# FOCALI COUNTRY BRIEF
# – Burkina Faso

Lisa Westholm

Focali Brief

2010:02

focali.se
Forest, climate & livelihood research network

**Focali** - Forest, Climate and Livelihood research network - is a Swedish knowledge-based network aiming to ensure Sida and other Swedish authorities access to scientific knowledge in order to effectively use forestry measures to reach climate and poverty objectives. Focali also aims to increase the flow of relevant information between academia, government authorities, and civil society.

Focali is a part of the **Forest Initiative** which is a strategic partnership between Sida, the Swedish Forest Agency and the Swedish Forestry Association. Sida provides funding for Focali. Focali currently consists of representatives from **University of Gothenburg**: Departments of Earth Sciences, Human and Economic Geography, Plant and Environmental Sciences, Economics, School of Global Studies; **Chalmers:** Division of Physical Resource Theory; **Linköping University:** Centre for Climate Science and Policy Research; **Swedish University of Agricultural Sciences:** Department of Forest Ecology and Management, Swedbio. The Focali secretariat is placed at the Environmental Economics Unit at the **School of Business, Economics and Law**, University of Gothenburg.

This brief is part of a series of publications within three themes that Focali is undertaking. Responsibility for its contents rests entirely with the author(s).

Theme I *"Assessment of existing global monitoring and financial instruments for carbon sinks in forest ecosystems."* – Theme leader Madelene Ostwald, Linköping University

Theme II *"Making REDD work for the poor"* - Theme leader: Robin Biddulph, University of Gothenburg

Theme III *"Climate assessed Sustainable Forest Management"* – Theme leader: Göran Wallin, University of Gothenburg

This publication is based on work from Theme I and can be quoted as: Westholm, L. 2010. Focali country brief – Burkina Faso, Focali Brief No 2010:02. Forest, Climate and Livelihood Research Network, Sweden

More on Focali can be found on www.focali.se
Postal address:
Att. Focali
Environmental Economics Unit
School of Business, Economics and Law, University of Gothenburg
Box 640
405 30 Gothenburg, Sweden

ISBN: 978-91-86402-03-7

focali.se
Forest, climate & livelihood research network

The **Forest Initiative** is a strategic partnership between **Sida**, **the Swedish Forest Agency** and **the Swedish Forestry Association**. The overall objective of the Initiative is poverty reduction through promotion of sustainable management and administration of forest resources within Swedish development cooperation. Sida is the main donor of the Forest Initiative, which is based on the belief that forests play an important role for poor people and can contribute to economic and social development as well as a better environment.

This document has been financed through the Forest Initiative and does not necessarily reflect the view of the three main partners of the Initiative. Responsibility for its contents rests entirely with the author(s).

## The Forest Initiative Partnership

SKOGSSTYRELSEN
SWEDISH FOREST AGENCY

SKOGEN
THE SWEDISH FORESTRY ASSOCIATION

Sida

## Introduction

Since the launch of the REDD concept (Reducing Emissions from Deforestation and Forest Degradation; later on REDD+, including also conservation, sustainable management of forests and enhancement of forest carbon stocks) at the UNFCCC meeting in Bali in 2007, a number of initiatives have been created to pilot efforts to reduce deforestation in tropical countries. Among the most comprehensive are the UN-REDD and the World Bank's Forest Carbon Partnership Facility (FCPF) and Forest Investment Program (FIP). All three initiatives aim to help countries formulate strategies and establish institutional frameworks for implementing REDD.

Focali has a portfolio of case study countries, all of interest in a REDD context, each representing different climatic, economic, political and institutional conditions. Until recently most REDD initiatives, both operational and research, have focused on countries with high value tropical and subtropical moist forests. Burkina Faso represents a somewhat different setting. Its forests are located in the tropical dry belt and have a low carbon content compared to tropical rainforests. Although its forests do not hold high-value timber, Burkina Faso has experienced high deforestation rates, and is characterised by extremely high poverty levels and a relatively large degree of forest dependency. These conditions, allied with a conviction that Burkina Faso is characterised by relatively good forest governance have motivated the Forest Investment Program to recently announce its intentions to invest in Burkina Faso.

This country brief aims to give an overview and a first introduction to Burkina Faso and its forests. The forthcoming investments in reducing deforestation could play a role in efforts to mitigate as well as to adapt to climate change. These investments hold the potential to make a difference in the livelihoods of the country's many poor. This makes Burkina Faso and its forest sector a subject for research of immediate importance and relevance to stakeholders working to reduce poverty not only in Burkina Faso, but in many other dry countries with similarly high deforestation, high poverty and high forest dependency rates. This short briefing paper anticipates the more detailed case study work by Focali, which will focus on REDD-readiness and livelihoods in Burkina Faso from both social and natural science perspectives.

## Background

- Burkina Faso is a landlocked country in western Africa.
- It covers a surface of 274 200 $km^2$ and borders with Mali, Niger, Benin, Togo, Ghana and Côte d'Ivoire.
- It had a population of 14.2 million in 2008 (INSD, 2010).
- 46% of the population is 14 years or younger and population growth rate is among the highest in the world (3.1%) (CIA, 2010). Almost 25% of the population lives in urban areas (INSD, 2009).


Map of Burkina Faso (UN, 2004)[1].

## Economy

- Burkina Faso belongs to the world's Least Developed Countries (LDCs). It is ranked 177 of 182 countries in the UN Human Development Index (UNDP, 2009).
- More than half of the population lives on less than 1.25 USD a day (UNDP, 2009).
- Its external debt stock was 21.2% of Gross National Income (GNI) in 2008 (World Bank, 2010).
- In 2008, net official development assistant (ODA) received was 12.6% of GNI (World Bank, 2010).
- Over 72% of the country's exports are agricultural products (WTO, 2010). Cotton was by far the largest export (counted in value) in 2007, followed by cattle and sesame. It accounted for over 50% of total exports (FAO, 2010b; INSD, 2009).
- Burkina Faso is import dependent and suffers from a large trade deficit. Over 60% of imports are manufactured goods (WTO, 2009).
- The country is totally dependent on imports for its provision of fossil fuels, which cover less than 10% of energy needs (Burkina Faso, 2001). Fuel imports come from Togo, Ghana, Benin and Côte d'Ivoire.

[1] Reproduced with permission from the UN Cartographic Section.

## Greenhouse gas emissions

In 2005, Burkina Faso's greenhouse gas (GHG) emissions, expressed in carbon dioxide equivalents ($CO_2e$), were reported as 17.9 million tonnes (t) $CO_2e$ (Burkina Faso, 2001), of which more than 95% where non-$CO_2$ greenhouse gases (methane and nitrous oxide). Net emissions (after subtracting sinks) totalled almost 4.6 million t$CO_2e$. According to estimations by the Carbon Dioxide Information Analysis Center (CDIAC) (2010), Burkina Faso's emissions per capita in 2006 were about 0.02 t$CO_2$, making it the 206th out of 212 countries in a ranking of global emitters.

Forest clearing and exploitation are the largest sources of $CO_2$ emissions. The energy sector is the second largest source. Agriculture is the main source of methane emissions, predominantly from livestock farming. Land and forest degradation is estimated to contribute 60% of total GHG emissions (Saboia & Davies, 2010). In the country's National Communication to the UNFCCC it is nonetheless estimated that the land use, land-use change and forestry (LULUCF) sector is a net sink (Burkina Faso, 2001).

Electricity is produced in 30 diesel power stations and three hydropower stations managed by the state owned company SONABEL (Société National d'Electricité du Burkina) (SONABEL, 2003). Currently, only 7% of the Burkinabe population have access to electricity (UNDP, 2007). SONABEL aims to increase this level to 40% (SONABEL, 2003).

## The role of forests

Burkina Faso's forests lie in the tropical dry belt in the West African Sahel. Although a large share of the country is covered by trees, forests cover only about 25% of the country surface (6,8 million ha in 2005) (FAO, 2008). Estimations of annual deforestation rate range from 15 000 hectares (ha) (FAO, 2010a) to 105 000 ha (Burkina Faso, 2007). The Forestry Department estimated that reforestation programmes reforested on average of 5800 ha per year between 2001 and 2005 (INSD, 2009). According to the FAO there are no primary forests in the country (FAO, 2010a). In 2005, 5.9 million ha were defined as modified natural forests and 800 ha as semi-natural forests by the FAO. There were 76 000 ha of plantation forests, mainly eucalyptus used for fuelwood.

It is difficult to find reliable data on the volume of biomass in Burkinian forests. There are great discrepancies in estimates, partly because of differences in measuring methods (MECV, 2004). The FAO estimates that Burkinian forests held a carbon stock in above-ground biomass of 235 million tonnes in 2005 (FAO, 2005), which equals about 35 tC/ha. This can be compared to the average carbon stock in vegetation in all tropical forests of 120 tC/ha (Watson et al., 2000). According to the FAO (2005) the above-ground forest carbon stock has declined, both in absolute terms (from 296 million tC in 1990) and per hectare (from 41 tC/ha in 1990).

Forests and forestry are the responsibility of the Ministry of Environment (Ministère de l'Environnement et du Cadre de Vie, MECV). The ambition of the Department of Forestry at the MECV is to promote sustainable forest management. Since the 1980 this has included policies for participatory forest management. Forests are divided into management areas where Forests Management Groups (GGF) are responsible for applying a management plan and have the right to use, extraction, management and exclusion (Sawadogo, 2006). The MECV forest services are responsible for the technical supervision.

The Burkinian forestry sector plays an important economic, social and cultural role. The formal forestry sector contributes between 1.5% (FAO, 2010a) and 3% (Burkina Faso, 2007) of GDP. However, in a report commissioned by the European Union (AGRECO, 2006) forestry is estimated contribute with as much as 15.6% of GDP, including the informal sector. In addition, firewood and charcoal constitute around 90% of energy consumption and wood fuels are the main source of energy for 97% of the population (AGRECO, 2006). Approximately 60 000 people, including woodcutters, wholesalers, transporters and retailers, are employed in the formal forestry sector (MECV, 2004). Apart from providing firewood, forests produce timber, forage, honey, fruits and medicinal plants. Millions of households receive income from the non-timber forest product (NTFP) sector. It especially serves as an important source of income for many women. Besides their economic and social functions, forests also serve as windshields, for soil conservation, and hosts of biodiversity (Lux-Developement, 2009).

During the past three decades increasing pressure on agricultural land has caused declining production and increased degradation of soils and pasture lands (Lux-Developement, 2009). Around 24% of all arable land is heavily degraded. Wood fuel demand, tenure insecurity, migration and agricultural expansion are generally considered to be important drivers of degradation and deforestation. Especially around the big cities the demand for wood fuels has caused near exhaustion of forest resources (Ouégraogo, 2006). Livestock grazing is another source of degradation of forests (Dulbecco & Yelkouni, 2007).

Migration is to a large extent driven by drought and environmental degradation in the northern parts of the country. Although some migration goes to the major cities it is principally directed towards rural areas in the southern and western parts of the country (Henry et al., 2004). There is also temporary, seasonal labour migration, where especially young men go to work in cities but return at the beginning of the agricultural season (Østergaard Nielsen & Reenberg, 2010). Migration as a driver of deforestation and degradation is closely linked to agricultural expansion and tenure issues. In 1984, all land including forests was made state property through a presidential ordinance on the reorganisation of agriculture and land (Burkina Faso, 1984). However, local communities generally do not recognise state ownership (Coulibaly-Lingani et al., 2009). Instead they continue to apply traditional tenure regimes.

The large influx of migrants to the southern provinces has increased pressure on forests as demand for cropland has grown. In Sissili province a great increase in croplands at the expense of forest lands has been observed (Ouedraogo et al., 2010). Farmers are often very poor and lack resources for investing in technologies to increase productivity. In addition, use of fertiliser is limited and fallow periods short (Lux-Developement, 2009). As a result, cropland expansion is the common solution to meet a need for increased production. Further, migrants tend to have a less diversified income base. They often have larger croplands because they need to provide not only for the nearest family but for relatives left behind (Ouedraogo et al., 2009).

Production of cash crops, mainly cotton, has also driven agricultural expansion at the expense of forests. Cotton production grew rapidly during the 1990s, especially in the western and southern parts of the country, as the government implemented a plan to increase production (Sawadogo, 2006).

## Burkina Faso and REDD

### Forest Investment Program

In March 2010 Burkina was selected as one of five pilot countries to take part in the Forest Investment program (FIP) (Saboia & Davies, 2010). The FIP is one of the Climate Investment Funds, a collaborative effort among the multilateral development banks, administered by the World Bank. The FIP aims to facilitate developing countries' efforts with REDD (Reducing Emission from Deforestation and Forest Degradation) and sustainable forest management through providing scaled-up financing aimed at achieving transformational change in the forest sector (FIP, 2010). The FIP currently has at its disposal USD 558 million. As a first step, countries will be granted up to USD 250 000 to be used for "*exercising a leadership role in the development of an investment strategy*" (Saboia & Davies, 2010, p. 2).

Countries were chosen by the FIP Sub-Committee, in line with recommendations from Expert Group based on the following criteria:

i. potential to lead to significantly reduced emissions from deforestation and forest degradation;
ii. potential to contribute to FIP objectives;
iii. potential of mainstreaming FIP investments in ongoing policy framework;
iv. country preparedness, ability and interest to undertake REDD+ efforts;
v. country distribution across biomes and regions.

Despite its relatively low potential for carbon sequestration the FIP Expert Group considered Burkina Faso a relevant pilot country because it represents the semi-arid ecosystem which covers vast areas in the tropics (FIP, 2010). This means that successful REDD+ efforts in semi-arid areas could have great benefits although carbon sequestration potential per hectare is low. Lessons learned in Burkina Faso could potentially be transferred to countries with similar climate conditions. So far, there have been no major investments in REDD in tropical dry forests, so this would be an opportunity for gaining new experiences. The large role forests play for livelihoods in Burkina Faso calls for coordinating efforts on forest-base adaptation and mitigation. This was another reason for choosing Burkina Faso as a pilot.

The FIP Expert Group judged that there was a high potential for initiating transformational change, because of a relatively high institutional planning capacity in the field of rural development, forests and environment (FIP, 2010). They also considered the involvement of civil society and local communities in rural development to be relatively strong. Forests already play an important role in the country's development strategy. The FIP sees opportunities for supporting the scaling-up of existing successful projects in forest conservation and agro-forestry. The potential for coordinating with, and building on existing investments in the forestry sector by development partners such as the World Bank, Sida and the Swiss and Dutch development co-operations was also emphasised.

### REDD Readiness

The FIP Expert Group considers Burkina Faso to be relatively well prepared for REDD implementation. But there are several constraining factors that should not be forgotten. Despite long-term experience from working with natural resource management, forest related law enforcement capacity in Burkina Faso is weak, to some extent due to a lack of resources (Dulbecco & Yelkouni, 2007). The Ministry of

Environment receives a modest share of the national budget and depends largely on external donors for investing in the forestry sector. The Ministry itself identifies this lack of resources and capacity as the reason for its inability to implement strategies and policies related to natural resource management (MECV, 2004).

A vast majority of the Burkinabe population depend almost exclusively on agriculture and forest resources for their livelihood (MECV, 2004). Many years of drought have speeded up degradation, and despite awareness of the need to sustainably manage natural resources it is difficult to establish sustainable practices. Extreme poverty is widespread and the rural population lives with minimal or no margins. This makes it difficult to control over-exploitation of natural resources.

Although the state officially owns all land, this ownership is often not understood or recognised in practice (Dulbecco & Yelkouni, 2007). Furthermore, the process of decentralisation of forest management initiated in the 1990s that was to give local people and rural councils more power over forest resources has been ineffective (Bouda et al., 2009). Many times, laws are not sufficiently known or understood by the main actors in the forestry sector (MECV, 2004), or they are applied only selectively and foresters and businessmen are still in control of forest resources (Bouda et al., 2009). This makes it difficult for local management groups to exercise their rights and responsibilities.

The FIP Expert Group mentioned the strong involvement of civil society and local communities in rural development as a reason for choosing Burkina Faso as a pilot. Civil society is involved in the management of natural resources, for example through the forest management groups and unions of forest management groups. However, although groups are responsible for preventing degradation, while enjoying user rights over the resources, in practice they often lack both competence and means for exercising these rights and responsibilities (Bouda et al., 2009). In addition, the decentralisation process has failed to include already existing local associations. In reality, forests are subject to uncontrolled and illegal clearings, unauthorised fires and infringements. The intended reinvestment in forest sustainability is often insufficient. Although there are experiences showing that forest use can contribute to poverty reduction, current benefit sharing arrangement would need to be revised in order to better satisfy the needs of woodcutters and management groups.

In the context of REDD implementation, the availability of information on historical and current forest cover, land use, land-use change and carbon content in forests are all crucial. The Ministry of Environment has identified a knowledge gap regarding forest resources, their growth, regeneration and productivity (MECV, 2004). The last national forest inventory was realised by FAO in 1980 (Lux-Developement, 2009). Since then, the status and cover of forests have only been estimated from aerial and satellite images and there is no detailed knowledge of the forest situation. For the estimation of GHG emissions from land use change for Burkina Faso's National communication to the UNFCCC, because of financial constraints, no satellite or aerial photos were available, forcing estimations to be based on comparative mapping techniques (Burkina Faso, 2001).

As a step to facilitate the implementation of the national Plan to Combat Desertification (1986) and the National Action Plan for the Environment (1990), the National Programme for Managing Information about the Environment (Programme National de Gestion de l'Information sur le Milieu, PNGIM) was launched in 1993 (MECV, 2010). The aim of the programme was to improve and make

available environmental information, to support institutions working with environmental and cartographic information and to ensure Burkina Faso's participation in international initiatives on collection and analysis of environmental data. So far, the programme has established several national topographic databases and techniques for collecting data, but a lot still remains to be done.

## Conclusions and research implications

Burkina Faso's impact on the global climate is negligible. There is no reason to believe that reducing emissions from deforestation and forest degradation would have any significant effect on the world's climate. The main impacts of REDD in Burkina Faso can rather be expected to be on livelihoods and poverty. The country is extremely poor and a large share of the population depends at least to some extent on forests for their livelihoods. Because of this, large investments in the forest sector and avoided deforestation are likely to affect poor people.

There are factors speaking in favour of REDD implementation in Burkina Faso. Burkinian forests do not contain high-value timber demanded on the world market which means that opportunity costs of preserving the forest are likely to be lower than in many other places. With access to more resources there are possibilities for establishing more sustainable practices in forest management. Efforts to reduce pressure on forests could well be advantageous for poverty reduction, e.g. increased agricultural productivity. The rural population would most likely benefit from reduced deforestation and forest degradation since this could help prevent soil erosion and retain water in soils. Yet, reducing pressure on forests will require conversion of energy use to other sources and increasing agricultural productivity (among other things). In a poor country like Burkina Faso, these changes will not come easily.

The FIP puts hope to Burkina Faso providing a good example and lessons learned that can be useful when reproducing REDD efforts in other countries with similar conditions. As observed by the FIP Expert Group, Burkina Faso will be the first REDD pilot country covering the tropical dry biome. This can certainly provide valuable experiences for expanding REDD activities outside the humid tropical ecosystems. Yet, the estimated "extended mitigation potential" of Burkina Faso, including the total global tropical dry forest area, may be slightly over stated. It fails to take into account political, institutional and other factors that affect REDD implementation.

Burkina Faso has a long way to go to reach readiness for REDD+ implementation. According to the FIP Expert Group, there is long-term experience in the country from working with natural resource management and rural development. However, the Burkinian natural resources management regime is far from functioning smoothly and efficiently. There is currently no land use monitoring system. Investments will have to be made in institutional and technical capacity. The forest management groups do not have the resources and capacity they need to fulfil their responsibilities. In addition, the actual power over forest resources does not lie with the management groups, but rather with wholesalers and transporters.

The FIP Expert Group emphasises the role of civil society in natural resource management. Yet, according to Siaka Coulibaly (2009), Burkinian civil society is mainly involved in local development projects and less in national politics. This type of civil society engagement is not explicitly requested by the FIP, but it holds relevance in the context of the transformational change the program aims at initiating. For example, the failure so far to integrate traditional land rights in the legal system has resulted in insecurities that could be mitigated by adhering to the voices of local communities and

civil society in policy formulation. But also on the local level, civil society seems to lack actual power, in spite of the good intentions of the decentralisation process. For example, although the forest management group unions (UGGFs) have the formal price setting power, in practice it is the wholesalers that control the market and prevent the UGGFs from raising prices (Bouda et al., 2009; Sawadogo, 2006).

The REDD process in Burkina Faso has not started yet, but the ambitions of the donors are enormous. Focali aims to follow the emerging REDD process in Burkina Faso as it progresses. Our plans include following the development of a forest monitoring system and establishment of a reference scenario. Of interest to Focali are also the intentions of the FIP to initiate transformational change and establish a sustainable forest management regime. The Focali research theme “Making REDD work for the poor” is planning a study on livelihoods and the potential implications of avoided deforestation on the poor. Focali is also involved in a Sida funded research project on the links between trees, water and livelihoods in Burkina Faso. These studies will all contribute to a discussion whether the proposed REDD instruments might prove effective in Burkina Faso.

## References


AGRECO (2006). *Profile Environnemental du Burkina Faso.*: La Commission Européenne, Gouvernement du Burkina Faso.

Bouda, H.-N., Savadogo, P., Tiveau, D., & Ouedraogo, B. (2009). State, Forest and Community: Challenges of Democratically Decentralizing Forest Management in the Centre-West Region of Burkina Faso. *Sustainable Development*.

Burkina Faso (1984). Textes portant réorganisation agraire et foncière au Burkina Faso, 84 - 050/CNR/PRES C.F.R. (1984).

Burkina Faso (2001). *Communication Nationale du Burkina Faso*. Ouagadougou: UNFCCC.

Burkina Faso (2007). *Programme d'action national d'adaptation a la variabilité et aux changements climatiques (PANA du Burkina Faso)*. Burkina Faso: Ministère de l'Environnement et du Cadre de Vie. Secretariat Permanent du Conseil National pour l'Environnement et le Développement Durable.

CDIAC (2010). Carbon Dioxide Information Analysis Center Retrieved 2010-05-16, from http://cdiac.ornl.gov

CIA (2010). The World Factbook Retrieved 2010-04-15, from www.cia.gov/library/publications/the-world-factbook/index.html

Coulibaly-Lingani, P., Tigabu, M., Savadogo, P., Oden, P.-C., & Ouadba, J.-M. (2009). Determinants of access to forest products in southern Burkina Faso. *Forest Policy and Economics, 11*(7), 516-524.

Coulibaly, S. (2009). Quelle société civile pour le renforcement de la démocratie au Burkina Faso? Retrieved from http://www.civicus.org/media/Siaka-Coulibaly_fr.pdf

Dulbecco, P., & Yelkouni, M. (2007). Sustainable development and institutional change: Evidence from the Tiogo forest in Burkina Faso. *Journal of International Development, 19*, 1043-1058.

FAO (2005). *Évaluation des ressources forestière mondiales 2005. Rapport national Bukrina Faso*. Rome: FAO Département des forêts.

FAO (2008). FAO Forestry Country Profiles. Retrieved 2009-03-25, from http://www.fao.org/forestry/country/en/

FAO (2010a). FAO Forestry Country Profiles Retrieved 2010-04-29, from www.fao.org/forestry/country

FAO (2010b). FAOSTAT Retrieved 2010-04-26, from http://faostat.fao.org

FIP (2010). *Report of FIP Expert Group: Recommendations for Pilots Under the Forest Investment Program (FIP)*. Manila, Philippines: World Bank Climate Investment Funds.

Henry, S., Piché, V., Ouédraogo, D., & Lambin, E. F. (2004). Descriptive Analysis of the Individual Migratory Pathways According to Environmental Typologies. *Population & Environment, 25*(5), 397-422.

INSD (2009). *Annuaire Statistique. Edition 2008*. Ouagadougou: Institut national de la statistique et de al démographie, Burkina Faso.

INSD (2010). Institut National de la Statistique et de la Démographie, from www.insd.bf

Lux-Developement (2009). *Revue Pays Burkina Faso 2009. Coopération luxembourgeoise au Burkina Faso.* Louxembourg: Lux-Development, Le gouvernement du Grand-Duché de Louxembourg.

MECV (2004). *Contribution du secteur forestière a l'économie nationale er a la lutte contre la pauvreté.* Burkina Faso: Ministère de l'Environnement er du Cadre de Vie.

MECV (2010). Presentation du Programme National de Gestion de l'Information sur le Milieu (PNGIM) Retrieved 2010-03-25, from http://www.environnement.gov.bf/SiteEnvironnement/transectorielle/pngim.pdf

Ouedraogo, I., Savadogo, P., Tigabu, M., Cole, R., Odén, P. C., & Ouadba, J.-M. (2009). Is rural migration a threat to environmental sustainability in southern Burkina Faso? *Land Degradation & Development, 2009*(20), 217-230.

Ouedraogo, I., Tigabu, M., Savadogo, P., Compaoré, H., Odén, P. C., & Ouadba, J.-M. (2010). Land cover change and its relation with population dynamics in Burkina Faso, West Africa. *Land Degradation & Development*.

Ouégraogo, B. (2006). La demande de bois-énergie à Ouagadougou: esquisse d'évaluation de l'impact physique et des échecs des politiques de prix. *Développement durable et territoires, [en ligne]*. Retrieved from http://developpementdurable.revues.org/index4151.html

Saboia, E., & Davies, R. (2010). *Summary of the Co-Chairs. Forest Investment Program Sub-Committee Meeting. March 17, 2010*: World Bank, Forest Investment Program.

Sawadogo, L. (2006). *Adapter les approches de l'amenagement durable des forets seches aux aptitudes sociales, economiques et technologiques en Afrique: le cas du Burkina Faso*. Bogor, Indonesia: CIFOR.

SONABEL (2003). Société National d'Electricité du Burkina Retrieved 2010-05-12, from www.sonabel.bf

UN (2004). *Burkina Faso. Map No. 4230*: Department of Peacekeeping Operations, Cartographic Section.

UNDP (2007). *Human Development Report 2007/2008. Fighting climate change: Human solidarity in a divided world.* New York: UNDP.

UNDP (2009). Human Development Reports. Statistics. Retrieved 2009-07-03, from http://hdr.undp.org/en/statistics/

Watson, R., Noble, I., Bolin, B., Ravindranath, N. H., Verardo, D., & Dokken, D. (2000). *Land use, land-use change and forestry.*: Cambridge University Press, UK.

World Bank (2010). The World Bank Open Data Retrieved 2010-04-27, from http://data.worldbank.org/

WTO (2009). World Trade Organization Statistics Database Retrieved 2010-03-19, from http://stat.wto.org/Home/WSDBHome.aspx

WTO (2010). Statistics Database. Trade Profiles - Burkina Faso. Retrieved 2010-04-26, from http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Language=E&Country=BF

Østergaard Nielsen, J., & Reenberg, A. (2010). Cultural barriers to climate change adaptation: A case study from Northern Burkina Faso. *Global Environmental Change, 20*(2010), 142-152.

The Forest Initiative Partnership