



## Editorial

Since the end of the cold war, the development policy debate has undergone a remarkable transformation. Whereas before, the political and legal environment of a developing country has been scarcely taken into consideration, today human rights, good governance, the rule of law and democracy, peaceful conflict settlement etc. have become central elements of development strategies, even if much of this remains on the level of rhetoric and of declarations of intent.

A similar reorientation has taken place in the field of research, both academic and applied. Until a decade ago, political and legal institutions were mostly considered exogenous variables of no central importance to explaining "underdevelopment" and development. Today, institutional regulations are placed in the very center of analysis and a consensus has emerged that legal security, transparency and good governance play a crucial role for successful development. Within this changed intellectual climate, the dynamics of political conflicts and their institutional regulations are now frequently discussed within a development context.

ZEF has recently developed its own branch of activities in this growing area of conflict and development. Against this background ZEF organized an international conference from 14-16 December which was dedicated to the most widespread type of conflict since the end of the cold war: ethnic conflicts. The results of this conference, soon to be published, will hopefully contribute to a shift in the focus of development studies and to a deeper understanding of the political and institutional obstacles which have to be overcome.

Prof. Aridfeas Wimmer  
Director at ZEF

## Too much or too little water in the Mekong?

Claudia Ringler

Last fall a large-scale inundation in the lower Mekong basin took more than 600 lives, and caused substantial material damage. The annual flooding season is only one of the many faces of the mighty Mekong, which dominates the landscape of mainland South East Asia with a total length of 4,200 km.



*Every year, rising water levels threaten the homes along the banks of the Mekong River*  
Photo: ZEF

Whereas water resources are more than adequate during the wet season, there are regional water shortages during the dry season, when only one to two percent of the annual flow reaches the Mekong Delta. In addition, the Mekong water resources are shared by six countries – Yunnan Province of China, Myanmar, Thailand, Lao PDR, Cambodia, and Vietnam – and are distributed among a series of different and sometimes competing water uses, including irrigated agriculture, household and industrial water uses, hydropower, fisheries, and wetlands. Recent rapid agricultural and economic development in the basin has led to increasing competition among the riparian countries for the development and use of Mekong waters. This development calls for a structured approach to the management

of the basin, including efficient, equitable, and environmentally sustainable water allocation mechanisms that support the development in the region. Institutional mechanisms for Mekong cooperation among the riparians in the lower basin have been in place since 1957, and were revived in 1995. However, comprehensive water allocation mechanisms for the (lower) basin have not been developed to date.

### Competitive Water Use

A research project by ZEF in cooperation with the International Food Policy Research Institute (IFPRI) in Washington D.C. and the Mekong River Commission Secretariat in Phnom Penh, Cambodia, examined the temporal and spatial distribution of water supply and demand as well as the tradeoffs and complementarities among the various water-using sectors and riparian countries in the Mekong basin.

For the analysis, an aggregate economic-hydrological model for the entire Mekong basin was developed. The objective of this optimization model was to determine the optimal economic use(s) of Mekong waters on the scale of the entire river basin. The model describes the water supply situation along the river system and the water demands by the various water-using sectors. Water benefit functions were developed for irrigation and domestic industrial water uses, for hydropower, wetlands, and for fish production. Water supply and demand are then balanced based on the economic objective of maximizing net benefits of water use. Results from the model indicate that although competition for Mekong water still appears to be very low, there are substantial tradeoffs between in-

stream and off-stream water uses, such as between irrigated agriculture and the fishery sector, for example. A simulation of alternative prices for irrigation water shows that the profit margin in irrigated agriculture in the Mekong river basin is very low. Even at very low water prices, profits from irrigation are wiped out. Improvement of the field application and overall water use efficiency, which allows irrigation of a greater area using the same amount of water, not only improves water productivity in agriculture, but can also in-



Cambodian woman in front of her flooded rice field Photo: ZEF

crease the returns from fisheries and hydropower. Furthermore, an analysis of alternative water allocation mechanisms shows that to achieve both equitable and optimal benefits from water use across countries and sectors, the optimal strategy would be to strive for the largest basin water use benefits and then to redistribute these benefits instead of the water resource.

The development of such an in-

tegrated framework of analysis is a critical first step to overcome some of the obstacles to effective management and cooperation in the Mekong River Basin. It can also facilitate the upcoming negotiations on water allocation rules and thus contribute to the reasonable and equitable utilization of the Mekong River waters, as envisioned in the 1995 Mekong Agreement.

To conclude, the Mekong is a river with sufficient water resources. However, these resources need to be managed in a cooperative manner, in order to achieve an equitable, efficient, and sustainable allocation of water resources among the riparian countries; and to better manage extreme events, such as the early and large-scale flooding in the fall of 2000.



*Claudia Ringler is research fellow at ZEF and is currently outposted in Vietnam with IFPRI.*

## Democracy, Rule of Law and Governance - A New Approach

Indra de Soysa, Anja Schoeller-Schletter, Annette van Edig

Today it is widely recognized that "good governance" matters in achieving sustainable development. However, both "good governance" and "development" provide for multiple interpretations.

The terms 'governance' and 'development' are both charged with meaning, the former sometimes being viewed in the narrowest sense of the regulation of economic life and at other times in a broadest sense as mechanisms that channel interactions between the state, market, and society. Similarly, the concept of development, thought of widely as measurable growth of wealth, has expanded to broader, more subjective criteria, such as 'development as freedom', meaning the expansion of people's choices for achieving improvements in life, within the political, economic, and social spheres. Such conceptual transformation poses considerable challenges for social scientists and policy, since the meaning of *good governance* will have to be evaluated on the basis not only of one set of outcomes but also on how these outcomes reflect choice, the processes behind who decides and the tradeoffs between alternative choices.

A research team at ZEF will approach the multifaceted problems from several disciplinary angles with the aim of shedding greater light on state-market-society interactions and their concomitants. This group will forge research paths that interconnect with the other research teams within its own department and build bridges to the other departments within ZEF. It will collaborate closely with ZEF's Uzbekistan and GLOWA projects on land and water management, grounding academic research firmly in the policy realm. The following broad thematic areas that cut across the disciplinary boundaries have been chosen preliminarily to pursue sharply focused research questions addressing the problem of governance and development.

### Institutions and Governance

The highly divergent paths of development experienced by the developing countries have focused attention on institutions as a key variable in determining political and economic performance. Institutions provide the rules of the game, they constrain unmitigated power, and provide safeguards for life, liberty, and property. The design, organization and procedures of institutions are relevant for the scope and effectiveness of the provision of public goods. Human and so-

## Governance, Decentralization and Reform in China, India and Russia

What are the distinguishing features of „good governance“ and what are the factors which promote its efficient formation? These and other questions are the central topics of discussion in the recently published book „Governance, Decentralization and Reform in China, India and Russia“. The book, edited by Jean-Jacques Dethier, Weltbank and guest researcher of ZEF, is based on an international conference organized by ZEF. Renowned international economists, political scientists as well as legal specialists illustrate how powerful élites, corruption within the government and inoperative legal systems have greatly complicated the political and economic reforms in China, India and Russia. However, in all three countries, astonishing reform progress has been recorded; decentralization as well as political and legal reforms are deciding factors in the effective functioning of their market economies. Although it needs to be thoroughly examined "how much decentralization" they can endure, as size also represents an obstacle in the reform process.

*Jean-Jacques Dethier (ed.): Governance, Decentralization and Reform in China, India and Russia. Kluwer Academic Publishers, Dordrecht/Boston/London, 2000, ISBN 0-7923-7909-8.*

cial capital can accumulate to strengthen the social bases of governance, leading to virtuous cycles of social and political development.

There is, however, very little understanding of democracy's role within these processes, a serious lacuna given the importance of 'freedom' and the emphasis on the rule of law, human rights, participation, and transparency as preconditions for development. Much scholarship on democracy and governance does little to dissect the many aspects, both normative and substantial, of varying democratic processes and institutional arrangements. Since 'democracy', as one arrangement of 'governance,' is treated as a single, all-encompassing entity, there has been little substantive meaning beyond the existence of civil and political freedom. Social, cultural and historical aspects of democratization and development are being explored, building on recent work that has already begun to yield important insights.

### Rule of Law and Governance

One crucial aspect of state-society-market interaction is the issue of the 'rule of law.' In particular, public law directly impacts on the way state-market-society relations function. Even when some constitutions mirror the best designed institutions, many decision-making processes display negative features, such as nepotism, inefficiency, arbitrariness, lack of transparency and accountability. Many of these problems may be attributable to either the normative system, or the realities of implementation. What appears as distorted decisions may be driven by structural – legal or political – deficits. How can public law respond to the task of minimizing the susceptibility for "corrupted" decisions in the sense of lacking democratic legitimacy? What institutional and regulatory reforms are needed to discipline the most influential factors or to curb powerful entrenched interests? In what ways and to what degree do the legal and political traditions impact on the implementation and institutionalization of public laws? These questions, directly linked to the realization of *good governance*, will also yield results on how to foster legitimate, balanced, stable and effective government.

### Natural Resources

Recently, research in economics and political science has begun to uncover patterns of state and market formation based on the natural capital endowment. Some argue that the natural endowment tends to distort state-building processes, leading to practices characterized as shadow-state activi-

## New Publications from ZEF

### ZEF Discussion Papers on Development Policy

No. 32 - Admassie, A.: The Incidence of Child Labour in Africa with Empirical Evidence from Rural Ethiopia. Bonn, 2000.

No. 33 - Katal, J.C., Vlek, P.L.G.: Desertification - Concept, Causes and Amelioration. Bonn, 2000.

No. 34 - Stark, O.: On a Variation in the Economic Performance of Migrants by their Home Country's Wage. Bonn, 2000.

### ZEF - Books

Qaim, M., Krattinger, A., von Braun, J.: Agricultural Biotechnology in Developing Countries: Towards Optimizing the Benefits for the Poor. Kluwer Academic Publishers, Boston/Dordrecht, 2000. 455 pp. ISBN 0-7923-7230-1

### Articles (Selection)

Bertolini, R., Sakyi-Dawson, O., Anyimadu, A., Asem, P.: Telecommunication Services in Ghana - A Sector Overview and Case Studies from the Southern Volta Region. In: Brüne, Stefan (ed.): Neue Medien und Öffentlichkeiten - Politik und Telekommunikation in Afrika, Asien und Lateinamerika, Vol. 2 (Schriften des Deutschen Übersee-Instituts, Vol. 47), Hamburg 2000, pp.166-186.

Evers, H.-D., Korff, R.: Southeast Asian Urbanism, the Meaning and Power of Urban Space. Hamburg and London: LIT, New York: St. Martin's Press 2000, pp. 268.

Evers, H.-D.: Globalization, Local Knowledge, and the Growth of Ignorance: The Epistemic Construction of Reality. In: Southeast Asian Journal of Social Science 28,1 (2000), pp. 13-22.

Grote, U., Deblitz, C., Stegmann, S.: Environmental Standards in the Agricultural Sector in Brazil, Germany and Indonesia: The Impact on International Competitiveness, In: Quarterly Journal of International Agriculture, No. 3, 2000.

Jütting, J.: Social Security Systems in Low Income Countries: Concepts, Constraints, and the Need for Cooperation. In: International Social Security Review, Vol. 4 (2000), Vol. 53, No. 4, pp. 3-25.

Kirchhoff, S.: Green Business and Blue Angels: A Model of Voluntary Overcompliance with Asymmetric Information. In: Environmental and Resource Economics 15, 4 (2000), pp. 403-20.

Lange Ness, R.L., Vlek, P.L.G.: Mechanism of Calcium and Phosphate Release from Hydroxy-Apatite by Mycorrhizal Hyphae. In: Soil Science Society of America Journal, Vol. 64, No. 3 May-June 2000.

Park, S.J., Burt, T.P.: Areal Differentiation of Weathering Intensity Identified by the Spatial Distribution of Soil Types and Clay Mineralogy, Zeitschrift für Geomorphologie, Vol. 44 (2000), pp. 379-402.

Riede, K.: Conservation and Modern Information Technologies: The Global Register of Migratory Species (GROMS). Journal of International Wildlife Law and Policy 3(2) 2000, pp.152-165.

ties (economic activity unregulated by formal state institutions), interlocking public and private, formal and informal, economic and political activity in webs of corruption. The natural resource endowment is frequently blamed for patterns of public good provision, taxation, and distribution of rent. The research team will cooperate intimately with the other departments and the projects on teasing out the problems and prospects of resource-based development, especially pertaining to the use and management of water. Models of mechanisms

that allow "good governance of water resources" are being worked on. The research will try to identify the political, economic and social constraints of such a natural resource policy, its role in national and international politics and economics including its potential for conflicts.



*The authors are research fellows at ZEF, Department „Political and Cultural Change“.*

# East African SMEs in the Process of Globalization

Francis Matambalya und Susanna Wolf

Small and medium scale enterprises (SMEs) contribute significantly to the economies of developing countries. Especially in poor countries like Kenya, Uganda and Tanzania, they employ a big share of the workforce as they produce rather labor intensive in contrast to the more capital intensive production in many larger enterprises. Support for SMEs plays an increasing role in the private sector development programs of international donors such as the EU under the Cotonou Agreement.

A question that arises in this context is whether SME production is efficient. Their operations are often restricted by limited access to capital, inadequate infrastructure

and are subjected to bureaucratic red tape even more so than large enterprises. Another question is whether SMEs are able to cope with the challenges of globalization and the spread of new technologies such as information and communication technologies (ICT), for example, mobile phones and computers. On the one hand globalization will increase competition, but on the other hand there may be a chance for SMEs to enter new markets through direct connections to customers in industrialized countries and through lower transaction costs because of improved information.

To analyze these issues, ZEF conducted a survey of East African SMEs in collaboration with four East African Universities (Dar es Salaam in Tanzania, Kenyatta and Maseno in Kenya and Makerere in Uganda). The research project is co-funded by the Alexander von Humboldt Foundation. Within the study, data from 450 enterprises from the textiles, food processing and tourism sector in Kenya, Uganda and

Tanzania were obtained. Results for Tanzania show for example that the level of education plays a significant role in the performance of SMEs. Investment in ICT is also positively correlated with the export performance of enterprises. However, for increasing the competitiveness through the use of ICT there are certain preconditions. Firstly, an adequate provision of public infrastructure such as electricity and transport is necessary, and secondly, the use of ICT is facilitated by existing strong regional diffusion of ICT. As ICT has strong external effects, its usefulness increases with its spread to potential suppliers, partners and customers. Further results show that a certain critical size of an enterprise is required to benefit from investments in ICTs.



*Dr. Francis Matambalya is guest researcher at ZEF and scholarship holder of the Alexander von Humboldt Foundation. Dr. Susanna Wolf is research fellow at ZEF.*

## Doctoral Studies Program

„Probably the worlds' largest group of doctoral students...“ said Oded Stark, Professor at the University of Oslo and guest lecturer within ZEF's International Doctoral Studies Program for Development Research, when welcoming the students of the new program year. 33 doctoral students from 20 countries participated in the first, interdisciplinary course of the three year program in October. The course covered various important areas of development research including environmental issues, societal organizations and economic growth, globalization, democracy and good governance, technological change, sustainability, collective action and human

behavior, legal aspects, knowledge and human capital formation. Interdisciplinary training is crucial in addressing the complex and interlinked problems of global change

and development. Therefore not only the participants but also the guest lecturers from all over the world represent various disciplines and experiences. Besides the course, the participants had the opportunity

to take part in ZEF's Global Dialogue on the "Role of the Village in the 21st Century", which was organized by ZEF during EXPO2000 in Hanover. Around 300 representatives from villages and cities, science, politics and business from all over the world met to discuss both the difficulties and prospects of life in rural areas. "It was a lifetime chance to attend this event" concluded some of the doctoral students.

Less than two years after its launching, the International Doctoral Program at ZEF is already widely recognized internationally. During the last year, more than 600 interested people contacted ZEF for information on the program. Thanks to the

financial support of DAAD, KAAD, the Robert Bosch Foundation, and BMZ, ZEF is able to offer attractive teaching and research conditions. The deadline for submission of applications for the program commencing August 2002 is 30 September 2001. For further information, contact Dr. Günther Manske, [docp.zef@uni-bonn.de](mailto:docp.zef@uni-bonn.de), or alternatively, visit ZEF's homepage: <http://www.zef.de>.



ZEF Doctoral Students at Expo

Photo: ZEF

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## European Hub of GDN at ZEF

ZEF has become home of the European hub of the Global Development Network (GDN), an initiative of the World Bank, which was officially founded in Bonn in December 1999. The State Government of North Rhine-Westphalia has financially supported the establishment of a secretariat at ZEF. GDN is an amalgamation of research institutes from all over the world which address sustainable development issues. The network's objective is to strengthen the research capacity of developing countries by way of exchange of information, support of global research projects, or the granting of stipends and research awards. The worldwide initiative is supported through regional network centers. In addition to those already existing in developing and transforming economies, further hubs are now established in Europe, Japan and North America. The primary function of the European hub (European Development Research Network (EUDN)) at ZEF is to promote not only cooperation between researchers from Europe and developing countries but also between development researchers throughout Europe. A further objective is to make the results of research projects more easily available to political decision makers. EUDN Management includes Jan Willem Gunning (Chair), Arne Bigsten, Francois Bourignon, Jean-Philippe Platteau (Vice-Chairs), and Ulrike Grote (Secretary Treasurer). Further information is available at [http://www.zef.de/zef\\_englisch/f\\_gdn.htm](http://www.zef.de/zef_englisch/f_gdn.htm).



## facts and news

On 11 October 2000, Matin Qaim, research fellow at ZEF, was conferred the "Josef G. Knoll Wissenschaftspreis" for his thesis on the impacts of biotechnology on agriculture in developing countries. The prize awarded every two years by the Eiselen-Foundation (Ulm) is conferred upon up-and-coming scientists who intensely research into the possibilities of combating hunger. Furthermore, Matin Qaim has become the first agricultural scientist to be accepted in the Emmy Noether Program of the German Research Society Bonn (DFG) and for the next two years will be based at the University of California in Berkeley, U.S.A.

Maximo Torero, Universidad del Pacifico, Peru, has been awarded a Georg Forster stipend from the Alexander von Humboldt Foundation. As guest researcher of

ZEF, he will be devoted to the research project "The Role of Information and Communication Technologies in the Development of Rural Peru". Furthermore, on 13 December at the Global Development Network Conference in Tokyo, Maximo Torero was conferred an Award for Outstanding Research on Development, for his noted achievements in this field.

On 26 October 2000 Katinka Weinberger, former research fellow at ZEF, won the "Entwicklungsländerpreis" awarded by the University of Giessen for her thesis on the participation of women in Chad and Pakistan. She is currently working at the Asian Vegetable Research and Development Center, Taiwan.

Oded Stark, Professor at the University of Oslo and senior fellow at ZEF, has been awarded the re-

nowned „Alexander von Humboldt Research Award“ in recognition of his economic related achievements in the field of migration research.

On 4 December 2000, for the second time at ZEF, the German Committee of the United Nations Development Fund for Women (UNIFEM) awarded its prize for sustainable women's self help



projects. First prize was awarded to Xochilt Acalt, a women's center in Nicaragua while second

prize was shared by CELUCT, a self help organization from Zimbabwe, and Tadbirkor Ayol, Association of Business Women in Uzbekistan. The awards were conferred by Heidemarie Wiczorek-Zeul, Minister for Economic Co-operation and Development.

In September 2000, Thomas Berger, ZEF research fellow, was awarded the 'GIL-Prize 2000' by the "Gesellschaft für Informatik in der Land-, Forst- und Ernährungswirtschaft" (GIL) in München-Weihenstephan. He received the prize for his dissertation on multi-agent systems and their application potential in the assessment of technical change, use of resources and political options in the area of agriculture.

# Rice Farmers Profit from *Azolla* in the Application of Urea

Madiama Cisse und Paul L.G. Vlek

The water fern *Azolla* with its ability to provide nitrogen has been utilized in wetland rice cultivation in South East Asia for millennia. Today *Azolla* has been largely displaced by chemical fertilizers. A current project at ZEF explores the potential of the simultaneous application of *Azolla* and fertilizers.

Wetland rice dominates rice cultivation in Asia where 90 % of the world production takes place. The annual global consumption of nitrogen (N) fertilizer in rice has surpassed 10 million tons, more than 90 % of which is urea. Over 30% of the urea-N is commonly lost as ammonia within weeks of urea application; a high financial burden for rice farmers.

The water fern *Azolla*, often praised for its ability to provide nitrogen to the system when grown with rice, has helped sustain rice yields in large parts of China and South

East Asia over millennia. The project at ZEF explores the possible benefits in the application of fertilizers and *Azolla* simultaneously. A recently completed study analyzes the interaction between these two inputs.

### The Role of *Azolla*

Detailed greenhouse studies reveal that intercropping *Azolla* with rice prevents the floodwater-pH from increasing to values where ammonia can escape (pH > 8). But also, *Azolla* is a competitor with rice for applied N, absorbing two-thirds of it during the first two weeks following fertilization. The use of <sup>15</sup>N tracer allowed researchers to establish that up to 44 % of this *Azolla* N is re-mineralized and taken up by the standing rice crop. This process also impedes the elimination of the applied N from the system in the form of NH<sub>3</sub> volatilization. As a result, the recovery of urea-N in rice at maturity was 60 % in the presence of *Azolla* and only 40 % without *Azolla* cover. Loss of N was 50 % without and only half of that with *Azolla* cover. This improved efficiency would

save the farmers 40 kg N per ha or at least US \$ 20 each season (dependent upon the urea farm-gate price). For the Asian economies, benefits are estimated to total some US \$ 500 million. There were further gains recorded from the input of N through the biological fixation of atmospheric N by *Azolla*. These were estimated to amount to at least 40 kg N per ha, which may benefit the standing or the following crop.

### Increase in Grain Yield

These benefits will fully convince farmers to adopt this technology only if they also translate into yield. The *Azolla* cover significantly increased the rice grain yield from 2.7 t per ha without *Azolla* to 6.2 t per ha with high rates of urea application (120 kg N per ha). At lower N rates (two and a third), the profits were 80 % and 70 % higher when compared with the application of urea alone. In another experiment the yield increase even reached 125 %. The higher yields were mainly due to the additive effect of the applied urea-N coupled with the BNF of the water fern, which contributed to better rice-N nutrition, this being especially evident under favorable weather conditions.

Synergy effects of combining urea and *Azolla* translate into savings in fertilizer use and an added boost to rice yield. A field program is currently underway in the Philippines that up until now seems to confirm the findings of this study.

Madiama Cisse is junior scientist, and Paul Vlek director at ZEF.

# Human Rights and Development

Chris Jones-Pauly

On 9 and 10 November 2000 ZEF organized a human rights workshop at Bonn. One focal point of discussion addressed the weaknesses in both the monitoring and enforcement of human rights.

nor governmental development policy, the position was that human rights should serve as a general framework. It was acknowledged, though, that political and economic interests have to be taken into consideration, thus detracting from the priority of human rights. To quote one chair person: "No one is afraid of human rights. They are just dead scared of them." In the second session "Human rights or growth as the aim

The discussion on codes of conduct (CoC) raised problems of inefficient monitoring due to a lack of documentation, the absence of CoC in agricultural sectors dominated by women workers, and deficient uniformity in human rights standards. Although the NGOs generally push donors and business towards new frontiers, they themselves are confronted with the permanent challenge of having to substantiate their own representativeness.

The discussion on enforcement also recognized with regret the non-compliance to date of the WTO human rights clause as well as a lack of early resort by NGOs to the World Bank's complaints procedure. It was asked, how human rights litigation affects investment in developing countries,

a concern being that without litigation, investment in developing countries would undermine the rule of law.

With regard to future policy, the conference organizer urged to re-evaluate the current sanction system which enables donors to judge in their own causes, an act which can be considered a violation of a fundamental principle of the rule of law. A new international system was recommended to ensure independent determination of human rights violations by recipients or donors and of remedies other than sanctions.



*Dr. Chris Jones-Pauly is senior fellow at ZEF.*



*Human rights debate at ZEF*

*Photo: Rühmekorf*

Under the title "Putting Human Rights First-Rethinking Development and Trade Policies" ZEF invited about 100 experts from all over the world. Representatives from multilateral organizations (High Commissioner for Human Rights, World Bank, Islamic Development Bank, ILO, WTO, UN-NGLS), governments (Caribbean and European), business (BDI), international NGOs, litigators suing multinational corporations for human rights abuses, and academic economists, lawyers, sociologists, political scientists, and financial systems analysts from Africa, Europe and the USA followed the invitation.

In the opening discussion on "Setting Goals of Aid and Trade: Who is Afraid of Human Rights?", human rights and trade were said not to be compatible. As for do-

of development and trade", the consensus was formed among participants that human rights and growth have to be coordinated. These positions inspired the question, however, of who takes responsibility for preventing human rights from being overrun by market interests – donors, NGOs, business or lawyers?

The donors were challenged about using double standards. In their own countries, all domestic programs have to be constitutionally compatible, yet not all development programs strictly comply with international human rights conventions. Business presented a similar dilemma. Some fear the OECD guidelines for investment in developing countries; others being disposed to employing "business diplomacy" to steer the human rights agenda.

## Viewpoints

### Holding Multinational Corporations Accountable for Human Rights Abuses: Old Law, New Developments

- State actors have long been held liable for human rights violations within their own countries. Human rights have increasingly gained importance in the last decades as
- has their influence on international relations. In the course of these developments, liability is also being extended.

- State actors from industrialized countries can be held liable for extraterritorial human rights violations in developing countries. Non-state actors from industrialized

countries who for example invest in developing countries can now also be held liable under the public or regulatory law in the country of investment or the country of origin for violation of human rights in the pursuit of commercial activity.

The Center for Constitutional Rights in New York is in the forefront of these new developments in human rights that have far-reaching implications for the integration of human rights in development.

Jennifer Green, staff attorney at the Center for Constitutional Rights in New York, is involved with numerous lawsuits against multinational corporations allegedly responsible for human rights abuses occurring in developing countries.

Hilde Hey, research fellow at ZEF spoke to her during the workshop 'Putting Human Rights First? Rethinking Development and Trade Policies', held at ZEF on November 9 and 10.



Jennifer Green

Photo: Rühmekorf

**ZEF:** *How did the Center for Constitutional Rights become involved with litigating against multinational corporations?*

**Green:** The Center for Constitutional Rights, founded in 1966, was at first involved with assisting people in the United States South in their struggle for voting rights. Not until 1965, with the passing of the Voting Rights Act, was voting for blacks made possible without legal restrictions and interference with the right to vote became a criminal offense. Thereafter the Center became involved in monitoring U.S. foreign policy, especially U.S. intervention in Latin America and in the 1980s the Center commenced litigating cases under the Alien Tort Claims Act (ATCA) and continues to do so today.

The ATCA is a law, dating back to 1789, which authorizes U.S. federal courts to hear civil cases by foreigners concerning violations of the "law of nations". In the 1790s, the ATCA enabled foreign nationals to seek monetary compensation in a U.S. court for violations of the "law of nations" committed by pirates or slave traders active along the United States coast. Lawyers revived the ATCA in the 1970s, which were concerned with applying international law to the United States. Case after case, norms of international law were put forward that obliged the courts to address issues of international law. In this process the courts started to define the meaning of a violation of the "law of nations".

**ZEF:** *What was the first success the Center had in using the Alien Tort Claims Act for allegations of human rights violations?*

**Green:** In 1979, the Center's lawyers litigated for the Filártiga family. The case concerned the 17 year old Joelito Filártiga, the son of a Paraguayan surgeon and human rights activist, who died on 29 March 1976 after having been jailed and allegedly tortured to death by Norberto Peña-Irala, the Inspector General of the police of Asunción.

In 1979, Peña-Irala was in the United States, which made it possible for a case to be brought against him. For a case to be brought before a court under the ATCA, the plaintiff (in this case the father and the sister of Joelito) and the defendant (in this case Peña-Irala) need to be physically present in the United States. In the district court the case was dismissed, but reversed by the federal judge in the Court of Appeal for the Second Circuit. Besides the fact that in 1983, the Filártiga family was awarded US \$ 375,000 in compensation, more importantly the judge ruled that torture constituted a violation of the "law of nations". In other words, the judge ruled that the torturer of today is the pirate of yesterday and is the enemy of all humankind.

The case is considered a landmark for the internationalization in the fight against torture and in the establishment of universal jurisdiction in the case of torture.

**ZEF:** *How did the ATCA cases develop from cases against individual torturers to cases against multinational corporations for human rights abuses?*

**Green:** With the advances booked through the Filártiga case, numerous cases were brought to court concerning acts of torture.

Increasingly there were cases, which did not just concern individuals who had committed torture, but rather the command structure was alleged to be responsible besides the individual. In this regard the cases were expanding because no longer just the individual could be held accountable, but also institutions. The cases were also expanding because it was no longer just torture, which could be considered as a violation of the "law of nations", but also acts of extra-judicial execution, arbitrary detention and crimes against humanity and genocide. Today, it also includes war crimes, rape and sexual abuse, disappearance, slavery, forced labor and environmental destruction.

One of the first cases brought before a U.S. court to hold a multinational corporation accountable for human rights abuses is the case against Unocal for its pipeline building operations in Myanmar. Unocal in a joint venture with the military government of Myanmar is accused of using slave labor. A final judgment in the case is still pending. Nevertheless, the case has been successful in that the U.S. District Court of California judged that the case constitutes an allegation of participation in slave trade. This fact is sufficient to establish jurisdiction under the Alien Tort Claims Act.

Besides the case against Unocal a case has also been filed against Royal Dutch/Shell in complicity with the Nigerian government. The plaintiffs claim that Ogoni people protesting the presence of Royal Dutch/Shell on their land were tortured and extra-judicially executed. The case is still pending a decision. Numerous other cases against multinational corporations are being litigated by the Center.

**ZEF:** *Why are people coming all the way to the United States to file these cases? Are they seeking financial compensation?*

**Green:** Some of the cases are multimillion judgments in compensation, which need to be collected. The Center works towards collecting the compensations, although this is very difficult. In cases of individual liability, collecting the money is not easy as individuals usually flee the country. In cases of multinational corporations, although no case has yet been finalized, the Center expects that collecting the compensation will be less problematic. But, money is not the reason why people file and engage in long court cases. Their main interest is to obtain recognition for the fact that they have been severely wronged and have had their rights violated.



# No Fires! Slash-and-Mulch - A Promising Alternative

Rolf Sommer

Traditional methods of cultivation in Brazil are undergoing change. Slash-and-burn systems with ever shorter fallow periods accelerate the devastation of cultivable land.

Researchers at ZEF explore suitable alternatives.



Burning is an essential activity in many traditional agricultural systems. In the Eastern Amazon in Brazil, for instance, the conventional shifting cultivation of smallholders includes a fallow period of at least 10 years to restore the soil fertility. During this period, a secondary forest - the so called "capoeira" - develops. At the beginning of the cultivation, this capoeira is cleared by slashing and burning - a practice carried out in this region for more than a hundred years. To handle the high amounts of the biomass of the vegetation, this practice is convenient. At the same time, however, it is wasteful as nutrients and carbon are released into the atmosphere during burning. With fallow periods long enough to balance these nutrient exports by inputs from atmospheric deposition, such systems are nevertheless ecologically sustainable. Additionally, crop pests and weed pressure are controlled, and nutrients are accumulated in the above-ground biomass, that, transformed into ash by the fire, support crop production (fertilization effect).

Nowadays, however, shifting-cultivation in the Eastern Amazon is undergoing change. Pressure on land use leads to intensified cultivation, with shortened fallow periods and a move to semi-permanent (cash-) crops like passion fruit or pepper. Thus, the essential functions of the fallow are endangered. Using fire to prepare the land under these conditions contributes to land degradation, which creates a need for encroaching on primary rainforest areas.

As part of the German-Brazilian cooperation program, SHIFT (Studies on Human Impact on Forest and Floodplains in the Tropics), the functionality of the fallow vegetation within shifting cultivation is studied to elaborate on improvements of this production system. Avoiding burning by slash-and-mulch is seen as one promising alternative. Instead of burning the vegetation at the end of the fallow period, the plant biomass is chopped and left as a "mulch" layer on the ground. Mulching, however,

substantially alters the nutrient dynamic of the agro-ecosystem and might promote losses by leaching due to the decomposition of high amounts of applied biomass. This would counterbalance the intrinsic nutrient-conserving feature of the mulching. Therefore, the nutrient dynamics of slash-and-burn agriculture traditionally practised by small-farmers were compared with those of the newly introduced slash-and-mulch system. All relevant imports and exports of the system were considered, such as atmospheric deposition, fertilization and biological nitrogen fixation and volatilization, harvest and leaching. Emphasis was placed on dissolved nutrient dynamics at greater soil depths. This was done to account for the influence of the fallow vegetation, which has an extensive root system penetrating the soil to at least six meter depth.

## Nutrient Balance

The necessity to avoid burning is due to the fact that most nutrients of the biomass are lost in this process. This could be observed during the burning of a seven year old fallow vegetation, which led to a loss of at least 93 % of the carbon (C) and nitrogen (N) bound in the above-ground biomass, corresponding to 21.5 t C and 372 kg N per ha. Also 45 - 70 % of the generally less volatile cations potassium, calcium and magnesium were lost, mostly by particle flight in the smoke of the fire. Most alarming was the export of about 11 kg phosphorous per ha (63 % of the stock), because phosphate is the yield-limiting nutrient in this agro-ecosystem. As a consequence, the nutrient balance of this cropping cycle (seven years of fallow and two years of cropping) under slash-and-burn practice was negative for all major nutrients.

Mulching prevented volatilization losses and consequently, the nutrient budget of this land-use system was balanced, even under intensified land use with a shortened

fallow period. To achieve reasonable yields, mulching, however, requires a moderate input of fertilizer, as phosphate and nitrogen are immobilized by soil microorganisms stimulated by the input of carbohydrates with the mulch.

Leaching under mulch did not increase during the two year cropping period as was initially feared. Moreover, topsoil nutrient levels were more stable in comparison to conditions after burning. Independent of land preparation technique, the amounts of nutrients percolating from 1 m to 3 m soil depth decreased significantly. This means, that the major part of the nutrients remained in this layer. Soil layers below 1 m are far out of reach of the roots of regular crops such as maize, cowpea and cassava or of the newly introduced cash crops. But the fallow vegetation with its deep rooting system can take up nutrients retained here and, thus, provide a safety net against leaching. Maintaining this nutrient pumping would require the maintenance of the fallow and limit the scope of prolonged cropping and any agriculture that reduces the vitality of the fallow vegetation.

Abandoning fire is the most crucial step towards sustainable smallholder agriculture. To be put into practice, mechanized slash-and-mulch provides a feasible alternative. Maintaining the natural fallow vegetation as an integrated part of land use minimizes leaching losses and enables ecologically sound agriculture even under intensified conditions. Besides ensuring the livelihood of smallholders in the Amazon, such a land-use system is also able to slow down the production of the greenhouse gas carbon dioxide and to provide a high degree of biodiversity.



*Dr. Rolf Sommer, scientist at ZEF, was based for two years in Belém, Brazil, to carry out his Ph.D. field research.*

## Impressum

Zentrum für Entwicklungsforschung  
Center for Development Research  
University Bonn  
Walter-Flex-Str. 3  
D-53113 Bonn  
ISSN: 1438-0943

Editor: Monika Reule  
Editorial Board: Dr. Ulrike Grote,  
Dr. Christopher Martius,  
Dr. Anja Schoeller-Schletter  
Tel.: 0228/73-1811 oder -1846  
Fax: 0228/73-5097  
E-Mail: m.reule@uni-bonn.de  
Internet: <http://www.zef.de>

ZEFnews appears three times a year in English and German and can be ordered free of charge