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中德农业中心
Deutsch-Chinesisches
AGRARZENTRUM

Harvest | 丰收

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SPECIAL ISSUE

The Sino-German Agrobiodiversity Network





中德农业中心
Deutsch-Chinesisches
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About the DCZ

The Sino-German Agricultural Centre (DCZ) is a joint initiative of the German Federal Ministry of Food and Agriculture (BMEL) and the Ministry of Agriculture and Rural Affairs (MARA) of the People's Republic of China.

The DCZ was established in March 2015 as a central contact and information platform in charge of coordinating the bilateral cooperation between Germany and China in the agriculture and food sector. In April 2022, the project entered its third phase.

China is one of the world's largest food producers and consumers. Therefore, its agricultural development and transformation process is of significant importance for its German partners. By bringing together stakeholders from politics, business, and academia, the DCZ promotes the exchange of experience and knowledge to tackle shared challenges and support the sustainable development of the agriculture and food sector in both countries.

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Editorial



Dear partners and friends,

Out of 250,000 known plant species about 30,000 are edible and 7,000 are used by humans. Of these, currently only about 150 species play a major role in human nutrition—worldwide. These numbers indicate a huge potential for alternative resources for a more resilient and climate friendly food system. In China and Germany, the conservation and the re-cultivation of endangered old varieties and landraces is recognized as a strategic resource for the breeding of climate-resilient varieties and as a contribution to food security. Cultivation of old varieties could create innovative sources of income for farmers, especially in remote rural regions and contribute to the preservation of cultural and culinary heritage and, last but not least, food sovereignty.

Funded by the “Innovation and Transformation Dialogue” of the German Federal Ministry of Food and Agriculture (BMEL), the DCZ is supporting the building of a Sino-German network of initiatives that work to strengthen and promote agrobiodiversity. During three workshops and field excursions in China and Germany, experts from science, NGOs, policy advocacy, and farmers exchanged experiences of re-introducing old varieties as a strategy for sustainable development. So far, the project has resulted in a collection of resources and policy recommendations that will be made accessible in a toolbox on the DCZ website.

This special issue of Harvest | 丰收 provides a glimpse into the ongoing dialogue. We have asked our experts to select representative case studies and summarize their policy recommendations. We also present upcoming events and publications involving our experts.

We hope you enjoy the read and look forward to your comments and suggestions. Feel free to contact us at info-dcz@iakleipzig.de if you are aware of initiatives that should be connected to the network.



Eva Sternfeld
*Head Science Dialogue and
S&T Platform, DCZ*



Michaela Böhme
Editor-in-Chief, DCZ



Network

The Sino-German Agrobiodiversity Network brings together initiatives from both countries committed to promoting diversity on our fields and plates. Conserving and using the rich biodiversity of our seeds and crops requires a **multi-stakeholder approach**. Our experts hail from all walks of life: scientific research, policymaking, farming, and advocacy. **Stakeholder interviews** conducted upfront have allowed us to identify the key issues each expert brings to the table, facilitating exchange and coordinating actions across different fields of expertise. Importantly, each of our experts acts as a **multiplier** for the crucial agenda of agrobiodiversity. By tapping into their own networks, our experts form a bridge between Germany and China and help share practical examples and policy approaches to the sustainable use of agrobiodiversity from both countries.







SONG Yiching
Farmers' Seed Network

Farmers' Seed Network is a pioneering organization in applying participatory research methods on agrobiodiversity and natural resource management in China.



Ronnie Vernooy
Alliance of Bioversity International and CIAT

Bioversity International is a global research-for-development organization with a vision that agricultural biodiversity will nourish people and sustain the planet.



YANG Yongping
Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences

Xishuangbanna Tropical Botanical Garden is a comprehensive research institution engaged in scientific research, species preservation, and science & technology development.



WANG Xin
Beijing Xiqing Farm

Beijing Xiqing Farm was founded in 2015 and grows high-quality fruits and vegetables, using agroecological farming methods.



CHANG Tianle
Foodthink 食通社 & Beijing Farmers' Market

Foodthink is a grassroots NGO and China's leading voice on sustainable food and agriculture.



ZHANG Zongwen
Institute of Crop Sciences, Chinese Academy of Agricultural Sciences

The Institute of Crop Sciences focuses on plant genetics and breeding research and operates the National Crop Gene Bank of China.



QIAO Yuhui
China Agricultural University (CAU)

CAU is one of the world's leading universities in the field of agricultural sciences.



Arno Todt
nova-Institut GmbH

nova-Institut GmbH provides research and consultancy on biodiversity, sustainable rural development, circular economy, and related areas.

ZHOU Meiliang

Institute of Crop Sciences, Chinese Academy of Agricultural Sciences

The Institute of Crop Sciences focuses on plant genetics and breeding research and operates the National Crop Gene Bank of China.



Sarah Sensen

Information and Coordination Centre for Biological Diversity (IBV), Federal Office for Agriculture and Food

The IBV coordinates the conservation and sustainable use of biological diversity in agriculture and food, in particular genetic resources, in Germany.



Rudolf Vögel

VERN e.V. (Association for the Preservation and Recultivation of Crops)

VERN is a non-commercial organization focused on the recultivation, conservation, and use of crop diversity.



Benny Haerlin

Foundation on Future Farming & Save Our Seeds

The Foundation on Future Farming is committed to sustainable and ecological agriculture in Germany and neighboring countries.



YANG Ping

Institute of Crop Sciences, Chinese Academy of Agricultural Sciences

The Institute of Crop Sciences focuses on plant genetics and breeding research and operates the National Crop Gene Bank of China.



Ralf Bloch

Eberswalde University for Sustainable Development

Eberswalde University has been dedicated to sustainable education and research for more than 190 years with a focus on nature protection, organic farming, and sustainable economics.



WANG Ze'en

Foodthink 食通社 & Beijing Farmers' Market

Foodthink is a grassroots NGO and China's leading voice on sustainable food and agriculture.



QIN Tianbao

Wuhan University (WHU)

WHU is a comprehensive and key national university directly under the administration of the Ministry of Education of China.



LI Long

China Agricultural University (CAU)

CAU is one of the world's leading universities in the field of agricultural sciences.



LI Guanqi

Farmers' Seed Network

Farmers' Seed Network is a pioneering organization in applying participatory research methods on agrobiodiversity and natural resource management in China.





Case studies from Germany



1. Networks: Association for the Preservation and Recultivation of Crops (VERN e.V.)

Jelena Grosse-Bley
Humboldt University Berlin

**VERN is a bridge for
information and seeds to
farmers and consumers.**

Rudolf Vögel, founder of VERN e.V.



As idiosyncratic as local crop varieties are the people who work with seeds to keep agrobiodiversity thriving and accessible from farm to fork. In Germany, VERN is a model example of a long-standing network focused on the recultivation, conservation, and use of crop diversity. VERN was established in 1996 as a non-commercial organization located in the biosphere reserve Schorfheide-Chorin in rural Brandenburg. It has built a seed bank of over 2000 rare, historic, and endangered vegetable and grain varieties. VERN makes this diversity available online and at events to their members of over 750 institutions, farmers, gardeners, and private individuals. It also markets selected conservation varieties to the wider public via events and commercial partners such as an organic supermarket chain.

VERN has initiated specialized networks that connect seed producers, growers, and other public and commercial organizations. The “Legume Network” (Saatgut-Erhalter-Netzwerk Ost) connects 23 regional farms that together conserve and use around 550 cultivars of legumes, herbs, and ornamental plants. Network members include state and federal institutions for crop variety regulation and plant safety, two universities, other NGOs, and commercial partners along the value chain. The “Cereal Network” counts over 160 farms, and also includes bakeries and distilleries as part of its members. Both networks share specialized tasks amongst members and facilitate cooperation amongst peers and with researchers, regulators, and other actors in the field. VERN plays a crucial role by recultivating old varieties around which these networks revolve. But equally crucial is VERN’s provision of basic variety information, various seed services, and guidance to field production.

VERN actively works to connect growers and farmers with each other, with processors down the value chain, with relevant regulatory and plant safety administrations, and with transdisciplinary researchers.

VERN’s work keeps seed materials freely available and in agricultural rotation on-farm. Its team varies between 6 to 10 people who distribute the work between a board of directors, garden management, the collection and distribution of seeds, administrative tasks, and participation in network and other projects. VERN finances its work through a mix of membership contributions, public project funding, and volunteered contributions. Distributing seeds, plants, and tubers to their paying members and selling selected conservation varieties with commercial partners to the wider public are an important stable revenue stream to support its work.

Over the course of its almost 30-year history, recultivating and providing access to rare, historic, and endangered varieties has never been a commercially motivated endeavor for VERN. It shows the sustained, skilled dedication needed in recultivation and on-farm conservation that nourish the seeds and relationships which make agrobiodiversity in fields and gardens possible. The quality and quantity of VERN’s ever growing collection of crop varieties and the additional work of cultivating living networks of practitioners is what enables agrobiodiversity in our food system to the benefit of wider society.

Further information:

vern.de | landsorten.de | alte-gemuesesorten-erhalten.de

2. Conservation and use of old crop varieties: Champagne rye



Over centuries, Champagne rye has adapted well to dry, nutrition-poor soils of the region and today offers unique characteristics for value creation to farmers, mills and bakeries in rural areas.

Arno Todt, nova-Institut

Rich and accessible crop diversity is of existential importance to on-farm agrobiodiversity and to breeding of new varieties. The identification of a commercially viable historic and endangered crop can support the conservation efforts of the variety itself and wider efforts to protect on-farm agrobiodiversity through organizations like VERN e.V. At the same time, such varieties can stimulate regional value chains and enrich the diversity of food products available to consumers. The case of “Northern German Champagne Rye” shows such a successful combination of on-farm conservation and commercialization as an example for a cross-pollinating species.

Champagne rye is a variety bred in the mid-19th century and widely grown in various parts of Germany before disappearing in the 1960s. In the 1990s, VERN recultivated champagne rye from a gene bank sample of 100 grams to make it available to farmers once again. Through pro-active networking and showcasing of the commercial potential of champagne rye, VERN and partners in research institutions such as Julius Kühn-Institut and Eberswalde University for Sustainable Development fostered a network of interested farmers, local mills, bakeries, and whiskey distilleries that eventually formed entire regional value chains around this old variety of rye. And after two decades of champagne rye on-farm conservation by the cereal network (see above), scientific assessments show the achievement of a high conservation value as the variety’s characteristics and genetic profile were kept stable over time.

To date, more than 30 farmers, about 10 bakers, 4 mills, and several distilleries are involved in the on-farm conservation and use of champagne rye. In the 1990s, the network started with a few interested farmers, who were willing to trial the recultivated “old” variety on their land. It showed appeal to both conventional and organic farmers, who valued champagne rye’s adaptation to the

dry, nutrition-poor sandy soils of the region, the crop’s low vulnerability to plant disease, and its resilient yield under drought conditions, which have become more severe with climate change. For organic farmers, the variety is especially attractive because it grows well without agrochemical inputs. Over the years, mills, bakers, and whiskey distilleries also got involved in the network. For bakers and whiskey distilleries, the variety offers desirable processing qualities and novel marketing potential. Products from regionally produced champagne rye have shown to benefit from the unique selling points of their flavor, cultural history, and local value chain. Champagne rye is again grown on select farms across Germany and even Austria with a total of 2000 hectares.

The network for the conservation and use of champagne rye is organized by membership and cultivar contracts that guide seed exchange. VERN with other partners supports the network with ongoing advice, evaluation through field surveys, and other analyses. Members benefit from regular networking and peer exchange, including field visits and support offers that also tie in transdisciplinary research projects with latest advice for farm-level challenges. The revenues from the champagne rye value chain contribute to fund other activities for recultivation, conservation, and public education that keep seeds of ‘old’ crop varieties accessible and offer income potential to regional seed producers, crop farmers, as well as regional processors and local shops. The case of champagne rye exemplifies how the conservation and use of one rare variety by members of a diverse network can enrich agrobiodiversity within the food system.

Further information:

landsorten.de

nova-institut.de/nachhaltige_regionalentwicklung/

3. Methods: Co-creative field schools

Field schools are an approach to develop solutions for specific localities and farm conditions.

Ralf Bloch, professor at Eberswalde University for Sustainable Development



Close collaboration between scientists and farmers is crucial for socio-ecologically sustainable food system transformations. Collaborative approaches and science-supported peer learning have demonstrated how to identify common challenges and share best practices at farm-level. In Germany, the field school approach developed by Eberswalde University for Sustainable Development is a prime example of realizing a close loop between latest research and food system innovation for agrobiodiversity and climate resilience.

Collaborative approaches flourish on long-standing relations amongst people connected to regional food systems. Since its founding, the Eberswalde University has fostered diverse networks across the region that enable collaborations for practice-oriented teaching, research, and development of farm-level solutions. For instance, its Innovation Forum for Organic Farming in Brandenburg (InnoForum) is a platform for academia, knowledge transfer, and collaborations with commercial practitioners. Other initiatives such as NutriNet provide members with scientifically tested, yet practice-oriented guidelines for socio-ecologically sustainable agriculture.

In field schools, researchers foster collaborative research and learning with farmers within, across and beyond individual research projects. A field school process is convened and facilitated by a researcher in the role of a ‚regional advisor.‘ The regional advisor is equipped with technical expertise and skills to support working in groups. The regional advisor selects farmers that share a similar question and the willingness to work on it together. For example, which crops might perform better under changing climatic conditions? How can I optimize intercropping or crop rotation on my land? How can I foster biodiversity in the soil and on my fields? It is ideal to bring together a group of farmers with varied backgrounds in practical experience, production, and farm characteristics. The regional advisor and the farmers then enter a co-creative process of three to

four multi-day meetings across a year. The process entails setting goals, defining questions, trialing new approaches, and implementing lessons learned. Data is collected throughout the process so the results can be analyzed at the end. Experience shows that a stable group of 7-10 people working together for one or more years is most fruitful in building trust to achieve substantive outcomes and lasting peer support.

To make the latest insights for sustainable agriculture even more broadly accessible to farmers, researchers at Eberswalde University developed a project to “train the trainers” in regional extension services. In the AnpaG project, university experts train advisors to offer extension services to groups of farmers rather than on an individual basis. The new qualification makes advisors eligible service providers for farmers, who can then spend public extension subsidies to request their services and benefit from professional group counseling and the added benefits from peer exchange.

The growing impact of climate change makes business as usual increasingly difficult for agriculture. A close loop between the latest research and agricultural practice, such as in the case of field schools, is crucial to mobilize the benefits of crop diversity for climate resilience at field-level. Agrobiodiverse cropping systems require skillful farmers and researchers capable to facilitate participatory research with benefits to farmers. Approaching knowledge production as a co-creative process shows potential for the capacity building and peer support needed to foster sustainable agriculture under changing ecological conditions.

Further information:

innoforum-brandenburg.de

nutrinet.agrarpraxisforschung.de

anpag-gruppenberatung.de

4

Case studies
from China



1. Networks: China's community seed bank network

Li Guanqi
Farmers' Seed Network (FSN)

Wang Ze'en
Foodthink

Diverse traditional seeds stored in community seed banks are helping us adapt to climate change and disasters such as drought by acting as resource reservoirs.

LU Ruixiang, CSB founder and ecological farmer, Henggouzi Village, Aohan Prefecture, Inner Mongolia



At CBD COP15 in Kunming in 2021, community seed bank (CSB) representatives from across China shared experiences and seeds with each other, scientists, and policymakers, highlighting the growth of CSBs and the expanding national CSB network. At this event, the Farmers' Seed Network (FSN), a pioneering organization enhancing farmers' seed systems, and Foodthink, a non-profit media and advocacy platform promoting sustainable agri-food systems, jointly launched a small grant program for farmers to expand the influence of CSBs in the in-situ conservation of agrobiodiversity.

China's agriculture, characterized by smallholding farming, has preserved thousands of plant genetic resources for centuries. However, the emphasis on high-yielding variety (HYV) breeding techniques has led to the loss of traditional seeds, threatening agricultural sustainability and food security. To address this issue, the government has invested in ex-situ conservation through national surveys, collection efforts, and the establishment of gene banks. While valuable, this approach alone is insufficient to meet dynamic and diverse social needs, including food safety, cultural heritage, ecological restoration, and the challenges posed by climate change. A more inclusive in-situ approach to conserving, screening and pre-breeding landraces is necessary, with CSBs managed by farmers playing a crucial role.

As of June 2023, over 50 CSBs have been established across 19 provinces, thanks to the efforts of the Farmers' Seed Network and Foodthink in piloting, capacity building, financing, and dissemination. These seed banks house over 2,000 accessions of various crops, including rare and endangered varieties, supplying seeds for local organic farming and strengthening rural organizational capacity. The number of accessions continues to increase steadily. CSBs are also integrating diversity blocks for regenerating collections and organizing seed fairs to exchange knowledge. Through these initiatives, farmers are empowered to document, evaluate, collect, and conserve traditional seeds within their communities while raising awareness about the importance of agrobiodiversity for sustainable agri-food systems and climate change adaptation.

These efforts showcase the importance of a win-win solution that combines ex-situ and in-situ approaches in preserving China's agricultural heritage. By integrating traditional knowledge with modern conservation techniques, CSBs play a vital role in maintaining the country's rich agrobiodiversity. This holistic approach ensures the preservation of valuable genetic resources, supports smallholder farmers, and contributes to long-term food security and agricultural sustainability in the face of global challenges.

2. Conservation and use of old crop varieties: Soybeans and legumes



**The best way to
conserve old varieties
is to keep planting
them.**

CHEN Ziyu, farmer

Effective in situ (on-farm) agrobiodiversity conservation is essential to agrobiodiversity conservation. Despite the rapid expansion of hybrid varieties, thousands of landraces and “old” varieties are spontaneously preserved by China’s smallholders on small-scale family farms. Organizations like Farmers’ Seed Network (FSN) and Beijing Farmers’ Market (BFM) strengthen existing conservation practice by training farmer’s communities and bringing diverse food products to organic consumers. The case of in situ conservation in Wocuiyuan Organic Farm exemplifies such collaborative efforts.

Located in Hebei Province, Wocuiyuan Organic Farm was established in 2011 by a young farmer, Chen Ziyu. For Chen’s family, access to diverse seeds from landraces and “old” crop varieties is equally important as organic farming to restore food’s natural taste. The family have collected more than 70 “old” varieties from farmers, researchers, and local gene banks, 14 of those being soybeans and other legume varieties.

Farmer-led agrobiodiversity training programs organized by FSN are reintroducing local knowledge of seeds in combination with scientific knowledge about seed selection, optimization, purification, and rejuvenation to farmers’ communities. Trained farmers like Chen are empowered to better conserve “old” crop varieties for future use, i.e., to stabilize varieties’ characteristics and genetic profile, and to improve germination rates and, thus, the overall yield. Apart from upgrading its conservation practice, Wocuiyuan Organic Farm has made substantial modifications to its seed bank with a two-year small grant offered by FSN.

The community seed bank was also officially endorsed by the local government as an important education base. To date, thousands of farmers from nearby and the national farmers’ seed network maintained by FSN have access to crop varieties in Chen’s community seed bank through regular seed fairs and social media communication.

The “Little beans, big health” campaign launched by FSN further raised consumers’ awareness of agrobiodiversity conservation. In collaboration with multiple regional organic farmers’ markets, a series of festivals have been held where the nutritional, cultural, and ecological values of “old” crop varieties are exhibited and where conservation farmers meet consumers face-to-face. As China’s most influential direct organic market, BFM has been organizing thousands of such direct markets in Beijing since 2011, hosting more than one million visits. Having joined BFM in 2012 and attending on a weekly basis, Chen’s family, their fellow eco-farmers and consumers have formed a close community centered around food. Within the community, continuous and effective communication not only centers on agrobiodiversity conservation, but also focuses on eco-farmers’ contribution to climate change adaptation and food system transformation. The case of Wocuiyuan Organic Farm demonstrates the successful conservation and use of “old” legume varieties by spontaneous smallholders, strategic empowerment by social organizations, and conscious consumers.

3. Methods: From seed to table

Seeds not only provide food for consumers but also give us more biocultural choices in the continuous interaction with farmers and nature.

*LIANG Weiwei, representative of
Farmers' Seed Network*



A sustainable agri-food system requires an integrated approach, incorporating diverse dimensions such as agronomy, economics, socio-ecological factors, and climate considerations. Central to this is agrobiodiversity, which exists at genetic, species, and landscape levels—and seeds are its cornerstone. Seeds not only underpin agrobiodiversity but are also fundamental to the entire agri-food system. Therefore, adopting a holistic concept featuring practical methods is crucial for the future of agri-food systems.

In China, however, a comprehensive approach that integrates plant breeding, agroecology, and sustainable consumption is noticeably lacking. This gap stems mainly from an industrial agri-food system that prioritizes monoculture, resulting in diminished plant genetic diversity, and neglect of consumer preferences. The past half century has seen a shift from small farmer-based seed and food production to a breeding and food system which lacks diversity.

To address these gaps, a paradigm shift towards diverse models and holistic methods is necessary. One such initiative is the “Seed to Table” method, which involves various actors in the agri-food value chain, including farmers, breeders, and consumers. This method encompasses in-situ conservation and on-farm management of farmer’s seeds. It encourages farmers to focus on identifying, ranking, and utilizing varieties preferred by consumers, often facilitated through community recipe festivals. Additionally, organizing seed and food fairs under this method can inspire consumers to enjoy

diverse food varieties and raise awareness about the significance of agrobiodiversity and agroecology. These fairs help bridge the gap between producers and consumers, fostering a mutual understanding and appreciation for sustainable practices.

“From Seed to Table” is an explorative yet necessary model for promoting agroecology and agrobiodiversity in China. By empowering farmers, preserving traditional seeds, promoting sustainable agriculture, and engaging consumers, this method contributes significantly to food security, agricultural sustainability, and climate change adaptation.

To meet the immediate needs of an increasingly organic-consuming population and ensure long-term societal and ecological resilience, the integration of all stakeholders is imperative. Creating an inclusive and sustainable agri-food system requires collective efforts beyond individual initiatives. Currently, the inclination to enhance the long-term sustainability of the agroecosystems is low, as there is no pressing urgency to implement and mainstream methods that might increase short-term costs. Effective government policies and subsidies are essential to creating a level playing field for all actors, ensuring long-term agri-food sustainability and resilience for society.



**Policy
recommendations**





The conservation and sustainable use of agrobiodiversity in China and Germany: advancing the policy agenda

One of the areas of work of the Sino-German Agrobiodiversity Network is agrobiodiversity policy development, in particular in support of the efforts of farmers, farming communities, and related organizations to conserve and sustainably use agrobiodiversity. In the context of the Sino-German collaboration, what can the two countries learn from each other to advance the policy agenda for agrobiodiversity? What are today's challenges and opportunities? This is a synthesis of a policy brief by the above authors available at the DCZ website.

China

China, with its highly diverse agroecological areas and long farming history, is richly endowed with agricultural biodiversity resources. Farmers and farming communities have conserved their crops and varieties for many centuries. This practice has allowed crop varieties to gradually adapt to new climate and environmental conditions. In recent decades, however, local agrobiodiversity conservation efforts have come under pressure due to industrialization, modernization of agriculture, out-migration, and the ageing and changing demographics of the rural population. New conservation initiatives have emerged to withstand and counter this pressure, such as community seed banks, conservation areas, and bio-cultural heritage sites.

A national agrobiodiversity policy could be of much value to support these initiatives, but the country has yet to develop, approve, and implement it. On the positive side, China's recent policy developments pay attention to some key elements of an imagined national agrobiodiversity policy as the country is trying to pay more attention to agroecology, genetic resources conservation, "green" (energy) development, and healthy diets. According to the Chinese government, the key to safeguarding food security is to implement a new agricultural strategy by strengthening the conservation and utilization of germplasm resources and establishing seed banks. Funds will be made available for these objectives.

Germany

Germany, although still a country with large rural areas, has undergone many changes in its natural resource basis, with a notable reduction in agrobiodiversity. However, the country has made considerable efforts in developing a supportive policy environment for the conservation and sustainable use of its remaining agrobiodiversity. This has been done in alignment with the objectives of international agreements and instruments, such as the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture, the Commission on Genetic Resources for Food and Agriculture of the FAO, and the Green Deal of the European Union.

The coordination and governance structure of genetic resources for food and agriculture in Germany is based on the sharing of decentralized responsibilities among the respective public and private actors, and governmental levels with distributed mandates and funding. The structure includes a central information and coordination center for genetic resources, which facilitates data sharing, communication, and co-operation. This center also supports efficient contributions of German stakeholders to European structures and international bodies. In March 2024, the government published the "National Strategy on Genetic Resources for Food, Agriculture, Forestry and Fisheries," which replaces the 2007 agrobiodiversity strategy. It supports contributing to an eco-friendlier agriculture and forestry, the conservation of genetic resources in agriculture, and complements and contributes to several German related policies.

Sarah Sensen, *Federal Office for Agriculture and Food, Bonn, Germany*

Yiching Song, *UN Environment Programme-International Ecosystem Management Partnership (UNEP-IEMP), Chinese Academy of Sciences, Beijing/Farmers' Seed Network, China*

Ronnie Vernooy, *Bioversity International, Wageningen, the Netherlands*

Recommendations

The differences and similarities among the two countries allow for identifying five core elements for an agrobiodiversity policy. These can serve as entry points for collaboration between the two countries to advance capacity building, exchange of knowledge and experiences, policy development, and research. Under each of the core elements, the Sino-German Agrobiodiversity Network formulated some expert recommendations (in italics).

- 1. A complementary strategy: long-term conservation, promotion, and sustainable use of agrobiodiversity through ex situ, in situ, on-farm conservation, and various types of plant breeding**
 - Legal recognition of and technical support for community seed banks and organized seed savers groups or associations to practice and strengthen in situ and on-farm conservation activities, exchange knowledge and experiences among themselves, and create public awareness about agrobiodiversity*
- 2. Adding value to the sustainable use of agrobiodiversity: effective and responsible value chains for agricultural genetic resources, e.g. through local product development**
 - Establish a program for regional value chain coordination that brings value chain actors together to develop and promote novel agrobiodiversity-based quality products*
- 3. Sustaining agrobiodiversity through agroecology: maintaining sustainable ecological balances and ecosystems services over time through agroecological practices and integrated plant protection measures**
 - Develop regulations for the integration of old plant varieties in agroecological practices, such as agroforestry, crop rotation, and intercropping*
- 4. The indispensable link: connecting the conservation and sustainable use of agrobiodiversity to resilient seed system development**
 - Promote and support regional networks of on-farm experiments for the evaluation, selection, and improvement of important local varieties, implemented by farmer associations, community seed banks, and seed saver groups*
- 5. Creating synergy: promoting and fostering multi-stakeholders, inter-ministerial, inter-sectoral consultation, knowledge exchange, and collaboration**
 - Promote and support trans-disciplinary, on-farm agrobiodiversity research with a long-time horizon to monitor trends, address challenges, and identify opportunities for conservation and sustainable use*



Events and
announcements



13-14 November 2024
European Conference “Biodiversity in Food Supply Chains” in Berlin, Germany



This conference will spotlight innovative approaches and best practices for protecting biodiversity while building sustainable and resilient food systems.

Supported by: Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection; Federal Agency for Nature Conservation

31 March 2025
Call: Special issue on community-based natural resource management

This special issue in the academic journal *Sustainability* aims to document and analyze how best to address the sustainability challenge of community-based natural resource conservation, regeneration, and management in the light of challenging conditions and negative trends.



Guest editors:

Dr. Ronnie Vernooij, *Bioversity International, Wageningen Centre for Development Innovation*

Dr. Yiching Song, *UN Environment Programme-International Ecosystem Management Partnership (UNEPIEMP)*

Application deadline: 31 March 2025



22-25 April 2025
3rd International Agrobiodiversity Congress in Kunming, Yunnan, China



With the theme “Agrobiodiversity for People and Planet”, this conference aims to share knowledge and identify actions to conserve and sustainably use agrobiodiversity globally.

Organizers:

Bioversity International, Institute of Crop Sciences of CAAS, Yunnan Agricultural University

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