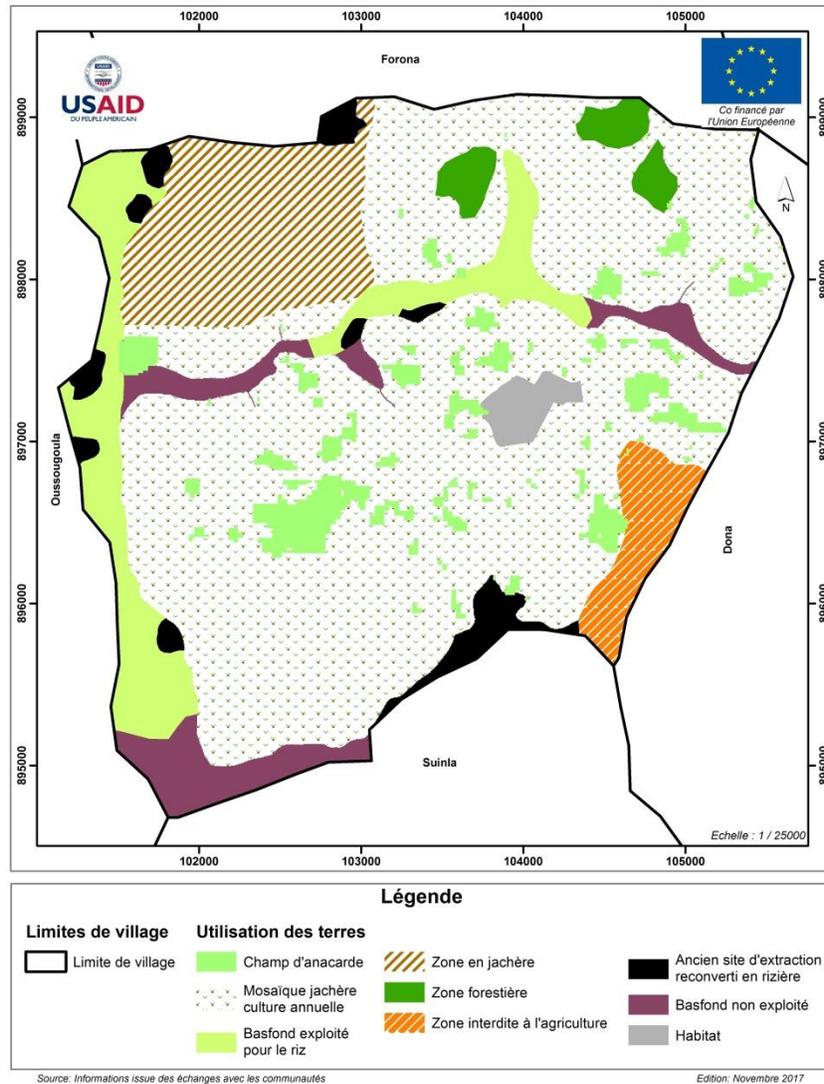


itself stimulated by investments made by cashew producers and diamond miners, some villages are setting aside land for grazing reserves. Others are creating livestock corridors linking one grazing area to another or in other cases, paths to livestock watering points. Both measures reduce the likelihood of field crop or cashew tree damage from cattle movements. Other villages set aside village protected areas to preserve or facilitate natural regeneration of the lowland riparian forests.

The USAID-funded PRADD II project supported community land use dialogues to strengthen these incipient land use planning practices. The project produced maps generated from Google Earth to facilitate discussions around how land use practices have evolved and how the community leaders might want to structure the use of land for present and future generations. Discussions often turned to how the community might respond to the inevitable shocks caused by precipitous drops in the international prices for cashew nuts and cacao fruit and the impacts this might have on not only livelihoods, but land uses. The results of these land use planning discussions were translated into maps showing the current land uses and rules governing territorial spaces (See Figure 4 below).



**Figure 5: Land use planning categorizations in Séguéla**



Source : PRADD II mapping of current land use practices in one of the Seguela village, 2017.

## Government Land Use Planning Practices

The Ministry of Planning and Development proscribes for all communes in Côte d'Ivoire the preparation of local development plans. Without these plans, government will not invest state resources in local development. The planning procedures require the community to identify basic problems and needs, define a vision, prepare development goals in line with regional priorities, elaborate a list of potential projects, and prepare detailed budgets. Task forces are to be set up to prepare these various components.



The community may choose to hire consultants to coordinate the preparation of the development plan in conformance with guidelines provided by the ministry. From the outset, the PRADD II project viewed this approach as excessively complex and onerous for the community. Like many indicative planning documents prepared by planning ministries far removed from rural realities, the guidelines are not suitable for rural situations. The participatory planning process tends to generate dream projects far removed from local realities. Instead, PRADD II suggested that the ministry encourage the communities in Séguéla and Tortiya to clarify rights around the various ecological niches in the landscape, resolve conflicts over land uses, and look for ways to use the internal revenues generated from taxes placed on diamonds and agricultural production to auto-finance scaled-down projects. Through focusing on property rights issues, PRADD II believed the foundations would be put in place for natural resource zoning planned and carried out by the local peoples themselves.

### *Lessons from strategic development planning in Tortiya*

The PRADD II project learned many lessons from the land use planning process piloted in Séguéla and Tortiya.

- The community land use planning process fostered by the PRADD II project created community dialogues on several issues that were believed initially unresolvable in the villages, such as the cohabitation of migrants and the various holders of customary land rights. Maps and Google Earth images displaying the location of the natural resources of the community turned out to be a useful tool to promote reflection on a wide range of land use issues. Simply through convening community leaders around a map, many difficult resource management issues were discussed and innovation solutions often found.
- The notion of land use zoning is perceived as a tool of the state, and thus, with much suspicion. From the village perspective, the state has no place in determining resource use. Instead, individual land-owning families decide how they wish to use their customary lands, sometimes through a consultative internal discussion within the extended family or clan, other times in more autocratic ways. In the absence of an effective and trusted state presence at the local level, the traditional land use chiefs and elders usually take decisive decisions about land uses and resolve quite effectively land disputes.
- The land use planning process facilitated by the PRADD II project helped local actors decide how to allocate and manage land for different economic activities. The capacity of the community to manage their own affairs was thus strengthened considerable. However, external actors, like the SODEMI



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



parastatal mining firm or agribusiness companies, acquire land without consultation with the local communities. Local people know that their decision-making power is limited because these external actors are often linked to politically and economically powerful interests. Indeed, external economic factors, often tied to the global economy, buffet the people and the places like Tortiya and Séguéla.

- The GIS mapping tools introduced by PRADD II seemed very “avant-garde” for the local authorities and community members. While all participants in the land use planning exercises had a fairly good understanding of the utility of land-use mapping, it turned out that village authorities (village chiefs, not land chiefs) and local government officials had only a poor understanding of the types of rules and practices land users were employing around specific micro-ecological niches. The gulf between what the perceptions of community leaders about how resource tenure rules operated and the reality of clan or family management were sometimes quite great.

## **Emerging lessons from community land use planning in Séguéla**

While the land-use planning process in Séguéla is still on-going, major lessons are emerging.

- In terms of land use planning, delineating and reserving areas diamond mining remains a priority for villages leaders, even though most youth and women, as well as long-term residents and newcomer communities each have different priorities. Despite differences, new rules are being devised by community elders to address differentiated use of natural resources as well as new ways to deal with compensation for crops destroyed by artisanal mining activities.
- Over time, decision-making in the Séguéla mining community land use management dialogues fostered by the PRADD II project have become progressively less inclusive. Compared to the initial period of community involvement in land use planning dialogues when important decisions were debated in meetings with all village members, more recently the decision-making processes tend to only involve the head of the major land-owning families. Community members seem to abdicate authority to the traditional roles of the elders charged with enforcing exclusionary rules and agreements with migrant “outsider” families.
- Implementing the 1998 land law without properly taking into account the socio-economic realities of particular places undergoing rapid economic and ecological transition can lead to unexpected outcomes. As described in this paper, the diamond mining communities of Séguéla are undergoing rapid change. “Customary” tenure systems are adapting to these new realities. Village leaders sometimes use legal mechanisms, like the village boundary delineation process, to reinforce their powers, and thus, the foundation of the traditional tenurial system itself. New



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
WASHINGTON DC, MARCH 19-23, 2018



tenurial precepts emerge during this time of profound change, such as the obligation by migrant families to live within the village in order to be granted access to land for cashew or cocoa farming. This new obligation placed on migrants reinforces even further the power of the traditional power structure.

## CONCLUSIONS

Cash crop expansion in diamonds mining areas of northern Côte d'Ivoire clearly illustrates how a community can rethink their customary land tenure and land management practices to capture financial opportunities offered by the global market. The resource tenure systems of West Africa are evolving in an astonishingly rapid fashion to meet new regional and international market opportunities. As a result, the Worodougou region of northern Côte d'Ivoire attracted migrants, leading to rapid social and ecological transformation of rural areas. Customary tenure systems over surface and sub-surface natural resources are adjusting to new market opportunities. In other parts of the country, integration into the global market has led to severe land conflicts. Benefitting from this experience, diamond mining communities of Séguéla and Tortiya have instead seized the opportunity to readjust their customary tenure traditions. The legal corpus defined by the 1998 land law generally seeks to formalize the customary tenure arrangements oriented through territorial boundary recognition but also individualized parcel ownership with title deeds regulated by the state. Far from reinforcing tenure security in mining areas or Séguéla and Tortiya, the 1998 land law appears to reduce the perception of tenurial security. Land certification is viewed as an extraordinarily expensive process. Since customary authorities remain strong in Séguéla and Tortiya, the land tenure regimes are able to adapt to the changing ecological and economic context. This is not the case the 1998 Land Law – a legal instrument that remains unchanged despite its inapplicability to complex realities involving competition over surface and sub-surface resources. We find that diamond mining villages in northern Côte d'Ivoire actively plan for the future use of their territorial spaces by redefining traditional land use norms and resource tenure arrangements to meet new market requirements. Informal community land use planning is often more efficient, effective, and adaptable than those more formalized practices conceived by government land use planning policies and land use development plans. Weak states, confronted with severe staffing constraints and budgets, should encourage these endogenous planning processes rather than imposing cumbersome land use planning more suited to wealthy, industrialized nations.



## REFERENCES

- Chirico, Peter.G. and Malpeli, K.C., 2012. *Reconnaissance investigation of the rough diamond resource potential and production capacity of Côte d'Ivoire*. United States Geological Survey Scientific Investigations Report.
- Freudenberger M. with Thiam Boubacar., Picard C., Jiekak S. and DeJong T., 2015. *Property rights conundrums in artisanal and small-scale mining. Experience from USAID projects in Côte d'Ivoire, Guinea and the Democratic Republic of Congo*. Paper prepared for presentation at the 2015 World Bank Conference on land and poverty, March 23-27, 2015
- Liz A. W., 2015. *Time to Rethink? A Critique of Rural Land Law in Côte d'Ivoire*, Fern, March 2015, 84pp.
- Thomas J. Bassett, *The Peasant Cotton Revolution in West Africa: Cote D'Ivoire, 1880-1995*. New York: Cambridge University Press, 2001. 243 pp.
- USAID, 2015. *Diagnostic Terre et Conflits*. Property Rights and Diamonds for Development (PRADD II) Côte d'Ivoire Field Report.
- USAID and European Union, 2015. *Diagnostic de la situation économique et foncière dans la commune de Tortiya*. PRADD II Côte d'Ivoire Field Report. Property Rights and Diamonds for Development.
- USAID and European Union, 2016. *Plan de Développement stratégique de la commune de Tortiya, Côte d'Ivoire*. Vol. 1 &2. Université des Collectivités & PRADD II. Property Rights and Diamonds for Development.
- USAID and European Union, 2017. *Diagnostic participatif et perspectives de Développement durable dans les villages diamantifères de la région du Worodougou*. PRADD II Côte d'Ivoire Field Report. Property Rights and Diamonds for Development II.
- USAID and European Union, 2017. *Synthèse du diagnostic écologique et socio-économique des forêts galeries des sites diamantifères de Séguéla*. Property Rights and Diamonds for Development II.
- USAID and European Union, 2017. *Rapports complets des diagnostics écologique et socio-économique des forêts galeries des sites diamantifères de Séguéla*. Property Rights and Diamonds for Development II.
- USAID and European Union, 2017. *Synthèse du Diagnostic Ecologique et Socio-économique de la Réserve de Faune et de Flore du Haut Bandama (RFFHB)*. Property Rights and Diamonds for Development II.