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Green Development Co-Operation in Zambia: An Overview

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OECD GREEN GROWTH PAPERS

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EXECUTIVE SUMMARY

Embracing green growth can secure strong, stable and sustainable development. Green growth recognises and integrates the value of natural capital into economic decision-making and development planning, which is critical to avoid natural capital depletion, the worst of climate change and social and national security risks (OECD, 2013). This is particularly true for developing countries, because of their dependence on natural assets and acute exposure and vulnerability to environmental risks, ranging from air, water and soil pollution, as well as natural resource scarcity and extreme weather events exacerbated by climate change. A green growth policy framework recognises and aims to address both micro- and macro-level pressures that countries face to grow their economies, while also managing environmental risks. In poorer developing countries, micro-level pressures may include lack of access to basic services such as shelter, fuel, water; while macro-level pressures are threats to stable livelihoods due to unemployment, poverty, social inequality, or resource scarcity or mismanagement. Leaders in developing countries today face clear choices to guide development towards a new growth model (OECD, 2013). These countries have the opportunity to move away from conventional growth strategies – the "grow now, clean up later" model – towards a green growth model, with the aim to build resilient and fairer economies around a vision of sustainable development.

An increasing number of developing countries have formulated and/or implemented innovative policies to pursue green growth, notably in Africa (AfDB, 2013; AfDB and OECD, 2013; OECD, 2013, 2014a). Zambia, in particular, is committed to drawing up an Inclusive Green Growth Strategy (IGGS) that builds upon a nationally-defined and comprehensive definition of green growth (Government of Zambia, 2012). A preliminary understanding already exists on what green growth means in Zambia, namely inclusive development that makes sustainable and equitable use of the country's natural resources within ecological limits (Banda and Bass, 2014). This effort can draw from a solid set of initiatives and institutions where green considerations are already beginning to be mainstreamed. Key among these are Zambia's National Long Term Vision and the Fifth and Sixth National Development Plans (2006-10 and 2011-15 respectively), and subsequent implementation through green programmes, policies, and processes i.e. targeting biodiversity, climate change adaptation, climate change mitigation, desertification, and other environmental objectives.

This paper illustrates the foundations of green growth in Zambia and provides an overview of bilateral green development co-operation efforts in the country from 2004 to 2012. Zambia is considered a "frontrunner" with respect to green planning and policy (Pauw, 2014; UN-HABITAT, 2014), yet most of the funding for its green programmes and initiatives has come from providers of development co-operation (Aongola et al., 2009; Government of Zambia, 2011a). Bilateral Official Development Assistance (ODA) targeting green objectives reached up to 30% of total bilateral ODA to Zambia over 2010-12 (USD 218 million) (OECD DAC CRS, 2014).[1] Importantly, the volume of green bilateral commitments increased steadily since 2004-06 (albeit part of this increase resulted from better reporting of green ODA flows by members of the OECD's Development Assistance Committee (DAC)), but this happened in the context of falling ODA flows to Zambia – bilateral ODA fell from USD 1.7 billion in 2004-06 to USD 738 million in 2010-12.[2] This illustrates the important role of green ODA in Zambia.

Green ODA to Zambia targets many of the leading sectors of the economy, namely agriculture, energy, transport, and water supply and sanitation, and these are identified as key by the country's vision and plans for its development pathway (Government of Zambia, 2006a, 2006b, 2011a). This suggests that green interventions are relatively aligned with the government of Zambia's plans and that providers use these to inform the priority sectors and types of technical support provided (Co-operating Partners to the JASZ I, 2007 and Co-operating Partners to the JASZ II, 2011). The Joint Assistance Strategy to Zambia (JASZ) has been a key mechanism to co-ordinate across development co-operation activities of different providers. With respect to green interventions, the JASZ has avoided duplication of provider activities, and has improved the information flow between providers and the government of Zambia (Ministry of Foreign Affairs of Denmark, 2010). Working closely with the government, several Nordic countries, which rank among the most active providers of green ODA in Zambia and lead under the JASZ on green matters, have established strategic plans in co-operation with the government to implement activities that support mainstreaming green objectives into many areas of government operations and policy (e.g. agriculture, forestry, water supply and sanitation).

The JASZ has potential to be the main forum for providers to support the implementation of any forthcoming agenda on green growth led by the government of Zambia. To do so, and to further increase the effectiveness of development co-operation in the Zambian context, the JASZ could continue aligning the interests of providers and those of Zambia (Mulenga, 2013) in three respects:

- First, the government of Zambia targets poverty reduction as its chief priority in both development planning and in its future inclusive green economy strategy (Banda and Bass, 2014). However, few green international projects have explicitly targeted or achieved the objective of poverty reduction (Banda, 2013). Although the main aim of ODA is, by definition, to promote the economic development and welfare of developing countries, poverty reduction remains an aspect of green ODA that could be bolstered.

[1] In this paper, bilateral ODA targeting green objectives refers to those activities targeting biodiversity, climate change adaptation, climate change mitigation, desertification, and other environmental objectives.

[2] The DAC currently has 29 members: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, European Union, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States. This paper covers the activities of these providers, except from Czech Republic, Iceland, Poland, Slovak Republic, and Slovenia, which joined in 2013. Korea joined the DAC in 2009.

- Second, a number of key sectors for the Zambian economy and its development receive virtually no green ODA or relatively small volumes of green ODA and could benefit from increased attention. These include key economic sectors, such as mining, industry or tourism (Telfer and Sharpley, 2008; World Bank, 2014), which face a host of environment-related risks and are important in Zambia's economic development (Government of Zambia, 2011a). Similarly, green issues could also be further mainstreaming into local-level institutions and planning processes, including in urban areas, where no projects could be identified targeting this level of governance over 2010-12.

- Finally, the Zambian government has identified the need for a climate financing framework (e.g., developing an in-country regulatory framework, human and institutional capacity and fiduciary standards) to tap into international financing mechanisms and to use these funds to leverage private sector investment into climate change (Government of Zambia, 2012). There is also an opportunity to mobilise and allocate domestic resources – public and private – to some of the core government functions to protect and promote environmental performance. Provider support in this area could help with the government's objective to ease dependency on ODA and lessen the reliance on foreign ODA in the green sector; while reducing the vulnerability of the country.

LIST OF ABBREVIATIONS

AfDB	African Development Bank
CIFs	Climate Investment Funds
CRS	Creditor Reporting System
DAC	Development Assistance Committee
DF	Department of Forestry
EU	European Union
FAO	Food and Agriculture Organization
FNDP	Fifth National Development Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GNI	Gross National Income
IDLO	International Development Law Organization
IGGS	Inclusive Green Growth Strategy
IPCC	Intergovernmental Panel on Climate Change
JASZ	Joint Assistance Strategy for Zambia
JFM	Joint Forest Management
LDC	Least Developed Country
LMIC	Lower Middle Income Country
MDG	Millennium Development Goal
MoFNP	Ministry of Finance and National Planning
MLNREP	Ministry of Lands, Natural Resources and Environmental Protection
MTENR	Ministry of Tourism, Environment and Natural Resources
NDP	National Development Plan
NLTV	National Long Term Vision
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPCR	Pilot Program on Climate Resilience
SFM	Sustainable Forest Management
SNDP	Sixth National Development Plan
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-HABITAT	United Nations Human Settlements Programme
UN REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation
USD	United States Dollar

INTRODUCTION

The African region has a comparatively low ecological footprint today (Thornton et al., 2011). However, Africa is particularly vulnerable to climate change, with most of its crops likely to be negatively affected by rising temperatures and shifting precipitation patterns (IPCC, 2014). These global changes interact with local environmental issues such as land degradation, the depletion of natural resources, air and water pollution. Development, urbanisation and population growth are also putting pressure on local environments and increasing the ecological footprint of the region, while underlining the urgency of strengthening the resilience of livelihoods and sustainably managing essential natural resources and related ecosystem goods and services. This is particularly important in Africa, where the poorest of the poor rely disproportionately on natural resources to sustain their livelihoods (OECD, 2013; IPCC, 2014) and where it is becoming increasingly important to put green measures in place to manage and reduce the risks associated with climate change and unsustainable development pathways (AfDB, 2013).

An increasing number of African countries have formulated or are formulating green growth strategies and policies (AfDB; 2013; AfDB and OECD, 2013; OECD, 2013). Embracing green growth can secure a strong, stable and sustainable future for developing countries because green growth rests on recognising and integrating the value of natural capital into economic decision-making and development planning (OECD, 2013), thus helping to tackle pressing social issues (e.g. lack of access to basic services and infrastructure, high vulnerability and threats to stable livelihoods from resource scarcity or mismanagement).

Realising the benefits of green growth, the Zambian government aims to develop an Inclusive Green Growth Strategy (IGGS) (Government of Zambia, 2012). Although an official, comprehensive definition is still to be developed, a preliminary understanding already exists on what green growth means in the Zambian context, and which refers to inclusive development that makes sustainable and equitable use of Zambia's natural resources within ecological limits (Banda and Bass, 2014). Developing the IGGS could build upon substantial experience with mainstreaming green considerations across sectors and levels of government and pre-existing green institutions, processes and policies (Banda, 2013; Banda and Bass, 2014). These explain why Zambia is considered a "frontrunner" in the green planning and policy space in Africa (Pauw, 2014; UN-HABITAT, 2014). Notwithstanding this, most of Zambia's green activities have been largely supported by international providers of development co-operation (Watson et al. 2013). Their experience in this sphere can therefore also help the Zambian government support the IGGS process, for example through sharing lessons learned and good practice, including from related experience elsewhere.

This paper illustrates the foundations of green growth in Zambia and provides an overview of green development co-operation efforts in the country from 2004 to 2012. Section 2 discusses on-going efforts towards greening growth in Zambia. Section 3 looks at total bilateral green Official Development Assistance (ODA) flows from members of the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) member countries, i.e. targeting biodiversity, climate change adaptation, climate change mitigation, desertification, and other environmental objectives. This analysis draws on OECD DAC statistics, in particular the Creditor

Reporting System (CRS).[3] It describes the sectors targeted, as well as the instruments used, and discusses the degree of alignment between Zambian priorities and providers' activities. Section 4 then explores specific provider co-ordination efforts and strategies to support the mainstreaming of green issues in-country. The paper concludes with a number of questions that could guide further research on this topic in Zambia and beyond.

TOWARDS GREEN GROWTH IN ZAMBIA

Zambia's gross domestic product (GDP) grew on average by 6.3% over 2004-13 (World Bank, 2014) stimulated by economic reforms, infrastructure investments, a better educated population and the development of natural resources (Murray McIntire, 2014). A number of environmentally sensitive sectors are responsible for this growth, notably mining (copper, cobalt, lead), tourism, agriculture (maize) or forestry (Aongola et al., 2009; Banda and Bass, 2014). The mining sector, in particular, contributed to over a third of Zambia's GDP and 70% of its export value on average during that period (Government of Zambia, 2011a). Agriculture, forestry and fishing contributed another 15% and provided for up to 80% of all livelihoods (FAO, 2009; Government of Zambia, 2010b). According to the World Bank, environmental assets amount to 27% of all assets available for Zambia's development (with other assets being financial, infrastructure, social, and human in nature). Cropland and forests are particularly abundant in Zambia (World Bank, 2006), yet this figure may actually be underestimated as the measurement of environmental assets excludes the value of many ecosystem services (Aongola et al., 2009).

The benefits of growth have not been widely shared across different income groups in Zambia. Poverty stood at 64% of the population in 2013 (down from 68% in 1996; Government of Zambia, 2012), and the poor largely depend on rapidly shrinking or vulnerable environmental assets to sustain their incomes and livelihoods (Government of Zambia, 2012). This is especially the case in rural areas, which account for 60% of the population. Population growth, rural flight, rapid urbanisation and a growing middle-class are further straining an already fragile environmental balance (Aongola et al., 2009). As a result, Zambia appears unlikely to meet the Millennium Development Goal (MDG) 7 to provide adequate clean water and sanitation, to slow the rate of deforestation, and to protect biodiversity by 2015 (Government of Zambia, 2012).

In other words, Zambia's recent growth has been natural resource intensive, leading to problems of environmental degradation and heightened climate change-related risks (see Box 1). However, growth has not translated into rapid poverty and inequality reduction rates (World Bank, 2014). Zambia aims to become a middle-income country by 2030 (Government of Zambia, 2006b) but achieving this goal will require a long-term strategy to manage its green assets in a sustainable manner.

[3] ODA refers to flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25%. By convention, ODA flows comprise contributions of provider government agencies, at all levels, to developing countries (bilateral ODA) and to multilateral institutions (OECD, 2014b).

Realising the potential benefits of green growth, the Zambian government aims to develop an Inclusive Green Growth Strategy (IGGS) (Government of Zambia, 2012). Although an official, comprehensive definition is still to be developed, a preliminary understanding has already emerged on what green growth means in the Zambian context. Namely, green growth refers to inclusive development that makes sustainable and equitable use of Zambia's natural resources within ecological limits (Banda and Bass, 2014). More specifically, green growth is seen as a deliberate, progressive and incremental move away from a carbon intensive economic model of growth to one compatible with sustainable development; it aims to fulfil short- and medium-term needs, such as reducing unemployment, poverty and inequality, and long-term needs, such as overcoming infrastructure deficits, connecting to markets worldwide and supporting urban growth (Government of Zambia 2012; Banda and Bass, 2014).

Box 4. Climate change and deforestation in Zambia

Climate change is expected to have important impacts in Zambia. By the end of the first decade of the 21st century, mean temperatures are estimated to be 1.3 degrees C warmer and precipitation patterns 2.3% rainfall lower per decade on average since the 1960s (McSweeney et al., 2008). Temperatures are projected to increase by another 1.2 - 3.4 degrees C and rainfall to decrease by a further 8-10% by 2060 (Hertel et al., 2010; Dell et al., 2012). This is likely to modify the catchment areas of the major Zambezi river watershed (with lower levels in dry seasons and higher in wet seasons); to increase evaporation in deep lakes (e.g. levels in the lake Tanganyika are decreasing due to the combined effect of drought, warming and human activities; IPCC, 2014); to change the climate of the Zambian highlands, but to reduce annual runoff by 30-50% under a scenario of warming above 2.7 degrees C by 2060-80 (Dell et al., 2012; IPCC, 2014). Extreme weather events are also predicted to increase in frequency. Floods, droughts and heavy rainfall are already increasing in intensity and frequency (Fumpa-Makano, 2011). Lusaka and other urban areas of Zambia are increasingly vulnerable to extreme weather events such as severe heat, heavy rainfall and flooding due to the growth of informal settlements, reliance on urban agriculture to sustain the livelihoods of the urban poor, and low levels of piped water, sewerage and electricity access (Heath et al., 2010).

As a result, climate change impacts are expected to alter the prospects for sustainable development in Zambia. In particular, unmitigated climate change is expected to:

compromise agricultural and livestock-based livelihood security by lowering agricultural growth by 1% p.a. (AfDB, 2013),

negatively impact water quality and availability as well as human health (e.g. increased incidence of climate-sensitive diseases such as malaria, cholera and dysentery; FAO, 2009; IPCC, 2014),

put at risk vital infrastructure, including hydro-power generation and at urban level (UN-HABITAT, 2014),

harm biological diversity, forestry and agricultural productivity and increase price volatility (e.g. reduction in fish stocks, soil erosion, decreased soil fertility; Government of Zambia, 2012).

Since 2003, Zambia has suffered losses in GDP estimated at USD 13.8 billion due to floods and droughts and is it is expected to lose over USD 2 billion per year (amounting to 0.9% to 1.5% of its annual GDP growth) due to climate change through 2020 (Government of Zambia, 2011a), while lower agricultural productivity due to climate change will cost USD 4.3 billion in GDP over the next decade (AfDB, 2013). The estimated loss of agricultural potential due to climate variability is USD 2.2 - 3.1 billion of GDP per year until 2020 (representing up to 2% of its annual GDP growth; Government of Zambia, 2011a).

In Zambia, forests provide edible products (e.g. caterpillars, mushrooms, honey), fuel in the form of firewood or charcoal and health services through medicinal plants. However, charcoal markets and agricultural needs are driving deforestation (IDLO and FAO, 2011). The rate of deforestation is estimated to be the second highest per capita in Africa and the fifth highest in the world (estimated at 4,000 km2 of forests lost every year from 1990 to 2005; see UNDP 2008), causing further land degradation and desertification (Government of Zambia, 2006a, 2011a; Watson et al., 2013).

Source: AfDB, (2013) African Development Report 2012: Towards Green Growth in Africa, Tunis, African Development Bank; Dell, M. et al., (2012) Temperature Shocks and Economic Growth: Evidence from the Last Half Century, American Economic Journal: Macroeconomics 4(3): 66-95; FAO (2009), Conservation Agriculture Scaling Up for Increased Productivity and Production, Rome: FAO; Fumpa-Makano, R. (2011), Forests and Climate Change: Integrating Climate Change Issues into National Programmes and Policy Frameworks, Background Paper for the National Workshop, Kabwe, 27-28 April 2011; Government of Zambia (2006a), Fifth National Development Plan: 2006-2010, Lusaka: Government of Zambia; Government of Zambia (2011a), Economic Assessment of the Impacts of Climate Change in Zambia, Climate Change Facilitation Unit, Lusaka: Government of Zambia ; Government of Zambia (2012), National Report – Zambia: The United Nations Conference on Sustainable Development – June 2012 (Rio+20), Lusaka: Government of Zambia; Heath, T. et al., (2010), How to Climate Proof Water and Sanitation Services in the Peri-Urban Areas in Lusaka, Water and Sanitation for the Urban Poor, Carnfield: Carnfield University; Hertel, T. et al. (2010), The poverty implications of climate-induced crop yield change by 2030, GTAP Working Paper Number 59, Global Trade Analysis Project, Indianapolis: Purdue

University; IDLO and FAO (2011), Legal Preparedness for REDD+ in Zambia, UN REDD Programme, Rome: IDLO ; IPCC (2014), Africa, in Climate Change 2014: Impacts, Adaptation, and Vulnerability, Part B: Regional Aspects, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Barros et al.), Cambridge: Cambridge University Press, pp. 1199-1265; McSweeney, C. et al. (2008), Zambia: UNDP Climate Change Country Profiles; UN-HABITAT (2014), *State of African Cities 2014: Re-imagining Sustainable Urban Transitions*, Nairobi: UN-HABITAT; Watson, C. et al., (2013), Understanding Climate Finance Readiness Needs in Zambia, Bonn: GIZ.

A Zambian IGGS could build upon previous experience in mainstreaming green considerations (Banda, 2013; Banda and Bass, 2014), especially into the country's National Long Term Vision 2030 (NLTV; Government of Zambia, 2006b) and the Fifth and Sixth National Development Plans (2007-11 and 2011-15 respectively; Government of Zambia, 2006a, 2010b). Over time, green issues, understood here to encompass biodiversity, climate change adaptation, climate change mitigation, desertification and local environmental issues, have progressively gained more space in these documents (see Table 1). As the implementation of these documents is meant to guide further decision- and policy-making, a number of green institutions and processes have been established to help with the mainstreaming process and have supported the implementation of several programmes and policies at the national and local levels (Banda and Bass, 2014; see Annex 1 for an overview). These developments are likely to inform the formulation of a Zambian IGGS in the future.

Table 1. Green and development priorities of Zambia

Document	Key features
Vision 2030 (2006)	- Provides a development vision to make Zambia a "prosperous middle income country by 2030" through comprehensive development planning programmes and tools - Places environmental sustainability at the centre of this Vision - Implementation through 5-year National Development Plans (NDPs)
Fifth National Development Plan (2006-2010)	- Includes a dedicated environmental chapter covering water, soil, climate, forests, fisheries, mineral resources and wildlife - Aims to review and reform natural resource legislation and policies; and to enhance the institutional capacity of the Ministry of Tourism, Environment and Natural Resources - Targets private sector investment in natural resource management - Identifies the key green sectors: agriculture, manufacturing, mining and tourism
Sixth National Development Plan (2011-2015)	- Aims to sustain economic growth and poverty reduction and to mainstream climate resilient and low-emission development - Strengthens the environmental policy and legal framework, including on climate change adaptation and mitigation, which are treated as cross-cutting issues - Strengthens environmental management by improving data and information management systems; scaling up physical and human capacities; education, public awareness and advocacy on sustainable practices - Assesses sector vulnerability and enhance resilience - Ensures a sustainable financing framework for environmental management by creating an environment fund and developing an adequate investment framework - Expands the list of key green sectors to include: commerce and trade, information and communication technology, livestock and fisheries, education, energy, health, infrastructure, land and water management, transport, water and sanitation.

Source: Government of Zambia, 2006a, 2006b, 2010b

In light of these strategies and plans, Zambia is considered a "frontrunner" with respect to green planning and policy-making in Africa (Pauw, 2014; UN-HABITAT, 2014), displaying strong political will to engage on green issues (Watson et al., 2013) and relatively high levels of awareness among decision makers and the general public on these issues (Aongola et al., 2009). Looking forward, it is expected that the Seventh NDP (2016-20) will serve as a framework for a Zambian IGGS once it is developed, bringing more coherence and capacity to manage green issues at national and local levels (Banda and Bass, 2014).

To date, most of Zambia's environmental projects and programmes have been largely supported by the international development co-operation community (Watson et al., 2013). It is widely understood that providers of development assistance can help developing countries transition towards green growth (AfDB and OECD, 2013; OECD, 2013). They can offer finance, help transfer knowledge, build capacity and promote learning, open markets for green goods and services, as well as support reforms in legal frameworks and collective action agreements to create a basis for new green activities at sectoral, local and/or national level (Aongola et al., 2009; OECD, 2013). A Zambian IGGS could therefore also build upon the support of providers of development co-operation and their experience in this space.

Zambian priorities and the increasing number of green activities have also provided a framework for development co-operation providers to act in this area. In particular, alignment between providers' activities and Zambian priorities has been facilitated by the on-going work of the Joint Assistance Strategy for Zambia (JASZ). The JASZ was created to co-ordinate the activities of providers in Zambia (Government of Zambia, 2006a), and constitutes a response to the *Paris Declaration on ODA Effectiveness* and its five principles (OECD, 2005) and the *Accra Agenda of Action* (OECD, 2008; see Box 2).

Box 5. International principles on aid effectiveness and effective development co-operation

The *Paris Declaration on Aid Effectiveness* (OECD, 2005) outlines five fundamental principles for making ODA more effective, born out of decades of experience of what works and what does not work for development:

- **Ownership**: Developing countries set their own strategies for poverty reduction, improve their institutions and tackle corruption.
- **Alignment**: Development co-operation providers align behind these objectives and use local systems.
- **Harmonisation**: Providers co-ordinate, simplify procedures and share information to avoid duplication.
- **Results**: Developing countries and providers shift focus to development results and results get measured.
- **Mutual accountability**: Providers and developing countries are accountable for results.

These principles are further elaborated by the *Busan Declaration*, which fleshed out some of these to form the foundation of effective development co-operation, namely:

- **Ownership of development priorities by developing countries**: Partnerships for development can only succeed if they are led by developing countries, implementing approaches that are tailored to country-specific situations and needs.
- **Focus on results**: Investments and efforts must have a lasting impact on eradicating poverty and reducing inequality, on sustainable development, and on enhancing developing countries' capacities, aligned with the priorities and policies set out by developing countries themselves.
- **Inclusive development partnerships**: Openness, trust, and mutual respect and learning lie at the core of effective partnerships in support of development goals, recognising the different and complementary roles of all actors.
- **Transparency and accountability to each other**: Mutual accountability and accountability to the intended beneficiaries of co-operation efforts, as well as to respective citizens, organisations, constituents and shareholders, is critical to delivering results. Transparent practices form the basis for enhanced accountability.

All members of the OECD DAC have endorsed these principles, which are applicable to all development co-operation activities. Implementation of these principles and commitments to integrate them into development co-operation activities of DAC members is well under way and the OECD has been monitoring progress since 2006 (OECD, 2011).

Source: OECD (2005), Paris Declaration on Aid Effectiveness, Paris: OECD; OECD (2011), *Aid Effectiveness 2011: Progress in Implementing the Paris Declaration*, Paris: OECD.

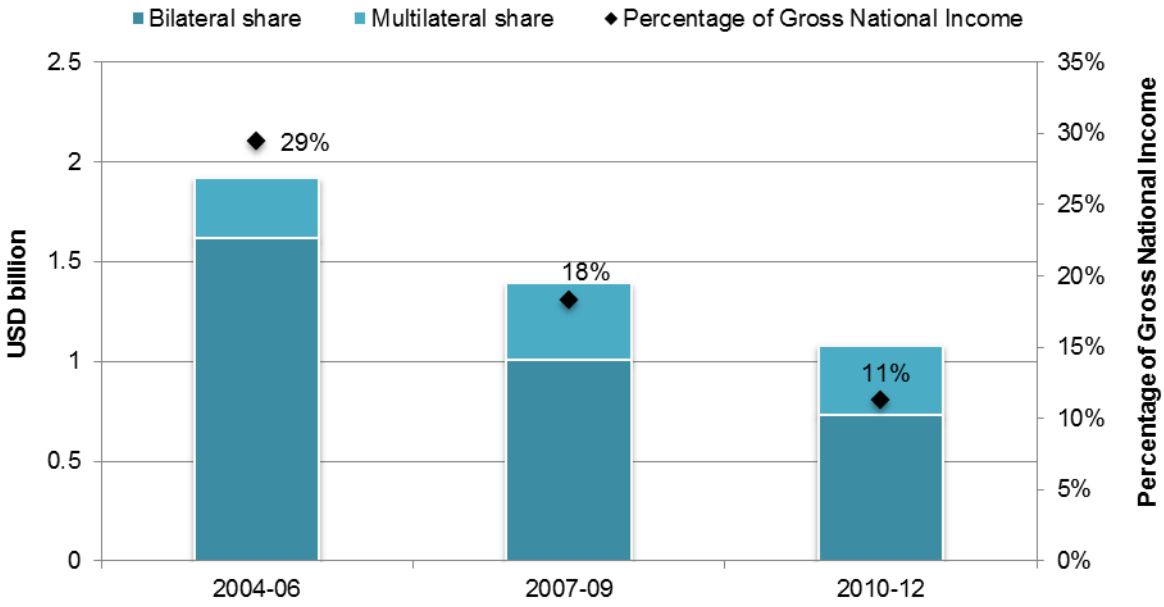
GENERAL TRENDS IN GREEN ODA IN ZAMBIA

Trends in total external development finance to Zambia

Zambia was classified as a Least Developed Country (LDC) in 1991.[4] It reached Lower Middle-Income Country (LMIC) status in 2011 due to reductions in poverty and sustained growth (OECD, 2011a).[5] Political stability and strong growth have improved investor confidence, as evidenced in the issue of two oversubscribed Euro bonds raising USD 750 million (Watson et al., 2013), or the increase in Foreign Direct Investment from USD 164 million in 2003 to USD 1.7 billion in 2010 (World Bank, 2012). In light of this, Zambia is increasingly less reliant on ODA: total ODA as a percentage of Gross National Income (GNI) steadily declined from 29% in 2004-06 to 11% in 2010-12 (Chart 1), in line with a general downward trend of ODA to Sub-Saharan Africa in recent years (OECD, 2014c).

Chart 1. Trends in total ODA to Zambia

2004-12, bilateral and multilateral commitments, 3-year annual averages, USD billion, constant 2012 prices



Source: OECD DAC Statistics, September 2014; World Bank, October 2014. *Notes*: 1) Chart 1 presents a trend based on averages over three years, so as to smooth fluctuations form large multi-year projects programmed and committed in a given year; 2) The share of ODA to GNI was calculated using constant 2000 USD.

[4] According to the UN, a LDC is a country that exhibits the lowest indicators of socio-economic development, with the lowest Human Development Index ratings of all countries worldwide (UNDESA, 2014).

[5] According to the World Bank, a LMIC is defined as a country with a GNI per capita between USD 1,045 - 4,125 in 2013 (World Bank, 2013).

Since 2004, total bilateral and multilateral ODA flows committed to Zambia have fallen from USD 1.9 billion in 2004-06 to USD 1.1 billion in 2010-12 (Chart 1).[6] Bilateral ODA provided by DAC member countries, including the European Union (EU) institutions, has generally been the largest source, representing 68% of total ODA to Zambia over 2010-12 (USD 730 million), falling from USD 1.6 billion in 2004-06 and 85% of total ODA commitments to Zambia. Multilateral commitments, in turn, reached USD 350 million over 2010-12, growing by 16% compared to 2004-06.[7]

Total bilateral and multilateral ODA commitments to Zambia over 2010-12 primarily targeted the following sectors: health and population (30.2%), transport and storage (13.2%), agriculture (10%), government and civil society (7.4%), water supply and sanitation (5.2%) and education (5%); with 8.8% of total commitments providing general budget support. Looking at bilateral and multilateral commitments, 6 of the top 10 providers over 2010-12 were bilateral providers of development co-operation (Table 2).

[6] Commitments are firm obligations, expressed in writing and backed by the necessary funds, undertaken by an official donor to provide specified assistance to a recipient country or a multilateral organisation (OECD, 2014b).

[7] The DAC CRS also recorded flows from Kuwait (USD 14.5 million) and the United Arab Emirates (USD 0.4 million) to Zambia in 2010.

Table 2. Top 10 bilateral and multilateral donors in Zambia, providing 81% of total ODA

Annual average 2010-12, bilateral and multilateral commitments, USD million, constant 2012 prices

Provider of development co-operation	USD million	Share of total ODA to Zambia
United States	291	27%
International Development Assistance (IDA) of the World Bank	123	11%
African Development Bank	106	10%
Norway	90	8%
Japan	64	6%
EU Institutions	63	6%
Germany	44	4%
United Kingdom	33	3%
Global Fund	32	3%
Concessional Trust Funds of the International Monetary Fund	29	3%

Source: OECD DAC Statistics, September 2014

Trends in total domestic and external green development finance to Zambia[8]

This section looks at domestic levels of green finance and provides an overview of green external development finance in Zambia.[9] Domestic sources of green finance have generally been low: the investments associated with the environment chapter of the Fifth National Development Plan (FNDP) stood at 2% of the national budget according to the medium-term expenditure framework of the FNDP (Aongola et al., 2009). Environmental protection, pollution control, environmental and climate change mainstreaming represented only 3% of the national budget in 2011 (Government of Zambia, 2011b). By contrast, governmental allocation to climate change adaptation and mitigation in the national budget was on average 7% of total resources over 2008-2012 (Mulenga, 2013). With the Sixth National Development Plan (SNDP), the government planned to increase its green funding by 33% for the 2011-15 period compared to 2006-10 (Government of Zambia, 2011b). However, this would still leave green investments heavily dependent on external support from providers of development co-operation (Government of Zambia, 2006a, 2008; Mulenga, 2013).

Total green bilateral ODA committed by the members of the OECD DAC reached 30% of total ODA commitments to the country over 2010-12 (USD 230 million), up from 6% of total bilateral ODA commitments over 2004-06 (USD 90 million; Chart 2), increasing at a time when total ODA volumes were

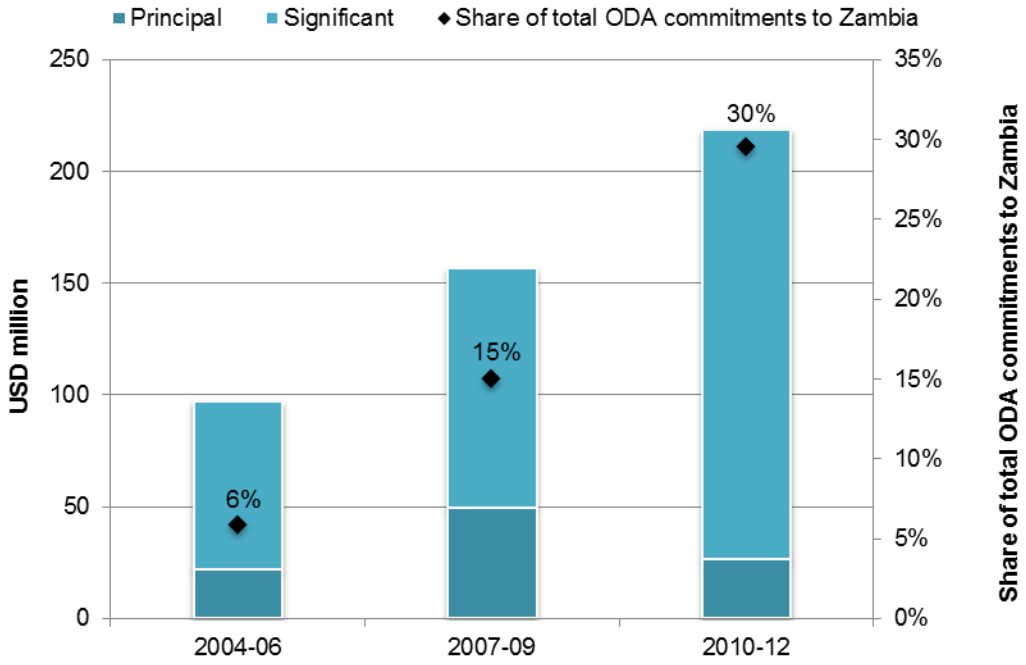
[8] This paper only provides a partial picture of total green ODA flows to Zambia, based on the activities of bilateral providers of development co-operation. An integrated, full picture including multilateral providers is still missing at the time of writing.

[9] Total bilateral green ODA commitments are calculated using the OECD DAC CRS as being the total ODA commitments marked as *principal* or *significant* with the environment marker, plus additional ODA to climate change adaptation marked *principal* or *significant*, additional ODA to climate change mitigation marked *principal* or *significant*, additional ODA to biodiversity marked *principal* or *significant*, and additional ODA to desertification marked *principal* or *significant*. Care has been taken to aggregate these figures to ensure there is no double counting where activities target multiple environmental objectives. For a further description of the CRS database and the Rio markers methodology, see Annex 1.

falling (Chart 1). These green flows include ODA targeting local environment objectives, as well as global objectives enshrined in the three Rio Conventions (biodiversity, climate change and desertification).[10]

Chart 2. Trends in total green ODA to Zambia

2004-2012, bilateral commitments, USD million, constant 2012 prices, 3-year annual averages



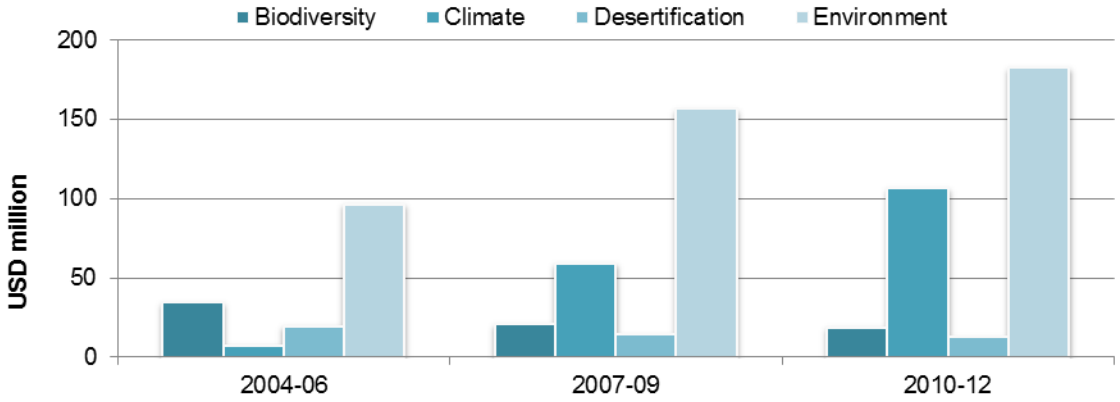
Source: OECD DAC CRS, September 2014. *Note*: The adaptation marker was introduced in 2010 so reported figures over 2004-09 may appear lower than in practice, and may reflect a break in the series given pre-2010 adaptation spend was not monitored;

Activities are classified as either having *principal* or *significant* green objectives (see Annex 1 for further information on the Rio Markers methodology). On the one hand, *principal* activities are activities where green issues are central and where the activity would not have gone ahead without having a green dimension. The amount of ODA having green *principal* objectives is relatively low in Zambia, with volumes varying over 2004-2012, and reaching USD 26 million over 2010-12 (see Chart 2). On the other hand, activities that providers score as *significant* have other prime objectives but have been formulated or adjusted to help meet green concerns, and failure to take this dimension into account would have not prevented the activity from going ahead. In Zambia, the majority of green ODA is marked as having a *significant* objective, accounting for 88% of all green ODA committed to the country over 2010-12 (USD 192 million), up from 2004-06 when it represented 77% of total ODA (USD 75 million). This suggests high levels of mainstreaming of green concerns across the portfolios of development co-operation providers.

[10] OECD DAC members did not monitor all their green development finance during 2004-09, e.g. monitoring climate change mitigation only became mandatory in 2006, and climate change adaptation was only monitored after 2010. As a result, part of the increase observed in Zambia also reflects improvements in the statistical coverage of green development finance.

Chart 3. Total ODA supporting environmental and Rio Convention objectives in Zambia

2004-12, bilateral commitments, USD million, constant 2012 prices, 3-year annual averages

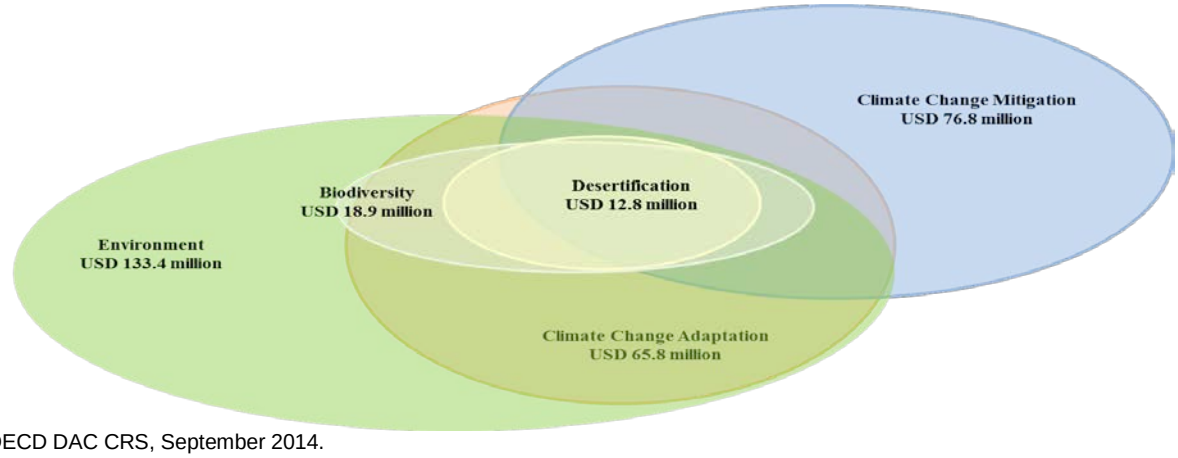


Source: OECD DAC CRS, September 2014. *Note:* The ODA commitments to biodiversity, climate, desertification and local environmental objectives displayed in this chart cannot be aggregated, as activities may target multiple objectives. Aggregated figures, taking into account any overlaps between finance targeting multiple objectives have been taken into account for the preparation of Chart 2. For further information on the methodology employed to avoid double counting, see Annex 1.

Looking at the components of green bilateral ODA commitments shows that the increase since 2004-06 has been primarily driven by climate-related ODA (Chart 3). Climate change adaptation represented 14% of total climate-related ODA in 2010-12, reaching USD 46 million per year on average, while climate change mitigation-related ODA accounted for 0.4% or USD 1.5 million over 2010-12 on average per year. The remainder, or over 85% or USD 272 million per year on average targeted both climate change adaptation and mitigation. During the same period, too, biodiversity- and desertification-related ODA halved in volume to USD 19 million and USD 10 million respectively. Providers are also seeking synergies within and across their green portfolios (Chart 4). An estimated USD 10 million or 7% of environment-related ODA also targets all other green objectives; USD 17 million or 13% of environment-related ODA also targets climate change mitigation and adaptation objectives; and all of the biodiversity and desertification-related ODA, and virtually all of the adaptation-related ODA targets at least one other green objective. That being said, 70% of total green ODA still targets climate change mitigation alone (USD 54 million); and 44% of environment-related ODA targets local environmental objectives only (USD 58 million).

Chart 4. Overlaps between OECD DAC members' ODA green activities

Annual average, 2010-12, USD million, constant 2012 prices



Source: OECD DAC CRS, September 2014.

It is noteworthy that the climate-related development finance figures presented here may not be comparable to those reported by Parties to the United Nations Framework Convention on Climate Change (UNFCC) in their National Communications, Biennial Reports, or Biennial Update Reports. Reporting to the UNFCCC is often based on, but may not be directly comparable to the OECD DAC Rio marker data presented here as different methodologies are applied, in particular to account only for a certain share of finance targeting climate change marked as a *significant* objective (Ockenden and Gaveau, 2014 *forthcoming*). During 2008-12 (covering the 2010-12 period of Fast-start Finance period), climate financing to Zambia amounted to USD 24 million, or USD 8 million on average per year. (Mulenga, 2013). This has been primarily provided through grants originating from Germany's International Climate Initiative, the Global Environmental Facility-Administered Trust Fund and the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (UN REDD+), aimed at climate change mitigation. In addition, a grant from Japan's Fast Start Finance focused on climate change adaptation. The Climate Investment Funds (CFIs), in particular, have also been a key international driver for the increase in climate change adaptation finance to Zambia, as the country was included in its Pilot Program for Climate Resilience (PPCR; Box 3).

Box 6. The Pilot Program for Climate Resilience in Zambia

The Pilot Program for Climate Resilience (PPCR) is funded by the Strategic Climate Fund, one of the two Climate Investment Funds (CIFs). It is designed to demonstrate ways that developing countries can make climate risk and resilience part of their core development planning. It helps countries build on their National Adaptation Programs of Action and helps fund public and private sector investments identified in climate resilient development plans.

In Zambia, the African Development Bank (AfDB) worked closely with the government and other partners to develop a PPCR investment strategy in line with national development priorities, including strengthening early warning weather systems, integrating climate resilience in infrastructure planning and investments, and strengthening the adaptive capacity and livelihood of farmers and natural ecosystems in the most affected areas of southern and western Zambia.

To date, Zambia has received a PPCR programme development grant of USD 1.5 million to support preparation of its PPCR investment strategy, the Strategic Programme on Climate Resilience. The AfDB is supporting this phase by providing input on mainstreaming climate resilience into national development planning; strengthening institutional co-ordination, improving information for decision-makers; and shaping targeted awareness and communication. This provided individual ministries the mandate to work on climate change issues, because budget allocations were linked to the strategy; has also strengthened country ownership and effectiveness by promoting institutional reforms on adaptation planning; and succeeded to change and improve the political economy context through concessional finance (Climate Investment Funds, 2014). Finally, this has also translated into three concrete interventions covering a range of sectors, e.g. two projects on building resilience in land-based livelihoods and infrastructure in two river sub-basins and a project on private sector support for climate resilience in those same sub-basins.

Source: Climate Investment Funds (2014), *Learning by Doing: The CIFs Contribution to Climate Finance*; and CIFs website: www.climateinvestmentfunds.org (accessed December 2014).

Sectors targeted by green ODA in Zambia

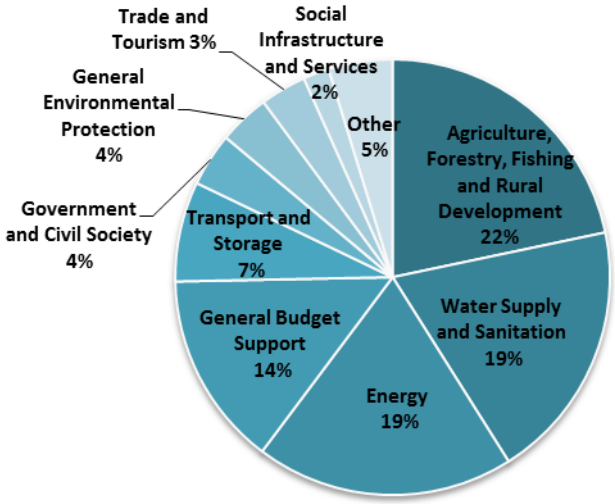
This section details the sectors that DAC member countries are targeting with their green ODA. This analysis can be used to inform and assess the extent of alignment between the sectors prioritised by the government of Zambia and those targeted by providers' interventions. The issue of alignment has been scantly studied in the case of green ODA (but see Thornston et al., 2011 who look at climate finance in various African countries; Terpstra et al., 2013 who explore national adaptation priorities and international adaptation finance flows in Zambia and other developing countries; or Drutschinin and Casado-Asensio, forthcoming, who study biodiversity-related development co-operation in Zambia and other developing countries). Alignment implies that providers base their support on partner countries' national development strategies, institutions and processes (see Box 2). For example, providers aim to increasingly use country systems for programmes managed by the public sector. In return, partner countries improve the quality and transparency of their public financial management systems. A lack of alignment leads to unsustainable outcomes, as well as undermining national institutions and processes; while alignment reflects efforts to build the institutional strength of partner countries (Birdsall and Kharas, 2014). By supporting this dimension, providers signal their willingness to make a long-term investment in partners' ability to develop and implement their own strategies.

In the case of Zambia, there is alignment between the sectors targeted by providers and with those highlighted by the Zambian government in the FNDP and SNDP. Inter alia, the FNDP (2006-10) highlighted agriculture, while the SNDP (2011-15) also highlighted energy, fisheries, livestock, tourism, transport and the water sectors (see Table 1). Providers have been consistently prioritising agriculture,

forestry, fishing and rural development over 2010-12 (22% of all green ODA to Zambia, or USD 39 million on average per year over that period, primarily driven by agriculture). Following this, are the sectors of water supply and sanitation and energy (each accounting for 19%, or USD 35 million), transport and storage (7%, or USD 14 million), general environmental protection (4%, or USD 7 million), other social infrastructure and services (4%, or USD 6 million) and trade and tourism (3% or USD 6 million; see Chart 5).

Chart 5. Total green-related ODA by sector

2010-2012, bilateral commitments



Source: OECD DAC CRS, September 2014. *Note*: 1) General budget support interventions are not targeted at a specific sector. In principle, the Rio marker methodology cannot be applied to this "sector", hence the data presented is only partial; 2) General Environmental Protection includes support to environmental research, education, policy and administration management; 3) The Other Social Infrastructure and Services category comprises social and welfare services, employment policy and administrative management, housing policy and administrative management, low-cost housing, and multi-sector ODA for basic social services.

Priorities for allocating green ODA can also be assessed based on the extent to which environmental considerations have been integrated into development co-operation support. Total sector support between 2004 and 2012 shows that environmental considerations are well integrated into ODA supporting a number of key sectors for Zambia's development - based on the share of total ODA to each sectors that targets a green objectives (Chart 6) - such as forestry (99%), energy (95%), water supply and sanitation (67%), tourism (61%) or agriculture (54%). For example:

- Agriculture is a key sector in Zambia. It was declared the "engine of income expansion in the economy" by both the FNDP and SNDP (Government of Zambia, 2006a, 2010a), yet is also seen as being particularly vulnerable to climate change. The draft National Climate Change Response Strategy (Government of Zambia, 2010b) and the Strategic Programme on Climate Resilience (Climate Investment Funds, 2011), were in fact developed to implement the NDPs and to prioritise agriculture (see Watson et al., 2012; UN-HABITAT, 2014).

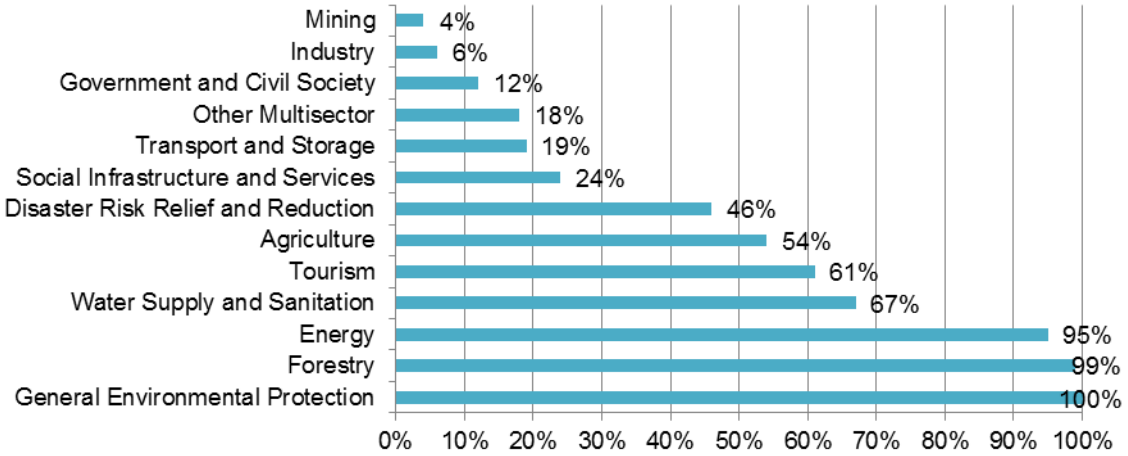
- Green support to the forestry sector predominantly comes from Finland to build government capacity to value, map and sustainably manage the country's forests (Leventon, et al., 2014). This is aligned with the government's Zambia Forestry Action Plan and National Forest Policy of 1998 aiming to achieve Joint Forest Management in Zambia.

- The high share of green ODA in the energy sector can be attributed to the expansion of energy access from hydro-power (Zambia is a water rich-country, accounting for 40% of the water resources of Southern Africa; UN-HABITAT, 2014), and to the government's intentions to continue expanding hydro-power and biofuel plants during the SNDP period (Government of Zambia, 2010a) and to climate-proof existing infrastructure (e.g. so that droughts do not impact negatively on energy generation which in turn affects industrial production).

- ODA to water supply and sanitation, but also to the transport and storage sector, have a green dimension in Zambia because providers have focused on climate-proofing existing infrastructure, as prioritised by the government's SNDP (Government of Zambia, 2010a). For example, transport interventions comprise three environmental assessments funded by the United States, plus other activities focusing on road construction and rehabilitation funded by Denmark and Japan to ensure that the increased frequency and severity of floods does not destroy roads as has happened in the past.

Chart 6. Percentage of ODA targeting green objectives by sector

2010-12, bilateral commitments



Source: OECD DAC CRS, September 2014

Providers' activities also coincide with respect to the emphasis placed upon capacity-building. Indeed, many small-volume activities also focus on the General Environmental Protection sector,[11] which is identified as the centrepiece to develop the FNDP, SNDP and the IGGS (Banda and Bass, 2014). In fact, 19% of all green ODA to Zambia over 2010-12 had capacity-building as its objective.[12] Three notable activities in this sector are:

- A programme funded by the United Kingdom's Department for International Development (DfID) to integrate climate resilience into development planning, and to provide support to priority public and private climate-proofed investments. This programme ran over 2009-12 and targeted climate change mitigation and biodiversity as *principal* objectives. The programme included contracting a consultant to identify links between climate change and development, and to suggest appropriate policies.

- A programme led by the Finnish Environmental Institute to support institutional capacity building in the then Ministry of Tourism, Environment and Natural Resources (MTENR). The programme was implemented during 2009-12 and comprised five mutually defined components: improving human resource management (including training on environmental monitoring), environmental information management, strategic environmental assessment, biodiversity and the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Basel, Stockholm, and Rotterdam Conventions.

- Finally, in 2010, the United States Department of Agriculture provided support to reduce pollution across multiple sectors. The initiative set out to improve environmental sustainability. By reducing environmental risks, the programme aimed to reduce health costs and ecosystem loss.

Notwithstanding the observed sectoral alignment and the emphasis placed to develop domestic-level capacity, there are also a number of gaps, for example:

- Mining, which has a high impact on Zambia's economy and environment (Aongola et al., 2009). Zambia's mining sector is specialised on the extraction of copper and cobalt. Mining activity consumes substantial volumes of electricity (Kivyiro and Arminen, 2014), primarily relying on hydro-power in Zambia and making the sector vulnerable to water scarcity and climate change. Despite recent signs of a green transformation in this sector (AfDB and OECD, 2013) and the fact that mining sites have to perform environmental impact assessments (Government of Zambia, 2011a), change is slow and enforcement of environmental legislation poor (Leventon et al., 2014); and the sector struggles to manage waste (AfDB and OECD, 2013).

- Tourism has the potential to be an effective means for achieving economic and social development in destination areas, notably through community-based eco-tourism (Lachlan and Binns, 2014). Although the data show that over 2010-12, 61% of all interventions had a green objective, the volume devoted to the sector was small (under USD 100,000 over 2010-12), owing

[11] General Environmental Protection includes support to environmental research, education, policy and administration management.

[12] Although there is no specific sector code for capacity building in the OECD DAC CRS, it has been estimated here based on all green activities that target policy and administrative management, research, education and training, public/financial institutions and access to financial services. For completeness, the CRS sub-sectors "statistical capacity building" and "agricultural extension" were also added.

to a Japanese intervention aiming to improve tourism policy and administrative management. No green intervention had been recorded in this sector previously, despite being mentioned already in the FNDP; and the fact that tourism may help Zambia diversify its economy and decouple its development from fluctuations in the world price of copper and other raw materials.

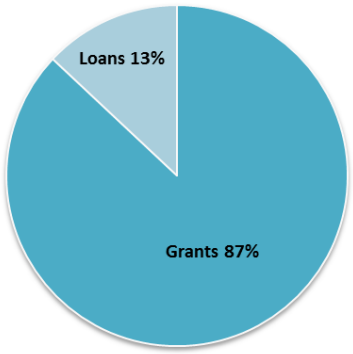
- Urban development, according to a recent review of DAC CRS data looking for interventions targeting climate change adaptation at urban level for the years 2010-12, no explicit projects could be identified on the matter in Lusaka, Ndola or Kitwe, despite high levels of vulnerability and the prioritisation of interventions at this level by the government (UN-HABITAT, 2014).[13]

Instruments used for green ODA

The majority of green ODA over 2004-12 (87%) is committed through grants (Chart 7). While ODA to biodiversity, climate change adaptation, and desertification only takes the form of grants (see e.g. Teprstra et al. 2013), 40% of the ODA targeting climate change mitigation takes the form of concessional loans. This is in line with Zambia's Aid Policy and Strategy, which states that "although it is the policy of the country to progressively reduce its dependence on external assistance, the government shall give preference to grants as opposed to loans" (Government of Zambia, 2005). The government also targets concessional finance and loans with a minimum 35% grant element (Government of Zambia, 2005).

Chart 7. Green-related ODA by instrument

2004-12, bilateral commitments



Source: OECD DAC CRS, September 2014

The majority of green bilateral ODA consists of project-type interventions (57%). Green ODA is also channelled through general budget support. Data collected within the OECD DAC CRS is only partial reflecting that the "Rio markers" are not applicable to general budget support – but available data suggests that at least USD 26 million per year on average over 2010-12 has been channelled as green ODA through general budget support, consisting of four large Poverty Reduction Budget Support transfers from Finland and Germany.

[13] This finding is based on a review of ODA activities within DAC members' climate change adaptation portfolios that target cities of over 500,000 inhabitants. Over 200 out of 1600 activities (above USD 50,000) were identified as targeting urban areas, based on the methodological approach developed for this study. This number may be considered a lower bound, owing to limited information available to identify the location of some ODA activities (OECD, 2014d). For further information see: http://oe.cd/RioMarkers

CO-ORDINATION AND MAINSTREAMING OF GREEN ODA IN ZAMBIA

Providers have made considerable progress in ensuring harmonisation amongst their green activities and to align these with Zambia's priorities through a provider co-ordination group, the Joint Assistance Strategy for Zambia (JASZ) (Aogonda et al. 2009). The JASZ responds to broader concerns from the development co-operation community that providers' practices did not always fit well with national development priorities and systems such as budget, programme and project planning cycles (see Box 2). The demands on partner countries to meet with different providers' objectives, reporting processes and procedures, along with uncoordinated country analytical work and missions may create excessive transaction costs and reduce the effectiveness of development co-operation. Providers and partner countries therefore have recognised that urgent, co-ordinated and sustained action is required to reduce overlap, waste and fragmentation among providers and to reduce the burden placed upon partner countries (Birdsall and Kharas, 2014). This section explores the green activities of the JASZ since 2007 and how this has helped mainstream green activities into the portfolios of development co-operation providers.

Provider co-ordination efforts: the Joint Assistance Strategy for Zambia

The JASZ is an instrument developed by 16 DAC and multilateral providers to co-ordinate their activities and align these with the country's national development priorities. The Strategy is periodically reviewed and updated with the introduction of successive NDPs. There are no specific projects under the JASZ, rather the co-operating partners use the JASZ to inform their development co-operation projects and programmes in-country (Ministry of Foreign Affairs of Denmark, 2010).

Joint Assistance Strategy for Zambia I: 2007-2010

The first JASZ I and its priority sectors were based on the FNDP. According to the agreed division of labour, the Nordic countries were meant to work on green issues; the EU, the US, Sweden, and the development banks supported the agriculture sector; while the Netherlands, development banks and the UK supported private sector development (Ministry of Foreign Affairs of Finland, 2010). Co-operating partners also committed to increase their funding of green issues. In line with the FNDP, the co-operating partners together with the government of Zambia, civil society and the private sector identified the following priority areas as a target for green ODA (Irish Aid, 2008; Aongola et al., 2009; Ministry of Foreign Affairs of Denmark, 2010):

- increasing capacity building efforts and funding for environmental planning and mainstreaming;
- introducing strategic environmental assessments at the national and sector levels, and strengthening the application of environmental impact assessments, including participatory approaches, to ensure the effective mainstreaming of green issues;
- carrying out joint analytical work with the government to support knowledge management;
- focusing on fisheries, forests, land, renewable energy and wildlife, and ensuring sufficient attention is paid to climate change adaptation.

The co-operating partners' targeting of these priorities were meant to assist Zambia in achieving Millennium Development Goal 7 (Ministry of Foreign Affairs of Denmark, 2010). Additionally, Zambia worked to reform and enhance the capacity of its government institutions, including its statutory bodies

aiming to help fulfil their mandates; to strengthen cross-sectoral co-ordination mechanisms; to address equity and transparency issues in the access and control of resources; to capture the contribution of green issues on the national economy and its impact in poverty alleviation; and to assess the impact of natural resource base degradation on growth pillars such as agriculture and tourism (Ministry of Foreign Affairs of Denmark, 2010).

The Strategy led to a more structured process to support the green dimension in Zambian development policy and its strategy (Ministry of Foreign Affairs of Denmark, 2010). As a mechanism, the JASZ I helped identify improvements in provider activity and in providing an effective model for greater sector-level co-ordination on green issues (Ministry of Foreign Affairs of Denmark, 2010). Information sharing through the JASZ I reduced duplication of activities and, where relevant, provided more co-ordinated support to the development of government systems. The dialogue architecture that emerged from the Strategy made a considerable contribution to encouraging harmonisation. Indeed, the co-operating partners' troika structure, whereby three co-operating partners represent the JASZ I signatories in dialogue with the government of Zambia, was generally perceived as successful and as having improved the flow of information (Ministry of Foreign Affairs of Denmark, 2010).

However, the co-operating partners identified generic drawbacks that significantly weakened its ability to achieve its objectives (Ministry of Foreign Affairs of Denmark, 2010):

- The Strategy neither contains specific targets nor does it define indicators against which progress can be measured. A work plan was developed in late 2007 and some of its elements were implemented. However, no work plans and no systematic processes to follow up on the commitments and actions were subsequently agreed.

- The government of Zambia was initially neither a signatory to the JASZ I nor to the work plan, despite the success of the JASZ I depending on governmental actions. In addition, there were doubts regarding the government's leadership in this process and the capacity for the Ministry of Finance and National Planning (MoFNP) to manage ODA (Ministry of Foreign Affairs of Denmark, 2010). The government is now aware of this and has taken steps to develop a mechanism for taking an effective cross-sector strategic view on green ODA issues and has anchored these responsibilities within the MoFNP.

- Existing consultative mechanisms are driven by co-operating partners and often do not respect governmental processes. The requirements of providers still dictate many actions and a number of important decisions are taken bilaterally, which undermine JASZ I processes. The risks were that the JASZ I may have resulted in leaving green issues entirely up to a few providers to lead, offering vague mainstreaming promises for the portfolio of other providers engaged with the JASZ I but not leading on green issues (European Commission, 2007).

Joint Assistance Strategy for Zambia II: 2011-2015

JASZ II builds on the lessons learned from JASZ I, as well as on priorities identified in the SNDP. JASZ II aims to channel co-operating partners' investment in Zambia to: address rural poverty and inclusive growth; support Zambia's longer term transition away from ODA; introduce a more robust focus on performance measurement and ensure management accountability; and improve the flow and quality of information and dialogue between co-operating partners and the government of Zambia and other local non-state actors (Co-operating Partners to the JASZ II, 2011). In an effort to improve the effectiveness and harmonisation of the JASZ with national processes, the government has committed to managing the division of labour among co-operating partners in the various sectors (Co-operating Partners to the JASZ II, 2011).

In the energy sector, co-operating partners commit to expanding generation capacity in the power sector and to scaling up access to clean, modern energy, primarily in rural areas. Co-operating partners will focus on supporting the government's efforts to exploit cost-effective hydro-power generation and transmission, strengthening the framework of ensuring an efficient and effective fuel supply system, including through locally produced, sustainable biofuels, in line with the SNDP (Co-operating Partners to the JASZ II, 2011). Co-operating partners will also continue to support the development of policies and legislation, and increase community, civil society and private sector participation in forestry, wildlife and national heritage to enhance sustainable management of natural resources. Co-operating partners will focus on the following key areas, namely:

- Mainstreaming green issues into the planning, programming and budgetary frameworks for central economic growth sectors by promoting strategic policy dialogue, joint planning and programming on green issues, in particular to develop the capacity for climate resilience and low carbon development;

- Conducting ecosystem assessments to inform green decision making and investments;

- Developing monitoring and performance assessment indicators to track implementation of green programmes across sectors;

- Supporting fiscal and market based incentive mechanisms to improve green management, in particular in pollution control and waste management;

- Intensifying the implementation of adaptation and mitigation initiatives as well as positioning the country to benefit from climate financing opportunities (e.g., the Green Climate Fund; Co-operating Partners to the JASZ II, 2011).

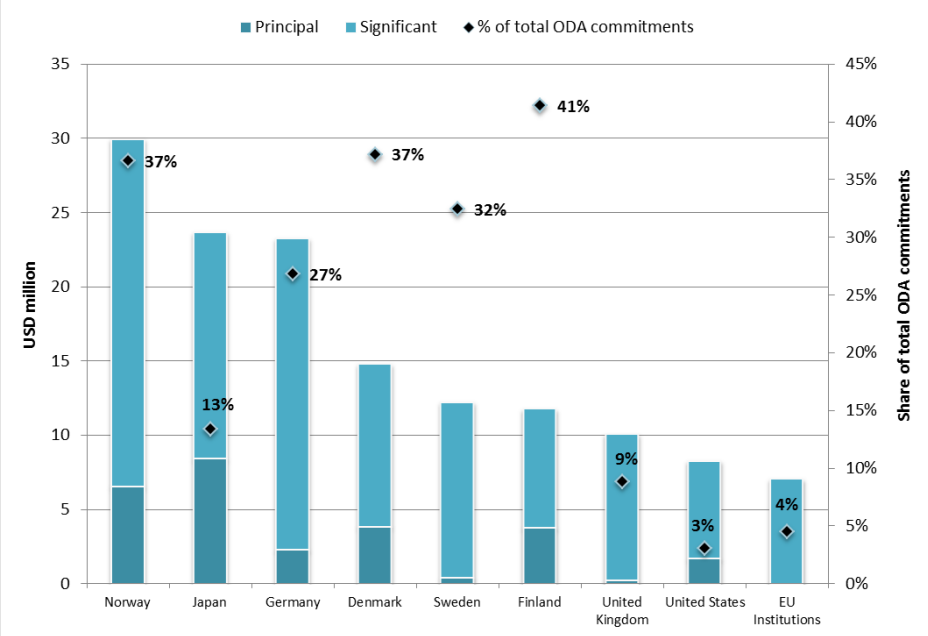
With the elections of 2011, however, ministerial portfolios and mandates changed, with implications for the implementation of the JASZ II (Watson et al., 2013). For example, after a period of uncertainty the Ministry of Tourism, Environment and Natural Resources (MTENR) became the Ministry of Lands, Natural Resources and Environmental Protection. The MTENR had led the preparation of the National Climate Change Response Strategy since 2010 and had received support from Norway and the United Nations Development Programme (UNDP) to establish a Facilitation Unit to co-ordinate climate change activities in-country. With the governmental change, departments were reshuffled and annual departmental and line budgets were housed in different ministries (Watson et al., 2013). In turn, this has slowed the drafting and implementation of many JASZ II proposals. Notwithstanding this, the government of Zambia has remained engaged with the green agenda and created an Interim National Climate Change Secretariat, now housed in the Ministry of Finance. The Secretariat is the focal point for developing the Zambian IGGS and co-ordinates all international and domestic green programmes and projects with the JASZ II (e.g. the USAID Low Emissions Development Strategy, the PPCR (see Box 3), or the UN Joint Climate Project REDD-Low Emissions Capacity Building Programme).

Provider strategies to mainstream green issues into development co-operation

Green issues have been at the centre of many DAC providers' ODA activities in Zambia. Chart 8 illustrates the top nine green providers, accounting for 97% of total green bilateral ODA to Zambia over 2004-12. Norway, Japan and Germany are the largest providers in absolute terms, and together account for 53% of green ODA to Zambia. It is important to note that Japan, Norway, Denmark and Finland commit the largest amount of ODA targeting green objectives as a *principal* objective over the same period. Green ODA as a proportion of a provider's total ODA portfolio gives an indication of the priority that this provider is placing on green issues. By this measure, Finland stands out in dedicating about 41% of its total ODA commitments to Zambia to green issues, followed by Denmark and Norway (each 37%). This reflects the division of labour of the JASZ I.

Chart 8. Top bilateral green ODA providers to Zambia, providing 97% of total green ODA

Average 2004-12, bilateral commitments, USD million, constant 2012 prices



Source: OECD DAC CRS, September 2014. *Note*: For technical reasons, data collection on green ODA for the United States is not available for the years 2011-12.

Looking at the aims and outcomes of the most important projects of the three largest providers in relative terms, Denmark, Finland and Norway, illustrates how provider activities align with the green priorities of the Zambian government. Their interventions have taken various forms, ranging from planning and goal setting support to promoting policy change, institutional capacity building and reform, monitoring and evaluation (see Table 3).

Table 3. Selected green development co-operation interventions in Zambia

Denmark		
Intervention	**Aims**	**Outcomes**
Community Based Natural Resource Management (since the 1980s)	Transferring power and decision-making processes to local communities Establishing principles of local ownership over natural resources	Building linkages between food security, poverty alleviation, and environmental sustainability in rural areas Providing basic social services at community level Facilitated community participation in producing biodiversity inventories and monitoring trends Policy and legislation reform for local natural resource management, including agriculture Identified the unequal distribution of natural resource revenues with local communities Slow process to manage natural resources and to link poverty reduction to the environment and measure impacts
Finland		
Intervention	**Aims**	**Outcomes**
Provincial Forest Action Plan (1995-1999)	Formulating a new Forest Act Strengthening the Department of Forestry's (DF) capacity at provincial level	A new Forest Act was formulated in 1999 Resources and capacity of the DF were not strengthened
Provincial Forest Action Plan (2000-2010)	Improving the capacity and resources of the DF to implement seven Joint Forest Management (JFM) Action Plans	Set up community structures to develop and manage forest resources and revenues with a Forest Trust Unable to implement JFM pilot projects Low impact on local development or poverty reduction
National Integrated Land Use Assessment (2005-2008)	Assessing forestry, other resources, and land use practices to update existing quantitative and qualitative data	Assisted land use institutions to develop baseline information Provided technical expertise to forestry institutions on collecting, compiling, processing and disseminating forestry data
National	Implementing the UN REDD and	Improved capacities to collect and

Integrated Land Use Assessment (2010-2011)	sustainable forest management (SFM)	analyse forest and other resource information for the UN REDD and SFM inventory Disseminated information across ministries by making use of multi-sector platforms
Decentralised Forest and Natural Resources Management Programme (2013)	Sustainable forest management, including reforestation and afforestation Supporting alternative, sustainable livelihoods for local communities Land auditing	Linking forests in climate change mitigation and adaptation, rural development and land use planning, energy Promoting private sector development within forestry, agriculture and related industries
Zambia Country Strategy (2013-2016)	Mainstreaming green issues into agriculture, private sector and development planning Strengthening, monitoring and reporting systems for environmental protection and pollution control Promoting an inclusive green economy and sustainable natural resource management	Currently under implementation
Norway		
Intervention	**Aims**	**Outcomes**
Community Based Natural Resource Management (since the 1980s)	Reviewing existing policy, legal and institutional frameworks Conducting policy and advocacy work Enhancing institutional capacity	Facilitated benefit sharing and devolution of power, responsibilities and rights to local communities over natural resources Facilitated innovative food security and livelihood programmes from conservation farming, non-farm and off-farm product marketing
Climate Change Facilitation Unit (2009-2010)	Focus on climate-smart agriculture and food security National co-ordination of climate-related issues Integrating climate change into strategic planning and implementation processes	Supported the development of a climate change strategy, draft climate change policy and communication strategy Developed programmes implementing the UN REDD and National Adaptation Plan of Action Developed guidelines for effective participation in key conferences and Clean Development Mechanism projects Developed a profile of data sources to include climate change in the SNDP

Evidence-Based Policies on Climate Smart Agriculture (2013-2015)	Improving food production and security Building climate resilient communities Promoting climate-smart agriculture through policy analysis, advocacy and knowledge management	Currently under implementation
Source: Ministry of Foreign Affairs of Denmark (2010); Ministry of Foreign Affairs of Finland (2012a, 2012b, 2012c); Norad (2008)		

CONCLUSION

Zambia aims to become a "prosperous middle-income country" by 2030 (Government of Zambia, 2006b). Achieving this will likely depend upon how Zambia manages its natural assets, controls pollution and prepares for the impacts of climate change. In addition to a range of existing green plans and policies, Zambia aims to develop an explicit and comprehensive Inclusive Green Growth Strategy, to ensure that future development and growth takes green considerations more centrally into account. Importantly, Zambia aims to ensure that the green dimension of economic growth and well-being is fully integrated and has a higher profile in its development plans (see OECD, 2013 on the rationale for doing so). The process of formulating this Strategy provides an opportunity to assess the environmental sustainability of existing growth patterns and to identify the structural changes needed in the economy to ensure growth and poverty reduction, while also protecting the environment. This process could not only build upon past domestic experience with green policy-making and mainstreaming of environmental objectives into sector policies, but also upon the experience of the international development co-operation community. Indeed, support from the international development co-operation community has been increasingly important in Zambia since 2004.

This paper reviewed to what extent development co-operation activities are aligned with Zambian priorities and needs. The statistical analysis provided here finds that green ODA has targeted some of the economic engines of Zambia (e.g. agriculture, forestry) and has significantly contributed to "greening" other key domestic sectors, such as energy, water supply and sanitation, or transport. Furthermore, providers have supported a range of capacity building activities, including environmental policy and legislation formulation, data management, resource valuing, community engagement and benefit-sharing in the green space. These activities are strongly aligned with the country's Long-Term Vision and its various National Development Plans (see also Co-operating Partners to the JASZ I, 2007; Co-operating Partners to the JASZ II, 2011). There is evidence, too, that alignment was informed by the Joint Assistance Strategy for Zambia (JASZ). The JASZ I and II has helped co-ordinate 16 DAC providers active in Zambia, has avoided the duplication of green projects and programmes, and has improved the information flow with the government (Ministry of Foreign Affairs of Denmark, 2010).

Despite strong alignment with Zambian priorities, the paper shows there is scope for further alignment with Zambian priorities, and of co-ordination among providers and with the government (Mulenga, 2013). First, virtually no green bilateral ODA flowed to a number of key sectors for the Zambian economy, such as mining, industry or tourism. The mining sector, in particular, is crucial for it generates up to 30% of Zambia's GDP, creates substantial amounts of waste and pollution, and is vulnerable to water scarcity and climate change. Second, green ODA has not yet demonstrated a link to the overarching developmental goal of reducing poverty in Zambia. Poverty reduction is expected to require a private sector role (Kivuitu et al., 2005), yet little is known about the activities of development co-operation providers to help make this link. Third, development co-operation places relatively low emphasis on the mainstreaming of green issues into local-level institutions and planning processes (Terpstra et al. 2013; UN-HABITAT, 2014). This is especially true at the urban level, where no projects could be identified in 2010-12, despite heightened vulnerability at this level. Finally, the JASZ worked in an iterative manner to refine its approach and align its work with Zambian priorities but struggled with Zambian bureaucracy, staff rotation and delays in the process of working with line ministries. Strengthening the capacity of the Zambian government and its institutions to more closely work with the JASZ could help to make development co-operation more effective.

These findings can support and inform the national agenda for action in Zambia to advance its green growth agenda and Inclusive Green Growth Strategy (IGGS). They can also assist providers of development co-operation to better target their activities. Notwithstanding this, further analytical work could benefit the IGGS process. First, it would be important to understand how ODA dependence on green matters is perceived by the Zambian government (e.g. exploring if the government interested in building sufficient capacity and political support for green goals, the potential for self- or co-financing such activities over time using domestic resources, and the role that providers could take to support these developments). Second, and relatedly, Zambia could work with providers to develop, implement, and evaluate new types of goals that sustain the "greening" of policy and practice over time. By setting clear goals, by tracking outcomes or impacts, gaps and improvements regarding the mainstreaming of green issues, providers and the Zambian government could improve their ODA effectiveness and better understand what green ODA is achieving on the ground. Finally, there is potential to work with Zambian stakeholders to understand better the potential pathways to improve harmonisation and alignment of development co-operation with Zambian priorities. This could provide lessons, for example, on the potential use of country systems, beyond national planning, to channel support; and might begin by monitoring and evaluating relevant systems (e.g. mechanisms for internal co-ordination, budgetary and financial management, and procurement systems).

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ANNEX 1: THE OECD DAC CREDITOR REPORTING SYSTEM AND THE RIO MARKERS

Since 1998 the DAC has monitored development finance targeting the objectives of the Rio Conventions. Data are reported by members of the OECD DAC, collected through the "Creditor Reporting System" (CRS) and identified as using "Rio markers", where providers are requested to indicate for each development finance activity whether or not it targets environmental objectives. There are four Rio markers, covering: biodiversity, desertification, climate change mitigation, and climate change adaptation.

A scoring system of three values is used, in which official development finance activities reported to the DAC CRS are screened and "marked" as either (i) targeting the conventions as a "principal" objective or (ii) as a "significant" objective, or (iii) not targeting the objective. These markers indicate donors' policy objectives in relation to each development finance activity. Activities marked as having a "principal" objective would not have been funded but for that objective; activities marked "significant" have other prime objectives but have been formulated or adjusted to help meet the relevant environmental concerns.

The markers provide an indication of the degree of mainstreaming of environmental considerations into development co-operation portfolios. In marking the full value of development finance activities the markers are considered descriptive rather than strictly quantitative, but allow for an approximate quantification of development finance flows that target the Rio convention objectives. In marker data presentations the figures for flows targeting objectives as principal or significant can be shown separately and the sum referred to as the "total" or "upper bound" of environmental-related development finance.

Climate change mitigation is defined as activities that contribute to the objective of stabilisation of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration.

Climate change adaptation is defined as activities that aim to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience. This encompasses a range of activities from information and knowledge generation, to capacity development, planning and the implementation of climate change adaptation actions.

Biodiversity is defined as activities that promote at least one of the three objectives of the Convention on Biological Diversity: the conservation of biodiversity; sustainable use of its components (ecosystems, species or genetic resources); or fair and equitable sharing of the benefits of the utilisation of genetic resources.

Desertification is defined as activities that aim at combating desertification or mitigating the effects of drought in arid, semi-arid or dry sub-humid areas through prevention and/or reduction of land degradation, rehabilitation of partly degraded land, or reclamation of desertified land.

Environment is defined as activities that are intended to produce an improvement, or something that is diagnosed as an improvement, in the physical and/or biological environment of the recipient country, area

or target group concerned, or activities that include specific action to integrate environmental concerns with a range of development objectives through institution building and/or capacity development.

The Rio markers are applicable to Official Development Assistance (ODA) where reporting is mandatory, for the mitigation marker from 2007 flows, and for the adaptation marker since 2010. Reporting is voluntary on Other Official Flows (OOF) (i.e. non-concessional developmental flows, excluding export credits) starting from 2010.

A key feature of the marker methodology is that one activity can address several policy objectives at the same time. This reflects the fact that the three Rio conventions (targeting global environmental objectives) and local environmental objectives are mutually reinforcing, but this overlap poses a problem when aggregating data across several markers.

The same activity can be marked for e.g. biodiversity and climate change mitigation, or for mitigation and adaptation. To avoid double or triple-counting the same activity, aggregate figures for biodiversity-, climate change mitigation-, climate change adaptation- and desertification-related aid should not be added up. Statistical presentations should either be prepared for one marker at a time, and resulting totals for each marker should not be added up – or the overlap should be "treated". "Treating" the overlap involves identifying and deducting the "overlap", and requires activity-level data.

For more information, see the user guide, available at http://oe.cd/Riomarkers.

ANNEX 2: OTHER ENVIRONMENTAL INSTRUMENTS IN ZAMBIA

National Biodiversity Strategy and Action Plan (2006)	
Aims	**Outcomes**
• Controlling deforestation, wildlife and fisheries depletion • Reducing domestic and industrial water pollution	• Sector-wide biodiversity policies integrated into forestry, agriculture, fisheries and energy
National Adaptation Plan of Action (2007)	
Aims	Outcomes
• Mainstreaming climate change adaptation into agriculture, food security, natural resources (forests and wildlife), water, energy, health • Prioritisation of 10 adaptation projects on droughts, early warning systems, alternatives to agriculture and natural resources, management of critical habitats, promoting natural regeneration of indigenous forests, sustainable land use and fisheries, water infrastructure, capacity-building for environmental health in rural areas, sanitation in urban areas	• Assessed climate change and variability • Establishment of 8 pilot site projects to test water harvesting and irrigation systems and crop diversification against financial sustainability in addition to their ability to reduce climate change vulnerability • Created national adaptation programme • Included urban adaptation measures • Improve capacity to supply and use climate risk information • Strong focus on the private sector
Environmental and Natural Resources Management and Mainstreaming Programme (2008-2012)	
Aims	Outcomes
• Improve co-ordination and implementation capacity of green management and response strategies • Review policies to co-ordinate actions between ministries as well as down to local levels • Harmonise development programmes with environmental protection and sustainability	• Development of the institutional capacity of the Ministry of Environment • Enforcing existing regulation and proposal for reform of regulation • Disseminating green information: focal points in key green sector ministries, preparing policy papers, cross-sector forums, green mainstreaming strategy and action plan, compiling regulation, raising public awareness • Establishment and implementation of Interim Environment Fund with domestic and international funds to finance green investments in key sectors
Disaster Management Act (2010)	

Aims	Outcomes
• Link with Zambia's climate change response • Lays out Disaster Management Plans to mainstream climate change in most vulnerable sectors by 2015 and all by 2030	• Led to the establishment of a Disaster Management and Mitigation Unit • Mainstreaming of disaster and risk reduction plans across key sectors
National Climate Change Response Strategy (2010)	
Aims	**Outcomes**
• Strengthening synergies and trade-offs between environmental, social and economic objectives to achieve a "prosperous climate change resilient economy" • Build resilience by mainstreaming climate change into key sectors by 2015 and nine priority sectoral adaptation and mitigation actions in land use, water, health, social infrastructure, physical infrastructure, transport, energy, mining, and governance. • Ensure sectors of the economy that are most vulnerable are "climate proofed" and follow a low carbon development pathway. • Five core pillars: finance and investment framework to identify sources and mobilisation of financial resources (national budget, international climate funds, private sector, foreign direct investment and carbon markets).	• Establishment of a Climate Change Facilitation Unit, to undertake studies on climate change, including on national adaptation policy, Information Needs Assessment and Identification of Gaps in Climate Change, and the Economics of Climate Change in Zambia. • Led to the Interim Climate Change Secretariat with high-level climate change focal points appointed in every ministry.
Zambian National Report for the United Nations Conference on Sustainable Development (2012)	
Aims	
• Meeting short-term (poverty, inequality, unemployment) and long-term needs (infrastructure, global market access, greening cities) • Establishing an institution to co-ordinate efforts and ensure coherent policy making on green growth • Developing context-specific indicators to measure green growth • Developing an effective monitoring system based on green growth indicators • Ensuring the sustainable management of green resources, in particular through community participation • Financing green growth with domestic and international funds, including the Green Climate Fund, inter alia to leverage private sector investment and promote green technology transfer • Providing additional resources and institutional support to the National Climate Change	

Response Strategy • Key sectors: agriculture, energy, environmental goods and services, forestry, fisheries, mineral resources, service sector and water	
Technology Needs Assessment report (2014)	
Aims	**Outcomes**
• Identified technology needs for different sectors to achieve climate resilience	• Under implementation.

Source: Government of Zambia, 2008, 2011a, 2012; Aongola et al., 2009; Banda, 2013

www.oecd.org/greengrowth