Sustainable development and forest-related German development cooperation:
Discourses, mindsets, and practice

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Abstract:

In the context of the guiding principle 'sustainable development', environmental protection, economic development, and social justice are conceptualized as converging and mutually supportive objectives, which require integrated approaches and ensure synergies. Environment and development politics, in practice, are fraught with diverging interests, goal conflicts and trade-offs regarding the different objectives, as well as competing approaches and incalculable impacts of measures. Based on a study of forest-related German development cooperation in Indonesia, Cameroon, and the Democratic Republic of the Congo, this article explores interdependencies between discursive framings and the practice of environment and development politics, with a focus on unequal weightings of ecological, economic, and social objectives as well as different strategic approaches. To capture different discursive positions and conceptualize the interrelation between discourse and practice, the mindsets 'regulation', 'competition', and 'empowerment' are distinguished. These cognitive frames, coined by different positions at the discursive level, guide perceptions, assessments, and action at the level of individual actors, and co-determine the practice of environment and development politics. Their impact has to be considered in order to devise development cooperation in a more reflective and deliberative way.

Keywords: Development cooperation, forest politics, sustainable development, mindsets, discourse analysis, environment and development policies

Introduction

Historically largely separated discourses on 'nature', 'development', and 'human rights', since the late 1960s, have converged in academic and political disputes regarding a global environmental and development crisis (see Buergin, 2013). In the late 1980s, these discourses were merged conceptually under the term 'sustainable development', which was established as discursive paradigm at the Rio Conference on Environment and Development, and subsequently institutionalized as guiding principle in international environment and development politics. In this context, ecological, economic and social issues are conceived as interdependent dimensions of a complex policy area which requires an integrated regulation. The Agenda 2030 attempts to further integrate these dimensions conceptually and strategically, and to equally advance the objectives of environmental protection, economic development, and social justice (e.g. Loewe & Rippin, 2015).

The almost undisputed adoption of 'sustainable development' as the guiding principle for international environment and development politics is crucially based on its promise that it is possible - and even ensures synergies and win-win options - to jointly pursue the objectives of environmental conservation, economic development and modernization, as well as global justice and prosperity for today's living and future generations. The attractiveness of the concept is also due to its vagueness, as it does not prescribe a particular behavior and leaves room for different positions and interpretations. However, this ambiguity and the all-embracing positive promises are also suitable to obscure conceptual inconsistencies as well as opposing interests and goal conflicts. At the same time it is difficult to capture actual effects of the concept on practical environment and development politics, which is crucially determined by diverging interests of actors, controversial political ideologies, competing implementation strategies, and incalculable effects of projects, instruments, and measures.

This article explores interrelations between the discursive paradigm sustainable

development and its practical implementation in environment and development politics based on an analysis of forest-related German development cooperation in Indonesia, Cameroon and the Democratic Republic of the Congo. The interest of the study is directed both to the practical implementation of development cooperation and to the theoretical conceptualization of the interdependence of discourse and practice.

The study first ties in with discourse-analytical work on the guiding principle sustainable development. In this context, diverging discourse positions are identified which put different emphases on the three dimensions ecology, economy and social issues which constitute the concept of sustainable development. These discourse positions correspond with different strategic approaches of environment and development policy, which can be found both in the conceptual design of forest-related development cooperation and in the argumentation patterns of different actors.

To conceptualize the interrelation between the discursive level and the practice of individual actors the concept 'mindset' is used. The paper explores the working hypothesis that the controversial positions at the discursive level are related to different strategic approaches at the institutional level and can be identified on the level of individual actors as different patterns of perception, evaluation, and action or 'mindsets'. For this purpose, the three approaches and mindsets 'regulation', 'competition' and 'empowerment' are distinguished. The concept is primarily used heuristically. A desirable sharper theoretical determination and empirical validation of the concept and the particular mindsets are beyond the scope of this study.

Regarding the practical implementation of the discursive paradigm sustainable development in forest-related development cooperation, the study focuses on different weightings of the three major objectives forest conservation, forest utilization, and improvement of local livelihoods - which refer to the three dimensions of sustainable development - as well as on the relevance of different strategic approaches in environment and development policies. To explore the relative significance of these objectives and approaches, stakeholders at all levels have been interviewed and

funding, programs, organizations, and instruments of development cooperation were analyzed (see Buergin, 2014a, 2014b, 2017). The unequal weightings of the major objectives in practical development cooperation, the paper argues, at least partly reflect the significance of different approaches and mindsets in forest-related development cooperation and their particular affinities to different discourse positions regarding the guiding principle sustainable development.

Discourses, approaches, and dimensions of sustainable development

Under the guiding principle sustainable development, the policy domains environmental protection, economic development and social justice are conceived as integrated and equally important dimensions of environment and development policies whose specific objectives converge and complement one another synergistically (e.g. Giddings et al., 2002; Hauff, 2014; Mayrhofer & Gupta, 2016). Discourse analytical studies of the concept sustainable development, on the other hand, rather focus on divergent political and ideological positions as well as inconsistencies between the different dimensions and fields of action of environment and development policies (see e.g. Brand 1997a; George, 2007; Höhler & Luks, 2004; Mobjörk & Linner, 2006). From such a perspective, the three dimensions of sustainable development are conceived less as converging fields of action of an integrated policy field, but can be better related to diverging discursive positions and competing strategic approaches of environment and development policies.

Brand (1997b), for example, differentiates three strategies which he characterizes as '*weiter-so-Strategien*' ('carry-on-strategies'), '*sozial-ökologische Modernisierung*' ('social-ecological modernization'), and '*radikale Korrektur des industriellen Zivilisationsmodells*' ('radical correction of the industrial civilization model'). Similarly, Sachs (1997) identifies three perspectives or 'basic orientations' for which he uses the terms '*Konkurrenzperspektive*' ('competition perspective'), '*Astronautenperspektive*' ('astronaut perspective'), and '*Heimatperspektive*' ('home perspective'), while

Bäckstrand and Lövbrand (2006) distinguish the three discourses 'weak ecological modernization', 'green governmentality' and 'civic environmentalism'. These discursive positions distinguished by the various scholars show remarkable similarities regarding strategic approaches and focus on different fields of action and dimensions of sustainable development. '*Weiter-so-Strategien*', '*Konkurrenzperspektive*' and 'weak ecological modernization' primarily focus on competitive markets, entrepreneurship, and economic growth. '*Sozial-ökologische Modernisierung*', '*Astronautenperspektive*', and 'green governmentality' predominantly refer to regulative institutions, good governance, and a rational global environmental management, while '*Radikale Korrektur*', '*Heimatperspektive*', and 'civic environmentalism' primarily invoke the self-determination of communities, civil society, and social justice as core elements of sustainable development. At the level of practical environmental and development politics, these discursively differentiated positions can be related to different strategic approaches, which are labeled below as 'regulation', 'competition', and 'empowerment approach'.

Before the concept of sustainable development was established in the 1980s, the three discourses regarding nature conservation, development, and social justice had largely developed independently of each other. From a discourse-historical perspective, the regulation approach is strongly rooted in the nature conservation discourse and close to the ecological dimension of sustainable development, while the competition approach is more firmly anchored in the development discourse and shows clear links to the economic dimension. The empowerment approach has its origins primarily in the social justice discourse and is more closely linked to the social dimension of sustainable development. (See Buergin, 2013)

The different discourse positions and strategic approaches also show specific 'affinities' towards the three spheres of modern society - state, market and civil society - as well as with regard to specific groups of actors and addressees of development cooperation. The regulation approach focuses on state institutions, administrative bodies, and

international organizations, while the competition approach is more associated with the sphere of the market, private companies, and business organizations. The empowerment approach has the strongest links to the civil society sphere as well as NGOs and local communities as target groups of development cooperation. (See Tab. 1)

Tab. 1: Discourse history and dimensions of sustainable development

Historic discourse formations		
Nature discourse	Development discourse	Social justice discourse
Dimensions and objectives of sustainable development		
Ecology	Economy	Social dimension
Climate, biodiversity and environmental protection	*Consumption of resources and economic development*	*Improvement of local livelihoods and social justice*
Discursive positions and strategic approaches in environment and development policies		
'Astronautenperspektive' *'Sozial-ökol. Modernisierung'* *'Green Governmentality'*	*'Wettkampfperspektive'* *'Weiter-so-Strategien'* *'Weak Ecological Modernization'*	*'Heimatperspektive'* *'Alternative Lebensentwürfe'* *'Civic Environmentalism'*
Regulation approach	Competition approach	Empowerment approach

However, these preferential relations and affinities - between discourse positions and strategic approaches on the one hand, and the dimensions and goals of sustainable development as well as social spheres and actors on the other - are neither exclusive nor do they predetermine specific objectives or target groups. Potentially, each of the three approaches can target all different social spheres and actor groups. Furthermore, under the guiding principle sustainable development, all approaches refer to each of the three dimensions of the model and their related objectives. (See Fig. 1)

Dimensions and objectives of sustainable development

Ecology	Economy	Social
Environmental protection	Economic development	Social justice

Priorities objectives

Discursive positions and strategic approaches

Regulation | Competition | Empowerment

Priorities target groups

Target groups and social spheres

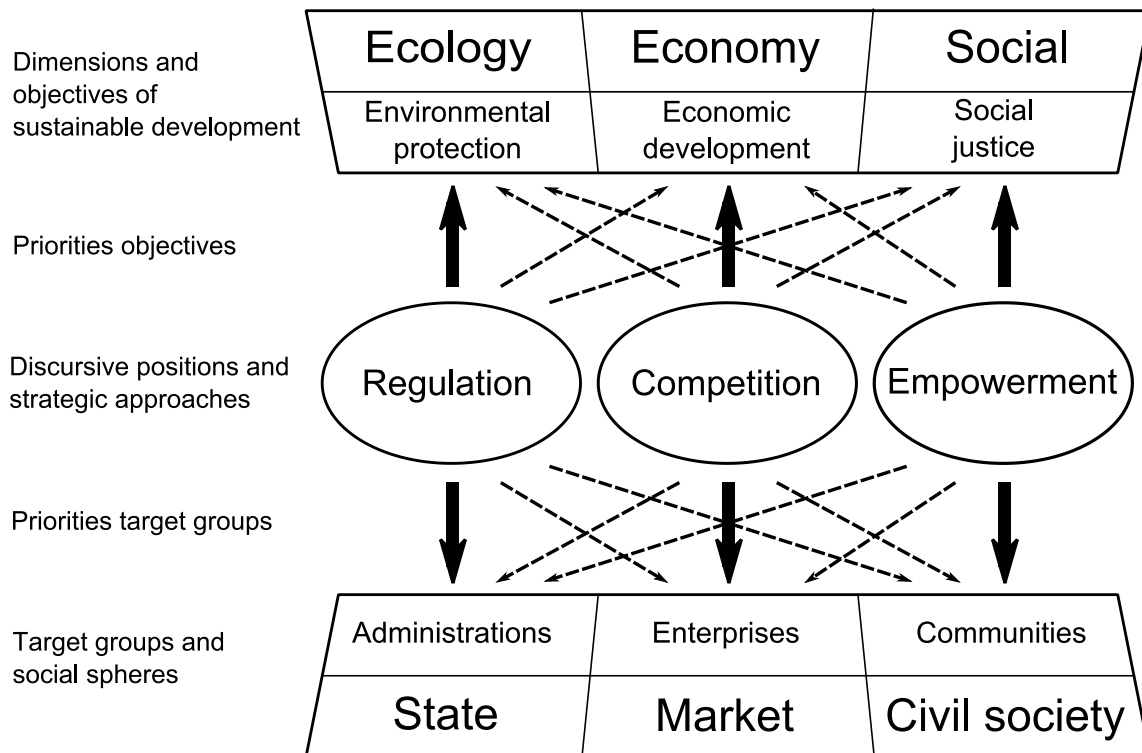| Administrations	Enterprises	Communities
State	Market	Civil society

Fig. 1: Dimensions of sustainable development, strategic approaches, and target areas

However, the different discourses and strategic approaches with their specific origins, affinities and emphases have diverging impacts on the design, implementation, and results of practical development cooperation (see also Buergin, 2014b, pp. 77-80). An investigation of such impacts always implies conceptualizations of the interrelation of discourse and practice.

Discursive positions and mindsets in forest politics

Discourse analytical approaches conceptually presuppose a close interdependence of discourse and practice and have developed into an important instrument for the study of environment and development policies (see e.g. Arts & Buizer, 2009; Hajer & Versteeg, 2005). However, the diverse conceptions of this interdependence are disputed and often remain indeterminate. Research predominantly focuses on the structure and dynamics of discourses as well as their influence on texts and institutions,

while interrelations between discourses and the practice of individual actors are only rarely explored (e.g. Arts et al., 2014; Behagel et al., 2017; Leipold, 2016). Based on a 'Foucaultian perspective on discourse' (Feindt & Oels, 2005) and with a focus on competing discourse positions and their hegemonic influences on political practice (Wesselink et al., 2013), this study pursues the thesis that diverging discourse positions in environment and development policies shape the practice of forest-related development cooperation as different strategic approaches at the institutional level. Furthermore, the concept of 'mindsets', in the sense of cognitive patterns of perception and evaluation which guide action, is used to conceptualize interrelations between discursive frameworks and the practice of individual actors.

The ambiguous term 'mindset' can refer to ways of thinking, worldviews, philosophies of life, attitudes or mentalities. It generally refers to a psychological or cognitive predisposition in the sense of a pattern of thinking and behavior characteristic of a person or a social group. Since the 1970s more than one hundred different mindset terms can be found in scientific publications and on the internet, most of them short-lived and frequently used without a precise definition. It was only in the 1990s that mindset conceptions emerged aiming at an empirical and theoretical substantiation. In psychology, since then, the 'deliberative mindset' and 'mindset theory' (Gollwitzer, 2012) as well as the 'growth mindset' (Tang et al., 2016) have been conceptually developed, while in economics the concept of the 'global mindset' (e.g. Story & Barbuto, 2011) is increasingly used. Since the 2000s, diverse other mindset terms have emerged in various disciplines as well as different attempts to sharpen the concept (e.g. Fatehi et al., 2015; Schroder et al., 2014, Yolles & Fink, 2014).

The present study uses 'mindsets' primarily as a heuristic concept, in the sense of specific cognitive patterns which are structured by different discourse positions on the level of social disputes and divergent ideologies, and which shape the practical design and implementation of development cooperation by way of guiding the action of individual actors. The study pursues the thesis that the different discourse positions and

strategic approaches at the level of the individual actors are effective as simplified cognitive constructs, which can be identified as different 'mindsets'. Such a 'mindset' thus unites a discursive position, an individual attitude, and a practice-relevant action strategy within the framework of an integrative cognitive construct of problem definition, solution approach, and implementation strategy. With regard to forest-related development cooperation, the three mindsets 'regulation', 'competition' and 'empowerment' have been differentiated (see Tab. 2 and Buergin, 2014b, pp. 84-87).

Tab. 2: Mindsets and approaches in forest related development cooperation

	Regulation	Competition	Empowerment
Problem statement	Deforestation and poverty due to insufficient education, and inadequate control capabilities of administrative agencies	Deforestation and underdevelopment due to market deficiencies, restrictions of competition, and inefficient resource use	Deforestation and social inequity due to external and elitist exploitation of community resources at the expense of common welfare
Solution approach	Education and control of actors and forest resources in the context of an international forest regime and global resource management	The regulative power of free markets and competition ensures development as well as an efficient resource management and forest protection	Communities which depend on forests for their livelihoods and identity have a strong self-interest to sustainably protect and use their forests
Implementation strategy	Establishment and strengthening of administrative bodies and their capacities to control forest resources and to educate forest-relevant actors	Establishment and promotion of competitive markets as well as privatization and commodification of forest resources and services	Support for communal self-determination and strengthening of the capacities of forest dependent communities for sustainable forest use

The cognitive constructs of these mindsets can be characterized as follows:

In the context of the 'regulation mindset', problems to sustainably protect and use forests as well as to improve local livelihoods are predominantly traced back to

knowledge deficits and the preponderance of private interests at the expense of common welfare. The most appropriate approach to implement rationally defined and internationally determined environment and development policy objectives is education and the effective control of forest-relevant stakeholders. This is best achieved by strengthening administrative authorities and improving their capacity to educate forest-relevant actors and control their forest use.

The 'competition mindset' attributes problems of forest destruction and underdevelopment primarily to market and competition deficits as well as poverty. The self-regulation of free markets best ensures economic development and the efficient use of resources, which are preconditions for the reduction of poverty and forest protection. The appropriate implementation strategy is the establishment of markets and competitive actors as well as the privatization and commodification of forest products and environmental services.

From the perspective of the 'empowerment mindset', problems of forest destruction, impoverishment and social injustice are predominantly due to the exploitation of local natural resources and labor power by influential 'external' actors and elites. As local communities and civil society actors that depend on forests for their livelihoods and identity have a personal interest in the protection and sustainable use of their forests, forest protection and local development is best achieved by promoting community rights to land and forests as well as by improving the capabilities of communities for self-determined forest use and development.

In the context of this study, it was possible to assign the different actors more or less clearly to one of the three mindsets which dominated their perception of the problem of deforestation and appropriate solutions. These cognitive constructs are closely related to the discourse positions and strategic approaches in the debate about the concept of sustainable development. They likewise show affinities to specific objectives and fields of action regarding forest-related development cooperation as well as to different social spheres and groups of actors, even though these affinities are not

exclusive and less determined (see Fig. 1). The following analysis of forest-related German development cooperation focuses primarily on different weightings and resource allocations regarding the major policy objectives in the context of the guiding principle sustainable development, as well as on the influence of different strategic approaches. Furthermore, an attempt is made to estimate the relevance of different mindsets for the conceptualization and implementation of development cooperation.

Strategic approaches of forest-related German development cooperation

Germany is one of the major donor countries of forest-related official development assistance (ODA). For the period 2002-2014, Germany provided USD 779 million or 11% of the total forest sector ODA and USD 3.9 billion or 9% of the environment sector ODA, which is forest-related to a large extent (see Buergin, 2014a for a comprehensive analysis). Primarily responsible for the conceptualization and implementation of development cooperation is the German Federal Ministry for Economic Cooperation and Development (BMZ). The Ministry emphasizes its commitment to the Agenda 2030 and global poverty reduction as well as to equally support the three dimensions and objectives of sustainable development. Development cooperation is perceived as one of the most important instruments of the German government to actively engage '… in combating poverty, securing food, establishing peace, freedom, democracy and human rights, shaping globalisation in a socially equitable manner, and preserving the environment and natural resources.' (BMZ, 2018a). Embedded in an international forest regime of initiatives, agreements and institutions that have been developed with the active participation of Germany over the last decades, forest-related German development cooperation pursues the two overarching development-policy goals of reducing poverty and preserving the capacity of forests to maintain ecological balance (BMZ, 2018b).

The international forest regime is mainly the result of negotiations between diverse actors at the international and transnational level with often diverging interests and

influence. The implementation strategies in the context of national forest policies, in contrast, are predominantly shaped by actors on the national level, based on their specific perceptions of relevant forest problems and appropriate solution approaches. Under the leadership of the social democratic (SPD) Minister Wieczorek-Zeul (1998-2009), the BMZ in 2002 published the 'Sektorkonzept Wald und nachhaltige Entwicklung' (BMZ, 2002) as a binding conceptual framework for forest-related development cooperation. Also under the FDP (Liberal) Minister Niebel (2009-2013), the BMZ website continued to refer to the forest sector concept as binding document. Only since 2015, under the CSU (Christian Social Union) Minister Müller, references to the sector concept of 2002 have been removed, and in March 2017 a 'Forest Action Plan for German Development Cooperation' (BMZ, 2017) was published.

A comparison of the presentation of the strategic approach of the CSU-led BMZ on its website in 2014 with the then still relevant sector concept of 2002 (BMZ, 2002) showed - besides a wide range of similarities - significant differences regarding the conception of the global forest problem and adequate solutions. The BMZ website, in first instance, referred to population growth, modernization deficits and inefficient use of resources as causes of the forest problematic, and emphasized economic instruments and incentives as well as economic development as solution approach. On the other hand, the sector concept primarily identified shortcomings in the political and economic framework conditions as causes of forest problems, had a stronger focus on the needs of forest-dependent local populations, assessed the role of economic development much more ambivalent, and emphasized forest protection as well as the development of consistent political and legal framework conditions as most appropriate solution (Buergin, 2014a, pp. 8-10).

Compared to the forest sector concept of 2002, the new 'Forest Action Plan' (BMZ, 2017) is conceptually much less explicit. In his preface, the responsible Federal Minister for Economic Cooperation and Development Dr. Gerd Müller (CSU) states that the global forest problem primarily is due to economic problems. By highlighting that

forests cannot persist in the long run if there are no alternative sources of income for the rural population, forest dependent local populations are particularly held responsible for deforestation and forest protection (BMZ, 2017, p. 4).

The twelve 'action fields' of the plan reflect the entire range of action of international forest policy in the context of global climate policy and the 2030 Agenda. As the three basic pillars of BMZ's forest policy, the action plan denominates the reduction of CO_2 emissions through REDD+, the rebuilding of forests through Forest Landscape Restoration, and the promotion of deforestation-free supply chains for agricultural raw materials. The former focus areas of the sector concept of 2002 are largely readopted as different fields of action in the 2017 action plan. However, the primary focus of the sector concept, the development and implementation of a consistent policy framework with a corresponding institutional landscape, has clearly lost significance in the action plan. In contrast to the sector concept, the forest dependent local population is no longer explicitly designated as the most important target group for development cooperation in the forest sector. Likewise, the central requirement in the sector concept, that projects have to make a concrete contribution to combating poverty, has not been included in the action plan. With regard to different strategic approaches, these changes can be interpreted as a shift of focus from a regulation approach to a competition approach, while indications of an empowerment approach are sparse in both concepts.

In all the reviewed concepts of forest-related development cooperation the objectives are manifold and ambitious. They include the use and protection of forests, the promotion of economic development, the preservation of a global ecological balance, the fight against poverty and the preservation of human and minority rights, as well as the support of global sustainable development. The three dimensions and major objectives of the discursive paradigm sustainable development are conceptualized as equally important while their significance may vary considerably in practical development cooperation. The following analysis of forest-related German

development cooperation focuses on different weightings of the three major objectives ecological forest protection, economic forest use, and improvement of the living conditions of forest dependent local populations.

Programs and major objectives

The study countries Cameroon, Democratic Republic of the Congo and Indonesia are home to large parts of the remaining tropical forests and are important partners of German development cooperation. In the period 2002-2014, the study countries received a total of about 3.9 billion USD in ODA for the environment and forestry sectors, to which Germany contributed about 9%, mainly to preserve the tropical forests (see Tab. 3).

Tab. 3: ODA for the environment and forest sector 2002-2014 in Mio. USD

	Cameroon	**DR Congo**	**Indonesia**
Environment sector ODA all donor countries	144	253	3.000
German share	56 (39 %)	89 (35 %)	109 (4 %)
Forest sector ODA all donor countries	109	134	255
German share	28 (26 %)	4 (3 %)	49 (19 %)

An analysis of the OECD data on forest-related German ODA for the case study countries between 2002 and 2012 with regard to the three major objectives 'forest conservation', 'economic forest use', and 'local livelihoods' indicates that the objective economic forest use was the primary goal for most of the funding, followed by 'forest conservation'. The major objective 'improvement of local livelihoods' was a primary goal for less than 6% of ODA in Cameroon and 3% in Indonesia, while for DR Congo no funds were classified in this category. However, in all three countries, the share of funding for which the improvement of local livelihoods was at least a secondary goal is significantly higher (Tab. 4, for a comprehensive analysis see Buergin, 2014a, pp. 19-31).

Tab. 4: Significance of major objectives in OECD data (2002-2012)

Primary goal	Cameroon	DR Congo	Indonesia
Forest and biodiversity conservation	37 %	15 %	17 %
Economic Forest use and management	62 %	85 %	81 %
Improvement of local livelihoods	6 %	0 %	3 %
Livelihoods as secondary goal	*21 %*	*19 %*	*16 %*

In % of total forest-related German ODA

The OECD data refer to documented payments of ODA from donor to receiver countries. However, development cooperation is primarily implemented in the form of programs and projects, which generally extend over longer periods, are based on consecutive payments and obligations, and are subject to recurrent negotiations between the development cooperation partners. To explore these programs, the OECD data have been aligned with additional information provided by the International Aid Transparency Initiative (IATI), development organizations, and other sources (as of November 2014). Hereby, for the period 2002 to 2020, a total of 89 completed, ongoing and planned forest-related programs of German development cooperation were identified, with a total volume of EUR 436 million. 39 of them were classified as 'ongoing programs' and were further examined (see Buergin, 2014a, pp. 31-35).

The overall EUR 384 million allocated for these 39 programs was provided for six programs in Cameroon (EUR 89 m), 13 programs in DR Congo (EUR 156 m), and 20 programs in Indonesia (EUR 139 m). Most of these programs were implemented by the two major development organizations GIZ and KfW, the latter responsible for more than half of the funds and GIZ for about a third. The 11 projects implemented by NGOs represented only 1.3% of total funding. Almost 90% of the funding came from the BMZ and about 10% from the BMUB via its International Climate Initiative (ICI). The information on these ongoing programs was further analyzed with regard to the quality of information, explicit objectives, target groups, applied instruments, and

implementation strategies, particularly trying to assess the significance of the three major objectives of forest-related development cooperation.

In the context of the guiding principle sustainable development, forest-related German development cooperation aims to integrate the major objectives forest conservation, forest use, and improvement of local livelihoods, thus almost all the programs address all three objectives more or less explicitly. Unfortunately, the poor information quality usually does not allow an accurate assessment of the significance of the different objectives. To estimate the relative importance of the major objectives at least roughly, the programs were assigned to three categories. If one of the major objectives was not mentioned in a program, this program was assigned to category 1 with regard to this objective. Category 2 was assigned if a major objective was addressed in a program, but not highlighted as a primary goal, while programs were classified in category 3 if the major objective was highlighted as a primary goal. (Buergin, 2014a, pp. 31-38)

The analysis shows that the patterns of the relative importance of the major objectives 'forest conservation' (FC) and 'forest use' (FU) are similar for all three countries, but differ significantly from the pattern of the major objective 'local livelihoods' (LL). While both 'forest conservation' and 'forest use' were addressed as important goals (category 3) with regard to more than one third of the funding, the major objective 'local livelihoods' was classified as an important goal for less than 1% of funding and had also the highest share in category 1 (not mentioned). However, most programs in all three countries and regarding all major objectives have been assigned to category 2.
(See Tab. 5)

Tab. 5: Significance of major objectives in ongoing programs

	Major objectives in all case study countries								
	1 (not mentioned)			**2 (Objective addressed)**			**3 (Primary objective)**		
FC	22.6 (3) 6 %			221.3 (22) 58 %			139.9 (14) 37 %		
FU	2 (1) 0,5 %			252.7 (24) 66 %			129.1 (14) 34 %		
LL	46 (5) 12 %			336.8 (29) 88 %			1 (5) 0,3 %		
	in different case study countries								
	Cameroon			**DR Congo**			**Indonesia**		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
FC	0	71.2 (5) 80 %	17.5 (1) 20 %	0	85.7 (6) 55 %	70.5 (7) 45 %	22.6 (3) 16 %	64.4 (11) 46 %	51.9 (6) 37 %
FU	0	27.5 (2) 31 %	61.2 (4) 69 %	2 (1) 1 %	147.8(10) 95 %	6.4 (2) 4 %	0	77.4 (12) 56 %	61.5 (8) 44 %
LL	0	88.7 (6) 100 %	0	12.5 (3) 8 %	143.7(10) 92 %	0	33.5 (2) 24 %	104.4(13) 75 %	1 (5) 1 %

Major objectives: FC = 'Forest conservation', FU = 'Forest use', LL = 'Local livelihoods'

First figure funding in Mio. EUR (in brackets number of projects), in % share of funding

Instruments and target areas

In order to better understand the conception and implementation of the various programs, these were analyzed with regard to the instruments used and the target groups addressed. Unfortunately, the poor quality of information for many programs does not allow a meaningful analysis of this data at the program level. In order to at least estimate the relative importance of the different instruments, they were differentiated according to the social spheres and actor groups which they primarily target, and were categorized according to the frequency of their mention and their importance in the programs.

While programs are generally very complex and seek to integrate the three dimensions ecology, economy and social affairs, the instruments applied in these programs target different social spheres and actor groups very specifically. For the purpose of this study, the differentiation of the 'target areas' refers to the societal domains 'state', 'market' and 'civil society'. Apart from problems with lack of information, the allocation of an

instrument to a target area was generally unambiguous. To assess the relative importance of instruments, those mentioned only once were assigned to category 1, while category 2 instruments were mentioned several times in different programs. Category 3 refers to instruments which were highlighted as particularly important in at least one of the programs. (See Tab. 6)

Tab. 6: Instruments of forest-related development cooperation

Primary target areas	Instruments of forest-related development cooperation	Cameroon	DR Congo	Indonesia
Government and administrative bodies	Development of National Forest Programs (NFP)	3	3	3
	Development of strategies and instruments to implement NFPs	2	1	3
	Zoning and land use planning on the national and regional level	1	1	2
	Planning of protected area networks and integrated conservation	2	2	2
	Development & implementation of administrative agencies and institutions	3	3	3
	Implementation of forest management plans according to SFM principles	2	1	3
	Education and training of foresters and administrative staff	1	2	2
	Compilation of forest and biodiversity inventories		1	2
	Development & implementation of forest monitoring systems		1	2
	Facilities for forest surveillance, protection, patrolling, and fire-fighting	1	2	2
	Infrastructure development (machines, transportation, buildings, roads)	1	1	2
	Aerial surveys, satellite imagery, and GIS mapping	1	2	3
	Climate change modelling	2	2	
Markets, enterprises, and economic actors	Extraction & marketing of timber, reduced impact logging (RIL)	1	1	1
	Certification systems and FLEGT	2	2	2
	Re- and afforestation projects		1	1
	Ecosystem restoration concessions (ERC)			3
	Payments for environmental services (PES)			1
	REDD+ preparation and pilot projects	2	2	3
	Carbon storage studies and mapping	1	2	2
	Development of measuring and monitoring systems for CO2 emissions		1	2
	Development and marketing of NTFPs	1		2
	Agricultural development and improvements		2	2
	Development & improvement of market access and infrastructure	1	2	2
	Development of tourism and ecotourism	1	2	2
	Training in handicraft, agriculture, and business			1
Civil society, NGOs, and local communities	Awareness building and environmental education	1	2	2
	Training in sustainable forest use and management		2	2
	Support of Climate Change Adaptation	1	2	1
	Development and support of participatory institutions		1	1
	Gender mainstreaming	1		1
	Participatory village mapping (PVM)			1
	Community based forest management (CBFM) and community forests	1		1
	Legal advice, mediation, and advocacy			1
	Networking on the regional, national, and international level	1	1	1
	Support for academic and educational institutions	1	1	1
	Socio-economic and ecological surveys and studies	1	2	2

1 = 'mentioned one-time', 2 = 'mentioned several times', 3 = 'emphasized as primary instrument'

The analysis shows that instruments primarily targeting the state and administrative bodies - thus having a certain affinity to the regulation approach - are applied in all case study countries and are often mentioned several times (category 2) or highlighted as particularly important instruments (category 3). The instruments which primarily target markets and economic actors - more closely related to the competition approach - show a less even distribution pattern regarding the three countries and are most important in Indonesia. Many of these instruments are linked to climate protection and REDD+ projects which are important in all countries. Compared to the regulation related instruments however, the competition related instruments were less frequently assigned to category 3. Compared to instruments that primarily target markets and administrative bodies, instruments which focus on civil society institutions and local communities - and are thus closer to the empowerment approach - are significantly less important. Most of the empowerment related instruments were mentioned only once (category 1), and particularly rarely in the programs of Cameroon and DR Congo. A more detailed analysis of the programs in Indonesia furthermore shows that empowerment instruments only play a marginal role there too (see Buergin, 2014b, pp. 47-75).

While the assignment of the instruments to the primary target areas was possible without major contradictions, an unambiguous assignment to specific objectives or approaches is not possible. Each of the instruments can be used to implement one or all of the three major objectives 'forest conservation', 'forest use' and 'local livelihoods'. The purpose and effects of the instruments depend less on their kind and target area, than on the context of their application and the mindsets which frame their implementation.

Mindsets and organizations

In the context of this study, the influence of different mindsets on the implementation and results of practical development cooperation could only be explored heuristically. The differentiation of mindsets and their cognitive constructs is based on the analysis of

discourses and policy approaches as well as the evaluation of interviews and discussions with various stakeholders of forest-related development cooperation. The argumentation structure of these actors generally more or less clearly reflected one of the three mindsets. The statements of the interviewees also suggested that these mindsets shape their perceptions, objectives and actions in the context of development cooperation. An empirical analysis of the relevance of these different mindsets of individual actors for practical development cooperation was not possible.

In order to gain an idea of the influence of the different mindsets, the information about the programs was analyzed with regard to the extent they reflected the patterns of reasoning of the different mindsets which was interpreted as an indication for their relevance. Due to the complexity of most programs and the diversity of goals and instruments they apply, it was generally not possible to assign a specific program to a single mindset. Therefore, each program with regard to each of the three mindsets 'regulation' (RM), 'competition' (CM) and 'empowerment' (EM) has been assigned to one of three categories. Category 1 ('not relevant') was assigned when there was no evidence that the specific mindset was relevant to the program. Category 2 ('relevant') signifies that the cognitive construct of a specific mindset appeared in the information about the program. When the information suggested that a particular mindset was of particular relevance to the program it was classified into category 3 ('important').

The analysis suggests that the regulation mindset (RM) was the most important in all three countries. A total of 70% of all funding was assigned to category RM3 ('emphasized') and another 23% to category RM2 ('relevant'), while only 7% was categorized as RM1 ('no indication'). With regard to the competition mindset, 23% of all funding was categorized as CM3 and 70% as CM2, which indicates a slightly lower importance of the competition mindset compared to the regulation mindset. However, the share of the programs in which both mindsets are 'relevant' or 'emphasized' (CM2+CM3 and RM2+RM3) is almost the same with 93%. The empowerment mindset (EM) is significantly less important compared to the regulation and competition

mindsets. Less than 1% of the total funding for all three countries was allocated to one of the categories EM2 or EM3, and in Cameroon all programs were categorized as EM1 ('no indication'). (See Tab. 7)

Tab. 7: Relevance of mindsets in ongoing programs

	All case study countries		
	1 (No indication of mindset)	**2 (Mindset relevant)**	**3 (Mindset emphasized)**
RM	27.5 (10) 7 %	87.4 (10) 23 %	268.9 (19) 70 %
CM	28.1 (7) 7 %	267.2 (23) 70 %	88.5 (9) 23 %
EM	381.7 (31) 99 %	1.0 (2) < 1 %	1.1 (6) < 1 %

	in different case study countries								
	Cameroon			**DR Congo**			**Indonesia**		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
RM	10.0 (1) 11 %	20.0 (2) 2 %	58.7 (3) 66 %	0	42.8 (6) 27 %	113.4 (7) 73 %	17.5 (9) 13 %	24.6 (2) 18 %	96.8 (9) 70 %
CM	10.0 (1) 11 %	37.5 (3) 42 %	41.2 (2) 46 %	17.5 (3) 11 %	132.6 (9) 85 %	6.1 (1) 4 %	0.6 (3) < 1 %	97.1 (11) 70 %	41.2 (6) 30 %
EM	88.7 (6) 100 %	0	0	156 (12) > 99 %	0.3 (1) < 1 %	0	137 (13) 98 %	0.7 (1) 1 %	1.1 (6) 1%

Mindsets: RM = 'Regulation Mindset', CM = 'Competition Mindset', EM = 'Empowerment Mindset'
First figure funding in Mio. EUR (in brackets number of projects), in % share of funding

All programs for which the empowerment mindset was relevant (EM2) or particularly important (EM3) were implemented by NGOs. 42% of the funds implemented by NGOs fell into these two categories, but made up only 0.3% of the total funding. However, the regulation mindset was even more important in NGO programs, while the competition mindset was least relevant. The regulation mindset (RM) was also the most important in the GIZ programs with 96% of the funding in category RM3, while 61% of the funds implemented by the KfW were assigned to this category. Regarding the importance of the competition mindset (CM) there were no marked differences between the GIZ and KfW programs, predominantly categorized as CM2. The empowerment mindset is marginal in both organizations. (See Tab. 8 and Buergin, 2014b, pp. 78-84)

Tab. 8: Mindsets and implementing organizations

	Regulation (RM)			Competition (CM)			Empowerment (EM)		
	1	2	3	1	2	3	1	2	3
GIZ	0	4.6 (1) 4 %	123.4 (8) 96 %	0	104.2 (7) 81.4%	23.8 (2) 19 %	128 (9) 100 %	0	0
KfW	15.7 (2) 8 %	62.1 (5) 31 %	121 (8) 61 %	15 (1) 8 %	142 (10) 71.4%	41.8 (4) 21 %	199 (15) 100%	0	0
NGO	1.8 (7) 36 %	0.7 (2) 14 %	2.5 (2) 50 %	3.1 (5) 62 %	1 (4) 20 %	0.9 (2) 18 %	2.9 (3) 58 %	1 (2) 20 %	1.1 (6) 22 %
n.d.	10 (1) 19 %	20 (2) 39 %	22 (1) 42 %	10 (1) 19 %	20 (2) 39 %	22 (1) 42 %	52 (4) 100 %	0	0

First figure funding in Mio. EUR (in brackets number of projects), in % share of funding by organization, n.d. = no data on organization

On the institutional level the two major development organizations differ significantly, even though the conventional distinction between 'technical' and 'financial' cooperation characterizes these differences only inadequately. The analysis of public self-presentation and discussions with employees of the two organizations suggests that GIZ - with its focus on 'technical cooperation' - is closer to the regulation approach, while KfW - with its focus on 'financial cooperation' - rather pursues a competition approach. However, this institutional proximity to different strategic approaches does not determine the patterns of reasoning or mindsets expressed by employees of the organizations. Some of the interviewed GIZ employees clearly expressed the argumentation pattern of the competition mindset. Various employees furthermore believed that the competition approach is also gaining in importance within GIZ. The empowerment mindset was marginal in both major development organizations and appeared almost exclusively in the argumentation pattern of NGO employees. (See also Buergin, 2014b, pp. 82-84)

Conclusion

The focus of this study was on the analysis of different weightings of the three major objectives 'forest conservation', 'forest use' and improvement of 'local livelihoods' in forest-related German development cooperation with Indonesia, Cameroon and the

Democratic Republic of the Congo. For the conceptualization and analysis of the interrelation between the guiding principle sustainable development and its implementation in practical development cooperation, different positions were differentiated at the discursive level. At the institutional level these discourse positions were related to different strategic approaches and at the level of individual actors they correspond with specific patterns of reasoning or mindsets. Within the scope of this study, the analysis of practical development cooperation and interdependencies of discourse and practice had to remain explorative. Research problems are not only due to the complexity of these interrelations and difficulties to determine impacts and causal relations, but also the poor quality of available data and the lack of transparency. An improvement of information policies of the involved agencies and organizations is urgently needed (see also Buergin, 2014b, pp. 83-84).

Despite these limitations, tendencies regarding the significance of different objectives and mindsets are discernable. The analysis of strategies, funding, programs, and instruments, at all these levels, indicates different weightings with regard to the major objectives of forest-related German development cooperation. The objectives of forest conservation and economic forest use have been clearly prioritized compared to the objective of improving the living conditions of forest-dependent local communities. In the context of the guiding principle sustainable development, this imbalance can be justified by referring to the convergence and mutual promotion of the three major objectives. However, the study also shows that such a mutual beneficial convergence of objectives cannot be presupposed and that conflicts of goals are likely.

The study suggests that the major imbalances between the objectives of ecological forest conservation and economic forest use on the one hand, and of the improvement of local livelihoods on the other hand, are significantly determined by diverging discursive positions, strategic approaches, and mindsets. With regard to forest-related development cooperation, these different approaches and mindsets have been characterized with the labels 'regulation', 'competition', and 'empowerment'. In order to

enable a reflexive and deliberative design of forest-related development cooperation and to be able to decide rationally on strategies and instruments, it is necessary to reflect and further analyze such influences of discourse positions, strategic approaches, and mindsets. In this context, a reassessment of the empowerment approach and its significance in development cooperation is particularly necessary. The development and promotion of community rights in international policy frameworks and legal regimes could be a crucial approach to strengthen local communities and civil society, in accordance with stated objectives of German and international environment and development policies. Furthermore, implications of the competition approach with regard to the objectives forest conservation as well as the improvement of local livelihoods and rights of forest-dependent communities have to be examined empirically in more detail. (See also Buergin, 2014b, pp. 77-88, and Buergin, 2017)

The concept of mindsets was introduced to capture impacts of discourse positions and cognitive framings on practical development cooperation. As specific cognitive constructs which are structured by different positions on the discursive level they guide perception, evaluation, and options for action on the individual level, and thus determine practical planning and acting of individuals and institutions. Indications of the influence of different mindsets were found with regard to individual actors as well as programs and organizations of forest-related development cooperation. These cognitive pre-settings not only shape the perceptions, evaluations and actions of individual actors, but also co-determine impacts and changes on the structural level of discourses, organizations, and institutions. Such a concept of mindsets can be helpful for the study of the interdependence of discourse and practice.

For this purpose, the mindset concept needs to be conceptually further developed and empirically verified in an interdisciplinary approach. Mindsets, on the one hand, appear as explicit patterns of reasoning and deliberate action strategies. However, they also function as unconscious assumptions or pre-settings, which may impede a reflexive assessment and discussion of problems as well as the search for appropriate solutions.

The analysis of mindsets can help to increase transparency in disputes about objectives and strategies in environment and development policies, to develop solution approaches better adapted for particular problems and objectives, and to efficiently implement these approaches.

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