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Center for Development Research (ZEF)

University of Bonn

Genscherallee 3 | 53113 Bonn | Germany

phone: +49 (0) 228 / 73 6124

e-mail: presse.zef@uni-bonn.de | www.zef.de

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### LEAD ARTICLE

# CAPACITY BUILDING WITH NORTH AND WEST AFRICA EDUCATING AGENTS OF CHANGE

he German Federal Ministry of Education and Research (BMBF) has been supporting two key ZEF-institutions in Africa for many years: the West African Science Centre on Climate Change and Adapted Land Use (WASCAL) and the Pan African University Institute of Water and Energy Sciences (PAUWES). These institutions work independently but both address capacity building and research development in West Africa, often focusing on common topics such as water and energy (e.g. WASCAL at the PhD level, PAUWES at the MSc level).

#### **Synergies**

Hence, BMBF intended to mobilize synergies by forging more interaction and collaboration between these two institutions, aiming at educating potential agents of change and strengthening institutions in West Africa in the fields of water, energy and climate change. Water, energy and climate change are key challenges in this most troubled region. With ZEF involved as a facilitator, the ZEF-WASCAL-PAUWES project was masterminded in 2017 as a platform for these collaborative institutions to complement each other's efforts and strengths towards capacity building and research and to increase the effectiveness and durability of German support across the African continent.

### **Core activities**

- Tailor-made workshops on research methods and practice related to water and energy sciences (conducted by the WASCAL-GSPs hosted at Université Abdou Moumouni de Niamey (UAM) in Niger and Université d'Abomey Calavi (UAC) in Benin), with 60 students from PAUWES and 60 from WASCAL.
- Research internships carried out twice at the WASCAL Competence Centre in Burkina Faso reaching 20 PAUWES students. Due to the COVID-19 pandemic the third internship event, for 12 PAUWES students based in Algeria, took place online instead of in Burkina Faso as planned.

- The creation of a PAUWES data information system, that aimed to archive, document, and publish raw and processed research data and data products (e.g. model results, maps), collected and generated during the PAUWES master's degree studies to share with other master's degree students and potential researchers.
- Summer schools conducted at PAUWES, Tlemcen focusing on an implementation-oriented synthesis of the results achieved in workshops on research methods and internship events provided by the PAUWES Data Information System. 120 students from WASCAL and PAUWES attended these summer schools. Based on the successful implementation of their online internships, the 12 PAUWES students in Algeria were offered to attend the fourth summer school in Tlemcen, also online, which was organized in close cooperation with WASCAL staff in Burkina Faso.

### **Responding to COVID-19 conditions**

Given the constraints of the COVID-19 pandemic, the closing event in May 2021 was conducted entirely online. During this closing event, representatives of ZEF, WASCAL and PAUWES concluded that the collaboration between the three consortium partners was fruitful as evidenced by the achievement of the project goals.

It is worth mentioning that during both project phases a total of 284 students (MSc plus PhD) coming from all regions of West Africa greatly benefitted by learning not only theory, but also from practical work offered during multiple field visits. In addition, over 20 PAUWES MSc students were supervised by scientists from different institutions and several publications were launched over 2018-2021. This is an extraordinary achievement as these students will now pursue their research on water, energy and climate. As 'agents of change' they can potentially make an immense contribution to the development of the continent.

### Project time line:

Phase I: January 2017 – April 2018

(with cost-neutral extension)

Phase II: July 2018 – May 2021

(with cost-neutral extension)

This research is funded by The German Federal Ministry of Education and Research (BMBF)

**Authors:** Bernhard Tischbein, Navneet Kumar, John Lamers, Dilfuza Djumaeva. All authors were or still are

senior researchers at ZEF.

Contact: tischbein@uni-bonn.de or nkumar@uni-bonn.de

### CAPACITY DEVELOPMENT FOR SUSTAINABLE RURAL TRANSFORMATION IN WEST AFRICA: ACHIEVEMENTS

he West African Center for Sustainable Rural Transformation (WAC-SRT) addresses socio-economic, political, cultural, administrative and technological aspects of sustainable rural transformation in West Africa. It is is a ZEF-based and DAAD (German Academic Exchange Service)-funded Center of African Excellence with partners in Ghana (i.e.: University for Development Studies (UDS), Tamale, Ghana / Faculty of Agribusiness and Communication Science (FACS), University of Business and Integrated Development Studies (UBIDS), Wa, Ghana / Faculty of Planning and Land Management (FPLM) and the University of Ghana, Legon, Ghana / Institute for Statistical Social and Economic Research (ISSER)) and Niger (Université Abdou Moumouni (UAM) Niamey, Niger / Faculty of Science and Technology).

Since 2017, WAC-SRT has developed interdisciplinary research and teaching programs to contribute to knowledge-generation and -dissemination aimed at sustainable rural transformation and political stability in West Africa. This encompasses developing and sharing suitable innovative managerial and technological solutions (i.e. in renewable energy and agricultural water management), locally adapted business models and administrative approaches, besides training experts who will be able to implement these solutions.

### **Building bridges across countries, disciplines, cultures and languages**

To teach students communication skills to transcend disciplinary, language and (inter-)national borders is challenging. To address the challenge, we have conceived the West African School for Sustainable Rural Transformation, with a curriculum aimed at facilitating future regional professional and academic cooperation.

In this School, WAC-SRT master students from Université Abdou Moumouni in Niamey (Niger), the University for Development Studies in Tamale (Ghana) and the University of Business and Integrated Development Studies (UBIDS) in Wa (Ghana) receive transdisciplinary training and discuss interdisciplinary aspects of sustainable rural transformation with academics and development practitioners. Besides lectures and discussions, the four-week program gives room for cultural activities and to close interaction between the master students from Ghana, Niger and other West African countries. In its first edition (2019) the School set the stage for face-to-face interaction between students of different partner institutions and proved to be an extraordinary success professionally -it increased students' capacities- and socially, since the students developed good social relations.





All photos on pages 4-5 were taken during research excursions in NIger and Ghana by Bernhard Tischbein.

Participant's interaction was mostly lively in person, during the 4-weeks School. Yet, the students opened a WhatsApp group that continued to be a functional contact platform during 2020. Both the School and the WhatsApp group boosted students from francophone countries' English-learning. After this success, we were highly motivated to organize the school in 2020. However, health concerns with the Covid-19 pandemic prevailed and we had to postpone it. In close cooperation with the DAAD, we made provisions that allowed us to carry out the WAC-SRT Schools to batches 2019 and 2020 jointly, in July and August 2021. This edition of the school, which just started in the third week of July 2021, in Wa (Ghana), already counted with an online training session on better science communication, organized in cooperation with the ZEF-PR, SFB Future Rural Africa, WASCAL and Uni-Bonn Press. Despite technical challenges and an undeniable digital gap, the training had very positive feedback from our students.

### Co-teaching within WAC-SRT and beyond

We encourage, thus, not only students' exchange, but also the exchange of lecturers among the partner faculties and master programs — during the WAR-SRT school and beyond. These initiatives enhance the course-portfolio of the different center branches (such as staff capacity and teaching capabilities) and academic networking. They also enhance interdisciplinarity and internationalization of partner universities. Dr. Wolfram Laube and Dr. Michael Ayamga also engage in co-teaching in South-South-North collaborations, building on synergies and increasing WAC-SRT visibility. Both taught PhD-students as part of WAC-SRT's collaboration with the DAAD-funded Doctoral Support Program (DSSP) that ZEF and the Instituto de Estudios Ambientales of Colombia's National University (UNAL/Bogota Campus) are running together.

#### Our alumni

Alumni are regular participants in teaching and extracurricular activities of WAC-SRT. Furthermore, DAAD provides funds for alumni to participate in WAC-SRT conferences and workshops. Retaining outstanding alumni at the departments, and/or to support them for their PhD are some of our goals. Participation in additional capacity building activities by the different WAC-SRT partners (WASCAL, PAUWES, GGCDS) also help to promote our progress alumni's progress. Our first alumnae graduated in 2019. One Burkinabe alumnus of the University of Business and Integrated Development Studies (UBIDS) has been employed by the international office of the university. Two short-term post-graduate scholarship holders, who came to ZEF in 2018 and 2019 to work on their PhDtheses, graduated in 2020. Both continue to work for our partner institutions, UDS and UBIDS, as senior lecturers.

This project is funded by the German Academic Exchange Service (DAAD)

**Author:** Aline Pereira, researcher at ZEF, **Contact:** alinerbpereira@daad-alumni.de



# FARMERS' ORGANIZATIONS IN AGRICULTURAL TRANSFORMATION IN AFRICA HAVE A POSITIVE ROLE TO PLAY

armers' organizations (FOs) play a critical role in the agricultural transformation of Africa by promoting collective action among farmers and by giving them a political voice. This recently conducted detailed review of the state of continental and regional FOs in Africa, includes case studies of Senegal, Uganda and Zambia that discuss the structure, functioning, objectives, and financing of FOs.

### Farmers' organizations compared in Senegal, Uganda and Zambia

The formation and development of FOs is a long-term process. Though considerable progress has been made across Africa, more needs to be done to strengthen existing FOs which have a long history of successes and failures. Unlike in Europe, North America and Asia where FOs are widely respected and recognized partners in the policy-making process, FOs across most of Africa have yet to effectively engage in the design of agricultural policies. Nevertheless, FOs are increasingly becoming an important component in the development of agricultural transformation policies in Africa.

#### **Constraints in funding**

The FOs in the case study countries are more or less well-structured, with the national-level (umbrella) FOs linked to local-level substructures. Membership is voluntary. However a majority of small-scale producers are yet to join the FOs. Our assessment suggests that FOs face capacity and financial constraints. They generate only a meagre proportion - about 5% - of their finances from members. The continental organization Pan-African Farmers' Organization (PAFO) and the five regional organizations, Eastern Africa Farmers Federation (EAFF), Southern African Confederation of Agricultural Unions (SACAU), Network of Farmers' Organizations and Agricultural Producers of Africa (ROPPA), Regional Platform of Central African Farmers' and Producers' Organizations (PROPAC), and Maghrebian and North African Farmers Union (UMNAGRI), as well as almost all national-level farmers' organizations are dependent on external resources from international financial institutions, UN agencies, bilateral and multilateral partners, donors, and NGOs.

### Road map for the future

In order to move agriculture to the next level, multiple efforts are needed to vitalize FOs. Firstly, existing leaders of FOs need training and exposure to build their capacity. FOs should ensure that their leaders' actions are transparent, that the leadership is accountable to the members, and that the leaders embrace a compelling vision. Secondly, the membership base of FOs and financial contributions from members need to increase. FOs can raise



Farmers transporting cattle in Kenya. Photo: Oliver Kirui

their own revenues by strengthening farmer-driven cooperatives, transfer of knowledge and innovations, training of members, and creating value addition through the processing of agricultural produce. Financial support and funding from donors should be merited and channeled to accountable organizations. Rather than only supporting micro-projects, funds should be dedicated for institutional development to strengthen FOs. Thirdly, opportunities need to be created for the FOs to regularly engage with policymakers. Governments should give FOs the right to sit in all decision-making bodies examining agricultural, food and rural development issues.

This article is based on ZEF Working Paper No. 205: https://www.zef.de/fileadmin/webfiles/downloads/zef\_wp/ZEF\_Working\_Paper\_205.pdf

Watch the story online here.

**Authors:** Willi Kampmann is an Independent consultant and the former head of the Brussels Office of the German Farmers' Association (DBV). Oliver K. Kirui is a senior researcher at ZEF. **Contact:** okirui@uni-bonn.de

# SPOKEN WORDS FLY AWAY, WRITTEN WORDS REMAIN PROMOTING WRITTEN EMPLOYMENT CONTRACTS BETWEEN LANDOWNERS AND HIRED WORKERS

n Côte d'Ivoire, smallholder cacao producers use family labor for most of their work, but also employ hired labor. Hired workers are a rather diverse group, and can be landholders themselves taking up small jobs on other farms as a source of additional income or migrants from neighboring countries working on a seasonal basis.

The relationship between landowners and hired workers is guided by a long-standing institutional arrangement deeply rooted in social norms: the aboussant arrangement. In some of the local languages, aboussant means "divided by three," which is the main principle behind this arrangement. The hired workers (who are referred to as aboussant) offer their labor to the landowner, and, instead of a fixed wage, at the end of the season they receive one-third of the value of the harvested cacao. Although this core element is understood by all parties, there are further important details that are only defined in oral contracts. Conflicts inevitably arise, but landowners stick to such oral agreements because "that's how it has always been done."

### **Nudging behavioral change**

To test if and to what extent we could change landowners' attitudes towards written contracts, we designed a small awareness campaign. The campaign comprised workshops – to which only randomly selected farmers were invited – and a follow-up meeting to clarify questions. In the workshops, farmers were first encouraged to share their positive and negative experiences of the current working arrangements. Then we presented the idea of written contracts, discussed the inclusion of social benefits for workers in the contract, and explained how they could draw up a contract and sign it with their workers.

Written/oral contract

Health expenses
Interest-free prepayment

Bonus payment

Option 1

Option 2

Status quo

Illustration: Example of a choice card used in the experiment.

One month after the workshops, we went back to the villages and played a game with farmers to elicit their preferences for different contracts. Using choice cards, we asked farmers to choose between two different **contract** options or to choose their current working arrangement as the status quo. Each farmer played the game four times using choice cards with different options.

### Small interventions, big transformations

Our results show that the landowners who participated in the awareness campaign have a higher preference for written contracts and for contract features involving social benefits for their workers, such as full coverage of work-related health expenses. Participants were also more likely to have taken concrete steps towards signing a written contract with their workers. These results show the importance of creating spaces to share experiences and discuss new ideas on how to solve problems. Even a simple awareness campaign can go a long way in re-shaping traditional attitudes and behaviors.

Original publication: Jäckering, L., Meemken, E.-M., Sellare, J., & Qaim, M. (2021). Promoting written employment contracts: Evidence from a randomised awareness campaign. European Review of Agricultural Economics, <a href="https://doi.org/10.1093/erae/jbaa035">https://doi.org/10.1093/erae/jbaa035</a>

**Author:** Jorge Sellare is a senior researcher at ZEF and head of the junior research group "Transformation and Sustainability Governance in South American Bioeconomies (SABio)"

Contact: jsellare@uni-bonn.de

# TIME TO SAY GOODBYE TO GÜNTHER MANSKE, THE LONGSTANDING ACADEMIC COORDINATOR OF ZEF'S DOCTORAL PROGRAM (BIGS-DR)

During the past 23 years you have led and guided ZEF's BIGS-DR program, based in Bonn. This is a long period of time. How has ZEF and especially the doctoral program developed and changed since you started working here?

I started at ZEF in April 1998. At that time, there were only a few staff members and two professors. I first helped set up ZEF's Department of Natural Resource Management and Ecology. In the beginning there were only a few operating offices at our disposal, on the second floor in the ZEF-building, furnished with desks, chairs, and paper. Gradually personal computers were added and a computer network set up and the library was stocked. What has been created at ZEF over the past 23 years is impressive.

This is not only due to the financial resources that were made available in the first roughly ten years through federal funding from the Berlin-Bonn Act. Rather, it is mainly due to cooperation between the three ZEF departments, through which many additional research projects were started over the years. Today many intertransdisciplinary and teams work together and conduct basic empirical research on development in all world regions.

dents and integrates them into research projects on site. Networking activities with alumni could be intensified virtually, making it possible to involve people who were previously difficult to reach. In the past year, ZEF alumni have participated in online courses as both lecturers and listeners within the doctoral program.

### What makes ZEF's doctoral program special and unique in your opinion?

The program is unique in Germany and Europe because of its size (120 enrolled doctoral students) and its international and interdisciplinary nature. BIGS-DR offers doctoral students a unique approach to researching development issues with in-depth training and field research. The combination of theories, methods, and practical experience

in the areas of social, economic, and environmental change enables students to explore new fields and to become competitive in an international job market. This international and interdisciplinary set-up makes BIGS-DR an exciting place to study, research, and live. We are a truly diverse community when it comes to academic and personal backgrounds. I have had the good fortune to experience that every day for the past two decades.



Günther Manske at a photo shooting at ZEF in 2019.

What do you consider your main achievements, and which

# What have been the main challenges in the past and what do you consider the main upcoming challenges facing your successor and the institute with regard to doctoral education in development research?

ZEF and BIGS-DR have evolved over the past two and a half decades, continuously adapting their research topics, teaching content, and teaching methods based on changing global contexts and opportunities for innovation. The most important challenge for BIGS-DR in the near future are the shocks and disruptions from the COVID-19 pandemic. Virtual supervision of graduate students in field research or by external supervisors could also be improved. In the future, some of the doctoral students' research could also be carried out virtually instead of traveling to locations. For this, ZEF will have to invest further in cutting-edge technologies. I also see huge potential in the expansion of the ZEF alumni network. ZEF already maintains close contact with some former doctoral stu-

### "missteps" have you learned the most from?

Management, with an eye for details but at the same time flexibility, openness to innovation and the implementation of forward-looking adjustments have guided my work as a coordinator. Perhaps I learned the most in my dual role as coordinator and as a person the BIGS-DR students in Germany could trust with their personal concerns. On the one hand, I was responsible for organizational matters and acquiring and administering research funds, but at the same time I had to provide emotional support to students. ZEF, with its internationality and interdisciplinarity, often does not fit into common patterns when dealing with authorities and administrative regulations. Negotiating skills and tactfulness are therefore required in order to assert oneself for the benefit of the doctoral students and ZEF. If there have been "mistakes", I hope I have always apologized for them and tried to learn from them. I am proud of our achievements and accomplishments – in the past 20 years we have trained numerous scientists and

leaders at ZEF who are making an important contribution to sustainable development around the world for the benefit of us all.

The doctoral program at ZEF is a capacity development program attracting doctoral students from all over the world (more than 750 from more than 100 countries by now). What have you learned over the years working with the students?

Through seminars, colloquia and the content of doctoral research at ZEF, I have learned from doctoral students about other disciplines and cultures. Their interdisciplinary term papers have always been a great source of inspiration to me. I've been open to innovation throughout my professional life and have learned a lot from our young researchers. I also had to adapt to new technologies in working with our students. The kind of technical progress that has taken place during my professional life is unbelievable. I wrote my doctoral thesis with a typewriter! In 1994 in Mexico, I started working with e-mail and the internet. In 2005, I introduced the first version of the ZEF Intranet and my assistant at the time, Ms. Rosemarie Zabel, programmed the doctoral program's Access database. In 2014 we created ZEF Wiki. These are now centerpieces of ZEF's and BIGS-DR's knowledge transfer and management. In spring last year, at the beginning of the pandemic, the software programs Slack, Trello, i-Spring, Loom, Mentimeter, Sciebo, etc. were still completely new to me. In the last academic year, my assistant Max Voit and the BIGS-DR support team used these softwares to conduct the entire doctoral courses online.

### What were the most impressive, personal experiences you have had at ZEF?

Each year I have been impressed during the intensive exchange of students' intercultural experiences at the intercultural weekend seminar which is held at the Windeck-Roßbach youth hostel. I learned that people are shaped by their personal backgrounds and stories, but never without surprises. I have always enjoyed the walk we take with the students through a German forest during the intercultural weekend. For many, this is a completely new experience. Some were afraid of wild animals, which are not actually dangerous in the forests here. Once a student got lost in the fog and snow, and I "rescued" him with the help of our cell phones.

You have seen several generations of ambitious young scientists from all over the world come and go through ZEF. What is your main advice for the new generation of doctoral students?

My advice for the current doctoral students in the program: Try to finish your thesis within four years and always remember that you can't do it all alone. Make the most out of your colleagues and peers at ZEF. We are a close-knit community and there are always people around who can and want to help you. My advice for our alumni: Stay in touch with the academic life at ZEF. We are

happy to have you back to teach or as life-long students. Also remember to stay in touch with your batch mates. I have seen many lasting friendships across continents that started at ZEF.

This interview was conducted by Andreas Haller (ZEF PR).



Günther Manske with ZEF doctoral students during a research trip to Japan in 2015.

Thank you for the interview Dr. Manske, and enjoy your retirement!

# THE ECONOMICS OF IRRIGATION SYSTEMS IN ETHIOPIA: TECHNOLOGIES AND INSTITUTIONS

he government of Ethiopia has promoted irrigation as a means to reduce poverty among smallholders in the face of climate change and variability and population growth. Investment in irrigation comprises over one-third of the total budget of the Ministry of Agriculture's Agricultural Growth Program (WB 2015). Between 2004 and 2015, the area under agricultural water management increased three times (FAO 2016).

In addition to physical and technological investments, the focus has been on building and reforming institutions in the irrigation sector. However, concerns remain regarding the overall performance of irrigation both for human well-being and the environment. Using data from 464 irrigating farm households (with a total of 2,166 irrigated and rain-fed plots), this study assessed the institutional set-up and the technologies used in various types of irrigation systems and examined their impact on profit generation, farmers' empowerment, and environmental sustainability.

### How the irrigation sector is functioning at different levels

At the national and regional levels, the policies, strategies and legal instruments are well- specified, and the relevant institutions and organizations have been established. However, at each administrative level organizations encounter problems due to weak enforcement capacity, overlaps in mandates, duplication of effort and absence of an integrated system of information and resource management.

### Trade-offs between income, empowerment, and environmental sustainability

Currently, there are multiple scales of decentralized irrigation water management systems and irrigation technologies in use in Ethiopia. The irrigation water management systems constitute privately managed system, users (farmers) managed system, jointly (users-and-agency) managed system and open access irrigation water management systems. One significant finding of the study is that farm plots served by pump irrigation systems reap higher returns and display a greater number of sustainable land management practices compared with farm plots supplied by gravity irrigation, regardless of the management systems they are in. Furthermore, the average vegetation biomass observed for plots under all types of irrigation water management system has increased since the adoption of irrigation by farmers. The highest Normalized Difference Vegetation Index (NDVI) score is noted in plots under privately managed irrigation systems with pump technologies.



Ethiopian farmers irrigating theirs fields.

In this study, irrigation empowerment at the local level is defined as the ability and capacity of rural farm households in acquiring information, making decisions, participating in, and strengthening local organizations in developing, using, allocating and managing of irrigation water. Regarding collective empowerment the results of this study suggest that groups of farmers practicing gravity irrigation are more likely to contribute to the initial establishment and the day-to-day operation and maintenance of the irrigation system, whereas they are less likely to be formal members of water users' associations. Households who have plots in openly accessed pump irrigation system are relatively less satisfied with the water use and management system, compared to other alternatives.

### **Implications**

The overall results of the research indicate a need for immediate intervention in gravity irrigation schemes and irrigation activities that are not supported by institutions to promote equitable access to and management of irrigation water. Strong emphasis should be given to active engagement, participation, and capacity building of all stakeholders at each level in the management and use of irrigation systems.

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#### Watch this story online here.

Author: Rahel Deribe Bekele was a doctoral student at ZEF. Her research was funded by the German Academic Exchange Service (DAAD)

Contact: rahelderibe@yahoo.com

## ACHIEVING SUSTAINABLE WHEAT SELF-SUFFICIENCY IN EGYPT: OPPORTUNITIES AND CHALLENGES

gypt is the third most populated country in Africa, with currently a population of 104 million inhabitants. Most of the Egyptians live on only 7% of the country's surface, mainly along the Nile River. Egypt is facing critical challenges regarding rapid population growth, poverty, water scarcity, environmental degradation, and climate change. In addition to that, it has been involved in a water conflict over the Grand Ethiopian Renaissance Dam (GERD) that was built by Ethiopia on the upper course of the River Nile.

Wheat is considered the most important crop in Egypt, not only as a staple food, but also as a strategic and political commodity. Most Egyptians depend on wheat for their daily intake in form of subsidized bread whereas millions of smallholders produce wheat for their livelihoods. Wheat-based food provides on average one-third of the daily caloric intake and about 45% of protein intake by Egyptians.



Ahmed Abdalla 'in the field' in Egypt.

### **Egypt's Sustainable Development Strategy**

Wheat occupies about 33% of the total crop area, mainly produced by smallholders in the River Nile delta in the country's Mediterranean north and upstream along the River Nile. It therefore seems contradictorily that Egypt also remains the world's largest wheat importer, and only half of the national consumption can be met by domestic production. Upon this backdrop, the Government of Egypt issued its "Sustainable Development Strategy" to achieve more than 80% of wheat consumption self-sufficiency by 2030. Given the fast growing population, anticipated future water shortages, soil degradation and climate

change constraints, the question remains how this goal can be reached in a sustainable manner.

#### **Project of Right Livelihood and SEKEM**

The project "Transition towards sustainable agriculture: The case of wheat-based production systems in Egypt" is part of the Right Livelihood College (RLC) Program at ZEF. This doctoral research project is carried out in close collaboration with the Heliopolis University in Alexandria and the NGO SEKEM near Cairo. SEKEM received the Right Livelihood Award in 2003. It aims to contribute to a more sustainable agriculture in Egypt by identifying the most important internal and external drivers affecting smallholder wheat production and by addressing the most pressing problems of smallholders in a case study in the River Nile delta. In this line the project tries to support the opportunities and face the challenges in attaining wheat self-sufficiency in Egypt in a sustainable manner from a smallholder's perspective.

### First findings of field research

So far, empirical field research was conducted in four districts in the Beheira Governorate in the River Nile delta, south of Alexandria. Interviews with 246 wheat-producing smallholders were conducted, along with expert interviews and participatory observation. First preliminary findings show that from a wheat-growing smallholder's perspective, there has been a significant drop in governmental support such as subsidized inputs and technical supply in the previous two decades. Farmers find wheat cultivation is jeopardized because is it depending mainly on a fluctuating private market. Farmers have often started to reduce their wheat production, and focused on more profitable cash crops. Some continued growing wheat only for their own household's consumption. Thus, the total area for wheat production tends to decline in Egypt. Other cash crops, such as clover, however, need more water, land and fertilizers. Farmers also observe high prices of fertilizers such as potassium, which negatively impact on the quality and productivity of their wheat yield. In addition, productivity is affected by inadequate irrigation systems and inappropriate crop rotation. The data is currently being analyzed and synthesized in detail.

The research is supported by the German Academic Exchange Service (DAAD), RIght Livelihood and fiat panis.

Watch this story online here.

Author: Ahmed Abdalla is a junior researcher at ZEF and part of the Right Livlihood program run at ZEF. Contact: s5adabda@uni-bonn.de

## DEVELOPMENT, PEACE, AND VIOLENCE IN COLOMBIA: A REFLECTION

olombia has a 50-year long history of violence and war, negotiations and several peace processes between the state, right-wing paramilitary groups, and left-wing guerrilla forces. Over the decades, 8.1 million people have suffered forced displacement and 1.3 million have been killed or simply disappeared. Between 1984 and 2002, more than 4,000 members of the Patriotic Union (UP), a leftist political party, were assassinated. Recently, the transitional justice tribunal, JEP, created in the 2016 peace agreement, found that the national army murdered at least 6,402 civilians between 2002 and 2008 whom they falsely declared to be guerrilla fighters in order to boost the state's own war statistics. Since the peace agreement was signed in 2016 at least another 1,206 people have been assassinated. Colombia's internal conflict is far from over.

### The spark of inequality

Violence is exacerbated by inequality. More than 21 million people in Colombia live in poverty (income below 86.58 USD/month), while another 7.4 million live in extreme poverty (below 37.85 USD/month). In contrast, the wealthy 1% of the country (30,000 people) have an income of above 24,700 USD/month, and the wealthiest 0.1% have an income of above 193,300 USD/month. The Gini index for Colombia is 0.53, making it the second-most unequal country in Latin America. The land-Gini index (concentration of land property), at 0.90, shows that most land is in few hands. In rural areas, inequality is accompanied by environmental degradation that threatens ecosystems and in particular the livelihoods of peasants, indigenous people, and afro-descendants.

The peace agreement of 2016 sought to build a stable and lasting peace, focusing on improving rural livelihoods, increasing socio-political participation, compensating victims, and fighting against illegal drug trafficking. Today, five years after its signing, the culture of violence rooted in Colombia's history remains difficult to overcome. The guerilla group Army of National Liberation (ELN), dissidence groups of former guerrilla FARC-EP, neo-paramilitary groups, and drug mafia clans fight in the power vacuum left by FARC-EP. Many civilians are still at high risk, especially indigenous people, afro-descendants, human rights activists and environmental defenders.

### Youth are entering the political stage

Since 2019, social discontent has generated regular mass protests throughout Colombia. People protest not only against the murder of civilians and the inadequate implementation of the peace agreement, but also against inequality and poverty, a poor public health and education system, environmental and tax policies that hit poor



people the hardest, and high levels of corruption. The COVID-19 pandemic further exacerbated the dire socio-economic situation of most of the population. At the beginning of 2021, the national government promoted a fiscal reform to increase taxes on some primary commodities that would have raised the costs of living, unleashing the most prolonged and vigorous mass protests in recent Colombian history.

In the middle of this chaos, new forms of social organization emerged, many of which are initiated by youth. It is the first time in decades that young people in the country, who are fed up with persistent violence, poverty and inequality, are steadily pushing for a drastic change. Local popular assemblies and youth movements are formulating proposals and acquiring recognition for this on the political stage. Examples of this are the National Popular Assembly established in Bogota, which congregated youth groups from different parts of the country, and the Cali Popular Assembly, where youth movements of Cali city organized themselves.

#### **ZEF's partners in Colombia**

In this context, also the students and faculty of the National University of Colombia (UNAL) and the Institute for Environmental Studies (IDEA), both working together with ZEF in the "Doctoral Studies Support Program on Environmental peace-building and development in Colombia", joined a national strike. The courses of the DSSP program had to be rescheduled, and field research of PhD students was affected. Although the strike has posed major challenges for all actors involved, the participation in the strike plays an important role in underlining the societal role and responsibilty of the higher education institutions in Columbia.

#### Read the full blog post here.

**Authors:** Alejandro Mora Motta, Carolina Tobón Ramírez, Emilia Schmidt, & Estefanía Montoya Domínguez. All authors work with ZEF's DSSP project with Colombia.