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Organization of the
United Nations

INSPIRATION, INCLUSION AND INNOVATION

FAO–China South–South Cooperation Programme (2009–2019)





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FOREWORD

Despite the progress made to date, developing countries still face enormous challenges in achieving the Sustainable Development Goals (SDGs) of the 2030 Agenda – and there is even a slow increase since 2015 in the number of people suffering from hunger. Many of the solutions to these challenges exist within the global South – solutions that are home grown, sustainable, replicable and scalable. Developing countries have much to learn from exchanging their experiences and development solutions.

For more than 40 years, the Food and Agriculture Organization of the United Nations (FAO) has been engaged as an effective broker for cooperation among countries of the global South. FAO has made a substantial contribution to South–South and triangular cooperation by facilitating policy dialogue between governments and other stakeholders such as civil society organizations, academia and the private sector. The organization has provided a framework for cooperation, always striving to match demand and supply of knowledge and experience, offering technical oversight and promoting international standards, but also working through its extensive country-level presence and mobilizing resources for South–South and triangular cooperation.

The People's Republic of China (hereinafter referred to as China) has been one of FAO's main partners in the promotion of South–South and triangular cooperation. In terms of cooperation among developing countries, China upholds the principles of equality and mutual trust, building equal partnerships with parity of ownership and responsibility, mutual benefit and win-win cooperation, which are highly valued by FAO. Together, FAO and China offer considerable development knowledge and solutions that are relevant to South–South exchanges.

After more than two decades of increasing collaboration in supporting flows of technical assistance between developing countries, FAO

and China established in 2009 the FAO–China South–South Cooperation Programme, supported by a trust fund of USD 80 million provided by China.

This report reviews the Programme's activities and achievements over the last ten years, lessons learned and prospects for the way forward. It highlights and illustrates the Programme's distinctive features, particularly its inspiring, inclusive and innovative modalities of cooperation. Its multi-stakeholder approach brings together, among other key actors, farmers' cooperatives and associations, the private sector, academia and triangular partners. In this context, the Programme provides a platform for insights and perspectives of all development actors through its national, regional, interregional and global projects focusing on sustainable agricultural production, productivity and farmers' livelihoods. The Programme is majorly contributing to the realization of SDG 1 (end poverty in all its forms everywhere) and SDG 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture).

I am pleased to present this report on the tenth anniversary of the FAO–China South–South Cooperation Programme. Indeed, I trust this publication will further communicate the Programme's significant achievements over the last decade. This flagship Programme, with its groundbreaking approach and substantial impact, provides a strong example to expand future South–South and triangular cooperation initiatives, supporting all countries in their efforts to achieve the SDGs.



QU Dongyu
FAO Director-General

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ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
AUDA-NEPAD	African Union Development Agency
BAPA	Buenos Aires Plan of Action
BAPA+40	Second High-level United Nations Conference on South–South Cooperation
CAADP	Comprehensive Africa Agriculture Development Programme
FAO	Food and Agriculture Organization of the United Nations
GIAHS	Globally Important Agricultural Heritage Systems
FOCAC	Forum on China-Africa Cooperation
IFAD	International Fund for Agricultural Development
IPPC	International Plant Protection Convention
ISPMS	International Standards for Phytosanitary Measures
MARA	Ministry of Agriculture and Rural Affairs (China)
NPPO	National plant protection organization
OECD	Organisation for Economic Co-operation and Development
OSS	Office of South–South and Triangular Cooperation (FAO)
SDG	Sustainable Development Goal
SO	Strategic Objective
SSC	South–South cooperation
SSTC	South–South and triangular cooperation
TrC	Triangular cooperation
UNDP	United Nations Development Programme
WFP	World Food Programme



EXECUTIVE SUMMARY

In 2009, the Food and Agriculture Organization of the United Nations (FAO) and China established a close collaboration through the FAO–China South–South Cooperation Programme, supported by a trust fund of USD 80 million provided by China. This report reviews the Programme’s background, its values and principles, its activities and achievements over ten years, lessons learned and prospects for the way forward.

The Programme is guided by three core values: inspiration, inclusion and innovation.

The Programme is an important source of inspiration for the countries, partners and people who are involved in it. It stimulates the creativity and entrepreneurship of farmers, local and central governments, and non-governmental FAO partners. It has contributed to a new momentum for South–South cooperation (SSC) in FAO and among Member States. Based on the principle of “leaving no one behind”, this inclusive programme involves stakeholders at all levels, embracing farmers, women and rural youth, governmental and non-governmental partners, small island developing states, and least-developed and landlocked countries. The Programme is also an incubator and an engine for innovation at multiple levels, from adapted technologies to new approaches to implementing SSC activities; and from business methods and models to international policies and strategies.

This report highlights the broad, multifaceted activities and achievements of the Programme’s projects, moving from country-level to regional, interregional and global projects.

First, this report reviews the Programme’s national projects and their technological and socioeconomic impact on the ground, at farmer level. These projects

benefited 12 developing countries (10 in sub-Saharan Africa and two in Asia¹), in which teams of experts and technicians from China were based in host countries’ villages on long-term assignments to share knowledge and technologies related to sustainable agriculture. Their activities included cereal production and animal husbandry, horticulture, fisheries and aquaculture, rural energy, post-harvest techniques, beekeeping, irrigation, mechanization, and water and soil management and conservation. Achievements include:

- over 70 000 direct beneficiaries;
- 290 specialists in the field, including 240 experts and technicians on two-year assignments working hand-in-hand with local farmers;
- hundreds of low-cost, scalable technologies introduced, including 330 species or varieties of animals and plants, 120 production practices and 200 types of agricultural machinery and tools; and
- 1 300 training events for farmers.

This report then analyses the Programme’s regional, interregional and global projects, with a specific focus on the following projects.

- A regional project focusing on transboundary animal diseases in Asia’s Greater Mekong Subregion, helping to coordinate efforts to fight African swine fever, among others.
- An interregional project supporting FAO’s Globally Important Agricultural Heritage Systems (GIAHS) Programme, organizing high-level regional workshops and training national stakeholders in the identification, protection and

¹ In Sub-Saharan Africa: the Democratic Republic of the Congo, the Federal Democratic Republic of Ethiopia (Ethiopia), the Republic of Liberia (Liberia), the Republic of Madagascar (Madagascar), the Republic of Malawi (Malawi), the Republic of Mali (Mali), the Republic of Namibia (Namibia), the Republic of Senegal (Senegal), the Republic of Sierra Leone (Sierra Leone) and the Republic of Uganda (Uganda); in Asia: Mongolia and the Democratic Socialist Republic of Sri Lanka (Sri Lanka).

sustainable development of agricultural heritage sites. This project has given a new impetus to the GIAHS Programme through the designation of new sites and countries, and the submission of dozens of higher-quality candidates. The GIAHS sites act as laboratories for partnerships supporting sustainable practices and maintaining prosperous rural communities, and offer opportunities for changing policy paradigms.

- An interregional project supporting FAO's activities in relation to the International Plant Protection Convention (IPPC). The project trains representatives from IPPC contracting parties that now fulfil improved National Reporting Obligations. This is achieved through regional workshops and capacity evaluation of national plant protection systems. The project assists countries to foster sustainable plant protection

and to overcome the technical barriers that hamper their exports through compliance with international standards.

- Two global capacity-building projects (or facilities) that have benefited 1 000 trainees from over 100 countries. These projects are advancing the technological and policy capabilities of a wide range of stakeholders in the global South, including producers' organizations, officials and non-governmental stakeholders. Through high-level training courses, seminars, workshops, study tours and symposiums, these projects foster the sharing of knowledge and experiences, and facilitate policy debates and agreements among countries in relation to SSC frameworks, as well as in relation to many strategic agricultural development issues.



The past ten years have provided useful lessons for enhancing the Programme's implementation, and these are already being incorporated to enhance the Programme. There is a need to further improve the Programme's efforts in outreach and communication, gender-disaggregated statistics, monitoring and evaluation, as well as collaboration with the private sector. There is scope to reinforce the engagement of host country governments and the adaptation capacities of the Programme's cooperants – and to streamline procedures to speed up and reinforce implementation.

The Programme's future is built on four pillars:

- the Sustainable Development Goals (SDGs) of the 2030 Agenda, particularly SDG 1 (end poverty in all its forms everywhere) and SDG 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture);

- FAO's Strategic Programmes² and Regional Initiatives;
- regional and national development frameworks, including Africa's Agenda 2063 and China's Belt and Road Initiative; and
- the outcome document of the Second High-level United Nations Conference on South–South Cooperation (BAPA+40) in Buenos Aires.

In the mid-term, the way forward includes a special emphasis on the Programme's collaborations with national, regional and international initiatives, as well as a strategic increase in partnerships with non-governmental stakeholders, especially the private sector.

² FAO's Strategic Programmes: 1: Help eliminate hunger, food insecurity and malnutrition; 2: Make agriculture, forestry and fisheries more productive and sustainable; 3: Reduce rural poverty; 4: Enable inclusive and efficient agricultural and food systems; 5: Increase the resilience of livelihoods to threats and crises.



1 INTRODUCTION

South–South cooperation (SSC) is a broad framework for collaboration among countries of the global South in the political, economic, social, cultural, environmental and technical domains. The philosophy of SSC breaks the conventional dichotomy between donors and recipients, and seeks mutual sharing and exchange of development solutions among countries in the global South, guided by the principles of solidarity, respect for national sovereignty, national ownership and independence, equality, non-conditionality, non-interference in domestic affairs, and mutual benefit.

1.1 PROMOTION BY THE UNITED NATIONS OF SOUTH–SOUTH COOPERATION

Countries from the South offer myriad technical, institutional and policy solutions for sustainable development that have proven cost-effective and have considerable potential to be shared, scaled up and adapted for the benefit of other developing countries. South–South exchanges have taken the form of technology flows and adaptations, sharing of best practices, innovative solutions and experts, processes of regional economic integration, increased volume of South–South trade, and South–South flows of foreign direct investment. Today, South–South and triangular cooperation (SSTC) is increasingly playing a greater role in the international development cooperation landscape, having been recognized as an important means of implementing the 2030 Agenda for Sustainable Development.

Work on SSTC by the United Nations began following the first United Nations Conference on Technical Cooperation among Developing Countries in 1978, which produced the Buenos Aires Plan of Action (BAPA). This work has been guided by BAPA, decisions of the High-level Committee on SSC,³ and the United Nations General Assembly resolutions on SSC. Other global frameworks and outcome documents on SSTC include those of the 2009 High-level Conference on SSC, and the second High-level Conference in 2019 (BAPA+40) (see Table 1).

The FAO–China South–South Cooperation Programme was established in 2009 as a direct response to the call by Member States for increased United Nations and multilateral support for SSTC, including in the areas of knowledge exchange, technology transfer and capacity development.

³ The High-level Committee on SSC is a subsidiary body of the United Nations General Assembly established to provide guidance and monitor the compliance of the United Nations and its development system with BAPA recommendations and other intergovernmental decisions on SSC.

Table 1. Key milestones on South–South cooperation

1978	2009		2019
First United Nations Conference on Technical Cooperation among Developing Countries	United Nations High-level Conference on SSC	FAO–China South–South Cooperation Programme established	Second United Nations High-level Conference on SSC
Buenos Aires Plan of Action (BAPA)	Nairobi Outcome Document	General Agreement and Trust Fund	Outcome Document (BAPA+40)
The conference generated key recommendations on promoting South–South cooperation (SSC) at country, subregional, regional and global levels with support of the United Nations system and other multilateral organizations, upon the request of developing countries ⁴	Member States call on United Nations funds, programmes and specialized agencies to enhance capacities of developing countries to develop and formulate development cooperation programmes (United Nations General Assembly President, 2009)	“The General Agreement foresees that the trust fund shall give priority to projects which aim to improve agricultural productivity in developing countries... With South–South cooperation as the major pathway, China will send agricultural experts and technicians to the recipient countries...”	The conference recommended that the United Nations system should focus on “building the human and institutional capacity needed to formulate and implement national development policies, strategies and programmes for [South–South and triangular cooperation], including the sharing of good practices and experiences from the South, especially with the least developed countries [...] and to encourage the transfer of technologies on mutually agreed terms” (United Nations, 2019)

Box 1. South–South cooperation

The United Nations defines South–South cooperation as “a process whereby two or more developing countries pursue their individual and/or shared national capacity development objectives through exchanges of knowledge, skills, resources and technical know-how and through regional and interregional collective actions, including partnerships involving governments, regional organizations, civil society, academia and the private sector, for their individual and/or mutual benefit within and across regions. South–South cooperation is not a substitute for, but rather a complement to, North–South cooperation” (United Nations Secretary-General, 2016).

Box 2. Triangular cooperation

The United Nations defines triangular cooperation as involving “Southern-driven partnerships between two or more developing countries supported by a developed country(ies)/or multilateral organization(s) to implement development cooperation programmes and projects” (United Nations Secretary-General, 2016).

1.2 FAO’S EXPERIENCE IN SOUTH–SOUTH COOPERATION

For more than 40 years, FAO has acted as an effective broker for cooperation among countries of the global South, accumulating substantial achievements. FAO supports SSTC initiatives by:

- mobilizing, documenting and disseminating Southern knowledge, solutions and expertise, including through its virtual platform SSTC Gateway;
- facilitating dialogue between governments, institutions, civil society and the private sector to reach consensus and coordinate policies, strategies and programmes for SSTC;
- providing a framework for cooperation and exchanges among countries, institutions, cooperatives, farmers and international organizations, which facilitates mutual learning and ensures that cooperating partners observe mutual commitments;
- offering technical oversight and ensuring international standards are adhered to or adopted in the formulation, implementation, monitoring and impact evaluation of all programmes and projects;

⁴ BAPA, recommendation 24, para. 47. (“The organizations of the United Nations development system should, at the request of interested developing countries, provide assistance in their respective sectors in preparing programmes and projects through which the rich experience accumulated in these countries [...] could be shared and extensively applied”). (also available at www.unsouthsouth.org/bapa40/documents/buenos-aires-plan-of-action).

- ensuring that technology and knowledge are adaptable to local conditions and are environmentally and economically sustainable and socially inclusive;
- working through FAO's extensive country-level presence, enabling engagement, support and follow-up with national authorities and other relevant stakeholders;
- identifying similar constraints and potential solutions among regions and across similar socioeconomic contexts; and
- mobilizing resources for, and raising the visibility of, SSTC.

In the wake of the World Food Summit (1996), FAO provided a substantial impetus to SSC through the creation of the Special Programmes for Food Security over the period 1996–2008 and their successor programmes, the National and Regional Programmes for Food Security, over 2008–2012 (Tang, Lu and Deogratias, 2018). This was followed by a shift towards a more unified and strategic approach to SSTC, with enhanced institutional support and innovative partnerships.

SSTC is a key instrument in achieving FAO's Strategic Objectives and the 2030 Agenda Sustainable Development Goals (SDGs). In 2019, FAO established its Office of South–South and Triangular Cooperation (OSS), demonstrating the importance that the Member States attach to this approach.⁵ There is now a substantial momentum supporting SSTC, and the great majority of countries, following BAPA+40, recognize its potential for achieving the SDGs.

During the past two decades, FAO's efforts to foster SSTC activities raised financial commitments exceeding USD 370 million. Nearly 200 SSTC agreements were signed under the auspices of FAO, and more than 2 000 cooperants (experts and technicians) have been fielded all over the world to share their expertise and knowledge.

Currently, FAO is implementing about 40 SSTC projects in more than 90 host countries. In addition,

trust funds have been established, based on voluntary contributions from countries including

Brazil, Japan, Mexico, Morocco and the Republic of Korea, in addition to China. Some countries have contributed to SSC activities through unilateral trust funds, including Angola and Nigeria.

1.3 CHINA AS A PIONEER IN SOUTH–SOUTH COOPERATION AT FAO

China's engagement with FAO to support SSC activities started in the 1990s, and since then China has been the major promoter of and contributor to SSC at FAO.

China's approach to SSC upholds the principles of equality and mutual trust to build equal partnerships with parity of authority and responsibility, resulting in mutual benefit and win-win cooperation. This approach combines foreign aid with trade and investment to promote the development of host countries' agricultural value chains.

China as an early SSC partner in FAO

China was one of the first countries to engage in SSC with FAO, joining this movement shortly after the World Food Summit (1996) in support of FAO's Special Programmes for Food Security, followed by the National and Regional Programmes for Food Security.⁶ An example of China's early engagement with FAO in SSC is its longstanding cooperation in Nigeria, within the framework of a food security project funded by the Nigerian Government through a Unilateral Trust Fund project.

Inspired by the successes of its first FAO-mediated SSC experiences, in 2006, China established an SSC Strategic Alliance with FAO through a letter of intent. Three years later, in 2009, to further formalize their cooperation, China and FAO signed a general agreement. This arrangement established the FAO–China South–South Cooperation Programme together with the related USD 30 million Chinese trust fund supporting Phase I. In 2015, the Programme entered Phase II, based on a second general agreement and an additional trust fund from China of USD 50 million,

⁵ FAO Regular Programme funding dedicated to SSTC through OSS amounts to USD 4.6 million per biennium.

⁶ The Special Programmes for Food Security, and later the National and Regional Programmes for Food Security, placed a special emphasis on sub-Saharan Africa and least-developed countries. By 2010, China had signed ten cooperation agreements and dispatched more than 1 000 technical experts to support these programmes in host countries.



raising the Programme's total resources to USD 80 million. This substantial engagement makes China FAO's largest financial contributor to SSC. It also constitutes an important milestone in China's SSC cooperation with multilateral organizations.

Through its close SSC partnership with FAO, China has been leveraging knowledge gained from its domestic achievements on rural and agricultural development, and the sustainable reduction of hunger and poverty, to support other countries of the global South.

FAO and China both consider that SSC offers important potential to achieve SDGs 1 and 2. Both are inspired by the spirit of SSC (solidarity, respect for national sovereignty, national ownership and independence, equality, non-conditionality, non-interference in domestic affairs, and mutual benefit), and promote innovative patterns of cooperation in which developing countries work together and share costs and experiences.

China as a development knowledge provider

When the Asia-Pacific region exceeded the Millennium Development Goals to reduce poverty and hunger by half by the end of 2015, China stood out as the regional and world leader in these remarkable achievements. China's results were impressive, reaching the target of halving hunger well in advance of its commitments. Hundreds of millions of Chinese citizens were lifted out of poverty thanks to the country's strategic approaches to development. China aims to completely eradicate rural poverty by 2020.

Box 3. The FAO–China–Nigeria South–South cooperation experience

Between 2003 and 2014, nearly 650 experts and technicians from China have been fielded in Nigeria's 36 states for a minimum of two years. These cooperants, living in rural communities, have helped introduce over 200 Chinese-developed scalable technologies. Impact assessments, Government reports and farmers' testimonies agree that this South–South cooperation experience has had a considerable impact on the livelihoods of farmers across Nigeria – with estimates that the welfare of hundreds of thousands of farming families across Nigeria has dramatically improved. The benefits have flowed both ways, with the experts and technicians gaining valuable experience in a new culture, and improving their technical knowledge through localizing their technologies in a wide range of environments.

The development knowledge accumulated by China is relevant to SSC, particularly due to three characteristics. First, China offers practical agricultural technological and policy solutions that can be useful for other developing countries. The technological knowledge accumulated in China, especially in relation to the sustainable intensification of agriculture, offers great potential for exchange with other countries of the global South, and is highly relevant to SSC initiatives. Beyond technologies, China's experience in sectoral and macroeconomic policies and reforms also offers valuable expertise for SSC and approaches to the SDGs. China and its development policies can nurture flows of expertise to assist host developing

countries in their own governance reforms, strategic plans and achievement of the SDGs.⁷

Second, China has human resources that can be mobilized to assist developing countries. There are about 2 million agricultural experts and technicians working in the public and private sectors in China, covering a very broad array of scientific knowledge in all the disciplines that are relevant to rural development. These disciplines also include nutrition; international standards and certification processes relating to agrifood value chains and overcoming technical barriers to trade; and the manufacture of low-cost, efficient and effective mechanization, processing and laboratory equipment. China offers a wide range of experience and expertise in developing agricultural value chains and promoting related business models and public–private partnership agreements. Chinese value chains have undergone profound changes over the past decades that reduce transaction costs and enhance transparency – in particular with recent developments in information technology and traceability. This digitization process is accompanied by new patterns of agricultural extension targeting small-scale family farms. China continues to implement rural supply-side structural reforms, professional farmers’ development, agricultural modernization, the fight against climate change and promotion of low-carbon development. All these areas of expertise can potentially be used within the SSC framework.

Third, China offers a considerable experience in sharing technological and policy experience with and among developing countries through SSC. To support its SSC training activities, China has established a

number of national research and training centres in its territory. In 2014, FAO and China signed an agreement designating five of these as FAO Reference Centres.⁸

Importantly, China has also established a strategic initiative and a specific facility that proactively promote SSC. These are the Belt and Road Initiative and the South–South Cooperation Assistance Fund. The Belt and Road Initiative is a transcontinental long-term policy and investment programme which aims at infrastructure development and acceleration of the economic integration of partner countries. The Belt and Road Initiative promotes the connectivity of the Asian, European and African continents and their adjacent seas. It establishes and strengthens partnerships among the included countries, sets up connectivity networks, and realizes balanced and sustainable development in these countries.⁹ The South–South Cooperation Assistance Fund aims to rally Chinese and international resources to advance SSC, facilitate the equitable participation of developing countries in global economic governance, assist them towards achieving the SDGs, and realize balanced economic, social and environmental outcomes. This fund supports SSC initiatives that relate to agriculture, poverty reduction and climate change mitigation, among other matters.¹⁰

All the above technological and policy solutions, institutions, expertise, initiatives and facilities constitute a reservoir of resources that can be leveraged by FAO and Member States, international organizations and FAO partners to advance SSC exchanges.

7 In China, the historical Policy Reform and Opening Up have led to crucial policy changes for rural and agricultural development: the Household Responsibility System, the Township and Village Enterprises movement, the freeing up of markets for farm products, and increases in the freedom of labour movement all provided a favourable environment and a huge boost to rural livelihoods along with redistribution from richer to poorer provinces. Underlying these macroeconomic policies, considerable progress was made concerning sectoral food and agricultural policies, combining important investment in infrastructure with the development of the secondary and tertiary sectors related to agriculture, particularly in secondary or small towns. This has boosted socioeconomic development and livelihoods in rural areas, especially in support of small-scale family agriculture. Chinese expertise related to these transformative processes offers a resource for other developing countries.

8 FAO Reference Centres are institutions designated by the Director-General to provide specific, independent technical and scientific advice on issues related to FAO’s mandate and programme, some with a special focus on SSC. National SSC centres of excellence are academic or other institutions that the government recognizes and supports as an important resource to promote a country’s SSC activities. For more information on the FAO Reference Centres in China, see Section 3.4.

9 The Belt and Road Initiative was unveiled in 2013 by President Xi Jinping. According to its official outline, the initiative aims to “promote the connectivity of Asian, European and African continents and their adjacent seas, establish and strengthen partnerships among the countries along the Belt and Road, set up all-dimensional, multi-tiered and composite connectivity networks, and realize diversified, independent, balanced and sustainable development in these countries” (www.chinese-embassy.org.uk/eng/zywl/t1251719.htm). Seventy-one countries are currently taking part in the initiative, together representing more than a third of the world’s GDP and two-thirds of the world’s population (www.beltroad-initiative.com/belt-and-road/).

10 In 2015, Chinese President Xi Jinping announced the creation of the South–South Cooperation Assistance Fund with an initial pledge of USD 3 billion in support of developing countries’ implementation of the 2030 Sustainable Development Agenda. In 2018, the fund identified the following seven SSC priorities: agricultural development; health care; aid for trade; climate change adaptation; poverty reduction; education and training; and humanitarian aid.

1.4 THE FAO–CHINA SOUTH–SOUTH COOPERATION PROGRAMME

Objective

In the context of the 2030 Agenda, the Programme's objective is to contribute to poverty reduction, food security and nutrition for all by 2030, based on increases in sustainable production and the productivity and incomes of small-scale farmers, herders and fishers.

Framework

The Programme's projects are based on governmental requests addressed to FAO, which are jointly identified, formulated and implemented by FAO, China and the host countries. Activities are focused on four main types of projects.

National projects are FAO projects funded by the Programme, identified and formulated jointly by representatives of FAO, China and the host country to address specific technology innovation and agricultural development challenges. The approach to implementation is based on the fielding of experts and technicians from China on the ground, at village level, for long-term assignments of two years. This method of learning-by-doing, hand-in-hand, peer-to-peer and face-to-face technical assistance through sharing villagers' day-to-day life in the spirit of SSC is a characteristic feature of these projects. Their implementation takes place under the joint supervision of the relevant technical departments of the Ministry of Agriculture and Rural Affairs (MARA) and FAO; the FAO country office; and an FAO headquarters-based project task force.

Regional projects aim to reinforce specific institutional or technical capacities among Member States by providing targeted expertise and training support. They are identified and formulated jointly by FAO and its regional offices, China, and

representatives from the region (Member States and relevant regional institutions). They tackle special issues that need to be addressed at supra-national level (e.g. transboundary pests and diseases). Their implementation takes place under the joint supervision of the relevant technical departments of FAO and MARA, the FAO regional office and the FAO project task force.

Interregional projects mobilize expertise and funds to support the exchange of knowledge and experience between two regions or subregions. These projects also support the implementation of FAO's Regular Programme through SSC, for example by increasing developing countries' capability to fulfil their international obligations, or by advancing their participation in interregional programmes and initiatives.

Global capacity-building projects (or facilities) provide the framework for a vast training programme. They organize training courses, study tours, and events such as ministerial or other high-level symposiums, seminars and workshops that aim to reinforce individual, institutional and system capacities. These training courses and events benefit a wide range of participants, from farmers and small enterprises to high-level officials and ministers, essentially, but not exclusively, from countries of the global South.

The Programme is coordinated by the Programme Management Unit in FAO headquarters, and relies on the technical support of project task forces (FAO, 2018a). Every year, representatives of China and FAO gather for an annual consultation meeting that serves as a steering committee to review the past year's project implementation, identify priority countries and approve the Programme's new projects and work plan.¹¹

¹¹ Some changes have emerged over the years concerning the delivery of China's technical assistance through FAO. These adjustments originate from the annual consultation meetings between FAO and the Government of China; the First International Forum on SSC organized by FAO and China in 2013 in Abuja, Nigeria; and the Ministerial-Level Forum on Global SSC in Agriculture hosted by China in Changsha in 2018. However, the same spirit and principles of SSC continue to guide the Programme's implementation since its Phase I.

2 VALUES: INSPIRATION, INCLUSION, INNOVATION

Over the past ten years, the Programme's core values have been inspiration, inclusion and innovation.

2.1 INSPIRATION

The United Nations General Assembly resolutions on SSC have stimulated the FAO Member States and Secretariat to develop SSTC as an integral part of the organization's technical assistance activities. They have also inspired China to engage proactively in the promotion of SSTC in FAO. This culminated in the signature of the two FAO–China general agreements that established the Programme and its trust funds for Phases I and II.

The Programme's approach is a source of inspiration for countries' local and central governments; for FAO itself and its development partners; and most importantly for farmers. Reciprocally, the Programme is influenced and inspired by other FAO SSC initiatives, as well as by other countries' and development partners' practices relating to SSC, and it draws on their experience to enrich its approaches.

Inspiring countries

The Programme has inspired a number of developing countries to embark on SSC as providers of development knowledge and technological solutions, for example Brazil, India and the Republic of Korea; as well as several industrialized countries to support SSC through triangular cooperation (TrC), such as Germany, Japan and the Netherlands. For example, a new TrC agreement with the Netherlands involves Wageningen University & Research; two FAO Reference Centres in China; and the private sector in Ethiopia, illustrating the willingness of some developed countries to support SSC processes institutionally, financially, scientifically and technically.

Placing experts and technicians in the field at village level for long periods provides a stimulus for both central and local governments of the host country. They see that this form of highly qualified and professional, long-term, technical assistance

Box 4. Inspiring countries: China, Ethiopia and the Netherlands advance aquaculture policy knowledge and value chains with FAO South–South cooperation Reference Centres

The triangular cooperation agreement with the Netherlands involves Wageningen University & Research and two Food and Agriculture Organization of the United Nations (FAO) Reference Centres in China – the Foreign Economic Cooperation Centre and the Freshwater Fisheries Research Centre – through:

- a policy study summarizing successful aquaculture policies and practices applied in China and identifying experiences that can be replicated in other developing countries;
- a pilot project in Ethiopia supporting sustainable aquaculture production and value chain development, with engagement of the private sector.

The project is an integral part of the FAO's regional Blue Growth Initiative. It will improve the capacity of the aquaculture industry in both China and Ethiopia, and stimulate corporate social responsibility in the private sector.

at the grassroots level can be provided by an organization such as FAO, thanks to exchanges between developing countries. This encourages them to apply for more support of this kind through SSC mechanisms. They appreciate the concrete support, through this approach to cooperation, for implementing their national and local agricultural development policies.

Inspiring FAO and its development partners

FAO and Chinese SSC projects have been fielding large numbers of experts and technicians over long periods of time at the village level since the 1990s, providing a source of inspiration for FAO and its development partners.¹² The continuous presence on the ground, at community level, of professional technical assistance is now better understood as an effective way to boost the adaptation of newly introduced technologies to local circumstances, fostering the sustainability of technical assistance results.

There are many other ways in which the Programme inspires Member States' engagement



¹² In the early days of FAO's SSC work in the 1990s, technical cooperation among developing countries was based on the deployment of experts at field level within FAO projects. These projects were supported by databanks carrying details of more than 5 000 experts worldwide (FAO, 1998). The scale at which China has promoted this approach, in search of real impact, serves as an example for development partners.

in SSC. Together with many other initiatives from various countries, the Programme encourages governments from the global South to share their specific areas of expertise, and to institutionalize mechanisms for this type of exchange. Such institutionalization may take the form of special services within ministries of agriculture, or of national SSC centres with a mandate to facilitate the reception and provision of SSC assistance, and the sharing of development knowledge.

Inspiring farmers

Technology transfer at the producer level is achieved by introducing, testing and adapting innovations, and combining demonstration and extension work hand in hand with tailored study tours and training courses in China, to reinforce the processes of technology adaptation and diffusion.

By involving small-scale producers directly in both testing and demonstrating techniques, and then diffusing them through farmer field schools,¹³ the Programme has provided an important stimulus, encouraging and inspiring farmers to co-design new technologies and adopt innovations; move from subsistence farming towards more commercial production; and themselves become providers of technological solutions for other farmers in their communities, as well as for other villages.

Box 5. Inspiring farmers: A Ugandan rice farmer boosts production, food security and income, and trains other farmers

Mr Robert Sageula lives with his family of ten in the Butaleja district of Uganda, a rice-planting area. In the past, he used to plant 2 acres of paddy rice every year, with an average productivity of 2 tonnes per acre, yielding just 1 tonne of milled rice. With the support of experts from China, and thanks to new varieties, inputs and planting practices, he cultivated his 2 acres with hybrid rice. His yield doubled (to 4 tonnes of paddy per acre) and his milled rice yield more than doubled (2.4 tonnes of milled rice per acre) due to the good quality of the hybrid rice variety. Since then, Robert has become a demonstration farmer in this region for farmer-to-farmer training through farmer field schools.

Robert found that planting hybrid rice was very profitable, not only because his production was boosted, but also because the retail price of hybrid rice is higher than that of traditional varieties. He increased his initial investments (purchase of 10 kg of hybrid seeds and three additional bags of fertilizer per acre), but his net margin per acre, after deduction of all initial costs, was more than doubled. Robert decided to expand his paddy-planting area to 5 acres. He has begun to send his sons to private school, built two new houses and become a relatively wealthy farmer in his region.



¹³ The farmer field school approach was developed by FAO and partners nearly 25 years ago in Southeast Asia as an alternative to the prevailing top-down extension methods of the green revolution, which failed to work in situations where more complex and counter-intuitive problems existed, such as pesticide-induced pest outbreaks. In a typical farmer field school, a group of 20–25 farmers meet once a week in a local field setting and under the guidance of a trained facilitator. Alternative practices are not automatically assumed to be superior to conventional practices. It is up to the farmers to decide what works best through their testing and observations. Farmer field schools provide a risk-free setting in which to discuss, dissect, modify and experiment with new agricultural management ideas.

2.2 INCLUSION

The Programme is inclusive at all levels, stimulating collaborations working towards the enhanced, participatory, inclusive and equitable governance of food systems.

Including women and rural youth

National projects endeavour to collaborate closely with young and female producers, as a China–Uganda project illustrates (see Box 6).

Box 6. Including women

A Ugandan female dairy farmer received support from cooperants, who provided her with both technical advice and machinery to improve her production of silage. This allowed her to enhance the quality and quantity of her animal feed. As a result, the cows' improved nutrition led to a significant increase in their milk production, and the size of her herd grew significantly as well. Thanks to the support of the Programme, this farmer went from selling 250 litres of milk a day to over 800 litres a day on average, representing a huge benefit to her livelihood. These results have been sustained and expanded since the cooperants left. She says that since the conclusion of the project, she has been able to keep growing her herd and business.



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Including new countries and funding sources

The Programme stimulates the inclusion of new countries and sources of funding based on the spirit of SSC. Developing countries apply for FAO-facilitated SSC projects, and follow-up to their requests can be supported by the Programme jointly with other sources of funding, or of scientific and technical support, stemming from TrC in particular. For example, the German Government is engaging with FAO and China in Kenya to promote low-carbon tea-production technologies, embracing as beneficiaries all actors in the tea value chain, from smallholder farmers to technicians and exporters.

Box 7. Including developed countries in triangular cooperation: China and Germany supporting a carbon-neutral tea value chain in Kenya

The objective of this project is to develop a climate-resilient, carbon-neutral tea value chain and product market in Kenya, through triangular cooperation between China, Germany and Kenya.

The strategy is to develop guidelines for calculating emissions associated with tea production, and to develop a carbon-accounting and decision-making tool for use in the tea sector. This will allow tea value chain stakeholders to assess their carbon footprint and develop context-specific pathways towards carbon neutrality.

Through working along the entire value chain, the project will develop the business case for carbon-neutral tea, and will demonstrate the higher prices that the key buyers are willing to pay for carbon-neutral certified products. The lessons will be shared with the global tea community to promote carbon-neutral tea production. Kenya is the third-largest tea producer in the world and the biggest in Africa, although climate change poses a significant threat to its tea production. Export markets have seen increased demand for low-carbon products, which is further driving the need to develop a low-carbon value chain in Kenya.

Germany as a triangular cooperation partner brings three benefits: a financial contribution to the project; technical and scientific support for calculating greenhouse gas emissions, developing a decision-making tool and establishing relevant certification methods; and support to the Kenyan export value chain through marketing advice.

2.3 INNOVATION

In addition to proactively promoting technological innovations at the country level, the Programme is an engine for innovation at multiple levels, especially in terms of methods and business models; approaches to sustainable development; and policies, strategies and approaches to implementing SSC.

Innovative methods and business models involving the private sector

The widening of partnerships at country level and the involvement of the private sector unlocks the potential offered by the introduction of technological innovations. Beyond the identification, testing, demonstration and promotion of specific techniques and practices, there is a need to foster their

dissemination through market mechanisms and by non-farmer actors in value chains.

The Programme promotes inclusive business models for agricultural development, such as the China–Uganda Agricultural Cooperation Industrial Parks, where domestic and foreign private firms invest and interact with experts and technicians, government officials, cooperatives and farmers’ organizations (see Box 8). Through fostering market links for smallholder farmers, they are a means to help transform the country’s agriculture towards more commercial and entrepreneurial patterns of production.

The parks also offer a forum where all stakeholders in the value chain can observe and discuss

Box 8. China–Uganda Agricultural Cooperation Industrial Park

Echoing its own strategy of agricultural modernization, in recent years China has increasingly invested in the construction of agricultural parks in a range of developing countries. The infrastructure, services and facilities provided can drastically improve the production, processing and trade of agricultural products.

A significant investment from China is enabling the development of the China–Uganda Agricultural Cooperation Industrial Park across five districts of Uganda. Promoted and supported by the Programme, China and Uganda, five private enterprises from China’s Sichuan Province¹⁴ together with three private investors established the Sichuan Youhao Hengyuan Agricultural Development Co., Ltd, which has invested USD 20 million and is building the park. To date, more than 40 Chinese agricultural experts have been dispatched to provide technical assistance in the park’s development.

Already, agricultural equipment valued at about USD 900 000 has helped to achieve the mechanization of rice planting, enabling farmers to reach historic yields (up to 8.57 tonnes/ha in some demonstration fields). The park is also providing farmers with improved crop varieties, agricultural materials and free technical services, as well as facilitating stable cooperative relationships between farmers and enterprises through win-win agreements. Ultimately, the initiative aims to establish three centres: an Agricultural Production Technology Incubation Centre; an Agricultural Industry Cooperation Centre; and an Agricultural Products Processing and Trade Centre.

Through these centres, the initiative creates an agriculture–industry chain that integrates agricultural technology training, crop planting, livestock and poultry breeding, advanced processing of agricultural products, agricultural machinery services, agricultural products trade, e-commerce logistics and investment cooperation services. The park will ultimately lead to the development of modern agricultural systems on 70 000 ha of land and provide 100 000 job opportunities, enabling 1 million people to increase their incomes, thanks to a 2015–2022 investment plan totalling more than USD 220 million.

In order to sustain the project outcomes, capacity development for staff in the areas of gender, environment, human rights, and technological and economic sustainability was implemented. Transferring experts and technicians, integrating project activities into the ongoing government agricultural programmes, and cost-sharing are largely credited with contributing to the project’s success.

The project is seen as an example of win-win-win experience where seed funding provided by the Programme has been catalytic for leveraging very high levels of private and public investment, for contributing to the government’s policy implementation, and for enhancing farmers’ access to technologies, markets and advisory services, thus enhanced income and employment opportunities.

¹⁴ In the case of Uganda, and increasingly also for other countries, China is implementing the “one province, one country” approach through which technical support and collaboration are provided by the institutions and stakeholders of a given Chinese province that has similarities (ecosystems, crops, etc.) with the targeted country.



innovations and demonstrations, or attend joint meetings and workshops. This enables interaction, reciprocal learning and social relationships among social and economic actors in value chains, helping to create an environment conducive to the emergence of win-win contractual arrangements. Finally, the park sites benefit both their immediate neighbourhoods and other areas of the country, generating waves of diffusion of technological innovations coupled with business development, employment and investment opportunities.

Innovative approaches to sustainable development

The Programme supports innovative approaches to sustainable development, rural employment and food security. For example, it promotes the protection and sustainable development of agricultural heritage at the interregional scale, in particular concerning agricultural biodiversity, soil and water management, and rural culture and traditional knowledge. It does this through an SSC approach, sharing China's wide experience in this domain, and facilitating the exchange of knowledge among countries concerning the identification, protection and management of heritage sites.

The sites of FAO's Globally Important Agricultural Heritage Systems (GIAHS) Programme are incubators of development solutions in relation to conserving natural resources, developing resilience to climate change, advancing value chains, and improving rural employment and livelihoods. They are also laboratories of local and central government policies, with interest and value beyond the boundaries of the sites themselves. They can provide important ideas and experiences for changing the paradigms of sustainable development strategies at district or national level, and for mainstreaming some local development solutions into policy-making.

New approaches to South–South cooperation

The Programme encourages innovative approaches to SSC strategic partnerships, such as memoranda of understanding – tripartite frameworks defining clear responsibilities of FAO, China and recipient countries in SSC exchanges. For example, China, Mongolia and Uganda have signed three memoranda of understanding with FAO.¹⁵

The Programme also encourages countries that have successfully benefited from SSC projects to

¹⁵ Namibia has finalized the draft of a similar memorandum of understanding that is ready for signature.

themselves become providers of technical assistance to other developing countries, in the fields in which they have gained important resources and expertise. The Programme advocates and supports the creation, in these countries, of dedicated governmental SSC offices, services or centres.

In addition, new types of TrC arrangements are being explored and promoted to reinforce the Programme. Two such agreements, for example involving academia and the private sector, have been signed between FAO, China, host countries and the governments of the Netherlands and Germany.

New international debates, policies and strategies for South–South cooperation

The Programme has facilitated international debates, strategies and policies for SSC, contributing to raising the profile of SSTC on the global development agenda.

In September 2013, with the support of the Programme, ministers and heads of delegation from 12 African countries, plus China, Brazil and Viet Nam, gathered at a High-Level Forum on SSC in Abuja, Nigeria. In the forum's Abuja Declaration, the countries pledged to work together on SSC, to share experiences, knowledge, technologies, best practices and capacities, and to explore new approaches to multilateral agricultural SSC.

In November 2018, with the support of the Programme, FAO and China organized the Ministerial-Level Forum on Global SSC in Agriculture in Changsha, Hunan Province, China. The forum was attended by more than 200 representatives from nearly 30 developing countries and 12 international organizations, and the heads of the United Nations Rome-based agencies: FAO, the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP).

The Programme also supported the celebration of BAPA+40 by sharing FAO's SSC experience, success stories and views on ways to further advance SSTC.

Contributing to the United Nations Rome-based agencies' Joint Road Map on South–South and triangular cooperation

The Programme also contributes to implementing the United Nations Rome-based agencies' Joint Road Map on SSTC by favouring the gradual

Box 9. Innovating in SSC policy: The Changsha Ministerial Forum and Declaration on SSC

The objective of the 2018 forum was to discuss paths to further increase South–South cooperation (SSC) in the agricultural sector and promote it as a vital instrument in achieving the Sustainable Development Goals (SDGs), specifically SDGs 1 and 2 – ending poverty and hunger.

The outcome of the forum was the Changsha Declaration, which defined clear ways to include SSC principles in national policies and programmes, especially those targeting the elimination of hunger and malnutrition. The declaration addressed the challenges for food security and nutrition, sustainable agriculture and rural development, and provided recommendations for the next steps for SSC at the global level.

The recommendations include mainstreaming SSC into policies, programmes and strategies; strengthening SSC synergies with the SDGs and global strategic initiatives; scaling up best practices and fostering the transfer of solutions through SSC; enhancing SSC connectivity and global partnership for sustainable development; empowering SSC under United Nations coordinated efforts; and enhancing financial support and investment to promote SSC partnerships.

The Changsha Declaration also highlighted the strong partnership between the Food and Agriculture Organization of the United Nations (FAO) and China on SSC, particularly through the FAO–China South–South Cooperation Programme. The declaration also recognized the key importance of the United Nations Rome-based agencies' coordinated role on SSC to support Member States in achieving the SDGs.

With the outcome of this forum, FAO and China set a new milestone for global SSC in agriculture and made a key contribution to the Second High-level United Nations Conference on South–South Cooperation (BAPA+40) in Buenos Aires in 2019.

promotion of joint, groundbreaking actions at the field level. For example, the Programme has engaged with China, Sri Lanka and WFP in a pilot project aiming to strengthen vulnerable smallholder farmers' livelihoods and resilience to climate-related shocks, and IFAD is considering joining the project as well. The three United Nations Rome-based agencies are currently advancing the preparation of SSTC action plans to realize the 2030 Agenda, and the Programme is expected to contribute to this endeavour.



3 ACTIVITIES AND ACHIEVEMENTS: WORKING AT ALL LEVELS

The Programme's contributions to the fight against hunger, to promoting food security and nutrition, and to advancing sustainable agriculture may be summarized as follows.

The Programme contributes to the fight against hunger at the rural household level. Food and nutrition security is improved through technology transfer, by introducing advanced agricultural knowledge, skills and localized practices at the grassroots level through demonstration and extension work, directly benefiting small-scale family farmers, herders and fishers.

It contributes to the **enhancement of villagers' livelihoods and incomes** through enhanced productivity, market development and job creation, boosting the local village economy as well as its links with national markets. Involvement of the private sector in agricultural technology hubs and agricultural parks creates an environment conducive to boosting the local village economy as well as its links with national markets.

It contributes to advancing the **structural transformation of agriculture and the sustainable development of value chains**, particularly through the involvement of the private sector in agricultural technology hubs and agricultural parks, and through projects that address issues such as plant protection or transboundary animal diseases, resilience of smallholders' production to climate change, and agricultural biodiversity and heritage, among others – while reinforcing countries' capabilities to overcome technical barriers to trade.

It supports **sustainable agricultural development strategies and policies** at national, regional and global levels through events such as symposiums and workshops, and through projects that advance the implementation of national policies. These activities contribute to policy environments and strategies that enhance the governance of agriculture and food systems.

As a cross-cutting feature of all its activities, the Programme **contributes greatly to the capacity-building of farmers, technicians, professionals from both public and private sectors, and other key stakeholders.** Those benefiting from training courses, demonstrations, seminars, workshops, symposiums and study tours include small-scale family producers, farmers' organizations and entrepreneurs, high officials and ministers, and representatives from national, subregional, regional, interregional and global institutions.

These contributions and achievements are realized through national, regional, interregional and global projects.

3.1 NATIONAL PROJECTS

Host country beneficiaries

Between 2009 and 2019, 12 countries benefited from specific national projects focusing on the sustainable improvement of their agricultural production. Among these, ten were sub-Saharan African countries (the Democratic Republic of the Congo, Ethiopia, Liberia, Madagascar, Malawi, Mali, Namibia, Senegal, Sierra Leone and Uganda) and two were Asian (Mongolia and Sri Lanka).¹⁶

The primary objective of these country-level projects is to enhance the food security, livelihoods and incomes of smallholder producers and family farmers by improving agricultural productivity and sustainability, particularly through the transfer of innovative and adaptable technologies relevant to specific, local production challenges. These projects all have a duration of two to three years, and budgets ranging from USD 1 million to USD 2 million. Some countries (e.g. Mongolia and Uganda) have benefited from two consecutive projects of this kind.

Approach to host countries and farmers

The approach to implementation is based mainly on placing experts and technicians from China on the ground, at village level, for long-term assignments of two years.¹⁷ The experts and technicians are carefully selected and, after approval by the host country, are sent to the field to provide technical assistance

based on the principle of learning by doing: hand-in-hand, face-to-face technical assistance through demonstrations and farmer field schools; training materials, kits and packages; and lectures, workshops and seminars in collaboration with national technicians and extensionists. The cooperants from China share the villagers' day-to-day life in the spirit of SSC, which advances the transfer of knowledge and technology, and adaptation of the proposed innovations to local circumstances through reciprocal learning and exchange.

Between 2009 and 2019, FAO and China have fielded more than 290 experts and technicians, 243 of whom have carried out long-term assignments of two years.

The result has been that hundreds of new technologies were introduced during the decade 2009–2019, helping more than 70 000 direct beneficiaries¹⁸ and several hundred thousand indirect beneficiaries. This was achieved through more than 1 300 training events and activities, and nearly 300 pilot demonstrations (see Table 2).

Box 10. Evaluation: Agricultural experts and technicians from China

“The Chinese agricultural experts and technicians work in the projects' host countries for 22 months. Additionally, they work together with the management personnel of the local ministry of agriculture, local technicians (their partners), Food and Agriculture Organization of the United Nations (FAO) office staff and the regional and village-level personnel, especially farmers, for a long time, demonstrating the concrete operation method of Chinese agricultural technology while explaining its connotations. The technical and expertise levels, as well as the professional dedication of the Chinese agricultural experts and technicians, have been fully affirmed by the local officials of the respective host countries' ministries of agriculture, the personnel of agricultural enterprises and the farmers in the project sites of the four countries visited by the review team. More importantly, through the adoption of Chinese agricultural technology, they have achieved the expected goals of increasing grain production and productivity including income, and continuously expanded their production scale” (Tang, Lu and Deogratias, 2018).

¹⁶ Pipeline projects are being finalized with Cabo Verde, Morocco and Sudan, and Phase II projects for Malawi and Namibia.

¹⁷ For the period 1998–2018, a total of 1 057 Chinese staff (volunteers) were deployed on the ground. Of this total, 578 were sent to Nigeria within the framework of a Unilateral Trust Fund project.

¹⁸ Estimate for the period 2009–2018 (Tang, Lu and Deogratias, 2018).

Table 2. Technology promotion activities by experts and technicians from China in host countries (2009–2018)

Training events/ field training	Training participants (person days)	Project direct beneficiaries (persons)	Test and demonstration activities on site	Training materials distributed (copies)
1 300	21 060	68 787	297	29 596

Source: Interim Review and Summary Country Report of the China–FAO SSC Trust Fund Project

The hundreds of innovations related principally to **genetic material** (varieties and species of plants and animals), **soil conservation and cultivation** techniques (including irrigation, soil conservation and preparation practices, and plant protection measures), and **animal production and health** techniques. Among these innovations, about 330 species and varieties of crops and more than 120 broad types of plant and animal production practices were tested and introduced, as well as about 200 sets of agricultural machinery tools (see Annex 3 for a list of technological innovations). In addition, many techniques were introduced that concern fisheries and aquaculture, energy, processing and other post-harvest techniques.



Box 11. Uganda boosts the implementation of its agricultural development policy thanks to the diffusion of technologies and capacity enhancement at local level

In Uganda, although opportunities exist for efficient agriculture, forestry and fisheries, a host of challenges facing these sectors prevent them from achieving their potential. Farming is characterized by low on-farm production and productivity. Inadequate investments have largely prevented commercialization, while food and nutrition insecurity and critical gender issues remain entrenched in many parts of the country.

Thanks to resources from China, Phase II of Uganda's South–South cooperation project was rolled out from 2016 to 2018 under the Food and Agriculture Organization of the United Nations (FAO)–China South–South Cooperation Programme. The Programme supported the implementation of the country's Agricultural Sector Strategic Plan (2015–2020). Other agricultural policies aiming to enhance national food security and household incomes were also supported through the fielding of experts and technicians from China, as well as promoting trade and investment in agriculture.

Seven agricultural technology demonstration hubs were established, showcasing Chinese technologies in horticulture, livestock, cereals, aquaculture, renewable energy, agro-machinery value-addition, and sustainable business models. Over 3 000 farmers and 80 extension staff members received training. In addition, three capacity-development study tours for policy and technical staff were undertaken in China, focusing on hybrid rice and hybrid millet production; irrigation, water and soil conservation; fruit and vegetable, grain and oilseed production and seed production; animal husbandry, livestock and poultry production; fish seed production and aquaculture; agro-machinery or mechanization; and rural energy (biogas, solar energy and wind power).

Ultimately, thanks to the project's capacity-development activities and the establishment of trade and investment links, producers were able to increase their production and productivity in horticulture, cereals, aquaculture, livestock and cross-cutting technologies. These achievements constitute a substantial contribution to the implementation of Uganda's agricultural policy, and particularly of the country's Agricultural Sector Strategic Plan (2015–2020).¹⁹

¹⁹ In addition to direct technology transfer and policy support, the project promoted one China–Uganda Agricultural Cooperation Industrial Park in Luwero and Kalungu districts, and seven more Chinese companies invested in Uganda under the guidance and support of the project. This business model represents a promising innovation in methods of implementing the FAO–China South–South Cooperation Programme, involving national and Chinese private firms in promoting more efficient value chains (see Box 8).

Box 12. Mongolia increases productivity and fosters value chain development

In Mongolia, where the climate is harsh and the growing season lasts for just 90 days, weather conditions have become increasingly unpredictable, affecting crop production and, in turn, dietary diversity and nutrition. Malnutrition is high and diets are unbalanced. Limited technical capacities affect the country's ability to implement policies and programmes to improve agricultural production and productivity.

Since 2010, support from the Food and Agriculture Organization of the United Nations (FAO)–China South–South Cooperation Programme has helped to address this gap in technical capacity, with experts from China travelling to Mongolia to share their knowledge in technical areas such as animal husbandry, crop production, food safety and trade. During Phase I of the initiative, the transferred knowledge was significantly adopted at local level, supporting national and household food security as well as agricultural intensification and diversification across the country.

Based on the project's initial achievements, the governments of Mongolia and China moved ahead with Phase II, involving expanded use of Phase I key technologies and the deployment of additional experts from China tasked with enhancing technical capacities for animal feed production, livestock and poultry production, horticulture, beekeeping and aquaculture.

Some of the results across Mongolia's agricultural subsectors were as follows.

- Chicken farmers received technical assistance for feed supply, infectious disease analysis and control, and managing the rearing of chicks and adult chickens, with a substantial impact on productivity: the growth rate of chicks jumped from 54 to 86 percent, and their survival rate reached an all-time high of 96 percent at 17 weeks. Benefits were seen on one of the major industrial farms of Mongolia.
- In horticulture, new cultivation technologies and new varieties were introduced. Pilot demonstrations of the management and maintenance of greenhouses adapted to Mongolia's climate were highly successful and will foster a new era for vegetable production.
- In the livestock and animal husbandry subsector, trials were conducted of artificial insemination and embryo transfer. To improve animal feed production, new varieties of annual and perennial fodder crops were demonstrated, and silage-making technology was piloted.
- With regard to beekeeping, the technology and practices for queen bee rearing and the management and maintenance of bee colonies were introduced to beekeepers.
- In aquaculture, technical assistance was provided to design an artificial pond, and a study was conducted to find suitable species for research on fish breeding.

The project has contributed to boosting the development of some important value chains – in particular poultry, livestock, beekeeping and greenhouse-grown vegetables – by introducing new technologies and connecting producers with the national market. Much of this was achieved in partnership with private firms from both China and Mongolia.



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Study tours for stakeholders from host countries

Each country hosting a field project of the Programme benefited from the organization of study tours in China, focusing on the specific technologies introduced in the country. Trainees were mostly officials from ministries of agriculture, extensionists and researchers, and representatives of farmers' organizations and of the local private sector. In total over the past ten years, 218 trainees participated in 21 study tours in China of 10–14 days' duration. Topics covered included soil management, irrigation and water management, crop production (hybrid rice, millet, oilseeds and vegetables) and animal husbandry (poultry and cattle, animal health), fisheries, aquaculture, agricultural machinery, post-harvest processing and rural energy (see Annex 4).



IN BRIEF

NATIONAL PROJECT OUTCOMES AND ACHIEVEMENTS

Between 2009 and 2019, 12 countries benefited from specific national projects jointly identified, formulated and implemented by the host country, Food and Agriculture Organization of the United Nations (FAO) and China. Ten of these were sub-Saharan African countries and two were Asian countries. FAO and China together have fielded over 240 experts and technicians for two-year assignments at the village level, and have organized 21 study tours in China for national projects' stakeholders. The result is that several hundred new technologies, varieties, species and agricultural practices have been introduced during the decade of the Programme, helping more than 70 000 direct beneficiaries²⁰ and several hundred thousand indirect beneficiaries.

The project aims to establish a collaboration and coordination platform to promote the control of transboundary animal diseases among countries in the Greater Mekong Subregion; improve disease risk management along cross-border value chains; and develop strategies and capacities to prevent African swine fever and address endemic diseases in swine, including porcine respiratory and reproductive syndrome, classical swine fever, and peste des petits ruminants (also known as goat plague).

The project was launched with a budget of USD 3 million, and kick-started in 2019 for three years. It is too early to assess its outcomes, but in the current context of African swine fever in Asia, and particularly in China, transboundary animal disease prevention is evidently crucial. The Programme offers a highly relevant framework for the coordination of activities across the countries concerned.

3.2 REGIONAL PROJECT: TRANSBOUNDARY ANIMAL DISEASES

In the Greater Mekong Subregion, three countries (Cambodia, Lao People's Democratic Republic, Myanmar) are benefiting from a regional project supported by the Programme, launched in January 2019: the FAO–China South–South Cooperation Project on Transboundary Animal Disease Control in the Greater Mekong Subregion. The project involves two regions of China: Yunnan Province and Guangxi Autonomous Region.²¹

²⁰ Estimate for 2009–2018 only.

²¹ Thailand and Viet Nam have also been involved in the project's formulation but have not yet joined implementation.

3.3 INTERREGIONAL PROJECTS: AGRICULTURAL HERITAGE AND PLANT PROTECTION

Agricultural heritage

FAO's Globally Important Agricultural Heritage Systems (GIAHS) Programme aims to safeguard the world's threatened agricultural heritage by promoting, at the global level, the identification, protection and international recognition of remarkable agricultural heritage sites and their



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associated landscapes, agricultural biodiversity, knowledge systems and cultures.

These ancestral agricultural systems constitute an important foundation for contemporary and future agricultural innovations and technologies. Their cultural, ecological and agricultural diversity and legacy is still evident in many parts of the world, maintained by local communities. Supporting such systems and enhancing their benefits requires securing their conservation and sustainable management in order to maximize their socioeconomic viability and preserve their unique environmental, biodiversity and cultural attributes for the long term.

An FAO–China SSC project, “Strengthening the implementation of the GIAHS initiative through capacity development”, began its three-year operational period in June 2015 with a budget of USD 2 million. The project promoted exchange of experiences among countries, especially developing countries, in the spirit of SSC. It organized a systematic and substantial capacity-building programme through regional conferences, training courses and seminars. These focused on sustainable development and contemporary development issues, the GIAHS Programme’s conceptual framework and implementation, the registration and conservation of GIAHS sites, and the exchange of countries’ experiences. The expected outcome was strengthened human and organizational capacity at global, regional and country levels, especially (but not exclusively) in developing countries, to identify and safeguard heritage sites, and to design and implement conservation plans for their protection and sustainable development (through a process coined “dynamic conservation”).

The major outputs of this GIAHS SSC projects are as follows.

- A large number of countries from Asia, sub-Saharan Africa, Latin America and the Caribbean, and the Near East and North Africa regions, have benefited directly from the project:
 - 5 high-level GIAHS training courses were attended by 129 participants from 64 countries
 - 4 regional or subregional workshops benefited 192 participants from 69 countries.

- With the support of the SSC project, the number of recognized GIAHS sites and countries that host such sites substantially increased – by 18 new sites and 6 new countries. As a result, there are currently 52 GIAHS-designated sites in 21 countries around the world, with potentially many more to follow. A total of 44 countries are currently actively engaged in submitting new candidates.
- From a regional perspective, the GIAHS sites portfolio now embraces North America and Europe, in addition to Asia, Africa and the Near East/North Africa. The SSC project has largely contributed to the renewed interest of FAO Member States in the GIAHS programme, and to the active engagement of many of them in the preparation of candidatures.
- Another important outcome is that the quality of the candidature documents submitted to FAO for recognition as GIAHS sites has substantially improved, and they now systematically include action plans to support the conservation and sustainable development of the systems concerned.

The GIAHS sites are laboratories of public policies to support sustainable practices and maintain prosperous rural communities. They offer examples for changing paradigms in policy-making not only at the local level, but also at the national level. This applies to a number of issues, including the improvement of rural livelihoods and food security; protection and regulation of agricultural

IN BRIEF

AGRICULTURAL HERITAGE PROJECT OUTCOMES AND ACHIEVEMENTS

By organizing high-level regional workshops and training courses in China benefiting over 300 participants from more than 100 countries, the project has given a new impetus to FAO's Globally Important Agricultural Heritage Systems (GIAHS) Programme. Countries are now more aware of agricultural heritage issues, and better equipped for the identification, protection and sustainable development of their remarkable heritage sites. The number of recognized GIAHS Programme sites increased by 18 new sites and 6 new countries. As a result, there are currently 52 Food and Agriculture Organization of the United Nations (FAO)-designated sites in 21 countries around the world, with potentially many more to follow – 44 countries are actively engaged in submitting new candidates. From a regional perspective, the GIAHS sites portfolio now embraces North America and Europe, in addition to Asia, Africa and the Near East/North Africa. These heritage sites are important laboratories of public policies to support sustainable practices and maintain prosperous rural communities, and often provide a reference for changing paradigms in policy-making at local and national levels.

biodiversity; marketing and promotion of local products through e-commerce; and promotion of agritourism. The influence of agricultural heritage sites in transforming agriculture – and agricultural policies – often goes beyond the boundaries of the



recognized sites to benefit national policies and strategic approaches. China's wide experience in the GIAHS domain reveals pioneering approaches and instruments that include e-commerce and e-agriculture, green jobs for rural youth, value-addition at the local level through branding, and *in situ* agricultural biodiversity conservation, all combined in the "dynamic conservation" of these sites.

FAO and the Government of China are currently considering the opportunity to renew this support, with other funding partners, in order to expand the GIAHS Programme's global coverage and further enhance its quality.

Plant protection

The International Plant Protection Convention (IPPC) is an international treaty that aims to secure coordinated, effective action to prevent and control the introduction and spread of pests of plants and plant products. The IPPC extends beyond cultivated plants to the protection of natural flora and plant products. It takes into consideration both direct and indirect pest damage, and includes invasive alien plants. It also covers vehicles, aircraft and vessels, containers, storage places, soil, and other objects or materials that can harbour or spread pests. It protects national territories against the introduction and spread of pests originating from other countries.

Plant protection is a key area for the maintenance and increase of agricultural production and trade. FAO estimates that 20–40 percent of global crop production is lost annually to pests. Each year, plant diseases cost the global economy around USD 220 billion, and invasive insects around USD 70 billion. Climate change has increased the incidence of pests, while the global movement of people and agricultural goods has exacerbated the risk of pests spreading. Developing countries are particularly vulnerable to the negative impacts associated with these amplified pressures because of their limited capacity to prevent and respond to pest introductions. As a result, there is a growing demand by developing countries for technical assistance to improve their phytosanitary capacity to establish and maintain efficient plant protection institutions and frameworks.

Plant protection standards – International Standards for Phytosanitary Measures – are of crucial importance in the trade of food and agricultural commodities. There are two major obstacles to the development of agricultural exports originating from least-developed countries: tariff barriers, which may affect the competitiveness of exported products on the destination market; and technical barriers to trade – non-tariff barriers that include sanitary and phytosanitary measures (including International Standards for Phytosanitary Measures) and customs procedures.

Funded by the Programme, the project "Strengthening the capacity development of Contracting Parties for implementation of the IPPC under the framework of the FAO–China South–South Cooperation Programme" began its three-year operational period in 2017 (and will continue to December 2020) with a budget of USD 2 million (IPPC, no date).

The project aims to increase the capacity of IPPC contracting parties to implement the Convention and its International Standards for Phytosanitary Measures and recommendations, hence improving sustainable plant protection and facilitating trade. The activities and outcomes are as follows.

- The project has supported two IPPC regional workshops and two IPPC National Reporting Obligations workshops for countries from Asia and the Pacific, Central and Eastern Europe, Central Asia, and Africa. These workshops have benefited over 300 participants from more than 100 contracting parties, principally (but not exclusively) from developing countries. Their national plant protection organizations (NPPOs) are now better equipped, at both individual or professional level and institutional level, to fulfil the National Reporting Obligations of their respective countries.
- The project has promoted bilateral and interregional cooperation on phytosanitary measures among countries that are part of the Belt and Road Initiative. This has taken place through organizing two IPPC high-level symposiums involving over 40 national and regional plant

protection organizations. The project has additionally set up two IPPC pilot sites in Belt and Road Initiative countries (Cambodia and Sri Lanka) to boost the countries' phytosanitary capacities. Through a phytosanitary capacity evaluation process, countries are accompanied by FAO in the participatory formulation of national strategies in order to improve their phytosanitary capabilities.

- At the global level, the project has increased the national, regional and interregional impacts of the IPPC, with positive effects on plant protection and its effectiveness on the ground, as well as co-benefits to public health. The project is promoting the use by contracting parties of the IPPC ePhyto National System,²² which should dramatically advance food and agricultural trade in the months and years to come. The IPPC is now proactively easing trade flows originating from developing countries because of their increasing capacity to respond to the quality assurance and risk assessment requirements of importing countries, based on improved capacity to respect internationally agreed standards.

IN BRIEF

IPPC CAPACITY-BUILDING PROJECT OUTCOMES AND ACHIEVEMENTS

The Food and Agriculture Organization of the United Nations (FAO)—China International Plant Protection Convention (IPPC) South–South Cooperation Project is advancing the integration of developing countries into the global market, while fostering effective and more sustainable plant protection at the country level. So far, through regional workshops, it has strengthened the capacity of over 300 representatives from over 100 developing country IPPC contracting parties, reinforcing the countries' national plant protection organizations and their capacity to fulfil national reporting obligations.

3.4 GLOBAL CAPACITY-BUILDING PROJECTS

In addition to the large number of capacity-building activities through national projects, the Programme implements a few important global projects (or facilities) with budgets totalling USD 11 million.²³ These projects and facilities provide cross-cutting support to all the Programme's activities.

In total, over 100 countries and almost 1 000 trainees have benefited over ten years (2009–2019) from the Programme's training and capacity development opportunities. These figures include beneficiaries of study tours organized by national projects (about a quarter) and trainees who have benefited from specific high-level capacity-building opportunities (about three-quarters). Over ten years, 27 high-level capacity development events were organized through the Programme's global capacity-building projects, and 21 study tours were organized by its national projects.

Participants in the high-level capacity development events originated mainly from countries of the global South, with additional participants from developed countries. All were stakeholders involved in agriculture and food systems development with influential positions, enabling them to share their learning with their peers on return. They included representatives of farmers' organizations and other grassroots institutions, technicians, researchers and experts, governmental officials, high-ranking officials and ministers, as well as non-governmental stakeholders, in particular representatives from academia and the private sector. The low participation of female trainees (20 percent) is largely due to the fact that nominations were provided by governments. Improving gender balance is a priority in future capacity building initiatives. Through dialogue with governments, the Programme is encouraging an increase in female participation towards full gender parity.

22 An ePhyto is an electronic phytosanitary certificate in XML format, containing all the information of a paper phytosanitary certificate. ePhytos can be exchanged electronically between countries and value chain stakeholders, including customs. The IPPC ePhyto Solution (www.ippc.int/en/ephyto/) consists of three main elements aiming to support the exchange of ePhytos between NPPOs:

- a central server (hub) to facilitate transfer of electronic phytosanitary certificates between NPPOs, either from and to their own national electronic system or by using the generic system;
- a generic ePhyto national system (GeNS), a web-based system that can produce and receive ePhytos, to allow countries that do not have a national electronic system to produce, send and receive ePhytos; and
- the structure and transmission of ePhytos follows a harmonized format through standardized mapping, codes and lists.

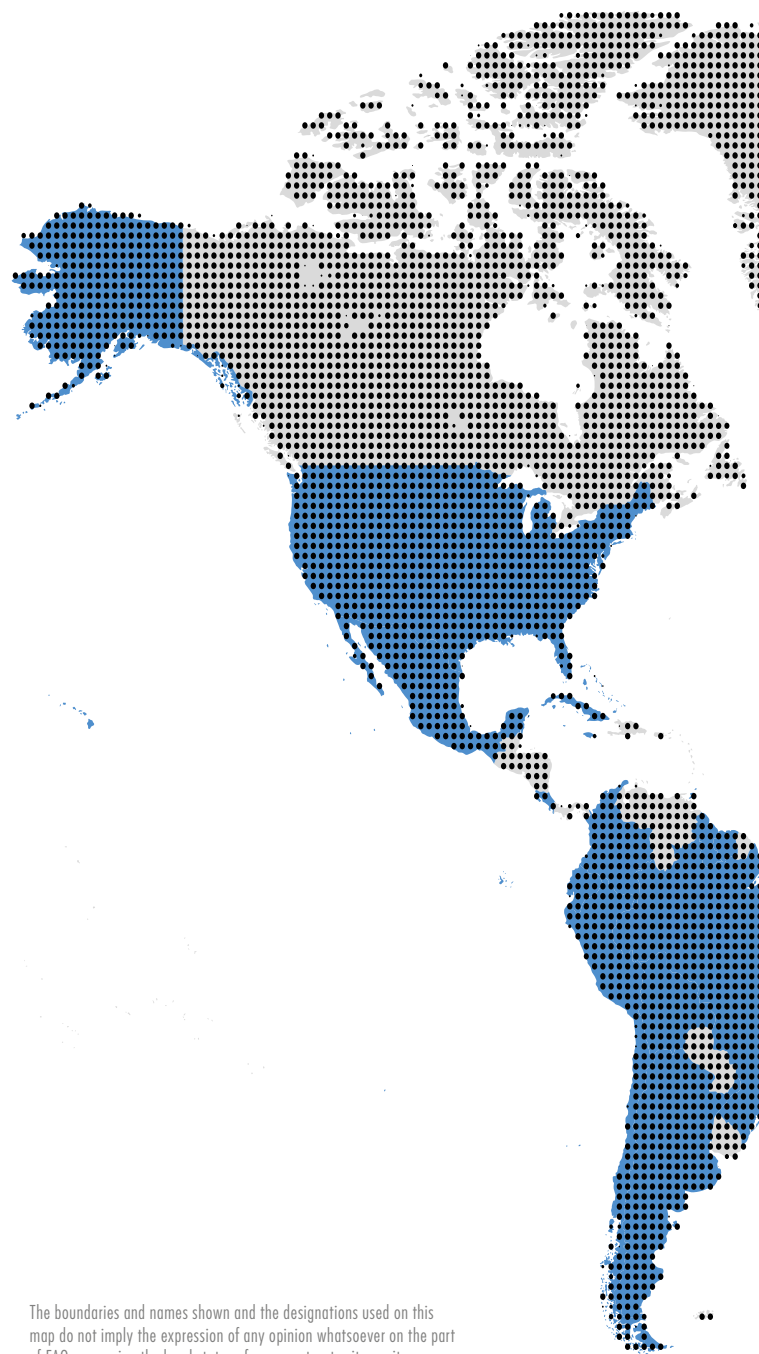
23 Projects GCP/GLO/808/CPR 2017–2021, USD 5 million, and GCP/INT/101/CPR 2010–2017, USD 6 million.

FAST FACTS

THE PROGRAMME'S FIRST TEN YEARS

- ➔ More than **70 000** direct beneficiaries at grassroots level in rural areas, and several hundred thousand indirect beneficiaries.
- ➔ Hundreds of low-cost, scalable technological innovations adapted to the local environmental and socioeconomic context, including:
 - over **330** species and varieties
 - over **120** broad categories of plant and animal production practices
 - over **200** types of agricultural machinery and tools tested, demonstrated and introduced.
- ➔ **1 300** training events conducted in the field.
- ➔ **1 000** trainees from over **100** countries attended **48** high-level capacity development events (study tours, training courses, workshops, seminars, expert meetings, policy dialogues, symposiums and fora).
- ➔ More than **290** experts and technicians from China deployed in **12** countries (ten in sub-Saharan Africa, two in Asia), more than **240** of whom carried out 2-year-long assignments at village level for hand-in-hand capacity development.
- ➔ Funding by China of **USD 80 million** supported the Programme's activities from 2009 to 2019.

Countries involved in the FAO–China South–South Cooperation Programme



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Adapted from United Nations (2019)

Over 100 countries benefited from global capacity-building activities (high-level training courses, seminars, expert meetings, policy dialogues, workshops, symposiums, fora) between 2009 and 2019

Algeria; Argentina; Armenia; Australia; Austria; Azerbaijan; Bangladesh; Benin; Bhutan; Bolivia (Plurinational State of); Botswana; Brazil; Burkina Faso; Burundi; Cambodia; Cameroon; Cabo Verde; Chad; Chile; Colombia; Costa Rica; Cuba;

Democratic Republic of the Congo; Ecuador; Egypt; Eritrea; Ethiopia; Fiji; France; Georgia; Ghana; Greece; Guinea; Guinea-Bissau; Guyana; Hungary; India; Indonesia; Iran (Islamic Republic of); Italy; Jamaica; Japan; Jordan; Kazakhstan; Kenya; Republic of Korea; Kuwait; Kyrgyzstan; Lao People's Democratic Republic; Lebanon; Liberia; Madagascar; Malawi; Malaysia; Maldives; Mali; Mauritania; Mexico; Mongolia; Morocco; Mozambique; Myanmar; Namibia; Nepal; Netherlands;

Niger; Nigeria; Oman; Pakistan; Papua New Guinea; Peru; Philippines; Portugal; Romania; Rwanda; Sao Tome and Principe; Saudi Arabia; Senegal; Sierra Leone; South Africa; South Sudan; Spain; Sri Lanka; Sudan; Suriname; Switzerland; Tajikistan; United Republic of Tanzania; Thailand; Timor-Leste; Trinidad and Tobago; Tunisia; Turkey; Turkmenistan; Uganda; United Kingdom of Great Britain and Northern Ireland; Ukraine; United States of America; Uzbekistan; Viet Nam; Zambia.

12 countries benefited from national South-South cooperation projects and ad hoc study tours in China between 2009 and 2019

Democratic Republic of the Congo; Ethiopia; Liberia; Madagascar; Malawi; Mali; Mongolia; Namibia; Senegal; Sierra Leone; Sri Lanka; Uganda.

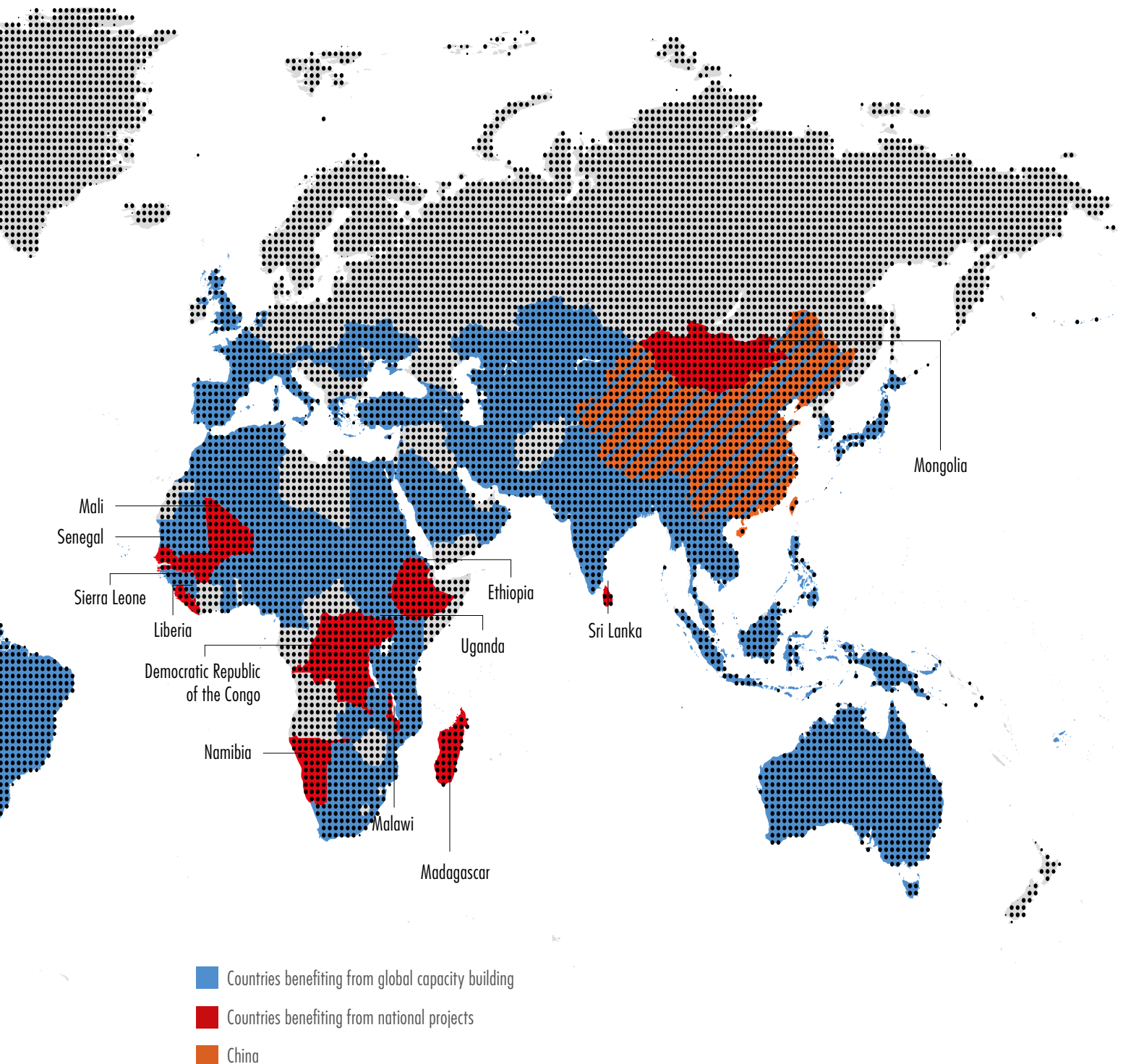


Table 3. Total numbers of high-level capacity-building events and study tours organized by the Programme, 2009–2019

	Number of capacity-building events (June 2019)	Number of participants (June 2019)	Number of female participants
High-level capacity-building events (training courses, seminars, expert meetings, policy dialogues, workshops, symposiums and fora) in China	27 ²⁴	773	156
Study tours to China for stakeholders of the Programme's national projects	21	218	35
Total	48	991	191

Source: MARA

The topics covered by the capacity-building events embrace both policies and technologies, covering a wide array of disciplines, specialities, innovations and best practices (see Annex 5).

Concerning policies, the themes of events included:

- SSC (one ministerial forum in China and one in Nigeria)
- trade and access to finance
- China's agricultural policy
- innovative policies for food systems
- responsible aquaculture and fisheries
- sustainable development of rice value chains in sub-Saharan Africa
- market access for aquatic or fisheries products
- biogas in animal production as a pathway to mitigate greenhouse gases
- pesticide risk management

- smart energy for food security
- policies relating to agricultural heritage sites.

Concerning technologies, themes included:

- hybrid rice cultivation in African and Asian countries
- improvement of rice value chains
- cassava production and processing
- aqua-seed and aqua-feed production
- biogas technology
- animal waste treatment and use
- tropical agriculture practices
- market information systems
- digital technologies in agriculture.

Over the past two decades, a number of Chinese academic institutions, research centres and training centres have increasingly engaged in SSC activities



24 Comprising 19 training events during Phase I of the FAO–China South–South Cooperation Programme (2009–2017) and 8 events during Phase II (since June 2017).



with developing countries. In 2014, FAO and China signed an agreement through which five of these institutions are recognized by FAO as FAO Reference Centres:

- The Foreign Economic Cooperation Centre of the Ministry of Agriculture and Rural Affairs (MARA) was recognized as FAO Reference Centre for South–South Cooperation Coordination, Research and Training;
- Hunan Hybrid Rice Research Centre was recognized as FAO Reference Centre for Hybrid Rice Research and Training;
- the Freshwater Fisheries Research Centre of the Chinese Academy of Fishery Sciences was recognized as FAO Reference Centre for Aquaculture and Inland Fishery Research and Training;
- the Chinese Academy of Tropical Agricultural Sciences was recognized as FAO Reference Centre for Tropical Agriculture Research and Training; and
- the Biogas Institute of MARA was recognized as FAO Reference Centre for Biogas Research and Training.

IN BRIEF

GLOBAL CAPACITY-BUILDING OUTCOMES AND ACHIEVEMENTS

The Programme has strengthened the capacities of almost 1 000 trainees from over 100 countries.²⁵ Through high-level training courses and other capacity-building events (study tours, seminars, workshops, expert meetings, fora, high-level symposiums), the Programme is significantly advancing the technological and policy capabilities of a wide range of stakeholders and countries of the global South. These activities are successfully fostering the sharing of knowledge and experience relevant to the specific agricultural development challenges faced by developing countries. Importantly, the Programme also facilitates strategic policy debates and agreements among Food and Agriculture Organization (FAO) Member States in relation to South–South cooperation frameworks and strategic agricultural development issues.

Many capacity-building events and high-level training courses organized by the Programme are taking place in these FAO Reference Centres, which constitute an important resource for supporting the exchange of development knowledge and solutions among developing countries.

²⁵ Including participants in the 21 study tours of national projects, and trainees benefiting from the 27 events of the global capacity-building projects (or facilities).



4 LESSONS LEARNED

The experience gained over ten years has highlighted some lessons that are of value for the future of this Programme, and that can also provide useful insights for other SSTC activities by FAO, and more widely.²⁶

4.1 VISIBILITY, OUTREACH AND COMMUNICATION

The outreach of the Programme must be further enhanced in order to increase the understanding of its spirit, approach, value, outputs and potential. The Programme's achievements are substantial, but several governments and FAO partners lack detailed awareness of its activities and accomplishments. Efforts are required to develop effective, high-quality outreach and awareness initiatives in close collaboration with FAO's Office for Corporate Communication. Action is being taken by the Programme Management Unit in this regard.

4.2 STATISTICS, MONITORING AND EVALUATION OF PROGRAMME AND PROJECTS

There is a need for more systematic and longitudinal collection of data concerning the extent to which the innovations are adopted by producers, and any resulting increases in production and productivity that are generated over the long term. The monitoring of national project outcomes and outputs through data and statistics needs enhancement, including the collection of gender-disaggregated data. The Programme Management Unit is addressing this issue with counterparts and partners at country level by fostering, jointly with WFP and IFAD, improvements in project design, selection of performance indicators, monitoring and evaluation, and by encouraging project leaders to improve monitoring mechanisms.

²⁶ The lessons described here draw on, among other sources, Tang, Lu and Deogratias (2018).



4.3 PRIVATE SECTOR INVOLVEMENT IN SPREADING INNOVATIONS

The Programme has focused on the enhancement of production and productivity at the level of small-scale producers. This emphasis is the foundation of the Programme and of the progress towards achieving SDG 2. However, it must be complemented by relevant links to the market. Development of the agriculture–industry continuum, and boosting of value chains by involving agribusiness in an inclusive manner, will be indispensable to secure the uptake and sustainability of the innovations introduced through the Programme. Action is being taken by the Programme’s management to seek innovative methods of intervention at host-country level, promoting cooperation with local and international agricultural enterprises and firms, as well as farmers’ cooperatives and organizations. This is being done based on projects that were particularly successful in this regard (e.g. those in Mongolia and Uganda) and along the lines described in Chapter 5 of this report.

4.4 HOST GOVERNMENTS’ ENGAGEMENT AND POLITICAL COMMITMENT

The governments of host countries sometimes need to enhance the continuity and coordination of their engagement in the implementation of SSC national projects. In some cases, staff turnover has taken place after the project agreement has been signed; or constraints impede governments from sharing costs and resources as initially agreed (e.g. housing for long-term experts and technicians in villages, or availability of full-time national counterparts for project implementation). Dialogue between

Programme management, government officials and FAO country offices is currently being further reinforced so that countries’ political commitments to SSTC translates into improved project implementation.

4.5 COOPERANTS’ CAPACITIES

The capacity of cooperants from China to achieve knowledge and technology transfer, field demonstrations and training-of-trainers is sometimes hampered by language difficulties, even if the cooperants are willing to learn, and are selected based on their language skills (among other criteria). To mitigate this, increased attention is being paid to language education and preparation, and the Programme is mobilizing interpreters for field work as required.

4.6 TRANSACTION COSTS OF IMPLEMENTING SOUTH–SOUTH COOPERATION PROJECTS

Shared costs and responsibilities among parties involved in SSTC (governments in the global South, TrC partners and FAO) offer important advantages. However, it is also a challenge in terms of procedures, especially when the host country lacks the human and institutional resources needed to implement it. There is a need to reduce the transaction costs of SSTC agreements, streamlining procedures to develop project agreements and smoothing project implementation. Action is being taken by the OSS and the Programme Management Unit in this connection.

5 THE WAY FORWARD

FAO Member States are committed to SSTC. The way forward for the Programme is to further contribute to making SSTC truly transformational to achieve SDG 1 (end poverty in all its forms everywhere) and SDG 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture).

The vision for the future of the Programme is built on four pillars, on a revamped approach and scope, and on strategic partnerships, particularly with the United Nations Rome-based agencies, with regional and national initiatives, and with the private sector.

5.1 THE FOUR PILLARS OF THE PROGRAMME

First, the Programme is committed to supporting the realization of the 2030 Agenda, particularly SDGs 1 and 2 based on the principles of SDG 17 (partnerships for the goals). So far, the Programme has focused primarily on these three SDGs; however, FAO is the custodian United Nations agency for 21 SDG indicators, and is a contributing agency for a further five SDGs.²⁷ Indeed, FAO plays a major role in the 2030 Agenda as a whole.²⁸ The Programme, in the long run, may be called on to widen its SDG focus to explicitly address, for example, SDG 12 (responsible consumption and production) and SDG 15 (life on land).

The second pillar is FAO's Strategic Objectives (SOs) and Regional Initiatives. SSTC will provide an increasingly important contribution to these programmes and initiatives, and to their responses to countries' requests and needs. So far, the Programme has focused its efforts principally on SO 1 (help eliminate hunger, food insecurity and malnutrition), SO 2 (make agriculture, forestry and fisheries more productive and sustainable), and SO 4 (enable inclusive and efficient agricultural and food systems). The Programme also supports SO 3 (reduce rural poverty) and SO 5 (increase the resilience

²⁷ SDG 5: achieve gender equality and empower all women and girls; SDG 6: ensure availability and sustainable management of water and sanitation for all; SDG 12: ensure sustainable consumption and production patterns; SDG 14: conserve and sustainably use the oceans, seas and marine resources for sustainable development; SDG 15: protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

²⁸ The centrality of agriculture in sustainable development processes means that the focus on SDG 2 generates substantial spillovers, multiplier effects and positive externalities for the achievement of many other SDGs.



of livelihoods to threats and crises). In the future, the Programme will adopt a more comprehensive approach to food systems and climate change, to resilient farming, and to gender and governance, while also supporting FAO's one health vision.²⁹

The third pillar is composed of regional and national development initiatives, goals and frameworks, including initiatives of the Regional Economic Communities as well as other frameworks. Among these, the Programme will contribute to Africa's Agenda 2063, the small island developing states' initiative relating to sustainable development and climate change (the SAMOA Pathway), the Belt and Road Initiative, and China's South-South Cooperation Assistance Fund. China's emphasis on the strategic importance of SSC mechanisms to contribute to achieving the SDGs is reflected in the two latter initiatives. The Programme will endeavour to build on the opportunities that these frameworks

and initiatives are opening up for the promotion of SSTC in relation to agriculture, food systems, investments and trade.

The fourth pillar is the guidance provided by global frameworks on SSTC, including the recent BAPA+40 outcome document. This document stresses that key areas where South-South cooperation could have an impact include "trade; climate-resilient pathways and disaster risk reduction; infrastructure connectivity; digital economy; investment in human capital; education and health; youth and gender mainstreaming; agriculture; rural transformation and opening of markets for farm products; humanitarian crisis; support in a post-conflict context; combating violent extremism and terrorism; and science and technology" (United Nations, 2019). It also stressed the importance of promoting e-commerce, digitization of agriculture, and rural economy for the benefit of small-scale producers.

²⁹ Over 60 percent of existing and emerging pathogens affecting humans originate in animals. Of those, 75 percent come from wildlife. One health is a holistic vision to address complex challenges that threaten human and animal health, food security, poverty and the environments where diseases flourish. FAO. 2011. One Health: Food and Agriculture of the United Nations: Strategic Action Plan. Rome. www.fao.org/3/al868e/al868e00.pdf

5.2 APPROACH AND SCOPE OF THE PROGRAMME

By placing emphasis on increasing rural incomes and improving rural livelihoods, the Programme will contribute to enhancing local villages' economies and markets, achieving a sense of potential prosperity and slowing outmigration flows, in particular of young people. The Programme's vision is that this must be achieved through the integration of small-scale producers into sustainable value chains. Producers' incomes must be improved through a policy environment that enables them to boost their production and productivity; gain better access to markets; obtain remunerative prices for their production; and have access to new employment opportunities. The time has come for the Programme to focus on responsible, equitable and environmentally sound agribusiness development, in partnership with the private sector.

The scope of the Programme will be broadened beyond sharing technologies to embrace a food systems and value chain approach. The goal will continue to be the enhancement of food security, rural livelihoods and rural incomes, but the strategic pathway will be to make the food systems and value chains more efficient, inclusive, responsible and transparent.

Boosting value chain development and market access for small-scale producers implies leveraging the potential offered by digital agriculture, such as e-commerce, e-connectivity and, in a relatively near future, blockchain technologies. To this end, the expertise in artificial intelligence and communications technology available in the global South will play a very important role. The Programme will explore collaborations with relevant stakeholders in order to promote the digitization of agriculture and rural development to benefit smallholders in those countries that request it.

5.3 THE PROGRAMME'S PARTNERSHIPS

The Programme will further develop its activities in collaboration with the United Nations Rome-based agencies; regional and national partnerships; and partnerships with non-governmental actors, including the private sector, academia and civil society.

The United Nations Rome-based agencies

The Programme will contribute to increasing collaboration between FAO, IFAD and WFP in order to implement their Joint Road Map on SSTC, based on their respective strengths and comparative advantages. This will multiply experiences from pilot projects,³⁰ contributing to the emergence of a fully fledged and efficient joint SSTC programme for these agencies.

Regional and national partnerships

Regional level

The Programme will foster increased integration of its activities into relevant regional frameworks and partnerships. In Africa, in the overall context of Agenda 2063 of the African Union, and in the wake of the 2018 Beijing summit of the Forum on China-Africa Cooperation (FOCAC), the Programme will embed its activities more closely into regional and national frameworks, in particular the African Union Development Agency (AUDA-NEPAD; formerly known as the New Partnership for Africa's Development) and its comprehensive Africa Development Programme (CAADP), and the implementation of the Maputo Declaration.³¹

In Asia, in the context of the Association of Southeast Asian Nations (ASEAN), the Programme will stimulate more countries to join its activities as SSTC providers or beneficiaries. This will be achieved in particular in the framework of the Lancang-Mekong Cooperation Mechanism, whose six member countries are engaging in close SSC exchanges.

30 For example, FAO and the World Food Programme have engaged in a collaboration in Sri Lanka, with a pilot project, "Strengthening the resilience and livelihoods of vulnerable smallholder farmers to climate-related shocks in Sri Lanka", likely to be joined by the International Fund for Agricultural Development.

31 In the Maputo Declaration on Agriculture and Food Security (2003), African leaders made a bold commitment to reverse the underinvestment that had held the agriculture sector back for so long. Through the declaration, African heads of state promised to allocate at least 10 percent of national budgets to agriculture, and to achieve at least 6 percent annual agricultural growth. In the Maputo Declaration on Agriculture and Food Security (2003), African leaders made a bold commitment to reverse the underinvestment that had held the agriculture sector back for so long. Through the declaration, African heads of state promised to allocate at least 10 percent of national budgets to agriculture, and to achieve at least 6 percent annual agricultural growth.

In Latin America and the Caribbean, as a follow-up to the first ministerial meeting of the China–Community of Latin American and Caribbean States (CELAC) Forum, held in Beijing in 2015, the China–Latin American and Caribbean Countries Cooperation Plan (2015–2019) provides a framework within which the Programme can envisage and unfold future partnerships.

Finally, in the Near East and North Africa region, the Programme will explore how to support FAO’s regional initiatives on water scarcity and small-scale family farming.

National level

The Programme will also tighten relationships between FAO–China project teams, national academic institutions and national agricultural research centres. In sub-Saharan Africa, the Programme will foster a more visible and effective integration of its activities in national CAADP compacts and related national agricultural investment plans.

The Programme will advance Member States’ recognition of the importance of SSC by encouraging them, with the support of FAO senior management, to create governmental SSC focal points, offices or specialized institutions (with budgetary support) bearing the mandate to facilitate countries’ engagement in SSC activities as beneficiaries or as providers of SSC services.

The Programme will continue its support to FAO’s GIAHS Programme by encouraging and training countries in the identification, protection and sustainable development (“dynamic conservation”) of their remarkable agricultural systems. An example of this is leveraging Chinese local and national policies that use recognized sites to provide sustainable rural development solutions.

The Programme will continue to reinforce national plant protection organizations by supporting International Plant Protection Convention activities aiming to evaluate and enhance national phytosanitary capabilities.

The Programme considers that the mobilization of domestic financial resources (e.g. unilateral trust funds) for SSC activities should be encouraged for middle-income as well as for low-income

developing countries. As demonstrated by the case of Uganda, countries may want to embark on FAO SSC unilateral trust fund projects in order to increase their ownership of the cooperation. The political willingness of governments to comply with SDG 2 may also drive them to apply for FAO Technical Cooperation Programme projects based on SSC approaches.

Finally, the Programme will foster partnerships in the context of the Belt and Road Initiative in relevant countries. The initiative plays an important role in the development of agricultural trade and is expected to have a significant, transformative influence on agriculture, value chains and food systems in its partner countries. Through its country, regional and global projects, the Programme will continue and increase its support to Belt and Road Initiative partner countries.

Non-governmental partnerships

Private sector

The Programme will invite national and local governments to consider approaches to cooperation with local enterprises and national agrifood firms. The Programme will support farmers’ organizations and cooperatives to advance their market links and to participate in the functioning of more dynamic and responsible value chains.

FAO headquarters and decentralized offices will explore ways to increase their flexibility at



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the country level for partnering with the private sector, based on FAO's corporate rules (CFS, 2014; FAO, 2013; OECD and FAO, 2016). Private firms collaborating with the Programme will be committed to corporate social responsibility standards and to compliance with FAO's voluntary guidelines as relevant to their domain of activity (FAO, 2005, 2012, 2015a, 2015b, 2015c, 2017a, 2017b, 2017c, 2018b, 2019).

The Programme will also stimulate opportunities for innovative business development between countries involved in SSTC, paving the way for joint ventures between local or national companies and firms from countries of the SSTC movement. Such agreements could become win-win scenarios for the development of the agrifood domestic sectors of host countries, as well as for small-scale producers and their organizations. Private firms engaging in national projects (including through blended finance) will be required to respect the spirit of SSC.³²

The OSS and the Programme Management Unit teams will explore with FAO's Legal Office and its relevant Strategic Programmes, departments, divisions and offices, and the country and regional offices concerned, the conditions and approaches to permit similar partnerships, with flexibility.

Practical means to develop private sector involvement in the Programme's implementation may include the following.

- Invitations as observers of local enterprises, national firms and foreign companies to seminars, workshops and training events (at country, regional or headquarters level).
- Invitations to specific events or activities organized by the Programme's agricultural parks, involving producers and cooperatives, local and national enterprises, paving the way for potential agreements between value chain stakeholders.
- Invitations for representatives of national chambers of industry and commerce to specific project events, demonstrations, agricultural technology hubs or agricultural park activities, paving the way for possible future round tables involving national and other value chain stakeholders, including industry.³³
- Commitment by firms to respect FAO policies concerning the private sector, Voluntary Guidelines and Codes of Conduct (CFS, 2014; FAO, 2013; OECD and FAO, 2016).
- Commitment by firms to respect (and adhere to) the SSC principles of solidarity, respect for national sovereignty, national ownership and independence, equality, non-conditionality, non-interference in domestic affairs, and mutual benefit.
- In countries where an enabling environment exists, and whenever possible within the FAO policy and political environment, invitations to enterprises to contribute to blended finance and to specific SSC projects – for example, co-funding of a given project with equal shares between China, a TrC country donor and a private firm.³⁴

³² Additional guidance for private sector engagement with the United Nations in pursuance of the SDGs can be found on websites of the UNDP and OECD, e.g.: OECD. 2018. *Better business for 2030: Putting the SDGs at the core*. Paris. www.oecd.org/dev/SDG2017_Better_Business_2030_Putting_SDGs_Core_Web.pdf
UNDP. 2019. *Finance and private sector engagement for the SDGs*. New York.

³³ The FAO Representative, in this connection, and after agreement with FAO headquarters and relevant regional office, the UNDP Permanent Representative and the ministry of agriculture may establish contact with the ministry of commerce and the chamber of industry and commerce.

³⁴ Many major international firms are willing to cooperate with international organizations, and a number have engaged in partnerships with the United Nations, signing the United Nations Global Compact. It is expected that they will contribute based on principles of corporate social responsibility, and through various approaches to achieving the SDGs, in collaboration with United Nations organizations.

Other non-governmental stakeholders and triangular cooperation partners

The Programme will seek the development of innovative partnerships with international financial institutions, associating the World Bank and regional development banks to its activities, and encouraging them to invest in disseminating the technological solutions introduced by the FAO–China SSC projects. Similarly, the Programme will endeavour to attract the interest of foundations and other private donors, possibly through blended finance mechanisms.

Academia, national SSC institutions, producers' organizations and other civil society organizations will increasingly be associated as operational partners for national project activities. Whenever relevant, this will be done in association with designated FAO Reference Centres. Based on the recent experience

with the Netherlands, new TrC projects involving academic institutions will also be formulated and launched with new donors.

5.4 FAO'S SOUTH–SOUTH AND TRIANGULAR COOPERATION STRATEGY

FAO is aiming to expand its strategic partnership base to attract more financial and technical resources for SSTC projects, and to promote FAO's role in catalysing interventions for generating sustainable investment and building project pipelines. The corporate strategy on SSTC will further enhance FAO's work in this area in the years to come. This strategy constitutes the institutional framework within which the Programme will unfold its activities.

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ANNEXES

ANNEX 1

Countries benefiting from training courses and other high-level capacity development events

2009–2019

Algeria	Guyana	Pakistan
Argentina	Hungary	Papua New Guinea
Armenia	India	Peru
Australia	Indonesia	Philippines
Austria	Iran, Islamic Republic of	Portugal
Azerbaijan	Italy	Romania
Bangladesh	Jamaica	Rwanda
Benin	Japan	Sao Tome and Principe
Bhutan	Jordan	Saudi Arabia
Bolivia (Plurinational State of)	Kazakhstan	Senegal
Botswana	Kenya	Sierra Leone
Brazil	Korea	South Africa
Burkina Faso	Kuwait	South Sudan
Burundi	Kyrgyzstan	Spain
Cambodia	Lao People's Democratic Republic	Sri Lanka
Cameroon	Lebanon	Sudan
Cabo Verde	Liberia	Suriname
Chad	Madagascar	Switzerland
Chile	Malawi	Tajikistan
Colombia	Malaysia	Thailand
Costa Rica	Maldives	Timor-Leste
Cuba	Mali	Trinidad and Tobago
Democratic Republic of the Congo	Mauritania	Tunisia
Ecuador	Mexico	Turkey
Egypt	Mongolia	Turkmenistan
Eritrea	Morocco	Uganda
Ethiopia	Mozambique	Ukraine
Fiji	Myanmar	United Kingdom
France	Namibia	United Republic of Tanzania
Georgia	Nepal	United States of America
Ghana	Netherlands	Uzbekistan
Greece	Niger	Viet Nam
Guinea	Nigeria	Zambia
Guinea-Bissau	Oman	

ANNEX 2

Countries benefiting from national projects

FAO–China South–South Cooperation national projects, 2009–2019

Twenty national projects (16 trust fund Phase I, 4 trust fund Phase II): 14 implemented and 6 pipelined

Host country	Duration	Project code	Signature	Number of cooperants fielded
Cabo Verde (trust fund, TF, Phase II)	To be determined (TBD)	TBD		
Democratic Republic of the Congo	Sep 2016–Sep 2018	GCP /DRC/051/CPR	Apr 2016	13
Ethiopia	Apr 2012–May 2015	GCP /ETH/080/CPR	Apr 2012	30
Liberia	Jun 2012–May 2014	GCP /LIR/015/CPR	Mar 2011	24
Madagascar (TF Phase II)	Nov 2018–Nov 2020	GCP /MAG/087/CPR	Feb 2018	0
Malawi	(Phase I) Sep 2010–Sep 2012	GCP /MLW/020/CPR	May 2010	18
Malawi	(Phase II) TBD	GCP /MLW/073/CPR		
Mali	Jul 2010–Dec 2016	GCP /MLI/036/CPR	Jul 2010	17
Mongolia	(Phase I) Mar 2010–Sep 2013	GCP /MON/004/CPR	Jan 2010	19
Mongolia	(Phase II) Aug 2014–Jul 2016	GCP /MON/010/CPR	Mar 2014	14
Morocco	TBD	GCP /MOR/052/CPR		
Namibia	(Phase I) Jun 2014–Apr 2017	GCP /NAM/017/CPR	Jun 2014	15
Namibia	(Phase II) TBD	GCP /NAM/019/CPR		
Nigeria	(Phase II) Jun 2007–Dec 2015	UTF /NIR/048/NIR	Oct 2008	78
Senegal	Jun 2012–May 2014	GCP /SEN/064/CPR	Oct 2011	24
Sierra Leone	Sep 2010–Aug 2012	GCP /SIL/035/CPR	Jul 2010	22
Sri Lanka (TF Phase II)	Dec 2018–Dec 2020	GCP /SRL/073/CPR	Jun 2018	0
Sudan	TBD	GCP /SUD/085/CPR		0
Uganda	(Phase I) Sep 2012–Oct 2014	GCP /UGA/040/CPR	Dec 2011	31
Uganda	(Phase II) Dec 2015–Dec 2017	GCP /UGA/046/CPR	Sep 2015	16
Uganda	(Phase III)–(TF Phase II)	TBD		
Total cooperants from China fielded from 2009 to June 2019 through FAO SSC activities*				321
Total cooperants from China fielded from 2009 to June 2019 under FAO–China SSC Programme				243

Key:

- Projects under implementation or terminated
- Pipeline projects

* Includes Nigeria unilateral trust fund project

ANNEX 3

Thematic technical coverage by the Programme

NATIONAL PROJECTS

New species and varieties introduced by experts from China to host countries (2009–2018)

More than 330 new varieties were introduced, within the following broad categories.

Species	Varieties
Grain/cereals	Unhusked rice, rice, millet, maize, sorghum
Legumes	Beans, Chinese mung beans
Tubers	Sweet potato
Fruits	Banana, mango, melon, apple, strawberry, pomegranate
Vegetables	Water spinach, opo squash, onion, carrot, lettuce, okra, tomato, cucumber, rattan, mushroom, long horn bean, moth bean, cabbage, tomato, chilli, onion, garlic, rape, Chinese cabbage

Source: Experts' work briefing, 2018



Soil conservation and plant cultivation innovations promoted by experts from China in host countries

About 70 soil conservation and plant cultivation innovations were introduced, within the following categories.

Land consolidation and conservation technologies	Techniques of standardized seedling preparation, garbage separation, soil improvement by burying in pits, and soil erosion-prevention techniques
Soil fertility improvement	Composting technology, straw returning technology, vegetable rice husk mulching technology, crop bottom fertilizer and top-dressing fertilizer proportioning methods, seedling observation and top-dressing methods, weed removal technology, organic fertilizer fermentation technology, wheat foliar spraying technology, cow manure and chicken manure fermentation technology
Irrigation techniques	Drip irrigation technology, alfalfa and silage maize irrigation technology, rainwater harvesting technology for maize planting, water resources use and rational irrigation technology
Seedling techniques	Nutrition bowl seedling technology, soil-less pot vegetable seedling technique, shelf seedling technology, winter greenhouse vegetable production technique, flower seedling production technology, pearl millet seed breeding, moss bran seedling transplanting technology, pepper seedling technology, seed soaking and germination technology, rice seedling soaking technology
Grain-planting technologies	Rice transplanting technology, Huanghuali rice cultivation and expansion technology, paddy field weed control technology, ridge cultivation technology, transplanting field management technology, bran seedling throwing and transplanting techniques, sweet potato planting technology, high-yield cultivation technology of rape seedling transplanting, maize cultivation technique at large bell stage, direct seeding and rational close planting techniques of maize, forage planting technology
Vegetable planting technologies	Pumpkin cultivation technology, eggplant pruning technology, long horn bean cultivation technology, greenhouse vegetable cultivation technology, ginger cultivation technology, edible fungi species isolation, master clock technology, vegetable high-yield cultivation technology
Fruit planting technologies	Banana planting technology, fruit tree pruning technology, seedless watermelon pruning technology, citrus fertilization and pruning technology, fruit grafting technology, grape-cutting technology, pear grafting technology
Pest control techniques	Prevention and control of guava root-knot nematode disease, application of methyl vitamin salt to control cabbage pests, locust control, identification of crop deficiency syndrome, treatment of tomato calcium deficiency disorders, use of intelligent insecticidal lamps, control techniques of potato <i>Agrotis ipsilon</i> and <i>Ralstonia solanacearum</i> , control of mango pests and diseases, cultivation techniques of millet in dry land
Other innovations	Planning and design of greenhouse construction in winter

Source: Experts' work briefing, 2018



New animal production/breeding techniques popularized by experts from China in host countries

About 50 new animal husbandry techniques were popularized, within the following categories.

Animal breeding and genetic improvement techniques	Selection and cultivation of piglets and breeding sheep, porcine and sheep castration technique, artificial insemination of cattle and sheep, chicken hatching technique, sheep semen dilution, sheep cervical insemination, breeding of fingerlings, breeding of catfish
Prevention and control of animal diseases	Epidemic prevention and control and daily management techniques, surgical operations for pigs and sheep, anatomical techniques for dead livestock and poultry, livestock and poultry disease diagnosis and treatment techniques, examination techniques for dairy cow mastitis, closed injection therapy for goat foot inflammation, rubber band ligation for root excision of animal body surface tumours, home blood therapy, animal parasite examination techniques, comprehensive treatment of bovine rumen tympanic emergencies, animal parasitic three-dimensional prevention and treatment of bovine ophthalmopathy
Animal feed	Silage processing technology, production of microbiological feed additive, cattle spring feeding technology, chicken feeding and management technology, animal nutrition and feeding technology, guidance for ammoniated feed production, beer pig feed, cow feed formula matching technology
Breeding technologies	Rapid fattening techniques for shaped cattle in dry season, fattening and castration techniques for pork production, poultry management techniques, fish culture in paddy fields and rice–fish rotation techniques, tilapia feeding techniques, management and reproduction techniques for spring bee colonies, artificial queen bee cultivation, artificial bee separation techniques
Other innovations	Construction of poultry farms for chicken and duck raising

Source: Experts' work briefing, 2018

Host country	Number of new types of technology introduced	Number of new varieties introduced	Number of new types of agricultural implements introduced
Ethiopia	52	8	31
Liberia	92	27	5
Malawi	106	60	6
Mali	13	28	3
Mongolia (Phase I)	11	42	80
Mongolia (Phase II)	18	55	17
Namibia	25	33	30
Senegal	33	30	10
Sierra Leone	68	56	35
Uganda (Phase I)	25	17	4
Uganda (Phase II)	20	16	6

Source: Interim review and summary country report of the China-FAO SSC trust fund project

REGIONAL, INTERREGIONAL AND GLOBAL PROJECTS

Transboundary animal diseases in the Greater Mekong Subregion

- Response to food and agricultural threats and emergencies
- Strategic national plans to reduce the risk of introduction and spread of transboundary animal diseases
- Prevention and impact mitigation measures for transboundary animal diseases
- Contingency plans tested through desktop and field simulation
- Functions and services of the Emergency Centre for Transboundary Animal Diseases in the FAO regional office
- Multidisciplinary and intersectoral one health approach
- Risk-based planning for swine disease control strategies
- Preparedness and preparation for swine disease contingency plans
- Laboratory diagnosis for swine diseases with regional quality assurance
- Risk assessment for introduction and spread of peste des petits ruminants
- Surveillance activities for peste des petits ruminants

Globally important agricultural heritage systems (GIAHS)

- GIAHS conceptual framework
- GIAHS implementation/operational framework
- GIAHS sustainable development and contemporary development issues
- Lessons learned and best practices
- Dynamic conservation of GIAHS sites
- GIAHS way forward

International Plant Protection Convention (IPPC)

- International Standards for Phytosanitary Measures
- National Reporting Obligations
- International Year of Plant Health
- Pest surveillance
- Control of key quarantine pests
- Emerging regulated pests
- IPPC electronic certificates (ePhyto)
- IPPC phytosanitary capacity evaluation



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ANNEX 4

Study tours for national project stakeholders 2009–2019

SSC host country trainees from:	Date	Locations visited	Number of participants	Technical components
Ethiopia	15–24 Mar 2015	Beijing, Hunan Province (Shaosha, Changsha), Hainan Province (Haikou, Sanya)	12	Livestock and veterinary services, dairy production, foodstuffs industry, tropical agricultural sciences, spice and beverage research, cropping
	21–29 Apr 2014	Beijing, Nanning	11	Dairy processing, agricultural machinery, chicken and cattle raising and cassava processing, grains, biogas
Liberia	17–28 Aug 2013	Beijing, Hunan Province (Changsha, Loudi, Shaoshan, Shuangfeng)	11	Animal husbandry, machinery, rice production, fisheries, cropping, animal and veterinary sciences
Malawi	10–19 Jun 2012	Beijing and Hubei Province (Wuhan, Laohekou and Xiangyang)	8	Veterinary services, fisheries, machinery and extension technologies
	23 Oct–1 Nov 2011	Beijing, Hubei Province (Yichang, Xiantao, Wuhan)	10	Animal husbandry, agro-product processing, biogas, water conservancy and aquaculture
Mali	1–30 August 2017	Beijing, Zhangjiakou, Changsha, Wuxi	10	Aquaculture, hybrid rice, hybrid foxtail millet, hybrid maize, virus-free potato
	3–17 Nov 2015	Beijing, Jiangsu, Anhui, Hubei	14	Agricultural mechanization, vegetables, aquaculture, agricultural industry chains, biogas, shrimp-rice production, grain processing
Mongolia	14–24 Apr 2013	Beijing, Xining, Erdos, Hohhot	16	Crop–livestock farming systems, animal feed production, greenhouse farming technologies, chicken feed production, processing of livestock-originated products, herders' cooperatives
	19–29 Jul 2011	Beijing, Hohhot, Dalian	15	Agricultural research, animal husbandry, aquaculture, agricultural product and feedstuff processing, animal epidemics, irrigation, agricultural machinery, market information, new rural construction
	19 Sep–1 Oct 2015	Beijing, Shanghai, Inner Mongolia (Hohhot, Hulunbuir)	14	Aquaculture, animal husbandry, feed processing, greenhouse vegetable production
	21–30 Sep 2016	Beijing, Inner Mongolia, Jiangxi	8	Animal husbandry, beekeeping and bee product processing, herb cultivation and planting technology, feed production and planting
Namibia	9–20 May 2016	Beijing, Jiangxi (Nanchang), Hubei (Wuhan, Qianjiang), Inner Mongolia (Hohhot)	11	Crop farming, animal husbandry, agricultural machinery, vaccines, agribusiness, seed production, agricultural value chains, food processing, rice
	13–19 Nov 2016	Beijing, Hubei, Inner Mongolia	7	Biotechnology, planting practices, rice, fertilizers, vegetables, vaccine production, seed production

SSC host country trainees from:	Date	Locations visited	Number of participants	Technical components
Senegal	29 Jun–18 Jul 2013	Beijing, Hubei Province (Yichang, Zhongxiang, Tianmen, Wuhan), Jiangxi Province (Nanchang)	10	Animal and veterinary sciences, vegetable production, water conservancy, rice production, bamboo production, aquaculture, lotus root production, agricultural machinery
	16–28 Nov 2013	Beijing, Hubei Province (Yichang)	9	Mandarin processing, vegetable production, aquaculture production, husbandry, cotton processing, peanut processing, water management, foodstuffs processing and value addition, tea processing
Sierra Leone	2–17 Sep 2012	Beijing, Hebei Province (Zhang Jiakou), Hubei Province (Wuhan, Qianjiang, Yichang, Enshi)	11	Irrigation, fisheries, management, seed production, post-harvest processing
	14 Nov–2 Dec 2010	Beijing, Wuhan, Nanning	7	Vegetable production, irrigation, rice production
Uganda	14–20 May 2017	Beijing, Zhejiang, Sichuan	5	Livestock, fruit and vegetables, tea production, mushrooms, husbandry
	15–21 Jun 2014	Beijing, Hebei (Zhangjiakou), Chengdu	6	Hybrid rice production and seed production, fisheries, irrigation, agro-machinery
	21 Aug–3 Sep 2013	Beijing, Hebei (Zhangjiakou), Chengdu	10	Hybrid millet production, fisheries, vegetables, grain and oilseed production, agro-machinery, water conservancy, husbandry, biogas
	4–17 Sep 2016	Beijing, Hebei, Sichuan	13	Livestock, hybrid millet and sunflower seed, solar and wind power, fruit production, irrigation, biogas, aquaculture, poultry, vegetable production

Total number of participants: 206

ANNEX 5

Capacity-building activities

From 2009 to 2019, a total of 27 capacity-building events were organized by the FAO–China South–South Cooperation Programme through its global capacity-building projects (or facilities) (25 in China and 2 in other countries). These events involved participants from more than 100 countries.

The type of capacity-building events ranged from a symposium at ministerial level involving more than 110 participants, 27 countries and 12 international organizations, to technical agricultural production training courses, and capacity-building to promote the digitization of agriculture and rural development.

The total number of participants reached 773 trainees (of whom 156 were women).

Nineteen training events were organized during Phase 1 of the Programme (2009–2017), and eight during Phase II (from June 2017).

The list in this annex does not include the 21 study tours organized in China for stakeholders from countries hosting national projects (see these study tours in Annex 4).



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Training courses and seminars 2009–2019 through the FAO–China South–South Cooperation Programme

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
1	Training Course on Aquaculture	10 May–10 Jun 2011	Wuxi	Jiangsu, Zhejiang and Shanghai	26	Eritrea, Liberia, Malawi, Mali, Nigeria, Senegal, Sierra Leone, Uganda and Zambia (9)	Aqua-seed production, good aquaculture practices, farm planning and business development	Aquaculture farms, research and extension institutions in Jiangsu, Zhejiang and Shanghai
2	Training Course on Hybrid Rice Technology	26 Aug–24 Sep 2011	Changsha		17	Eritrea, Malawi, Nigeria, Senegal, Sierra Leone, Uganda and Zambia (7)	Hybrid rice breeding, hybrid rice seed production, hybrid rice cultivation, molecular breeding of hybrid rice	Super hybrid rice demonstration base in Longhui County, hybrid rice seed production base in You County; super hybrid rice high-yield demonstration base in Liling County
3	Scoping Workshop on Regional Cooperation for Responsible Aquaculture and Fisheries Development in Central Asian and Caucasian Countries	4–8 Jun 2012	Urumuqi		23	Azerbaijan, Georgia, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan, Thailand, Turkey, Turkmenistan and Uzbekistan (12)	Common regional and subregional issues in fishery and aquaculture development; obstacles and problems, essential needs, possible strategies, future plans and development strategies; technical cooperation between institutions and countries	Two fish hatcheries at Xingjian Aquaculture Research Institute, and a fish breeding centre
4	Training Course on Aqua-feed Development and Aqua-seed Production	1–30 Aug 2013	Wuxi	Jiangsu, Zhejiang and Shanghai	19	Armenia, Azerbaijan, Bangladesh, Georgia, Indonesia, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan (11)	Aqua-seed production; aqua-feed development and management	Aquaculture farms, research and extension institutions in Jiangsu, Shanghai and Zhejiang
5	High-Level Forum on the Achievements of SSC in Africa	26–29 Sep 2013	Abuja		45	Benin, Cabo Verde, Democratic Republic of the Congo, Guinea, Ethiopia, Kenya, Liberia, Mali, Namibia, Nigeria, Senegal, Sierra Leone, Tanzania and Uganda; (14 African countries) plus Brazil, China and Viet Nam	Review of SSC achievements and best practices in Africa, and recommendations for the way forward and means to upscale and reinforce SSC	

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
6	Tropical Agriculture Platform (TAP) Inception Workshop and Partner Assembly	4–6 Sep 2013	Haikou		28	Argentina, Brazil, Colombia, France, Ghana, Indonesia, Italy, Japan, Jordan, Mexico, Netherlands, Papua New Guinea, Philippines, South Africa, Spain, United Kingdom, United States of America and Zambia (18)	Design of a plan of action for TAP to enhance agricultural innovation in the tropics through fostering more effective capacity-development interventions, including North–South and South–South collaboration initiatives	Danzhou Experimental Farm
7	High-Level Workshop on Sustainable Improvement of Rice Value Chain	23–27 Jun 2014	Changsha		21	Benin, Democratic Republic of the Congo, Guinea, Madagascar, Malawi, Mali, Namibia, Nigeria, Senegal, Sierra Leone and Uganda (11)	Reviews of rice production strategies in countries; review of the integration of hybrid rice development in regional and subregional priorities, and relevant and specific areas of work for collaboration on the future of rice production in sub-Saharan Africa; identification of capacity development needs	Quan Tang Zi demonstration base, Xiangtan, Hunan
	Hybrid Rice Integration in Africa	28 Jun–19 Jul 2014					Basic theories, advanced practical techniques and managerial patterns related to hybrid rice technology systems	Visits to hybrid rice seed production base and super hybrid rice high-yield demonstration base in You and Liling counties
8	Globally Important Agricultural Heritage Systems (GIAHS)	14–28 Sep 2014	Beijing	Xuanhua, Wenzhou City, Qingtian, Hangzhou, Xinghua, Yancheng	23	Bangladesh, Bhutan, Cambodia, Fiji, India, Indonesia, Maldives, Mongolia, Nepal, Sri Lanka, Thailand and Viet Nam (12)	Five modules: GIAHS conceptual framework, GIAHS implementation/operational framework, GIAHS sustainable development and contemporary development issues, lessons learned and best practice, and GIAHS ways forward	Four agricultural heritage sites in China (Qingtian Rice–Fish Culture, West Lake Longjing Tea Culture System of Hangzhou, Xinghua Duotian Agrosystem, and Xuanhua Traditional Vineyard System)
9	Training on Rural Energy	9–27 Oct 2014	Chengdu, Dujiangyan		29	Botswana, Cambodia, Costa Rica, Indonesia, Lao People's Democratic Republic, Mozambique, Myanmar, Thailand, Viet Nam and Zambia (10)	Setting the scene on rural energy development in China; biogas technology in theory and practice; biogas as a means to treat waste	Straw biogas plant in Xinjin County and biogas digester manufacturing factory in Chengdu

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
9	High Level Dialogue on Promoting Smart Energy for Food Security	28–30 Oct 2014	Chengdu, Dujiangyan		29	Botswana, Cambodia, Costa Rica, Indonesia, Lao People's Democratic Republic, Mozambique, Myanmar, Thailand, Viet Nam and Zambia (10)	Overview on how sustainable energy can contribute to food security and rural development; situation, needs, challenges and opportunities on energy for food security and rural development in the participating countries; relevant and specific areas of work for collaboration on the future of rural energy promotion; identification of capacity development needs and field of projects that require interventions by China and its counterparts	Swine Farm Biogas Plant for comprehensive utilization at Chengdu Giant Star Agriculture and Animal Husbandry Technology Company
10	International High-Level Consultative Expert Workshop on Sustainable Development of Aquaculture and the Inland Fisheries	1–5 Jun 2015	Wuxi		30	Azerbaijan, Armenia, Bangladesh, Cambodia, Georgia, Guinea-Bissau, Indonesia, Jamaica, Kazakhstan, Kyrgyzstan, Mexico, Namibia, Senegal, Tajikistan, Turkmenistan and Uzbekistan (16)	Development of a five-year roadmap including policy support, resource mobilization, activities, targets to be met, future SSC projects, etc.	
	Regional Training on Production and Management of Aquafeed and Seed for Central Asian and Caucasus Region Countries	6–20 Jun 2015					Aqua-seed production, management and quality control; aqua-feed production and management	
11	2nd High Level Training and Experience Sharing on Globally Important Agricultural Heritage Systems (GIAHS)	5–19 Sep 2015	Beijing, Ningxia, Zhejiang, Hebei		25	Algeria, Bangladesh, Bolivia, Brazil, Chile, Ecuador, Egypt, Fiji, Indonesia, Islamic Republic of Iran, Japan, Korea, Mauritania, Mexico, Niger, Nigeria, Oman, Pakistan, Peru, Philippines, Thailand, Tunisia and Viet Nam (23)	Three modules: GIAHS initiative, GIAHS practice and operation, GIAHS ways forward	Agricultural heritage sites in China (Qingtian rice–fish culture, Xuanhua traditional vineyard system, Ningxia Zhongning medlar cropping system, Ningxia Lingwu jujube cropping system, Huzhou mulberry fish pond system)

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
12	Regional Workshop on Agricultural Technologies and Trade Policy in Central Asia: Issues and Prospects	26–28 May 2015	Bishkek, Kyrgyzstan		61	Kazakhstan, Kyrgyzstan, Tajikistan, Russian Federation and Uzbekistan (4); World Trade Organization and Eurasian Economic Union	Processes of trade and economic integration affecting the agricultural sector in Central Asia. Regional cooperation on agricultural development and trade between the Central Asian countries and China. Outcomes of agricultural and trade reforms in other countries. Lessons from international experience	
13	International High-Level Expert Consultation Workshop on Agricultural Market Information for Trade Policy Development in East Africa	6–12 Sep 2015	Chengdu, Beijing		21	Burundi, Ethiopia, Kenya, Malawi, Rwanda, South Sudan, Tanzania and Uganda (8)	Developing database and market information system for policy development in East African countries; establishing a High Level Dialogue Platform between China and East Africa	Sichuan International Agricultural Products Trading Center and the organic agriculture base, headquarters and entity store of Chengdu Sunyuki Agricultural Technology Company Ltd
	Training Course on Agricultural Market Information for Trade Policy Development in East Africa	13–28 Sep 2015					Progress of agricultural monitoring and early warning in China; agricultural information resource and acquisition; standardization of collection of agricultural information; methodologies and technology of agricultural information analysis; establishment and application of agricultural outlook system in China; agricultural information management system; agricultural trade development and policy; global value chain analysis	Practice in agricultural monitoring and early warning; Xin Fa Di wholesale market

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
14	Workshop on SSC Sustainable Development and Innovations	7–11 Dec 2015	Beijing, Nanjing, Wuhan		24	Democratic Republic of the Congo, Ethiopia, Kyrgyzstan, Malawi, Mongolia, Namibia, Nigeria, Senegal, Tajikistan and Uganda (10) Representatives of the United Kingdom Department for International Development, International Fund for Agricultural Development, Wageningen University & Research, and the World Food Programme	Sharing experiences and lessons learned on SSC implementation between FAO, China and relevant host countries in order to confirm priorities; revision of relevant documents to improve programme management and deepen cooperation content; development of an action plan for the FAO SSC Reference Center (Foreign Economic Cooperation Center) in China	Agricultural heritage sites in China (Qingtian rice–fish culture, Xuanhua traditional vineyard system, Ningxia Zhongning medlar Cropping system, Ningxia Lingwu jujube cropping system, Huzhou mulberry fish pond system)
	Training Course on China's Agricultural Development Policy and SSC	22 Nov–6 Dec 2015						
15	Regional Training Course on Capacity Development for Hybrid Rice in Asia	19–31 Oct 2016	Changsha		32	Bangladesh, Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Nepal, Philippines, Sri Lanka, Thailand and Viet Nam (10)	Hybrid rice breeding; hybrid rice seed production; hybrid rice cultivation; molecular breeding of hybrid rice	Hybrid rice high-yielding base in Xiangtan city; rice-based farming system demonstration base in Liuyang County
	Regional Expert Consultation on Hybrid Rice Development in Asia: Constraints and Opportunities	1–3 Nov 2016						

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
16	3rd High Level Training and Experience Sharing on GIAHS	24 Oct–4 Nov 2016	Beijing	Guizhou, Jiangsu, Shandong Provinces	29	Brazil, Cameroon, Chad, Costa Rica, Democratic Republic of the Congo, Ethiopia, Guyana, Japan, Kenya, Kuwait, Malaysia, Morocco, Papua New Guinea, Saudi Arabia, Senegal, Suriname, Tajikistan, Tanzania, Trinidad and Tobago, and Uzbekistan (20)	Three modules: GIAHS initiative, GIAHS practice and operation, GIAHS ways forward	Dong's rice–fish–duck system (GIAHS); Xinghua duotian agrosystem (GIAHS); Xiajin Yellow River Old Course ancient mulberry grove system (NIAHS)
17	Training Course on Biogas Technology for the Belt and Road Countries	21 Nov–3 Dec 2016	Chengdu		23	Bangladesh, Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Mongolia, Nepal, Pakistan, Thailand and Viet Nam (10)	Setting the scene on biogas development in China; biogas production in theory and practice; multiple uses of biogas and other products; four experiments entitled "Hungate anaerobic technique for cultivating methanogens"	Biogas project on New Hope Dairy Farm, biogas power generation project on Yousheng pig farm; biogas digester manufacturing factory in Chengdu
	High-Level Dialogue 2016 on Lessons from Experience for Future Development of Biogas in Asia	5–7 Dec 2016					Country presentations of national situations, needs, challenges and opportunities on biogas development	Two fibre plastic reinforced biogas digesters for community supply
18	Technical Training on Cassava Production and Processing Technologies	30 Nov–17 Dec 2016	Danzhou, Hainan Province		21	Cameroon, Ghana, Kenya, Liberia, Malawi, Nigeria, Rwanda, Sierra Leone, Uganda and Zambia (10)	Introduction to scientific innovation on tropical agriculture of China; status, developments and advanced approaches in Chinese cassava production and processing technologies; their relevance to the participating countries; cassava production and marketing in China; commercial demand for cassava in China; establishment of the cassava industrial system	Practice cassava tissue culture technology in the lab and cassava experimental base; Baisha Gaodi Cassava Starch Processing Factory, Baisha Cassava Experimental Station; attend 3rd Conference on China–Africa agricultural cooperation

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
19	High Level Scoping Workshop on the Assessment of Capacity Needs for Developing Countries	26–30 June 2017	Changsha		18	Bangladesh, Cambodia, Democratic Republic of the Congo, Ethiopia, Guinea, Madagascar, Malawi, Morocco, Namibia, Nigeria, Philippines, Senegal, Sri Lanka, Sudan, Tajikistan, Thailand and Uganda (17)	Review of capacity-building activities of the FAO–China SSC Programme Phase I; setting direction for capacity-building activities of Phase II; working out and confirmation of a three-year work plan with objectives and time frame	Pilot rice farm, Longping Rice Museum
20	4th High Level Training and Experience Sharing on Globally Important Agricultural Heritage Systems (GIAHS)	10–23 Sep 2017	Beijing	Inner Mongolia, Fuzhou, Guilin	26	Argentina, Austria, Chad, Cuba, Greece, Guinea, Hungary, Italy, Japan, Lao People’s Democratic Republic, Madagascar, Malaysia, Portugal, Romania, Switzerland and Turkey (16)	Three modules: GIAHS initiative, GIAHS practice and operation, technical guidance to potential GIAHS proposals	Three agricultural heritage sites in China: Xiajin Yellow River Old Course ancient mulberry grove system (NIAHS and potential GIAHS); Longsheng Longji Terraces (NIAHS and potential GIAHS); Aohan dryland agricultural system (GIAHS)
21	Training Course on Innovative Solutions and Policies Facilitating Access to Finance in the Agro-food Value Chain	15–24 Sep 2017	Beijing		41	Cameroon, Egypt, Jamaica, Kyrgyzstan, Lebanon, Morocco, Mozambique, Myanmar, Nepal, Pakistan, Rwanda, South Sudan, Sri Lanka, Sudan, Viet Nam and Zambia (16)	Discussion of innovative solutions and policies for facilitating access to finance in agrifood value chains, and of the challenges ahead for such developments	Beijing Office of the Ant Financial Group and Beijing Kingpeng International High-tech Corporation; participation in International Forum for China Financial Inclusion 2017
	Workshop on High Level Policy Dialogue and Exchange of Experiences on Innovations in Food Systems	26–30 Sep 2017	Hangzhou				Discussion of three selected topics: food systems for healthy and nutritious food for all; food systems and implications for environment and natural resources in the context of climate change; and food systems as sources of employment and livelihood stability and security	Visit to Alibaba Group, Ant Finance and field sites in Huzhou city; goat farm, mulberry–fishpond system and farm service centre
22	International Consultative Workshop on Facilitating Seafood Market Access in the Framework of the Belt and Road Initiative	28 May–2 June 2018	Fuzhou		16	Egypt, Malaysia, Myanmar, Philippines, Russia, Saudi Arabia, Sri Lanka, Thailand, Ukraine and Viet Nam (10)	Discussion on how to enhance market access of aquatic products based on a multidimensional analysis encompassing systems, policies, rules and regulations, and technology	Seafood processing companies including Fujian Yida Food Company, Fuzhou Baiyang Seafood Company, and intelligent fish farms in Nanguo Wind Intelligent Fishery Group, Fujian Province

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
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23	Capacity Development for GIAHS	10–24 Sep 2018	Hangzhou, Beijing	Beijing, Fuzhou, Hangzhou, Shaoxing, Youxi, Qingyuan	26	Algeria, Australia, Bangladesh, Chile, Islamic Republic of Iran, Japan, Kenya, Korea, Mexico, Morocco, Peru, Spain, Sri Lanka, Tanzania, Tunisia and United States of America (16)	Three modules: GIAHS initiative, GIAHS practice and operation, technical guidance to potential GIAHS proposals	Three agricultural heritage sites in China: Xiajin Yellow River Old Course ancient mulberry grove system (NIAHS and potential GIAHS); Longsheng Longji Terraces (NIAHS and potential GIAHS); Aohan dryland agricultural system (GIAHS)
24	Ministerial-level Forum on Global SSC in Agriculture	30 Oct–3 Nov 2018	Changsha		111	Bangladesh, Burkina Faso, Cambodia, Democratic Republic of the Congo, Ethiopia, Fiji, France, Gambia, Kyrgyzstan, Madagascar, Malawi, Mongolia, Myanmar, Namibia, Netherlands, Nigeria, Pakistan, Philippines, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Sri Lanka, Sudan, Timor-Leste, Uganda and Viet Nam (27 countries) Albright Stonebridge Group, Alliance for a Green Revolution in Africa, Bill & Melinda Gates Foundation, Centre for Sustainable Agricultural Mechanization, FAO, Indian Council of Food and Agriculture, International Food Policy Research Institute, International Fund for Agricultural Development, International Potato Center–China Center for Asia Pacific, New Development Bank, The Rockefeller Foundation, World Bank, World Food Programme (13 international organizations)	Consensus was reached through a letter of intent, signed by FAO and China, on establishing an International Centre of Excellence for Agricultural Innovation and Rural Revitalization within the FAO Office in China. It was agreed to mobilize finance from the private sector for upscaling joint FAO–China work on rural poverty reduction through a memorandum of understanding on agricultural cooperation in China, between FAO and the China Agricultural Science and Education Foundation. In addition the Changsha Declaration was adopted and the United Nations Rome-based Agencies’ Joint Statement was released	Shaoshan city; tree-planting ceremony; former residence of Chairman Mao; Guangming village
25	Training Course on Biogas Technology and Animal Waste Treatment and Utilization	13–22 Jan 2019	Chengdu		17	Bangladesh, Cambodia, Egypt, Indonesia, Lebanon, Malaysia, Philippines, Uganda and Viet Nam (9)	Setting the scene on biogas development in China; biogas production in theory and practice; biogas facilities design and engineering; post-treatment and utilization	Biogas project for centralized supply biogas project on dairy farm; pilot project of bio-natural gas produced from organic waste

No.	Activity	Date	Venue		Number of trainees	Participating countries	Main modules, content, objectives and results	Field visits
			Lecture	Field visit				
25	Workshop on Experience Sharing and Lessons Learned in Animal Waste Treatment and Utilization	23–26 Jan 2019	Chengdu		17	Bangladesh, Cambodia, Egypt, Indonesia, Lebanon, Malaysia, Philippines, Uganda and Viet Nam (9)	Aimed to raise participants' awareness on the benefits of mitigating greenhouse gases by developing biogas in animal industry, and to share national experiences in value-added products	Two biogas projects on a scaled animal farm and two manufacturing companies for biogas products
26	Workshop on Pesticide Risk Management under the Framework of the FAO–China SSC Programme and the Belt and Road Initiative	25 Feb–3 Mar 2019	Shanghai		21	Bangladesh, Cambodia, Colombia, Egypt, Kyrgyzstan, Myanmar, Nigeria, Thailand, Uganda and Ukraine (10)	Three modules: overview of global pesticide risk management regulation; countries' challenges and experience-sharing on global pesticide risk management; group discussions on FAO–China SSC regional project on pesticide risk management	Green pesticide management base of Shanghai, Jiangsu Youjia Company and Jiangsu Changqing Company
27	Capacity-building Workshop on Promoting Digital Technologies in Agriculture under the Framework of FAO–China SSC Programme Guide Book	30 June–7 July 2019	Beijing, Wuxi, Hangzhou			Kenya, Morocco, Pakistan and Turkey (4)	Establishment of external expertise which FAO and partners can access to promote digital technologies	Private company providing digital solutions and services in aquaculture; visit to Alibaba; visit to e-commerce village near Hangzhou; visit to a farm equipped with Top Cloud facilities and technologies

Total number of trainees **773**

Number of activities conducted in China 25

Number of activities conducted in other countries (Nigeria, Kyrgyzstan) 2

Total number of activities **27**

Key:

19 activities conducted under Phase I of the FAO–China SSC Programme

8 activities conducted under Phase II of the FAO–China SSC Programme

Source: Ministry of Agriculture and Rural Affairs of China

The above capacity-building events were organized with the support of the following institutions:

Biogas Institute of the Ministry of Agriculture and Rural Affairs of China (MARA)
 Chinese Academy of Agricultural Sciences, Agricultural Information Institute
 Chinese Academy of Fishery Sciences
 Chinese Academy of Tropical Agricultural Sciences

Center of International Cooperation Service of MARA
 Department of International Cooperation of MARA
 Foreign Economic Cooperation Center of MARA
 Freshwater Fisheries Research Center

Hunan Hybrid Rice Research Center
 Ministry of Agriculture and Rural Affairs of China
 Rural Energy and Environment Agency of MARA

South–South cooperation is the mutual sharing and exchange of development solutions between developing countries, including knowledge, experiences and good practices, policies, technology and resources.

This report presents the achievements of ten years of cooperation between the Food and Agriculture Organisation of the United Nations (FAO) and China for the promotion of South–South cooperation. Over 2009–2019, China and FAO have coordinated efforts at country and global levels to advance developing countries' capacities to achieve the Sustainable Development Goals of the 2030 Agenda through a special agreement and the FAO–China SSC Programme.

Hundreds of experts and technicians from China were deployed at village level to work hand in hand with farmers, introducing hundreds of technological innovations, boosting their productivity, production and income, and sustainably improving their food security and livelihoods.

The report highlights how developing countries can inspire and support each other in overcoming their development challenges. It shows how the Programme's first ten years have promoted inclusive partnerships with different actors, including the private sector, academia, civil society and the United Nations Rome-based agencies.



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