



**China Council for International Cooperation on
Environment and Development**

Council Member Paper

Mr. Achim Steiner and Mr. Kandeh Yumkella



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Mr. Achim Steiner is serving his second four-year term as the Executive Director of UNEP, after being unanimously elected by the UN General Assembly in 2006 and re-elected again in 2010. He also served as Director-General of the United Nations Office at Nairobi from 2009 to 2011. Before joining UNEP, Mr. Steiner served as Director General of the IUCN from 2001 to 2006, and prior to that as Secretary General of the World Commission on Dams. His professional career has included assignments with governmental, non-governmental and international organizations in different parts of the world including India, Pakistan, Germany, Zimbabwe, USA, Vietnam, South Africa, Switzerland and Kenya. He has worked both at the grassroots level as well as at the highest levels of international policy-making to address the interface between environmental sustainability, social equity and economic development.

Mr. Steiner, a German and Brazilian national, was born in Brazil in 1961. He has a BA from the University of Oxford, as well as an MA from the University of London with specialization in development economics, regional planning, and international development and environment policy. He also studied at the German Development Institute in Berlin, and the Harvard Business School. He has been the recipient of a number of international awards.

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Mr. Kandeh K. Yumkella is Special Representative of the UN Secretary-General and Chief Executive for the Sustainable Energy for All (SE4All) Initiative and holds the rank of Under-Secretary-General in the United Nations. He seeks to mobilize action toward a sustainable energy future and accelerate the implementation of the Secretary-General's initiative as well as engaging with the leadership of relevant stakeholders in government, businesses, academia and civil society at the highest level to advocate for and promote sustainable energy for all. Mr. Yumkella also chairs UN-Energy, which brings together all UN organizations dealing with energy issues.

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Mr. Yumkella has also served as member of the Council during Phase IV and V.



**China Council for International Cooperation on
Environment and Development**

**South-South and Triangular Cooperation:
Enhancing China's Energy-Sector
Cooperation with Africa and Beyond**

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CCICED Council member

2014 Annual General Meeting
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South-South and Triangular Cooperation: Enhancing China's Energy-Sector Cooperation with Africa and Beyond

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**CCICED Annual General Meeting
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Abstract

This brief report assesses the role that south-south and triangular cooperation could play to enhance China's Energy Sector Cooperation with Africa and beyond. The report briefly outlines Africa's energy and climate challenges and describes the important role that external assistance plays in addressing these challenges. China plays a big role in this external assistance for several reasons. China has made immense progress in the three objectives of SE4ALL and has much to share in terms of knowledge and experience. The main recommendation of the report is to explore how the SE4ALL platform could help scale up and support the south-south cooperation activities by bringing other partners to complement and support these activities for greater impact and effectiveness. The value added of this modality is that the South-South cooperation will be part of a comprehensive program with several components required to reach a specific set of objectives and outcomes. The South – South component will be one of the elements required with others contributing other components required to achieve the objectives. Those contributing other elements would be the SE4ALL partners and which include donors and international financial institutions.

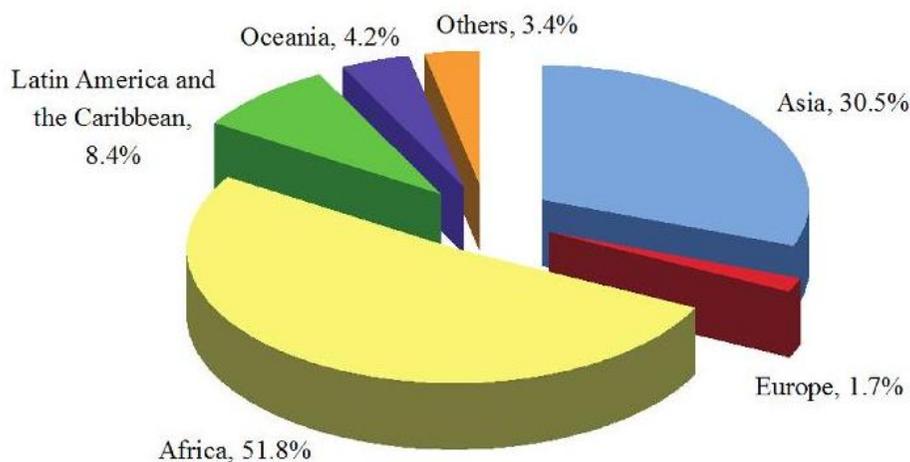
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I. Background

1. China has made cooperation with other developing countries a cornerstone of its international relations policy. Its South-South cooperation activities cover many diverse areas, ranging from trade and investment and debt cancellation to training and capacity building. These are implemented through various line ministries.
2. Strategic partnerships between China and Africa have grown considerably during the past few years. China is now Africa's largest trade partner, and Africa has become China's major source of imports and its second largest overseas market for construction contracts. Over 10% of China's imports now come from Sub-Saharan Africa,ⁱ and according to the Chinese Ministry of Commerce, China's FDI in Africa has increased by 46% per year over the last decadeⁱⁱ. China's clean energy investments in Africa reached US\$54 billion in 2013, and totaled US\$302 billion between 2006 and 2013.ⁱⁱⁱ From 2010 to 2012, China provided assistance to 121 countries, out of which 51 are located in Africa, and between 2000 and 2009 it forgave 312 loans to African countries with a total value of \$US 2.93 billion. In addition, China provides assistance to regional organizations such as the African Union (AU).

Figure 1. Geographical distribution of China's Foreign Assistance Funds (2010-2012)



Source: China's Foreign Aid, 2014^{iv}

3. China's economic policy towards Africa has resulted in increased trade, aid, more direct investment through concessional and commercial loans, and, most of all, a surge in export credit financing from the Export-Import Bank of China (China Eximbank).
4. Since its establishment in 2000, the Forum on China-Africa Cooperation (FOCAC) has been an indispensable platform for collective dialogue and an effective mechanism for practical cooperation between China and Africa. The FOCAC process, which now formally includes the African Union, is a tri-annual meeting of leaders and ministers that provides an opportunity to highlight the areas of cooperation and growth in China's relationship with Africa.
5. Under the FOCAC framework, China and Africa have agreed to deepen their cooperation in areas such as trade, investment, poverty reduction, infrastructure building, capacity building, human resources development, food security and high-tech industry. China and Africa also

share concerns about increased threats and challenges brought by global issues such as climate change, environmental degradation, energy and resource security, and the global financial crisis. In the coming years, more formal cooperation on sustainable energy issues could be supported by existing international cooperation frameworks such as the Sustainable Energy for All (SE4ALL) platform.

6. The Sustainable Energy for All (SE4ALL) initiative^v is a multi-stakeholder partnership between governments from around the world, private sector, donors, financial institutions, and other sectors of society launched by the UN Secretary General in 2011 to address major current global energy challenges. Today, nearly one person in five on the planet lacks access to electricity, twice that number, almost 3 billion people rely on coal, charcoal, or animal waste for cooking and heating, all of which are major barriers to eradicating poverty and building shared prosperity. SE4ALL has an Advisory Board comprised of participants from governments (including China), business and civil society; and co-led by the UN Secretary General and the President of the World Bank. It has three inter-linked objectives to be reached by 2030: 1) ensure universal access to modern energy services, 2) double the global rate of improvements in energy efficiency, and double the share of renewable energy in the global energy mix. In all three areas, China is one of the best performers with much to share with Africa (where major efforts are required in all three objectives) and other parts of the developing world in terms of know-how, technologies, good practices and lessons learned.

II. Africa's energy and climate change challenges

7. In Africa as well as China, climate change and weather variability will have wide-ranging impacts, including on the energy sector.^{vi} Changing weather patterns, including variability in rainfall, temperature, wind patterns, and the number of sunny days per year, could affect the consumption and production of energy. For example, higher temperatures would raise the demand for space cooling and air conditioning, resulting in higher energy demand in some urban areas. Differences in the quantity and seasonality of precipitation would adversely affect hydropower production, and stronger and more-frequent extreme weather events would increase the risk of damage to power lines and other energy infrastructure.
8. To address these challenges, both China and Africa are embracing a transition to cleaner and more affordable energy by making investments in renewable energy sources and taking steps to improve energy efficiency, targeting all sectors of the economy. In addition to enhancing access to modern forms of energy and taking mitigation actions, both Africa and China have their energy infrastructure to deal with a changing climate.
9. According to the 2013 Sustainable Energy for All *Global Tracking Framework* report, on all three SE4ALL objectives (energy access, renewable energy and energy efficiency), China stands out as a country that has made particularly rapid progress since 1990 as well as one with a high weightage on the global landscape to attain the objectives of the SE4ALL initiative.^{vii} In 2013, China's new renewable power capacity surpassed new fossil fuel and nuclear capacity for the first time^{viii}. In contrast, Sub-Saharan Africa is home to 11 out of the 20 countries globally with the largest percentage of people lacking access to electricity although it is one of two regions worldwide projected to achieve the highest share of renewable energy in 2030, largely due to the use of biomass. Support from China that allows Africa to further tap its renewable energy resources and accelerate the deployment of renewable energy technologies

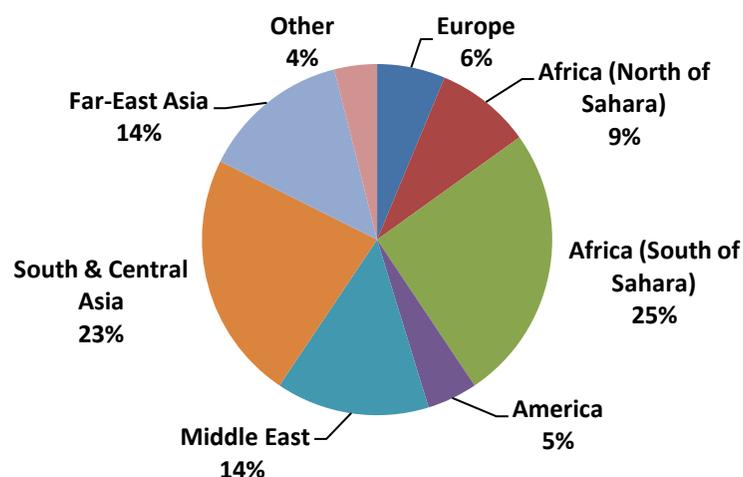
would help to address its electricity deficit and improve both the continent's access to energy and uptake of renewables.

10. In 2010, China's installed electricity generation capacity reached 970 million kilowatts, ranking it first in the world. The growth in generation capacity, however, has been accompanied by a decrease of 19.1 percent in energy consumption per unit of GDP since 2006^{ix}, evidence of structural changes in the economy and improved energy efficiency. To manage its growing energy demand, China has adopted a number of successful and inspiring policies promoting more sustainable energy, such as:
 - The Ecological Civilization^x: In 2012, this new concept was adopted to balance development and nature to further the well-being and livelihoods of Chinese citizens.
 - The 12th Five-Year Plan for Energy Development^{xi}: The Plan released in 2013, highlights China's efforts to curb energy consumption and foster greener growth. It comprises targets for both energy intensity (16 percent reduction by 2015) and CO2 emissions per unit GDP (17 percent reduction by 2015). Total electricity consumption is capped at 6.15 trillion kilowatt-hours by 2015, and overall energy efficiency will be raised by 38 percent by 2015 over 2010 figures.
11. National Plan for New Style Urbanization (2014–2020): The Plan seeks to address energy use associated with the country's rapid rate of urbanization, which reached 53.7 per cent in 2013 and is projected to reach 60 per cent by 2020. It promotes low-carbon building and transportation and is being piloted in several cities. In 2012, ten of the pilot cities/provinces using the low-carbon approaches achieved an average 9.2 per cent decrease in carbon intensity compared to 2010, much higher than the national average of 6.6 per cent.^{xii}
12. Examples of China's cooperation with Africa on sustainable energy projects, from 2010 to 2012, include^{xiii}:
 - Materials and equipment: China undertook several projects on the utilization of renewable energy resources, such as solar streetlamps and solar power generators. Under a Memorandum of Understanding on Complimentary Supplies for Addressing Climate Change with nine developing countries globally, it donated thousands of energy-efficient lamps and energy-efficient air conditioners to Ethiopia, Madagascar, Nigeria, Benin, Cameroon and Burundi.
 - Capacity building: Under technical cooperation, China organized training sessions for over 120 developing countries, providing training to over 4,000 officials and technical personnel in such areas as low-carbon industry development, energy policies, renewable energy exploitation and utilization. For example, China helped Ethiopia, Burundi and Sudan to improve their utilization and management of solar power, hydro power and other clean energy.
13. Combining China's national policy measures and its history of collaboration on clean energy issues with Africa, Africa could increasingly benefit from China's experiences under a sustained and expanded cooperation on sustainable energy.

III. The role of external assistance in Africa

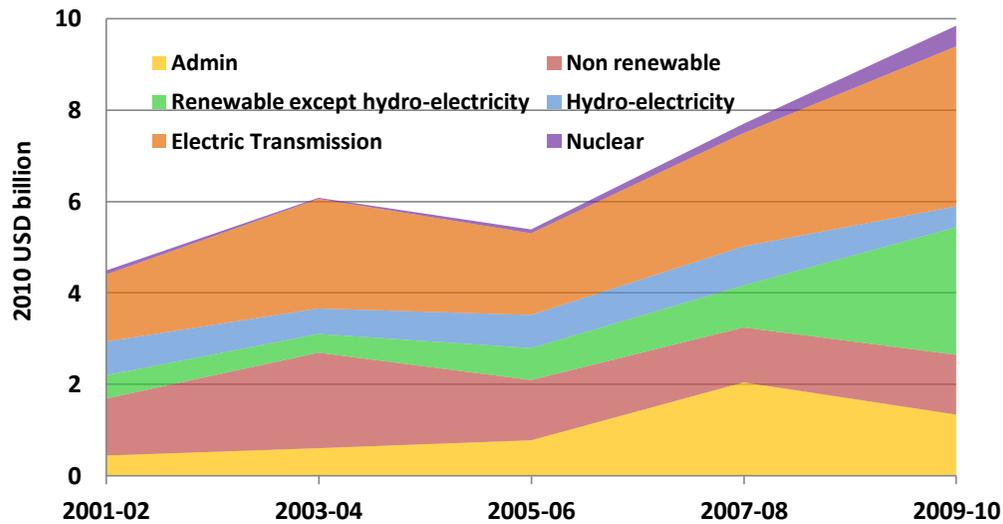
14. Africa is an important target of international development assistance. According to the OECD Development Assistance Committee (DAC), official development assistance worldwide in 2012 totaled US\$132.8 billion, of which US\$51.3 billion – more than a third – went to Africa. DAC member countries (i.e., developed countries) contributed US\$88.5 billion of the worldwide total, of which US\$30.4 billion went to Africa, and multilateral agencies contributed US\$39 billion, of which US\$19.7 billion went to Africa.^{xiv}
15. According to the DAC, more than half (57 per cent) of all energy-related development aid is directed to sub-Saharan Africa and South and Central Asia (see Figure 2), the two regions with the greatest deficits in energy access. It is unclear from the OECD/DAC figures, however, how much of this aid is going specifically towards populations that do not have access to energy, particularly in rural and isolated areas. SE4ALL promotes and support efforts to improve more reliable and detailed data collection, analysis and tracking to allow for better assessment of the actual contribution of aid and investment in helping to address these deficits. The significant increase in renewable energy investment, for instance, may indicate a greater effort to increase rural electrification and access to energy in isolated areas where renewables play a major role.

Figure 2. Total development aid to the energy sector, by region, 2012



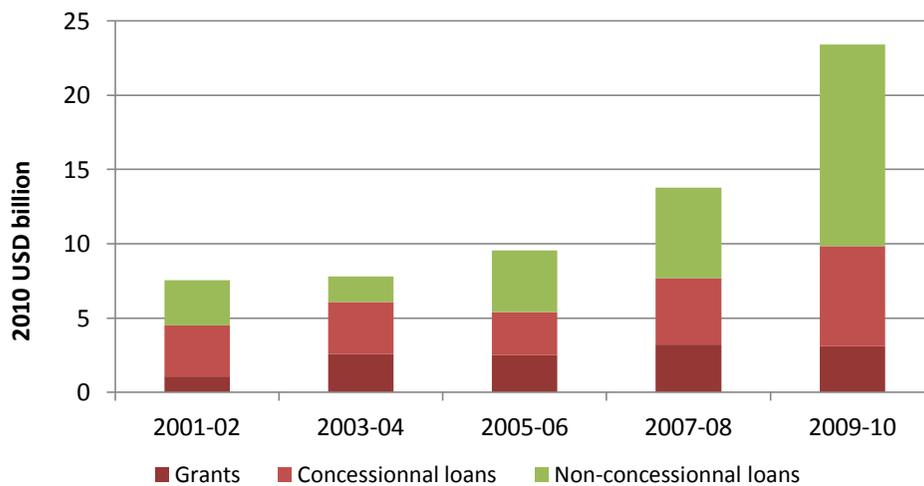
16. Aid to the energy sector has grown considerably over the last 15 years (see Figure 3). However, only a small share of this assistance has been in the form of grants, and a rising share is loans – both concessional and non-concessional (see Figure 4). This is not encouraging news for the energy access agenda, as investments in energy access typically have low rates of return and thus require higher levels of grant funding to support project implementation, policy formulation, and institution and capacity building. It is here where South-South collaboration can play an important complementary and promotional role.

Figure 3. Total development aid to the energy sector, by sub-sector, 2001–2010



Source: OECD, *Development Cooperation Report, 2012, Paris*

Figure 4. Total grants and loans to the energy sector, 2001–2010



17. Increasingly, developing and emerging economies are playing an important role in overseas development assistance, indicating rising South-South cooperation. Although OECD data on non-DAC countries are not completely reliable and may differ widely from data reported by the countries themselves, they suggest a considerable increase in recent years, with a large proportion being directed to Africa.
18. These data likely underestimate significantly the growing involvement of emerging economies in Africa, whose relationships have expanded to foreign direct investment (FDI), trade and aid. Often, these come as a package, making it difficult to track or identify where one component begins and another ends. The more relevant measures therefore may be those that track FDI, trade and other types of collaboration and political engagement. In general, the greater involvement of emerging economies, among others, has radically changed the landscape of

development cooperation, as many emerging economies have well-developed strategies for cooperation with other developing countries.

IV. China's South-South cooperation and its role in Africa

19. As its economy has surged, China has sought increasingly to provide foreign aid and other forms of development assistance to developing countries. In a new White Paper describing China's priorities for and implementation of foreign aid, released on 10 July 2014, the Chinese government outlines the principles of China's aid as follows^{xv}:

“China is... providing assistance to the best of its ability to other developing countries within the framework of South-South cooperation to support and help other developing countries, especially the least developed countries (LDCs), to reduce poverty and improve livelihood....”

“... China adheres to the principles of not imposing any political conditions, not interfering in the internal affairs of the recipient countries and fully respecting their right to independently choose their own paths and models of development. These basic principles China upholds in providing foreign assistance are mutual respect, equality, keeping promises, mutual benefits and win-win.”

20. In announcing its new aid priorities when the White Paper was issued, the government outlined the following¹:

- Involving recipient countries more deeply in project design;
- Enhancing the quality of foreign aid and projects;
- Improving the pertinence and effectiveness of foreign aid;
- Joining forces with others in foreign aid;
- Increasing the proportion of grant aid (around 40% to date);
- Giving more to heavily indebted countries (LDCs and SIDS);
- Strengthening international cooperation and exchanges and learning from good practices.

21. According to the White Paper, China's foreign aid has increased significantly since 2009. From 2010 to 2012, the country contributed some US\$14.1 billion in aid – equivalent to roughly 35 per cent of the total foreign aid that China provided over the previous six decades. The report estimates China's annual foreign aid to be around US\$5 billion, a much higher figure than reported by the DAC.

22. The White Paper also signals a shift in Chinese aid from only “complete projects and goods and materials, which were the main forms of China's foreign assistance ... to ... technical cooperation and human resources development cooperation,” with a strong focus on poverty alleviation and capacity building. This underscores China's interest in helping to improve local livelihoods as well as contribute to local economies and social development. The White Paper also emphasises strengthening consultations with recipient countries, including through

¹ English.news.cn | 2014-07-10 11:38:42 | Editor: Lu Hui

regional cooperation mechanisms and other new efforts listed above. The SE4ALL is one of those mechanisms that could facilitate such consultations, help improve effectiveness and lower transaction costs considerably.

23. China has engaged in South-South cooperation with Africa since the 1950s. Since 2000, however, the advent of more-structured China-Africa collaboration under FOCAC has resulted in significant growth in aid, trade and investment from China to Africa. The recent White Paper reports that the share of China's foreign aid going to Africa increased from 45.7 per cent in 2009 to over 50 per cent from 2010 to 2012.
24. According to Chinese government statistics, China's foreign direct investment in Africa grew at an annual rate of 20.5 per cent between 2009 and 2012.^{xvi} By 2012, cumulative FDI to Africa reached US\$21.2 billion, going mostly to the energy and mineral resources sectors, and Chinese enterprises had completed some US\$40.8 billion in construction contracts on the continent. Between 2010 and May 2012, China approved US\$11.3 billion in concessional loans for 92 projects in Africa, and in 2012 China-Africa trade reached US\$198.5 billion (reflecting year-on-year growth of 19.3 per cent). Although China's FDI dropped in early 2014, Chinese policymakers have announced plans for significantly increasing FDI to Africa.
25. Examples of China's South-South cooperation with Africa through aid, investment and capacity building include^{xvii}:
 - Investment and enterprise cooperation: Such cooperation has accelerated since FOCAC's Fourth Ministerial Conference in 2009 and has been implemented mostly through bilateral agreements. China will use the China-Africa Development Fund and gradually scale it up to US\$5 billion. Furthermore, China will continue to support the development of overseas business cooperation zones in Africa, and will encourage enterprises joining the zones to increase links with local enterprises and communities, strengthen technology and experience sharing on the shop floor and enhance technology transfer and job creation. This could be of particular relevance for developing energy products and services, pairing Chinese know-how with African counterparts.
 - Infrastructure construction: Areas of infrastructure development being prioritized include transport, telecommunications, radio and television, water conservation, electricity and energy. China-Africa cooperation involves design, inspection, financing and management of projects under the Program for Infrastructure Development in Africa and the Presidential Infrastructure Championing Initiative. These initiatives strengthen relevant dialogue and exchanges, provide support for project planning and feasibility studies, and provide preferential loans to support infrastructure building in Africa, all of which can help Africa scale up activities related to the three objectives of SE4ALL.
 - Trade: Despite the international financial crisis, both China and Africa have showed continued economic growth. In an effort to promote the balanced development of China-Africa trade, China will implement its "special plan on trade with Africa" and will further open its market to African countries. Under this South-South cooperation framework, China will phase in zero-tariff treatment to 97 per cent of all tariff items (products) from the least-developed countries in Africa that have diplomatic relations with China. Under this framework, China could increase imports of value-added goods from Africa that could be used as inputs to its renewable energy and energy efficiency industries.

- Human resources development: China has financed human resources development in Africa through scholarships, workshops and training programmes in agriculture, industry, health, education, communication, media, science and technology, disaster prevention and reduction, and administration. Through the *African Talents Program*, over the next three years China will train 30,000 African professionals in various sectors; offer 18,000 government scholarships; and take measures to improve the content and quality of the training programmes, fostering participation from both youth and women.
 - Science and technology cooperation and knowledge sharing: Through the China-Africa Science and Technology Partnership Plan, China will continue to support higher-level visits, exchanges and research programmes from both sides. China will continue to encourage the transfer of advanced and applicable technologies to African countries and help to raise their capacity in research and development (R&D) innovation. This is of particular relevance for building the capacity of African countries to address issues of sustainability, including through adapted energy technologies, planning and services.
26. China's South-South cooperation with Africa has also faced numerous challenges, including the consequences of political instability on trade and investment, and the fragmentation of policies and regulatory frameworks. Although bilateral exchanges between China and African countries have supported development and collaboration in the energy sector, both sides will benefit greatly if such cooperation is accelerated and undertaken in a more structured manner.
27. In particular, the evolution of China-Africa cooperation under FOCAC (now involving the African Union and collaborating increasingly with regional blocs in Africa) can optimize the potential of sub-regional integration processes through both South-South and "triangular" approaches to cooperation (involving three parties or sets of parties getting together to promote development cooperation in support of a particular goal or objective). The triangular cooperation being proposed here would involve one or more African partner countries, China, and SE4ALL working together to further sustainable energy objectives, as described in the following sections.

V. SE4ALL as a platform for China's engagement in Africa on energy issues

28. Discussions within the FOCAC framework have identified climate change, environmental protection and energy as key areas for cooperation between China and Africa.^{xviii} China has agreed to help African countries build capacity for climate change adaptation and mitigation and sustainable development. More specifically, the two sides have agreed to:
- "... support joint development and proper use of their energy and resources by enterprises of the two sides,"* and
- "... advance cooperation in clean energy and renewable resources projects in keeping with the principles of mutual benefit and sustainable development."*
29. Sustainable Energy for All offers a platform to enhance the collective impact of aid and investment in Africa's energy sector and to address energy security and energy poverty issues in a meaningful way. SE4ALL can support China's deeper engagement in Africa and its role in capacity building and livelihood improvement within a country-driven process, while respecting the local and regional consultation mechanisms currently in place. Given Africa's current and projected economic growth, now is the time to invest in clean and low-carbon

energy infrastructure, enabling deep market transformations and more-sustainable lifestyles, and avoiding technological lock-in of obsolete and polluting technologies.

30. One of the resources that attract the most Chinese investment in sub-Saharan Africa is energy, accounting for 41 per cent of Chinese FDI in the region. In addition, Chinese greenfield investment in Africa is directed mainly at building physical infrastructure, such as seaports, roads, railways, dams, telecommunications networks, power stations and airports, as well as government facilities. Taking contracts into account, transport is one of the largest sectors for Chinese FDI to sub-Saharan Africa, accounting for 25 per cent of the total (behind energy at 36 per cent). There is significant potential for China to build local capacity in Africa that specifically targets sustainable energy goods and services, and to provide the expertise and capacity building needed to enhance deployment of locally manufactured renewable energy and energy efficiency goods.
31. Infrastructure projects are the most visible sign of Chinese economic activity in Africa. In 2013, for example, state-owned China Machinery Engineering (CMEC) announced that it had signed a US\$127 million contract to build and expand power grids in six cities in Equatorial Guinea, and a US\$199 million contract to build a national power supply system. In July 2013, CMEC won contracts to build two power plants in Nigeria for US\$621 million. Such cases open the door for China to invest in Africa's renewable energy and energy efficiency sectors, transforming the ways that electricity generation, transportation and buildings are designed and used.
32. UNEP has a Memorandum of Agreement (MoA) with China's Ministry of Environmental Protection (MEP), signed in 2009. Considering the UNEP Country Cooperation Framework on China (2014–2017), UNEP will, among other things:

“Facilitate China in achieving the target of green transition and disseminating the concept and practice of ecological civilization,” and

“Facilitate China's role in South-South Cooperation and share China's experiences through the tripartite cooperation mechanism.”
33. China's MEP will, among other things:

“Provide support to UNEP to identify projects to build the environmental capacity of developing countries targeted by the China Trust Fund,” and

“Facilitate communication with other ministries and agencies.”
34. This MoA could be used as a framework to facilitate dialogue between UNEP and China's MEP on the inclusion of SE4ALL. It could also facilitate the transfer of Chinese know-how on low-carbon urbanization and ecological civilization, possibly under FOCAC, to African countries, involving other SE4ALL partners and donors in a coordinated manner that applies principles of South-South and triangular cooperation.
35. For example, the recent hosting of the Global Efficient Lighting Forum in China, organized with UNEP, is a concrete example of South-South Cooperation and how China could support the Sustainable Energy for All initiative globally.

36. UNDP has also signed a Memorandum of Understanding with China's National Development and Reform Commission (NDRC) in support of South-South cooperation, particularly with Africa. This and other official existing instruments can be used to support the trilateral cooperation being proposed here. These could benefit from the SE4ALL platform to scale up and strengthen their south-south cooperation agreements.

VI. The advantages of partnerships and triangular cooperation

37. Foreign aid to the energy sector has changed drastically over the last few years to cope with and adapt to the evolving needs and priorities of developing countries. Factors contributing to these changes include technological shifts; better knowledge and science (and acceptance of this science) about the link between energy and other pressing issues such as climate change, health and food security; and more-innovative mechanisms for delivering aid that combine technical assistance, trade and investment. Most importantly, there is a recognized need to align aid to the needs and priorities of receiving countries. In its recent White Paper on Foreign Aid, the Chinese government makes this both a priority and a pre-requisite.
38. Consequently, the evidence suggests that the most effective strategies for addressing the development challenges of today are those that promote integrated approaches. This is particularly true in the case of energy.^{xix} Approaches that allow energy policies to be coordinated with policies in other key sectors such as industry, buildings, urbanization, transport, agriculture, infrastructure and climate change are the most effective. As new demands emerge in the energy sector that require a more diverse set of stakeholders and more linkages with other economic sectors, the approaches that will have the greatest impact are those that enhance partnerships, encourage policy dialogue and coordination, and avoid fragmentation. These approaches also help to ensure that any foreign aid that is provided is fully mainstreamed and in line with national priorities.
39. The approach suggested here specifically addresses these changing needs and priorities around the world. SE4ALL offers a platform based on partnership building. With a vast network of partners that include governments, international institutions, multilateral development banks, private business and other sectors, SE4ALL provides a flexible mechanism to bring the most relevant and adequate partners to a particular project or programme as needed. The innovation being suggested here is to use the SE4ALL platform to promote South-South cooperation either directly or through a "triangular cooperation" modality. While South-South cooperation is most often practiced, triangular cooperation is a relatively new modality of development cooperation.
40. As noted earlier, triangular cooperation involves three parties, or sets of parties, getting together to promote development cooperation in support of a particular goal or objective. In this particular case, the three parties would be a developing-country recipient (specifically, an African country, since we are suggesting initiating this approach in Africa), China and SE4ALL. SE4ALL will be responsible for bringing other donor partners to contribute, as needed, in those areas and with technical assistance or finance in cases where South-South cooperation cannot respond by itself. The result of this triangular cooperation is a partnership that comes together in response to specific needs identified by the country, and within a programmatic framework with broad development objectives and ambition.

41. The proposed triangular cooperation is based on the concrete offer by SE4ALL to serve as an entity that carries out facilitating tasks ranging from the identification of needs, to helping to formulate agreements of cooperation with the recipient government (in consultation with China and potential partners), to support in the implementation and resource mobilization for technical assistance and investments. The proposal is to use the unique SE4ALL platform to ramp up action and investment in SE4ALL’s areas related to the three objectives on energy access, renewable energy and energy efficiency as well as to promote South-South cooperation with the support of SE4ALL’s vast networks of partner countries and stakeholders.
42. One of the attractive features of SE4ALL is its universality. Not only are developed countries fully supportive, but more than 80 developing countries also have engaged as partners with the initiative. This includes over 40 countries in Africa. Table 1 highlights the developing countries that are now active partners of the SE4ALL initiative, all of which are potential beneficiaries of the South-South or triangular cooperation being proposed.

Table 1. SE4ALL Developing Countries Partners

Region	Africa & Middle East (43)		Americas & Caribbean (20)	Asia Pacific (14)	Europe & CIS (6)
Countries	<ul style="list-style-type: none"> • Angola • Benin • Botswana • Burundi • Burkina Faso • Cameroon • Cape Verde • Central African Republic • Chad • Congo • Cote d’Ivoire • Democratic Republic of Congo • Ethiopia • Equatorial Guinea • Gabon • Gambia • Ghana • Guinea-Bissau • Guinea-Conakri • Kenya 	<ul style="list-style-type: none"> • Lebanon • Lesotho • Liberia • Malawi • Mali • Mauritania • Mozambique • Namibia • Niger • Nigeria • Rwanda • Sao Tome and Principe • Senegal • Sierra Leone • Somalia • South Africa • South Sudan • Swaziland • Tanzania • Togo • Uganda • Zambia • Zimbabwe 	<ul style="list-style-type: none"> • Argentina • Barbados • Belize • Bolivia • Colombia • Costa Rica • Dominican Republic • Ecuador • Grenada • Guatemala • Guyana • Haiti • Honduras • Peru • Jamaica • Mexico • Nicaragua • Suriname • Trinidad and Tobago • Uruguay 	<ul style="list-style-type: none"> • Afghanistan • Bangladesh • Bhutan • Cambodia • Fiji • Indonesia • Laos • Malaysia • Mongolia • Nepal • Philippines • Pakistan • Sri Lanka • Viet Nam 	<ul style="list-style-type: none"> • Armenia • Kyrgyzstan • Montenegro • Tajikistan • Moldova • Turkey

43. SE4ALL is a fully country-driven initiative. In consultation with partner countries, it has developed an indicative four-stage process that can be adapted by each country to ensure that participating countries themselves fully direct the process and articulate their needs and priorities. This four-stage process includes: 1) formal engagement by countries, 2) stock-taking and rapid assessment of areas of greatest need and with greatest opportunity for impact, 3) preparation of an action agenda and 4) preparation of specific projects and investments in support of one or more of the goals of SE4ALL: energy access, renewable energy and energy efficiency (see Figure 5).

SE4ALL Country Action Process



44. SE4ALL would facilitate the formulation of a South-South or triangular cooperation programme that could be developed for each country with China, and that would respond to the expressed needs of governments. This could be a comprehensive programme involving policy and regulatory framework support, as well as implementation that requires broader development cooperation and investments (of which equipment would be one important component). Or, it could be a more limited and punctual programme of support. SE4ALL's role would be to help provide a programmatic approach and to bring additional partners and funders of the project or programme where the China South-South cooperation is not able to supply them.
45. **Developing Country Partner:** Because this would need to be a country-driven process, SE4ALL partner countries would need to express interest in benefiting from the initiative and to enter into an agreement with China and SE4ALL. Once this is established, SE4ALL, most likely through the office of the UN Resident Coordinator, could be a facilitator in the discussion with the recipient government and among all parties on the design of a possible programme for the country.
46. **Chinese Support:** China would commit to supporting the programme with inputs that it will define for each case (these could include, or be restricted to, equipment and infrastructure components as well as technical cooperation, investment, trade, and knowledge sharing). This would be the South-South component of the programme.
47. **Third-party Partner:** The SE4ALL partners would vary from country to country as needed and as per interests expressed. They could include bilateral agencies, UN system agencies, multilateral development banks, businesses and others as needed and as agreed by China and the recipient government. SE4ALL partners would commit financial and in-kind resources for implementing those components in need of development cooperation and/or investments that the China South-South cooperation is not able to provide.

48. The formulation of each programme will include the details of implementation, funding and management, and will be tailored to the needs of each country. Needless to say, it is an arrangement that lowers significantly the transaction costs for everyone.

VII. Where China can make a difference

49. Africa is endowed with immense energy sources, both renewable and non-renewable. It has vast hydropower and geothermal potential, as well as oil and gas reserves. It also has abundant solar radiation throughout the year, and studies confirm the availability of abundant wind energy resources in some areas of the continent. However, these energy endowments remain highly underutilized. This is a sad dilemma given that more than one out of two Africans does not have access to modern energy, with this share rising to nine out of ten people in rural areas.
50. Despite its vast endowment of energy sources, Africa continues to face critical challenges related to the energy sector, which is characterized by lack of access to modern energy services (especially in rural areas), poor infrastructure, low purchasing power, low investments and over-dependence on traditional biomass to meet basic needs. Furthermore, energy use across the different sectors remains inefficient, with the continent still having the highest energy intensity per unit of GDP. And the continent suffers from weak capacities and institutions.
51. SE4ALL is working with several of its partners to help Africa address these urgent needs. All of these partners are potential third-party partners in the triangular cooperation being proposed. The African Development Bank, for example, is acting as the Regional Hub for SE4ALL, providing technical and financial support, and is planning to invest some US\$20 billion in energy by 2030. Other principal partners include UNDP, UNEP, UNIDO, FAO, the World Bank, and the European Union and its member countries. In several countries, Action Agendas are being formulated with very concrete proposals on the actions and types of investments needed. Their focus is on addressing the immense challenges in each of the three SE4ALL goals (energy access, renewable energy and energy efficiency) in support of poverty eradication and economic development for the region.
52. The triangular cooperation being proposed here would allow China to implement its South-South cooperation in the context of broad programmes in partnership with others. This will not only increase its impact but also allow China to enter into new South-South cooperation areas that require multiple entries and resources that are not normally or readily provided by only one actor. The SE4ALL platform can help China share its many successes, including in addressing energy access and moving hundreds of millions of people out of poverty; dramatically increasing investment in and production and deployment of renewable energy domestically; and achieving impressive improvements in energy efficiency in the last two decades. In each of these areas, Chinese expertise and technology can make a great contribution.
53. Below is a list of potential areas where triangular cooperation can contribute. It is by no means exclusive and presents only a sample of dozens of potential areas where Chinese South-South cooperation would most likely be greatly welcome.
54. Energy access for rural and isolated and dispersed areas: These areas, home to most of the population without access to modern energy, face multiple barriers and constraints to energy access. They include economic, social, technological and financial limitations coupled with weak institutions and policies. It is impossible to address these problems with limited or

isolated interventions. They require action in all of the areas mentioned, often concurrently. Renewable energy technologies (solar, wind and hydropower – particularly small hydro), where China excels, are some of the most promising responses for providing energy access to these areas. In many cases, rural or isolated areas are not serviced by a central grid but rather by decentralized and distributed generation from local providers. Having the right and affordable technology is crucial. Having others address the funding gap for these projects in cases where residents have minimal if any ability to pay is also essential. And it is here where other SE4ALL partners can help formulate projects and programmes with several components, where one or several of them can be met by the South-South cooperation and other components by other partners.

55. Renewable energy for urban areas: The energy access needs in urban areas are equally great, and there are many areas where Chinese South-South cooperation could contribute. Three examples include solar water heating; lighting and electricity for educational facilities; and cooling facilities for health centres. Again, these are all areas that require collaboration with other sectors of the economy and where additional inputs and financial and technical assistance requirements are essential. Triangular cooperation could bring together a number of contributing partners, each with their own capabilities and all within a structured programme
56. Energy efficiency: SE4ALL has launched a major flagship programme on energy efficiency – the Global Energy Efficiency Accelerator Platform – that is targeted at cities and regions interested in scaling up action and investments in lighting, appliances, transport, district energy systems and buildings (all areas in which China excels). Several cities in Africa are candidates for this flagship programme, which aims to help cities and regions formulate road maps for scaling up energy efficiency in the next decade. As everything with SE4ALL, this is a strictly country-driven initiative in which cities and regions, with the support of the central government, sign on to SE4ALL’s Energy Efficiency Platform in order to benefit from partnerships. For example, partners can contribute with technical assistance, equipment and hardware, financing, or investments (as in the case of the private sector). SE4ALL would help identify and design the programmes to be implemented, and then broker partnerships in several cities in Africa, bringing together the partners to support the priorities of that city, country and region. The China South-South cooperation could be a partner in one or several of these initiatives, depending on the interest of the parties involved.
57. These are just a few examples to illustrate the potential of this type of triangular cooperation where SE4ALL can contribute. There are dozens of others that can be listed in each of the goals of SE4ALL, with direct relevance to the Chinese expertise and potential interest.
58. The sixth Forum for China-Africa Cooperation (FOCAC), to be hosted by South Africa in 2015, promises to be a major event on the diplomatic and climate change calendar in the run-up to the Paris-hosted UNFCCC COP21. With the expansion of the FOCAC agenda from its primary focus on economic development to also include wider partnerships, the FOCAC VI meeting is set to demonstrate how cooperation is evolving to encompass new areas of mutual concern.
59. The China-Africa partnership still has much more to contribute to the global economy and to global sustainable development in the coming years.

VIII. Recommendations

Recommendation 1:

China already has several South-South and other cooperation agreements with Africa. SE4ALL may be a useful platform to support and scale up elements of the current cooperation, particularly South-South efforts, through direct or triangular arrangements as described above. Subject to the interest of the Government of China, the option of using the SE4ALL platform could be explored through a detailed assessment of options and their potential usefulness.

Recommendation 2:

In the detailed assessment mentioned under Recommendation 1, explore how the SE4ALL platform might identify investment opportunities in the power and transport sectors and help bring about a sustained transformation of Africa's energy systems through sustainable infrastructure development.

In November 2013, Zhao Changhui, the chief country risk analyst at China Eximbank, announced that the central government (including state-owned banks) would provide US\$1 trillion in financing to Africa in the years to 2025.^{xx} Mr. Zhao told delegates at an Africa investment conference in Hong Kong that Eximbank would account for 70–80 per cent of the funds, which were to include direct investments, soft loans and commercial loans. He noted that:

“Africa for the next 20 years will be the single-most important business destination for many Chinese mega-corporations.”

In particular, Eximbank has plans to participate in infrastructure projects in Africa, including transnational highways, railways and airports.

Recommendation 3:

Subject to the interest of the Government of China on the proposal, SE4ALL would proceed to explore with African governments (through the UN Resident Coordinators in each country) the interest of such a collaboration platform.

Recommendation 4:

Also subject to the interest of the Government of China on the proposal of SE4ALL, the recommendation is to proceed to a detailed assessment of potential interest of partners in joining the Triangular Collaboration platform of SE4ALL-Africa -China, which would result in a list of potential donor partners interested in joining the Triangular Collaboration as third parties.

Recommendation 5:

Subject to the interest of the Government of China on the proposal, SE4ALL would proceed to assess the interest of UN agencies and financial institutions in joining the Triangular Collaboration platform of SE4ALL-Africa-China.

Recommendation 6:

Subject to a positive response on the recommendations above, prepare a report and present this to the

Government of China through the UN Resident Coordinator by the end of January 2015. This report would include recommendations for implementation, as well as timelines.

Recommendation 7:

The recently created G20 workstream, announced during the Brisbane Leaders Summit, as part of the G20 Energy Efficiency Action Plan^{xxi} could offer an interesting option to support action in this areas. This specific workstream will be dedicated to financing - both private and public - of energy efficiency, as a core component enabling more energy efficiency projects in all sectors. The work focus will be on facilitating a closer exchange between finance and policy, and on both demand and supply sides of financing. These innovative angles are to be viewed as accelerators to help bridge existing gaps blocking the development of energy efficiency projects and financing at a larger scale. The Finance Initiative of UNEP (UNEP FI) has been very supportive and involved with IPEEC (International Partnership for Energy Efficiency Cooperation) in the creation of this workstream, and shall continue in the work going forward.

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Action Plan (including the presentation of the energy efficiency finance workstream on page 6) : https://www.g20.org/sites/default/files/g20_resources/library/g20_energy_efficiency_action_plan.pdf