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A new climate trilateralism? Opportunities for cooperation between the EU, China and African countries on addressing climate change

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A New Climate Trilateralism?

Opportunities for Cooperation Between the EU, China and African Countries on Addressing Climate Change

*Moritz Weigel
Alexander Demissie*

Joint project with:



CHINA AFRICA
ADVISORY
connecting the dots

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and African countries on addressing climate change

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Abstract

The Paris Agreement under the United Nations Framework Convention on Climate Change is the first universal, legally binding instrument requiring both developed and developing countries to tackle climate change as a joint responsibility. While developed countries reconfirmed their obligation to provide support to developing countries under the Paris Agreement, there is also a growing recognition of the importance and potential of new partnerships among, and with, developing countries through South-South and trilateral cooperation.

The European Union (EU), having shown considerable leadership in forging the Paris Agreement, also expressed its intent to work trilaterally with China and African countries to support the treaty's implementation. The new EU strategy on China proposes to turn "what is often perceived as EU-China competition in Africa into "greater cooperation" and to pursue "joint approaches" to "speed up the implementation of the Paris Agreement wherever possible, including the implementation of Nationally Determined Contributions". Cooperation on addressing climate change has been part of China's Africa policy since 2006, and China has been increasingly supporting African countries through South-South cooperation as well as trilateral cooperation with involvement of United Nations entities. In 2015, China committed to significantly scaling-up its efforts in the area by pledging 20 billion Chinese yuan (USD 3.1 billion) to its recently established South-South Cooperation Climate Fund, which will focus on supporting African countries.

Trilateral cooperation between the EU, China and African countries should be guided by Africa's priorities. Fifty-three African countries have communicated their national plans on addressing climate change under the Paris Agreement through the submission of so-called (Intended) Nationally Determined Contributions ((I)NDCs). Based on an analysis of INDCs and a review of existing partnerships and recent pan-African developments, this briefing paper proposes for EU-China-Africa trilateral cooperation to initially focus on renewable energy. The African Union's newly launched Africa Renewable Energy Initiative (AREI) provides a possible entry point at the regional and national levels. The EU and China should build on their existing pledges of support for AREI and jointly explore with African partners the development of pilot projects towards AREI's goal of installing at least 10 GW of new and additional renewable energy generation capacity by 2020 and establishing the Africa Renewable Energy Institute. The single largest pledge in support of AREI by an EU member state has been made by Germany, which is well positioned to spearhead the proposed trilateral cooperation building on its technical expertise and its G20 Presidency objective to support Africa's development, including in the area of renewable energy.

Keywords: G20, Africa, European Union, China, Germany, rising powers, developing countries, development cooperation, South-South cooperation, triangular cooperation, trilateral cooperation, climate change, renewable energy, Africa Renewable Energy Initiative

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The views and opinions expressed in this paper are our own.

Cologne, Germany

February 2017

Moritz Weigel
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Abbreviations

2030 Agenda	United Nations 2030 Agenda for Sustainable Development
AREI	Africa Renewable Energy Initiative
AU	African Union
AUC	African Union Commission
CCICED	China Council for International Cooperation on Environment and Development
CNY	Chinese Yuan
CRES	China Renewable Energy Society
DFID	Department for International Development (United Kingdom)
EC	European Commission
EC2	Europe-China Clean Energy Centre
EU	European Union
FAO	Food and Agricultural Organization (United Nations)
FOCAC	Forum on China-Africa Cooperation
GHG	greenhouse gas
INDC	Intended Nationally Determined Contribution
LULUCF	land use, land use change and forestry
NCSC	National Center for Climate Change Strategy and International Cooperation
NDC	Nationally Determined Contribution
NDRC	National Development and Reform Commission (People's Republic of China)
RECP	Africa-EU Renewable Energy Cooperation Programme
RET	renewable energy technology
SSCCC	South-South cooperation on climate change
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar

1 Introduction

The entry into force of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) on 4 November 2016 is a milestone towards safeguarding an opportunity for our species to live in peace and dignity on this planet. It is a significant achievement, as it represents the first universal, legally binding instrument requiring developed and developing countries to contribute to tackling climate change and showing the willingness of all countries to take responsibility for moving onto sustainable development pathways. The Paris Agreement adoption was preceded by national processes that captured a contribution each country was willing to make under the agreement in so-called (Intended) Nationally Determined Contributions ((I)NDCs).¹ While developed countries reconfirmed their obligation to provide support to developing countries under the Paris Agreement, there is also a recognition of the importance and complementarity of new partnerships among, and with, developing countries through South-South and trilateral cooperation (Paris Agreement, Articles 28 and 30). Consistent with this, the European Union (EU) expresses in its new strategy on China its intent to work trilaterally with China and African countries on addressing climate change. This discussion paper aims to give an overview of possible opportunities for realising such a “climate trilateralism”.

This paper has been developed based on a comprehensive review and analysis of literature on trilateral cooperation and policy documents, reports and speeches published by European Union institutions, Chinese government entities, the African Union (AU) and 53 African governments. Findings from the literature review were complemented by insights from interviews conducted with experts from China, Ethiopia, Finland, Germany, Ghana, Mali and the United Kingdom between October and November 2016.

The paper is organised into seven sections. Following this introduction, Section 2 explains the concept of “trilateral cooperation” and defines it for the purposes of this paper. Section 3 lays the ground for discussions triggered by the EU’s recent expression of interest in trilateral cooperation with China and African countries on addressing climate change in Africa. Section 4 then provides an overview of previous and ongoing South-South cooperation on climate change (SSCCC) between China and African countries as well as trilateral cooperation with United Nations (UN) entities.² This overview aims to inform the identification of opportunities for an EU-China-Africa climate trilateralism. Section 5 presents an analysis of African countries’ current priorities for climate action based on a review of the 53 submitted INDCs. Some of these priorities could serve as a starting point for trilateral cooperation. Following this analysis, Section 6 offers potential priority areas for trilateral cooperation based on the experiences of previous and existing collaboration

1 Countries agreed that INDCs will be considered as Nationally Determined Contributions (NDCs) once a country has ratified the Paris Agreement, unless the Party decides otherwise (UNFCCC, 2015, pp. 4-5). As 23 of the 53 African countries that have submitted an INDC are still in the process of ratifying the agreement, this paper uses the term (I)NDCs for referring to national contributions that include both INDCs and NDCs.

2 Given the limited public availability of information on China’s SSSCC, the overview in this section is presented for illustrative purposes only and should not be taken as comprehensive. There are information gaps regarding China’s SSSCC, even at the national level, for which China has been issuing annual reports since 2008.

between the EU, China and African countries and current pan-African developments. Section 7 presents main findings and recommendations for realising trilateral cooperation.

2 Trilateral cooperation

For the purpose of this discussion paper, “trilateral cooperation” is defined as development cooperation between a Northern provider, including Organisation for Economic Co-operation and Development/Development Assistance Committee members³ and United Nations entities, a Southern provider, and a developing country, in which a project is implemented.⁴

Trilateral cooperation is an innovative and relatively new mode of development cooperation⁵ that takes global power shifts into account and addresses the needs of a multipolar world (Langendorf, Piefer, Knodt, Müller, & Rüter, 2012, p. 15). This form of cooperation complements and brings together the traditional North-South and South-South cooperation models. Although trilateral cooperation bears a risk of rising transaction costs due to the greater number of actors with different development cooperation backgrounds involved, practical cases show that higher transaction costs than for bilateral projects can be avoided if cooperation is “strictly oriented towards the benefits of the recipient country, built upon the complementary and jointly accorded contributions of the three partners, and coordinated with other contributions of development cooperation aimed at achieving the national goals in the recipient country” (Langendorf et al., 2012, p. 16).

Trilateral cooperation has been gaining momentum in recent years with the growing importance of emerging economies acting as South-South cooperation providers as well as the booming interest from Northern and Southern providers to work together in developing countries. Potential motivations for Northern and Southern providers and beneficiary countries to enter into trilateral cooperation are shown in Table 1.

This discussion paper focusses on the EU as a “Northern provider”, China as a “Southern provider” and beneficiary countries in Africa. The EU’s new focus on trilateral cooperation on climate change with China and African countries may be motivated by the EU’s objective to build broad alliances for the effective implementation of the Paris Agreement. China may be motivated to engage in such trilateral cooperation as a way to broaden and scale-up SSCCC through additional resources from the EU. China has been working towards increasing support for SSCCC by sponsoring the United Nations Secretary-General Southern Climate Partnership Incubator (UN [United Nations], s.a.), an initiative launched in 2016 to facilitate new “cross-country partnerships” on the implementation of the Paris Agreement and the achievement of the Sustainable Development Goals. With their (I)NDCs, African countries have put on the table

3 Australia, Austria, Belgium, Canada, Czech Republic, Denmark, European Union, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

4 This definition of trilateral cooperation is in line with that of the Japan International Cooperation Agency (Japan International Cooperation Agency, 2009, p. 1).

5 Some Northern providers have been engaged in trilateral cooperation for decades, most notably Japan.

ambitious adaptation and mitigation targets as well as requirements for external support for achieving these targets. African countries may be motivated to enter into trilateral cooperation as a means to increase support for operationalising and implementing their (I)NDCs. The following section discusses the EU’s new focus on cooperating with China and African countries on addressing climate change in Africa.

Table 1: Motivations for trilateral cooperation

Northern providers	Southern providers	Beneficiary countries
Continuing cooperation with Southern providers that have graduated from “beneficiary country status” through structures and networks built over decades of development cooperation	Broadening and scaling-up of South-South cooperation through additional resources	Increasing external support for meeting development challenges
Nurturing trust at the working level with Southern providers, who will gain more importance and power over the next decades	Higher visibility on the international stage as a responsible member of the international community	Benefiting from the synergy between suitable technical solutions and know-how from the Southern provider and technical and management expertise from the Northern provider
Expanding collaboration with Southern providers as strategic partners to address global challenges, such as climate change	Justifying South-South cooperation to own constituents	Accessing solutions from two different development cooperation approaches and cultural backgrounds
Strengthening development cooperation agencies of Southern providers to enhance response to global challenges, such as climate change		Strengthening own position and asserting more ownership in comparison to bilateral cooperation, where chance of being overruled is more likely
Learning from Southern providers’ practices and experiences regarding development cooperation	Learning from Northern providers’ practices and experiences regarding development cooperation	Advancing harmonisation of support within the country by facilitating cooperation of Northern and Southern providers
Integrating Southern providers into the OECD/DAC agenda		
Maintaining traditional influence in different world regions		
Gaining access to new markets created through South-South cooperation	Gaining access to new markets created through South-South cooperation	
Building on the good image of the Southern provider in the beneficiary country, countering perceptions of a former colonial power	Building on the good image of the Northern provider in the beneficiary country, countering perceptions of a dominating or hegemonic power	
Source: Own interpretation by the authors based on Langendorf et al. (2012, pp. 33-56)		

3 The European Union's new focus on trilateral cooperation with China and Africa

The EU is reacting to the growing attention to South-South and trilateral cooperation on climate change with its recent proposal to cooperate with China “in a very fruitful and important way” in Africa, including on “fighting climate change and its consequences” (EU [European Union], 2016, p. 3). The High Representative of the Union for Foreign Affairs and Security Policy, Federica Mogherini, who is commonly known as the EU's Foreign Minister, made this statement during her speech at the Chinese Academy of Social Sciences⁶ in July 2016. According to Mogherini, the EU is “seeing clearly that China is becoming a leading investor in Africa and that [China has] an interest – just as much as [the EU does] – in making the continent more resilient [...] and prosperous” (EU, 2016, p. 4). This statement builds on the provision of the “EU-China Joint Statement on Climate Change” of 2015 to “explore opportunities to work together on low carbon and climate resilient investments and capacity building bilaterally and internationally” (European Council, 2015, p. 2).

The EU's new focus on working with China and African countries to address climate change is also captured in the “Elements for a New EU Strategy on China” (EC, 2016a), proposed by the High Representative and the European Commission (EC) to the European Parliament and the Council of the EU (Council) in June 2016.⁷ The EU intends to turn “what is often perceived in Africa as EU-China competition” into “greater cooperation” including on “global commons” (EC [European Commission], 2016a, p. 11). Recognising that “China plays an increasingly important role in international development cooperation and has increasing impact on development processes in third countries”, and that the “prominence given by China to the 2030 Agenda (UN, 2015) during its Presidency of the G20 provides an opportunity to step up engagement to work together with developing countries”, the EU aims to “advance bilateral and multilateral cooperation on development to support the implementation of the 2030 Agenda with the aim of establishing a donor-to-donor partnership with China [...] and promote practical engagement [...] on the ground, for example in Africa” (EC, 2016a, p. 15). Furthermore, the EU proposes to pursue “joint approaches” to “speed up the implementation of the Paris agreement wherever possible, including the implementation of Nationally Determined Contributions” (EC, 2016a, p. 16).

Although trilateral cooperation is new in the area of climate change, the EU's move towards seeking trilateral cooperation with China and Africa is not a novelty. The EU has been paying attention to China's growing influence in Africa and has adopted a “pro-active foreign policy response” to expanding China-Africa relations. In 2008, the EU proposed to establish a trilateral EU-China-Africa dialogue, focussing on four policy areas, namely peace and security, infrastructure, sustainable management of the environment and natural resources, as well as agriculture and food security (Stahl, 2015, pp. 6, 21-22). However, this first attempt by the EU to establish trilateral cooperation with China and Africa failed, as it was perceived to be too much driven by the EU and to “impose European standards rather than adapting to African policy priorities” (Stahl, 2015, p. 23).

6 The Chinese Academy of Social Sciences is among China's leading think tanks and affiliated with the State Council, the supreme organ of China's central government.

7 The Council adopted the EU's new strategy on China in July 2016 (Council of the European Union, 2016a).

Alden and Sidiropoulos found that the Chinese and African sides were not interested in developing trilateral cooperation with the EU, as the EU approach was seen as self-serving and not as a form of genuine support to African countries' development (Alden & Sidiropoulos, 2009, p. 2). Furthermore, diverging views on trilateral cooperation within the EU bureaucracy may have also contributed to the failure. Although the EU Commission was the driving force behind the initiative, the EU Parliament had reservations about working with China in Africa (Stahl, 2012, p. 17). Other studies on trilateral cooperation between the EU, China and Africa have highlighted challenges to finding common ground for cooperation with African countries, including competing economic interests and a lack of African voices in the debate (Berger & Wissenbach, 2007, pp. 2, 15, 17). Sven Grimm further underlined differences in development policy concepts, instruments and modalities as major challenges (Grimm, 2011, p. 2). However, areas of consensus between the EU and China, where cooperation is possible, do exist, for example in multilateral development agendas and in environment-related areas (Grimm, 2014, p. 4).

4 South-South cooperation on climate change between China and African countries

This section provides an overview of China's South-South and trilateral cooperation on climate change with African countries to inform the discussion on potential opportunities for an EU-China-Africa climate trilateralism.

Although China has been providing aid to African countries since the 1950s (IOSC [Information Office of the State Council], 2011a), the first reference to China's South-South cooperation on climate change in an official policy document can only be found in "China's African Policy", published in 2006 (IOSC, 2006).

China has a clear vision for its SSSCC, aiming to

become a demonstration model which other developing countries can follow in pursuing sustainable development. Learning from China's experience, other developing countries can avoid reliance on the traditional high-emission development pathway and the lock-in effect, enabling them to take on a new development pathway that is efficient and innovative with low pollution and emissions. (National Center for Climate Change Strategy and International Cooperation, 2015, p. 11)

Furthermore, China's vast experience in adapting to the adverse effects of climate change has a great role to play for SSSCC in this area (Simpson et al., 2012, p. 6). Acknowledging that "climate change is a common challenge confronted by humankind", China advocates for the strengthening of international cooperation "to tackle it together" and has been actively expanding its SSSCC, in particular with African countries, through the provision of technical support, technology transfer and capacity-building over the past years (NDRC [National Development and Reform Commission], 2014). From 2005 to 2010 China reported total spending of 1.17 billion Chinese yuan (CNY) (about USD 180 million) on SSSCC (NDRC, 2012). With the pledge of CNY 20 billion (about USD 3.1 billion) from China's president, Xi Jinping, for the establishment of China's South-South Cooperation

Climate Fund⁸ in September 2015, China is about to embark on a new era of its SSSCC (“China pledges 3 billion”, 2015).

Although the focus of this paper is on China’s SSSCC with African countries, it should be noted that China’s economic engagement with the African continent is also rapidly expanding, including through trade, foreign direct investment and commercial loans (see Eom, Hwang, Xia, & Brautigam, 2016; Hwang, Brautigam, & Eom, 2016).

4.1 China’s policies and commitments on South-South cooperation on climate change with African countries

Over the last decade, China has been publishing a growing number of official documents on its foreign policy and aid, including on its cooperation with African countries in addressing climate change. In the following sub-section, key policy documents and commitments are reviewed.

4.1.1 China’s African Policy and the Forum on China-Africa Cooperation

“China’s African Policy”, published in 2006, states that “China will actively promote China-Africa cooperation in climate change [...] by facilitating technological exchanges” and “further speed up scientific and technological cooperation in the fields of common interest, such as bio-agriculture and solar energy utilization” (IOSC, 2006). At the fourth Ministerial Meeting of the Forum on China-Africa Cooperation (FOCAC), held in Sharm El Sheikh, Egypt, in 2009,⁹ China and African countries agreed to include cooperation on addressing climate change as one of the new areas for cooperation under the forum. In the “FOCAC Sharm El Sheikh Action Plan (2010-2012)”, China confirmed that it “stands ready to strengthen cooperation with Africa in tackling climate change”, recognising “the urgent need of African countries to enhance their capacity to adapt to climate change” (FOCAC, 2009). In the following FOCAC action plan (2013-2015), “the two sides expressed satisfaction with the progress in cooperation in protecting the environment and addressing climate change in recent years and underscored the willingness to continue exchanges and cooperation in these areas”. China pledged to “continue to adopt measures to help African countries build capacity for climate change adaptation and mitigation and sustainable development” (FOCAC, 2012). Cooperation on addressing climate change also features prominently in the latest FOCAC outcome documents, adopted in December 2015. In the “FOCAC Johannesburg Declaration” (FOCAC, 2015a), China and African countries “acknowledge that climate change is exacerbating existing challenges in Africa and is placing additional burdens on national budgets and efforts of African States to achieve sustainable development”. The African side recognises China’s efforts to capitalise China’s South-South Cooperation Climate Fund to support African countries to

8 For further information on China’s South-South Cooperation Climate Fund, see Weigel (2016, pp. 23-24).

9 Following proposals from Benin, Ethiopia, Madagascar and Mauritius, FOCAC was established in 2000 by China in collaboration with African countries and has since been the main platform for collective consultation and dialogue on political, economic and socio-cultural cooperation (Li, 2012, p. 10). FOCAC ministerial meetings take place every three years. The ministerial meetings were elevated to summits with the participation of heads of state and government in the years 2006 and 2015. Further information on FOCAC is available at <http://www.focac.org>

combat climate change. Furthermore, the “FOCAC Johannesburg Action Plan (2016-2018)” stipulates that

the two sides will strengthen the policy dialogue on climate change, deepen China-Africa cooperation in tackling climate change, in particular climate change monitoring, risk and vulnerabilities reduction, strengthening resilience, promoting adaptation, support for mitigation in terms of capacity building, technology transfer as well as financing for monitoring and implementation and improve the China-Africa consultation and collaboration mechanism on climate change. (FOCAC, 2015b)

“China’s second Africa policy paper”, published shortly before the FOCAC Johannesburg Summit, stipulates that enhancing cooperation on climate change is one of the six areas for which China’s assistance will be “primarily used”. It also states that

China will boost and consolidate cooperation with Africa under the UNFCCC and other relevant mechanisms, and push for both sides to carry out consultations, exchanges and cooperation projects in relation to addressing climate change. China will innovate on cooperation areas, deepen pragmatic cooperation, and work in concert with Africa to enhance the capacity for tackling climate change. (“China’s second Africa policy paper”, 2015)

4.1.2 China’s white papers on foreign aid

In 2011, China published its first white paper on foreign aid. The paper states that 51 African countries had received foreign aid from China by 2009, and that 45.7 per cent of China’s foreign aid in 2009 was provided to African countries. The white paper highlights that “coping with climate change has become a new area in China’s foreign aid” in recent years (IOSC, 2011a). However, in the section on “Clean Energy and Coping with Climate Change”, the paper states that China has helped African countries introduce renewable energy technologies – for example through biogas projects – in the 1980s and has since undertaken small-scale hydro, solar and wind power projects and training programmes on climate change, forest management and desertification in many countries (IOSC, 2011a). China’s second white paper on foreign aid (IOSC, 2014), published in 2014, includes a number of specific examples of China’s SSSCC with African countries (see Section 4.2.1).

4.1.3 China’s national development plan, national climate change plan and annual reports on climate change policies and actions

“China’s Policies and Actions for Addressing Climate Change”, published in 2008, was China’s first white paper on the topic and states that it has “all along” helped African countries and Small Island Developing States “improve their ability to cope with climate change”, and that “China’s African Policy makes it clear that China will actively promote China-Africa cooperation on climate change” (IOSC, 2008). China’s commitment to SSSCC is also visible in its Twelfth Five-Year Plan (2011-2015), which aims to

vigorously launch international cooperation in response to global climate change [and] strengthen international exchange and strategic policy dialogue on climate change, [...] develop pragmatic cooperation in areas like scientific research, technology research and development and capacity building, [...] and provide help and support to developing countries in confronting the challenges of climate change. (IOSC, 2011b)

The international cooperation section of “China’s National Climate Change Plan (2014-2020)” also includes provisions to actively strengthen and encourage local governments, domestic companies and non-governmental organisations to promote partnerships on low-carbon and adaptation technologies and products with counterparts in developing countries, achieving mutual benefits in line with China’s “going out” policy (NDRC, 2014).

China announced the establishment of its own dedicated fund for SSCCC during the United Nations Climate Change Conference in Lima, Peru, in December 2014 (“China to advance climate goals”, 2014). In its INDC, submitted in June 2015, China included reference to its SSCCC fund, which will help implement China’s commitments on SSCCC under the Paris Agreement. In particular, China will provide “assistance and support, within its means, to other developing countries including the small island developing countries, the least developed countries and African countries to address climate change” (NDRC, 2015b, p. 16).

4.1.4 China’s Belt and Road Initiative

The overall objective of the Belt and Road Initiative¹⁰ is to interconnect countries in Asia, Europe and Africa through the development of infrastructure as well as economic and political cooperation. The “Silk Road Economic Belt” aims to connect China, Central Asia and Europe by land, whereas the “21st Century Maritime Silk Road” aims to connect China, South-East Asia, Africa and Europe by sea. First proposed by President Xi Jinping in 2013 (Ministry of Foreign Affairs of the People’s Republic of China, 2013; Wu & Zhang, 2013), the Belt and Road Initiative will continue to receive the highest level of political support from the Chinese government, at least until the end of Xi’s regular term in 2022.¹¹

In 2015, the National Development and Reform Commission (NDRC), China’s supreme macroeconomic planning and management body, together with the ministries of Foreign Affairs and Commerce issued a comprehensive document titled “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road” (vision document) outlining the initiative (NDRC, 2015a). Importantly, the vision document also included provisions on “tackling climate change” and on low-emission and climate-resilient infrastructure construction and operation. So far, the initiative has mainly unfolded in Asia and Europe through the signing of dozens of bilateral agreements and the implementation of the first large-scale infrastructure projects.¹² However, the vision document does not explicitly refer to the extent and specifics of Africa’s involvement in the initiative. This may be an indication that the inclusion of Africa was initially not

10 When first announced, the Chinese *yi dai yi lu* (一帶一路) was translated into English in its literal form “One Belt, One Road”, and therefore accordingly abbreviated to “OBOR”. Another common translation is “New Silk Road”. However, the terms caused confusion, as the “Belt” refers to multiple land routes and the “Road” to multiple sea routes. In September 2015, the Chinese government issued a statement on standardising the English translation to “Belt and Road Initiative” (Xie, 2015). However, the aforementioned terms OBOR and New Silk Road continue to be used in English language sources.

11 Some China watchers expect President Xi to remain in power until at least 2027 (Lam, 2015).

12 The Initiative comes with massive investments, which are likely to be mainly channelled through new financial institutions initiated or led by China, such as the Asian Infrastructure Investment Bank, with an initial capitalisation of USD 100 billion, and the dedicated Silk Road Fund with an initial capitalisation of USD 40 billion.

foreseen, and that details remain to be defined. Nevertheless, with the signing of the first bilateral agreements on the initiative with South Africa in 2015 (“China and Africa united”, 2016) and Egypt in 2016 (“China, Egypt agree to boost cooperation”, 2016), Africa’s involvement is slowly starting to become more concrete. It is striking that FOCAC is not among the regional “existing mechanisms” that the initiative intends to make “full use” of. At the same time, it is important to note that the China-Arab States Cooperation Forum, which is referred to in the vision document, includes 10 African countries, namely Algeria, Comoros, Djibouti, Egypt, Libya, Mauritania, Morocco, Somalia, Sudan and Tunisia. Furthermore, the “FOCAC Johannesburg Declaration” states that China and African countries will

actively explore the linkages between China's initiatives of building the Silk Road Economic Belt and 21st Century Maritime Silk Road and Africa’s economic integration and sustainable development agenda, and seek more opportunities to promote common development and realize our common dreams. (FOCAC, 2015b)

4.2 Overview of China’s South-South cooperation on climate change projects with African countries

Since 2011, China’s SSSCC has been under the auspices of the NDRC,¹³ which also plays a key role in China’s national and international climate policy-making.¹⁴ However, a number of other ministries remain engaged in related work, including, inter alia, the Ministry of Commerce, the Ministry of Science and Technology, and the Ministry of Agriculture. This overview is based on reports on China’s SSSCC issued by the Chinese government.¹⁵

4.2.1 Bilateral projects

At the FOCAC Ministerial Conference in 2009, China pledged to assist African countries with 100 renewable energy projects on bio- and solar energy as well as small hydropower plants over the next three years (FOCAC, 2009). In 2013, China reported as having successfully carried out more than 100 renewable energy projects with African partner countries, highlighting biogas projects with Guinea, Sudan and Tunisia; hydropower projects with Burundi, Cameroon and Guinea; and solar and wind power projects with Ethiopia, Morocco and South Africa (IOSC, 2013). However, no comprehensive data was released on the location, size or other characteristics of these projects. In addition, China reported on the installation of solar-powered appliances in Morocco (NDRC, 2012) and

13 While theoretically NDRC needs to be involved in any work on international cooperation on climate change-related matters, in practice this is not always happening due to the broad scope of climate change-related work and the absence of a clear definition of what constitutes SSSCC (Weigel, 2016, pp. 12-13).

14 The National Leading Group for Addressing Climate Change and the National Leading Group on Energy Saving and Pollution Reduction are China’s supreme climate change policy-making bodies, relying on recommendations developed by the NDRC’s Department for Climate Change. The NDRC’s climate change policy work is supported by its National Center for Climate Change Strategy and International Cooperation and by research institutes at the Chinese Academy of Social Sciences, Renmin University and Tsinghua University. In addition to its Department for Climate Change, the NDRC’s Department for International Cooperation is involved in China’s CCSSC.

15 As there are no official reports on SSSCC taking place at the sub-national levels or by non-state actors, these aspects are not being considered here.

technical cooperation with Burundi, Ethiopia and Sudan on improving their utilisation and management of hydropower, solar energy and other renewable energy installations (IOSC, 2014). Furthermore, China reported that it had conducted 64 projects in 58 developing countries on the utilisation of solar-powered streetlamps and solar power generators between 2010 and 2012 (IOSC, 2014). In 2013, China provided more than 4,000 solar-powered road lamps and 6,000 solar generation systems to partner countries (NDRC, 2013).

China's latest white paper on foreign aid states that from 2010 to 2012, China signed bilateral agreements on "Complimentary Supplies for Addressing Climate Change" with Benin, Burundi, Cameroon, Ethiopia, Madagascar and Nigeria. Within this period, China donated more than 500,000 energy-efficient lamps and 10,000 energy-efficient air conditioners to these countries. Furthermore, China conducted 150 training sessions on environmental protection and addressing climate change for more than 4,000 representatives from more than 120 developing countries, including on low-carbon industry development and energy policies; renewable energy; water resources management and conservation; forestry; desertification prevention and control; and early warning of meteorological disasters. The white paper also includes a section dedicated to SSCCC with Africa, in which it says that China has "actively helped African countries improve their ability to cope with climate change, and strengthened cooperation with them in meteorological satellite monitoring, new energy development and utilization, desertification prevention and control, and urban environmental protection" (IOSC, 2014). The NDRC's latest annual report on "China's Policies and Actions on Climate Change", published in November 2015, states that, since 2014, China has

carried out pragmatic cooperation with nearly 100 developing countries in Asia, Africa and Latin America in the field of emergency relief, satellite weather monitoring and clean energy development, and undertook more than 100 technical cooperation and emergency relief projects to tackle climate change. (NDRC, 2015c, p. 56)

China also signed bilateral agreements on SSCCC with Ghana (NDRC, 2015c, p. 55), Egypt and Ethiopia (Zhang, 2016).

4.2.2 Trilateral projects with United Nations organisations

China has been undertaking a number of trilateral projects with African countries and United Nations entities on addressing climate change. References to the following trilateral cooperation projects presented below are included in the NDRC's annual reports on SSCCC.

China has been working with the Food and Agriculture Organization of the United Nations (FAO) on South-South cooperation since 1996. In 2008, the government of China donated USD 30 million to the FAO to establish a trust fund and launch the FAO-China South-South Cooperation Programme with a focus on African and Asian countries (FAO, 2015a, p. 1).¹⁶ The programme supports the adoption of climate-smart agricultural practices in partner countries. For example, in Uganda, the programme supports the agribusiness sector to adapt to the adverse effects of climate change, such as irregular heavy rainfalls,

¹⁶ In 2014 a new pledge of USD 50 million was made to the trust fund by the Chinese government (FAO, 2015a, p. 2).

heatwaves and droughts. Chinese experts and technicians have successfully worked with local partners on the transfer of 25 technologies and 17 new crop varieties, which have increased resilience against the changing rain and weather patterns (FAO, 2015b).

China has also been working with the United Nations Development Programme (UNDP) on a number of SSCCC projects. These include the sharing of expertise and technologies for renewable energy generation in Burundi, Ghana and Zambia and supporting drought management and desertification control in Ethiopia and Kenya (UNDP, 2015). The China-Ghana-UNDP and China-Zambia-UNDP projects on renewable energy technology (RET) transfer aim to support access to electricity for rural communities through the broad proliferation of RETs in both countries. The projects are pioneering a new trilateral cooperation model by taking a holistic approach to RET transfer through creating and strengthening enabling environments for RET deployment and up-scaling and removing market barriers for the introduction of RETs. The government of Denmark is providing full funding for both projects as part of its support for South-South cooperation to enable better and more coherent cooperation between China and countries in Africa, in particular with a view to promoting the United Nations' Sustainable Energy for All initiative (SE4ALL).¹⁷ The projects will establish or strengthen regulatory frameworks for promoting RETs in Ghana and Zambia by building on China's experiences. Enabling environments for the absorption and production of RETs will be fostered through the creation of communities of practice that include the private sector and research institutes, as well as through the development of RET financing models and support channels. In this context, the projects will establish testing and training facilities for building local technical capacities and develop pilot projects for showcasing productive-use cases of RETs. Pilot projects will focus on solar (photovoltaic, thermal, water pumping, cook stoves), wind, mini-hydro and biogas technologies. China will strengthen its project-management capacity and refine its approach to South-South cooperation on RET transfer by learning from Ghana's and Zambia's experiences with past RET projects. The projects involve a wide range of stakeholders – from the private sector to research institutions in China, Ghana and Zambia – to create communities of practice in the sphere of renewable energy that will facilitate continued cooperation beyond the projects (Interview Ghana, 2016; UNDP, 2014a, 2014b).

Since 2008, China has been working with the United Nations Environment Programme (UNEP) through the UNEP-China-Africa Cooperation Programme on the Environment to enhance the capacity of African countries to address climate change through technology transfer and capacity-building. Ten projects were implemented from 2008 to 2014 on water management, drought early warning systems, reusing wastewater for forest plantation, promoting rainwater harvesting, technologies for safe water supply, water quality and ecosystem monitoring, and the demonstration of wastewater treatment technologies and water-saving techniques. The projects were funded by China and implemented by Chinese research institutions in collaboration with African counterparts, with technical support and coordination by UNEP (2015). Furthermore, in 2011, the Chinese Academy of Sciences and UNEP launched the UNEP-International Ecosystem Management Partnership as a global platform for SSCCC in the context of ecosystem management.¹⁸

17 Sustainable Energy for All is a global initiative led by the United Nations Secretary-General, Ban Ki-moon, to achieve universal energy access, improve energy efficiency and increase the use of renewable energy. For further information, see <http://www.se4all.org>

18 For further information, see <http://unep-iemp.org>

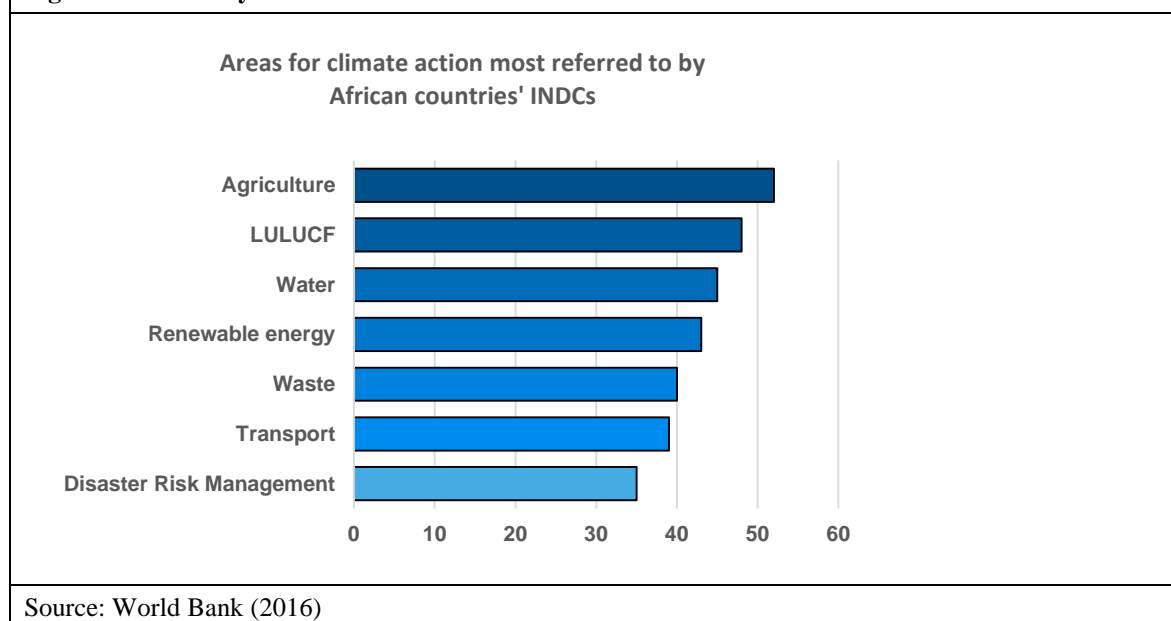
5 African countries' priorities for climate action

The adoption of the Paris Agreement was preceded by national processes that captured a contribution that each country is able to make under the agreement in its INDC. It is important to note that some developing countries have included both unconditional intended contributions as well as contributions that are conditional to the receipt of support from developed countries.

This section analyses African countries' INDCs based on the World Bank's INDC database (World Bank, 2016). All of these countries specified goals or targets for reducing GHG emissions in their INDCs as well as adaptation components that describe how their country is adversely impacted by climate change and what the country intends to do to adapt to these impacts. Based on this analysis, priority areas for African countries' climate action are identified.

The analysis of African countries' INDCs shows that the most common areas in which African countries intend to take climate action are agriculture; land use, land use change and forestry (LULUCF); water; renewable energy; waste; transport and disaster risk management.

Figure 1: Priority areas for climate action as referred to in African countries' INDCs

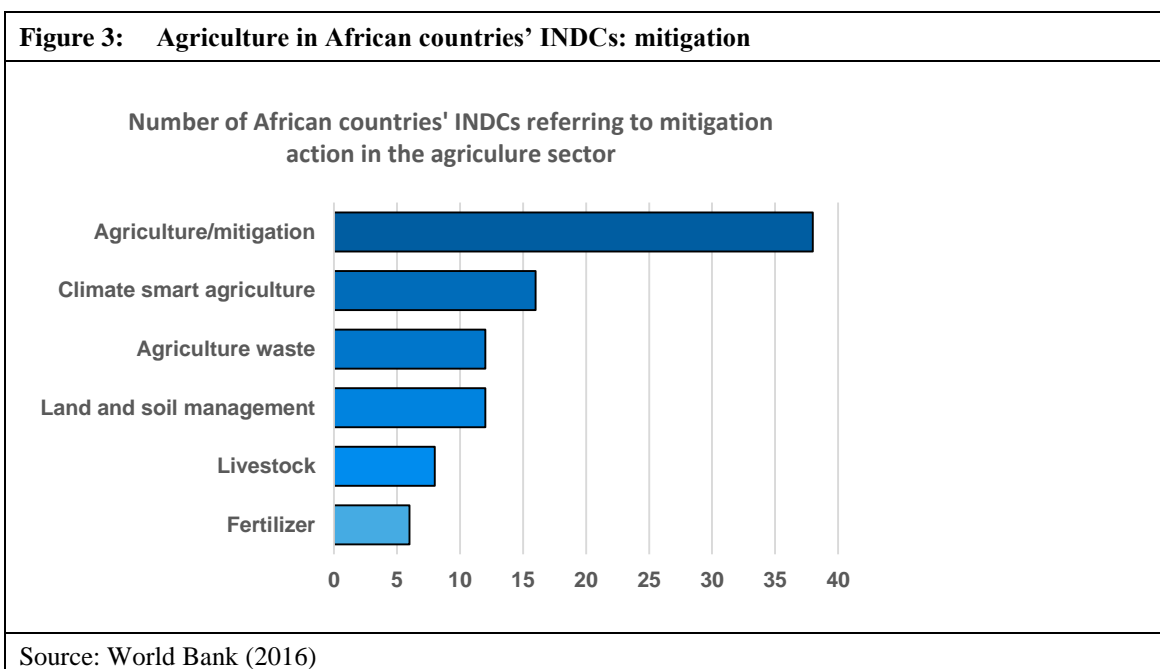
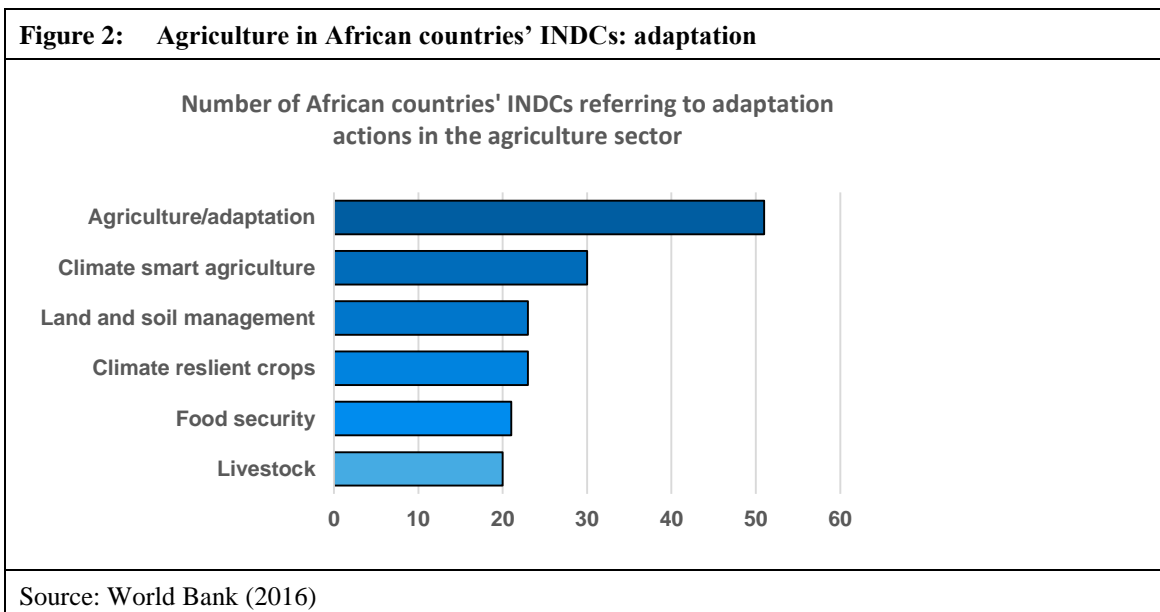


5.1 Agriculture

Fifty-one African countries included specific provisions for climate action in the area of agriculture in their INDCs. All of these countries included measures on adapting to the adverse impacts of climate change, and 38 countries spelt out contributions on reducing their greenhouse gas (GHG) emissions in this sector. Common areas for adaptation actions include climate-smart agriculture,¹⁹ climate-resilient crops, land and soil management,

¹⁹ The FAO defines climate-smart agriculture as “an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security

food security, livestock and irrigation (Figure 2). The most commonly referred to areas for mitigation actions are climate-smart agriculture, soil management, waste, livestock and fertilizer (Figure 3).

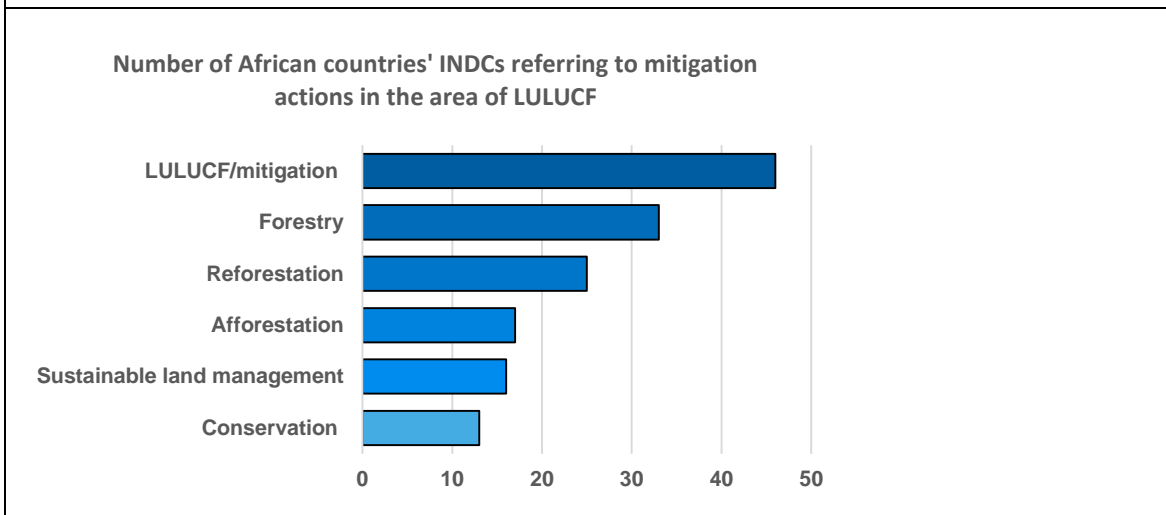


in a changing climate”. According to the FAO, climate-smart agriculture aims to tackle “sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions, where possible” (FAO, 2016).

5.2 Land use, land use change and forestry

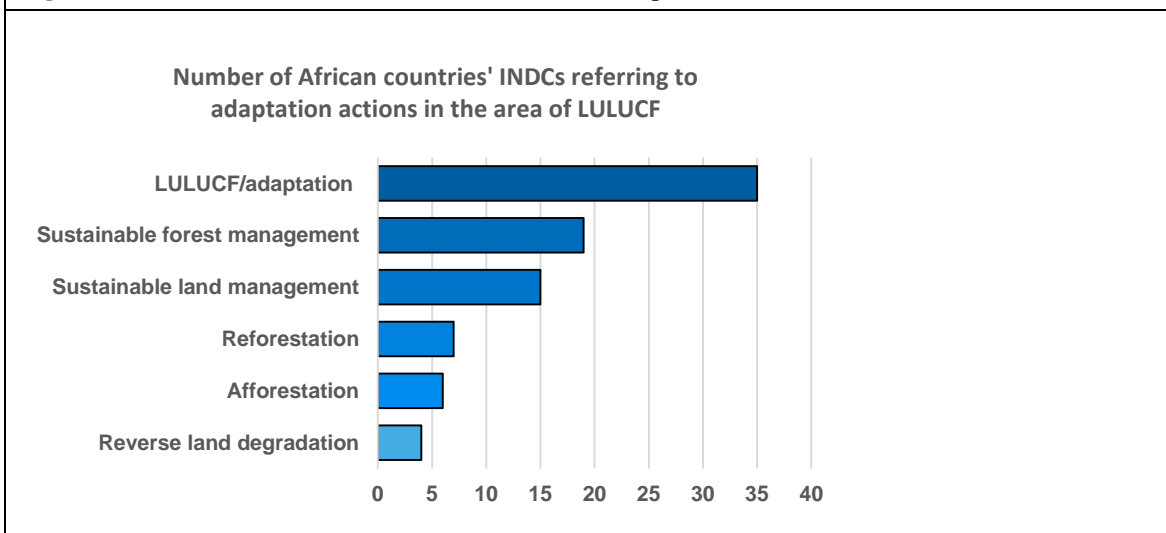
In the area of land use, land use change and forestry (LULUCF), 48 countries have submitted mitigation and 35 countries adaptation contributions. The most commonly referred to mitigation areas are forestry, reforestation, afforestation, sustainable land management and conservation (Figure 4). Common areas for adaptation actions are sustainable forest management, sustainable land management, reforestation, afforestation and reversing land degradation (Figure 5).

Figure 4: LULUCF in African countries' INDCs: mitigation



Source: World Bank (2016)

Figure 5: LULUCF in African countries' INDCs: adaptation



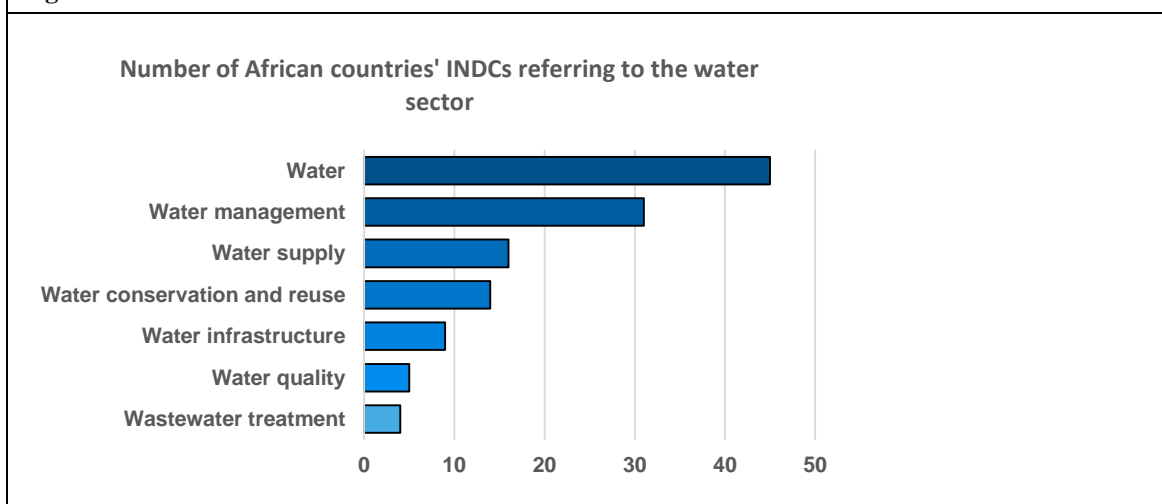
Source: World Bank (2016)

For example, Namibia aims to achieve an annual reforestation of 20,000 hectare of land and reduce deforestation by 75 per cent by 2030 (INDC Namibia, 2015, p. 9).

5.3 Water

Forty-five African countries are planning to take adaptation actions in the water sector. Most commonly, countries aim to improve water management, water supply, water conservation and reuse as well as water infrastructure (Figure 6).

Figure 6: Water sector in African countries' INDCs

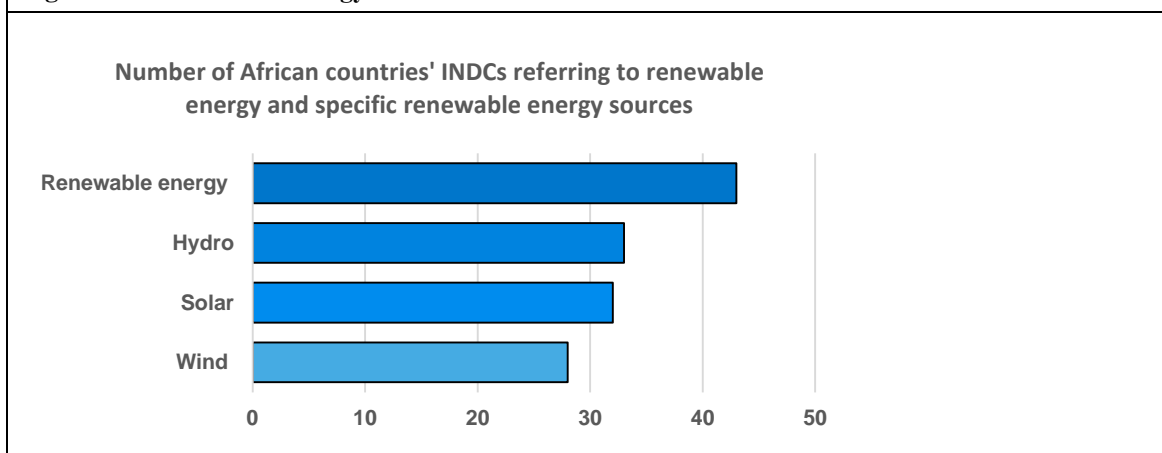


Source: World Bank (2016)

5.4 Renewable energy

Forty-three African countries have identified renewable energy as an important area for climate action. In particular, hydro, solar and wind power were mentioned as suitable renewable energy solutions by the majority of African countries. Many INDCs include specific goals and targets, such as on newly installed electricity generation capacity from renewable energy sources. Thirty-three countries have specific goals and targets for hydro power, 32 countries for solar power and 28 countries for wind power (Figure 7).

Figure 7: Renewable energy in African countries' INDCs

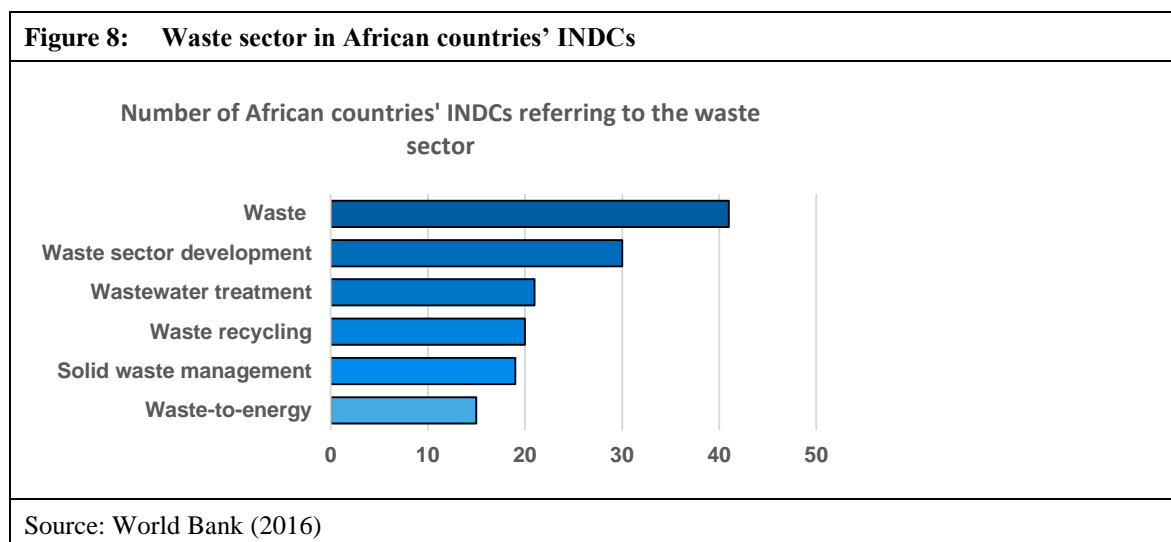


Source: World Bank (2016)

For example, Ghana aims to increase the share of renewable energy in the national energy mix by 10 per cent until 2030 by increasing the installed capacity of small and medium hydro power plants by 150-300 MW, utility-scale wind power by 50-150 MW, utility-scale solar power by 150-250 MW as well as by establishing 55 solar power mini-grids with a capacity of 100 kW to 10 MW and by installing up to 200,000 solar home systems in urban and rural areas (INDC Ghana, 2015, p. 11). Morocco plans to have 50 per cent of its installed electricity production capacity from renewable sources by 2025. By 2020 the share should reach 42 per cent – with 14 per cent from solar energy, 14 per cent from wind energy and 14 per cent from hydro energy (INDC Morocco, 2015, p. 9). Zambia's INDC has a strong focus on expanding the use of renewable energy sources, in particular for off-grid rural electrification through solar and wind power (INDC Zambia, 2015, p. 4).

5.5 Waste

Forty African countries aim to take mitigation actions in the waste sector. The most commonly referred to areas for action are waste-sector development, wastewater treatment, waste recycling, solid waste management and waste-to-energy conversion (Figure 8).

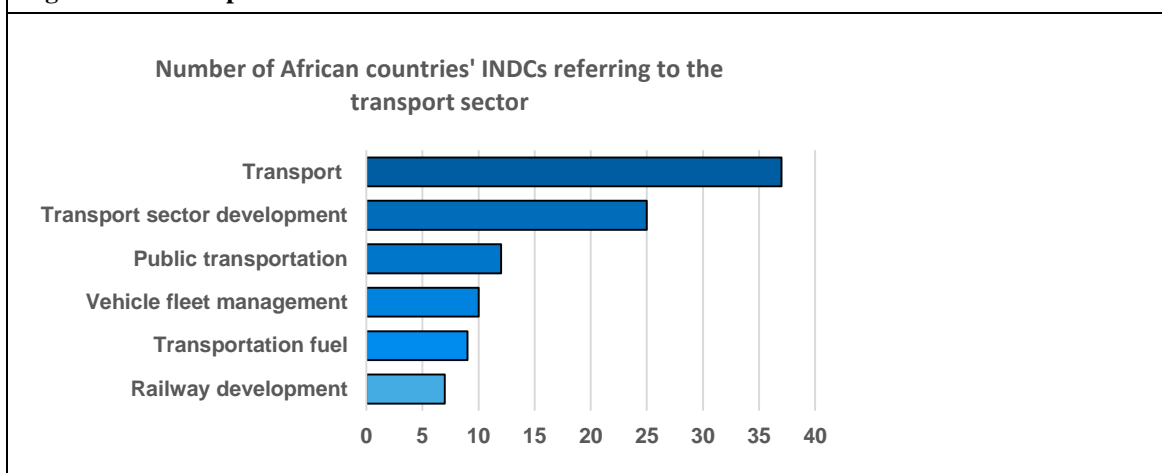


For example, the Gambia aims to implement a waste management initiative that will reduce GHG emissions through methane capturing, recycling and composting (INDC the Gambia, 2015, p. 9).

5.6 Transport

Thirty-nine African countries have planned in their INDCs to take climate action in the transport sector. The most commonly referred to action areas are public transport, vehicle fleet management, transport fuel as well as specific projects on rail, road, air and maritime transport as well as in aviation (Figure 9).

Figure 9: Transport sector in African countries' INDCs



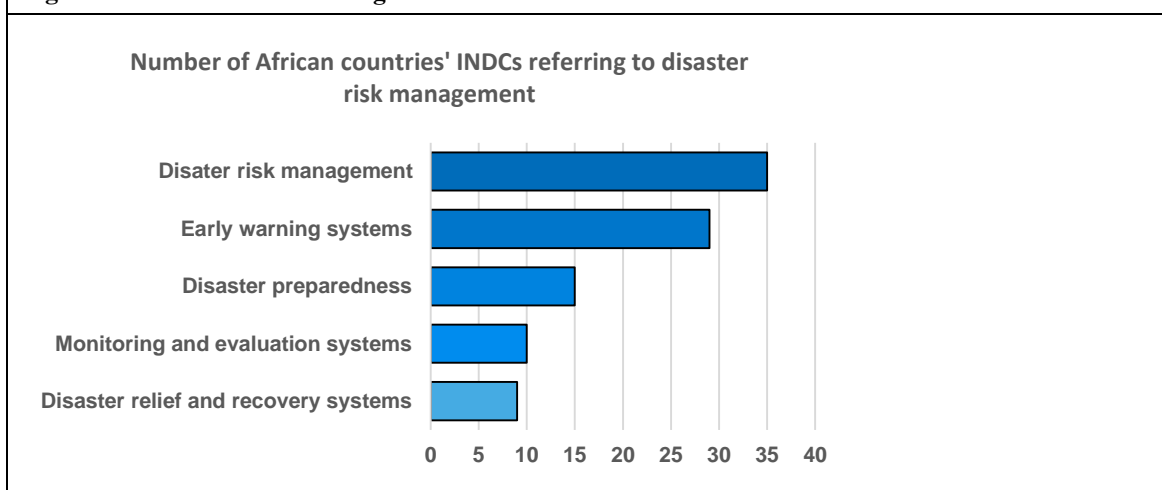
Source: World Bank (2016)

Egypt, for example, plans to reduce emissions from the transport sector by scaling-up its public transport capacity through the expansion of the Cairo metro and by increasing bus and train services (INDC Egypt, 2015, p. 11).

5.7 Disaster risk management

Thirty-five African countries have included in their INDCs actions in the area of disaster risk management. The most commonly planned actions are the enhancement of early warning systems, strengthening of disaster preparedness, building or enhancement of monitoring and evaluation systems, as well as disaster relief and recovery systems (Figure 10).

Figure 10: Disaster risk management in African countries' INDCs



Source: World Bank (2016)

For example, Angola aims to enhance its disaster risk management through strengthening the capacity of national and sub-national entities to monitor climatic changes, generate reliable hydro-meteorological information and combine available information with other

environmental and socio-economic data to improve evidence-based decision-making on adaptation responses and planning (INDC Angola, 2015, p. 15).

6 Opportunities for trilateral cooperation between the EU, China and Africa on addressing climate change

Any new approach by the EU to foster trilateral cooperation with China and Africa on addressing climate change should build on insights and lessons learnt from the EU's previous attempt on trilateral development cooperation in 2008, as discussed in Section 2. First and foremost, trilateral cooperation must be guided by Africa's policy priorities, as analysed in Section 4. Although adaptation is, and will remain, the top priority for African countries as far as climate action is concerned, it is recommended to start trilateral cooperation in another priority area identified in Section 4, namely renewable energy. From the seven identified priority areas, renewable energy seems to be one of the most suitable areas for initiating trilateral cooperation, given that it represents a low-hanging fruit and can quickly lead to tangible benefits for African countries, such as facilitated access to affordable electricity through the proliferation of renewable energy technologies. This would help build trust and a spirit of partnership, which were not present during the EU's first attempt at trilateral cooperation. Once the atmosphere becomes more conducive for trilateral cooperation via the demonstration of a new inclusive and transparent approach and immediate tangible benefits, more complex projects on adaptation could be launched.

Furthermore, renewable energy is an area in which each partner of the EU-China-Africa triangle has extensive previous experience regarding cooperation with the other two. Already in 2008, the EU identified renewable energy as an area in which trilateral cooperation could "enhance local capacity" to "maximize sustainable investment and development outcomes" and proposed to initiate

joint work with the African Union Commission (AUC) and China, for capacity building purposes, on climate change and renewable energy, possibly including technology transfer and increased capacity for Clean Development Mechanism (CDM) investment, also under a post-2012 global climate change agreement. (EC, 2008, p. 6)

The EU invited its member states as well as African and Chinese partners to "consider and support" this proposal and to "enter into specific agreements between agencies, institutions and associations to facilitate results-oriented joint initiatives" (EC, 2008, p. 8). In addition, at the AU level, African countries' have emphasised renewable energy as an important area for the continent's development in the African Unions' Agenda 2063 (AUC [Africa Union Commission], 2015a, p. 16) and its First Ten Year Implementation Plan (2014-2023) (AUC, 2015b, pp. 57, 63, 67) as well as through the AU's recent endorsement of the Africa Renewable Energy Initiative (AREI).²⁰ African, Chinese and

²⁰ AREI is significant, as it is the first continent-wide "Africa-owned and Africa-led inclusive effort to accelerate and scale up the harnessing of the continent's huge renewable energy potential". AREI aims to coordinate existing renewable energy initiatives, achieve at least 10 GW of new and additional renewable energy generation capacity by 2020 and 300 GW by 2030, and establish a pan-African renewable energy institution for research and training.

European experts interviewed in the context of the preparation of this paper all highlighted renewable energy as a suitable starting point for an EU-China-Africa trilateral cooperation (Interview CRES, 2016; Interview Ethiopia, 2016; Interview Finland, 2016; Interview Ghana, 2016; Interview Mali, 2016; Interview NCSC, 2016; Interview United Kingdom, 2016). Furthermore, a number of other recent developments would support a trilateral initiative in this area.

The EU and China have established various strategic energy cooperation mechanisms, which include cooperation on renewable energy. Currently, the EU-China Energy Dialogue, the EU-China High-Level Energy Meeting and the Partnership on Urbanization constitute the three main institutional mechanisms around which the cooperation is articulated (EC2 [Europe-China Clean Energy Centre], 2015, p. 2). The EU-China Energy Dialogue was established in 1994, constituting one of the oldest sector dialogues between the EU and China. The dialogue is carried out via two mechanisms: the EU-China Energy Conference and the EU-China High-Level Working Group on Energy. In 2009, the European Commission (EC) and China established the China-EU Institute for Clean and Renewable Energy to provide postgraduate education and vocational training in the fields of solar, wind, bio and geothermal energy and to facilitate the development and applications of renewable energy technologies.²¹ In 2010, the two sides established the Europe-China Clean Energy Centre (EC2) with the objectives to promote the increased use of renewable energy sources in China and to support China's efforts to shape a more sustainable, environmentally friendly and efficient energy sector through technology cooperation, institutional advisory services, capacity-building and information dissemination (Europe-China Clean Energy Centre, 2015, pp. 13-14). Furthermore, the EU and China agreed on the EU-China Roadmap on Energy Cooperation in June 2016, which, inter alia, aims at strengthening cooperation on promoting the use of renewable energy (EC, 2016c, pp. 2, 7-8).

The EU has also extensive experience in cooperating with African countries in the area of renewable energy. In 2007, the EU and the AU jointly launched the Africa-EU Energy Partnership,²² which, inter alia, aims to expand the use of renewable energy in Africa. In 2015, 35 African and European ministers and commissioners launched the Africa-EU Renewable Energy Cooperation Programme (RECP) to catalyse the development of African renewable energy markets. RECP is comprised of four action areas: policy advisory, private-sector cooperation, access to finance and innovation, and skills development (Africa-EU Renewable Energy Cooperation Programme, 2016). The EC has also set up the Electrification Financing Initiative²³ as a financing mechanism to support market development and private-sector initiatives in the area of renewable energy technologies in African countries. Furthermore, the EC and EU member states have already pledged support for AREI, and the EC recently announced its intention to sign a joint declaration with AREI on renewable energy in Africa as well as specific declarations to cooperate with Mozambique and Zambia on the implementation of AREI (EC, 2016b). The draft EU-AREI joint declaration states that the EU "will mobilise support to facilitate investments that will increase the generation capacity of at least 5 GW" by 2020 (Council of the European Union, 2016b, p. 5).

21 See <http://icare.hust.edu.cn/EN>

22 See <http://www.africa-eu-partnership.org/en>

23 See <http://www.electrifi.org>

As we have seen in Section 3, China has considerable experience in working with African countries on the proliferation of renewable energy technologies as a means to addressing climate change. Under the “FOCAC Johannesburg Action Plan (2016-2018)”, China pledged to support African countries to implement renewable energy projects and to encourage and support the participation of Chinese businesses in the investment, construction and operation of power projects in Africa through expanded cooperation on solar energy, wind power, bioenergy, power transmission and transformation, and grid construction and maintenance. China and African countries agreed to “establish a training programme for the capacitation of African energy practitioners through research and development exchanges” (FOCAC, 2015b). Furthermore, China committed to advance cooperation on the development and utilisation of renewable energy sources with African countries under the Belt and Road Initiative (NDRC, 2015a) and the G20 Initiative on Supporting Industrialization in Africa and Least Developed Countries. The China Renewable Energy Society, which is affiliated with China’s State Council, is preparing to sign a cooperation agreement with AREI at the AU’s Headquarters in Addis Ababa, Ethiopia (Interview CRES, 2016).

Hence, a timely and concrete action to start trilateral cooperation on addressing climate change could be for the EU to support the implementation of AREI jointly with China. Such a cooperation could take place at the regional or national level and offer direct support for increasing installed renewable energy capacity and/or contribute to the establishment of the Africa Renewable Energy Institute planned under AREI (2016, p. 18). A potential modality of trilateral cooperation on the implementation of AREI is used here as an example and should be seen as one of many possible starting points for cooperation.

At the regional level, a trilateral cooperation pilot project could involve the EU through RECP, China through the NDRC’s Department of Climate Change, and African countries through AREI’s newly established Independent Delivery Unit. However, given the institutional constraints of RECP as a multi-donor programme, it may be more practical to explore possibilities for a trilateral cooperation pilot project from the EU side through one of its member states. Germany may be an ideal candidate for such a project, given its recognition of trilateral cooperation as an important instrument for development cooperation, its strong commitment to AREI,²⁴ its extensive experience supporting climate action in China and in African countries in the area of renewable energy – for example through the German-Chinese Energy Partnership²⁵ and the South African-German Energy Programme (Deutsche Gesellschaft für Internationale Zusammenarbeit, s.a.) – and its global leadership in renewable energy policy and technologies. In addition, Germany could utilise its unique position as a founding member of the China Council for International Cooperation on Environment and Development (CCICED),²⁶ a high-level

24 Under the German G7 Presidency in 2015, the G7 pledged to “accelerate access to renewable energy in Africa and developing countries, including through alignment with the proposed Africa Renewable Energy Initiative”. The G7, Sweden and the Netherlands further pledged USD 10 billion in grants and loans to support AREI, of which Germany pledged the largest contribution of USD 3 billion until 2020 (Federal Government of Germany, 2016, pp. 33, 36).

25 See <https://www.giz.de/en/worldwide/32698.html>

26 Since its establishment in 1992, CCICED has been receiving support from the German government. The EU has also supported CCICED since 2008. Germany’s Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety, Barbara Hendricks, currently holds the position of CCICED Vice Chairperson.

advisory body to the Chinese government, to initiate a dialogue on trilateral cooperation under CCICED's recently launched Task Force of South-South Cooperation (China Council for International Cooperation on Environment and Development, 2016) together with African partners. Furthermore, such trilateral cooperation would be an opportunity for Germany to demonstrate jointly with China – as the incoming and outgoing G20 Presidencies – the G20's commitment to promoting the use of renewable energy in Africa made at the G20 Summit in 2016 (G20 Research Group, 2016).

If a pilot project is to focus on supporting AREI's objective of achieving at least 10 GW of new and additional renewable energy generation capacity by 2020, an AU member state should be identified for partnering on such a project. Zambia may be interested in exploring such cooperation, given its intention to sign a declaration with the EU on working together on AREI's implementation. Furthermore, Zambia can offer valuable experience on trilateral cooperation on renewable energy technology transfer gained through the ongoing project with China and UNDP, described in Section 3.2.2. Through this project, Zambia has also established effective working-level relations with China, which would be an additional advantage for a swift set-up of a pilot project. For the success of such a project, it would be key to ensure that the three partners jointly go through all stages of project development, implementation, monitoring and evaluation and build on their respective comparative advantages. Trilateral cooperation can only be successful if all three partners reached a common understanding of cooperation that creates a basis for joint action despite potential differences in their concepts of development (Langendorf et al., 2012, p. 28).

Alternatively, a pilot project could focus on supporting AREI on enhancing domestic renewable energy technology manufacturing, assembly, deployment and operations capacity (AREI, 2016, p. 17), or on establishing the Africa Renewable Energy Institute, which is to serve as AREI's backbone for research and training (AREI, 2016, p. 18). For the latter, the EU and China could build on the experiences from the establishment and operation of the China-EU Institute for Clean and Renewable Energy in China and engage the institute and its network.

7 Recommendations

A report on the aggregate effect of INDCs published by the UNFCCC Secretariat in May 2016 finds that although the implementation of INDCs will deliver sizeable emission reductions, global aggregate emission levels in 2025 and 2030 resulting from the implementation of the INDCs will not fall within the scope of 2°C scenarios²⁷ and therefore fail to achieve the objective of the Paris Agreement (UNFCCC, 2016). It is therefore necessary to urgently identify ways that enable greater ambition of all countries and to prepare for the climatic consequences of potentially not reaching this objective.

27 Under the Paris Agreement, countries have agreed to make contributions to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. These temperature levels were determined by the Intergovernmental Panel on Climate Change, which provides the scientific basis for the UNFCCC process, as meeting the UNFCCC's ultimate objective of stabilising GHG concentrations at a level that would prevent dangerous anthropogenic interference with the climate system.

Trilateral cooperation may be a valuable additional means that can complement existing cooperation between developed and developing as well as among developing countries in this context. To achieve this through an EU-China-Africa trilateralism, the following recommendations are offered.

7.1 Build on insights from the EU's previous initiative on trilateral cooperation with China and Africa

- **Ensure that all partners are equally engaged from the outset:** The EU's expression of interest towards China to cooperate with China in Africa on addressing climate change should be followed by a similar proposal to the AU to consider the establishment of trilateral cooperation with China in this area.
- **Develop a trilateral cooperation pilot project based on the priorities of African countries:** Although African countries' (I)NDCs are a useful starting point for selecting a thematic area for cooperation, the AU should be engaged in this discussion to learn from their perspectives about which areas a trilateral approach may be most useful and could best build on the respective comparative advantages of the EU and China as development partners.

7.2 Establish a pilot project in support of the AU's Africa Renewable Energy Initiative

- **Support the initiative's goal of achieving at least 10 GW of new and additional renewable energy generation capacity by 2020:** Build on existing cooperation mechanisms, institutions and experiences between the EU, EU member states, China, the AU and AU member states in the area of renewable energy to identify suitable project partners from each side of the trilateral partnership. Make use of the recent commitments to support the Africa Renewable Energy Initiative by the EU and its member states as well as by China. Develop a trilateral cooperation pilot project at the national level between the initiative, an EU member state and China to ease administrative burdens. Consider a German-China-Zambia pilot project, given the conducive preconditions for such a cooperation outlined in Section 5.
- **Support the establishment of the Africa Renewable Energy Institute:** Establish a partnership between the China-EU Institute for Clean and Renewable Energy and AREI's Independent Delivery Unit to share experiences and lessons learnt from the establishment and operation of the joint China-EU institute.

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