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Economics Research

WIDER Working Paper No. 2013/139

Aid and environment in Burkina Faso

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December 2013

Abstract

The main objective of the paper is to determine the actual aid flows that have an environmental focus in Burkina Faso. The environment literature highlights important environment issues in air, land and water, including deforestation, desertification, irreversible negative effects on biodiversity, and urbanization issues. It implies serious adverse consequences on wellbeing in developed countries, but also in developing countries in particular. The negative impact of climate change in Burkina Faso is particularly worrying because of the country's dependence to subsistence agriculture, its high vulnerability to natural disasters, its lack of adequate healthcare and other adaptation/resilience capacities. Stakeholders, including Burkina Faso's government and donors in environment and development areas, acknowledge the urgent need of facing these challenges efficiently, the first of which seems to be deciding how to finance the environment strategies. Of the € million needed per year, the government's investment in environment is less than 1 per cent. The financing alternative could be aid, but donor support to the sector in Burkina Faso is considered insufficient. Furthermore, efficiency in environmental project implementation is more worrying.

Keywords: environment, foreign aid, Burkina Faso

JEL classification: F35, F64, O55

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This study has been prepared within the UNU-WIDER project 'ReCom–Foreign Aid: Research and Communication', directed by Tony Addison and Finn Tarp.

UNU-WIDER gratefully acknowledges specific programme contributions from the governments of Denmark (Ministry of Foreign Affairs, Danida) and Sweden (Swedish International Development Cooperation Agency—Sida) for ReCom. UNU-WIDER also gratefully acknowledges core financial support to its work programme from the governments of Denmark, Finland, Sweden, and the United Kingdom.

ISSN 1798-7237

ISBN 978-92-9230-716-5



Acknowledgements

This paper has been written as part of a collaboration between UNU-WIDER and the African Economic Research Consortium (AERC) within the UNU-WIDER project 'ReCom-Foreign Aid: Research and Communication', directed by Tony Addison and Finn Tarp.

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Typescript prepared by Liisa Roponen at UNU-WIDER.

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1 Introduction

In Burkina Faso, donors are sensitive to environmental issues as the link between the environment and poverty is very strong, and the environmental context is gaining more attention at the international level since the Rio Earth Summit in 1992 and the Kyoto Protocol in 1995 (Castro and Hammond 2009). Previous development strategies in Burkina Faso did not explicitly take environmental issues into account. At best, environmental needs have been insufficiently included in development programmes, as noted in the evaluation of the previous 'Poverty Reduction Strategy Document' in 2006. The current overall development document has systematically included environmental issues as a priority for any development action in any sector.

1.1 Development strategies and priorities

Development policies implemented in Burkina Faso during the last ten years, significantly supported by donors, led to an average real gross domestic product (GDP) growth of 5.2 per cent. This economic growth was 5.2, 5.7, 6.5 and 6.2 per cent in 2009, 2010, 2011 and 2012, respectively (African Economic Outlook 2013). Contributions of the primary, secondary and tertiary sectors are 25 per cent, 15 per cent and 60 per cent, respectively. During this period, exports from Burkina Faso increased on average 8.3 per cent. Economic growth was led more by consumption than investment, particularly in 2010, notably increasing imports of petroleum products. Domestic demand, including consumption and investment, represents 24.6 per cent of GDP. In addition, private investment growth rate, on average, was 12.7 per cent over the period 2000-10, mainly in telecommunication and mining. Gold represents a high share of the total exportation values over the recent 4-5 years.

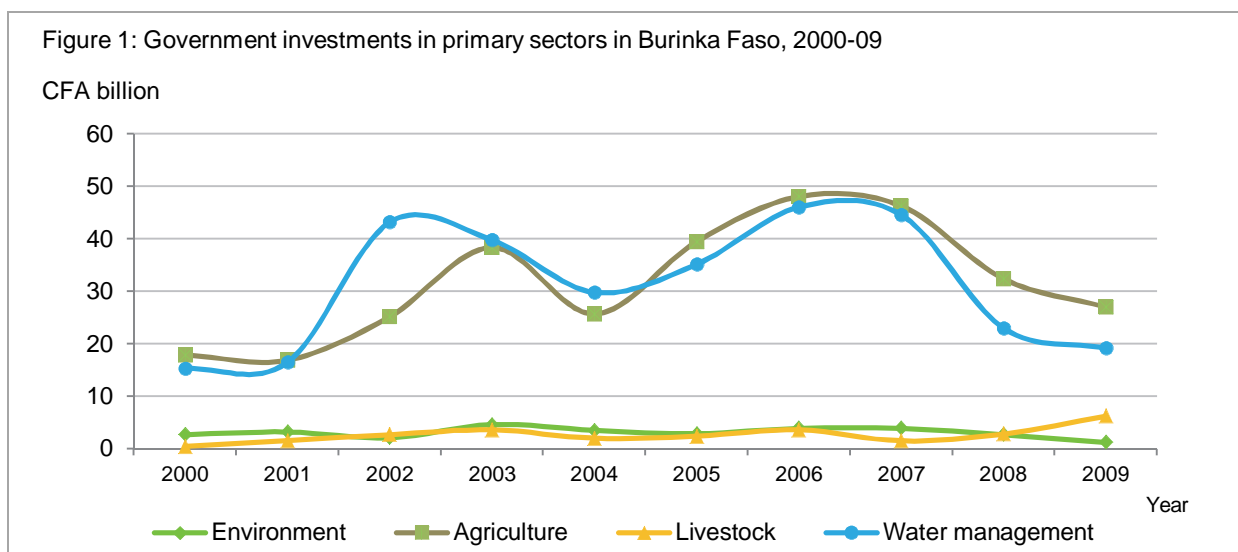
Macroeconomic policy has been increasingly expansionist over the last few years. The budget deficit was 3.5, 4.5, 4.4 and 5.1 per cent of GDP in 2009, 2010, 2011 and 2012, respectively, with a high risk of over-indebtedness in the medium and long terms. This gap was largely filled by external aid. The expansionist policy objectives include supporting domestic demand, and strengthening the social security net. An urgent component is humanitarian needs, particularly for housing and reconstruction following the floods in 2009 and 2010. The government of Burkina Faso has focused its development efforts on such social sectors as health, education, and social protection, for achieving the Millennium Development Goals (MDGs). The share of these sectors in government expenditures relying on own resources, has increased from 29.16 per cent in 2000 to 44.64 per cent in 2010. This economic development, however, co-exists with poor living conditions, and most life quality indicators have been pessimistic for Burkina Faso for at least 20 years. The share of people living below US\$1.25 a day has decreased about 40 per cent over the 1994-2009 (MDG Report 2012). Life expectancy at birth in 2000 was 50 years, and 55 years in 2011. In 2010, about 73 per cent of the rural population had access to improved water. Carbon dioxide emissions, which were 0.1 metric tons per capita in 2009, are considered a sustainability proxy by the UNDP in calculating the human development index (HDI), a composite measurement of basic human dimensions that can be analysed for a broader definition of wellbeing. In UNDP's latest report in 2013, Burkina Faso's HDI was 0.313, ranking it in 183rd position out of 187 countries. This is lower than the average HDI of the low human development countries. The poverty headcount ratio at national poverty line was 49.2 per cent and 46.7 per cent in 2003 and 2009, respectively (WDI 2013).

A new strategy paper ('Strategy for Accelerated Growth and Sustainable Development', SCADD), adopted in December 2010, focuses on combining increased economic growth,

improved environment and resources management, and social equity, for sustainable development. Its overall objectives include sustained and consistent economic growth, increased income, improved quality of life, and improved management of natural resources and environment issues.

1.2 Allocation of Burkina Faso’s government expenditures

The budget of Burkina Faso in 2013 is CFA 1,636 billion (about US\$3.3 billion) (MoE 2013). About 62 per cent of this amount is covered through own resources and the shortfall is funded mainly by donors. The budget shares for education and health are 16 per cent and 13 per cent, respectively. Government investment in the environment sector was on average about CFA 3 billion per year during the 2000–09 period (Figure 1), and seems to be decreasing over the time. It remains very small for dealing with the country’s environmental issues.



Source: MoE (2010).

2 Key environment sectors in Burkina Faso

2.1 Brief description of the climate in Burkina Faso

Burkina Faso is characterized by a dry tropical climate with recurring droughts, a dry season and a rainy season (which is typically shorter than the dry one), and hot weather with aridity expanding from the north to the south. The country is divided into three climatic regions: the Sahel, the Sudan-Sahel, and the Sudan zones.¹ The Sahel zone, located in northern Burkina Faso, frequently has less than 600 mm of rainfall and 8-10 months of dry season. The Sudan-Sahel zone represents the largest central strip, where rainfall is typically between 600 mm and 900 mm, but rarely exceeds 1000 mm. The Soudan climatic zone in the south is the most humid, with a rainy season lasting six months and 1000–1300 mm of rainfall. The weather is hot with a monthly average temperature of 35°C, and occasionally a maximum of about 50°C in the north of the country (National Weather Service 2010). Burkina Faso, as many other regions, has experienced weather extremes, including droughts and floods. Droughts were evident in 1973, 1984, 1991, 2004, 2010, and 2012, while floods were recurring events in

¹ For details, refer to Atlas de l’Afrique (2005), available at: www.fructifera.org/ENG/HTML/Climate.htm.

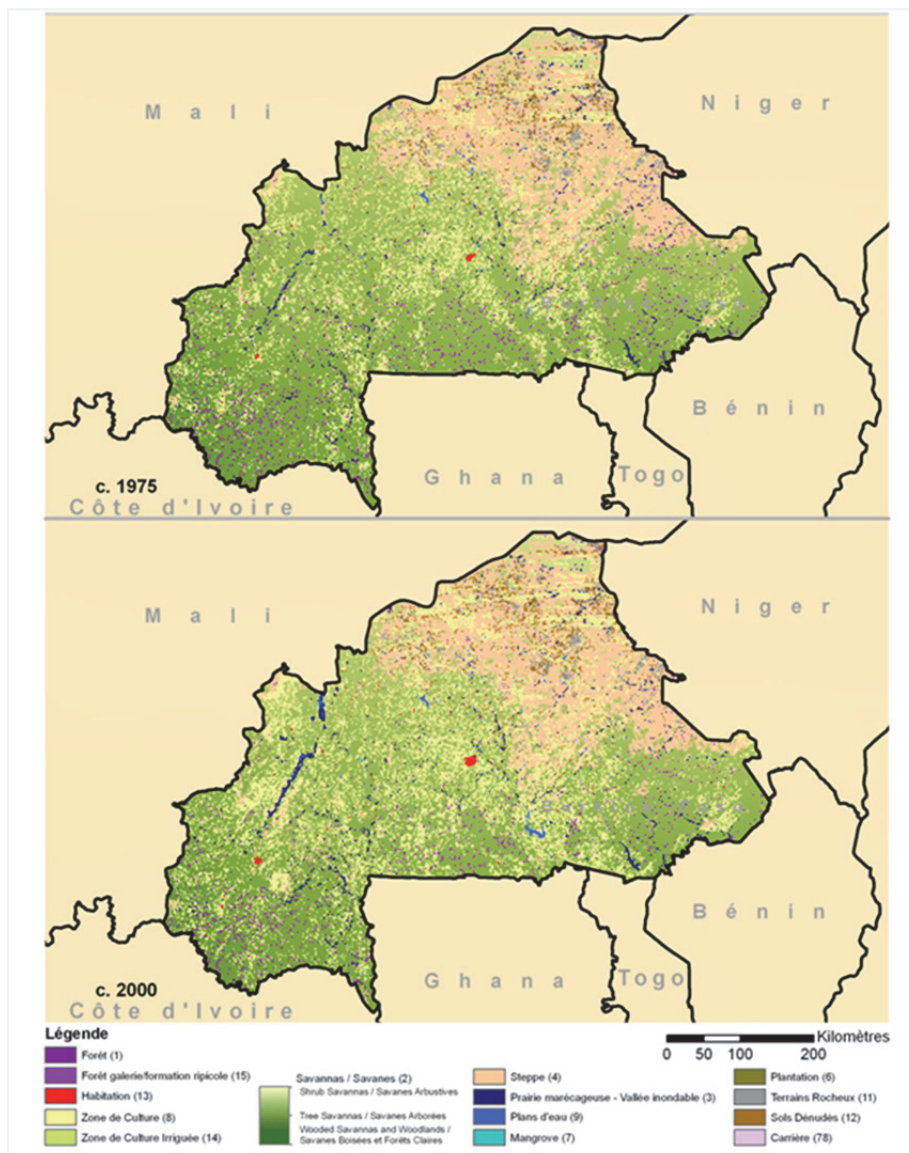
1988, 2007, 2009 (the worse), and 2012 (Wikipedia 2013). Floods have become particularly noticeable during the last decade. These extremes are thought to be the consequence of climate change, and to contribute to exacerbating environment issues.²

The key sectors impacting on the environment in Burkina Faso include agriculture, forestry, water resources and fishery, mining, and urban pollution.

2.2 Agriculture and land

Farming is significantly increasing pressure on land. Cultivated land has expanded 2 per cent and 3 per cent, respectively, over the years 1975-2000 and 1992-2002 (MEF 2010, see

Figure 2: Trends in the land uses and land cover of Burkina Faso, 1975-2000



Source: Map reproduced with the permission of the US Geological Survey-Eros Center (2013).

² The country has signed most of the international agreements on environment issues (Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Life Conservation, Ozone Layer Protection, Wetlands, etc.). Most have been ratified.

Figure 2). The typical, extensive farming technique impoverishes the soil and increases water and wind erosion, causing about 50 per cent and 20 per cent of the country to be annually exposed, respectively, to these erosion factors. About 19 per cent of the land in Burkina Faso is unsuitable for any type of agricultural activity, and about 10 per cent of land is inappropriate for farming due to lack of rainfall.

2.3 Forestry

In Burkina Faso, savannahs are the predominant type of land-cover, and their coverage has decreased by about 14 per cent over 19975-2000 because of clearing for crops (USGS 2013). These are mainly gallery forests along drainage channels rather than true forests, constituting an area decrease of 24 per cent over the same period (ibid.). In general, deforestation of the country's forestry (Table 1) has been estimated at about 19 per cent over the two last decades (FAO 2010), resulting primarily from growing domestic use (fire wood) and bush fires. About 87 per cent of households rely on wood as the main domestic source of energy (INSD 2009). Most important forest resources sites are under rigorous control by the Forestry Commission. This includes 77 enclosed locations that account for about 14 per cent of the country's land (DIFOR 2007).

Table 1: Forest area, 1990-2010

Year	1990	2000	2005	2010
Area (ha)	6,840,000	6,190,000	5,871,000	5,540,000
Variation (%)		-9.5	-5.2	-5.6

Source: FAO (2010).

2.4 Water resources

The principal hydrographic basins in Burkina Faso are the Comoé, Mouhoun, Nakanbé, and Niger. Only the Mouhoun and Comoé are perennial basins, as they are located in the rainiest regions, in the southern Sudan climatic zone. In addition to these waterways, there are at least 1300 lakes, dams, or ponds, of which about 30 per cent are perennial (SP/CONNEDD 2010). However, these basins and lakes are increasingly becoming silted and dry because of agriculture and inappropriate water utilization, leading to reduced aquatic resources, and related ecological issues. A particular concern is related to water pollution through the use of chemical fertilizers and pesticides, a particularly prevalent problem in the cotton basin in the south-western part of the country.

Table 2: Estimated water volume of basins in Burkina Faso, 2008

Hydrographic basins	Water volume (m ³ , million)	Main use
Comoé	1,900	Hydroelectricity, agro-pastoral (including irrigation).
Mouhoun	74,500	Irrigation, livestock, fishery
Nakanbé	62,300	Irrigation, livestock
Niger	51,100	Irrigation, livestock
Burkina Faso	206,900	Irrigation, hydroelectricity, agro-pastoral activities (including irrigation and livestock), fishery

Source: MEE/GIRE Programme (2009).

2.5 Mining

Mining in Burkina Faso has developed considerably in the last decade, with very substantial negative effects on the environment, including pollution of water, land and air through the inappropriate use of chemical products (such as mercury, cyanide, various acids, etc.), as well as deforestation. For example, for each gram of extracted gold by amalgamation, about two grams of mercury are released into the environment, leading to pollution (Ouédraogo 2006). Pre-environmental impact studies are conducted by most mining companies, and although they are officially obligated to comply with environment requirements, these commitments are not respected because of the government's accommodating control (if any), and corruption. This environmental concern is particularly worrying as there seems to be an anarchic rush in mining, and new mining sites are frequently created, as evidenced by three new ones planned for the few next months.

2.6 Urban pollution

Towns are 'dirty' in Burkina Faso. Domestic garbage is estimated at about 0.6 kg per capita per day, yet only 40 per cent is collected in rubbish bins in Ouagadougou and Bobo-Dioulasso, the country's two biggest towns. Garbage generally is not treated; neither are dirty water and industrial liquid wastes sufficiently collected or appropriately treated. The sewerage system does not function well, and has a very low capacity. The main consequences of this pollution include deterioration of the environment and related water illnesses such as malaria, diarrhoea, and typhoid fever.

In addition to water contamination, air pollution is a problem, particularly in the biggest towns and industrial zones. The greenhouse gas emissions per capita are estimated at 522 kg in 2007, an increase of 2 per cent over 1999-2007. The principal sources of pollutants in Burkina Faso are meteorological factors (wind, rainfall and temperature), households (firewood and garbage) as well as industry and motorized vehicles.³ The problem related to vehicles is being made worse by their high age, the huge increase in two-wheel motorcycles, and the questionable quality of some fuel that contributes to high emission levels of dioxide of carbon/azotes. Dust from non-asphalt streets compounds the situation.

Deterioration of natural resources is one of the major environmental issues in Burkina Faso that extends to soil, water resources, biomass and biodiversity. This degradation is due to multiple factors including:

- strong pressure on natural resources resulting from population growth,
- non-secure land access,
- insufficient productivity of farming and livestock systems,
- weak/inefficient implementation of land and environment legislations,
- weak awareness and control of management of natural resources, and
- lack of biodiversity development.

This environment degradation triggers a vicious cycle that results in: (i) decreases in biomass, forest cover, biological diversity, water resources, and fertile soils; increases in pollution, and

³ Burkina Faso has one of the highest motorcycle populations in Africa. About 58 per cent of the transport of goods and people is provided by two-wheel motorcycles.

(ii) severe pressure on the remaining natural resources and on a rural exodus that lead to rising poverty, and (iii) greater reliance on basic natural resources, which generates more environmental issues.

3 Environment challenges and strategies

3.1 Challenges

The most important environmental issues include degradation of the soil and water resources, and erosion of biodiversity. In addition, the country's energy sources are not sustainable. Major factors include mining and cotton production in rural areas, and industry and traffic (air and water pollution). Attention to environmental issues has increased in Burkina Faso in the last decade, and based on the new development strategy, numerous measures are being taken by the government to deal with these issues. In addition to the activities undertaken by the ministry of environment, each ministry should include environment concerns in its development programmes. Furthermore, a national office for monitoring and evaluating the environmental impacts of development projects (*BUNED*) has been created. Some educational modules are included in school programmes to teach the importance of safeguarding the environment at an early age.

The Rio Earth Summit in 1992 and the Kyoto Protocol in 1995 provided recognition of the need for environment protection. Developed and developing countries acknowledge that environment degradation is related not only to air pollution, but also to land and water, with irreversible effects on biodiversity. The negative impacts of environment degradation on wellbeing are particularly severe in the developing countries because of their poor healthcare systems and reliance on subsistence agriculture (Mak et al. 2009). Developed countries have increased their focus on environmental challenges by providing more aid to developing countries or requesting stronger links to environmental concerns in development programmes.

The importance of the environment in Burkina Faso's new development strategy is justified by many reasons, including the role of agriculture in the economy, and environment's global context with regard to climate change. In Burkina Faso, 80 per cent of the active population works in the primary sector, including subsistence agriculture, livestock and forestry. This sector accounts for 70 per cent of the country's exportation value. However, many limitations and constraints challenge the efficiency of the country in dealing with environmental issues. They include:

- lack of recognition of environmental issues in policies and development programmes;
- low share of government expenditures for environmental issues;
- lack of human capital devoted to environmental concerns;
- lack of visibility of the environment department and its contribution to the development of the country;
- lack of appropriate regulations;
- poor monitoring and evaluation processes for environmental development programmes;
- absence of recent and reliable data on environmental resources;

- lack of incentives for private investors in the forestry subsector; and
- absence of efficient environmental accounting.

Subsequent challenges to achieving sustainable management of environmental issues include:

- sustainable management of natural resources, including land, water, and forests;
- safe drinking water;
- sustainable mining;
- better life environment;
- prevention and management of natural disasters;
- promotion of environmental assessment in all programmes and development projects;
- practice of environmental education, including the concept of ecocitizenship;
- efficient implementation of economic and financial environment instruments; and
- promotion of decent green jobs.

3.2 Strategies

The government of Burkina Faso has elaborated a number of legal frameworks, policies/strategies and action plans for the sustainable development of the country that also take environment issues into account.

Legislation for the environment

In its constitution of 11 June 1991, Burkina Faso included the right of the people to the environment. The constitution has many references to the environment and natural resources, and mentions in its preamble people's awareness of the need to protect the environment. Although Article 14 of the constitution stipulates that natural wealth and resources belong to the people of Burkina Faso and that they are to be used to improve living conditions, Article 29 recognizes the right to a healthy environment, and that protecting, defending and promoting the environment are the responsibility of all citizens. Unfortunately, this legislation has serious shortcomings and its application is very limited. Indeed, all regulatory provisions that would allow the stakeholders to hold perpetrators accountable for offences/violations are not specified. Moreover, legal measures with respect to environmental rights or stipulations to seek compensation for violations seem to be more a matter of faith than the effort to ensure efficient implementation.⁴

Policies for the environment

Many sector-based policies dealing with environment issues in Burkina Faso include:

- *Lettre de Politique de Développement Rural Décentralisé, LPDRD*, the policy of decentralized rural development;
- Strategy for rural development by 2015;
- National environment policy, with a particular focus on forestry;

⁴ A typical example of non-application of legislation is the tanning industry in Ouagadougou that has significantly polluted water and air in the region, with subsequent adverse effects on some local agricultural commodities, and negative impact on the health of local residents.

- National policy for land security; and
- Policy for development of the energy sector.

Commitments and international agreements for the environment

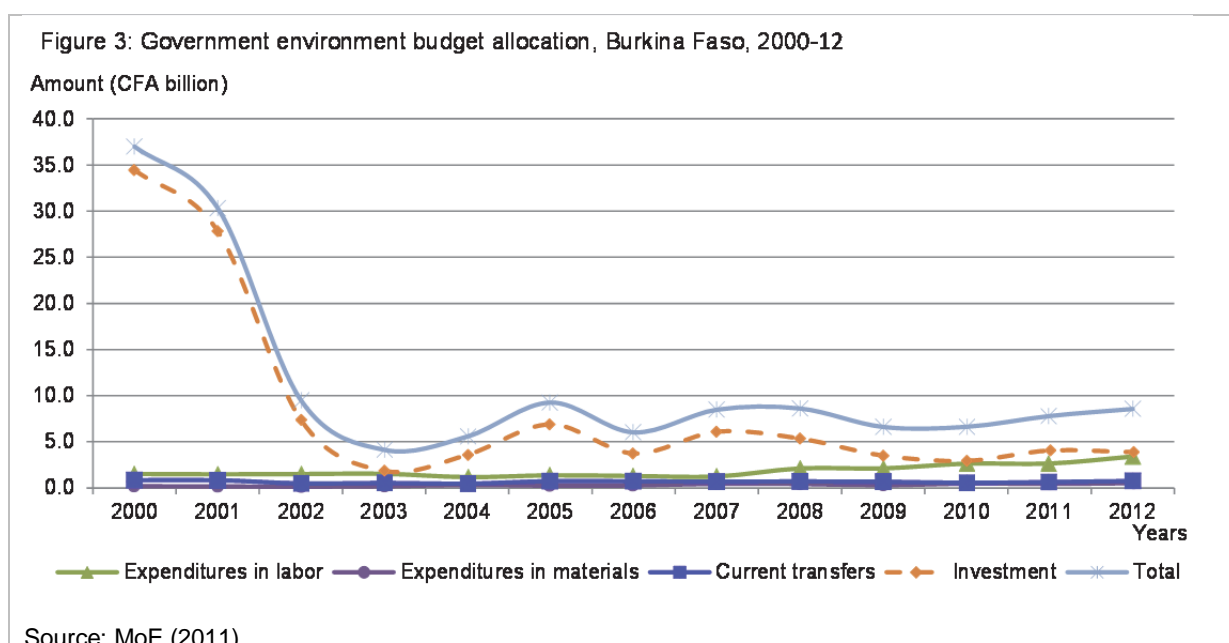
Burkina Faso has signed or ratified more than 20 international conventions and agreements related to environment. See Appendix 1 for details.

Other important environmental initiatives

The government has set up two major environmental initiatives:

- Poverty and environment initiative (*Initiative Pauvreté et Environnement*). A joint UNDP-UNEP programme launched in 2005, this initiative is aimed at supporting countries to integrate the environment and particularly the links between poverty and environment into national development planning processes.
- The establishment of an environmental accounting mechanism. To comply with international recommendations, Burkina Faso designed and implemented a pilot project in 2006 with UNDP support to improve consideration of the environment in its economic strategy for sustainable development and poverty reduction. Specifically, the project aims to: (i) implement an operational national environmental accounting system; (ii) establish pilot environmental accountability mechanism for forest resources, land, water, etc. with regard to the occupation of land, forests and semi-natural areas, water, as well as monetary accountability on expenditures for environmental protection (government and donors funds), (iii) develop inter-institutional cooperation on environmental accounting issues, with the institutions responsible for environmental management, including in particular the National Institute of Statistics and Demography (INSD).

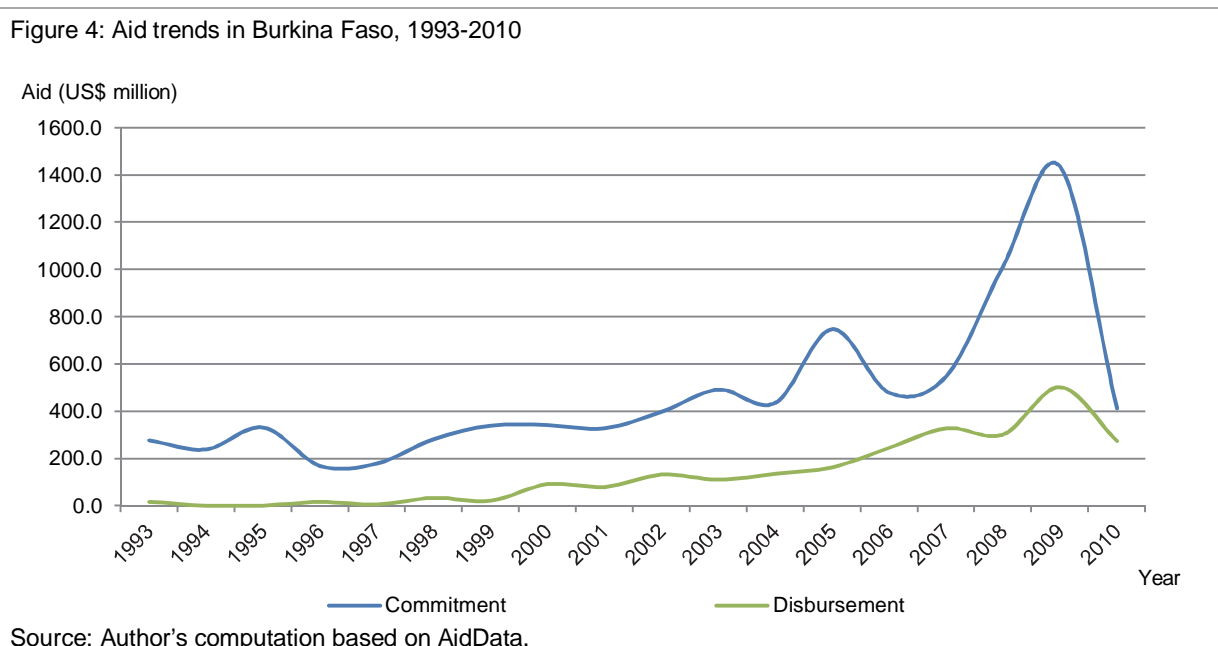
The insufficiency of government expenditures allocated to environment concerns is one of the main criticisms from most of the country's environment stakeholders (Figure 3). At least €8 million is needed to deal with the current basic issues of climate change in the country (EC 2013). The country's overall development process relies significantly on donors and at



least one-third of the financial needs of the new development strategy (SCADD) is covered by donors. In addition, many projects with significant indirect impacts on environment protection have been funded by donors including the World Bank, Global Environment Fund, UNDP, African Development Fund, Canada, Swiss, Japan and China.

3.3 Aid in Burkina Faso

About US\$8.5 billion has been committed as aid to Burkina Faso over the 1993-2010 period, with about 30 per cent disbursed, corresponding to an average annual commitment of US\$470 million (AidData 2013). Over the last decade, aid has been rising (Figure 4), but shows a decreasing trend for 2009-10, probably due to the global economic crisis.

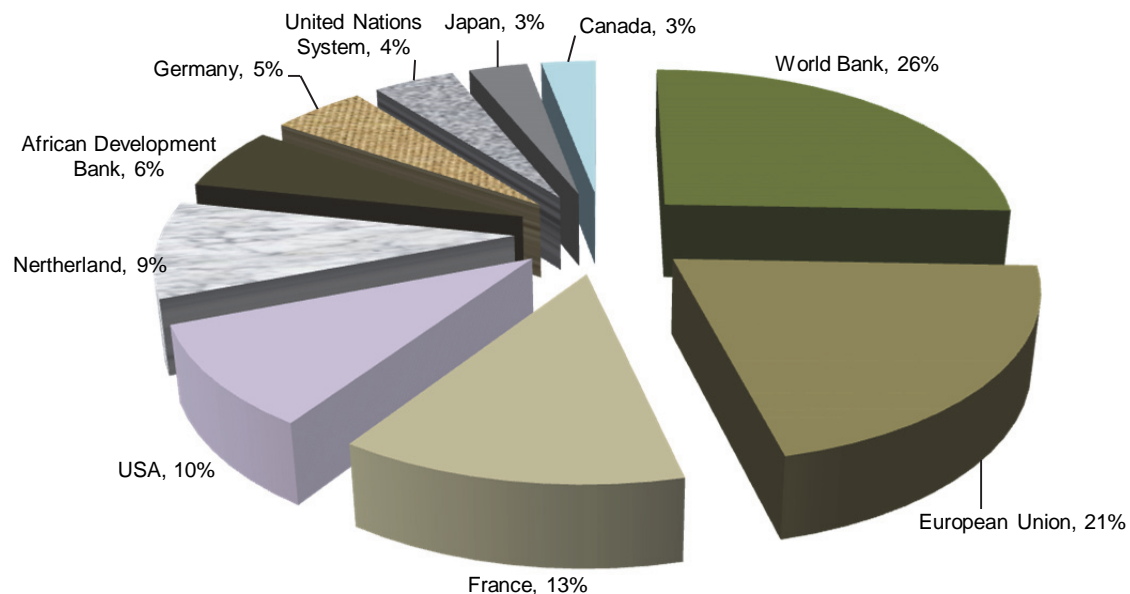


3.4 Donors in Burkina Faso

At least 50 donors are implementing more than 500 projects per year in Burkina Faso in rural finance, extractive industry, transport infrastructure building, tourism, energy, education, health, environment, etc. The donor countries include Germany, Austria, Belgium, Denmark, France, Italy, Luxembourg, the Netherlands, Sweden, Switzerland, USA, Canada, Cuba, Morocco, and Taiwan. Bilateral and multilateral donors include the United Nations System (UNS), the World Bank, the African Development Bank (AfDB), the International Monetary Fund, and the West African Development Bank (WADB). The principal donors in Burkina Faso during the last decade are shown in Figure 5. During 2011, the five main donors of Burkina Faso were the World Bank, European Commission, USA, UNS, and AfDB are in 2011, with respectively, about 19, 13, 8, 8, and 8 per cent of total aid to the country (Figure 6).

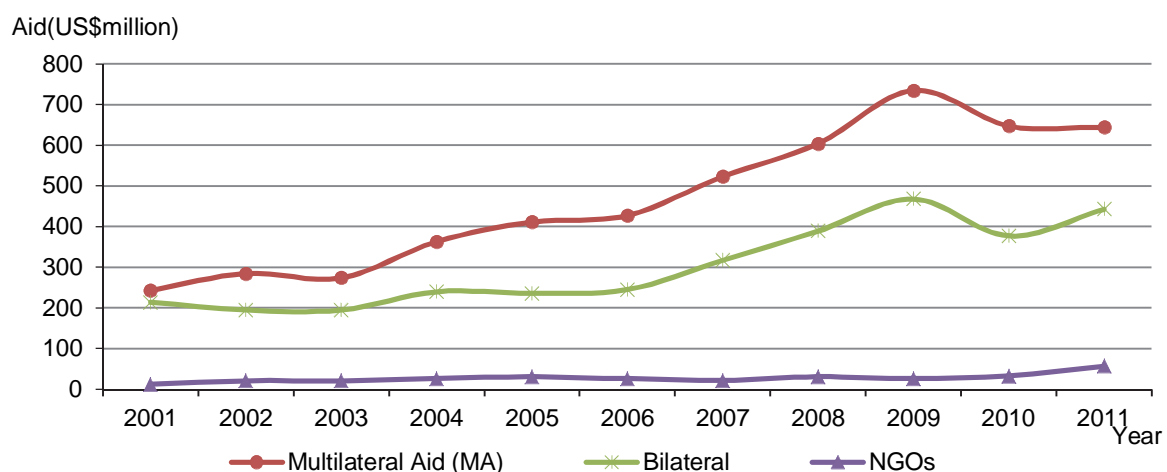
Multilateral aid is the most important form of assistance in Burkina Faso, representing about 58 per cent of the total aid amount over the years 2001-11 (Table 3). About 70 per cent of the total aid has been received as direct aid, compared to concessionary loans (Table 3).

Figure 5: Principal donors in Burkina Faso, 2002-10



Source: Author's computation based on AidData.

Figure 6: Aid in Burkina Faso by source category (multilateral, bilateral and NGOs), 2001-11 (US\$ million)



Source: MoE (2011).

Table 3: Concessional loans and direct aid in Burkina Faso, 2001-11

Year	Direct aid (US\$ million)	Concessional loans (US\$ million)	Share of direct aid (%)
2001	286.6	183.3	61.0
2002	335.1	165.1	67.0
2003	391.9	98.0	80.0
2004	378.8	250.5	60.2
2005	420.8	257.7	62.0
2006	436.4	261.4	62.5
2007	643.8	218.1	74.7
2008	706.1	306.4	69.7
2009	830.9	397.7	67.6
2010	805.3	252.0	76.2
2011	923.9	220.3	80.8
Total	6159.8	2610.2	70.2

Source: MoE (2012).

4 Sectoral analysis of developing aid on 1993-2010 period

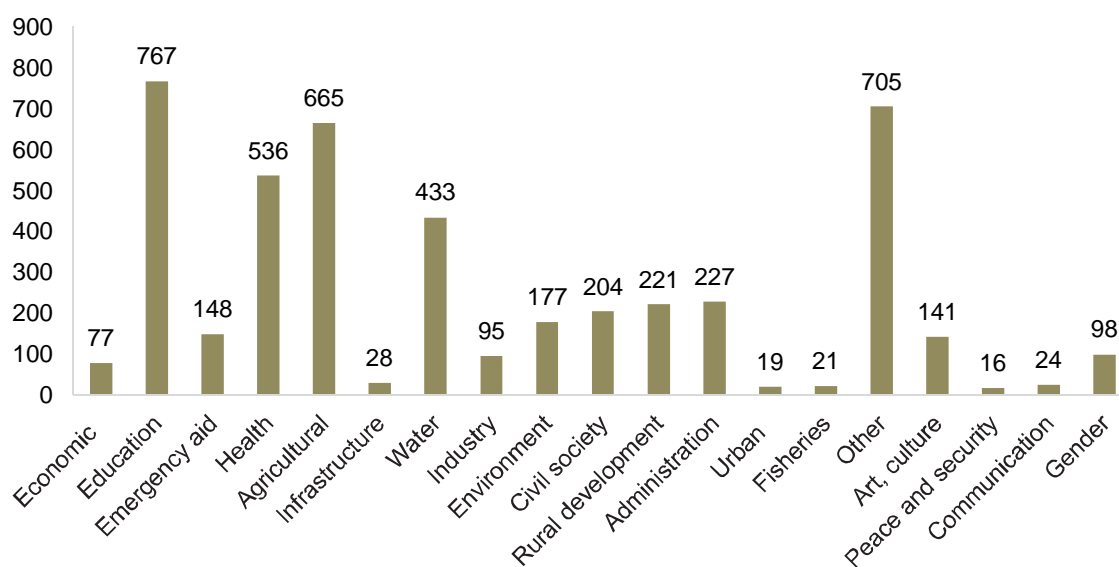
Support from donors is an important determinant for development in Burkina Faso, particularly in dealing with environment issues. However, it is challenge to isolate the funds allocated to environment from aid data as this sector cross-cuts many other sectors with indirect links to the environment. Moreover, the impacts of aid on the environment can be determined through the flows of funding over the time as well as the types and number of activities funded. This section, using the AidData dataset, analyses development aid by sector, focusing on the number of projects financed, the relevance of environment and related factors in aid, and the dynamic of the aid to the environment sector. Based on the title, purpose and description of each project, we arrange this dataset into 19 sectors.

4.1 Number of projects financed, and related commitments and disbursements

Number of projects

The number of projects financed through aid in a given sector can have various interpretations, including the importance or priority attached to the given sector. There is considerable disparity in the distribution of projects across the sectors (Figure 7). The number of environmental projects is less than the average, with a relatively low share (4 per cent) compared to education (17 per cent) and agriculture sectors (14 per cent). For comparison purposes, the 19 sectors can be grouped by percentile as terciles of the number of projects from 1993 to 2010. The first tercile group is composed of peace and security, urban, fisheries, communication, infrastructure, economic, and industry. The total number of projects for this group is 280, representing 6.1 per cent of all projects (4,602). The second group includes gender, art, culture, emergency aid, environment, civil society, and rural development, with 21.5 per cent of all projects. The remaining sectors represent the last group that accounts for 72.4 per cent of the overall projects.

Figure 7: Number of projects financed during 1993-2010

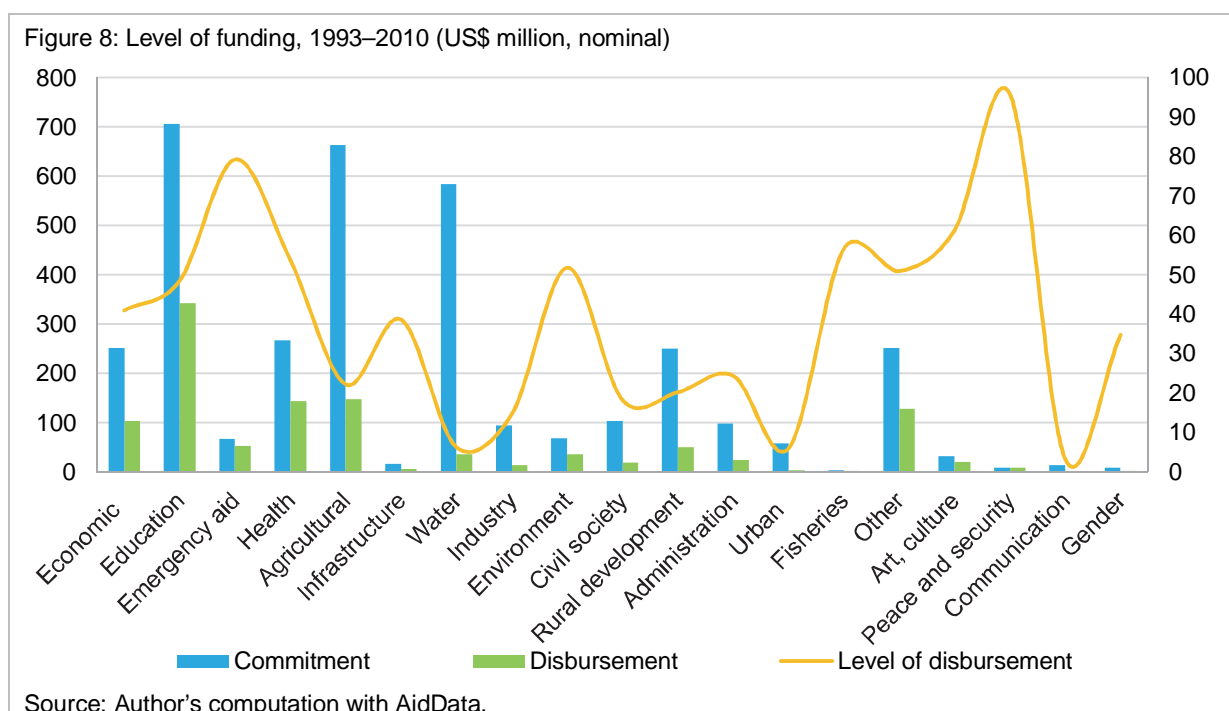


Source: Author's computation with AidData.

Commitments and disbursements

In terms of commitment or disbursement amounts, donors attach greater priority on the education, agriculture, health, or economy sectors (Figure 8). The amounts committed by donors can be expected to be disbursed. However, variation between commitments and disbursements is common, depending on the sector and context. Total commitment and disbursement amounts for the period under review are, respectively, US\$3,552 million and US\$1,143 million, which implies a disbursement rate of 32 per cent. Some disbursement rates are conspicuously low. For example, US\$14 million was committed to the communication sector with null disbursement over the 1993-2010 period. Similarly, US\$584 million was committed to the water sector, but only 6 per cent disbursed. There is no systematic relationship between the amount committed or the number of projects and the rate of disbursement. Disbursement, however, seems to be higher for the sectors facing adversities, i.e., peace and security (96 per cent), or emergency aid (79 per cent). It is also relatively high for small commitment sectors as, for example, fishery (57 per cent) which had a commitment of only US\$3 million (0.1 per cent of the overall commitment).

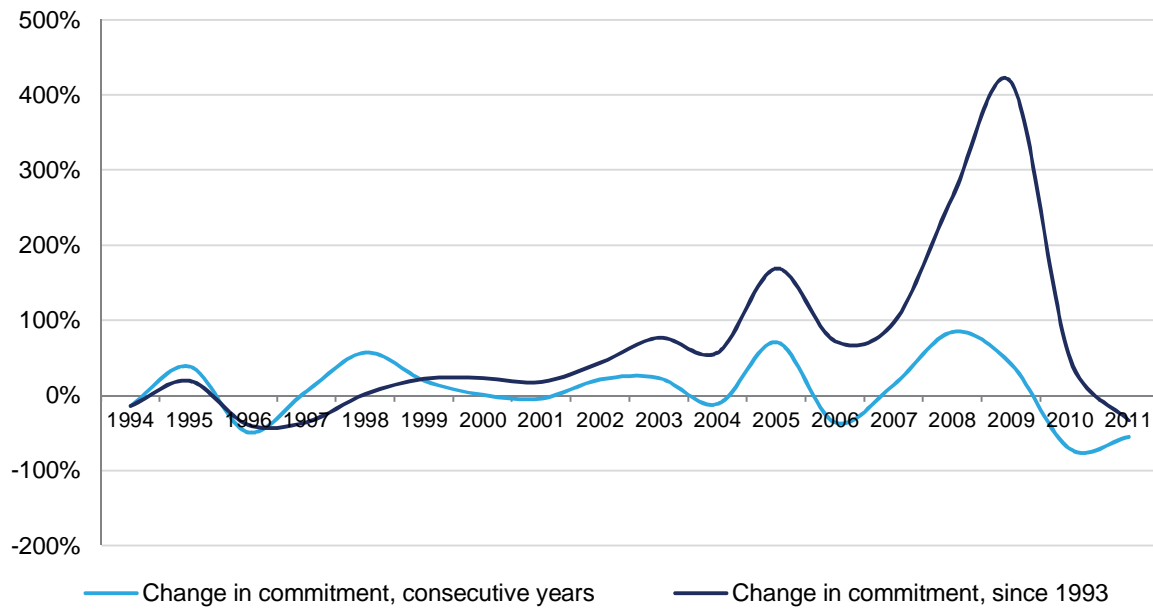
The environment sector's disbursement rate is 52 per cent. In terms of disbursements, commitments, and the number of projects, this sector is ranked in 6th, 11th, and 9th positions, respectively. Based on this ranking, the environment sector could be considered as a medium (or upper intermediate) priority for donors.



An analysis of the overall aid commitments and disbursement during the 1993-2010 period can uncover significant dynamic changes that are helpful in understanding the effects of aid on different sectors, particularly with regard to the environment. Figure 9 shows the changes in aid commitments between consecutive years since 1993, while Figure 10 gives the changes in aid commitments. These figures indicate slightly decreasing tendencies in aid commitments and disbursement over the years, but these have been rising since 1993. Some individual variations are substantial and seem to be closely linked to specific events. For example, commitment and disbursement have increased considerably during most of the

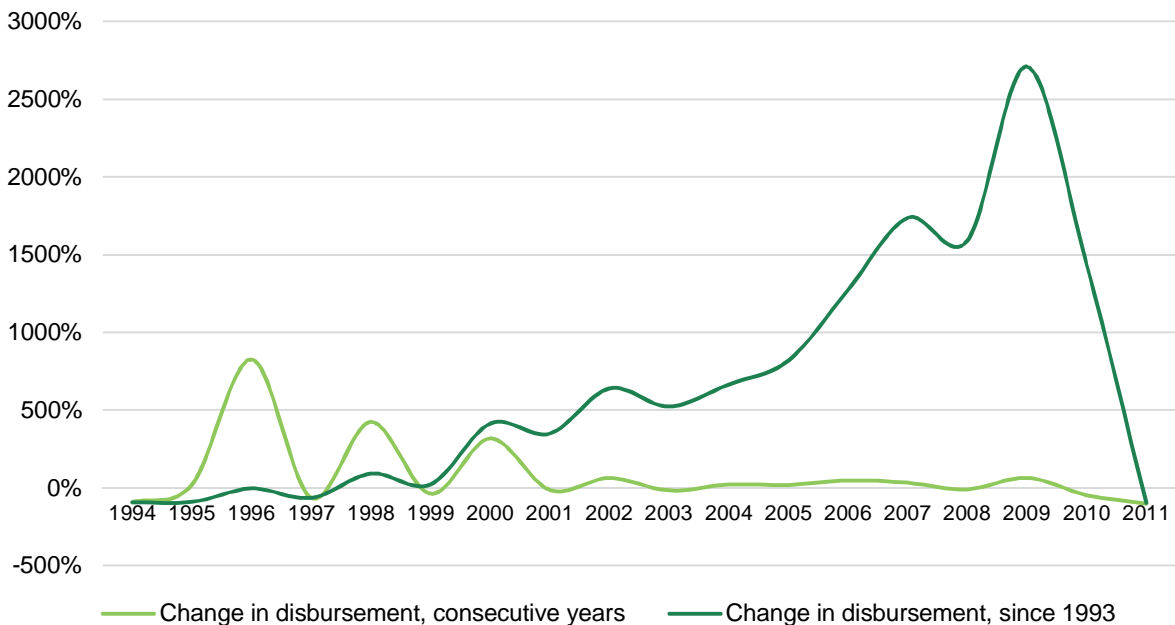
drought and flood years: 2005 (following the 2004 drought), 2007-09 (flood period) (Figures 10, 11). Moreover, the highest increase in commitment and disbursement since 1993 is noted in 2008-09, while the drop in the disbursement rate in 2010-11 was the deepest since 1993, probably because of the potential effects of the global economic crisis.

Figure 9: Dynamic changes in commitments, 1993-2010 (US\$ million, nominal)



Source: Author's computation with AidData.

Figure 10: Dynamics of changes in disbursements, 1993-2010 (US\$ million, nominal)



Source: Author's computation with AidData.

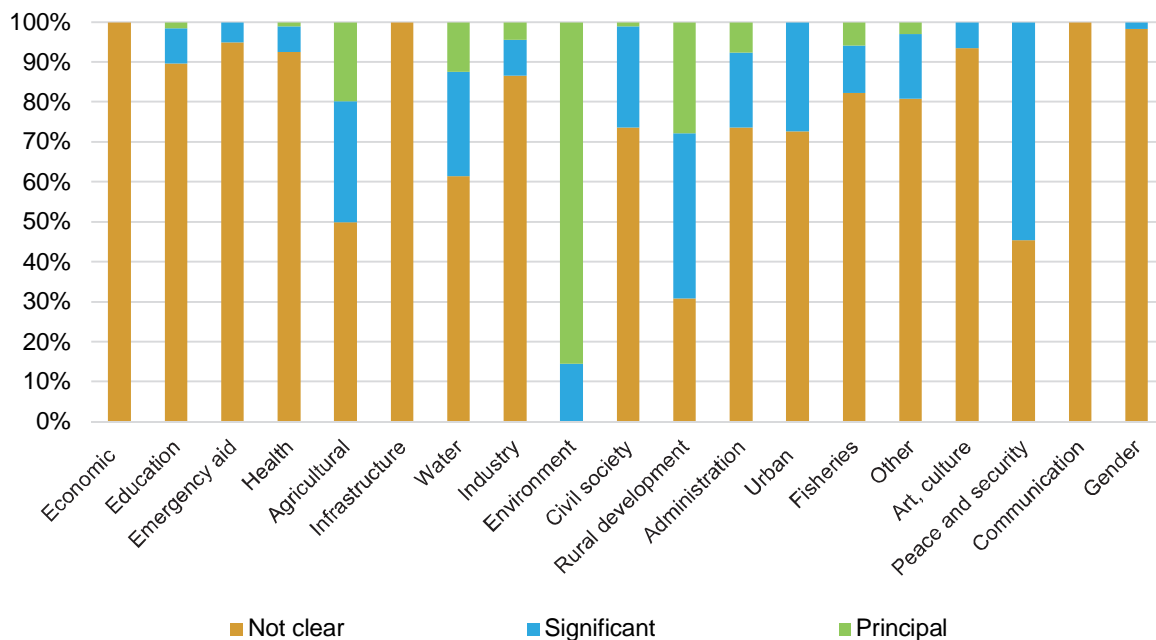
4.2 Relevance of environment, biodiversity, climate change and desertification in foreign aid

All sectors have direct or indirect effects on the environment, as this sector is cross-cutting. Thus, environmental considerations are expected to be included in the design and implementation of all projects. This requirement seems to be the leitmotiv of many donors as a sine qua non condition for aid disbursement. In addition, Burkina Faso has signed and ratified several international convention and agreements on environment, biodiversity, climate change and desertification. However, there seems to be a gap between these acknowledged ‘objectives’ and the results.

Relevance of environment

Figure 11 indicates the level at which each sector takes environmental concerns into account. Some sectors, including economy, infrastructure and communications, have no clear consideration for environment issues. As expected, sectors such as environment (85 per cent), rural development (28 per cent), agriculture (20 per cent) and water (12 per cent) acknowledge the environment as their principal consideration. Peace and security, urban, civil society, and administration are sectors with some significant environmental regard. Fisheries and industry sectors take environmental issues into account, but less than could be expected.

Figure 11: Relevance of the environment to the 19 sectors, 1993-2010



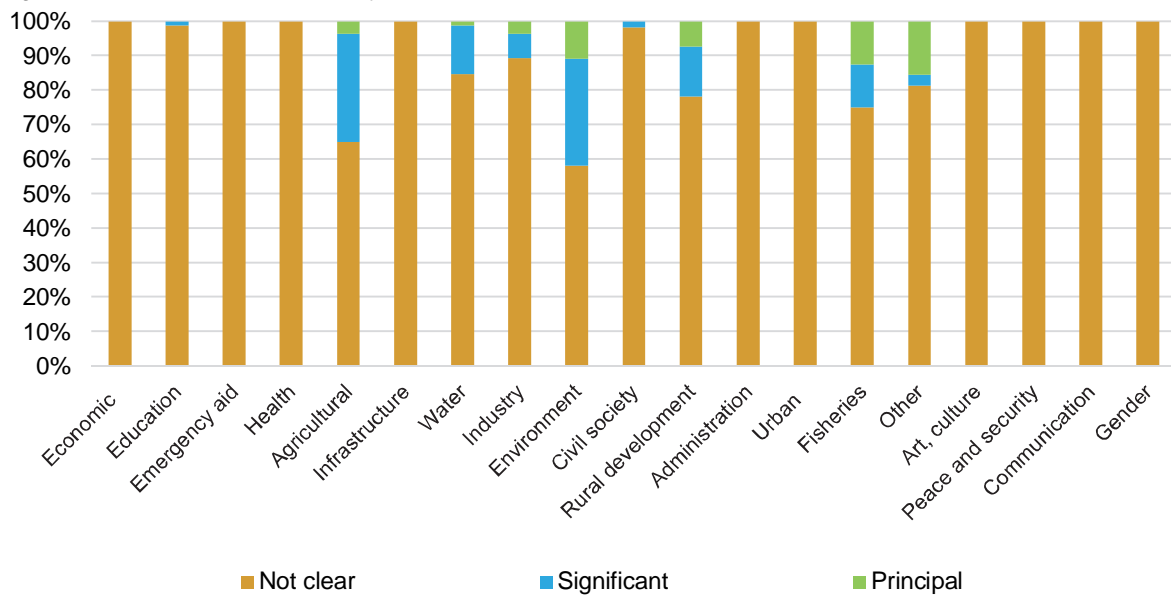
Source: Author's computation based on AidData.

Relevance of biodiversity

Burkina Faso, through the *Convention on Biological Diversity* (ratified on 20 September 1993), and the *Cartagena Protocol on Biosafety* (ratified on 25 April 2003), is committed to conserve biodiversity and use it suitably and fairly. However, biodiversity concerns are weakly considered in many donor-funded sectors. Environment (42 per cent), agriculture (35 per cent), fisheries (25 per cent), and rural development (22 per cent) are the more ‘bio-diversified’ sectors (Figure 12). Some sectors with very close links with environmental concerns, such as water and industry, have taken these issues into account rather poorly. At least half of the sectors have no consideration for biodiversity in their project design, and the

average overall biodiversity consideration in projects is 9 per cent. Thus, the biodiversity dialogue seems to be more theoretical than actual in the aid context in Burkina Faso.

Figure 12: Relevance of biodiversity to the 19 sectors, 1993-2010

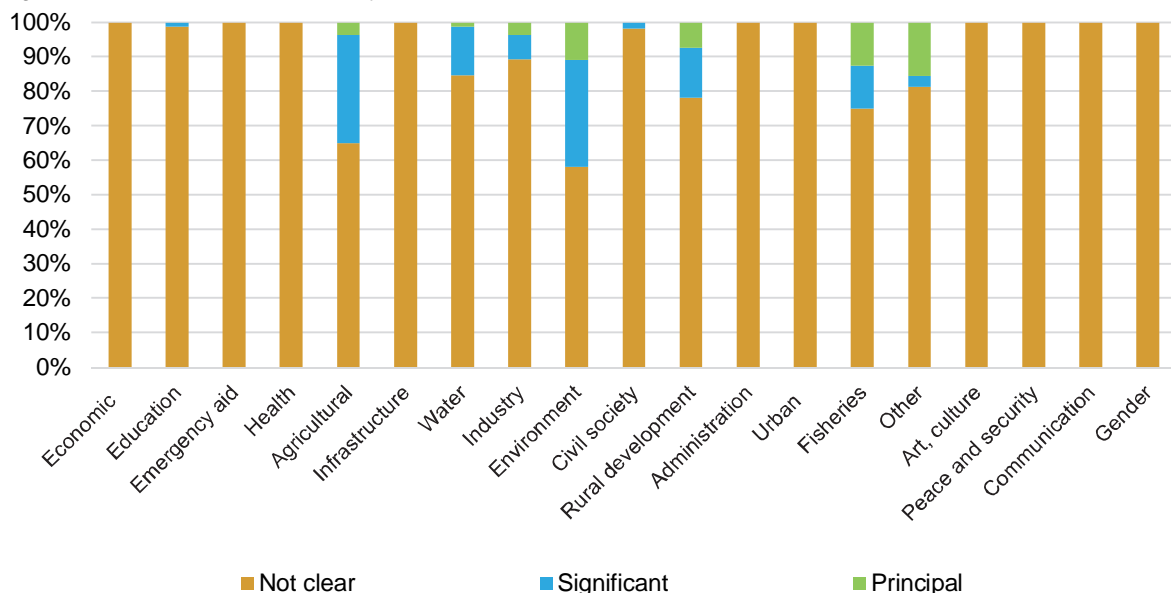


Source: Author's computation based on AidData.

Relevance of climate change

Compared to the environment and biodiversity, the relevance of climate change in aid is smaller, despite the country's ratification of United Nations Framework Convention on Climate Change.⁵ Projects within the environment, urban, agriculture, and water sectors rank

Figure 13: Relevance of biodiversity to the 19 sectors, 1993-2010



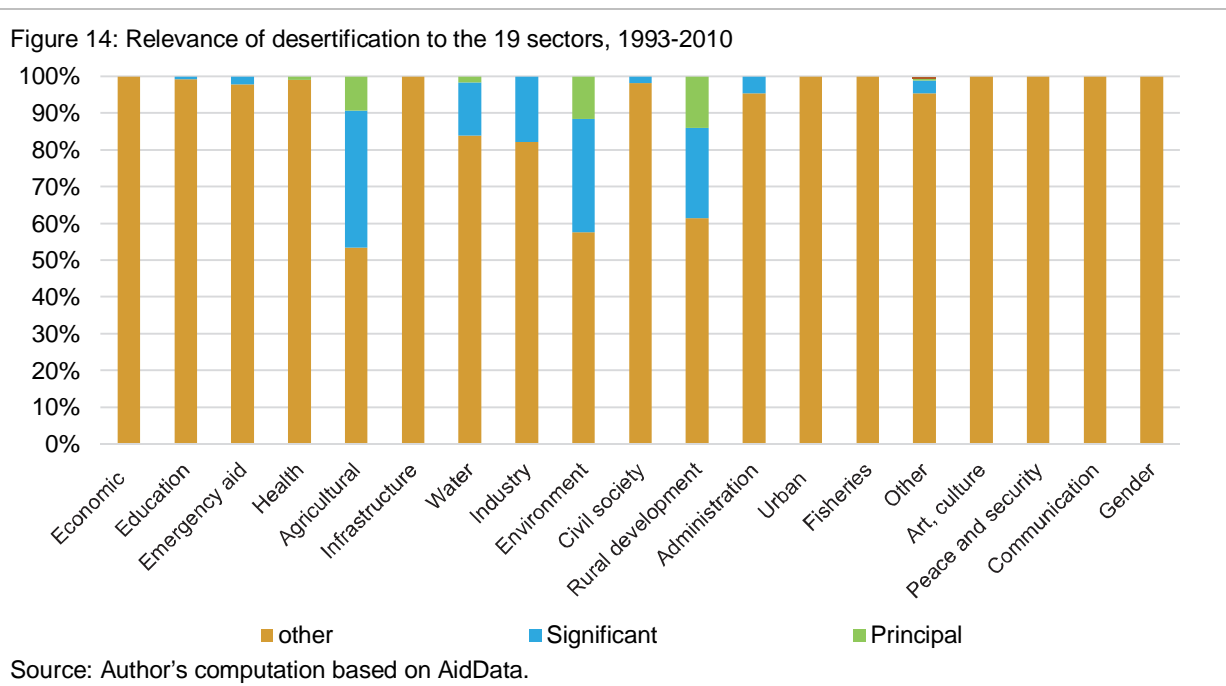
Source: Author's computation based on AidData.

⁵ The Convention's main objective is to 'achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [originating in human activity] interference with the climate system' (UN 2006).

the highest in terms of climate-change recognition during the years 1993-2010 (Figure 13). Few other sectors, including rural development and industry, exhibit minimal regard for climate change. The share of overall projects considering climate change is about 5 per cent.

Relevance of desertification

Burkina Faso ratified the United Nations Convention to Combat Desertification on 29 December 1995. Its principal purpose is to combat desertification and mitigate its effects in the short and long term. But, as mentioned above, desertification is spreading rapidly from the north to the south. As Figure 14 shows, desertification in Burkina Faso is not the principal or even significant priority most donor-funded sectors. Agriculture, environment, and rural development sectors exhibit some recognition of desertification, but less than expected.



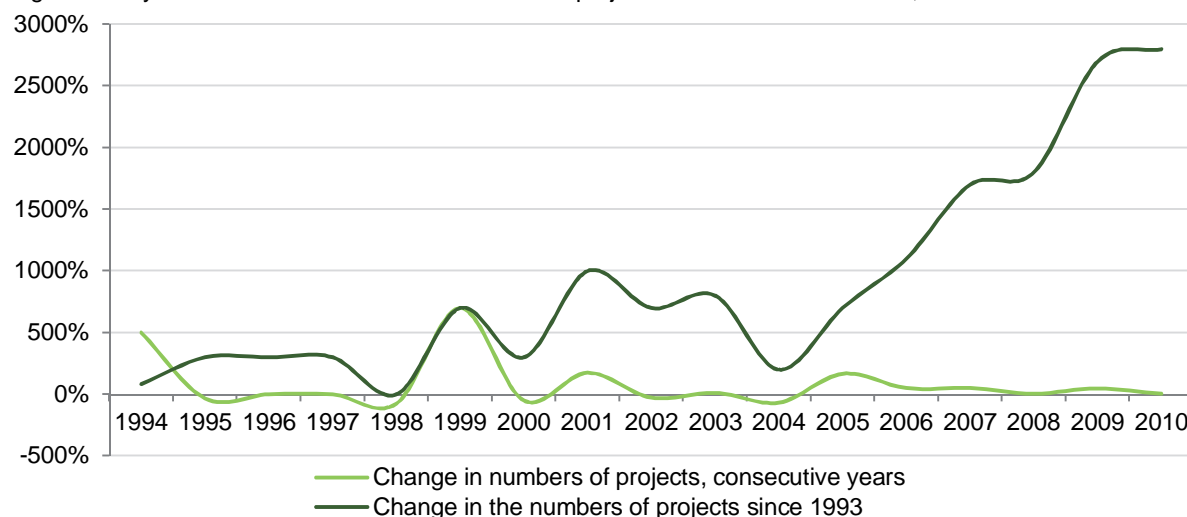
4.3 Dynamics of commitments and disbursements to the environmental sector

The remaining part of this section focuses on a specific trend analysis of the commitments and disbursement within the environmental sector.

Commitments and disbursements to the environmental sector

As Figure 7 shows, the overall number of environmental projects financed by donors in Burkina Faso during 1993–2010 was relatively small (177), with an average of ten project per year. There has been a significant increase in the number of environmental projects, from one project in 1993 to 29 projects in 2010, while the dynamics of this number for the consecutive years, shows a slight decrease (Figure 15). The highest consecutive yearly increase was in 1999.

Figure 15: Dynamics of the number of environmental projects financed in Burkina Faso, 1993–2010



Source: Author's computation based on AidData.

Commitments and disbursements to the environmental sector

Aid to the environment sector in Burkina Faso is relatively small in relation to the challenges and problems that need to be resolved, and the limited government contribution to this sector. Total commitments and disbursements to the sector are, respectively, US\$69 million and US\$36 million, which imply a disbursement rate of about 52 per cent in 1993-2010 (Table 4).

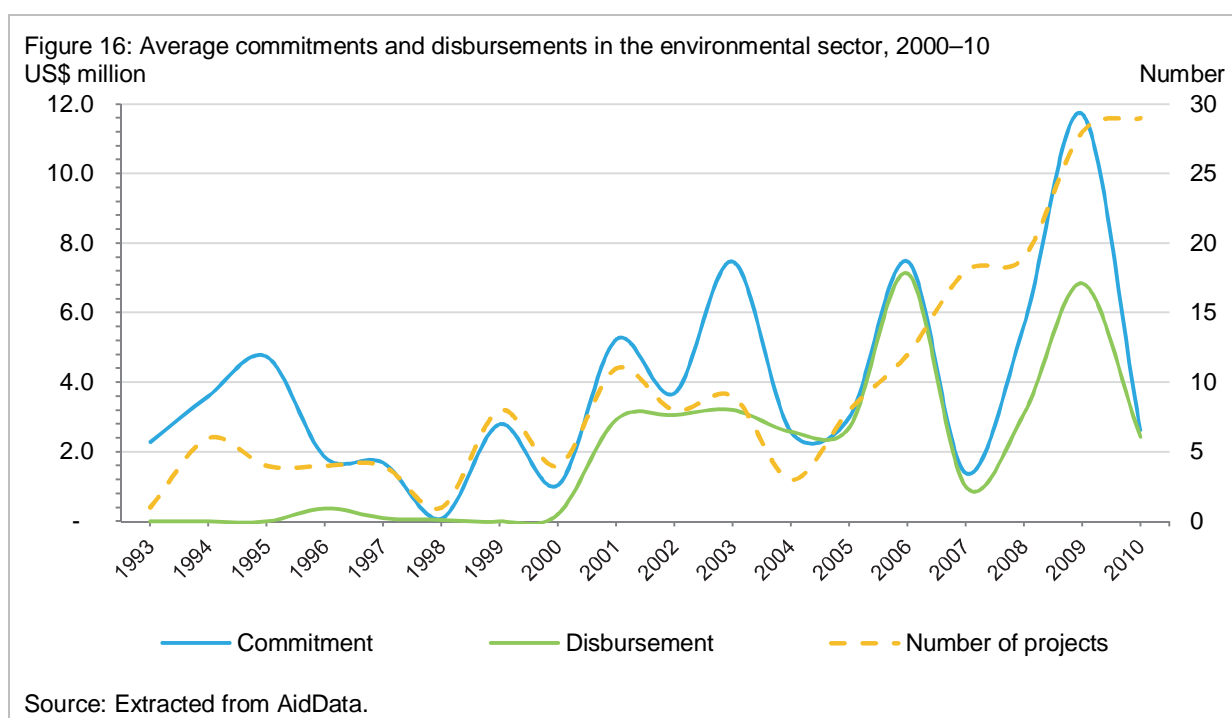
Table 4: Commitments and disbursements to the environmental sector, 1993-2010

Year	Commitments (US\$ million, nominal)	Disbursements (US\$ million, nominal)	Disbursement rate (%)
1993	2.28	0.00	0.0
1994	3.60	0.00	0.0
1995	4.74	0.00	0.0
1996	1.85	0.38	20.4
1997	1.69	0.10	5.8
1998	0.08	0.05	59.6
1999	2.80	0.00	0.0
2000	1.05	0.21	20.3
2001	5.24	2.93	55.9
2002	3.69	3.06	83.0
2003	7.47	3.21	42.9
2004	2.58	2.58	100.0
2005	2.99	2.70	90.3
2006	7.48	7.13	95.4
2007	1.39	1.00	72.1
2008	5.64	3.10	54.9
2009	11.72	6.85	58.4
2010	2.63	2.44	92.6
Total (1993-2010)	68.93	35.74	51.8

Source: Extracted from AidData.

The environment sector's share of total commitment and disbursement amounts for 1993-2010 was 2 per cent and 3 per cent, respectively, compared to such sectors as education (20 per cent and 30 per cent) or agriculture (19 per cent and 13 per cent) respectively. The highest disbursement rates were for the years 2002, 2004, 2005, 2006, and 2010, while 1993-95, and 1999 had null disbursement.

Figure 16 shows that the trends in commitments and disbursements have converged somewhat during the 2000-10 decade compared to the first period (1994-99). We also note that during the 2000-10 subperiod, the number of environmental projects has increased regularly, particularly in 2004-10. However, at the same time, commitment and disbursement amounts exhibit, on average, a decreasing tendency. This inverse dynamic relationship would foresee a new strategy from the donors and/or the government in dealing with environmental issues to consist of implementing more, albeit smaller, projects.



Donors in the environmental sector

Table 4 shows that about half of the committed aid is still to be disbursed, with high disparities in annual disbursement rates during the period 1993-2010. The difference between commitment and disbursement amounts can be explained by shortcomings in the recipient country, donors or both recipient and donors. We have not found credible or detailed information on the reasons for these discrepancies. But it is worthwhile to analyse the disbursement rates by donors, which we divide into three categories (groups I, II, and III) based on the average disbursement rates during 1993–2010 (Table 5). Group I, which represents 22 per cent of overall commitments to Burkina Faso's environment sector, includes donors with a null disbursement rate (e.g., donors who have committed funds to the environment sector, but made no disbursements). Donors from group II, representing 28 per cent of overall environmental commitments, have disbursed up to half of their commitment amounts. Group III, accounting for half of overall environmental commitments, is made up of the donors with disbursement rates exceeding 50 per cent.

The disbursement shares (Table 5) of the three categories are as follows: 0 per cent (group I), 11 per cent (group II) and 89 per cent (group III). The shares of total undisbursed amounts are 46 per cent (group I), 46 per cent (group II) and 8 per cent (group III). There are no specifically noticeable donor characteristics that could explain these differences in disbursement rates. However, the mean and dispersion of the commitment amounts are different for each group: US\$2.56 million (group I), US\$2.73 million (group II) and US\$4.32 million (group III) while the standard deviations from commitments are, respectively, 1.8, 1.9 and 7.6. In addition, as the table shows, donors with the smallest and highest commitments are in group III, i.e., those having the highest disbursement rates. Very small commitments may perhaps be disbursed with fewer difficulties because of the limited amounts involved, while bigger commitments could be linked to relatively 'sensitive' projects or 'stakes'. France stands out in Burkina Faso's environmental sector as the donor with the highest levels both in terms of commitments (US\$23 million) and disbursements (US\$21 million) during the period under consideration, corresponding to 33 per cent and 59 per cent of the overall amounts of commitment and disbursement, respectively. The smallest commitment to the environment sector for the period 1993-2010, US\$8560, was made by Korea; disbursement rate was 100 per cent.

Table 5: Level of disbursement by donors in the environmental sector, 1993-2010

Groups	Commitments (US\$ million)	Disbursements (US\$ million)	Level of disbursement (%)
Group I (no disbursements)			
European Communities	1.38	0.00	0.0
Germany	3.92	0.00	0.0
Global Environment Facility	1.59	0.00	0.0
Norway	5.31	0.00	0.0
Switzerland	0.32	0.00	0.0
United Kingdom	2.84	0.00	0.0
Total for group I	15.37	0.00	0.0
% Shares for group I	22.28	0.00	
Group II (disbursements between 1-49%)			
Netherlands	3.17	0.23	7.3
Canada	6.18	0.49	8.0
United States	0.58	0.05	8.4
Denmark	3.75	0.94	25.0
Italy	1.61	0.41	25.2
Austria	1.05	0.48	45.2
Sweden	2.73	1.32	48.5
Total for group II	19.08	3.92	20.5
% Shares for group II	27.66	10.98	
Group III (disbursements more than 50%)			
UNDP	3.89	2.92	75.1
Japan	1.46	1.31	89.3
France	22.70	21.10	93.0
Belgium	0.99	0.97	97.3
Korea	0.01	0.01	100.0
Luxembourg	3.72	3.72	100.0
Spain	0.11	0.11	100.0
UNICEF	1.63	1.63	100.0
Total for group III	34.52	31.77	92.0
% Shares for group III	50.06	89.02	

Source: Author's computation based on AidData.

5 Publicly available information on donors: some shortcomings

5.1 Focus funding areas

Clearly, the environment sector does not qualify as a major component within donors' core areas (Table 6), for whom funding priorities include general budget support, agriculture, education, road transport, water supply, healthcare, food security, administration management,

Table 6: Core areas of focus by various donors in Burkina Faso, 1993-2010

Donor	Strategic priorities	Shares of core area (%)
European Communities	– General budget support	61
	– Road transport	17
France	– Debt forgiveness	16
	– General budget support	14
	– Higher education	7
	– Water supply & sanitation	7
Netherlands	– General budget support	42
	– Primary education	18
	– Basic health care	9
	– Rural development	8
IDA	– Economic and development policy	37
	– General budget support	20
	– Transport and Storage	15
	– Government administration	10
	– Energy supply	6
United States	– Road transport	31
	– Food security	26
	– Agricultural water resources	16
Denmark	– Water supply and sanitation	37
	– Agricultural & administration management	21
	– General budget support	5
African Development Fund	– Road transport	35
	– Relief of multilateral debt	25
	– General budget support	15
	– Primary education	5
	– Social/ welfare services	5
Germany	– Water supply & sanitation	20
	– General budget support	8
	– Public sector policy and administration management	8
	– Agricultural development	5
Japan	– Education	22
	– Emergency food aid	11
	– Agricultural inputs	10
	– Basic drinking water supply and basic sanitation	7
Sweden	– General budget support	46
	– Basic health care	8
	– Education policy & administration management	7
	– Agricultural water resources	5
Switzerland	– General budget support	23
	– Multi-sector aid	17
	– Basic life skills for youth & adults	5
	– Public sector policy and administration management	5

Source: Extracted from AidData.

and debt relief. The environment cross-cuts with most of the other sectors. However, the impact of these sectors on environment depends on their recognition of the environment during project implementation. As noted above, the relevance of environment, biodiversity, climate change, and desertification is not a high priority in many sectors. Many reasons may account for this disinterest, including capacity of Burkina Faso to meet the eligibility criteria, capacity/effectiveness of the country in implementing projects, donor priorities, the complexity/transparency of eligibility criteria, compatibility of donor requirements with national environment strategies, leadership conflict between some government departments, as between the ministry of agriculture and water resources, and the ministry of environment, etc.

The environment sector is insufficiently funded in Burkina Faso. Furthermore, efficiency of actual project implementation is often questionable. In many environmental projects, technical staff comes from the donor country either because of specific donor requirements or lack of local expertise. Unfortunately, some of these external technicians have lack knowledge of local realities related with the environment sector, or are just second-best 'experts'.

There are also environmental projects that are not appropriately designed to achieve the expected goals. Some are too general, while others are conceptually confusing, leading to different perceptions between the recipient country and the donor. Some environment projects are implemented in Burkina Faso more for political purposes than real efficiency motivation. Selection of project staff members is influenced more by political membership and submissiveness than by their skills in project implementing efficiency.

One of the recurrent obstacles in project implementation/efficiency, particularly for environmental projects, is their assessment. Impact evaluation of environmental projects is not common. Assessment generally extends only to monitoring, not impact evaluation. The reliability of the rare evaluation reports that are available is questionable because these had not been included from the start of the project; the methodology had not been appropriate, or the results are just 'fixed' to please the donors. Furthermore, some of the implementation processes are unsuitable or only second-best, but the country continues to replicate them because of earlier impact reports that were either misleading or naively considered as efficient.

5.2 Determinants of success and failure of environmental projects

We conducted some interviews with environment stakeholders, including the department of environment (DE) of the government, project implementers, and donors. We requested the DE to single out one example of an environmental project that had succeeded and one that had failed. In addition, we initiated a survey of ten donors, which produced some very useful thoughts from three donors and two environmental projects in Burkina Faso.

Some factors were considered by the environment stakeholders to be positively linked to the success of an environmental project, while others would contribute to their failure. Our interviewees also provided some suggestions.

Success factors of environmental projects in Burkina Faso

- strong political lobbying for project success;
- capacity building in project management;

- involvement and motivation of technical staff;
- involvement of local private sector;
- participation of stakeholders, including main beneficiaries; and
- consideration of compatible, basic needs in environmental resources for local population;

Failure factors of environmental projects in Burkina Faso

- poor understanding of the issue by project implementers;
- poor knowledge of local realities;
- weak adaptation of the environmental investment plan to local concerns;
- insufficient competence or experience of implementing institutions;
- inappropriate communication with local communities;
- low appropriation of the project by beneficiaries;
- conflict of interests between project stakeholders;
- weak motivation or reticence of some stakeholders of the project;
- weak transparency in the management of project funds; and
- accommodating environmental project design without genuine conviction, and an attitude seeking merely to benefit from donor funds.

5.3 Suggestions for improving environmental project efficiency

In view of the obstacles mentioned above, some improvements at various levels could promote the efficiency of donor-funded environmental projects in Burkina Faso.

At donor level

- priorities for projects to originate within local context, with local stakeholders and realities;
- openness for compatibility between funding procedures and standards, and national environmental priorities and strategies;
- openness for networking with other environmental stakeholders;
- efficient participation in project implementation; and
- implementation of an independent and rigorous project impact assessment.

At the recipient government level

- compliance with international commitments and agreements on the environment;
- good economic governance to meet donor requirements;
- a clear blueprint on foreign direct investment;
- development of inter-agency cooperation on environmental issues;
- good coordination among project stakeholders; and
- institutional and financial strengthening of the National Council for the Environment and Sustainable Development;

The project coordination level

- sound and transparent management of project funds;
- comprehensive understanding of all project components by the project coordination unit;
- strong project ownership/appropriation by local stakeholders;
- compatible and matched objectives with needs of local communities; and
- rigorous project monitoring and evaluation.

At beneficiary level

In Burkina Faso, majority of the population live in rural regions, with livelihoods based on natural resources including soil, water for farming, timber/firewood, non-timber products, etc. It is thus recommended that these needs be considered in the design of environmental projects. The success of an environment project depends on key factors, including eco-citizen education; participatory management; and potential revenues from environment resources.

6 Conclusion

The link between the environment and aid is particularly relevant in Burkina Faso for development and living conditions in the short and long term, as most Burkinabe rely on agriculture. However, environmental concerns are increasing. These issues are officially considered a high priority by the government in Burkina Faso, at least in the country development strategy documents. Paradoxically, this ‘engagement’ seems to be in conflict with the actual actions and the worsening environment issues in the country. The share of environment sector in government expenditures is small and decreasing. Support from donors is thus crucial for dealing with environmental issues in Burkina Faso. This aid exhibited an increasing tendency during 1993-2009, but has decreased since 2009. The average share of disbursed environment aid was about 3 per cent over 1993-2010.

The main problem affecting donor support to the environment sector in Burkina Faso is the efficiency of project implementation rather than the level of funding. Many factors impede the success of the environmental projects, including (poor) quality of project design, weak implication of local context (expertise, realities, beneficiaries, etc.), and transparency in the project management, including project funds. In this regard, some suggestions for improving efficiency in environmental projects in Burkina Faso could include:

- development and implication of local expertise in environmental project implementation;
- priority for locally adapted environmental projects;
- transparency in environmental project management, including project funds;
- efficient coordination between environment stakeholders in the country;
- rigorous impact evaluation of environmental projects to avoid replicating wrong approaches; and
- best national and local governance, particularly in environment and related sectors.

Appendix

Table A1: A summary of the environmental conventions and protocols ratified by Burkina Faso

Name of convention or protocol	Date ratified
The United Nations Framework Convention on Climate Change, ratified by decree no. 93-287 RU	20 Sept. 1993
The Convention on Biological Diversity, ratified by decree no. 93 RU	20 Sept. 1993
The United Nations Convention to Combat Desertification, ratified by decree no. 95-569	29 Dec. 1995
The Basel Convention, ratified by decree no. 98-424	5 Oct. 1998
The Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, ratified by decree no. 2002-294	2 Aug. 2002
The Cartagena Protocol on Biosafety, ratified by decree no. 208/ PRES/PM/MAECR/MECV	25 April 2003
The Stockholm Convention on Persistent Organic Pollutants, ratified by decree no. 2004-300	20 July 2004
The Kyoto Protocol to the United Nations Convention Framework on Climate Change, ratified by decree no. 2004-536/PRES/PM/MAECR/MECV/MFB	23 Nov. 2004

Source: Compiled by author based on data from: UNFCC (n.d., various reports); CBD Secretariat (n.d.); UNCCD (n.d.); UNEP/FAO (n.d.); UNEP/POPs (2001).

Table A2: Burkina Faso's aid requirements for 2013, by main sectors

Sector	Requirements (US\$)	Funding (US\$)	Coverage rate (%)
Food security	30,226,092	2,227,347	7
Nutrition	32,845,903	412,015	1
Coordination and common services	1,339,141	0	0
Early recovery	4,358,151	0	0
Education	1,443,430	0	0
Health	7,116,962	0	0
Multi-sector (refugees)	46,784,130	3,053,968	7
Protection/human rights/rule of law	2,846,601	0	0
Shelter and non-food items	0	0	0
Water and sanitation	8,580,409	0	0
Sector not yet specified	0	0	0
Total	135,540,819	5,693,330	4

Source: Author's computation based on data from various government documents.

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