



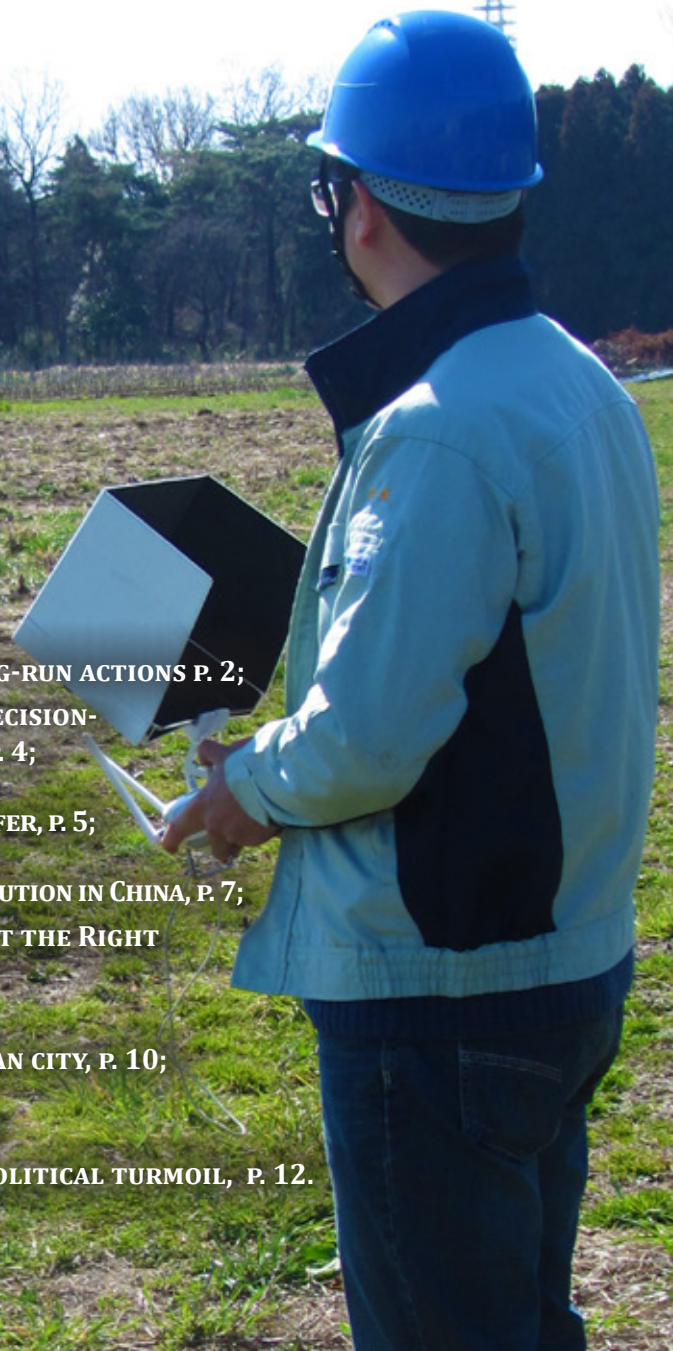
**zef**

Center for  
Development Research  
University of Bonn

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# ZEFNEWS

In focus: Agricultural innovations



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## LEAD ARTICLE

## SCIENCE AND AGRICULTURAL INNOVATION IN AFRICA



Sixty-three percent of the population in sub-Saharan Africa live in rural areas and are employed in agriculture-related work. Agriculture is highly labor-intensive. Given that labor is the predominant asset of the poor, agriculture is the sector where the poor can most easily benefit from sustainable growth.

The overall picture of the agricultural sector's performance in Africa is encouraging. Yet, in many countries substantial efforts are needed to sustain and accelerate agricultural development for reducing poverty and hunger. Agricultural development can come from different sources. While in the past the increased use of inputs and the expansion of agricultural land accounted for a large part of agricultural growth in Africa, improvements in productivity through innovation to increase output per unit of input will be a major driver of growth in the future.

To increase productivity in a sustainable way requires maintaining environmental quality and resources. Keeping up with increasing and changing demands from a growing population, and achieving food security remains a considerable challenge. It is essential also to prevent poverty related migration flows. Such agricultural innovations require enhanced investments in research and development and connecting social policy with labor-productivity enhancing policies, as for instance pursued in so-called productive safety net programs in Ethiopia in the context of the current drought severe problems.

#### African initiatives

Governments and civil society in Africa are increasingly recognizing the role of agriculture and agricultural innovation. African countries have therefore recently made major commitments to invest in this sector. The Comprehensive Africa Agriculture Development Programme (CAADP) was initiated in 2003 as the cornerstone for fostering agricultural development and was reinforced by the Malabo Declaration in 2014. With CAADP, African countries committed to spend 10 percent of their total public expenditures on agriculture to achieve an annual agricultural growth rate of 6 percent. Other African and international initiatives, like the New Alliance for Food Security, Nutrition and Feed the Future, have since been launched to support the CAADP process.

However, evidence shows that not all types of public agricultural expenditure are equally growth-inducing. Investments in agricultural innovation are especially beneficial for growth. Africa has a rapidly evolving science sector in agriculture, food security and nutrition which stimulates scientific and technological development on the continent. A major undertaking in this context is the Science Agenda for Agriculture in Africa, which was launched in 2014. It is an organizing framework for the social and economic transformation of national science and technology institutions in Africa and aims to bring about a more productive and efficient food and agricul-

tural sector. Another important initiative is the Science, Technology and Innovation Strategy for Africa 2024, which is the continental framework for accelerating Africa's transition to an innovation-led, knowledge-based economy within the overall framework of the broader and long-term Agenda 2063 of the African Union.

### One world, no hunger

The German Government's Special Initiative "One World – No Hunger" is one of the most significant initiatives to improve food and nutrition security in Africa by stimulating the generation and implementation of innovations in agriculture and the food sector. This initiative includes setting up Agricultural Innovation Centers in twelve African countries. ZEF's Program of Accompanying Research for Agricultural Innovation (PARI) with a large group of African and German partners identifies promising priorities for investment and policy, and offers independent scientific advice to support these Centers, therewith contributing to sustainable agricultural growth and food security.

The two main components are: To conduct accompanying research with ex-ante impact analyses, including the development of detailed strategic analyses and visioning; modelling the direct and indirect impacts of potentially promising innovations; and an institutional analysis of the innovation centers in the context of their national agricultural innovation systems. The second objective is to steer a research-based design and assessment of technological and institutional innovation opportunities with local partners, including identification of promising ("top-down") innovations from research organizations and ("bottom-up") innovations generated by farmers and other actors in the value chains. The project fosters synergies with and links to existing innovation systems in Benin, Burkina Faso, Cameroon, Ethiopia, Ghana, Kenya, Malawi, Mali, Nigeria, Togo, Tunisia and Zambia. PARI's consortium consists of partners in Africa (the Forum for Agricultural Research in Africa – FARA with its national partners in the respective countries; the African Growth and Development Policy Modeling Consortium – AGRODEP) and in Germany (School of Life Sciences Weihenstephan at the Technical University of Munich and the University of Hohenheim).

Website: [research4agrinnovation.org](http://research4agrinnovation.org)

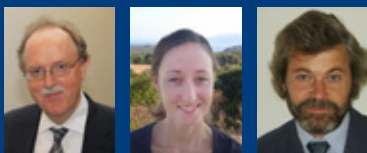
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## EDITORIAL: COMBINING SHORT-TERM RELIEF WITH LONG-RUN ACTIONS

Especially in Africa, complex emergencies are accelerating right now in serious ways. These emergencies are arising from extended droughts caused by El Niño in combination with political and security problems. It is therefore necessary to combine short-term relief with long-run actions for sustainable development in a smart way.

This poses a major challenge to African governments, development partners and civil society organizations. Thus, the research community is obliged to engage in providing the evidence base on what, where, how, and when to best invest in the pathways toward a world without hunger.

Actually, the research community has started to

take up this challenge with new energy. The large African science mobilization event "Next Einstein Forum" held in Dakar, Senegal, in March 2016 was first of its kind and serves as a good example. Outstanding (young) and committed African scientists presented innovative solutions for agricultural development in the presence of high-level policy makers.

The commitment of African countries to accelerate agricultural development has actually improved in recent years (see lead article). The German Government's initiative "One World – No Hunger" with setting up Innovation Centers in many African countries will make a positive contribution just at the right time. This initiative needs to be sustained over the long run.

Innovations to improve food security are at the core of ZEF's research work in the Program of Accompanying Research for Agricultural Innovation (PARI), which is contributing to sustainable agricultural growth in cooperation with African partners.



Joachim von Braun is Director of ZEF's Department for Economic and Technological Change.



## HOW RESEARCHERS CAN HAVE AN IMPACT ON DECISION-MAKING FOR SUSTAINABLE DEVELOPMENT

Sustainable development requires good decisions – decisions by policy-makers and land managers capable of influencing lives and landscapes. As researchers, we aim to influence such decisions through the evidence we produce. Unfortunately, most of the results we generate are never used in decision-making, because decision-makers – even if they are aware of our work – find it difficult to relate them directly to the decision dilemmas they face. Research rarely manages to capture the full scope of what these people have to consider – the interests of multiple stakeholders, the social, economic, ecological and political dimensions, the resource constraints, the unintended side effects, the risks and uncertainties.

Since most development researchers know that addressing this complexity is important, we aim to do our research in multi-, inter- and transdisciplinary – even holistic – ways. Yet the methods most of us are familiar with are not well suited to this challenge. Complex systems cannot be governed by a small set of rules that can be discovered through hypothesis testing, and we move far away from direct applicability when we design controlled experiments that fail to consider the host of drivers that determine system performance. It would also be impossible in most situations to eliminate all knowledge gaps, one after the other, so that decisions are based on perfect information. Data gaps and uncertainties are part of the game in practical decision support.

Luckily, there are proven approaches to supporting risky decisions on complex systems with imperfect information. Decision Theory has focused on precisely this challenge for centuries. Decision analysts have harnessed insights from this field to offer pragmatic decision support to a wide range of clients, serving private businesses as well as governments. Their tools include comprehensive decision models aiming to forecast decision outcomes based on what is currently known, and to highlight critical decision-specific knowledge gaps.

These tools cannot make precise outcome predictions, but they can provide reliable estimates of the plausible ranges of outcomes, which in many cases are sufficient for identifying the most desirable course of action. We have started to adapt decision analysis procedures for use on decisions in agricultural development within the framework of a collaborative initiative led by the World

Agroforestry Centre (ICRAF). Experiences so far have shown that this decision-focused approach is effective in capturing complexity and in including stakeholders and decision-makers in the research process. It can quickly generate tailor-made results, and thus support decisions in real time and raising the chance that research results will help shape and improve decisions in development.



## SHARING RESEARCH: ZEF'S DATA PORTAL IS ONLINE!

ZEF publishes its data free-of-charge in a publicly accessible data portal in line with global trends towards “open data” and “open access” in data management. The data have been collected in ZEF’s worldwide research projects and are made available to colleagues and stakeholders all over the world. Reliable and systematically collected data are rare in third-world countries in particular. Yet, policy-makers might use them to take informed decisions on combating hunger and reducing poverty.

The ZEF data portal contains raw data from the fields of geography, climate science, economics and sociology, in the form of maps, diagrams and presentations. The ZEF data portal is connected to other, external online data banks, so searching for data becomes an easy exercise without users having to start anew every time.

But how can the ZEF data portal be of practical use for non-scientists? Development cooperation projects wanting to improve market access for small-scale farmers can draw on different interactive maps, thus combining data on income distribution, agricultural use and traffic infrastructure. Regions with a high potential for raising incomes through better access to regional markets can thus be identified.

A ZEF data management policy has been developed to protect user and data rights. The ZEF data portal is also used by other institutes of Bonn University.

Visit the data portal at: [data.zef.de](http://data.zef.de).

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## DIFFERENT SOURCES, DIFFERENT INFORMATION? HOW AND WHY GLOBAL GRAIN SUPPLY AND DEMAND ESTIMATES DIFFER

Imagine you have to make an important, far-reaching and difficult decision. How do you make your choice? If you weigh up all the advantages and disadvantages of the possible options, then you are more or less behaving in a way that economists call “rational”. Strictly speaking, this implies that you consider all the information available to calculate the statistical likelihood of possible outcomes and their positive and negative implications. But what if the information you have is imprecise, outdated, or even incorrect? Markets are considered to be “efficient” if all available information is reflected in the prices. But the same problem applies here too: If the information is imperfect, prices may be a poor indicator, even if markets are efficient. Thus, data quality is key.

### Role of global grain supply and demand

For agricultural economists, national and global grain supply and demand estimates are one of the most important sources of data. These estimates include many categories such as production forecasts or assessments of the amounts held in stocks or traded. Different sources provide such estimates, including the US Department of Agriculture (USDA), the Food and Agricultural Organization of the UN (FAO), and the International Grains Council (IGC). These estimates are used for various purposes, including numerous scientific studies. Thus, problems in this data may have serious consequences, including an inefficient allocation of resources and problematic policy decisions.

This ZEF study therefore compares the estimates from the three different sources mentioned above. All data was obtained via the Agricultural Market Information System, a G20 initiative to improve agricultural data as well as policy responses in times of crisis. While a comparison of the data cannot provide a comprehensive picture of the data quality (e.g. all sources could make the same mistake), it can still provide a number of insights, including how and, to a certain extent, why the estimates from different sources vary. The study compares the production, supply, stock, trade, and demand estimates for corn, rice, soybeans, and wheat from 2011 to 2015.

### Why do data differ so much?

Some of the methodological discrepancies between the estimates from the different sources are known. However, most of them are unknown. Thus, different methodological approaches are applied to account for the differences and provide different insights. For example, the research not only compares the levels of the estimates but also how they change over time (first differences). This sheds light on the question of whether the differences persist over time.

It emerges that data on stocks and trade shows much larger differences than data on production or demand. Weak evidence also suggests that the USDA and IGC data might be slightly more up-to-date than the FAO data.

Furthermore, the estimates generally behave very similarly over time. More precisely, all sources make very similar adjustments over time, implying that the estimates do not approximate each other or diverge from one another when they are updated. Instead, they show a comparable evolution. What does this mean? If different sources had different information at their disposal, we would expect that, over time, the information they acquire would become more similar. For example, they could acquire data which had been missing earlier or turn to each other and exchange data to improve estimates. Thus, one would expect the sources to approximate each other over time.

As this is not the case, the discrepancies in the estimates do not seem to be a result of different information or of a different way of processing new information. Instead, they must be the outcome of methodological discrepancies which are maintained over time. Unfortunately, these are not documented. Yet, they should be.



### More transparency needed

If the methods of collecting and aggregating data were made more transparent, better judgements about the quality of the data could be made and trust in the data would increase. Furthermore, it would allow one to choose the specific source which best suits one's own needs. For the three agencies providing the estimates, it would facilitate learning from each other. In addition, it could also help to increase pressure on some countries which remain reluctant to share data, be it due to a lack of collection efforts or because they regard the data as a state secret. Finally, more disaggregated data would draw a clearer picture of the supply and demand situation and would allow researchers to use datasets which are better adjusted to their needs.

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## LAND EROSION ON THE RISE WORLDWIDE

Land degradation is on the rise to a dramatic extent, affecting around 3.2 billion people worldwide. A collaborative study by ZEF and IFPRI revealed that every US dollar invested in saving land and soils today will save us five US dollars in the future.

### Basics about land and soil

Land and soil are the basis of life on Earth. Nevertheless, insufficient effort has been made so far to ensure sustainable land use and the protection of soils. This is the conclusion that a team of around 30 international scientists has drawn from studies conducted in 12 world regions and countries, including India, Argentina, Central Asia, Russia and a large number of African countries. The findings, which are partly based on remote-sensing satellite data, are alarming: Globally, 33 percent of grasslands, 25 percent of croplands and 23 percent of forests have experienced degradation over the past three decades. Around 30 percent of the global land area, home to around 3.2 billion people, is affected by significant soil degradation. The global costs amount to around 300 billion Euros per year. The global assessment concludes:

### Soil: a neglected resource

“Soil is the most neglected natural resource”, states Professor Joachim von Braun, ZEF’s Director and co-editor of the book “Economics of Land Degradation and Improvement – A Global Assessment for Sustainable Development”, which was published by Springer recently. “Yet, investments in land and soil are crucial for food supply, climate and human security”, von Braun adds. According to von Braun: “The international scientists involved in these country case studies basically all come to the same conclusion; namely, that if we invest in rescuing global land and soil now, the cost will be much lower than if we wait longer. This applies both to industrialized and developing countries alike”.

### Land degradation can lead to migration

The high levels of land degradation in croplands and grazing lands in developing countries, especially in sub-Saharan Africa, pose a serious problem too and may lead to increased migration. Often, there is a lack of advisory services and knowledge transfer for farmers, for example with regard to integrated soil fertility management. Poor

access to markets is another obstacle as is weak security of land tenure. The latter means that farmers are not motivated to practice sustainable land use methods.

### Poor people suffer most

The severe degradation of grazing lands is cause for concern. Global meat and dairy consumption are expected to increase by 173 percent and 158 percent, respectively, between 2010 and 2050. Developing countries are likely to see even higher increases in meat and dairy consumption. The impact is more severe in developing countries, where livestock provide food and income to most of the 1.2 billion people living below the poverty line of 1 US dollar per day. This means efforts to address grassland degradation are especially urgent in sub-Saharan Africa because of the key role that livestock plays as a source of wealth, food and nutrition, draft power, and sociocultural services such as payment for dowries.

### Lessons learned from case study countries

Even poor countries can achieve sustainable development through policy and institutional changes that incentivize land users to invest in restoring degraded lands and preventing land degradation. Niger, a success story for addressing land degradation, was one of many case study countries that consistently showed that improved government effectiveness and rule of law make it easier for people to adopt sustainable land management practices.

### A global plan for action needed

Goal 15 of the United Nations' 2030 Agenda for Sustainable Development calls for land degradation to be halted and reversed. Investments to address land degradation could produce significant economic payoffs. Because the global community bears more than half of the cost of land degradation, it is vital that solutions involve local land users, national governments, civil society, and the global community.

### Sources:

- Economics of land degradation and improvement. IFPRI issue brief no. 90. December 2015.
- Press release by Bonn University of February 11, 2016. Launched on the occasion of a ZEF press conference held in Berlin on February 11, 2016. Read more: [bit.ly/ZEFELDPK](http://bit.ly/ZEFELDPK)
- Book (open access): "Economics of Land Degradation and Improvement - A Global Assessment for Sustainable Development", Eds.: Ephraim Nkonya, Alisher Mirzabaev and Joachim von Braun, Springer Publ. 2016. [link.springer.com/book/10.1007/978-3-319-19168-3](http://link.springer.com/book/10.1007/978-3-319-19168-3).

The research on economics of land degradation was financed by the German Ministry for Economic Cooperation and Development (BMZ).

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## COMMUNICATING ABOUT AIR AND WATER POLLUTION IN CHINA



China has been experiencing huge economic growth since 1978. But industrialization has triggered environmental hazards and pollution. Preventing pollution has therefore become an imperative.

Besides applying technocratic practices to control pollution, the government is making increasing use of Information and Communications Technology (ICT) and the digital sphere in order to strengthen interaction with local people who are affected by severe air and water pollution.

Government webpages, mailboxes and online interviews with cadres are becoming increasingly widespread in environmental governance. This research explored the accountability of these digital functions for environmental management in Dongying City in the Yellow River Delta.

### Online surveys

Online interviews are regularly offered by the Dongying Environmental Protection Bureau. They present a forum where the population and government can virtually discuss pollution. The disclosure of pollution data, however, is still far from being transparent despite various virtual channels. The development of ICTs and internet technologies empowers

resource-poor activists in their self-representation, information-brokering and network-building activities. They become more aware and active in contesting environmental pollution, which further helps to construct the green public sphere in China.

### Blame games

When local livelihoods are endangered by constant pollution or hazards such as poisonous gas leakage, people blame local cadres in online fora for not taking sufficient measures to protect their health and income. The cadres, for their part, feel wrongly accused as they provide these communication platforms and believe that the people affected should align with them against industrial polluters.

Jiaxin Tan worked as a junior researcher at ZEF. Irit Eguavoen, a ZEF senior researcher, has advised her doctoral project which was initially part of the Sino-German DELIGHT Project ([delight.eoc.dlr.de](http://delight.eoc.dlr.de)).

The research was funded by the German Federal Ministry for Education and Research (BMBF), Foundation fiat panis and ZEF.



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# Viewpoint

INTERVIEW WITH TILL STELLMACHER, RLC GLOBAL SECRETARIAT COORDINATOR IN BONN

"THE RIGHT LIVELIHOOD CAMPUS BONN HAS BECOME AN ESTEEMED PARTNER IN THE SUSTAINABLE DEVELOPMENT DISCOURSE"

**ZEF has been a Campus of the Right Livelihood College (RLC) since 2011 and has hosted its Global Secretariat since 2014. What do you consider to have been the main achievements during this time?**

It is quite amazing what the RLC Campus in Bonn has achieved during these first few years. A global network has been established based on exchanges with Laureates of the "Alternative Nobel Prize" and ZEF. Our PhD students are working worldwide in cooperation with Laureates. The RLC workshop series at ZEF are well established and are internationally recognized as high-profile education modules for PhD students from the Global South. More than 200 PhD students from 48 countries have participated in our workshops so far. The RLC Campus has become an esteemed partner in the sustainable development discourse locally here in Bonn and is also working with parties outside academia, for example on the international advisory board of the City of Bonn.

**How many PhD students have been involved in the RLC research projects and can you give us two examples of their studies?**

At the moment, we have five PhD students, one each from Malaysia, India, and Columbia and two from Kenya. All of them are working on case studies related to environmental sustainability and social justice. Our PhD student Juliet Wanjiku Kamau, for example, is currently conducting field research in her home country of Kenya, where she is studying aspects of sustainability in organic smallholder agriculture in partnership with Biovision Africa Trust in Nairobi, the organization founded by the "Alternative Nobel Prize" Laureate Hans Herren. Another example are the studies conducted by our PhD student Alejandro Mora Motta from Columbia, who is working on fundamental human needs in the context of large forestry plantations in Los Rios, Chile, together with the Laureate Manfred Max-Neef and our colleagues from the RLC Campus at the University of Valdivia, Chile.

**What have been the main activities and highlights of the RLC Campus Bonn?**

Our work is clustered into the areas of education, research and network activities, which are efficiently combined. Highlights are certainly our PhD students' one-year periods of empirical field research. The main highlights here in Bonn are our large-scale international workshops in which Laureates, PhD students and other scientists and practitioners work together on a particular topic on a transdisciplinary basis for a week. The workshops combine public speeches and panel discussions – at ZEF or other venues such as the Old City Hall or the University Club – with internal working groups and thematic sessions.

A real highlight for us was the workshop with Amy Goodman, US journalist, author and "Alternative Nobel Prize" Laureate, who visited ZEF in June 2014. PhD students from the Middle East and Africa, who are conducting research on the nexus between development and media in their home countries, teamed up in working groups with Ms. Goodman and other experts, public speeches were given at ZEF and parts of the workshop were held at and integrated into the Global Media Forum, in cooperation with the Deutsche Welle in Bonn. I would also like to mention the workshops with impressive Laureates like Sima Samar from Afghanistan and Nnimmo Bassey from Nigeria as well as visits by distinguished German authorities such as Ernst Ulrich von Weizsäcker. By the way, videos of all major RLC events are available on ZEF's Youtube channel.

**Why is it important for ZEF to partner the activities of the "Alternative Nobel Prize" Laureates and the other Right Livelihood College Campuses around the world?**

Over the past few years, 38 Laureates of the "Alternative Nobel Prize" paid a visit to ZEF. Each of them leads or represents development-oriented organizations and networks from around the globe. Most Laureates, however, have never previously been to Bonn – or have not known ZEF. As the Swedish Parliament honors new Laureates every year,



RLC team and students at the RLC campus in Bonn. From left to right: Till Stellmacher, Wagma Bromand, Alejandro Mora Motta, Divya Swaminathan, Wan Teng Lai, Tiemo Pokraka and Willis Okumu.



# Facts & news

this is a dynamic and growing 'resource'. In addition, the RLC Global Secretariat at ZEF coordinates the RLC activities of development research institutes at seven universities worldwide, such as at the Tata Institute of Social Sciences in Mumbai, Addis Ababa University, or the Lund University Centre for Sustainability Studies. This all strengthens ZEF's international position as an inter- and transdisciplinary development research and education hub.

## The Campus and the Secretariat are funded by the DAAD and the Robert Bosch Foundation. Why is the RLC relevant to them?

The RLC's activities correspond to the goals and tasks of our funding agencies. All our education and research work is based on North-South and South-South dialogue and transdisciplinary cooperation between students, Laureates, scientists and civil society actors – based on the leitmotiv of 'change by exchange'. This enhances the qualifications of PhD students from the Global South in particular, enabling them to become responsible decision-makers, multipliers and change agents in the future.

## Do you still have contacts with PhD students who have participated in your workshops?

Yes, certainly. The RLC workshop alumni network is striving to become a global pool of development and sustainability experts. Alumni make great use of our RLC blog ([www.rlc-blog.org](http://www.rlc-blog.org)). Many gain remarkable positions after receiving their PhDs. Take, for example, Abdallah Possi from Tanzania, who participated in a RLC workshop on the rights of marginalized people in 2014, presenting his PhD research on the rights of people with albinism in Tanzania. As an albino himself, he was appointed Deputy State Minister for the rights of people with physical disabilities in Tanzania just one year later.

## Imprint

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## ZEF-IPADS international collaboration is strengthened by people's participation and cooperation

Six ZEF students have been visiting the International Program in Agricultural Development Studies (IPADS) at the University of Tokyo from March 11-20, 2016, for joint lectures, field training and exchange. Read more: [bit.ly/IPADS-2016](http://bit.ly/IPADS-2016)



## Georg Forster Awardee Professor Soares-Filho now guest professor at ZEF

Professor Britaldo Silveira Soares Filho from the Federal University of Minas Gerais in Belo Horizonte, Brazil, guest professor at ZEF, was one of eight awardees who received the Georg Forster Award from the Alexander von Humboldt-Foundation in Bamberg on March 18, 2016. Read more: [bit.ly/filho-ZEF](http://bit.ly/filho-ZEF)



## African network of DAAD excellence centers meets

Thirty-two representatives from the eight DAAD-sponsored Centres of Excellence in Africa gathered for the seventh DAAD Network Meeting in Accra from March 3-5, 2016. It was hosted by the Ghanaian-German Centre for Development Studies, which is run by ZEF in collaboration with the Institute of Statistical, Social and Economic Research (ISSER) at the University of Ghana. Read more: [bit.ly/GGCDs2016](http://bit.ly/GGCDs2016)

## Best Paper Award for ZEF researcher Oliver Kirui at the Indo-German Conference on Sustainability

ZEF's work on the Economics of Land Degradation was recognized with another award during the Indo-German Conference on Sustainability held at the India Institute of Technology, Madras, on February 27 and 28, 2016. Read more: [bit.ly/Kirui](http://bit.ly/Kirui)

## ZEF again in top positions among international Think Tanks

In the latest ranking of the University of Pennsylvania's "Global GO TO Think Tank Index Report 2015" ZEF is placed in excellent positions again. Read more: [bit.ly/ZEFranks16](http://bit.ly/ZEFranks16)

## PAUWES visits ZEF

A second course for students from the Pan African University Institute of Water and Energy Sciences (PAUWES) based in Tlemcen, Algeria, took place in Bonn and Cologne. Twenty-two students from eight African countries participated in the Spring School held at ZEF from March 27-April 1, 2016. See: [bit.ly/PAUWES16](http://bit.ly/PAUWES16)

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## BANDUNG. A TALE OF A CREATIVE INDONESIAN CITY



High-school students participating in Ulin Sasab, a game held in the creative city quarter Linggawastu in May 2015. Participants have to fulfill tasks, answer some riddles and upload their results to instagram for the jury.

People are at the center of development. Their ideas, knowledge and creativity are the drivers of development transformation. Furthermore, they replace natural resources and market access as a means to survive modern complex problems in this urbanizing world. As a result, more and more cities around the world are taking the “creative city-making” approach, although definitions of this approach by scholars and development agencies differ. The research here focuses on Bandung, Indonesia, as an illustration of an alternative development pathway and in order to challenge the idea that there is linearity in development transformation in urban development.

### **Bandung as a creative city**

Bandung currently has around 2.6 million inhabitants, 70 percent of them are young people. Bandung was appointed the first creative city in Indonesia by the British Council in 2007. In 2015, Bandung city took up the concept and consequently joined the UNICEF Creative City Network as a design city. Bandung is a place where hundreds of communities actively organize periodic knowledge-sharing events, initiated by young people. The events allow practitioners and academicians to share their expertise in public lectures and affordable workshops with regard to various urban challenges, such as waste management, public transport, health issues, urban settlement, and the need to express oneself as part of cultural identity construction. Bandung’s knowledge communities and the use of the creative city concept shape knowledge construction within the city and facilitate people’s right to continuously re-create themselves by shaping their city’s development.

### **Creative cities and knowledge communities**

My study investigates the interplay between the creative city concept and knowledge communities in urban devel-

opment in Bandung. I try to unravel the power-dynamics, motives, directions, and patterns of interaction among the knowledge communities and the creative city concept, especially in the constructions of day-to-day reality and the knowledge related to urban development in Bandung. This is in order to avoid understanding urban development as an a-political phenomenon. I therefore conducted interviews with different stakeholders in Bandung, participated in knowledge community activities, attended related events, compiled related government and institutional reports, and also collected written interactions on social media.

### **Preliminary findings**

There are four different but interrelated ideas about Bandung’s creative city concept: it functions as an economic driver; it is a city brand; it both constructs and disrupts social identity; it both limits and encourages forms of aesthetic expression; and it raises questions about the definition of creativity itself. Different knowledge communities work with or even against each idea. The term creative city seems to serve as a temporary panacea for various urban problems in Bandung, even when different proponents of each interpretation challenge one another on their contributions to city development.

### **About the author**

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## DOCTORAL FIELD RESEARCH @ ZEF: INTERVIEW WITH NICHOLAS MORET ABOUT RESEARCH IN BURKINA FASO CONDUCTING FIELD RESEARCH IN THE MIDST OF POLITICAL TURMOIL

### Can you explain the research you conducted in Burkina Faso?

I'm studying how biodiversity is impacted by climate change in West Africa. Biodiversity loss can potentially impact, reduce or transform most ecosystem services and functions. I try to elaborate models able to foresee the consequences of changing climatic conditions on biodiversity and on some related ecosystem functions. In my field experiment, I am studying a specific ecosystem function: the regulation of the microclimate by the vegetation, or in other words, the extent to which plants have an impact on the local climate. A shift of the plant communities in the ecosystems may alter the local microclimate regulation, in a sort of local retroactive feedback. I have set up a network of measuring instruments in different types of savanna ecosystems to gather data on the fluctuation of the microclimate. Together with botanists from WASCAL, I also characterized the diversity of plants present on my experimental plots.

### Climate change is not new and we know that it is impacting local and poor people most. Can you already make some assessment along these lines?

The first noticeable effect is probably the pressure on the land that one can feel just by wandering around the countryside. Even though the population density is not so high, it is quite spread out, and you easily get the impression that people are marking the landscape and impacting ecosystems everywhere. A second observation that stroke me was the awareness of people about the changes they see and how they relate them to climate change, based on the information they receive from the media. You might think that farmers in the most remote places in Africa would not be aware of the latest scientific knowledge on climate change. But actually, I found out that this is quite wrong. The farmers I met get a lot of information and they are really interested in new findings. Their interest is for sure a source of motivation for a young scientist and their expectations of results raises the bar for making sound science. It also calls for giving them a proper feedback on our results.

### You stayed in Burkina Faso when there was political turmoil and even a coup d'état in 2014. Can you tell us something about your experiences?

I was there in October/November 2014, which was an important historical moment for Burkina Faso. The former President Blaise Compaoré was pressed to step down by the people who organized massive street demonstrations. Witnessing this was a very interesting experience, I had the feeling of seeing history unfold. I think we were lucky that

Burkina Faso is basically a peaceful country and that there are no underlying ethnical conflicts. I was in Ouagadougou a few days before he stepped down. Riots occurred in the city center, but the situation did not escalate. The people's enthusiasm was high because Blaise Compaoré had been in power for 27 years and most of the persons I knew had never lived under any other president. So it was a very important moment for them, and you could sense that, you could feel it in the streets. You could hear people talking at the tables of the "maquis" (local bars), in the street restaurants, or on the markets. Suddenly everybody was discussing politics. It was a fascinating atmosphere. Through these weeks of excitement and tension, the status of emergency was declared, prohibiting us from leaving the country and making us stop conducting our research work momentarily. That was perhaps the most annoying part.

### What advantages do you take from conducting your doctoral research in the context of a large project such as WASCAL? (funded by BMBF).

I was enthusiastic to join a large-scale program like WASCAL. It gives you the possibility to interact with a wide array of experts from different disciplines. Being a scientist in such a structure can give momentum to your work, which added to that of fellow colleagues, contribute in establishing meaningful results. The second aspect I appreciate about WASCAL is the infrastructure we have for conducting research in West Africa. It is really a great help to have facilities, transportation and reliable field assistants when you go for the first time in an unknown region.

### What was your most impressive moment in the year of your field research?

Going to the field sites located in remote places. Some of my study areas are deep into the forest or the savanna and take hours driving, riding motorcycle and walking to reach. We had some adventurous moments like running away from elephants, riding through bushfire that encircled us or playing hide and seek with gold smugglers and outlaw hunters! The second thing that really impressed me was the reliability of our assistant workers in the field. They have done an awesome job supporting us. They were always reliable, and I am still depending on them for the maintenance and monitoring of my instruments. They are largely responsible for the good quality of the data I collected in the field.

The interview was conducted by Alma van der Veen

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