

Policy pointers

Ensure training

programmes supported by the Chinese government better reflect the needs of African stakeholders and include both sustainable forest management and high value-added forest product processing for local livelihoods.

Direct more Chinese

support for training in Africa towards local communities, entrepreneurs and workers, not just experts and officials.

Increase impact of

Chinese-funded training by improving the needs assessment, training design, post-training monitoring and support for trainees in applying their knowledge.

Pursue collaboration

with experienced international organisations, to ensure that the training of individuals also builds organisational capacity and systems to support local forest-based economies.

Chinese aid for African forestry: progress, problems and prospects

African countries are the largest recipients of the Chinese government's human resource development programmes, including in the forestry sector. This research explores both provider and recipients' experience of the programmes to date; it also describes the training priorities of African forestry experts and the capacity of Chinese organisations to deliver them. We reveal strengths and gaps in the current training, and suggest how the latter can be bridged. This briefing concludes that all future China–Africa forestry development cooperation initiatives should be based on a joint needs assessment, context-specific design, and collaborative implementation and follow-up, to ensure that human resource development programmes build organisations' capacity to support truly sustainable forestry.

Africa has undergone rapid economic development, partly due to increasing use of its abundant natural resources. The continent's 674 million hectares of forest play a critical role in providing food, medicine, energy and timber. They are also vital for biodiversity conservation and other environmental services of growing public concern, including within China.¹ After years of over-exploitation, many African countries are now asking how they can achieve the *sustainable* use of forest resources. Developing sustainable timber and non-timber forest product (NTFP) processing and manufacturing — contributing to local economies and livelihoods — should be attainable, but is constrained by limited capacity and organisational weaknesses. But development cooperation initiatives with other countries have helped in some cases, and China has demonstrated its commitment to providing

training opportunities to several African countries over a number of years.

In recent years, approximately 10,000 African officials have participated in China-based training courses annually,² more than from any other continent. China's foreign aid is currently centred on capacity building, including training for technicians and officials, academic education and other exchange programmes.^{2,3,4} This is also the case with the forestry sector. However, unlike the agriculture sector, there is little understanding of the status, impact, problems and solutions surrounding capacity building in forestry. Our research investigated progress to date and the gaps between what China offers and what African countries need in terms of training priorities, course design and ways to achieve human resource development (see Box 1).

Human resource development implies more and longer-term support for people in their institutional settings

Chinese forestry aid to Africa: key features

Since 1993, China's forestry sector has implemented 131 foreign aid capacity building projects, training over 3,500 people from developing countries. Around 20 training workshops are held each year by qualified training organisations, including the State Forestry Administration, Beijing Forestry University, National Bamboo Research Center and the International Network for Bamboo and Rattan. African trainees are the largest recipient group, and courses specifically for African officials or technicians account for roughly 30 per cent of all forestry sector training hosted by China. These tailored workshops mostly cover forest law enforcement and governance, forest management, bamboo planting and processing, desertification control, wildlife conservation, biodiversity conservation, wetland protection, the control of harmful organisms, and climate change mitigation and adaptation. Most of the African forestry officials we interviewed (see Box 1) had participated in one or more training courses and generally felt that they had benefited greatly.

In addition, some demonstration sites for technology transfer have been established in Africa, in cooperation with local organisations. For example, the National Bamboo Research Center has set up bamboo cultivation bases in Rwanda and Uganda; at the sites, nearly 100 products have been developed for local

communities, about 600 local people have been trained and around 400 people have been employed to develop the value chain.

Whose needs does forestry training meet?

In our research, Chinese forestry training organisations and African recipients agreed there is a strong need for human resource development and that useful progress has already been made. But they also recognised that there are gaps between the training provided and what is needed.

African governments are strongly motivated to develop their national economies; they want to get the most out of their forest resources while maintaining sustainability. Respondents in the five African countries (see Box 1) shared some common concerns for the most important training areas for their stakeholders:

- **Sustainable forest management:** forest inventories, forest management plan development and implementation, natural resources monitoring and forest development project management
- **High value-added forest product processing:** including facility operation, processing techniques, corporate management and training for skilled workers
- **NTFP development for local livelihoods:** China's successful experience in NTFP production and trade could be harnessed in Africa to help improve local people's livelihoods and reduce communities' dependence on timber
- **Cultivating and utilising plantations:** the development of plantation resources — another area of Chinese expertise — can provide uniform raw material for certain forest products
- **Lesser-used timber species development:** research and development of the potential timber value of certain tree species that are not currently commercially harvested.

Meanwhile, the forestry training organisations interviewed identified the areas in which they perceive China to have strong expertise, notably: plantations, bamboo processing, NTFP processing and utilisation, wildlife conservation, sustainable forest management, forest governance and combating illegal logging, wetland protection and desertification control. While this expertise covers key elements of the African priority training areas (eg sustainable forest management, plantation development), a mismatch is also evident. For example, while China would like to share its expertise and

Box 1. Our research: exploring Chinese forestry training in five African countries

- **A survey** was conducted of Chinese forestry training organisations qualified for foreign aid: six organisations responded to a detailed questionnaire about training achievements, problems and challenges, priority areas of training, and types and format of training courses.
- **A workshop** held in August 2015 brought together forestry training organisations and competent authorities for human resource development, including the Ministry of Commerce and the State Forestry Administration, as well as relevant experts from forestry human resource development. Participants discussed training organisations' capacity to provide courses, the challenges they face and ways to overcome them.
- **Semi-structured interviews** with senior forestry officials from Cameroon, Democratic Republic of Congo, Gabon, Madagascar and Mozambique were carried out in June 2015,⁵ which sought to understand capacity building needs in target African countries. The interviews focused on the current forestry training provided by China, looking at perceptions of priority areas and preferred forms and mechanisms.

experiences in wildlife conservation, the African recipients interviewed show more interest in developing lesser used species.

Who needs forestry training?

Following social changes brought by rapid economic development, it is no longer appropriate or effective for training to be targeted only at Africa's public officials and senior technicians. Non-governmental stakeholders and local communities are also vital to the future of the continent's forests. Successes in enabling forest sectors to achieve sustainable resource use, and to generate good returns for the local and national economy, are often characterised by a mix of government and non-governmental organisations that have worked together to sustain the effort. Focus has shifted to the practical techniques required for forests to play their role in economic development, and so to expand the range of people who receive capacity building support to include:

- **Local communities** who would benefit from training in developing plantations, NTFP use, sustainable forest development and other topics
- **Grassroots technicians** who need to improve their capacity to promote the wise use of timber and NTFPs among local communities
- **Local people, entrepreneurs and workers** who could be trained in advanced processing to contribute to the development of small-scale timber businesses and local livelihoods.

However, Chinese training organisations are still focused on public sector experts. Our workshop and questionnaire surveys showed that although some Chinese experts advocate expanding the scope of training to local people, trainee recruitment procedures and available resources make it easier to target officials and, sometimes, NGOs' representatives. However, there is increasing discussion of including local people in on-site demonstration training projects. In addition, the training organisations also hope to include officials and professionals from forestry-related sectors, such as environment, trade and commerce, tourism and handcrafts if they have more freedom for trainee recruitment.

Gaps in the training types and formats

Cultural and educational differences between China and Africa mean that African government respondents and Chinese training organisations have different views on the preferred types and formats of training. Although the respondents think that the short-term training projects (eg typically two-week modules) that China

provides are suitable for officials, they would like to see more long-term academic (undergraduate, Masters and PhD level) and on-site grassroots training. The latter would ideally involve Chinese experts and senior technicians for the training of local communities, with a focus on local industry development.

Chinese training organisations, on the other hand, suggest senior official training projects, lower-level official training projects and technical training projects should make up 20 per cent, 40 per cent and 40 per cent of the total training given, respectively. Senior experts and volunteers could be dispatched to African recipient countries according to need and the resources available in China, taking issues such as payment, language and internal procedural limitations into account. Chinese training organisations agreed that local grassroots training projects would be worthwhile to try, but suggested that they would work best if combined with specific practical projects.

Both Chinese and African respondents agree that there is a need for better post-training monitoring and evaluation in order to strengthen the design of courses and curricula as well as to gain a better understanding of the impact. They also agree that, while distance learning offered potential, it would need to be combined with opportunities for practical training and might be limited by poor infrastructure.

Conclusions and next steps

Analysis to date reveals a strong technical training model, in which Chinese experts train African recipients at locations in both China and Africa. Though technical training clearly has a vital role to play, other types of capacity building are needed too and China's human resource development cooperation initiatives may be very well placed to offer these. Work is needed to assess what more is needed beyond training individuals in order to understand how those individuals operate in the context of their organisations, and how to develop effective systems of appropriate forest and related technology use, management, participation, information, human resource, finance and monitoring within such organisations. While this still represents an agenda for 'human resource development', it demands more of a focus on human resource development *within organisations*, and implies more and longer-term support for people in their institutional settings.

Our research has revealed ample opportunities and willingness to enhance capacity building in the African forestry sector. A key step in putting such aspirations into action was taken with the Five-Year Plan for Forestry Human Resources

Development proposed in 2015 by China's State Forestry Administration (SFA). This represented an important opportunity to learn lessons from experience, integrate the self-identified needs of recipient countries and improve human resource development initiatives in the near future. In 2016, the final version of the 13th Five-Year Plan on Forestry Human Resources Development was officially released by the SFA, incorporating key results from this research about Chinese forestry foreign aid and human resource development in Africa. To implement the plan, our research suggests the following further recommendations:

1) **Develop joint needs assessments**, exploring the following question with a mix of government and non-governmental organisations in the target African countries: how could Chinese development cooperation best help enable forest sectors to be based on sustainable resource use and to generate good returns for the local and national economy?

2) **Increase the scale** of human resource development programmes in Africa, in terms of the number of target countries and the number of trainees. Key countries for the programmes should include Algeria, Cameroon, Democratic Republic of Congo, Ethiopia, Egypt, Gabon, Kenya, Liberia, Madagascar, Mozambique, Namibia, Niger, Nigeria, Tanzania, South Africa and Zimbabwe. The emphasis and focus of training could vary by region.

3) **Improve the quality** of human resource development programmes in Africa. While strengthening short-term training, medium- and long-term courses should also be provided to enhance impact. Medium- and long-term courses would last between six and 12 months, and focus on both theory and practical applications. In-service Master and PhD programmes could be provided for young African forestry professionals. Chinese experts in relevant areas could be selected and dispatched to the recipient countries to provide technical training on plantation establishment and management,

timber and bamboo processing, and forest livelihoods. The target groups would be forest managers, technicians, businesses and workers in local communities. Where feasible, training demonstration sites could be set up in recipient countries to locally tailor training.

4) **Enhance the monitoring of capacity building** and help trainees to apply what they have learned in their work. Monitoring parameters should include demonstration site selection, project design, training course curricula, lecture quality, training project implementation and impacts of training projects. A database of African trainees could be developed as a mechanism for feedback and to maintain contact with trainees on what they learned in their work, while also providing general information for forestry cooperation with African recipient countries.

5) **Deepen international cooperation**, so that human resource development programmes can truly build effective organisations and systems that nurture sustainable forestry sectors. Chinese training providers should seek further opportunities to work with United Nations agencies, development banks and international organisations with strong expertise in capacity building and organisational development for forestry's contribution to thriving local economies.

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Knowledge Products

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Notes

¹ Ebrahim, N and Weng, X (2016) Why Africa's forests are important — for its people, for China, and the world. IIED, London. <http://pubs.iied.org/G04092> / ² Tugendhat, H and Alemu, D (2016) Chinese agriculture training courses for African officials: Between power and partnership. *World Development* 18: 71–78. / ³ Li, A and Yazini, A (eds) (2013) Forum on China-African cooperation: The politics of human resources development. Africa Institute of South Africa, Pretoria. / ⁴ Sun L (2014) Problems and countermeasures in foreign-aid human resources development in the agriculture sector. *International Economic Cooperation* (10): 92–95. / ⁵ These countries each have rich forest resources and are the main African suppliers of timber to China; they are also among the major African recipient countries of Chinese human resource development aid.