

# Good Land Governance: Between Hope and Reality

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## Summary

The paper highlights the fast changes in understanding and conceptualizing the complex topic of land governance, its multi-faceted aspects and inter-linkages to other thematic sectors. Major policy developments, such as state divestiture and increasing private investment into land, and a stronger and more influential role of Civil Society Organizations are addressed in more detail. Capacity development at all levels (e.g. academic, administrative, community, private investors) is identified to be essential for good and transparent governance in the sector. German Development Cooperation has responded to these challenges by expanding and deepening focus and volume of the international and bilateral engagement in this field of action.

## Zusammenfassung

*Die Studie hebt die rasanten Veränderungen im Verständnis und der Konzeptualisierung des komplexen Themas der Bodenpolitik sowie ihre vielfältigen Dimensionen und Verknüpfungen zu anderen Themenbereichen hervor. Bedeutende jüngere politische Entwicklungen wie staatliche Veräußerungen von Land, zunehmende private Investitionen sowie die wachsende und einflussreichere Rolle von zivilgesellschaftlichen Gruppen werden hervorgehoben. Die Entwicklung von Kenntnissen und Fähigkeiten auf allen Ebenen (z. B. akademische oder administrative (Aus-)Bildung, Sensibilisierung kommunaler oder privater Investoren) ist von zentraler Bedeutung für eine gute und transparente Regierungsführung in diesem Themenbereich. Die Deutsche Entwicklungszusammenarbeit hat auf diese Herausforderung reagiert und sowohl den Fokus als auch das Volumen der bilateralen und multilateralen Zusammenarbeit erweitert.*

**Keywords:** Land Governance, Good Governance, Capacity Development, Tenure Security

## 1 Introduction

Over the last two decades, land tenure issues have become more and more important around the world. The ever increasing pressure on land resources has often exacerbated conflicts beyond the most pessimistic expectations. Furthermore, the old problems have come hand in hand with new and more complex challenges.

In 1998 GIZ (former GTZ) published the volume “Land Tenure in Development Cooperation: Guiding Principles” which enjoyed a warm reception and quickly became a source book among land experts and practitioners in Germany and abroad.

Now that almost twenty years have passed, we would like to revisit the principles laid down in that publication,

reflect on the current main challenges, and update core messages on best practices and experiences, particularly considering the knowledge gathered by GIZ and its partners in the numerous land-related projects which have been implemented ever since.

As mentioned in the first publication, “Land tenure and land tenure systems are of fundamental importance for efficient agricultural production, stemming poverty and conflicts and attaining social equity. Thus, they are essential for securing enduring, self-supporting and sustainable development. Thus, ‘good governance’, participation, rule of law, certainty of the law, and access to productive resources, are (once again) of key importance for policy formulation and development cooperation. Problems of land tenure and land tenure systems demand answers to questions on the control of power, the security of fundamental rights and the creation of prerequisites for long-term, productive investments. The form of land tenure and consistent land policies contribute towards future agricultural productivity worldwide, the many and diverse land uses in rural areas, the environmental impact thereof, and coping with the complex and dynamic processes of urbanization” (GTZ 1998).

The present paper addresses all those committed to development cooperation in land issues. It should open the door for intensified discussion and lay the basis for informed decision making. It is not intended to cover all aspects of the highly complex field of land policy and land management, but it should provide the reader with a number of principles, concrete tools and examples for dealing with land related problems.

Access to and distribution of assets such as land and sustainable land use will remain cross-cutting challenges for the next decades. In fact, within the frame of the recently endorsed Sustainable Development Goals, land will continue to play a key role for future gender-balanced poverty alleviation, food security, investment in education and better livelihoods, equity as well as the protection of terrestrial ecosystems and coping with climate change.

## 2 Land governance: drivers, challenges, perspectives

Meanwhile, definitions on governance fill libraries. Governance refers to “all processes of governing, whether undertaken by a government, market or network, whether over a family, tribe, formal or informal organization or territory and whether through laws, norms, power or language” (Bevir 2013). The World Bank, focusing on a country-wide perspective, sees governance as the way

power is exercised through a country's economic, political and social institutions (World Bank 1991). The United Nations Development Program's (UNDP) conceptualization of governance is only partly about how governments and other social organizations interact, how they relate to citizens, and how decisions are taken in a complex world. It is rather a process whereby societies or organizations make their decisions, determine whom they involve in the process and how they render account (Graham et al. 2003).

Why is governance the conceptual backbone of this publication? Land relations are based on "the rules of the game", on formal and informal institutions (North 1991), in particular on property rights. Governance focuses on the processes by which authority is conferred on different decision makers, such as national parliaments, administration at different regional levels, family heads, village elders, elected community leaders or international regimes (World Trade Organization, United Nations Convention on Biological Diversity) and organizations (Food and Agriculture Organization).

Governance also focuses on the processes by which decision makers design these rules (statutory rules in contract law, land laws, land use regulations or informal, often unwritten rules and codes of conduct summarized as customary tenure), and the processes by which those rules are enforced (e.g. through forest officers, land priests up to FAO "Voluntary Guidelines") and modified. This modification may refer to new regulations on Foreign Direct Investment (FDI) in land, restricting specific rental contracts in the past, such as sharecropping, but as well as formulating land reform principles (willing seller, willing buyer) and implementation procedures (calculating compensation rates).

Debating on formulating criteria and indicators to measure the quality of governance brought up the normative concept of "good governance". Definition attempts by UNDP together with the analysis of a broad range of sources compiled by the World Bank Institute (Birner 2007) focus on six dimensions of good governance: political stability and the absence of violence, the rule of law, voice and accountability, regulatory quality, government effectiveness and control of corruption, and environmental governance.

Having in mind the historical development of land tenure systems, not only in developing countries, and resulting violent conflicts about land relations, it becomes intuitively evident that considerations on governance and its quality are the key to understand the functioning and shortcomings of land tenure today and to formulate standards for future land tenure systems.

In countries like Zimbabwe, South Africa or Central American countries, the fight for gaining access to land has left a trace of violence and political unrest. Ignoring the rule of law has not only led land reform processes and land expropriation for public purpose (e.g. large dam projects) into a deadlock, but also to the denial of the

customary or secondary resource rights of the rural poor and women: Voice and accountability are often ignored principles when it comes to conversion in land use patterns, e.g. as a consequence of deforestation or direct investment in large tracts of land.

The regulatory quality in most countries is at best achieved at a national, *de jure* level, transforming rules and regulation into viable practice at a local user level is often still missing. This is partly due to ineffective, sometimes corrupt government agencies which are allocating land, formulating land use regulations or solving conflicts.

## 2.1 Types of land governance

Land governance, just as other forms of governance, occurs in form of three ideal types, which rarely will be found in purity:

*State-driven*: often identified as top-down or control and command governance, applying instruments like penalties, interdictions, quotas, taxes by state authorities which are often foreign, exogenous to local land owners or user communities. There is a long history of this kind of land governance, e.g. in African states after independence under authoritarian rule (Francophone West and Central African countries, Ghana, Nigeria, Kenya, Uganda, etc.).

This includes far-reaching revision of property rights and decision making authorities to the advantage of the nation state in the case of common property, following the misleading policy messages of the so-called "tragedy of the commons" (Hardin 1968).

Transition after 1990 and liberalization triggered far reaching reforms in many countries towards more participatory and decentralized state governance, including devolution of state influence while at the same time securing property rights in land and related resources without title or certificates as state land. However, only few reforms could be implemented successfully at lower levels while others cannot respond actually adequately to new challenges, such as large-scale foreign and domestic investment in land, the delivery of ecosystem services (ESS), and effective protection of the commons.

*Market-driven*: here the use of the market mechanism for land and rental markets is guiding rental and sale transactions for land. After privatizing land and setting legal frameworks for liberalized land markets since 1990, many land transactions in particular those with large-scale domestic and foreign investors are based on private contracts with the state (ideally) offering only legal security, contract enforcement and conflict resolution through this legal system. Furthermore, applying the market principle has strong implications on mechanisms of land administration and land development: land use planning, land valuation, land consolidation or land development schemes are entrusted to private parties.

*Cooperation-driven land and resource governance as a hybrid between market and state:* for many decades this has been a fiercely debated principle, strongly rejected by orthodox economists, politicians and bureaucrats. Their arguments were negative externalities (e. g. overgrazing which is in a short perspective beneficial to the individual herder but detrimental to society as a whole), a loss of centralized authoritarian power and of sources for daily petty corruption.

Its renaissance was driven by bottom-up experiences, in particular, in developing countries on success conditions for extensive grazing lands, water allocation in irrigation schemes, forest and fishery management, culminating in awarding the Nobel Prize for Economics to Elinor Ostrom in 2009. The arguments fell on fertile grounds as on parallel terms the ideas of subsidiarity, polycentric governance and stakeholder participation gained ground. The cooperation principle takes up strong long lasting traditions of many developing countries in common pool resource management, e. g. all over Africa, in irrigation systems in Asia or cooperative agriculture in parts of Latin America (e. g. the Mexican “Ejidos”). It considers not only recent experiences with successful community based natural resource management (CBNRM) but also a fresh view on more formalized cooperation in production, marketing, credit for the rural poor (micro-credit, service cooperatives, or other hybrids may they be networks, franchising or contract farming).

Guiding principles are based on an endogenous development of norms and rules as well as organizations (user associations) and a strong bottom up perspective. It is a rather sensitive principle always being in danger of becoming unstable, eroding, getting dissolved or “crowded out” by exogenous state or market governance initiated by powerful groups. FDI cases in land have shown the risk of privatizing these commons or imposing external management rules by government units.

Target group oriented, effective and sustainable land/resource governance has thus to be embedded into broader systems and contexts, which consider the interaction of an urban or rural population with different resource units and their interactions with human activities (extraction of trees or non-timber products from trees, water harvest for irrigation, using land to transform seeds into crops, converting rural plots into urban housing areas), within diverse resource systems, such as irrigated agriculture, agro-forestry, national parks, city landscapes. This defines, shapes and enforces property rights by assigning to different actors rights to use, manage, transform, transfer land or related resources and apply mechanisms to compensate people when being unjustly alienated from these rights.

Different bundles of property rights allow for different governance patterns. Land can then deliver private goods (titled plots), public goods (clean air through CO<sub>2</sub> sequestration, biodiversity, aesthetic enjoyment of rural landscapes or forests), club goods (golf courses) and common

pool resources (village meadows, sacred groves). One may alternatively focus on the actors holding these bundles of rights, such as natural or legal private persons (individuals, corporations, foundations), the state either on a national or municipal level or joint ownership of village, herder or fishing communities or extended families.

Last but not least, governance is determined by the activities of actors or stakeholders involved in land related transactions. There are established ones, such as land owners in a legal sense including state agencies, farming tenants or – often with contested rights – mobile herders, tenants in urban flats.

However, new actors appear and raise their voice on land governance. Examples are foreign and domestic investors in land (state and pension funds), land developers in urban areas, international regimes (access and benefit sharing), donor agencies, NGOs, such as in trans-boundary national parks like KAZA in southern Africa. Not to forget the stakes of affluent consumers in high income societies having a strong interest in traceability of the food and natural products they eat and use. All of them have a direct impact on land governance through changing land use patterns, dilution of local rights, land degradation or conflicts.

## 2.2 Multi-level governance

Land governance has thus gained a lot in complexity during the last decades requiring a state-of-the-art analysis and policy recommendations that are based on a systems approach and working at multiple levels. Solving land tenure problems and strengthening sustainable land management needs rules and enforcement mechanisms at different administrative levels. Only multi-level or multi-layer governance can adequately meet these challenges.

Experiences during the last two decades have shown that setting or reforming constitutional norms, such as a new land legislation (e. g. parts of Africa, Cambodia) is just a first step at a national level to provide for effective governance. Local community-based monitoring and enforcement mechanisms based on statutory and customary norms have to be equally aligned and harmonized with the national level as market mechanisms may be put into force in some instances.

Multi-layer governance therefore has to combine control-and-command instruments based on the law with self-coordination and market incentives.

For partner countries, having often hesitantly and skeptically implemented decentralization, allowing for devolution and a deeper division of power between administrative levels, *polycentric* governance (Ostrom 2010) remains a challenge as well as a chance.

Land governance is at the core of all endeavors of local to global initiatives to craft favorable conditions for sustainable land and resource use, to allow for structured change and adaptation to newly emerging challenges

and to allow for comprehensive stakeholder participation. With the end of the bipolar world followed by far-reaching reforms in the legal and regulatory framework on land but also with the food crisis, the biofuel hype and the renaissance in land investment, land governance has become a highly dynamic process, often generating a mismatch between the needs to protect the poor, to counteract against widening inequality and to preserve land resources for future generations. Therefore, land use and land management cannot anymore be handled in isolation to other natural resources: traditionally the intensity of land use is strongly determined by availability of irrigation water resources and technologies. Integrated agro-forestry and agro-pastoral systems urge a broader view on land.

What is rather new in public perception is the fact that land availability and quality is crucial to deliver global environmental goods, such as biodiversity or carbon fixation which has to be considered when crafting multi-level governance systems. Or to phrase it differently: for our future we need governance systems which enable land to supply not only food or space for housing or public technical infrastructure, but also Ecosystem Services (ESS) to human beings as their "end users", and to allow Ecosystem Functions (ESF) to be effective (Millennium Ecosystems Assessment 2005).

Taking into consideration this complexity makes governance questions even more difficult to answer. Sometimes it helps to identify the resource having the highest scarcity with regard to human well-being in order to decide if, for example, in irrigation systems the analytical and policy focus should be more on water or on land governance.

Urbanization, deforestation or the encroachment of agriculture into regions with a low natural potential not being appropriate for cropping accelerates processes of land conversion. Some of these changes are of an evolutionary kind such as the continuing creeping of urban land into the urban fringe and rural lands, others are accelerated by policy priorities, such as subsidies for beef, soy bean, or sugar cane production in Latin America which is severely endangering the Amazon forest.

WBGU (2011) has projected that in 2050 as many people will live in cities as currently live on earth, and cities will occupy an area of 7 % of the world's arable land compared to the current 3 % (Angel et al. 2005). In India and China megacities are mushrooming; while focusing mainly on these the thousands of mid-cities developing at the same time are often neglected.

Their impact on peri-urban land will be far reaching: assignment of new development areas for residential, industrial or public purpose (roads, airports, shopping centers) with significant increases in land sale and rental prices, rapid conversion from more extensive to intensified agriculture (vegetables, dairy farming, poultry) for a growing urban population, crowding out former tenants and landless (as shown in the debate on the formula 1

racing course near New Delhi), changing employment opportunities and, last but not least, a heavy pressure on existing ecosystem services deriving from land.

In all cases, land governance must be flexible enough to accompany these changes by offering for example urban planning instruments for formerly rural sites. This includes, in particular, concepts to buffer these processes for the poor and to avoid major frictions for them in case they rely only on informal or customary land or resource rights. This includes informal urban settlements as well as agricultural land which gain in land value and where no compensation must be paid as plot have not been registered in the past in favor of the poor.

Normally, these processes are conflict ridden and ask for conflict resolution mechanisms, such as round tables, mediators, advocacy for the powerless following the principle of subsidiarity starting from the local village level to higher levels, and relying on statutory as well as on more informal rules and regulations.

### 3 The changing role of the state

After a period of state divestiture, decentralization and withdrawal of state agencies from land governance, requests for a stronger regulation of land matters arise, in particular on Foreign Direct Investments (FDI) in land, while at the same time the governments of many partner countries seem to be either unwilling or unable to react on these requests substantially.

We see an ambivalent development: in the 1990s local decision-making on land issues was strengthened in many counties, customary and minority rights were at least formally acknowledged and communities were entitled to manage land questions on their own. Nowadays many of these lower level entities appear to be inactive, unwilling or, understandably, overcharged to negotiate contracts with powerful foreign investors adequately.

Often national authorities are no help at all as frequently hidden economic interests within government or administration support only the interests of investors. Here, multi-layer land governance does not (yet) work well and has not been prepared for on-going challenges from investments. As, however, many of these contracts ignore basic legal settings of the hosting state and are often closed against the explicit will of the local population, the cry for the state to intervene comes up without being echoed.

Whereas the liberalization period has shifted responsibility on land governance to non-government units, environmental concerns still require a strong state involvement which has not yet materialized in many countries due to the complexity of the challenges, financial and human capacity constraints or diverging policy priorities. It remains the genuine role of a state to deliver public goods which are related to land access, land use and management. This is a key requirement for good land governance.

Putting it into a nutshell this refers to the following issues:

- Improving legal security of property rights in land and assuring the application of the rule of law in case of land acquisition for all parties involved. In concrete terms this means also to offer different arenas for conflict resolution from a local to international level.
- Ensure transparency in land sale and rental markets, in particular, in fast growing urban areas and support participatory land development instruments and mechanisms.
- Enabling a stronger delivery of ESS, e.g. in preserving the global commons by encouraging robust local level resource governance (through Community Based Natural Resource Management (CBNRM), cooperatives, private public partnerships etc.),
- Ensuring gender equality with regards to land acquisition, land use and land transfer, an issue which has been largely neglected in the FDI debate until now.
- Develop further the harmonization between statutory and customary land related rules and the statutory legal framework, in case of cross-border activities also on a regional level.
- Working together in international organizations and regimes, for example, by implementing the Voluntary Guidelines on Land and other mutually binding agreements.
- Cooperating in case of financial and human capacity constraints of the nation state with international agencies in order to get support for its citizens.

This listing is not complete but shows future challenges for re-balancing the role of the state, the private sector and civil society organization with regard to land matters and land governance.

#### 4 Future role of private actors and civil society for land governance

More than ever the private sector will play a key role in implementing and further developing new land management models and therefore having a strong impact on the land governance of the future. All hybrid governance forms between market contracts and firm solutions either in a rural or urban context will gain importance. In rural areas this includes contract farming but as well as cooperative solutions or joint ventures.

The same applies for better integration into value added chains, including the keeping of quality and environmental standards in these chains up to the end consumer. It has a direct impact on man-land relations, if former small-scale farmers now work as plantation workers, as tenants or as out-growers, sometimes superseded by cooperative structures.

Private sector representatives will increasingly quarrel with local communities and the state on “the right” land

governance and property rights allocation, with questions such as the following ones arising: should common pool resources be privatized in order to make them part of export oriented food or biofuel production? How to define the terms on which to convert forests into farmland, give compensation to indigenous groups when losing rights of gathering these forests or on shares of harvest when entering into rental contracts?

Parallel changes happen in an urban context: private land developers gain in importance compared to state agencies when development cooperation urges stronger private sector involvement or governments are reluctant to take a lead in land development, land adjudication, zoning, etc. The upgrading of former informal settlements is laid in the hands of private investors, contributing to phenomena like “gentrification” and a neglect of respect for social policy and housing objectives. Conflicts in particular with grass-root organizations, NGOs and other civil society movements are inevitable.

In fact, civil society organizations have taken over responsibility as advocates of the landless and the rural and urban poor who are side-lined by described processes. They are not only forming new interest groups and associations to protect the rights of the disadvantaged in these periods of quick change but they are also addressing neglected social, ecological and gender concerns related to land matters. Besides their “traditional” focus on local-level, target-group specific activities, some world-wide operating organizations have significantly contributed to support the interests of the land-poor and endangered groups at a global scale.

The Land Matrix Global Observatory for example, strongly benefits from the input of the International Land Coalition and NGOs play a significant role in drafting and implementing the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT), or are long-term drivers in agrarian and land reform processes.

Land governance is therefore a joint governance endeavor of state, private sector and civil society interaction. The more land becomes attractive as a means of investments due to actually lacking alternatives on financial markets the more market forces and untamed private initiatives need clear rules and regulation by the state. If this state, however, is not capable or willing to execute and enforce these rules, civil society organizations at all levels will play a stronger role.

#### 5 Capacity development and applied research

Fundamental objectives of land management and land administration projects in development cooperation are to impart knowledge and exchange experiences. Part of this is the awareness creation of all affected persons, capacity development measures and platforms for the discussion of experiences.

**BMZ/GIZ Technical Cooperation Program  
“Strengthening Capacities for Land Governance in  
Africa – SLGA”**

The program is part of the BMZ special initiative “ONE WORLD – No Hunger” and contributes directly to achieving the objectives under its Action Area 6 (promoting responsible land use and improving access to land). It is thereby also making a significant contribution to improved global food security. The project partners are the Land Policy Initiative LPI (UNECA, African Union Commission and African Development Bank), the World Bank and GIZ.

The overall objective of the program is: “The Human and institutional capacities for realizing sustainable land policies that pay particular attention to the rights of marginalized groups like small-scale farmers, pastoralists and women are strengthened across Africa.”

The program will work in the following areas:

- Provide institutional and specialized support for LPI to establish the Network of Excellence on Land Governance in Africa (NELGA).
- Collaborate in the development and implementation of short and long term capacity development measures together with LPI, World Bank and Universities in Africa, Europe and USA.
- Promote Policy dialogue, South-South and North-South exchanges.
- The accompanying research program, conducted by institutions comprising the NELGA spearheaded by the World Bank, will generate evidence-based findings and recommendations that will feed into the policy dialogue and other policy-making processes.

The profile of requirements for long-term and short-term experts has changed over the years. Nowadays, capacity development programs should create more awareness and foster understanding of the complexities of the field of land management and land administration for decision and policy makers. Besides the teaching of knowledge, obtaining formal qualifications (Diploma, B.Sc.; M.Sc.; Ph.D.) is a major objective for sustainable capacity development. Project personnel or counterparts can be sent to relevant Diploma, M.Sc. courses or Ph.D. programs (e.g. MSc and PhD Program on Land Management and Land Tenure at TU Munich) for further education, thus fostering career development for key actors and leaders. In addition, the middle level (land manager, land administrator, etc.) is an essential part of education too. This is especially valid for decentralized systems.

A regional potential for advisory services can be mobilized by supporting universities and research institutions in the region to strengthen programs in the field of land management and land administration (see text box on BMZ/GIZ project “Strengthening Advisory Capacities for Land Governance in Africa”). Dissemination of knowledge in this field is an important task that can be promoted by technical cooperation. In particular, the following topics have to be considered:

- Support for obtaining, translating and distributing text books, teaching material and information material related to land management and land administration,
- Promotion of networks for obtaining and distributing information,
- Support the organization and implementation of field work and excursions concerning land issues (e.g. land survey, land readjustment, land consolidation etc.),
- Promotion of contacts and of exchange of experiences with and between cooperating countries,
- Support of the use of modern information technologies, like the Internet, online collaboration and social networks.

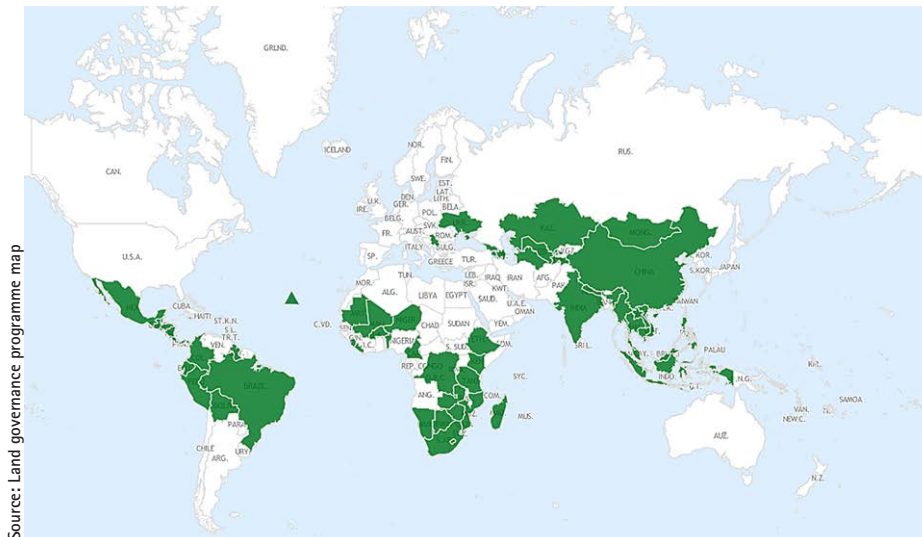
Implementation and promotion of new academic programs in Germany and in partner countries support the exchange of experiences and can contribute to the development of context-intelligent approaches. In addition, in many partner countries the capacity for research is (still) limited and offers various entry points for improvement. Therefore, these countries should be supported in strengthening their efforts especially in the field of applied research by the creation and expansion of appropriate research infrastructures.

**6 Conclusions**

For German Development Cooperation (GDC), a number of consequences have emerged out of these developments and strategic changes in the last two to three years, namely:

- A redesign of all land-related programs vis-a-vis the principles formulated in the VGGT and the Principles for Responsible Investment in Agriculture and Food Systems (RAI). This holds true in particular by focusing on supporting tenure security for marginalized groups, indigenous peoples and women. Additionally, a much stronger focus has been laid on creating socially and environmentally sustainable and responsible policy frameworks for large-scale agricultural investments in the “own house” and in partner countries.
- Considerable expansion of the land-related engagement through utilization of “normal” bilateral and SEWOH funds (Sonderinitiative EINEWELT ohne Hunger), in order to enlarge existing country programs (e.g. Benin and Peru) or to create new ones (e.g. Uganda).
- Taking over the responsibility for chairing the Global Donor Working Group on Land by the German Federal Ministry for Economic Cooperation and Development in 2015 and considerable promotion and expansion of globally aligned activities in the land sector.

As such, GDC became one of the major actors in the land advisory sector in recent years and continues to strengthen this role in close cooperation with other bi- and multi-lateral donor partners.



Source: Land governance programme map

Fig. 1: Current and planned German Land projects

### References

- Angel, S.; Sheppard, S. C. and Civo, D. L. (2005): The dynamics of global urban expansion, Washington, DC.
- Bevir, Mark (2013): Governance. A very short introduction, Oxford, UK.
- Birner, Regina (2007): Improving Governance to Eradicate Hunger and Poverty, 2020 Focus Brief, IFPRI, Washington, D. C.
- FAO (2012): Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Rome.
- Graham, John; Amos, Bruce; Plumptre, Tim (2003): Principles for Good Governance in the 21st Century, Policy Brief 15, Institute on Governance, Ottawa.
- GTZ (1998): Land Tenure in Development Cooperation, Guiding Principles, Eschborn.
- GTZ (2004): Natural Resources and Governance: Incentives for Sustainable Resource Use, Manual, Environment and Infrastructure Division, Eschborn.

- Hardin, Garrett (1968): The Tragedy of the Commons, *Science*, 162:3859, 1243–1248.
- Millennium Ecosystem Assessment (2005): Ecosystems and human well-being: synthesis, Washington, D. C.
- North, Douglas (1991): Institutions, Institutional Change and Economic Performance, Cambridge, UK.
- Ostrom, Elinor (2010): Beyond Markets and States: Polycentric Governance of Complex Economic Systems. *American Economic Review* 100 (June 2010): 1–33.
- The Land Matrix Global Observatory: "Land Matrix", Accessed Date 10.12.2015, [www.landmatrix.org/en](http://www.landmatrix.org/en).
- WBGU (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen) (2011): Welt im Wandel – Gesellschaftsvertrag für eine Globale Transformation, Berlin, Available at [www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/hauptgutachten/jg2011/wbgu\\_jg2011.pdf](http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/hauptgutachten/jg2011/wbgu_jg2011.pdf).

- World Bank (1991): Managing Development: The Governance Dimension, Discussion Paper, Washington, D. C.

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