

## **Challenges in combating desertification in sub-Saharan Africa, which role for China?**

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### **Abstract**

Sub-Saharan African (SSA) countries are witnessing both man-made disasters, such as corruption, civil wars, fratricide conflict; and natural disasters, such as water scarcity, drought and desertification. These phenomena have led to land degradation and affected the economic and living conditions of the population. In response to these last challenges, several international conventions and domestic laws have been enacted to prevent and tackle their threatening effects. Among these attempts, is the United Nations Convention on Combating Desertification (UNCCD). This convention requires international co-operation in which China and Africa are both engaged.

Based on the above premise, the purpose of this article is to evaluate the main challenges in combatting desertification in SSA and to assess the role that China is playing with Africa to overcome the relevant challenges. Some questions will be addressed hereto: how does the UNCCD accommodate the needs of SSA countries and what are the remaining challenges? How do SSA countries comply and respond to the requirement of the convention and what are the unresolved issues? Finally, how are China and Africa co-operating or may better co-operate to tackle the nexus challenges on desertification?

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## **Introduction**

Land, Air and Water (LAW), are among the most needed resources as they are the basis for survival. Their degradation threatens the economy and the living conditions of human beings. Arable land is under threat today. Two thirds of the land in Africa is classified as deserts or dry land. These are concentrated in the Sahelian region, the horn of Africa and the Kalahari in the south (ECA, 2007). Serious drought and desertification, particularly in these regions are one of the main problems that should not be left behind when dealing with environmental issues. Unfortunately, it seems to be neglected as a global challenge (Fuchs, 2005).

By analysing the causes of desertification particularly in Africa, one may notice direct and indirect factors combined to the socio-economic realities. Among the typical direct causes of desertification in the region are poor agricultural practices, such as continuous cultivation without adding any supplements; overgrazing; poor land management practices; and lack of soil and water conservation infrastructures. Another serious cause of desertification is the necessity to meet energy needs and expand agricultural land. More than 15 million hectares of tropical forests are depleted or burned every year in order to provide for small-scale agriculture or cattle ranching; or for using as fuel wood for heating and cooking (ECA, 2007). The issue can therefore be addressed in several angles, namely geographical, sociological, economical and legal.

On a legal point of view, as law has a moving target, it involves Land, Air and Water and implies enforceable binding rules and principles to protect these main components of the environment. Environmental Law is a collection of legal rules concerning the use, protection, management or restoration of the environment in all its forms: terrestrial, aquatic and marine. International Environmental Law indeed is a set of international rules and principles required for the protection of space, the biosphere, and global ecosystem. The definitions take into account the functional aspect of Environmental Law which is the cornerstone of this analysis.

The phenomenon of desertification is defined by the UNCCD (194 countries are members of the Convention) as land degradation in arid, semi-arid and dry sub-

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humid areas resulting from various factors, including climatic variations and human activities. In 1977, the United Nations (UN) adopted a plan of action to address the issue but despite the effort, the problem of desertification remains unsettled. The question of how to tackle desertification remains a major concern with many challenges. This issue called for a conference organised by the UN held at Rio de Janeiro in 1992. The conference resulted in the adoption of Agenda 21, the Rio Declaration on Environment and Development, the Statement of Forest Principles, the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention on Biological Diversity (CBD).

The conference succeeded in establishing the concept of sustainable development as a combination of economic growth, environmental protection and social improvement. The UNCCD was adopted following a direct recommendation of the Rio Conference's Agenda 21, and the resolution 47/188 of the UN's General Assembly. According to Article 2 of the UNCCD, the objective is:

*“to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international co-operation and partnership arrangements, in the framework of an integrated approach which is consistent with the Agenda 21, with a view of contributing to the achievement of sustainable development in affected areas”.*

Several countries have areas where desertification is occurring. The level of impact depends on the specific natural, socio-economic and political features of the area. The hardest hit is SSA, where poverty is more extensive, the level of awareness regarding potential catastrophe is low, and means for adapting and tackling the phenomenon are very weak (Winslow et. al. 2004). According to experts, SSA will lose two-thirds of its arable lands by the year 2025 (Youba, 2006:13). The UNCCD has been adopted to address the issue.

This paper will cast light on how the Convention on Combating Desertification accommodates the needs of SSA countries and what the remaining challenges are. The second part will address how the SSA countries responded to the requirement

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of the Convention focusing on the efforts at the sub-regional and regional economic and legal orders and the outstanding limits. The third part will show how China and Africa are co-operating to tackle desertification as it is requested by the UNCCD and beyond how the Forum for China-Africa Cooperation (FOCAC) is addressing or could better address the issue.

### **The International Legal Framework in Combating Desertification and the needs of sub-Saharan African countries**

According to the United Nations Environment Program (UNEP), desertification, land degradation and drought affect over one and a half billion people in more than 110 countries. This is a third of the world population, 90 per cent of whom are in low-income areas. The pathways out of poverty often depend on the resources that are lost: land, water and forests (UNEP, 2011). In Africa more than 73 per cent of the dry lands used for agriculture are already degrading. The UNCCD is seen as a new response to this age-old problem and the centrepiece in the international community's efforts to combat desertification and mitigate impacts of drought and ensure sustainable development. This convention is the sole legally-binding international agreement linking environment and development to sustainable land management. In the on-going ten-year strategy of the UNCCD (2008-2018) adopted in 2007, parties to the Convention further specified the aim to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability (Fuchs, 2005:292).

As the dynamics of land, climate and biodiversity are intimately connected, the UNCCD and the other two Rio Conventions, namely the CBD and the UNFCCC are also intrinsically inter-connected (Horstmann, 2006). These are among the international responses that derive from the 1992 Rio Global Earth summit. Each instrument represents a way of contributing to the sustainable development goals of Agenda 21. The three conventions are operating in the same eco-systems and addressing interdependent issues. The UNCCD helped to launch public awareness in Africa that has been put into practice by National Action Plans (NAP). It invites

countries to create conditions for greening the environment, in accordance with the means within their borders, by strengthening existing legislation on the subject or by establishing new laws, policies and programmes (Article 4 of the UNCCD). The convention places special emphasis on the concept of participation, which also applies to the NAP development process, promoting bottom-up approaches and seeking to involve social groups that are usually excluded from the political decision-making process. It highlights the fact that it is the local population who depends on the natural resources that are affected by desertification processes; they should be well-informed about the most suitable practices to combat the challenge. This lack of co-ordination leads to a conflict of interest between the primary concern of the population and the mandate of the government. In a way this lack of co-ordination is unlikely to attract international assistance.

Lastly, in the convention, the NAPs are conceived as continuous processes to promote dialogue and search for effective solutions. The actors must therefore engage in a continuous participatory process to review and update NAPs in the ambit of changing socio-economic and environmental circumstances. The convention however remains silent on the specific contents and forms of these legislations.

In sum, the convention has taken in theory important measures to accommodate the need of African countries. However, overcoming correctly the challenge of desertification depends largely on international pragmatic measures and on local conditions. Besides its physical consequences on ecosystems there is a wide range of socio-economic threats including poverty, food insecurity, water shortage, health problems and conflicts that can be associated with truly combating the phenomenon. People leaving in rural areas are not aware of the measures provided by the convention. Therefore, the issue of public awareness particularly in rural areas must be addressed further. As such, more sensitisation campaigns are needed to raise public consciousness.

With regards to the implementation strategies some key words should be noted at the light of Article 2. These are "effective action at all levels" supported by "international co-operation and partnership arrangements" aimed at contributing to

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the "achievement of sustainable development". Even though these features are in theory reflected in some African policies to combat desertification, outstanding issues linger in the implementation of such commands.

### **Sub-Saharan African countries responses in combating desertification**

SSA countries adopted plans of action as requested by the convention, at national, sub-regional and regional levels. Nevertheless, the threat of the desert is still rising. These plans being only political assessments, it is commendable to find appropriate measures to join theory to concrete practice. The merits of these plans of action will be assessed and the remaining challenges will be emphasised further. Few examples will be pointed out in comparison to China where it is appropriate.

#### *Actions taken at national level*

African countries are at different stages of developing and implementing their NAPs as requested by the convention. In April 2007, NAPs had been developed and adopted by 42 African countries. The majority of the remaining countries had launched NAP processes (ECA, 2007:7). The NAPs are the overall strategies for specific land and drought-related plans and programmes. They also serve as important tools in guiding the implementation of the convention and monitor efforts in combating desertification and poverty. Efforts are being made at all levels but still the challenge is over rising due to some internal and external reasons. Based on the UN's published data on action taken at national level to combat desertification, a good number of projects have been reported in different regions since 1997. According to the report, the United Nation Economic and Social Council recorded in 2007, countries that have succeeded in mainstreaming NAPs and other Sustainable Land Management (SLM) include Burundi, Kenya, Burkina Faso and Uganda (ECA, 2007).

In Senegal, since October 2008 a national programme of combating desertification had been launched by the ministry of environment and the protection of the nature. The main legal instruments established by the Government are twofold: legal instruments relating to land tenure and sectorial laws. For the last, there is the Envi-

ronmental Code provided by law 2001-01 of 15 January 2001, which gives principles and instruments for environmental protection and on the other hand supports the management of the urban environment. The actions against desertification are mainly conducted in five areas: Agriculture, Livestock, Forestry, Hydraulics, and Training Education.

Mauritania had its plan of action since July 2002 where the core principles are to define an appropriate framework for consultation to local population, NGO's, community-based organisations and local communities to improve their management of natural resources (PAN/LCD, 2002). This approach has among its guiding principles: the implementation of plan in a permanent participation, improving the lives of people by linking the management of natural resources and the fight against poverty.

In Niger the NAP has been effective since November 2000; the reason being that Niger has an arsenal of legal pro-activities to combat desertification (CNEDD, 2000). To build warrants of an effective implementation of the plan of action Niger is following the device of the decentralisation [*Programme d'action nationale de lutte contre la désertification et de gestion de ressources naturelles* (pan-lcd/grn), cit. p 52]. Indeed, actual distribution of powers assigned to the municipalities includes urban and rural planning and the protection of the environment (Saunders, nd:25).

Many efforts towards combating desertification could be recorded in SSA countries but despite these efforts there are common weaknesses that deserve more attention. In some African countries, like many other countries, the law in paper is promising but there is always a huge gap with the "law" in practice, and its implementation. Another problem witnessed in SSA countries is as a very weak technology with very little command of data on their own natural resources. Environmental data is often collected, analysed and processed through projects that are limited in time and space without any follow up. Unlike in China, there are very few African countries that have genuine national programmes for monitoring resources and the degradation phenomena that affect them (Youba, 2012:14). To this extent,

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their land planning and development choices are seriously limited. Through national budgets, countries of the region are making provisions to fund directly or indirectly projects and activities to address drought impacts and tackle desertification. However, funding is channelled mainly through sectorial budgets particularly in the agriculture, environment and management of natural resources. Generally, these sectors receive low funding and the end use is not controlled. This lack of control encourages corruption or simply a misuse of public funds. As a result, there persists funding gaps for addressing the identified sustainable land management priorities. Due to these shortcomings, there should be a more pragmatic international response and device for control. Some actions are being taken at regional level to strengthen NAPs.

#### ***Actions taken at regional and sub-regional level***

The New Partnership for Africa’s Development (NEPAD) contains the environment initiative, which includes combating desertification as an integral and priority programme area. Action plans under this initiative are designed for the sub-regions in collaboration with African sub-regional organisations such as Permanent Inter-State Committee for Drought Control in the Sahel (*Comité Inter-Etat pour la Lutte contre la Sécheresse au Sahel* – CILSS). In the same direction, as reported by the Economic Commission for Africa (ECA), Sub-regional Action Programmes (SRAP) and the Regional Action Programme (RAP) on drought and desertification have been undertaken to complement the NAPs particularly with respect to trans-boundary resources such as lakes, rivers and forests; and crosscutting issues including information collection and dissemination, capacity building and technology transfer. Three SRAPs have been developed and implemented under the auspices of sub-regional institutions, namely the Economic Community of West-African States (ECOWAS) the Southern African Development Community (SADC), and the Inter-governmental Authority on Development (IGAD).

The treaty establishing the ECOWAS dedicates a chapter on environmental cooperation and natural resources. In light of its Article 29, member states shall undertake to protect, preserve and enhance the natural environment of the region and

co-operate in the event of natural disasters. To this end, they shall adopt policies, strategies and programmes at national and regional levels and establish appropriate institutions to protect, preserve and enhance the environment, control erosion, deforestation, desertification, locusts and other pests. In the aim of combating desertification and drought, the ECOWAS environmental policy aims, *inter alia*, at promoting appropriate partnerships for improving sub-regional co-operation on multi-lateral agreements on the environment, supporting the functioning of a regional technical consultation to monitor and boost the implementation of the Conventions.

The community aims also at promoting sustainable management of resources for the improvement of an environment-friendly life, to improve sustainable management of natural resources, ensure smooth implementation of joint programmes that address the causes and symptoms of land degradation particularly: good management of woodlands and off-forest trees in the sub-region through large scale reforestation programmes and integrated local programmes for rural development (ECOWAS Commission, 2008).

In the SADC sub-region, priority was given to programmes designed to fight drought and food security as a result of frequent droughts with devastating impacts on agriculture and food security. The region is investing heavily in irrigation. Furthermore, a number of sub-action plans have been undertaken to combat desertification. Among this plan is the *Kalahari-Namib Action Plan* that is aimed at achieving sustainable exploitation of natural resources, to stop human-induced land degradation and desertification and improve welfare of the population (Costantinos, 2003).

In the IGAD sub-region desertification control has been one of the bases at the creation of the organisation. Since its inception this issue remained a central objective of the Authority. The IGAD member states are Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, and Uganda. The Article 13 (g) and (h) of the IGAD identifies desertification as important attempt for the Authority. To this aim, a New Environment and Natural Resources Strategy has been developed and endorsed by

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the Ministers of Environment and Natural resources of the sub-region (Costantinos, 2003).

There are other initiatives aimed at mobilising and channelling funding programmes to combat desertification. In June 2007, the Global Environmental Facilities approved US\$ 150 million funding for the Strategic Investment Programme for Sustainable Land Management for sub-Saharan Africa (ECA, 2007:36). The programme aimed to restore soil fertility, help boost food security, increase farm incomes, maintain ecosystem services, and engage local communities in better managing their lands. The beneficiary countries are Benin, Botswana, Burkina Faso, Burundi, Comoros, Central African Republic, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, South Africa, Sudan, Swaziland, Tanzania, Uganda, and Zambia (ECA, 2007:37). In another hand with the support from Norway, the UNEP provided support to Mozambique, Libya, Ethiopia, Ghana and Cameroon to develop their national action plans for the environmental initiative on a pilot basis. These pilot programmes are also being operationalised through innovative arrangements initiated under the UNCCD.

The *chef de files* (a new arrangement initiated by the UNCCD) are development partners that have accepted to act as representatives of the African governments in support of UNCCD implementation. The so called *chef de files* provide leadership within the aid community to enhance support for NAP for a specific country (ECA, 2007:41). Canada was rendering this support to Ghana. Today with its withdrawal from the UNCCD, this gap should be considered further. Norway giving supports to Ethiopia; Italy to Niger; the Netherlands to Burkina Faso and Senegal; France to Chad and Cape Verde; and Germany to Morocco and Tunisia (ECA, 2007:41). Numerous co-operation efforts should be acknowledged, namely with the European Union (EU) and with America. For instance in 2011, African Union project on the Great green wall, was supported by the EU and Food and Agriculture Organization, aiming to address desertification, land degradation and drought in the Sahara and Sahel (Europafrika, 2011). Even though these efforts should not be underestimated, it should be seen behind the rhetoric how effective this funding

helps to tackle the imminent needs on combating desertification.

### ***Remaining challenges***

There are internal and external challenges that involve socio-economic dimension to which it can be added the failure of regional organisations to take effective actions.

As for the internal reasons, one can mention the poor co-ordination and collaboration among actors. In that sense, despite the call of the UNCCD to run an effective bottom up approach, rural habitants are being involved in the process only when it comes to work the land or plant trees. Insufficient political will affects the local population. There are also a lack of in-depth understanding and appreciation of drought and desertification issues, especially their links with poverty (Arba Diallo, 2005:158). Poor people are in a need to over exploit land resources in order to survive and the resulting impoverishment of land decrease the potential for subsistence and income creation. To this extent, poverty is both the cause and the consequence of desertification. (Arba Diallo, 2005:158). There is a weak institutional capacity including poor set-ups, lack of legislative support and inadequate human resources. The understanding and appreciation of drought and desertification issues due to inadequate information on drought, desertification and dry lands are also further challenges. The difficulties encountered in accessing and sharing information continues to obstruct environmental activities and progress. The political instability and conflicts faced by some countries in the region breeds conditions such as displacement and concentration of populations followed by destruction of natural resources. This stimulates land degradation and hampers implementation of programmes to reduce poverty and address drought and desertification.

As for the external or independent reasons it can be mentioned that the technology option that empowers communities remains largely inaccessible and unaffordable, particularly to a majority of rural populations and the urban poor. There is also a weak natural resources management policy that justifies the anarchic share of natural resources. Regarding these remaining challenges, it is of interest to see how China and Africa are jointly tackling the issue or what China is doing to assist

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Africa in combatting desertification.

### **Chinese Strategic Assistance in combating desertification in sub-Saharan Africa**

The UNCCD calls for international co-operation and partnership arrangement to hand-in-hand tackle the challenging issue of desertification. On this basis, China is lending support in addition to its role on forming strategic partnership with Africa.

As the French proverb states, charity begins at home (*Charité bien ordonnée commence par soi-même*), China is continuously making efforts on the domestic battle against desertification in its most affected areas (Tao, 2001). It has for instance established a committee for the implementation of the convention with its secretariat housed in National Greening Committee (State Forestry Administration). The government has also created the Desertification Monitoring Centre in order to collect macro dynamic information and data in real time (Ci & Yang, nd). This institutional framework is lacking in African countries. Furthermore, the Chinese government has made outstanding achievements over the past several years by means of planting trees, with the *Maowusu* project, A biomass thermoelectric project's in combating desertification in China's Maowusu desert, as one of the successful cases. The project made great efforts in dealing with global climate change, bearing social responsibility and developing green economy, its experiences are worth learning (Wei, 2012). The Chinese government has also tried with the green wall, a 4480 kilometres long belt along the edge of the *Gobi* desert which annually comes four kilometres closer to Beijing (Stenkjaer, 2010). This experience of establishing green walls is being experimented in Africa where it has been announced to build a "Great Green Wall" (*grande muraille verte*). This belt of trees intends to go through 11 countries across the Sahara through Senegal, Mauritania, Mali, Burkina Faso, Nigeria, Chad, Niger, Sudan, Ethiopia, Eritrea and Djibouti. The African green wall will be 7,000 kilometres long and 15 km wide and is designed to stop spreading the Sahara to the south. The Senegalese government launched the first steps to implement this plan since 2008 starting from Louga, (northern Senegal) (Kané, 2011). It is interesting to follow up the practical evolu-

tion of the green wall to better evaluate its progress. Progress and reporting currently vary from one country to another (Youth Green Team, 2013). The project is already showing some success: a World Food Program (WFP) report from Senegal details how villages in Widou Thiengoli (Region of Louga- Senegal) are now harvesting fresh fruits and vegetables from the dry desert sands, a by-product of the Wall initiative. The process is still in its infancy and will take several years to complete. It requires strong perpetrated political will. What's more, planting trees alone will not stop the Sahara's spread; it should be followed up by an obligation of result from for all concerned countries.

Back to the efforts from China as outlined earlier, the government is making efforts to promote the obligation as requested by the Article 2 and 12 of the Convention. Some events are worth to remember since they are the blueprint of these efforts. In August 1996, Beijing hosted the first Asia-Africa forum on Combating Desertification and mitigating the effects of the Drought. This conference adopted the Beijing framework for Asian- African Cooperation on Combating Desertification. As provided in the objective of the forum, the co-operation should involve capacity building, transfer of technology, know-how, research and development, new attitudes, approaches and understanding. In that direction, China can seriously speed up the transfer of expertise and technology to African countries and boost co-operation in the fight against desertification. This attempt could be strengthened under the framework of the China-Africa Cooperation Forum (Dan, 2011). Among the guiding principles of this conference, it has been outlined that co-operation between Asia and Africa has to be broad and mutually beneficial to be sustainable. Asia should benefit from the co-operation as Africa does. Given the different stages of technological development that countries in the two regions have reached, interests could be diverse. Furthermore, it should not be a donor and recipient relationship. The co-operation between Asia and Africa is claimed to be pursued based on equality and mutual respect guided by the desire to learn from each other. It should also promote a two-way flow of experience. A framework for action has been drawn in that direction. To combat desertification and drought issues, it is required to run activities and actions in the following priority areas:



- Poverty eradication through, *inter-alia*, local area development programmes, including capacity building, promotion of alternative livelihood, and socio-economic development;
- Combating land degradation through, *inter-alia*, soil conservation, water resources management, forest management, afforestation and reforestation activities;
- Knowledge-base, information and monitoring systems through, *inter-alia*, research and development, information processing, and early warning systems

Within the framework of the FOCAC, it should be mentioned that -n November 2006, the Beijing Summit and the Third Ministerial Conference of FOCAC were again held in Beijing and gathered 48 African countries and China. The two sides have decided to promote dialogue and exchanges in environmental protection and co-operation in human resources development. China committed itself to increase year after year the number of environmental protection administrators and experts from Africa to receive training in China (Cheng, 2007). In this last field positive actions are being taken. "China will continue to help African countries combat desertification" according to the Gansu Desert Control Research Institute (GDCRI). The GDCRI is based in northwest China in Gansu Province. This institution trains among others technicians from developing countries in desert-control methods (Cheng, 2007). It organises two training sessions in June and August on how to set up windbreaks and choosing plants for desert control (Cheng, 2007). Still under the framework of the China-Africa Cooperation Forum to Combat Desertification, a Seminar of 21 days training course was held in Beijing on 17 June 2011. This was sponsored by the Ministry of Commerce and the State Forestry Administration Office to Combat Desertification and the International Centre for *Bamboo* and *Rattan* Network. Seventeen domestic academics from related fields, experts, government officials and business leaders from African countries, gathered for that training to combat desertification. In this dynamic and in the frame of sharing technologies and knowledge the Chinese Government and the United Na-

tions International Strategy for Disaster Reduction Secretariat (UNISDR) another conference was organised on 24-27 September 2011 still in Beijing. Participants shared knowledge, scientific approaches and practical methods in drought monitoring, early warning and management of agricultural drought in four areas: national policy and existing mechanisms for drought management and risk reduction; national and regional early warning systems; and good practices in reducing the socio-economic impact of drought.

### ***Outstanding issues***

The aforementioned efforts should highly be acknowledged but it should not be mere theory followed by little actions. It should indeed be recognised that there is ambitious political joint efforts, but the implementation step is still lagging behind. The resolution of conferences, the earned experience during training should mainly be implemented in Africa for the enactment of plans and programmes that may support Africans to solve their problems. In this attempt the African side would have a great duty to make a sustained follow-up plan in the implementation of programmes.

Due to the gravity of the desertification and the wide field of land being affected, important funds are necessary to sustain the efforts on combating this threatening phenomenon. It is doubtful that China will play a direct role on this point. Indeed, the fund that the country is able to invest for its own problem on desertification is said limited and scattered (Tao, 2001:103). In China alone the direct annual loss associated with desertification reaches US\$ 42 billion (Tal & Cohen, 2007:164). In 2006, for instance, it has been identified by the China National Committee for the Implementation of the UNCCD the domestic weakness and challenges that China is encountering to combat desertification. These include, but certainly not limited to, the “fragile ecological condition, poor stability of man-made plant community, poverty in the affected areas, existence of natural and social factors resulting in desertification and the climatic variation that induced droughts”. It is true that the challenges ahead are still huge and the task still arduous (UNCCD, 2013:73). Therefore, more serious and adequate international responses are need-

ed. The existing financial management of the UNCCD for instance should be revised for more support to countries experiencing drought and desertification. As recommended in an audit of the financial management of the UNCCD, the secretariat should create a documented fund raising strategy to mitigate the risk of not having financial resources to implement the substantive activities and ensure adequate representation of developing countries in activities of the conference of parties (UNCCD, 2009; UNCCD 2013). Yet most SSA countries are too poor to invest in major projects that may help to combat desertification but exceptional efforts from the African governments themselves and a common political will be helpful. These governments should consider the challenge as being among the top priority and make efforts themselves to solve the issue.

With regard to China-Africa ties, it is deplorable that the transfer of technology from China to Africa is still low. Regarding this matter there is no institutional basis that sustains this co-operation as suggested by the Article 2 of the UNCCD. Beyond training session organized in the ambit of the FOCAC, there is neither scientific basis for decision-making in the fight against desertification nor concrete and sustainable action on the ground. It should be worth noting that both parties identified practical problems and proposed technical solutions that should be implemented within a short time frame.

### **Conclusion and recommendations**

Living in harmony with the land is like living in harmony with a friend. To build this environment-friendly policy, related programmes should be truly and efficiently executed. Any indecision is to banish. It is also worth to bear in mind that nothing less than a transformation of attitudes and behaviour toward the nature would bring the necessary changes. It is remarkable that 18 years after the UNCCD has been adopted, poverty and land degradation continue to expand in significant areas and a large number of people are being more and more affected throughout the world. The main goal is to achieve “zero net land degradation”. Despite the on-going efforts, policy-makers and scientists generally agree that land degradation problem needs to be addressed and tackled urgently. In theory, the

UNCCD offer the best response thereof, but in practice, the issue remains questionable as shows the evolution of the threat, the failure of regional organisations and the limited attention given by the countries that are not directly affected. Today it is fair to say that the convention has yet to unfold its potential. As it is the case with any environmental challenge, it is far easier to pass legislations than implementing them. In the poorest nations where destitution is a rule rather than an exception, it will take considerable assistance to bring people to a point where regulation is a realistic alternative (Tal & Cohen, 2007:216). It should be highly considered that SSA countries depend on agriculture, livestock, and natural resources to cover their basic needs. This dependence is unlikely to change in the near future.

The involvement of local populations, mainly farmers, should be encouraged. These people should see an advantage in planting trees and making money out of it. A full implementation of the UNCCD is a primary necessity to secure water and food for the poorest and most vulnerable people. It requires a complete and true international co-operation with serious commitment among nations. The international development assistance should be strengthened at all levels and in diverse forms.

As regard the recommendation for partnership arrangement stated in the UNCCD, could the China-Africa cooperation be seen as a suitable strategy? There can be a mixed response to this issue. Africa should look at China not for coming to solve the problem but for enacting new joint projects in the environmental protection, anti-desertification and sea water desalination. Local and scientific communities offer fundamentally different and yet complementary perspectives that can provide policy-makers with more holistic reliable and pragmatic guidance. China understood this aspect and established a committee for the implementation of the convention creating the Desertification Monitoring Centre in order to collect macro dynamic information and data in real time. This experience should be performed in Africa for more information and public awareness. Also a follow up mechanism should be maintained to assess the progress of national, sub-regional and regional programmes, to evaluate their usefulness and remaining challenges. As for the

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Great Green wall of Africa, it is advisable to enact this policy in each country's plan of action. China may also bring its expertise as it already succeeds on the establishment of its green wall with the *Maowusu* project. The mistakes and pitfalls encountered thereof should be among lessons to learn and be avoided in the African attempt of building great green wall.

A sustainable environmental protection requires basic financial support. If desertification is seen as a global challenge, then the international financial institutions should be truly involved. For sustainability, any funding for the implementation of programmes should be followed by an obligation of result. In areas where enforcement mechanisms are weak, the best compliance strategies may not be horizontal but vertical strategies of interaction, interpretation and internationalisation for a realistic "up-down, down-up" approach as suggested in the UNCCD.

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