

**Conflict and Cooperation over Natural resources
in developing countries**

A knowledge, research and innovation programme

July 2008

ABBREVIATIONS

CIFOR	Centre for International Forest Research
DGIS	Directorate-General for International Cooperation (DGIS) of the Ministry of Foreign Affairs of the Netherlands
DMW	Department Environment and Water (Dutch Ministry of Foreign Affairs)
EFA	Environmental Foundation for Africa
GW	Humanities (division of NWO)
IP	Integrated Project
IPAC	International Programme Advisory Committee
KOS	Knowledge, innovation and research strategy
MaGW	Social Sciences (division of NWO)
MDG	Millennium Development Goal
NGO	Non-Governmental Organisation
NWO	Netherlands Organisation for Scientific Research
WOTRO	Science for Global Development (division of NWO)
WUR	Wageningen University and Research Centre

Table of contents

- 1. Introduction 4**
 - Introduction to the theme
 - Terminology
 - Background of this programme

- 2. Programme objectives 6**
 - Objectives
 - Sub-objectives
 - Knowledge, research and innovation
 - Process of demand articulation
 - Monitoring
 - Sharing of knowledge and learning

- 3. Programme structure 8**
 - Overall structure
 - Integrated projects
 - Programme design

- 4. Analytical key features and themes 11**
 - Analytical key features
 - Themes

- Annex 1. Background of the programme 13**

- Annex 2. Definition and analytical key features for the research component16**

- Notes 18**

1. Introduction

Introduction to the theme

In conflict studies, development studies, political science and policy circles there has been, over the last decade, a vivid debate on the nexus between natural resources and conflict. For some analysts, the degradation of the environment was a key explanatory factor of conflict. Others focused on resource scarcity or distribution as the key issue, often associated with one particular resource or mineral. The idea of resource abundance as a conflict factor also emerged: the so-called 'resource curse'. The present position is the recognition that natural resources degradation and scarcity may play a role in the rise of conflicts, but that conflicts can rarely be characterized as purely 'resource-driven'.

Conflict has detrimental, negative and destructive powers, but conflict can also be a key driver of change—without conflict no change and no change without conflict. Conflict brings creative potential that helps families, organisations and states to (re)define themselves, to innovate and create. There is need to not only look at conflict as an agent of negative impacts but also as an agent of positive change. Thus, tension and conflict may also be seen as a source of innovation and creativity to adapt land-use and governance systems. There is need to know under what conditions conflicts may lead to innovation and cooperation.

Continuation of conflict may be in some parties' self-interest, and a longitudinal orientation on conflict may facilitate better understanding of these processes. For instance, in the case of economies of war with heavy investments in arms and drugs trade, or vested interests in oil, diamond and timber, multiple parties seem to benefit from prolonged rather than resolved conflict. The question would be under what conditions the parties involved have more interests in collaboration and peace processes.

Without doubt, the scale of the problems has recently increased and so have the interests at stake. Recently, debates have focused on the possible role of climate change in causing conflict in the future. Even more recently, the growing demand for biofuels has given rise to increasing competition with local food security and competing claims over land. Global markets and trade patterns create tensions when markets rapidly expand or shrink. With respect to marine resources, there are growing pressures on declining fish stocks and as a result growing tensions between artisanal and industrial fishing fleets. A range of factors including environmental governance issues, processes of empowerment and social action determine whether tensions evolve into conflicts or into cooperation. Understanding these dynamics is critical for the livelihoods of millions of people who directly depend for their daily living on natural resources.

Knowledge and innovation are essential to the development process. The focus is no longer so much on discovering new technological principles but on how to make use of the existing stock of knowledge. Knowledge sharing is an important source of creating new knowledge and innovation, but inequalities in the capacities for accessing and using knowledge pose a constraint to development in many countries. The study of conflict and cooperation over natural resources spans several levels of analysis and bridges many disciplines. At the same time the current speed of change as a response to the interplay of various global factors requires new forms of linking knowledge with research and innovation.

The programme 'Conflict and cooperation over natural resources' is meant to meet these challenges. It is innovative and ambitious in putting local demand articulation and ownership at the forefront and in making available knowledge for development and combining this with high-quality research to bring about positive change in the interface between natural resources and conflict.

Terminology

The term natural resources specifies the focus on problems and opportunities associated with the exploitation and management of natural resources. In this programme document the term conflict is not narrowly interpreted in the sense of violence and armed conflicts, but is more broadly interpreted as a fight, a struggle, or the clashing of opposed principles. Thus, an appropriate working definition would be one of conflict being a process that begins when an individual or group perceives differences and opposition with others about interests and resources, beliefs, information, values or practices that matter to them (see for details Annex 2).

Background of this programme

This knowledge, research and innovation programme has been initiated and is being funded jointly by the Directorate General of Development Cooperation (DGIS) of the Ministry of Foreign Affairs of the Netherlands and the Netherlands Organisation for Scientific Research (NWO). DGIS has developed directorate-wide 'knowledge, innovation and research strategies' (KOSs) that pursue the integration of knowledge and research into the Ministry's development policies and programmes. This is based on the recognition that poverty reduction and the attainment of the Millennium Development Goals (MDGs) require policy innovation and continuous learning.

The Department 'Environment and Water' (DMW) of DGIS has elaborated a KOS-document for Environment, Water and Poverty Reduction with the objective "to promote innovation in policies and programmes in the field of environment and water that will contribute to poverty reduction and to the achievement of the MDGs; and to strengthen institutional capacity in developing countries." Conflict and natural resources as a focal theme matches with the NWO theme of Conflict and Security, in which the NWO Divisions of the Humanities, Social Sciences and WOTRO Science for Global Development participate, and in which 'Natural Resources and Conflict' is one of the programme lines. In terms of its contents, this programme explicitly seeks to combine priority themes of the DMW KOS with scientific trends in research identified in the NWO theme (in particular, the multifaceted functions of conflict, the dynamic and longitudinal nature of conflict, and cross-level influences).

DGIS/DMW and NWO have shared interests in this programme. The two institutions see mutual benefits in collaboration on the subject of conflict and natural resources, by (i) the focus on enhancing development (positive change) by providing contributions to evidence-based policy development and practice in the field of conflict and natural resources, and (ii) the focus on making knowledge available, conducting high quality research and enhancing innovation in the field of natural resources and conflict. The focus on a positive contribution to development implies that the programme's knowledge and research activities need to be strongly embedded in a wider development context and innovation system. It requires the active interaction with key stakeholders in demand articulation, design and execution of concrete research projects. This will guarantee relevance and the incorporation of results in policy and practice. The proposed structure of the programme seeks to ensure such active interaction. The contents of the programme are only broadly defined, as the awarded consortia in collaboration with various stakeholders will identify relevant themes. This reversion of the order (of contents and structure) emphasises the developmental focus of this programme.¹ The reader is referred to Annex 1 for details on the background of both initiating institutions and the formulation of this programme.

Chapter 2 outlines the main objectives and elaborates on the key issues of this programme, especially the linkages between knowledge, research and innovation, and the process of demand articulation. Chapter 3 discusses the programme structure and design, and introduces the concept of Integrated Projects (IPs) and its main characteristics. This is followed by Chapter 4 on the key features of knowledge and research in the area of conflict and natural resources. This chapter also describes the three thematic priorities.

2. Programme objectives

Objectives

This programme is a knowledge, research and innovation programme, which is a new concept for both DGIS and NWO. Its aim is to contribute to sustainable development, poverty reduction and the realisation of the MDGs (positive change). The objective is to contribute to evidence-based policy development and practice in the field of conflict and cooperation over natural resources, and to adequately manage, resolve and learn from conflicts over natural resources.

Sub-objectives

The objective can be divided into three distinct sub-objectives, i.e. to contribute to:

1. Providing society with tools and perspectives for evidence-based policy development and practice in developing countries—the *Development perspective*.
2. Generating knowledge, high quality research and innovation in the field of conflict and cooperation over natural resources—the *Knowledge, research and innovation perspective*.
3. Capacity building of organisations, groups and individuals, including researchers, policy makers and other stakeholders at different levels—the *Capacity development perspective*.

To implement this programme Integrated Projects (IPs) will be financed. Each IP will need to demonstrate integration and synergy of the above three perspectives: a clear development perspective, high-quality knowledge and research, and capacity building. In practice, this synergy may take different forms for various projects. For instance, demands of decision-makers and practitioners for knowledge in the field of conflict and natural resources might be met by making available existing knowledge or by fast-track action-oriented research. On the other hand, there is room for curiosity-driven research not addressing immediate development priorities, but using a longer term perspective. Furthermore, the need and potential for capacity building may strongly differ from one conflict area to another. For that reason, individual activities or (sub)-projects can emphasise one of the above perspectives and be elaborated in various ways, provided they are relevant for and well-integrated into the overall project.

Knowledge, research and innovation

Knowledge generation, research and innovation in policy-making and practice is basically a continuous and iterative process. The focus on knowledge implies first of all the effective and efficient use of available information and insights (scientific or otherwise), and then combining this with high quality research—implying originality and adequacy ('sound science') in research—on knowledge gaps to generate new knowledge and enhance innovation. An important step is the sharing of knowledge and (emerging) results of research projects within the programme and with related programmes/initiatives. Some knowledge demands require a review or analysis of existing knowledge and making this available to policy makers and a wider public. In many cases existing knowledge may be available but not be well accessible, insufficiently analysed or not disseminated to potential users. Thus, to address knowledge demands, this programme does not always start with initiating new research. It is assumed that better access to knowledge will lead to more insights and help policy makers and other stakeholders to make better decisions. It is recognised that making knowledge available has a political dimension: making available which information and for whom, with what purpose and potential use? These questions should be adequately addressed with every knowledge demand.

All research to be undertaken within this programme will be of high quality, will enhance innovation and will address identified knowledge gaps. Knowledge gaps may require different types of research, ranging from fast-track research to medium or long term research and from applied to more fundamental research. There is room for curiosity-driven research if its development relevance can be demonstrated and if researchers and other stakeholders closely cooperate.

Researchers can make use of a variety of methodologies. Participatory and action-oriented research methods may be particularly instrumental for involving stakeholders and strengthening ownership, and thus contribute to the use of knowledge and the implementation of research results. Yet, other methodologies (large scale surveys, laboratory modelling, game simulations, statistical analysis, qualitative methods, etc.) and the triangulation of various methodologies may equally prove relevant.

'Research in conflict situations' is a particular type of local research, whereby the research process and the knowledge being generated may directly contribute to conflict management, by interaction between researchers and stakeholders. This requires specific negotiation and facilitation skills of researchers. A range of different tools is available for this type of research, including visualising techniques. Yet, it is equally possible that research outcomes will generate new research questions for comparative analysis to reach more generalised insights.

Specific conflicts (within a country, cross-country or on a regional level) will be the focus of the IPs. These projects, therefore, have a specific geographical focus as their starting point, but can spread out to and comprise other levels and include, especially, the linkages between them. Thus stakeholders involved may equally be from different levels, including the international policy arena.

Process of demand articulation

Rather than coming up with a detailed set of research themes, consortia submitting a proposal for an IP are requested to demonstrate how they will manage a process of demand-driven knowledge, research and innovation activities. This includes the following elements:

- Thorough understanding of the conflict, to ensure that knowledge and research questions and expected results are relevant and focused. This requires insight in contextual factors at different levels (local, national, regional and international).
- Involvement of key stakeholders in demand articulation and research design to ensure demands are addressed and priorities are met.
- Proper translation of stakeholder demands into knowledge and research questions as well as capacity building activities.
- Enhancing ownership among potential end-users to ensure that results are taken up and used in policy and practice (both in the North and the South).
- Linkages with national and international research and policy agendas, to avoid duplication, enhance synergy and ensure embedding in broader development and research agendas.

In order to secure demand articulation, feedback, uptake and relevance, non-research stakeholders are part of the consortium and governance of the integrated programmes.

To address these elements, financial means for a 'demand-articulation process' will be made available to elaborate IP proposals (see Chapter 3).

A second key to success is communication with and involvement of stakeholders during the implementation of the project's activities. Communication is important for at least three reasons: to communicate progress, to make adjustments based on feedback, and to strengthen ownership. Enhancing ownership by actively involving and communicating with decision-makers and other potential end-users is a guiding principle. It starts out from clear demand articulation based on the needs and priorities of potential users, keeps them well informed and provides them with possibilities to influence the project's course and results.

Monitoring

It must be recognised that this programme has an ambitious objective and is challenging in at least two ways. One challenge is the orientation at knowledge, research and innovation and the

need to demonstrate their usefulness for policy and practice. Secondly, the theme of natural resources and conflict is complex and multi-faceted and has intricate political and institutional dimensions. IPs will define expected outcomes, mile stones and success factors to enable the monitoring of progress, draw lessons and identify good practices to share within the programme at large (and beyond).

Sharing of knowledge and learning

The programme will enhance effective sharing of knowledge and experiences between projects within the programme and with related programmes/initiatives. NWO will bring together different projects and initiatives with the aim to generate new insights and innovative knowledge for policy makers and practitioners, both in the North (DGIS and others) and in the South. Also, there is need for mutual learning on how to conduct IPs falling within this programme.

Different tools are available to enhance the exchange of knowledge and learning, such as websites, newsletters, workshops and conferences. Depending on the theme, options to be selected will involve stakeholders from research and practice, both from northern and southern (developing) countries. It is envisaged to have workshops and conferences in regions where research is executed (corresponding to DGIS priority countries or regions).

3. Programme structure

Overall structure

The programme 'Conflict and Cooperation over Natural Resources' is part of the Conflict and Security theme of NWO, The programme, however, will have a relatively autonomous character with its own Steering Committee, which will be mandated to decide on the funding of projects, and an International Programme Advisory Committee (IPAC) to assess and prioritise proposals. The connection to the NWO theme of 'Conflict and Security' will be assured. One of the members of the theme committee of 'Conflict and Security' will be a member of the Steering Committee of 'Conflict and Cooperation over Natural Resources'. Furthermore, DGIS may nominate a representative in the Societal Advisory Committee of the 'Conflict and Security' theme. Moreover, active knowledge exchange and sharing between the various programmes of the NWO theme as well as with other initiatives will be developed by NWO.

Integrated projects

The programme 'Conflict and Cooperation over Natural Resources' will be implemented through a limited number of long-term Integrated Projects (IPs), for which consortia will be invited by NWO to submit proposals. The IPs will have the following characteristics.

1. *Consortium.* An IP is directed by a consortium composed of a limited number of representative, competent and credible key stakeholders. The consortium will steer the process of demand articulation, translate demands into relevant knowledge and research questions, coordinate knowledge and capacity building activities, give advice on research and support the application of new knowledge and insights. Apart from that, the consortium will actively involve other stakeholders as a second layer around the core group of key stakeholders in identifying demands and setting priorities, translating these into knowledge and research questions, undertaking high quality research, and applying new knowledge and insights. To safeguard scientific objectivity and academic independence, the research methodology and the process of conducting the research will be managed by the research institutes involved.
2. *Key stakeholders.* Involvement of relevant, competent stakeholders that have complementary skills and disciplinary perspectives is crucial for success of any project

responding to the objectives of this programme. Key stakeholders include collaborators from research as well as non-research institutes from both the North and the South. Key stakeholders from non-research institutes may originate from civil society, government or the private sector and be affiliated to local, national, regional as well as international organisations. They play a role in the setting of the conflict, either in conflict management, prevention or resolution, or in related policy making, awareness raising or capacity building. They will be involved in the design of the IP, play a central role in the process of demand articulation, and give feed-back on the progress and application of results. Selected key stakeholders will form a consortium to direct the IP. Special attention needs to be given to the issue of legitimacy of stakeholders, especially in relation to poor groups.

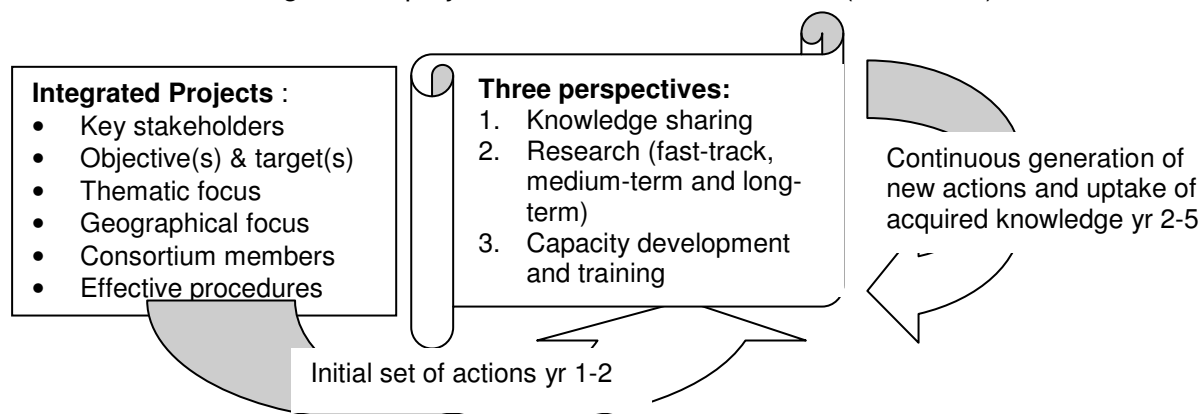
3. *Objectives and success indicators.* Proposals should elaborate one or more concrete development objectives to which the IP will contribute, with indicators, targets and/or success factors that can be used to monitor progress in time. Expected results should show how knowledge, research and capacity building activities will contribute to these objectives.
4. *Thematic focus.* To avoid the risk of fragmentation, a limited number of rather large IPs focusing upon broad themes will be funded. The thematic focus will be based on demands and priorities expressed by the key stakeholders and have to be in line with (one or more of) the three thematic priorities of the 'Conflict and Cooperation over Natural Resources' programme (see Chapter 4).
5. *Geographical focus.* An IP will focus on a specific geographically delineated conflict area to allow for the identification and consultation of relevant stakeholders. This area may be sub-national, national or even cross national borders, depending on the specific conflict, but should have primary relevance for the DGIS ODA policies (in terms of the DGIS partner countries and regional programmes).² Ideally, different scale levels are involved, and the IP should indicate how these will be integrated. Thus, there may be need for in-depth understanding of dynamics at the local level as well as insight in relevant issues at a global scale (see also the analytical key features in Chapter 4).

For inspiration

It is emphasised that the design of an IP should start out as much as possible from the demands, perceptions and framing of problems in the respective geographical area, avoiding adjustment to preconceived knowledge and research themes and topics. Also, the consortium should be formed on the basis of local networks and the logic of stakeholder demands within the geographical area in question. The following suggestions may offer some relevant starting points:

- There may be a local network of NGOs dealing with natural resources management issues: bring these together and connect them to a research institute;
- There may be an existing business consortium dealing with a certain agricultural sub-sector or commodity: bring these together with relevant NGOs and form a stakeholder forum around a key natural resources management problem—in many cases such fora already exist;
- There may be needs expressed by a ministry, e.g. on problems with environmental governance and capacity building of decentralised authorities dealing with natural resources management, or being confronted by environmental NGOs with problems on accountability and evidence of natural resources degradation;
- There may be a cooperative of producers around a certain agricultural commodity, confronted with problems of scarcity or conflict, including over "illegal" crops.
- There may be important existing stakeholder processes of conflict resolution or prevention that so far undervalued the role of natural resources for lack of understanding of the dynamics involved. They might want to invest in adding a knowledge and research component to their work.

6. *Three perspectives.* An IP proposal should make clear how it will constitute and put into operation the provision of high quality services in terms of the three perspectives:
- Knowledge sharing, i.e. making existing knowledge worldwide accessible and synthesising this to generate tools and perspectives for development policy and practice;
 - Research, both fast-track and long-term;
 - Capacity building and training activities, separately or possibly as part of action-research, focusing at the application of innovative insights.
7. *Initial set of projects.* IP proposals will include a first set of coherent sub-projects or activities that address expressed demands and priorities to be executed within the first two years. During these years new sub-projects and activities will be identified, based on newly discovered knowledge gaps and expressed demands. These additional sub-projects and activities can be formulated and submitted after the second call for proposals. New proposals will always be in line with the main objective(s) of the IP, but there is room for comparative research linked to other IPs or related initiatives.
8. *Effective process approach.* Knowledge, research and innovation in policy-making and practice are basically continuous and iterative processes. The IP should assure an effective process of demand articulation, stakeholder involvement, feed-back on progress and take-up of new knowledge and insights. New issues and demands for knowledge, research or capacity building will be translated into new activities. To do so, the IP should include effective working procedures and communication strategies as well as learning tools and events for exchange at the project and the international level (see below).



Programme design

A first call for IP proposals will be followed by a second call after two years and possibly—if deemed useful—a third call. The calls, and the assessment and selection of proposals will be set up according to standard NWO-practice, i.e. based on competition and independent peer review, offering the opportunity to applicants to reply to comments raised by reviewers, and separating quality assessment and ranking of proposals from decision making on granting.

The first call for proposals will be directed at medium-sized (k€ 600) IPs with a duration of five years. Later calls will provide the opportunity to extend activities of the initial IPs (to a max. of 1,000 k€), and—if felt useful—to submit new IPs to cover pertinent knowledge gaps, research questions or geographic areas not yet covered by the IPs awarded after the first call. As such there is scope for extension and/or expansion of existing consortia and their activities, and possibly for new consortia to develop an IP.

The assessment and selection procedure for initial IPs will be split in two stages. Consortia will be invited to submit a preliminary proposal. The proposals will be assessed and ranked by the IPAC, whereupon selected consortia will obtain a grant of 20 k€ for intensive stakeholder participation and the joint elaboration of the project proposal design. In the second stage, the evaluation procedure will include independent review by peers from science, policy and practice and an assessment and prioritisation by the IPAC, leading to an advice concerning which applications should be awarded. The decision on granting will be taken by the Steering Committee.

The criteria for assessment and selection are in line with the three programme perspectives:

- Relevance for development;
- Scientific quality and potential for innovation; and
- Collaboration and capacity development.

Evidence of the engagement of other stakeholders—from inception to the sharing of emerging results—will be an important element in the assessment of IP proposals. Further details on the IP instrument, procedures and criteria are elaborated in a separate document: tentative IP call for proposals.

The development of later calls will be based upon a thorough mid-term review, under the responsibility of the Steering Committee.

4. Analytical key features and themes

Analytical key features

Four analytical key features have been identified to be taken into account when undertaking research on conflict and natural resources. These will need to be reflected in the proposals. Respecting these key features will help to generate relevant and new insights in the relations between natural resources and conflict. The four key analytical features are the following:

- multi-causality, acknowledging that there is an interplay of various factors causing conflicts over natural resources;
- the multi-faceted functions of conflict, acknowledging the need for research to not only look at conflict as an agent of negative impacts but also as an agent of positive change;
- the dynamic and longitudinal nature of conflict, acknowledging that conflicts are embedded in several layers of time and often have profound historical roots;
- cross-level and multi-actor influences, acknowledging the interplay between actors and developments at different levels.

These features, more fully described in Annex 2,³ all contribute to the overarching characteristics of interdisciplinarity and transdisciplinarity.

A second overarching dimension, associated with the process of avoiding and managing conflicts in natural resources, is that of generating insight in conflict management tools. Reference is made to peace building processes and the 3-D approach of Defence, Development and Diplomacy. Clearly, which of these tools will be most suitable depends upon the specific context and circumstances.

Themes

The following three themes are considered to be priorities for knowledge and research on the relations between natural resources and conflict. An IP will focus upon one or more of these

themes.⁴ Specific research topics will need to be specified and justified within each proposal. For each theme a comprehensive list of potentially relevant research topics, which can be used for inspiration, will be published on the NWO web site.⁵

Theme 1: Conflicts, land rights and land-use change

Many conflicts seem to stem from land pressure and scarcity. Scarcity of fertile land is one of many factors in the poverty–environment nexus, where local factors (e.g. land rights) and supra-local factors (e.g. governance issues) interact. It is argued that the main driving force is not resource scarcity *per se*, but rather the allocation of the resource, the rules and procedures for its allocation and the historical and cultural roots associated. Likewise, poverty may be one denominator of conflicts, resulting from loss of livelihood that in turn is caused or exacerbated by environmental degradation and reduced access to natural resources. But rather than absolute levels of poverty, relative poverty and unequal access to resources is mentioned as a main driver. At the same time, some level of inequality may enhance private initiatives and private sector development. Conflicts may emerge due to resource scarcity or mal-distribution and competing claims to natural resources. Local tensions may escalate into more prominent violence. These conflicts need to be positioned and monitored in terms of changes in rural livelihoods and associated ecosystems. There is also a need to gain insight in the role of government policy in forging or exacerbating socio-economic differentiation among different identity groups, and governance issues such as corruption and economic policy. Lastly, land-use tensions may result from external influences such as climate change and the expansion of the agricultural frontier, e.g. by increasing production of agro-commodities to respond to global markets (e.g. soy, bio-fuels, palm oil). On the other hand, these changes also offer opportunities and if adequately governed may not lead to conflict (see theme 3).

In terms of causality, this theme particularly looks at land scarcity and conflict as an agent of social change. High dependency on land resources may be a source of conflict but may also trigger development, e.g. in terms of new land management arrangements, new types of collaboration, technical innovation, development of off-farm employment opportunities and migration. Highly efficient resource use systems have often developed under conditions of resource scarcity. In more popular terms, tension and conflict may also be seen as a source of innovation and creativity to adapt land-use and governance systems. In a broader setting it may link up with the theory of Boserup that looks at population pressure and scarcity as a requirement of technological innovation, as opposed to Malthusian thinking.

Theme 2: Water resources, conflict and cooperation

Contrary to common belief, there are in fact very few ‘water wars’, while there is a tendency to cooperation and what has been called ‘institutional resilience’, i.e. the capacity of institutions to cope with tensions about water and water scarcity. Adaptive capacity seems to be one important factor to deal with resource scarcity. Water conflicts are usually not so much about the allocation of the resource but about rules and procedures of its allocation, or become flashpoints of very different struggles, with deep historical roots. The Cochabamba and El Alto ‘water riots’ in Bolivia were not about scarcity, but about the privatisation of customary water rights. This gave rise to another kind of water wars thesis, predicting violent protest against injustice due to unreflective privatisation and globalisation. Other examples are the privatisation of customary water rights and the use of water resources by powerful constellations of elites and companies for the benefit of economic growth (e.g. irrigation and flower industry in countries such as Kenya and Ethiopia). Sub-state actors see their insecurity increased as a result of violent acts, transboundary collusion in hydraulic development and war, sometimes deliberately targeting both large and small water infrastructure, most recently in Somalia and Gaza.

Currently the liberal idea has taken hold that water interdependence necessarily leads to cooperation and benefit sharing. However, others warn that there is scant reason for optimism about international cooperation. An important topic for further research is the emerging notion of the environment as a conflict resolution and peace-building mechanism. Water can be a productive pathway for confidence building, cooperation and arguably conflict prevention, even in particularly contentious basins. In some cases, water offers one of the few paths for dialogue to navigate an otherwise heated bilateral conflict. In politically unsettled regions, water is often essential to regional development negotiations that serve as de facto conflict prevention strategies. Environmental cooperation—especially cooperation in water resources management—has been identified as a potential catalyst for peace making. The expectation of ‘water peace’ is undermined by many examples of non-implementation of international water treaties, hegemonic power play and unresolved structural conflict. It appears that conflict and cooperation go in tandem and should be analysed simultaneously.

Theme 3: Resource exploitation, global trade and conflict

There is much debate about the contribution of natural resource exploitation and global trade to economic growth and social development, and the linkages to conflicts over resource use. It is still widely believed that a situation of resource abundance contributes to social and institutional instability and transboundary conflict and civil war. Typical situations of this so-called resource curse seem to occur mainly where institutions are weak and cannot cope with the high interests and pressures by powerful actors benefiting from the value of the natural resources. These processes are well known for natural resources such as oil and diamonds, but also for global commodities such as timber (Congo), palm oil (Indonesia) and other minerals. However, the reverse reasoning that countries with weak institutions fail to develop non-resource sectors and thus put a high pressure on natural resources, with conflict as a possible effect, may also be true. It seems that a general theory is difficult to establish. Meanwhile, there is a strong call for tools and approaches that can be adopted in a tailor-made fashion to manage conflicts over natural resources. Associated with this is the need for local livelihoods to benefit more from resource exploitation in their surroundings serving global trade. Patterns of resource overexploitation and depletion are often linked to global trade and consumption patterns, but integration of local livelihoods into global economies may also generate incomes and employment. However, too often, commodity exploitation and global trade do not benefit local livelihoods, as they lose part of their livelihood assets.

The role of international (illegal) trade and transnational organisations in both the private and public sector needs further scrutiny. The subject of illegal trade is commonly associated with resource exploitation and global trade in countries characterised by weak institutions. Prof. Frerks’ discussion paper lists several international initiatives that aim to develop regulatory mechanisms to curb illegal trade, such as transparency initiatives and commodity tracking systems. It is not well known if and under which conditions these initiatives will be effective. Research may therefore include the effectiveness of sanctions and/or peace conditionality in the case of illegal exploitation, trafficking and trade in natural resources. Lessons learned and best practice exercises could lead to improvements and inform practice. Transparent and proper governance of natural resources is an area much discussed, but not yet achieved in practice. Likewise, the role of non-governmental action in this field is not always well understood as is the way stakeholders could best be included. Noteworthy in this respect are private sector and multi-stakeholder initiatives emerging around commodities, with the aim to agree upon standards for fair and sustainable production and marketing (e.g. timber).

Annex 1. Background of the programme

DGIS development cooperation policy, environment and conflicts

Sustainable poverty reduction is the main policy objective of Dutch development cooperation. However, conflicts interfere in many different ways and poverty reduction is particularly problematic in conflict areas. The Dutch government has been one of the first international agencies that have put the issue of intrastate conflict on the policy agenda. In the early 1990s the development cooperation minister Jan Pronk was one of the first to link the domains of development and conflict and of development cooperation and defence. It was also reflected in policy practice by resolving or mitigating the effects of conflict through diplomatic, humanitarian and development initiatives in a variety of conflict and post-conflict situations. These developments were supported by a conscientious policy research effort, involving different agencies.

Many development cooperation initiatives took place in conflict-prone areas. In 2003 attention was given to the specific links between conflict and the environment. An integrated approach was promoted that combines instruments of diplomacy, defence and development (the so-called 3-D approach or whole-of-government approach) to deal with a series of interrelated problems in weak states and conflict areas.⁶ Conflict prevention and conflict management as well as stabilisation and reconstruction are mentioned as important policy goals. The importance of good governance and the proper management of natural resources are emphasised. It asserts that resource scarcity and mal-distribution compounded by patterns of patronage is one of the causes of Africa's multiple conflicts.

In 'Een zaak van iedereen' (2007), the most recent policy paper on development cooperation, much attention is paid to the subject of conflicts. The paper clearly demonstrates the global and political dimensions of natural resources and conflict.⁷ Highlighted are the close relations between energy resources such as oil and gas and conflicts which hamper human development in many countries worldwide. Involved are factors of unequal access to energy resources, interests of industrial countries to secure energy sources, and powerful political elites in countries where governance is poor. For other countries, reference is made to other valuable resources, such as timber (e.g. DRC), diamonds (Liberia) or drugs (Colombia, Afghanistan) as a major source of conflict and hampering development and poverty reduction. The policy paper introduces the subject of fragile states, which are characterised by a high level of instability and intra-state conflict. Such states are considered to be a global risk, e.g. because of large numbers of refugees and the threat of terrorism. Particularly conflict-prone regions are the Horn of Africa and the Great Lakes region. Lastly, the subject of climate change is highlighted, leading to shortages in water resources and food, health problems, migration and conflict over natural resources from which the poor suffer in the first place.

It is encouraging that DGIS recently developed directorate-wide 'knowledge, innovation and research strategies' (KOSs) that pursue the integration of knowledge and research into the Ministry's development policies and programmes. The formulation of a KOS is based on the recognition that poverty reduction and the attainment of the Millennium Development Goals (MDGs) require policy innovation and continuous learning. The Department 'Environment and Water' (DMW) of the Ministry of Foreign Affairs has elaborated this general objective into a KOS for Environment, Water and Poverty Reduction (Ministry of Foreign Affairs, 2006). The objective of this strategy is "to promote innovation in policies and programmes in the field of environment and water that will contribute to poverty reduction and to the achievement of the Millennium Development Goals; and to strengthen institutional capacity to this end in developing countries." The document mentions the organisation of knowledge management and the allocation of resources to key research(able) problems as central issues to be addressed.

As medium-term objectives are mentioned the strengthening of knowledge within DMW and Dutch embassies, strategic investments in relevant research and the transformation of knowledge and capacities into innovation in policies and programmes. In addition, the KOS should assure a high-quality implementation and impact.

'Environment and Conflict' is one of in total eight key areas for knowledge, research and innovation. Falling within this key area are the following three themes:

1. Environment and land rights, land management and agriculture in landscape systems under pressure;
2. Environment (e.g. cross-border parks) and water (e.g. international rivers and lakes) in relation to conflict generation and conflict resolution;
3. Environment, conflict and the role of illegal trade.

NWO research strategy, conflict and natural resources

The Netherlands Organisation for Scientific Research (NWO) has elaborated a new strategy for 2007-2010.⁸ The strategy depicts 'science for society', i.e. the need for research to be embedded in society, as one of its three strategic lines of action. Society expects science to provide substantial support in solving complex problems. It appears that too often societal research needs are not adequately met. Because of deficient contacts between the 'knowledge producing' sciences and the various 'knowledge users' in society, valuable knowledge remains unutilised or reaches potential users too late or in an undesirable manner. NWO not only aims to enhance the quality and innovative nature of scientific research, but also to organise the transfer of knowledge. In the current strategy period, social problems and economic challenges will resound more robustly in NWO's research programmes. The strategy document notes that there is a need for stakeholders to be involved in the identification and implementation of research. This presupposes close contacts between research institutes and different layers of the government, civil society and the private sector.

For the strategy period 2007-2010, NWO has adopted the theme of Conflict and Security as a strategic research theme, next to twelve other ones. 'Natural resources and conflict' has been designated as one of the six programme lines within this theme, in which three NWO divisions participate: Humanities (GW), Social Sciences (MaGW) and WOTRO Science for Global Development.⁹ NWO acknowledges that conflict research is conducted in many different academic disciplines and that scientific findings are scattered and incoherent. Insights exist in isolation, and empirical results are ignored or misunderstood because of the fundamentally different research methods. A first ambition is therefore to connect and where possible integrate existing insights and analyses of conflict and conflict-related phenomena. A second ambition is to fuel practices and applications in the field of conflict and dispute resolution with solid analyses, empirically grounded insights, and models of the conflict dynamics and outcomes. Various institutes, research or practice-oriented, have vested interests in the determinants and consequences of conflict and dispute resolution, including DGIS. A third and final ambition is to enhance further research excellence among scientists studying conflict and conflict-related processes and phenomena.

A link can be established here with the NWO theme of 'Sustainable Earth', in which a programme on drylands with a research line on 'conflict, land use and climate' will be included. This research line refers to conflict, violence, collaboration and synergy as outcomes of complex land use interactions. The main question is how climate change affects the transition towards more sustainable land-use: will it increase existing pressures or create room for synergy? A main underlying research subject is how climate change affects water availability and its distribution at a regional and local scale.

Towards a joint research programme

Mutual interests between development cooperation (DGIS) and research (NWO) emerge from the above background, in terms of the subject as such and in terms of the process of improving the integration of research and policy & practice. This integration is not only a technical challenge (of identifying relevant themes and generating useful results), but also a challenge of embedding research into a process of stakeholder involvement that starts out from the design of research proposals and ends with follow-up given to ensure that results will be translated into realistic policy recommendations.

As a first step towards the development of a joint research programme, DMW and NWO organized a joint workshop with the purpose of formulating recommendations and building blocks in The Hague in October 2007. Building blocks refer to contents of the programme as well as inputs in terms of research approach and conditions to ensure that the programme meets its objectives and principles. In preparation to this workshop, Prof. Georg Frerks of the Disaster Studies Group of Wageningen University and Research Centre (WUR) wrote a discussion paper. On the basis of interviews with a number of relevant informants and a selection of academic and developmental literature, Frerks offers a review of the main literature sources on the subject, makes an inventory of major initiatives and some lessons drawn so far, and proposes potential research issues.

The conference in The Hague was explicitly meant to enrich the discussion paper. About forty people from different backgrounds participated, including representatives from DMW, NWO, universities, research institutes, NGOs, the Dutch embassies of Colombia, Ethiopia and Rwanda, the Centre for International Forest Research (CIFOR), Global Witness, the University of Botswana and the Environmental Foundation for Africa (EFA) in Sierra Leone.

As a follow-up to the conference Dr. Jan Joost Kessler was asked to elaborate the programme document on 'Conflict and cooperation over natural resources'. This programme highlights the complex relations between conflicts and resource use, the intricate stakeholder arena, the important relations with governance and institutional arrangements, and the multi-disciplinary approach that is required to tackle this subject.

The following people acted as members of a reference group to support Kessler in the formulation of this programme document:

- Prof. Ken Giller (WUR, Plant Production Systems)
- Prof. Pieter van der Zaag (IHE, water management)
- Janny Poley (DGIS, embassy Addis Ababa)
- Maurice Beers (DGIS, embassy Colombia)
- Rob Visser (DGIS, Scientific Advisor)
- Mike Davis (Global Witness)
- Tommy Garnett (Environmental Foundation for Africa, Sierra Leone)
- Prof. Bertjan Verbeek (Radboud University. International Relations).

The reference group was involved in the preparation of the programme document, by providing specific inputs and by commenting upon drafts. The discussion paper of Georg Frerks, an overview of the outcome of the conference, and further ideas generated by the reference group on possible research topics are available on the NWO web site.¹⁰

Annex 2. Definitions and analytical key features for the research component

A broad interpretation of conflict

Conflict is often narrowly interpreted in terms of violence and armed conflicts with organised combat and planned strategies. Conflicts usually follow a sequence in time, from pre-conflict (generally with deteriorating economic and social circumstances, civil disturbance and instability) via conflict (with periods of relative stability and violence) and stabilisation (decline of violence) to post-conflict (with reconstruction and reintegration of refugees).

However, in line with definitions used in NWO programming,¹¹ this programme looks at conflict more broadly, as a fight, a struggle, or the clashing of opposed principles. Thus, conflicts may emerge over resources, information or values. Firstly, conflicts may emerge over the allocation, the accessibility, or the distribution of (perceived) entitlements to scarce resources such as water, land, money, individual or collective security and safety. Secondly, conflicts may surface over truth and correctness, and involve a search for the correct or the best solution to a problem. Finally, conflicts may emerge with regard to norms and values, such as about what is proper and improper, about good and bad, moral and immoral, and they emerge because parties adhere to different religions, have different cultural background, or need to defend and enhance their identities. In view of the many forms conflict takes, and because conflict emerges at all levels of society, NWO proposes a working definition of conflict being a process that begins when an individual or group perceives differences and opposition between oneself and another individual or group about interests and resources, beliefs, values or practices that matter to them. This process view can be applied to all kinds of parties—nations, organisations, groups, or individuals—and to all kinds of conflict—from latent tensions to manifest violence.

Four key features

There are four key features to be taken into account when conducting research on conflict and natural resources: multi-causality, the multifaceted functions of conflict, the dynamic and longitudinal nature of conflict, and cross-level influences. Respecting these key features will help to generate relevant and new insights in the relations between natural resources and conflict.

1. Multi-causality

Research on conflict and natural resources has demonstrated that a situation of conflict is generally triggered by multiple interacting factors. These include economic motives and opportunities, long-standing grievances over the mismanagement or inequitable distribution of resource wealth, exclusionary and repressive political systems, inter-group disputes and security dilemmas further exacerbated by unaccountable and ineffective states. The present position is characterised by the recognition that the environment and associated factors like environmental degradation, resource scarcity and more recently climate change, do or may play a role in the rise and continuation of conflict, but are seldom the only or most important factor. This position amounts to a debunking of simple (neo-)Malthusian approaches that emphasise mono-causal or reductionist environmentalist explanations, where scarcity or abundance directly leads to conflict. Mono-causal approaches highlighting the environment as the reason for conflict have given way to a more modest approach in which environmental factors are positioned into a broader and more complex framework. Conflicts can rarely be characterized as purely 'resource-driven'.

2. Multi-faceted functions of conflict

Much of the relevance of conflict research and theory development derives from the outcomes conflicts have. These outcomes can be seen in terms of the utility gained or lost by participants alone and together. Utility can be narrowly defined in economic, monetary terms, or broadly defined in terms of both material (money) and nonmaterial (love, respect) values. However, a

case can be made for a much broader approach to conflict outcomes. Conflict has detrimental, negative and destructive powers, but can also be a key driver of change at the societal and group level—without conflict no change and no change without conflict. Conflict generates creative potential that helps families, organisations, ethnic groups and entire states to (re)define themselves, to change and to adapt, and to innovate and create. There is need for research that does not only look at conflict as an agent of negative impacts but also as an agent of positive change. High dependency on environmental goods and services is a source of conflict, but may also be a condition for development and collaboration. In more popular terms, tension and conflict may also be seen as a source of innovation and creativity to adapt land-use and governance systems. There is a need to test the claim that environmental conservation supports security and cooperation. This particularly refers to the conceptual appeal of peace parks.

3. Dynamic and longitudinal nature of conflict

The dynamic nature of conflict, rooted in history and being part of a longer process, is often not taken into account. Therefore, to contribute to societies' need and desire to intervene in conflict situations, a more encompassing and systematic analysis of the dynamic and longitudinal character of conflict is needed, post-conflict developments included. Many conflicts cannot be fully understood without analysing the past of the region and its ethnic, cultural and religious diversity. Continuation of conflict may be in some parties' self-interest, and a longitudinal orientation on conflict may facilitate better understanding of these processes. For instance, in the case of economies of war with heavy investments in arms and drugs trade, or vested interests in oil, diamond and timber, multiple parties seem to benefit from prolonged rather than resolved conflict. The question would be under what conditions the parties involved have more interests in peace processes.

4. Cross-level and multi-actor influences

Conflicts emerge at all levels of society: at the interpersonal level, i.e. between individuals in families or organisational teams; at the inter-group level, between groups or organisations, or between ethnic groups in cities or countries, and at the interstate level, between countries or coalitions of countries. Global markets and trade patterns may enhance local development but may also create tensions when markets rapidly expand or shrink, while on the other hand local processes of empowerment and social action determine whether tensions evolve into conflicts. At these levels we find different actors, who may have mutual or conflicting interests. The study of conflict spans all these levels of analysis. It is important to emphasise the multi-level nature of conflicts and the need to connect global and local analysis. Thus, there is a need to conduct fine-grained, micro-level research, including livelihood analysis, linked to meso-level and macro-level contextual developments. Related to this is the need to situate conflicts and resource-use problems in broader spatial and historical contexts.

Notes

¹ This sequence was proposed by Birgit Olsson during the conference 'Knowledge on the Move'.

² The list of countries can be obtained from Annex 1 of the most recent DGIS policy paper (<http://www.minbuza.nl/binaries/kamerbrieven-bijlagen/2007/10/059dek-beleidsbrief.pdf>).

³ Three of these features are even more fully elaborated upon in the programme document on the wider NWO 'Conflict and Security' theme: 'Conflict: Functions, Dynamics, and Cross-Level Influences. Proposal for NWO Strategic Theme 2007-2011', NWO, The Hague, April 2007.

⁴ These three themes build onto the 'tentative knowledge, innovation and research agenda' as presented in section 4 of the discussion paper by Prof. Frerks (see Annex 1), which was based on the three KOS themes and in which the research priorities of the NWO theme 'Conflict and Security' are integrated.

⁵ <http://www.nwo.nl/conflict-and-natural-resources>.

⁶ 'Strong people, weak states, Dutch policy on Sub-Saharan Africa for the long term' (Ministry of Foreign Affairs, 2003).

⁷ 'Een zaak van iedereen. Investeren in ontwikkeling in een veranderende wereld'. October 2007. The word 'conflict' features more than 50 times in this 40-page document.

⁸ Science valued. NWO strategy 2007-2010 (The Hague, May 2007).

⁹ The other programme lines or research programmes are: Ethnic conflict in local communities and societies; Conflict around work and organisations; Framing conflict in culture, politics, and science; Conflict escalation, justice and intervention; and Conflict and religion.

¹⁰ <http://www.nwo.nl/conflict-and-natural-resources>.

¹¹ Conflict: Functions, Dynamics, and Cross-level influences. Proposal for NWO Strategic Theme 2007–2011 (The Hague, 2006).