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# ZEF NEWS

**ABOUT FOOD,  
FORESTS,  
AND FOOTPRINTS**

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## BIODIVERSITY AND GENDER: HOW THEIR BONDS WERE STRENGTHENED IN THE UN CONVENTION ON BIODIVERSITY

**M**ontreal, Canada's second-most populous city, welcomed parties and stakeholders from all over the world on **December 7-19, 2022** for a series of international and UN-related meetings on Biodiversity: The 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (Part II, COP 15); the 10th meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (COP-MOP 10, Cartagena Protocol); and the Fourth meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing (COP-MOP 4, Nagoya Protocol). This article focuses on the post-2020 Global Biodiversity Framework (Post-2020 GBF) and its gender-responsive implementation targets.

### A piece of history

The UN Convention on Biological Diversity (CBD), which has been in force since 1993, became the first multilateral environmental agreement to have a **Gender Plan of Actions** (adopted as Decision XII/7 at COP 12, in 2008, at its 12th Conference of Parties in Pyeongchang, Republic of Korea). With this, **the CBD recognizes the importance of gender considerations in achieving its 2011 – 2020 strategic biodiversity plan**. During the external review process of the first draft of the post-2020 GBF, the UN-CBD Women Caucus pushed for a stand-alone gender target to **advance gender mainstreaming and women empowerment**, ensure alignment with the CBD Gender Plan of Actions and build complementarity with the UN Sustainable Development Goals (SDGs), particularly SDG 5 (gender equality). Thus, UNCBD women caucus succeeded in birthing a gender-responsive implementation target.



### Target 23: 'Gender-responsive' or 'gender-sensitive', what does it matter?

With some modifications, the stand-alone gender implementation target was included in the non-paper draft version (WG2020-5-CG-4), at the start of the Part II of COP 15 negotiations in Montreal in December 2022. However, this target was met with a rebuttal at the December 6th plenary session, following objections by a party to the inclusion of the word 'responsive' in the text of the target.

In her opening statement at COP15 in Montreal on December 7, 2022 the UN CBD women spokesperson reminded parties of the adoption of 'gender-responsive' as one of the thirteen principles guiding the preparatory process for the post-2020 Global Biodiversity Framework at the UN CBD COP14 in Sharm-El-Sheikh, November 2018. As a result, **replacing the term 'gender-responsive' was non-negotiable** in order to ensure a comprehensive and participatory, that is, **whole-of-society implementation process**. Gender-responsiveness is now integrated in goal D, target 23 and captured in the newly adopted gender plan of action.

### Need for capacity building

After this historic victory at COP 15 in Montreal, the work is far from done. Adoption of these gender-related targets (targets 22 and 23) **establishes gender-responsive Global Biodiversity Framework** implementation as a shared interest and creates a global cohesive picture of desired outcomes. These goals, however, should not be denied the human and institutional resources needed to coordinate collective actions and move them forward.

Although indicators have been established as measures of target achievement, **capacity development on 'Gender and biodiversity' is the pivot of an effective gender-responsive Global Biodiversity Framework** implementation. Finally, how this bond between gender and biodiversity will play out in the national contexts, relies majorly on credible commitments and actions.

Read the full blog post (including references) here: <https://blog.zef.de/?p=8235>

In the photo left: Isimemen Osemwegie taking part in a session at the COP15 in Canada in December 2022.

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## INTERFACES – SUPPORTING PATHWAYS TO SUSTAINABLE LAND MANAGEMENT IN AFRICA



ZEF started a new four-year project in October 2022: “INTERFACES – Supporting Pathways to Sustainable Land Management in Africa”, which is both a research project in West Africa and a support project for four BMBF-funded regional projects on sustainable land management in sub-Saharan Africa. It is ZEF’s first project where gender is mainstreamed across all activities.

INTERFACES’ core assumption is that in order to achieve changes towards sustainable land management, a fundamental reorganization across technological, economic, political, institutional and social factors is needed. This also includes questioning existing paradigms, goals and values. If we want changes to be sustainable, they must be gender-responsive and socially inclusive. This implies that implementation pathways for sustainable land management must be based on thorough gender and power-analyses and lead to outcomes that benefit both women and men from different ethnicities, ages, classes, and income levels.

Therefore, INTERFACES’ support activities, including gender research, capacity building and the organization of policy-practice workshops, will be impact-driven and build on networking to strengthen the integration, coherence and reach of the four regional projects with regard to sustainable land management. The outputs from INTERFACES are expected to include scientific and non-scientific publications and the promotion of transdisciplinary research and social learning approaches. INTERFACES strives to produce research results that are practice-relevant and strengthen already existing networks on land management issues by linking them up with different African networks. Thus, the project will contribute to implementing research and development results in the area of land management. Finally, INTERFACES will anchor implementation-oriented research in education and training.

**Funding:** INTERFACES is funded by the German Ministry for Research and Education (BMBF).

**Website:** <https://www.zef.de/project/INTERFACES>

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## MEAT CONSUMPTION AND SUSTAINABILITY

Globally, we produce around 350 million tons of meat each year - consuming 43 kg per person per year, on average. This is far too much and not sustainable according to a recent study by ZEF researchers. They took a comprehensive look at various sustainability dimensions, such as climate change, the environment, resource use, and human health, added by economic, social, and animal welfare aspects of meat consumption around the world. Major environmental pressures resulting from meat production are: Emissions of greenhouse gases and particulate matter, nutrient pollution, and acceleration of biodiversity loss. Moreover, overconsumption of meat can have negative impacts on human health.

### Livestock: Not always an unsustainable option

But, livestock provide important sources of income and livelihoods and can function as safety nets for millions of people, especially in developing countries. And meat production can even be more resource-efficient than plant production, depending on the type of inputs used within meat production systems. Well-managed grazing of ruminants on grassland unsuitable for crop production can contribute to a food system sustainably feeding 10 billion people. In areas where sufficient micro- and macro nutrient intake from plants is difficult due to limited market access or seasonality effects, meat is an important contributor to healthy and nutritious diets.

### Outlook and recommendations

Nevertheless, if we take a global perspective, we see that current levels of meat consumption are creating serious sustainability issues that threaten the functionality of several vital ecosystems. Meat consumption has been increasing substantially in the past decades. Spurred by population and income growth, low- and middle income countries have been catching up to the high levels of meat consumption that most wealthy nations have had for almost half a century.

The study concludes that meat consumption has to become more sustainable. Though technological progress to reduce externalities and increase the efficiency of meat production is an important element, meat consumption will have to be reduced too. This can be achieved by education and awareness-building measures as well as appropriate fiscal policies, added by promoting and developing healthy and nutritious plant-based substitutes.

**Further reading:** *Parlasca, M. C., & Qaim, M. (2022). Meat Consumption and Sustainability. Annual Review of Resource Economics, 14.* URL: <https://doi.org/10.1146/annurev-resource-111820-032340>

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## ONE HEALTH DAY 2022 AT ZEF: REFLECTIONS ON THE ONE HEALTH APPROACH

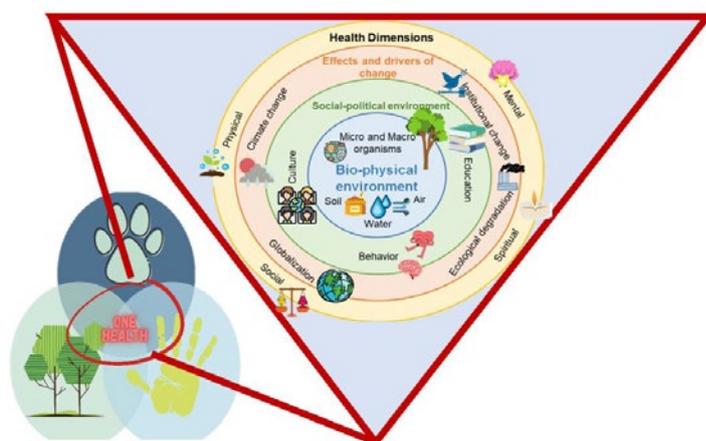
Speakers and participants of the One Health Day symposium held at ZEF on November 3, 2022 critically reflected on the directions and perspectives for One Health. They did so by revisiting the concept and discussing presentations of ongoing research at ZEF. The researchers pointed to areas receiving much public attention, such as zoonotic diseases and anti-microbial resistance. But they also referred to neglected areas like the valuation of health for non-human beings and animal-environment health interactions. The scope was widened by looking at the overlaps of One Health with other integrative concepts such as Planetary Health, and by reconsidering integrated perspectives to assess the impacts of geopolitics and the political economy on health. Speakers also called for a closer look at how sustainable current One Health developments are, how to broaden conceptional notions of health and well-being, and how to include gender-sensitive approaches. Two highlights of the research symposium were: The critical assessment of One Health developments and the introduction to the concept of an antibiotic footprint.

### Revisiting the One Health concept

Walter Bruchhausen from the Public Health Institute of the University Bonn (IHPH) talked about the latest developments of the One Health concept. On the one hand, the concept can be important to raise awareness about topics that have been neglected; on the other hand, the use of the term One Health is impregnated with ambiguity and confusion. This can make groups such as animal rights activists desert from advocating for the approach. Bruchhausen concluded his address by pointing out some areas to be considered research priorities for One Health: (1) the transmission of anti-microbial resistance, (2) spill-over of zoonotic diseases, (3) control of zoonotic and vector-borne diseases, (4) food and water safety, and (5) the threats to food security from animal and plant diseases.

### One Health, anti-microbial resistance, and geopolitics

IHPH-director Nico Mutters delivered his address on the general micro-One Health idea, particularly about the development of antimicrobial resistance. The latter can spread from different environments to humans, animals and plants, and poses serious risks to health. Geopolitics and political economy can play a crucial role in antimicrobial resistance transmission. Thus, if we look at the antibiotic footprint net initiative of the Mahidol-Oxford Tropical Medicine Research Unit shows that antibiotic consumption per person is notably higher in European countries than in any other region in the world. However, resistance currently spreads



at a higher pace in South Asia. This indicates that there is only a slight correlation between antibiotics consumption and resistance and that poorer infrastructure and poorer governance can lead to higher antibiotic resistance.

### The directions of One Health research at ZEF

At present, there are 18 doctoral research projects within the framework of the One Health Graduate School at ZEF. There is a strong focus on environmental transformations and the way they affect human health and well-being as well as urban health resilience. Important additions to the second phase of the Graduate School (2021-2024) are the inclusion of a gender perspective, strengthening research on the governance and implementation of One Health initiatives, and targeting the research on anti-microbial resistance to tackle food safety in plant-based diets.

**Further reading:** Read the full report on the ZEF website at: <https://bit.ly/OneHealthDay22>

**Funding:** The NRW Forschungskolleg "One Health and Urban Transformation" is funded by the Ministry of Culture and Science of North Rhine-Westphalia (Ministerium für Kultur und Wissenschaft des Landes Nordrhein-Westfalen, MKW).

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## THE GLOBAL FOOD CRISIS: CAUSES AND CONSEQUENCES

The COVID-19 pandemic has put health systems around the world under massive stress. At the onset of the pandemic, many governments put various containment measures in place, restricting the free movements of people both within and between countries added by closing non-essential businesses and schools. These policies have also had an impact on global food systems by limiting international food supply, disrupting local supply chains, leading to economic slowdowns and reduced accessibility of food. Food systems in Africa have particularly been hit, due to a limited ability to respond to shocks and stress - reinforced by structural deficiencies in the production and distribution of food. These are caused by inadequate infrastructure, high transaction costs, as well as malfunctioning credit and insurance markets.

### Effects on global hunger

After a steady decline in global hunger over the past decades, progress has slowed down in recent years - mainly related to climate shocks and conflicts. The COVID-19 pandemic and Russia's military attack on Ukraine are driving up international food prices, causing a severe increase in global hunger and malnutrition. On the country level, food and nutrition security impacts vary, depending on both the severity of the shock and the resilience of local food systems to adapt and recover. In several case studies from sub-Saharan Africa (Ethiopia, Ghana, and Uganda), ZEF researchers investigated the effect of the COVID-19 pandemic and associated lockdown measures on household consumption and income losses using primary household panel survey data.

### Income effects stronger than supply chain disruptions

Despite early reductions in food availability due to supply chain disruptions and higher transaction costs, local and regional food trade in the case study countries have proven to be remarkably resilient. However, the containment measures and subsequent economic slowdowns have significantly affected household food security (diversity and quantity) through a reduction in wage income. These findings are in line with most other earlier assessment studies. The observed negative short-run effects are strong for households in Ghana and Ethiopia (both urban samples) and for rural households surveyed in Uganda.

### Food insecurity in Ghana, Uganda, and Ethiopia

In Ghana, dietary diversity and food expenditures increased between the first months of the pandemic in 2020 and one year later in 2021, while the share of food expenditure declined - indicating a fast recovery of the Ghanaian economy. In Ethiopia, survey data suggests that in the early months of the pandemic, employment and household income decreased significantly and has remained low until now, while dietary diversity was less affected. Relatedly, more than half of the respondents in Uganda were affected by the pandemic and its containment measures in the early months, signified by a marked reduction in food expenditures. In the subsequent months, dietary diversity remained relatively low irrespective of whether Ugandan households were initially directly affected or did not report negative effects early in the pandemic.

### Outlook

Global and local food markets have been severely under stress in the past two years. On top of multiple crises caused by climate, conflict, and COVID-19, high and volatile international food prices and supply shortages of grains threaten global food security. Many African countries are highly indebted and unable to respond by expanding existing social safety net programs that were able to partly mitigate COVID-19 impacts. This situation needs to be monitored and considered by international communities when support programs are discussed, planned and implemented.

**Further reading:** Kornher, L. and J. von Braun. 2023. *The global food crisis will not be over when international prices are back to normal.* (ZEF Policy Brief 42) [Download](#)

Usman, M.A., Adong, A., Injete, E., Dzudzor, M., Getahun, T.G., Lulie, J. and L. Kornher. 2022. *The Effect of COVID-19 and Associated Lockdown Measures on Household Consumption, Income, and Employment: Evidence from sub-Saharan African Countries.* (ZEF Working Paper 218) [Download](#)

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## FOOD POLICY ENGAGEMENT ACROSS ASIAN CITIES

Ensuring food security in rapidly expanding cities is a major challenge for local governments. Urbanization has created fragmented areas and slums, altered the structure of urban food markets, increased rural-urban competition for natural resources, and affected agricultural supply chains.

### Food-related competencies at different policy levels

Historically, production of and access to food have been out of the scope of urban planning. This is largely due to most countries' traditional view that national entities such as the Ministry of Agriculture are responsible for food-related matters. Given the current food-related challenges facing cities, including malnutrition, food safety, or food waste, local governments are gradually engaging in food strategies to ensure healthy and sustainable diets for their citizens. These strategies entail policies or programs such as enforcing land-use zoning or taxes on unhealthy food, providing school meals, or setting up food banks. Yet, the extent to which cities can actively implement these strategies is linked to their mandates, or ability to act. This means that cities might depend on higher levels of government (provincial or national) to administer food issues.

### Role of cities in Asia: ZEF study based on unique dataset

There is an abundance of case studies illustrating the different roles cities play in food systems. However, there is only limited literature on cross-city comparison, though this could be helpful to explore common patterns of what factors influence cities to engage in food policy and what type of engagement they choose.

A new (forthcoming) ZEF study investigates the overall state of urban food policy across Asia. Using a **unique dataset of 171 Asian cities from 21 countries**, the study explores the association of demographic, institutional and geographical factors with the level of food policy engagement. To analyze this relationship, cities were **categorized as reactive, engaged, progressive, or food-smart**. This categorization was based on a scoring system including three criteria: Cities were evaluated or benchmarked according to how their food policies (if any) are **proactive** (or forward looking), **integrative** (or multi-sectoral) and **inclusive** (in policy design or orientation). In addition, the study describes food-related mandates, challenges, opportunities and programs at city level. The results show that, with some exceptions of medium-sized cities, the majority of Asian cities are at an early stage when it comes to engaging in food-related matters. While cities have mandates related to food (e.g., upgrading public markets), most of the time they are implementing national policies.

The commitment of local leaders to engage in food matters was found a key factor in advancing the issue of food in urban agendas. Raising awareness of the opportunities for city leaders to unlock potentials and options to act within given food systems settings can influence this commitment.

*This article is based on a forthcoming publication written in collaboration with Steven Jaffee (University of Maryland, College of Agricultural and Natural Resources) and Navneet Kumar (ZEF senior researcher).*



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## ACADEMIA'S ROLE IN INTEGRATING SCIENTIFIC AND LOCAL KNOWLEDGE TO ADDRESS ENVIRONMENTAL CONFLICTS

In a recent peer-reviewed journal publication, a multi-disciplinary group of ZEF researchers critically explored the role of academia in co-producing knowledge on the complexities of environmental conflicts. The researchers departed from understanding environmental conflicts as complex social struggles over natural resources at the intersection of social, ecological, cultural, and political relations. The article discusses inter- and transdisciplinarity as epistemological approaches to address socio-ecological issues. The authors looked at six ZEF research projects carried out between 2015-2021 as case studies.

### Challenges for inter- and transdisciplinary research

Whilst inter- and transdisciplinary approaches have become increasingly common in academia, a strong divide between disciplines with rigid boundaries persists. Inter- and transdisciplinary research projects benefit from cross-fertilizing ideas and practices while opening inclusion channels for non-academic, lived experiences and knowledge of people at the local level. **Knowledge production in inter- and transdisciplinary research often occurs in complex socio-political contexts that lack enabling spaces for knowledge exchange.** Therefore, **co-production of knowledge** is, for a researcher, a balancing act of observing academic rigor on the one hand, and, on the other, ensuring stakeholder participation right from the start. The latter entails joint problem phrasing and conceptualizations (i.e., how 'sustainability' is understood) as well as team-building efforts.

### How to address environmental conflicts

This publication highlights why inter- and transdisciplinary approaches to **understanding multifaceted environmental conflicts are important and which day-to-day challenges academic researchers face when applying them.** The authors have come up with a couple of suggestions: Focus more on the conflict at stake than on the method at hand; Pay more attention to achieve a 'research co-ownership' with local stakeholders; At the grass-roots level, it is of fundamental ethical rigor that researchers avoid speaking for the communities; For decision-makers, it is essential to question the bureaucratic-administrative 'machinery' of truth-building.

Four main lessons on how to best **integrate scientific and local knowledge to address environmental conflicts** were derived from the analysis: (i) Dialogue between different types and (stake-)holders of knowledge needs trust; (ii) It is imperative to reflect on how profound participation of stakeholders and how genuine a knowledge co-creation strategy is; (iii) Academic research can produce knowledge

of significant practical relevance to address or disentangle environmental conflicts - despite limited time and budgets of most research projects; and (iv) Local communities still have little control over how co-produced knowledge affects decision-making.

### Interdisciplinary approaches can make a difference

The authors conclude that inter- and transdisciplinary approaches strengthen academia's role in understanding and addressing the dynamics of complex environmental conflicts worldwide.

### Further reading:

*Avilés Irahola, D., Mora-Motta, A., Barbosa Pereira, A., Bharati, L., Biber-Freudenberger, L., Petersheim, C., Quispe-Zuniga, M., Schmitt, C.B. & Youkhana, E. (2022): Integrating scientific and local knowledge to address environmental conflicts: the role of academia. Human Ecology 50, p. 911–923. Springer Publishing. <https://doi.org/10.1007/s10745-022-00344-2>*

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## IMPROVING IRRIGATION EFFICIENCY AND PRODUCTIVITY IN PAKISTAN

Pakistan depends on irrigation-based agriculture. This doctoral research looked into options for making irrigation systems more efficient in the face of 'old' challenges such as water scarcity and 'newer' ones such as the impact of climate change.

Irrigated agriculture is by far the major consumer of surface- and groundwater in Pakistan, accounting for nearly 95% of the country's water withdrawals. Surface water is distributed to farmers according to the so-called Warabandi principle. The century-old Warabandi system allocates water to farmers in seven-day terms in compliance with a predetermined timetable specifying the day, time and amount of water supply, proportional to the size of the respective farmer's land. **Warabandi aims not only to maintain an equitable distribution of surface water to farmers, but also to cope with water scarcity by efficiently irrigating as much land as possible with the limited amount of surface water available.**

### Problems and opportunities in Pakistan's water distribution system

The Warabandi system is relatively easy to run and managed by public authorities, its operation therewith transparent. But, on the downside, it is inflexible which makes it **difficult to address the day-to-day challenges of water distribution**. It does not compensate users at the lower reaches of the canals for decreased water supplies caused by conveyance losses along the canals. Besides, it is a rigid supply-based irrigation mode that does not match the time-depending demand of crops. Moreover, Warabandi does not take soil features and an increasingly variable environment caused by climate change into account.

### Research in Punjab

This research was conducted in the area of the Mungi distributary canal, located in Punjab, Pakistan. The area is dominated by irrigated cotton cultivation.



The researcher's objective was to look for alternative and more flexible **options for improving irrigation at farm level within the given context of the large-scale water allocation system of Warabandi**. Extensive fieldwork was conducted in the study area in 2019 and 2020. The field research assessed current irrigation practices and derived options to improve irrigation efficiency and increase productivity through advancing irrigation scheduling.

### On-farm water management package

The most promising way to achieve higher water productivity at farm level (bottom-up approach) proved to be by **integrating interventions into a package for on-farm water management**. This package combines: (i) Providing demand-oriented irrigation schedules, (ii) Advancing irrigation schedules by sensor-based soil moisture monitoring, which can unfold its potential by (iii) Establishing a storage option of Warabandi allowance during the potential surplus time in a pond to create an enabling environment for demand-based irrigation. Furthermore, by (iv) Using the drip method, irrigation efficiency could be increased and the undersupply situation in Warabandi-guided irrigation schemes reduced.

### Conclusion

This research provides detailed information on the actual irrigation practices of cotton cultivated in the Punjab area. Its results provide information about **options for advancing on-farm water management interventions** to policy makers, irrigation managers, academics, private sector employees, and farmers. The research has therefore the potential to contribute to a sustainable and productive transformation of cotton farming in Punjab and beyond.

*Imran Sajid defended his doctoral thesis successfully in November 2022 and obtained his doctoral degree from the Agricultural Faculty of Bonn University.*

*Watch a video about Imran's doctoral research on ZEF's youtube channel: <https://www.youtube.com/watch?v=BNpPb5s9ExU>*

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## VIEWPOINT: "ORGANIC AGRICULTURE CAN PLAY A ROLE IN ACHIEVING FOOD SECURITY IN EAST AFRICA".

Interview with David Amudavi, a Kenyan extension educationist and socio-economist. Amudavi also is the executive director of Biovision Africa Trust. He has been cooperating with ZEF and its Right Livelihood Campus Bonn (RLC) since 2015. He has an academic and professional background in agricultural education and extension and works on promoting sustainable agriculture and food systems in Africa.

*How do you and your organization Biovision Africa Trust benefit from the cooperation with ZEF and RLC?*

[Biovision Africa Trust](#) has been collaborating with ZEF and RLC for over 6-7 years in the area of research. The partnership has been instrumental in addressing issues in African agriculture and food systems. Biovision has been a central coordinator for initiatives such as ecological organic agriculture and the Knowledge Center for Organic Agriculture for Africa, both supported by the African Union and the German government. The organization has been supporting research work of students from Africa at ZEF and RLC, and facilitating field research in Kenya. The collaboration has led to the exchange of knowledge and sharing of ideas. Moreover, it has been practically relevant to solving problems of food insecurity and improving family incomes while protecting the environment.

*Which future role can organic agriculture play in East Africa given the projected growth, economic but also population-wise?*

I think organic agriculture can play a significant role in East Africa, as it has the potential to provide safe and nutritious food for local consumption and can therefore serve as an important economic base for farmers. Organic systems have shown resilience to the impacts of climate change and are more likely to support sustained production. The diversification of crops within organic agriculture can help address issues of food security and nutrition. Additionally, it can support cottage industries and generate employment in rural areas, which is particularly important for countries where the economy largely depends on agriculture. Thus, investing in organic agriculture could complement efforts towards achieving food and nutrition security and provide alternative employment opportunities for the youth and rural populations.

*Which challenges and opportunities do you see for Africa's young, well-trained and talented academics? What can be done to make them stay or return to the continent?*

Brain circulation certainly is an issue, as many young people who study in academic fields like agriculture hesitate to return to Africa after completing their training

abroad. However, it is important for these well-educated individuals to come back to the continent to contribute to knowledge generation and development. To make organic agriculture more attractive to young scholars, the role of information, communication and technology can be utilized to resolve challenges in the sector and create job opportunities. The close nexus between the organic sector and industry is important, as it can provide employment for young people and thus support the sector's development. Organic agriculture can also be linked to other sectors, such as environment and land-use planning, to attract young researchers. The [UN Food Systems Summit](#) in 2021 has raised awareness of the need for sustainable food systems. Young people with good training can play a role in this by working closely together with organizations on the continent.

*How do the current energy crisis and political turmoil in the Global North affect your work?*

The current global polycrisis has led to reduced funding and support for our work. This is affecting our ability to promote agriculture, increase productivity, and ensure food security and economic stability in Africa, as most African economies rely on agriculture. The crisis is also affecting the availability of fertilizers, as the focus shifts from bio-based inputs to fossil-based and chemical-based fertilizers. Africa has the potential for producing bio-based inputs, especially bio-fertilizers and bio-pesticides, but limited funding has set back its growth. The crisis in the North affects the support and focus towards bio-based inputs and environmentally sustainable agriculture and food systems in the Global South.

*Watch the full video-interview on ZEF's youtube channel:*  
<https://www.youtube.com/watch?v=xUMqv32m1cM>

The interview was conducted by **Alma van der Veen**, Public Relations Officer at ZEF.  
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## THE THREE ALAZANI RIVERS BIOSPHERE RESERVE IN GEORGIA: PERCEPTIONS, BENEFITS AND RISKS

This research aims to understand the complex human-environmental interactions in the designated UNESCO Three Alazani Rivers Biosphere Reserve in Georgia, Caucasus. The project is part of the Right Livelihood College (RLC) Campus Bonn at ZEF and is working in Georgia together with the [Succow Foundation](#) of Michael Succow, who received the [Right Livelihood Award](#) in 1997. The project is funded by the German Academic Exchange Service (DAAD).

### Regional history of nature conservation

Situated at the crossroads of Europe and Asia, Georgia (Sakartvelo in Georgian) is part of the wider Caucasus ecoregion and one of the biodiversity hotspots worldwide. Different nature conservation measures and schemes, like National Parks, Strict Nature Reserves, Habitat and Species Management Areas, Protected Landscapes have been implemented in Georgia since Soviet times and even before. Many of these initiatives have not fulfilled their aims of conserving ecosystems and biodiversity nor included the needs of the local population. Upon this backdrop, the **Three Alazani Rivers Biosphere Reserve was nominated to UNESCO in 2021 and designated in 2022, and is now the first UNESCO Biosphere Reserve in the South Caucasus** (covering Armenia, Azerbaijan, Georgia).

### Why Biosphere Reserves?

Biosphere Reserves aim to harmonize human-nature interactions and promote sustainable development for people living in and around these Reserves, while maintaining natural ecosystems and biodiversity. **All Biosphere Reserves are structured into different zones: Namely core, buffer and transition areas.** While it is quite challenging to achieve all the aims, several factors are key in determining the effectiveness and success of Biosphere Reserves: Stakeholder involvement, governance approaches, proper zonation and management plans, in addition to clear and coherent monitoring and assessment. **The designated Biosphere Reserve in Georgia covers a rich, diverse and distinct natural and cultural heritage**, like the high mountains of Tusheti at the Russian border, shaped by nomadic sheep farming as well as lowland areas like the Pankisi Gorge inhabited by Kist people who are of Chechen descent.

### Research plans and set-up

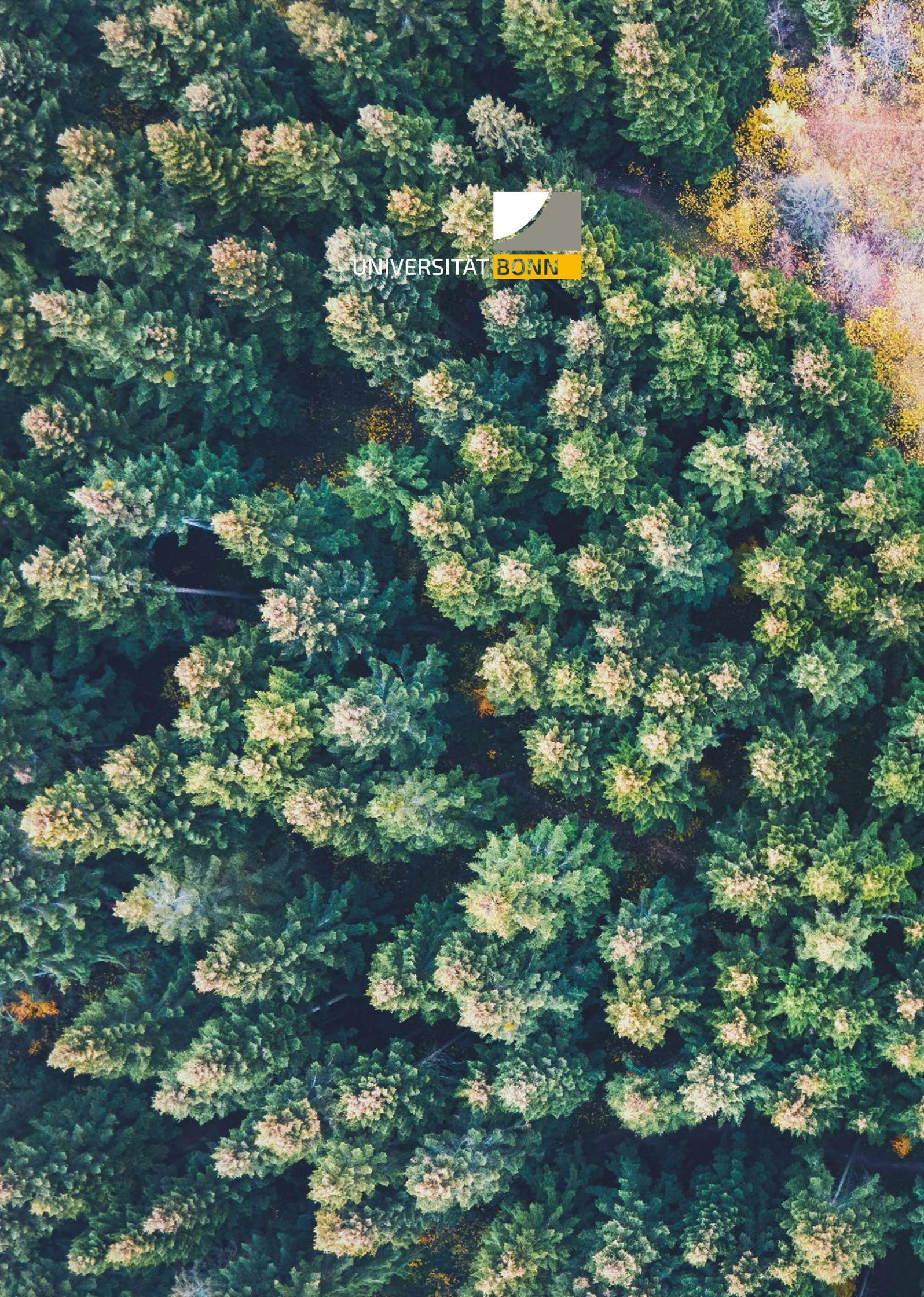
The research project incorporates different qualitative and quantitative data-gathering methods including interviews with people from different target groups, participant observations, transect walks, participatory mapping, and focus group discussions. In 2022, first explorative field research was conducted.



The results will help to show **the perceptions of different groups of people living in and around the Three Alazani Rivers Biosphere Reserve** concerning the Reserve, their needs, as well as the potential benefits and risks for their livelihoods.

Apart from filling the existent knowledge gaps concerning the human-environmental interactions in the research region, the project outcomes have the ambition to improve governance and management practices for other Protected Areas in Georgia, the Caucasus region, and beyond.

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