
DEALING WITH SCARCITY AND VIOLENT CONFLICT

Seminar Proceedings

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List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
CRU	Conflict Research Unit
DRC	Democratic Republic of Congo
ECOMAN	Environmental Change, Consensus Building and Resource Management in the Horn of Africa
EIA	Environmental Impact Assessment
EU	European Union
Frolinat	Front pour la Libération National du Tchad
HIV	Human Immunodeficiency Virus
IRIN	Integrated Regional Information Networks
IUCN	International Union for Conservation of Nature and Natural Resources. World Conservation Union.
NAFTA	North American Free Trade Area
NGO	Non Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
PCIA	Peace and Conflict Impact Assessment
PRIO	Peace and Research Institute Oslo
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (National Institute for Public Health and the Environment)
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America
WTO	World Trade Organisation

Executive Summary

The conference 'Dealing with Scarcity and Violent Conflict' - held in The Hague on 3 and 4 July 2003 - was jointly organised by the Conflict Research Unit (CRU) of the Netherlands Institute of International Relations 'Clingendael' and the National Institute for Public Health and the Environment (RIVM). The event was intended to take stock of the debate and summarise lessons for the wider disciplines of environmental and conflict studies. Given the multi-dimensional nature of the discussion, a wide variety of issues were presented during the conference. In short, these included the following.

Scarcity is a muddled concept, as some people argued. The finiteness of environmental resources in itself is too common a phenomenon to be related to conflict. Rather, it is the way people deal with these limited resources that may be a cause of confrontation. One of the speakers asserted that scarcity is not just determined by natural factors but also by a society's technological capacity, organisational and institutional capabilities and the knowledge base deployable in order to counteract resource shortages. Scarcity is not only material but also social and psychological, he said. The definition of scarcity depends on how societies develop their social and cultural specific perceptions about it.

Development assistance may have negative effects with regard to both conflict and the environment. Tools like Environmental Impact Assessment and Peace and Conflict Impact Assessment have been devised to address the negative consequences of aid. Assistance may also have positive side effects on the environment or peace. Environmental initiatives may represent a relatively safe entry point to start working on peace and conflict, because they may implicitly bridge social divisions caused by conflict. Soil conservation, irrigation and forestry may be areas of common interest that are not so violent prone as certain political or economic issues. One speaker suggested a newly formed Marshall Plan. The focus of this plan would be to rebuild and reconstruct degraded environmental resources that are vital to agricultural livelihoods. In this way, the plan could create immediate livelihood opportunities where it is most needed, while also ensuring that these livelihoods will be sustainable.

Trade is essential for sustainable development and sustainable development is essential for future trade, one of the speakers stated. He argued that trade, aid and security need to be tackled in unison. More specifically, security should be the central goal, while trade and aid are the means to reach it. The lack of political will be a major obstacle in employing trade to support both the environment and peace. Overcoming the wedges between the trade and the aid community is another problem. Other challenges include the following questions regarding the market mechanism. How can one include environmental resources into the mechanism in a way that creates incentives for preservation, diversification and innovation? How can the incentives be governed to reach the right people, so that

the phenomenon of rent-seeking elites is prevented? How can countries be compensated for keeping their environmental diversity in tact?

The possibility of including the **military sector** in working towards sustainable development was also raised, with the acknowledgement of their being a strong imperative to 'green' security forces. The military sector often controls natural resources, has significant budgets and may have relevant data and mechanisms to monitor the state of the environment. There is thus a large potential interest for including the military in initiatives aimed at irrigation and land development or stopping erosion.

There is a field of tension between sensitive **local analysis**, respecting the plurality of local characteristics, on one hand, and **global perspectives**, on the other. Reconciling these two perspectives is hard. There are conceptual difficulties. At macro level, conflicts may be viewed as a part of the globalisation process. At micro level, very different causalities play a role. A second challenge is found in the fact that the different research communities (for example, macro level quantitative analysts and micro level qualitative anthropological researchers) continue to live separate lives.

What's the key to success: **good policies or good processes**? It was argued during the meeting, however, that it is not so much the strategy to be employed, but rather the process of coming to that strategy that is truly important. From a participatory point of view, a discussion among actors in the field is the key to the process, rather than the policy resulting from it. Thus, inclusive mechanisms, stakeholder platforms, democratic governance, decentralised decision-making and transparency are the key words. None of these processes will guarantee to success, though. There may also be a mismatch between 'modern' democratic systems and traditional structures. Many seemingly inclusive mechanisms may be very prone to co-optation, power abuse or exclusion, leaving people no other resort than violence. What matters is *how* these processes are carried out in practice. Who are the stakeholders, who calls the shots, who controls the money and the agenda? These are the questions to be asked.

The case of Ethiopia was presented to illustrate that seemingly adequate modern resolution mechanisms may accentuate divisions within a community. Various forms of support for either traditional or modern mechanisms show that local perceptions and interests are not static and even potentially conflicting.

One speaker observed a **misfit between modern natural resource management and local situations**. Most circumstances require continuous adaptability and flexibility. Many state or external interventions are criticised for not being locally grounded. Technocratic approaches to resource management are not compatible with the diversity of local responses. Participation of local stakeholders, the need to embed interventions in local customs and the use of indigenous knowledge are thus argued to be important.

Though the widely advocated plea for participation and respect for local culture seems overwhelming, there is much criticism of this perspective as well. In short, it came up in the discussion that local perspectives, strategies and knowledge are not necessarily homogeneous and not necessarily good. **Local strategies for dealing with scarcity** include diversification of production and income, falling back on indigenous knowledge, adaptation, exploiting other people's resources, activating social support networks, migration and violent conflict. Obviously, some of these responses are considered more constructive than others. The inclusion of certain local elites (which may be an unavoidable component of participation) may lead to rent-seeking, exploitation of the environment, exclusion and conflict. It was also concluded that traditional mechanisms are not static but rather arenas for conflict between or within communities. Having acknowledged the conflicting interests at communal level, we find that participation as a means to work on conflict prevention becomes problematic.

The view that conflict prevention or resolution requires interventions addressing root causes is popular in the international aid community. However, it was noted that both **conflict and violence may be natural** and in some cases functional aspects of human life. Contentions over scarce resources, economic entitlements or political influence are inherent in society. The conflicts involved may even be essential to progress. Violence may be instrumental in creating the will to find a political solution. Thus it can be argued that it may not be fruitful to address the root causes of conflict. After all, violence and conflict may be the means by which a society addresses these root causes.

If scarcity is a cause of conflict, **abundance** would be expected to contribute to peace. However, literature in recent years has underlined the ironic consequences of prevalent valuable resources and easily lootable commodities like diamonds, gold and Coltan. The dichotomy between scarcity and abundance is debatable. They may not be mutually exclusive categories. Scarcity usually refers to natural resources people need for their direct livelihoods (like fresh water or fuelwood), while the abundance debate focuses on luxury goods sold on the global market (like diamonds or gold). Even with regard to one specific resource, scarcity and abundance may occur simultaneously. A resource may be scarce in some segments of society and abundant in others. The reason diamonds (normally considered abundant) are so valuable is that they are scarce at global level. This raises questions on the definition of scarcity. Is it an environmental or an economic phenomenon? Is it absolute or entirely subject to perceptions? Is it people's need for a resource or their demand for it?

There was also a discussion on **qualitative and quantitative methodologies**. The flaws of quantitative data sets are evident: they fail to appreciate nuances, the indicators used may be subjective and they are vulnerable to inaccurate or unavailable statistics. Likewise, qualitative methodologies have salient weaknesses: researchers have the tendency to find the relations they're looking for, and the selection of case studies may be subjective. There are examples to substantiate almost any thesis and examples supporting the opposite as well.

Underlying most of these issues, there is a more general question on the **relevance of an environmental approach** to conflict. Evidently, environmental factors related to conflict are interwoven with social, political and economic dimensions. After years of debate the question still remaining is: What does an environmental perspective add to our understanding? Can conflicts be explained without an environmental perspective or is such a thematic focus complementary to our understanding? The discussions during the conference were not conclusive. Some feasible views on the linkage between resources and conflict provide interesting insights. However, these views do not provide a homogeneous picture. In fact, they are highly contradicting. Essentially, three basic views can be identified: scarcity may lead to conflict (the Neo-Malthusianism view), scarcity may lead to cooperation (Cornucopianism) and abundance, rather than scarcity, may lead to conflict (a resource curse). General lessons about resources and conflict can thus not be drawn.

One point of relative consensus was that it is not scarcity or environmental degradation *per se* that matters but its impact on people's lives. Thus, it was opted to take people's **livelihoods as a central concept**. This perspective is a missing link in conflict analyses, one speaker observed. He argued that creating and safeguarding livelihoods is paramount for conflict prevention. A livelihood approach to conflict could include both so-called 'need' (scarcity) and 'greed' (abundance) perspectives. Obviously, there are social, political and economic dimensions to livelihoods. A very large portion of the population of the developing world is directly dependent on limited resources for daily survival. Environmental scarcity may thus account for people's livelihoods to a larger extent than a purely social, political or economic analysis may suggest.

Preface

This is the report of the conference 'Dealing with scarcity and violent conflict' held in The Hague on July 3rd and 4th, 2003. The event was jointly organised by the Conflict Research Unit (CRU) of the Netherlands Institute of International Relations 'Clingendael' and the National Institute for Public Health and the Environment (RIVM). At the invitation of these institutes, about 30 academics, policy-makers and representatives from NGOs came together to discuss a range of issues on the conflict scarcity nexus. A list of participants is attached in Annex 2.

Following a decade of research and discussion on conflict resulting from environmental degradation and scarcity, the debate seems to have passed the first stages of exploration. This has led some to argue that this discipline has reached an impasse. Others have learnt the lessons of the initial explorations and used them as a starting point to take up more specific perspectives. Either way, the time is opportune to reflect on the past decade of debate and take stock of the current state of the art in research. In this way, lessons can be learnt for the wider disciplines of environmental and conflict studies. Given the striking absence of Dutch initiatives at the crossroads of environment and conflict, it was felt particularly relevant to critically assess the potential contributions of this field to initiatives that approach conflict and environment in isolation.

The first day outlined how to conceptually approach questions of scarcity and conflict, and discussed the relevance of adopting an environmental perspective. Different approaches of scarcity and abundance were presented and the 'how' and 'under what circumstances these may lead to conflict or conversely patterns of cooperation' were elaborated. The notion of 'environmental conflict' was examined critically.

The second day was concerned with applying the focus on pertinent governance issues in the response to challenges of scarcity and conflict. Attention was paid to the role and position of different actors, such as the government, the corporate sector, civil society, local communities and external donors. Identified responses included enhanced governance, market regulations and coping responses of communities at grassroots level. The conference was structured into presentations, workshops and plenary discussions. A detailed programme is included in Annex 1.

With reference to the background paper drafted for the conference, the first section of this report provides a short overview of the main issues at stake. The second section presents the outcome of the conference by summarising the discussions, while the third section provides an overview of the presentations during the conference.

PART 1. Background to the Conference

The main issues at stake during the conference were mapped out in a background paper.¹ Reflecting on the history of the debate on scarcity and conflict, the shortcomings of research initiatives and different ways of dealing with scarcity, the paper may be summarised as follows.

- There is a relative consensus that environmental scarcity may be a factor causing intrastate conflict. It remains questionable though whether it is a necessary or a sufficient factor, or neither. Alarmist theories predicting an apocalypse resulting from environmental degradation and over-exploitation, and the violence over increasingly scarce resources have lost most of their support.
- Scarcity may not only lead to violent conflict; it may also be a catalyst for peace. To complicate things, abundance of resources - the seeming opposite of scarcity - has also been argued to be a conflict-generating factor.
- There is a general consensus that political and economic factors are at central stage in the causes of conflict. Environmental factors may contribute to discord and violence through processes of impoverishment and inequality.
- There is a space and a time component to environmental scarcity as an issue of contention. With regard to space, migration was discussed as a process that may cause ecological marginalisation and increasing pressure between population groups. The term sustainable development was discussed with regard to time. Through this term, the ability of future generations to meet their needs can be brought into the picture.
- It was observed that research in the field of scarcity and security has multiple shortcomings. Theories and concepts are in an exploratory phase, empirical evidence has been relatively weak and the challenges of testing hypotheses with systematic quantitative research are large.
- Theoretically, there are basically four ways of dealing with scarcity in an attempt to prevent conflict: slowing population growth, conservation of scarce resources, innovation of economic opportunities and balancing the distribution of resources. These four strategies are the cornerstones to policy and may be combined. The three channels to addressing these issues

¹ Klem, B. (2003). *Dealing with Scarcity and Violent Conflict: A Background Paper to the Conference*. The Hague: Clingendael. This document can be downloaded without charge at <http://www.clingendael.nl/cru>

were summarised under the headings of legal strategies, managing the market and changes in the field of governance.

- The need to involve all principle stakeholders into decision-making is frequently stressed. The people, the state, the private sector, the civil society and external (aid) agencies were the five (groups of) actors discussed. Providing people and organisations with a channel to voice their concerns and defend their interests will make them less likely to resort to violence. One way to enhance this kind of participation is through multi-stakeholder platforms.
- Some relevant dimensions of dealing with scarcity were suggested. However, most strategies may not only lead to constructive co-operation, but to conflict as well. Thus the question may not be what to do, but how to do it. The factors determining the outcome - confrontation or co-operation - of interventions are ambiguous.
- Integrating issues of conflict and environmental scarcity into larger wider policy and research efforts is a challenging undertaking. Moving beyond the stage of 'taking these aspects into account' and coming to a coherent and integrated point of view have proven to be difficult, if not impossible. There is a variety of actors and processes at stake and there is no one way of looking at these fields. The existence of multiple realities and inclusion of a large number of stakeholders may be at odds with a policy that is both holistic and coherent. The current challenge for the actors at stake is thus to deal with scarcity in the absence of a coherent point of view and the presence of multiple actors, interests and realities.

PART 2. Summary of the Discussion

A wide variety of discussion topics came up during the conference. The participants shared their views and insights both in working groups and during the plenary sessions. Though some issues yielded relative consensus, the discussion ended with many 'loose ends' and disagreements as well. It would have been impossible to reflect the diversity of perspectives and grasp the complexity of the discussions in a few coherently presented bullet points. Nevertheless, this section will hopefully provide an overview of the main themes discussed and some of the most salient viewpoints brought forward.

An Environmental Perspective?

The participants discussed different definitions of security (military, food, human and comprehensive security). Some participants voiced the concern that recent events had further complicated the usefulness of such definitions. The attack on the World Trade Centre on September 11th, 2001 caused a whole range of issues to be 'securitised'. The term security has now been broadened; it is even subject to inflation, according to some. In an attempt not to get hung up on a conceptual debate, some participants argued that it was just a matter of placing oneself somewhere in the *spectrum* between narrow military security and a broad definition like 'human security' (which can mean anything that contributes to a better life).

The environment has been suggested as one dimension of security of the past decades. It was agreed that conflicts were never purely environmental, but multi-dimensional and complex and therefore should not be downsized merely to a manifestation of scarce environmental resources. Political, economic and social mechanisms, processes and structures have a salient position on the playing field. Environmental factors tend to be interwoven with social, political and economic dimensions. The question is: Can conflicts be fully explained without an environmental perspective or does such a thematic focus complement our understanding?

The participants to the conference did not agree on the answer to this question. Some argued that environmental degradation and exploitation must be analysed in unison with conflict. Within the broad realm of sustainable development it would be fruitless to approach conflict and environmental issues separately. Others stated that one could take different perspectives at different times and analyse political, ethnical or environmental dimensions relatively separately. A third view brought forward during the discussion was that the term environmental conflict is somewhat artificial, although people living in the context of conflict will probably not label it as such.

One point of relative consensus was that it is not scarcity *per se*, but the extent to which scarcity threatens people's interests that matters. Thus, it was opted to take livelihood as a central concept. It was stressed that a very large portion of the population of the developing world is directly dependent on limited resources for daily survival. Thus, environmental degradation and eroding livelihoods are closely related. Factors creating or breaking down livelihoods are a logical starting point when exploring the environment conflict nexus. Some participants pointed out that livelihood is not only relevant to scarce resources, but to conflicts resulting from abundance as well. It was argued that people with seriously restrained livelihoods are more vulnerable to mobilisation by violent militias. Like lootable resources, these people may be a *sine qua non* for this kind of violent conflict.

Governance

Rather than scarcity in itself, it is the way people deal with scarcity that may be a cause of conflict. Scarcity of resources and competition over them is to a large extent a man-made phenomenon. Adequate governance is crucial in tackling scarcity and conflict. Poor governance may cause environmental degradation and escalation of violence. Like state policies, the interventions of international donors may contribute to scarcity as well. Numerous cases of failing economic policies and rent-seeking elites were discussed. Ethiopia was one of the cases brought forward. One positive note was the suggestion that if scarcity is created by policy, there are also opportunities to solve (part of) the problem through policy.

It is not just the outcome of governance - rules and regulations - but also the process that matters here. Inclusiveness is important. Multi-stakeholder platforms, for example, are very topical due to their participatory character but are by no means a guarantee for success. It was noted that any such medium of governance could either be extremely inclusive or an empty shell exploiting the stakeholders who are supposedly included. Powerful groups may strengthen themselves and patterns of exclusion may be reinforced. Power relationships, the authority of the platform and the decision-making processes are the key ingredients. Analysis should focus on good and bad practices of multi-stakeholder platforms and try to explore why the process worked or not. The role of 'facilitators' - the people facilitating the process but inevitably involved in some level of manipulation as well - needs to be taken into account here.

Development Assistance

Development assistance is often seen as a means of addressing both conflict-related problems and scarcity. Nonetheless, it may have negative effects with regard to conflict. It may create or reinforce patterns of exclusion and increase inequality. Adverse effects on the environment should be a concern as well. Any intervention may have a wide range of side effects that need to be taken into account when assessing the total impact. Though many development initiatives are aimed at economic growth or poverty

alleviation, they cannot be viewed in isolation from environmental impact and conflict-generating side-effects.

The persisting dilemma of holistic and specialised action was raised in the wake of the policy coherence debate. Different fields of action may be strongly related and lack of coherence may result in counterproductive practice (implying a need for holistic action). On the other hand, a lack of specialisation may be unworkable due to the great number of variables, levels and actors (implying a need for selective action).

The development aid industry was noted to value the complex consequences of development cooperation on the environment and/or on conflict. Aid has not solely focused on poverty and ignored security. Although the aid industry has learnt numerous lessons, it was observed that despite the rhetoric of comprehensive approaches and policy coherence, many multilateral initiatives still undermine sustainable and non-violent development. Many agencies are 're-arranging the deck chairs on the Titanic', without taking the effort to create a holistic policy supporting sustainable, peaceful development. Though the difficulties inherent to the execution of development assistance should not be underestimated, the failure of rich countries to facilitate sustainable development was stated as being due to a lack of political will rather than to a lack of money or expertise.

Leif Ohlsson's proposal to launch a 'Marshall Plan' aimed at creating livelihoods by rehabilitating environmental resources was also discussed. Such a plan would be both politically attractive and suit Europe's role in the world. At least, the plan could be more in line with the Union's basic principles than its current security perspective. It would, however, create tension with regard to European trade interests.

The environment is not only a relevant field for conflict prevention (because it is arguably a cause of conflict) but is also a useful field of action for reacting to conflict since it offers the development industry additional opportunities. Environmental initiatives can serve as a relatively safe entry point for starting work on peace and conflict. Soil conservation, irrigation and forestry may be areas of common interest that are not so prone to violence as certain political or economic issues. Thus, activities in this field may be relatively easy to sell to local authorities and may create legitimacy among local communities. Consequently, these activities could serve as an adequate starting point for addressing conflict-related problems.

Markets and Trade Liberalisation

Economic opportunities and proper governance of market mechanisms are of crucial importance in supporting people's livelihood and their adaptation to an environment of scarce resources. Moving beyond subsistence agriculture and direct dependence on fragile resources will demand adequate market mechanisms. Free trade, some participants argued, is a condition for sustainable development. Failure to implement such a system without being selective has detrimental effects though. Malfunctioning

market mechanisms may cause exclusion, generate violent conflict and erode environmental resources.

Many actors shaping the international trade regime fail to acknowledge that sustainable development is the ultimate goal of the system. The world needs policies promoting constructive investment and increased emphasis on governance and institutions. Again, the lack of political will is a major obstacle. Thus there is a great need to hold countries to their promises, as taken up in the EU Treaty of Amsterdam and the Rio conventions. The agricultural subsidies of the Union, for example, do not comply with the treaty.

During the discussion a number of challenges related to the market mechanism were identified. How can environmental resources, for example, be included in the mechanism in a way that creates incentives for preservation, diversification and innovation? How can the system be governed in a way that the incentives reach the right people, so that the phenomenon of rent-seeking elites is prevented? How can countries be compensated for keeping their environmental diversity intact? These questions were explored but consensus was not reached.

Role of the Security Forces

The possibility of including the military in working towards sustainable development was also raised. The presence of a strong imperative to 'green' security forces was acknowledged. Military control over resources, significant budgets, data and mechanisms to monitor the state of the environment create a broad potential for including the military in initiatives aimed at irrigation, land development or stopping erosion. Although this has been attempted, enthusiasm died quickly, since many military agencies have a predatory lifestyle, representing rent-seeking elites. They often get involved themselves in illegal trade too. This thus does not imply that the military should be ignored, but that caution is required. The Brazilian example was brought forward. The Brazilian air force was willing to allow use of radar systems for environmental initiatives, contributing considerably to the analysis of environmental degradation in the Amazon region.

Local versus Global Perspective

There is a field of tension between sensitive local analysis respecting the plurality of local characteristics, on the one hand, and global or macro economic perspectives on the other. Reconciling these two perspectives is hard. There are conceptual, human and methodological restrictions at stake.

At macro level, a lot of data are available on scarcity, such as global level statistics on soil, forest, and water. People dealing with these data sets tend to generalise their views, while those confronted with their local context are aware of the numerous nuances and fluctuations over space and time. The variety of approaches is crucial to our understanding, but how can we combine the two levels of analysis into one perspective? Even though there is a need for multi-disciplinary and multi-layered research, the

different research communities (macro-level quantitative analysts and micro-level qualitative anthropological researchers, to name two examples) seem to 'live' separate lives and fruitful cooperation is not always at hand.

Discussions on globalisation illustrate how micro and macro perspectives may differ. At macro level, some people view conflicts as phenomena embedded in the deeper structure of globalisation. For example, the global markets and networks create the opportunity for illicit trade in lootable resources. The overall impact of globalisation on resources and conflict remain ambiguous. Basically two schools of thought were mentioned here. Some argue that globalisation supports peace since it contributes to growth and the elimination of poverty, while others argue that it results in greater inequality, thus contributing to conflict or facilitates 'economies of violence'. A local perspective would most likely not include globalisation as a major cause of conflict. Scarcity, inequality and domestic politics are more likely to be mentioned by local stakeholders. Although the diversity of global and local perspectives is enriching, realisation of a coherent all-inclusive viewpoint is not made any easier.

Policy and Process

What is the key to success: good policies or good processes? There is a political need to formulate policies on conservation, innovation or more adequate distribution. During the meeting, however, it was argued that it is not so much the strategy to be employed, but rather the process of coming to that strategy that is truly important. From a participatory point of view, discussion among actors in the field is the key to the process, rather than the policy resulting from the process. Thus, inclusive mechanisms, stakeholder platforms, democratic governance, and decentralised decision-making and transparency are the key words.

None of these processes are a guarantee to success though. What matters is *how* these processes are carried out in practice. Who are the stakeholders? Who calls the shots? Who controls the money and the agenda? These are the questions to be posed. Many seemingly inclusive mechanisms can be very prone to co-optation, power abuse or exclusion. There may also be a mismatch between 'modern' democratic systems and traditional structures. Many countries try to duplicate central governance to local levels. The result is that village elders are substituted or threatened in their position, with as consequence that problems may have to be solved through the state system. These constituencies may not be supported by tradition and may lack the goodwill of the people. Government-assigned elites may be instrumental in the escalation of violence. Seemingly inclusive mechanisms ruling out traditional systems may also leave people no other resort than violence.

There is also a normative component to the discussion. The underpinning value of the debate is that people have the right to be included in decision-making if they have a stake in the issue. This value may, however, lend itself to different interpretations, depending on who decides and what perspective is taken. A conflict-preventive

perspective (preserving the peace) may very well suggest a different set of stakeholders than an environmental perspective (preserving the environment).

Local Knowledge and the Limits to Participation

Many state and external interventions are at present being criticised for not being locally grounded and applicable. Local strategies of dealing with scarcity are therefore to be valued. Participation of local stakeholders, the need to embed intervention in local customs and the use of indigenous knowledge are ingredients that many consultants and activists would argue to be of importance.

It was also discussed that Western debates on resources tend to take a rational approach, while the significance of resources for local communities is certainly more comprehensive than this. Spiritual, cultural and social significance to the environment is often excluded from the analysis, although these may be crucial from the viewpoint of local stakeholders. Local knowledge was often perceived as being fragile, while history has shown its resilience. Interventions should thus take local strategies as a starting point, and extrapolate and disseminate them.

Criticism was expressed that external initiatives involved flying in well-educated staff with no or very little knowledge of the local situation. For reconciliation projects in Chad for example, European experts were flown in to facilitate workshops among local groups. Even though external involvement has the advantage of being relatively neutral, the lack of awareness of local perspectives considerably restricts the impact of these projects and raises questions about potential negative side-effects. Though the widely advocated plea for participation and respect for local culture seems overwhelming, there is a lot of criticism of this perspective as well. In short, local perspectives, strategies and knowledge were discussed as not being necessarily homogeneous, and not necessarily of good quality.

Local institutions may act counter to the interest of local communities. Depending on the perceived interest of stakeholders, there may be a field of tension between participation and an agenda of sustainable development or peace. The inclusion of certain local elites (which may be an unavoidable component of participation) could lead to rent-seeking, exploitation of the environment, exclusion and conflict.

During the discussion on the case of Ethiopia, it was pointed out that traditional resolution mechanisms at village level were not unbiased. These bodies - usually consisting of wise men - favour older farmers to young farmers. Younger farmers are especially keen to change certain norms they perceive as too restraining. Traditional mechanisms based on local norms and values were thus concluded as not being static, but rather representative as arenas of conflict between or within communities. Having acknowledged the conflicting interests at communal level, a participatory approach is clearly not free of conflict. There may thus be a field of tension between the approach - participatory - and the objective: conflict prevention.

This raises questions regarding the legitimacy and instruments of external actors. To some extent the underlying rationale of international assistance is rooted in universal values and global agendas on poverty alleviation, peace and environmental conservation. External initiatives thus do not come to support the local population in any way deemed necessary without values or prejudices. Being an agent of change, international assistance may force the uneasy question on the relative importance of local and universal values to the fore.

Root Causes, Escalation Factors and Violence as a Natural Phenomenon

What should be the focus of analysis: root causes or the process of escalation? Discrediting the latter as treatment of symptoms, makes the view that root causes need to be addressed popular in the international aid community.

Conflict has been noted as a natural aspect of human life. Contentions over scarce resources, economic entitlements or political influence are inherent to society. The conflicts involved may be essential to progress. Thus, trying to prevent conflicts by addressing their root causes may not be a very productive approach. Analysing root causes may be of little relevance when it is the human decision to resort to violence - rather than the ever-present issues of contention underlying conflict - that determines the escalation of violence. Scarcity, for example, may lead to both cooperation and conflict. It may not be the level of scarcity that matters, but the human decision how to deal with the scarcity that determines the outcome. This has implications for research and methodology. Analysing the process and the rationale of human decisions requires an approach that is very different from quantitative analysis geared to finding a correlation between presumed root causes of conflict and violence.

The view that conflict is inherent to society has resulted in the popular view that it is violence rather than conflict that must be tackled. It was pointed out though that violence might also be an inherent feature of society as well. Violence is a traditional means of providing defence, gain or defending one's reputation. In some developing countries, violence has seen a steady rise; this is because the state proved unable to contain or channel violence. In fact, the struggle for state power has become a main reason for using force in many cases. The case of Chad was mentioned to illustrate that violence might be a part of everyday life. To some extent, violence is an institutionalised phenomenon; there is a 'culture of violence'. It may seem incidental at first glance, but after a time we may have to conclude that this is the way people solve their problems and that some people have no other means to defend their interests. The fact that something is inherent in society may not imply that nothing can be changed. Societies can change and external actors may have a role in facilitating that change. It must be acknowledged though that conflict may be essential for progress, and that violence may be required to induce the political will for a settlement.

Abundance

If scarcity is a cause of conflict, abundance is expected to contribute to peace. However, the literature of the last few years has underlined the ironic consequences of prevalent valuable resources and easily lootable commodities, e.g. diamonds. Different speakers pointed out that such resources can cause or fuel violent conflicts. Reference was made to a recent World Bank publication², which argues that there is a correlation between a country's dependence on primary commodities and the occurrence of conflict.

The dichotomy between scarcity and abundance is somewhat fictitious though. They are not mutually exclusive categories. Scarcity usually refers to natural resources needed directly for one's livelihood (like fresh water or firewood), while the abundance debate focuses on luxury goods sold on the global market (like diamonds or gold). Even with regard to one specific resource, scarcity and abundance may occur simultaneously. A resource may be scarce to some segments of society and abundant to others. The reason diamonds (normally considered abundant) are so valuable is that they are scarce at global level.

This raises questions on the definition of scarcity. Is it an environmental or an economic phenomenon? Is it absolute or entirely subject to perceptions? Is it people's need for a resource or their demand for it? The abundance debate strongly underlines the relevance of the private sector to the debate on resources and conflict. The double role of the corporate sector fuelling conflicts by trading (on the one hand) with armed militias, and supplying security and livelihoods (on the other) was discussed. A number of relevant initiatives were presented with respect to the former. In an attempt to banish illegal trade in resources and mitigate its fuelling effect on conflicts, we have put corporate responsibility as issue on the agenda. Codes of conduct, trademarks and certifications systems (like the Kimberly process for diamonds) seem promising steps forward. However, such initiatives may not be feasible for all resources. The issue of Coltan (a metal used in mobile phones) is a difficult case, because there are so many intermediates that the market and the trade process are hard to trace. If we are unable to map out trade flows, certification may be of little use.

Methodology

Both conflict and environmental systems are complex phenomena. Exploring relationships and attempts to construct models should be geared towards detecting causal relations. Taking a less ambitious approach, detecting probability should be the main goal of research. Alternatively, a Popperian approach to research may be advisable. Attempting to prove assumptions wrong and indicating the absence of correlation may be the only feasible way forward.

² World Bank (2003). *Breaking the Conflict Trap: Civil War and Development Policy*. World Bank policy report. <http://www.worldbank.org/>

There was a discussion on qualitative and quantitative approaches. The flaws of broad data sets are evident: they fail to appreciate nuances and they rely on the availability of statistics and the applicability of indicators. A violent incident in Chad was noted to be excluded from certain data sets as it did not fulfil the criteria: violence between organised groups, one of which was the state. Quantitative methods have a tendency to conceal the subjectivity of their indicators. Is the state one of the parties when security forces engage in conflict, though not on behalf of the government? When do we call a group organised? Appreciating these complexities in macro level quantitative research is difficult. Likewise, qualitative methodologies have salient weaknesses. Researchers have a tendency to find the relations they're looking for. The selection of case studies may be inadequate. Certain dark spots (unanalysed areas) and hotspots (popular areas of research) may occur. There are examples to substantiate almost any thesis and examples supporting the opposite as well. This diversity troubles our understanding, but may be unavoidable.

Lastly, there are questions on methodology with regard to the use of research. The applicability of analysis to policy making is a topical issue of debate. The rise of policy tools like Peace and Conflict Impact Assessment (PCIA) in recent years is receiving significant attention. Like Environmental Impact Assessment (EIA), which has a much longer history, adequate use of such instruments is the key challenge. There is a risk that PCIA will be used as an add-on tool rather than being an interwoven aspect of the policy-making process. The additional value and the limitations of these tools will be subject to exploration.

PART 3. Presentations

Six presentations provided input for the discussions. This section will summarise these contributions. Nils Petter Gleditsch provided a macro-level overview of scarcity/abundance and conflict, along with different ways of approaching the link between the two. Leif Ohlsson underlined the central importance of livelihoods when discussing scarcity and conflict. Mark Halle advocated a more comprehensive approach to trade, aid and security. Mohammed Salih discussed the different ways people deal with scarcity and provided macro-level insights into the complexity of scarcity. Eva Ludi provided a case study on micro-level coping strategies for scarcity in the Ethiopian highlands. Finally, Mirjam de Bruijn and Han van Dijk related a case study on the scarcity dimensions of the conflict in Chad.

Nils Petter Gleditsch: 'A Resource Curse? Scarcity, Abundance and Conflict'

During the 1990s Nils Petter Gleditsch of the International Peace Research Institute Oslo (PRIO) was one of the most prominent scholars in the field of environmental conflict. He is a Professor of International Relations at the Norwegian University of Science and Technology (Trondheim) and has contributed to a large number of research projects for organisations like the World Bank, UN agencies and different ministries of Foreign Affairs. In addition to the impact of resource scarcity on conflict, Gleditsch has also taken an interest in the effects of resource abundance. He advocates an integrated approach to both scarcity and abundance.

The following text represents a recapitulation of Mr. Gleditsch's original talk at the conference and has been approved by the author.

Mr. Gleditsch commenced his talk with an overview of conflicts around the world. Referring to the map below, he concluded that there seemed to be two main areas of conflict: a cluster in Africa and a string throughout the Middle East, the Caucasus and southern Asia. In addition to these geographical observations, he noted that most conflicts take place at intra- state level. With reference to the figure below, he stated that counter to the popular perception, there had been a decrease in conflicts since the end of the Cold War.

The question to be posed at this conference would be: what share of these conflicts could be accounted for by resource factors? Gleditsch went on to outline three basic views with regard to resources and conflict:

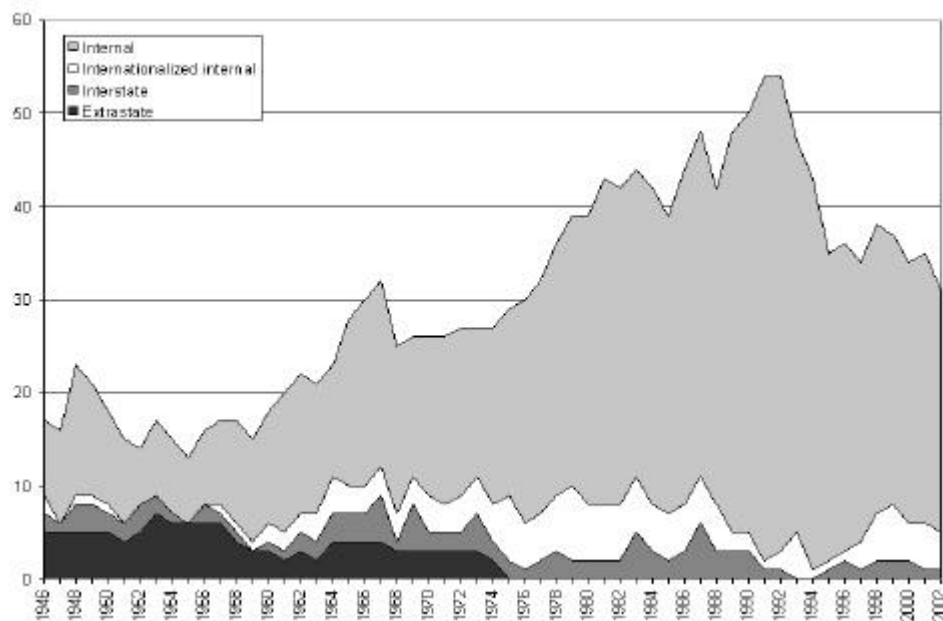
1. Neo-Malthusianism: scarcity leads to conflict.
2. Cornucopianism: there is no real scarcity.
3. Resource curse: abundance, rather than scarcity, causes conflict.

The Malthusian Model

According to the Malthusian model, the population grows exponentially, while food production grows linearly, inevitably causing a squeeze. The system may compensate itself through 'positive' checks on the demography - a higher death rate due to war, famine and pestilence - and 'negative' checks: a lower birth rate resulting from abortions, infanticide and birth control. The Neo-Malthusian model takes population pressure as a point of departure as well. In addition, high resource consumption is an aggravating factor. As a result, resource depletion, scarcity and competition over resources will lead to armed conflict. In Gleditsch's view, Homer-Dixon is a contemporary supporter of this Malthusian model, although he would probably not classify himself as such. Homer Dixon's model distinguishes between demand-induced scarcity (mainly driven by population growth), supply-induced scarcity (mainly driven by depletion or degradation of a resource) and structural scarcity (mainly driven by resource distribution).

Cornucopian Response

Cornucopians raise several methodological objections to the preceding model. The failure to look at cases where scarcity does not yield conflict or could be argued to aid cooperation disqualifies the research already done. The main question to be asked is why scarcity leads to conflicts in some cases and not in others. Gleditsch referred to Aaron Wolf's work that substantiates the view that water wars hardly ever occur. States don't fight over water, his research indicates. The relevance of proper policy and technology is brought into the picture here. On a broader level, Gleditsch stressed that there is no correlation between population density and violent conflict. There is, however, some correlation with population growth and some with so-called youth bulges.



Gleditsch argued that political conditions are crucial in the explanation of environmental conflict. He underlined the relevance of a democratic system to environmental performance. Freedom of information, pluralism, international cooperation, market orientation and greater respect for human life - all characteristics of democracies - make the depletion of resources and violence resulting from the depletion less likely. In addition to political aspects, the Cornucopian model argues that resource scarcity can be overcome by innovation, substitution and price mechanisms. In short, economic development may prevent conflict.

On the international level, the Cornucopian viewpoint indicates the phenomenon of environmental cooperation. The ability of nations to overcome fishery or water-basin conflicts and to increase their cooperation shows the impetus that scarcity can give to peaceful relations between countries.

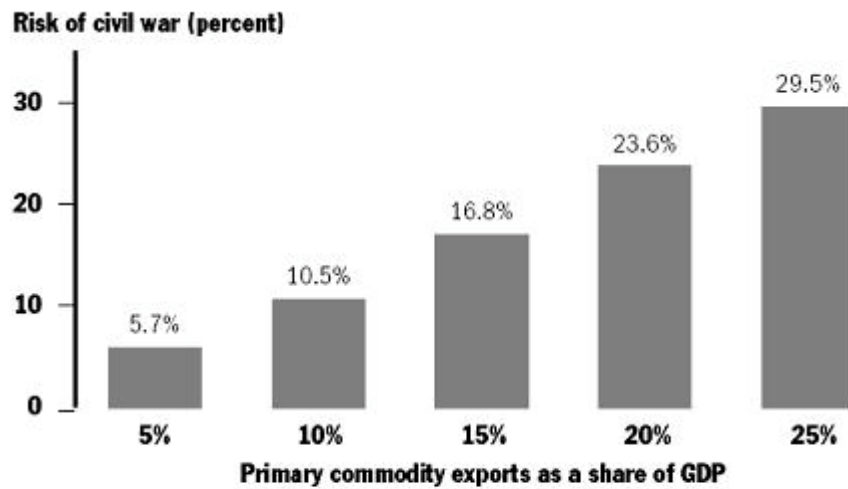
A Resource Curse

The third view presented by Gleditsch argued that the abundance of resources would lead to low economic growth, rent-seeking elites, corruption and the looting of resources. In this context, he mentioned the Dutch disease, referring to the Netherlands' experience of low economic growth and rent-seeking policies after the discovery of natural gas in its soil. The underlying thought of the resource curse model is that conflicts are driven by economic opportunity. There are three important conflict-promoting effects of resource abundance:

1. Resources provide the *motivation* to start a war. Gaining control over them is the main motive for violence.
2. Resources are a crucial *means* to financing the conflict.
3. Abundant resources may create a *context* that breeds conflict. A country's dependence on valuable resources may result in poor governance, slow growth, instability or inequality and thus contribute to violence.

Conclusions

Gleditsch discussed some empirical evidence to critically assess the three perspectives he presented. Many studies suggest a territorial component to conflict. Thus, the Malthusians have a point when we consider territory a resource. Then again, most conflicts assume such a dimension, even though they arose for other reasons. Other research shows that shared rivers may lead both to increased conflict and cooperation. As the picture below indicates, a correlation has been detected between conflict and abundance. It must be noted though that the export of primary commodities is not a very accurate measure, because they are often looted and traded illegally.

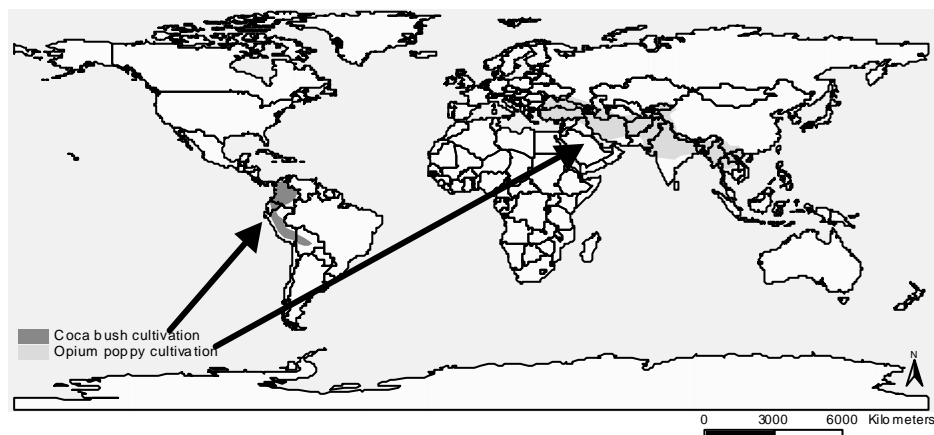


Source: Collier and Hoeffler (2002c).

Figure: Natural resources and risk of civil war for low-income countries.

Mr. Gleditsch concluded his talk by summarising a few salient points.

- Environmental conflict is not isolated from other forms of conflict.
- Conflicts can result both from scarcity and abundance.
- Global resource wars seem unlikely. Local conflicts are more probable.
- Some environmental problems (such as the lack of clean fresh water) may be more serious as development problems than as causes of armed conflict.



Leif Ohlsson: 'Livelihood Conflicts and the Need for a Global Environmental Marshall Plan'

Originally a journalist, Leif Ohlsson is holder of a PhD in environment, scarcity and conflict. Ohlsson works with the term 'social resource scarcity' and has analysed ways of adapting to it. In the past few years, he has published a large number of articles about the crossroads of environment, poverty, development and conflict. He is currently attached to the Department of Peace and Development Research at the University of Göteborg.

His contribution to the topic of 'Dealing with Scarcity and Violent Conflict' was structured around three points. First, the argument that livelihoods, loss of livelihoods, and the inability to provide sufficient livelihood opportunities is, on the one hand, a missing link in conflict analyses. On the other hand, this is also somewhat strange, since it is a widely accepted fact that creating and safeguarding livelihoods is paramount for conflict prevention. Second, this argument for the importance of livelihoods leads to two conclusions:

1. On the research level, a programme is needed that synthesises several strands of research on the causes of conflict. Ohlsson suggested a 'Livelihood Conflicts Approach', incorporating both the so-called 'need' and 'greed' approaches.
2. On the policy level, something akin to the Marshall Plan after the Second World War is needed. The focus of this plan would be to rebuild and reconstruct degraded environmental resources vital to agricultural livelihoods, thereby creating immediate livelihood opportunities where most needed, while also ensuring that these livelihoods would be sustainable.

Third, the three immediate caveats to such a plan are discussed below by Ohlsson under the following headings:

1. The global HIV/AIDS crisis.
2. The necessity of addressing the gendered aspects of livelihood conflicts.
3. The threat of the broad and generalised attack on the humanitarian international community, forcefully directed by the present US administration. Here Ohlsson argued that the suggested Global Environmental Marshall Plan would constitute a very powerful statement in defence of such an international humanitarian community, and that it could very well be initiated from Europe.

The Livelihood Conflicts Approach

Let's start from the demonstrable fact that people are increasingly paupered and starving because they are driven from their homes and their sources of livelihoods as a result of bloody conflicts within their own countries.

Often the forms of these conflicts resemble what we have learned to associate with mediaeval conditions. Seemingly without raising our mental eyebrows, we have learned to incorporate terms such as 'warlords' in our daily vocabulary. Tragically, we have also increasingly had reason to use terms such as 'genocide' or 'genocidal violence' in our analyses. Every attempt to deal with this new pattern of poverty, starvation and conflict necessarily starts from an attempt to understand the underlying causes. This is why we seek explanations. And explanations, in turn, must be built on descriptions of mechanisms; the way factors such as 'poverty', 'environment' and 'ethnicity' (to mention just a few) work together in a way that result in bloody conflicts, sometimes even full-blown genocide.

In the pursuit of understanding we encounter several common traps. I am sure that all of us would agree that the causes of the conflicts we are concerned with are complex and probably include a number of factors. At the bottom of it all, however, we all have a tendency to think that a particular type of conflict is 'really' about 'poverty', or 'environment', or 'ethnicity'. This is actually our common-sense counterpart of the specialized scientific pursuit of trying to isolate the causal contribution of one particular factor, for example 'poverty', or 'environment', or 'ethnicity'. The trap is to pit these explanations against each other, instead of seeing them as complementary. In order to do the opposite, i.e. to incorporate sets of explanations built on, for example, 'poverty', 'environment', and 'ethnicity', respectively, into a common framework, we need to step back and take a look at the larger picture for a while. We need to find something that connects these explanations. In short, we need what is known as a theory. Here is a bit of such a theory.

The Start of a Theory

The idea is that explanations built on 'poverty', 'environment' and even 'ethnicity' can be connected in a meaningful way if we concentrate on the importance of livelihoods, and the difficulties societies have at this particular point of time to safeguard livelihoods. The theory is very simple, and it goes like this. In most of the internal wars and conflicts going on, a common denominator is poverty: not just poverty as a static condition, but as a result of a process of rapid loss of livelihoods.

Poverty may be a near-endemic condition in certain societies. Loss of livelihoods, however, marks a rapid transition from a previously stable condition of relative welfare into a condition of poverty or destitution. In turn, such losses of livelihoods are often caused or exacerbated by environmental degradation. If you cannot obtain a livelihood, because your father no longer has enough land to distribute among your brothers and yourself, or because you are forced to cultivate steep and eroding hillsides, there is a

very clear and simple link between poverty, environment and loss of livelihoods. We still have to link it to conflicts, however. If the rapid processes of change that result in a sudden fall into poverty - more than the endemic condition of poverty - create the potential for what I call livelihood conflicts, we still have to answer the question of how people can be mobilised to commit atrocities, and even genocide?

First of all, a common feature of livelihood conflicts is that the rank and file of most atrocious militias around the world are occupied by large cohorts of young men who have been subjected to a rapid devaluation of their expectations as a result of loss of family livelihoods, and forced to accept a much more lowly situation in society than they had been led to believe they were entitled to in their position as men.

In such situations, and depending if they are unable to find alternative livelihoods in the cities, or in other sectors than agriculture, young men are extremely easy to mobilise in one or another movement, or even militia (particularly if they are promised land, livelihoods, or even just looting). Young women form a much smaller, if any at all, part of these militias. Instead, they commonly first have to forgo their school to help out at home as a consequence of loss of family livelihoods; later they take on the role of family providers themselves in subsistence agriculture. Loss of livelihoods in agriculture undermines the social security of women first, and then the social security of their dependants, children and ageing family members. When livelihood conflicts break out, these people regularly become the first victims of warlords as their livelihoods are destroyed by marauding militias.

This is the gendered aspect of livelihood conflicts, and it is fundamental to recognise it - although we often fail to do so; we talk and write about unemployed 'youth' in general. But 'youth' is not the problem here - young men are. The mobilization of young men by unscrupulous leaders - or warlords - who of course have agendas of their own, is regularly undertaken along ethnic lines. This is not surprising. Every society is filled with fault lines. In good times they may be relatively unimportant. When times get tough, however, they provide an easy channel to pit one segment of unemployed young men against another, and thus to mobilise them. If you are unscrupulous enough, it is easy to mobilize an ethnic army of discontented young men - provided they have been subjected to the rapid process of loss of livelihoods. When times are good, young men are not that easily mobilized to commit atrocities against a part of the population in their own countries.

So loss of livelihoods plays a central role in linking poverty and environment as causes of conflicts. But losses of livelihoods have many causes in the world today. I will now concentrate on one cluster of such causes, which has to do with agriculture, and with environmental scarcities.

The Role of Agriculture

Particularly developing countries are severely challenged by the social consequences resulting from a scarcity of job opportunities in relation to the number required as a

result of population increase. Failures to meet such challenges create opportunities for the extremely vile political forces we are talking about.

The losses of livelihood resulting from environmental scarcities of arable land and water, vital for agriculture, form a special case of growing importance. Although roughly half the human population is now - at the turn of the century - living in cities, agriculture is still by far the largest single source of livelihoods and income. But agriculture as a sector is, at present, unable to incorporate the still rising numbers of people in rural areas in most developing countries (Africa, in particular), giving rise to rapidly increasing environmental scarcities. Environmental scarcity of arable land was one of the factors at work that enabled the genocide-committers of Rwanda to mobilize a large part of the population as perpetrators in the first full-blown genocide after the Holocaust. These perpetrators remain a driving force for mobilizing the foot soldiers of many, if not most, in the on-going livelihood conflicts. Water and competition for scarce water resources has been portrayed as a source of international conflict. Nations, however, and the international system have learnt to manage this threat. There is now a growing consensus that water scarcity will not create wars between nations - but will create loss of livelihoods in irrigated agriculture, which, in turn, may create the ugly potential of livelihood conflicts. It is not surprising that Egypt is building a new Nile Valley, although they really do not have the water to fill it with. It must be an imperative for the government to find livelihoods for a still growing population at almost any cost. The prize of discontented young men in Cairo is simply too high to pay. So how should we design a research effort built on these intuitions?

Reconciling Different Strands of Research

Research efforts on links between environment and conflict have diverged in the last few years into several strands, sometimes seemingly at odds with one other. This is unfortunate, unproductive and possibly also unwarranted.

Paul Collier has aptly summarised the controversy as 'Need or Greed', indicating, on the one hand, research (by Homer-Dixon³ and others) on environmental scarcities as a cause of conflict and, on the other, resource pillage as a cause of several internal wars in Africa (research by Collier⁴, Keen⁵, and others). Reconciling diverse research efforts may not always be an advantage per se (an obvious risk would be loss of clarity and the explanatory power inherent in more refined and specialized efforts). In this case, however, considerable gains from a policy-making point of view would seem probable. The suggestion here is that it would be worthwhile to investigate a 'Livelihood Conflicts Approach', in which the apparent contradiction between 'need' or 'greed' approaches might be transcended. This could be done by studying loss of livelihood resources and

³ E.g. Homer-Dixon, T. (1999). *Environment, Scarcity and Violence*. Princeton: Princeton University Press.

⁴ E.g. Collier, P. and Hoeffler, A. (2001). *Greed and Grievance in Civil War*. Washington D. C.: World Bank.

⁵ E.g. Keen, D. (1998) *The Economic Functions of Violence in Civil Wars*. Adelphi Paper 320. London: Oxford University Press for the International Institute for Strategic Studies.

opportunities as an underlying cause of conflict, in both 'need' and 'greed' type of conflicts.

In a 'need' type of conflict the link between environment, livelihoods and conflict is clear. Environmental scarcities of livelihood resources (land and water) lead to loss of livelihood opportunities. Rapidly increasing inequalities give rise to polarisation along existing social fault lines (ethnic, national or religious). Marginalized people's justified expectations of development and a decent life are frustrated. The rapid fall into relative poverty and the ensuing polarization make large segments of the population vulnerable to political mobilization by unscrupulous actors with a power-seeking agenda of their own. In 'greed' type of conflicts the link between environment, livelihoods and conflict is more indirect. The conflict is seemingly 'about', or financed by, looting of mineral and other mainly non-renewable resources. The war in the Congo, DRC, or the wars in West Africa, may be taken as an example.

However, people whose reasonable expectations of a decent life are fulfilled don't readily allow themselves to be mobilised by warlords, nor do they readily commit atrocities. For this to happen, it could be hypothesised that a similar loss of livelihood opportunities, and a similar rapid pauperisation (brought on by loss or scarcity of opportunities for earning a livelihood) must have taken place. Let's turn now to the policy aspect.

The Need for a Global Environmental Marshall Plan

Against the background sketched so far, social undertakings that require manpower - rather than the exploitation of scarce natural resources or activities that undermine or pollute the resource base, should be regarded as beneficial from a livelihood-conflicts perspective.

Almost all tendencies prevalent in the workings of the global economic system, however, seem to go against the grain of this tenet. Development efforts seem bent on increasing the productivity per invested dollar, rather than promoting the sustainable productivity of the land and increasing the ability to provide livelihoods for all the young men who no longer have a place in the agricultural sector. The relevant policy question therefore is: What kind of overarching political principles can make a dent in this almost universally applied conventional economic wisdom? To address this question, the analytical part of the research effort in my view should be complemented by a policy-directed effort to reconcile the glaring contradiction between, on the one hand, the readily available productive resource of people currently marginalized in agriculture, and, on the other, the recognized scarcity of healthy and productive ecosystems.

While job-creating efforts are certainly on the international agenda, a special responsibility here could be to point at possibilities for creating jobs, ultimately creating long-term livelihood opportunities and increasing future productivity. Indicating possibilities for employment could serve as a strong conflict-prevention measure by

creating opportunities for people to work in reconstruction of depleted agricultural and other vital degraded ecosystems.

What we seem to be confronted with in the present world is, on the one hand, a well-documented scarcity of healthy, productive eco-systems and, on the other, an equally sizeable and unused asset made up of all those women and men who have suffered losses of livelihood due to environmental destruction or unsustainable agriculture. While the world's eyes are focused on the reconstruction of Iraq, it is easy to forget that very large areas, where populations are many times larger, are in dire need of reconstruction, both from conflict and from degraded environments.

In fact, it is the combination of these two glaring facets of poverty and environmental degradation that offer a potential for conflict prevention, poverty elimination and environmental reconstruction. The reconstruction of ecosystems will take a lot of effort, and there are many willing hands that would gladly undertake that work. But what it is needed, is some mechanism, some incentive that would get the good spiral going. Working together on reconstructing environmental resources makes partners and friends, not enemies. It will provide greater opportunities for livelihoods in the future, thus leaving less ground for future warlords. Reconstruction of degraded environmental resources is now recognised an integral part of conflict resolution in post-conflict situations. However, the mechanisms for doing this sustainable - over time, beyond the period immediately after a terminated conflict - are sorely lacking.

There is an abundance of manpower in the world, a fact that might have contributed to conflict in the first place, as demonstrated by the Livelihood Conflicts Approach. There is also an abundance of degraded environmental resources, which, if properly rehabilitated, can contribute to future livelihoods for populations in need after conflict. But there are very few economic mechanisms that will facilitate a smooth mobilization of all those in need of livelihoods to working with rehabilitating degraded environmental resources. In most cases, mainstream economic thinking tends toward employing fewer and fewer people, while maximizing the productivity of capital and the labour of those employed. There are a few mechanisms that would instead enable a large number of people to gain livelihoods from rehabilitating degraded environmental resources. Finding those mechanisms is a major development challenge, which could well be formulated as the need for a comprehensive Global Environmental Marshall Plan.

Summing up the Research and Policy Efforts

To sum up so far, the suggested research could thus be divided into three parts:

1. General background research on the theme of a 'Livelihood Conflicts Approach'. This would provide guidelines to:
2. A series of specialised case studies. These could be made by re-reading previous studies from many sources. It would be an inventory of case studies made so far, reinterpreted in the light of the 'Livelihood Conflicts Approach'.

3. A thorough working-out of the possibility of a 'Global Environmental Marshall Plan', to reconstruct depleted environmental resources, while creating conflict-preventing livelihood opportunities.

Bringing AIDS into the Livelihood Equation

The first caveat is about the AIDS crisis. The general tendency described so far - a surplus of labour, lack of livelihood opportunities, and the resulting risks of tensions and conflict - is severely complicated in those parts of the world worst affected by the AIDS crisis.

In all of Africa south of the Sahara it is now recognized that the present food crisis is not going to go away quickly, even if the recurring droughts do not return. The reason is that a combination of droughts, political mismanagement, unfair trade and AIDS has drained the resilience of the social system. The production of small-scale farming families drops immediately to half of what it used to be as soon as somebody in the family dies from AIDS. In industry, and the society at large, life is increasingly coloured by the exigencies of the disease. Therefore, the need in small-scale African rural households at present is for labour-saving techniques, so as to mitigate the impacts of AIDS. The UNDP resident coordinator for Zimbabwe, Victor Angelo, recently aired his misgivings in an interview for the UN humanitarian news agency, IRIN. 'We know', he said, 'that those who are most likely to become infected are between 15 and 25 years, meaning that ten years from now, the group that would have been the main source of income generation will have been drastically reduced. How can Zimbabwe be sustained?' he asked.

The present crisis thus represents a whole set of new development challenges, which have to be incorporated into any research effort aimed at creating viable policies. But Victor Angelo also said: 'I have to tell you, people often speak of gender issues as a first-world preoccupation - as secondary, a luxury - but gender inequalities fuel the AIDS pandemic in Zimbabwe. You cannot marginalise any one group without the consequences being felt by everyone.' Which brings us to the second caveat to the Global Environmental Marshall Plan, namely its gendered aspects.

Gendered Aspects

This second caveat is conditionality, i.e. it includes in the plan efforts to promote women's status and power as autonomous political and economic agents. To be sure, this is acknowledged as a goal in its own right today (at least, by international agencies and many governments). However, political and economic power, including livelihoods is very much a zero-sum game: a game where women, from a vastly disadvantaged position, compete with men. This is a fact, and it is not to be deplored. In fact, it is a ground tenet of democracy. If women are to get political and economic power to a degree that at least begins to approach their equal number in society, then it follows that men will have less power.

The Sida (Swedish Development Cooperation Agency) journal 'Omvarlden' recently displayed, prominently on its back page, an interview with a leading South-African masculinities researcher under the headline: *'Men must get more jobs to increase gender equality in Africa'*. I take this as corroboration of having correctly identified the salience of livelihoods, as well as the particular gendered aspects of livelihood conflicts. As to the inference, however, I provisionally beg to differ. Increasing gender equality doesn't mean that life for men will be less worth living - by necessity, however, it means that they will have less power, as indeed they should. This is, in fact, the definition of increased equality, and as such not something to be deplored, although the consequences of it most certainly will have to be faced. What it means is that the international humanitarian and developmental community will have to accomplish several difficult tasks at once. Not only should the access of women to livelihood opportunities be enhanced, but women should also be invested with the corresponding political, economic and legal rights. And men - who will lose major portions of their former disproportional privileges - will have to be taught, not only to accept, but to welcome and smooth the way for this change. As noted earlier, women in the war-torn and AIDS-ravaged countries of Africa already carry the burden of sustaining families, children and the elderly - while constantly being undermined, and indeed, becoming the first victims of men's violence in livelihood conflicts. The cardinal policy question for both conflict prevention and development efforts therefore is: what kind of concrete policies will make recalcitrant men accept that they will have to lose some of their hitherto unquestioned male prerogatives to make room for women? It is a very tall order, but this issue cannot be circumvented; it has to be addressed head-on, in both research and policy efforts.

The Humanitarian International Community under Attack

The third caveat is a very real and frightening threat to the very international humanitarian community that gained in strength during the 1990s, after the Cold War. The threat stems from the present US administration, which today has been captured by a powerful group of neo-conservative ideologists. The goal of neo-conservative ideologists is explicitly to wrench the USA away from any hint of that international humanitarian community, which has respect for an agenda of human rights, women's rights, and environmental concerns, and which adheres to international negotiations and treaties. And the position of these neo-conservative ideologists has been very much strengthened by the-in their view- successful war in Iraq. These ideologists steadfastly believe that the humanitarian and internationalist agenda is a product of European military weakness, and that the overwhelming military strength of the USA instead warrants a 'Pax Americana', built on pre-emptive military strikes against goals unilaterally decided by the USA.

I cannot but agree with liberal humanitarians in both the USA and Europe who regard this turn of events as a grave danger to exactly the kind of policies we are discussing. A Global Environmental Marshall Plan, addressing both AIDS and gender issues, is very far from the agenda of the present US administration. That is also why, at exactly this point

in history, such a suggestion may be of utmost importance. After the Second World War, the USA stayed in Europe, and they made very sure that the 'German danger' would not reappear. The classic Marshall Plan is widely recognized to have been instrumental in creating the present peaceful Europe (which is very much recognized by the neo-conservatives, although they choose to call the eventual outcome as a 'weakness' or 'softness' in Europeans).

A Global Environmental Marshall Plan - creating sustainable livelihoods, reconstructing degraded ecosystems, while addressing AIDS issues and gender gaps - could very well be Europe's way of paying back the historical debt we owe to the original Marshall Plan. At the same time it would provide an example of true global leadership and an alternative for the future.

Summary in Ten Points

In summing up, I would like to suggest the following ten points for discussion:

1. Loss of livelihoods, or an inability to provide enough livelihood opportunities as a root cause of conflict, merits study.
2. Agriculture as an economic sector can no longer absorb the still growing number of people and the related increasing demand for employment during the next decades.
3. Part of agriculture's inability to provide an increased livelihood opportunities is caused by environmental degradation (in turn, caused by the pressure on environmental resources to provide livelihoods).
4. A number of internal conflicts, often regarded as 'ethnic', are better explained as 'livelihood conflicts'.
5. Such livelihood conflicts have a particular gendered aspect - we should acknowledge that the problem is frustrated young men as immediate agents of conflicts, while young women are most often the first victims of such conflict.
6. These conflicts are in no way deterministic: it takes actors with a power-seeking agenda of their own to mobilize the frustrated young men; there are ways and means, and policies, whereby such actors and the risk of conflict could be mitigated.
7. Conflict-prevention policies should be built on reconstructing degraded environmental resources important for livelihoods in agriculture, and should go against the conventional economic wisdom, striving to maximise the number of people gainfully employed, rather than maximizing the productivity of investments.
8. On a more generalized level, the policies sought show strong kinship to the classic Marshall Plan.
9. It is important that such a 'Global Environmental Marshall Plan' addresses the special needs brought on by the HIV/AIDS crisis; it also has to address the gendered aspects of livelihood conflicts.
10. The Global Environmental Marshall Plan could be Europe's way of paying its historical debt for having achieved maturity and peaceful relations. It would also be a poignant statement at the present juncture of international affairs.

Mark Halle: 'Trade, Aid and Security: Towards a Positive Framework'

Mark Halle has both policy and academic experience in the field of environmental security. He is currently the director of the Geneva office of the International Institute for Sustainable Development and is senior advisor to the IUCN. In the past, he has worked for the World Wildlife Fund and the United Nation Environment Programme. More recently, he has conducted a study for the OECD on the implications of the linkages between environment and security for development assistance.

The following text represents a recapitulation of Mr. Halle's original talk at the conference and has been approved by the author.

In his talk, Halle advocated an integrated approach to trade, aid and security. In an attempt to work towards sustainable development - which he viewed as the ultimate goal of humanity - the three concepts need to be tackled in unison. He supported his argument for such an approach with five reasons (see below).

1. Security - the absence of violence or military oppression - is a necessary condition for effective governance, foreign investment and fair distribution.
2. Security is thus a prerequisite for sustainable development.
3. Treating trade, aid and security in isolation creates adverse impacts.
4. A combined approach can take both international power relations and different policy spheres into account.
5. Armies can win wars, but peace can be secured and sustained only by broader interventions.

The past decades have witnessed a wave of intra state conflict and asymmetric violence. Because these conflicts are taking place in a context of globalisation, they will have international relevance. Halle observed that globalisation is developing more rapidly than our capacity to deal with it. In this way, it may undermine governance. National governments are increasingly bypassed or restricted and international governance fails to adequately control trade, flows of finance, people and ideas. Weakly governed international markets may sustain or exacerbate conflict. On the other hand, unresolved intra-state conflict has global impacts. The events of 11 September 2001 have led those in some parts of the world to put up walls to close off the rest of the world- measures, however, which will not guarantee security and certainly not sustainable development. Many international authorities - among which the Bretton Woods institutions and the European Union - try to promote security through trade. Development, poverty reduction and improved governance may be supported by trade and in effect contribute to peace and security. In addition, international trade allows for norm-sharing, exchange of people and interdependence. Finally, an adequate trade system offers non-violent mechanisms for signalling and resolving disputes.

On the other hand, trade may also undermine security. Excessive economic dependence and commodity prices may fuel war economies. Increased equality, migration and

urbanisation may create tensions and escalations of violence. Some parties use trade to sustain their conflict. As a consequence, trade may sustain conflicts. Finally, decreasing power and budget for governments may result in weakened government and inability to resolve intra-state tensions. Halle observed that trade liberalisation has been argued to contribute to sustainable development. However, selective liberalisation - only in the interest of powerful countries - will not.

Halle also provided some examples of inadequate liberalisation exacerbating conflict. In South America, the drop in coffee prices caused many farmers to switch their production to coca. This resulted in a strengthening of illicit trade networks and armed militias who engaged in violent conflict. In line with this, the North American Free Trade Area (NAFTA) is arguably a major cause of the Zapatista conflict in southern Mexico, because cheap American maize flooding the country has had a large impact on the people in this region. Liberalisation has also given rise to illicit trade in diamonds, Coltan and other lootable resources that have been observed to fuel conflicts.

Like trade, aid is often seen as a medium to prevent conflict, but it may exacerbate it as well. Development assistance is increasingly reactive. Peacekeeping budgets and humanitarian aid are steadily increasing. Failure to take a broader picture and employ the preventative capacity of aid has contributed to the crises the aid community is now merely trying to react to. Halle observed that assistance might aggravate conflict by financing armed insurgents and autocratic regimes. Support to disruptive resettlement and migration may have adverse effects as well. In addition, development aid may create conditions for competition: for example, economic austerity, democratic influence and human rights. Lastly, aid may feed conflict due to unstable and inconsistent funding and donor policies being subject to fluctuating fashion trends.

Having underlined the need for approaching trade, aid and security in unison, Halle addressed the question on how to do this. A 'positive paradigm' would take security as the central goal, while trade and aid are the means to reach it. Transparency, participation and dispute resolution are cross-cutting values. To overcome the wedges between the trade and the aid community, a dialogue between the two spheres is required. With regard to trade and security, Halle noted a few positive developments like the Kimberly process, a certification system for 'blood' diamonds. Such a mechanism would, however, not be feasible for all resources. Coltan was mentioned as one of the more challenging ones. Thus broader modes of cooperation need to be sought between the WTO and the 'environment community' to prevent the trade in certain natural resources from aggravating conflict. The exploration of possible interventions should take place within the existing trade system. WTO articles XX/XXI were mentioned as a positive example. On trade and aid, Halle moved to reinvigorate the debate on the stabilisation of commodity prices and the conflict-generating effects of fluctuating prices. In addition, he argued that aid should be geared towards trade needs.

Finally, going back to aid and security, Halle stressed the need for Peace and Conflict Impact Assessment (PCIA) in development projects. The importance of aid being predictable and accountable was also underlined. In many cases there has been a downward spiral of malfunctioning trade, instable development assistance, social

tensions and failing conflict resolution mechanisms, resulting in violence. It should thus also be possible to create an upward spiral of trade, aid and security, marking the challenge in our efforts towards sustainable development.

Mohamed Salih: 'Responding to Scarcity'

Mohammed Salih is Professor of Politics of Development at the Institute of Social Studies at The Hague and the Department of Political Science University of Leiden. He received his masters in sociology and anthropology at the University of Khartoum, Sudan and his PhD in economic and social studies at Manchester University (UK). Salih has contributed to a wide range of publications in the field of environmental governance, democracy, sustainable development, pastoralism and local environmental change in different parts of the world, particularly in eastern Africa.

Professor Salih started his talk with four anecdotes. The first one was from Locke's⁶ *Two Treatises of Government*, which contrasted the Europeans, described as being able to dominate nature using rational labour, with the American Indians. Locke described the Indians as rich in land, but poor in all comforts of life, because they did not work. The second is from Adam Smith's *The Wealth of Nations*⁷, where he lamented in the late 18th century that 'Scarcity is the original condition of all human kind, a condition with which humanity must wrestle, first in order to survive, later to live in comfort'. The third is from John S. Mills' *Principles of Political Economy*⁸, where he argued that in steady-state (economy), human beings would be far better off than speeding towards progress. The fourth anecdote is from a much later period. Keynes in *Essays in Persuasion*⁹ had the view that within two generations, industrial societies might finally realize the ultimate goal of mankind. That goal is an end to the problem of scarcity. However, Keynes was optimistic in arguing for the possibility that the future would bring light and the satisfaction of a human's all basic needs.

The problem of scarcity and how to deal with it has always been, and still is, the worry of human beings. The earliest forms of responding to scarcity included colonization, which pushed the problem of resource scarcity to other societies and continues to do so. New forms of internal colonization, which are not necessarily European, operate at local and regional levels of sovereign states through population movement and mobility from regions of resource scarcity to those of real or imagined resource abundance. From this perspective, migration, mobility, resettlement or any similar connotation, are not entirely new responses to scarcity, although it is fair to say that they operate at different scales and magnitudes, and carry with them more far-reaching consequences.

⁶ Locke, J. (1690) *Two Treatises of Government*. Cambridge: Cambridge University Press. (1690).

⁷ Smith, Adam (1776) *The Wealth of Nations*. New edition. London: Dent.

⁸ Mill, J. S. (1848) *Principles of Political Economy*. Harmondsworth: Penguin, (1848).

⁹ Keynes, J. M. (1930) *Essays in Persuasion*. London and New York: W. W. Norton.

Science and technology began some time ago to replace colonisation, offering new solutions to scarcity instead. The premise and promise of technology and science went unchallenged until the last three decades of the 20th century. The raising of serious doubts about the capacity of the economy to grow exponentially and the ensuing increasing pressure on finite resources has allowed scarcity to resurface, albeit in different forms and in a more divided and less confident manner.

Looking back at the intellectual and policy heritage in dealing with scarcity, it is only fair to argue that substantive efforts were made to explain how potential scarcity of capital, labour and resources dynamically determine national wealth and individual income. Issues of ownership, management and differential impacts of scarcity were studied against the backdrop of the desirability of one policy orientation favouring one natural resource allocation perspective over the other - whether private, collective, communal, market-driven or control and command managed. Ironically, this heritage has dominated a variety of policy prescriptions dealing with scarcity whether at the global, national or regional levels. The antecedence of scarcity seems to have persisted, at least, in this vital domain of social science enquiry and policy intervention.

However, the emergent environmental consciousness, and what is perceived as global environmental problems and concerns with the future and the capacity of 'spaceship earth', have to maintain the environmental life support system indefinitely, responding to scarcity is being taken more seriously. Sustainable development became the new paradigm without major paradigm shift. The rationalist assumption is that if scarcity is global, the solution to the problems emanating from it should also be global. Global policy designs are thought to produce a blueprint, hence privileging the maintenance of a functioning global environmental support system over the pressing need for equally healthy and functioning local livelihood conditions. The responses to scarcity in policy circles has so far concentrated on:

1. Development;
2. Humanitarian intervention;
3. Population control;
4. Conservation;
5. Capacity building and
6. Innovation.

Development and humanitarian intervention have as their premise alleviating situations of structural scarcity or as a response to chronic shortages of the necessities of life (food, water, security etc.). As recent studies have shown, both development and humanitarian intervention have in many situations become metaphors of conflict contributing to the bitter struggle over who benefits, controls and defines their direction.

Conservation is possibly the newest among the above growth-linked scarcity reduction strategies signalling the shift from scarcity to sustainability. While none of the above intervention methodologies have been adapted to the conditions of the developing countries, there is, however, a universal belief that they are sufficient ingredients for responding to scarcity. In reality, though, our knowledge about scarcity has not progressed much and our doubts about the methods and theories explaining their ever-

present dangers or rewards have not been consolidated, probably more so at the local than the global level. Because the technology and organization created by the industrial countries to mitigate scarcity were originally conceived to deal with the larger synthesis, most conceptual and regulatory frameworks proved inept in dealing with mundane local scarcity concerns.

The main problem in my view is the contradiction between techno-organizational packages based on modern natural resource management fixation and local situations, where continuous adaptability and flexibility are essential prerequisites for coping with adversity.

1. Diversification of Production and Sources of Income

Responding to scarcity through the diversification of crop and livestock varieties appropriate to emerging resource conditions are common practices among almost all local communities. Diversification of income is increasingly dependent on proximity to town and urban centres. Income diversity such as charcoal and firewood sale, or engagement in hired agricultural labour, may solve the immediate problem of overcoming scarcity by increasing income, but may create scarcity through resource depletion.

2. Falling Back on Indigenous Knowledge

Instead of resorting to modern science and innovation, local communities often fall back on their own indigenous knowledge about processing wild edible plants. The response to water scarcity was local water management and soil conservation knowledge, including catchment terracing and ridge cultivation as new innovations taken from past practices etc.

3. Adaptation

In the social science, adaptation could be inferred to mean deliberate interventions or changes within a time frame to bring the socio-economic conditions to cope with new environmental conditions. This would be in order to ensure that the productive and reproductive processes which maintain livelihood are capable of generating income from the same or enhanced resource base. Adaptation does not imply maintaining the same level of productivity or ensuring that sustainability of resources is imminent, even though this is the desired goal. Or simply put, adaptation is an act of changing to allow something to fit into a different situation or condition. In real-life situations, adaptation could mean reducing consumption, changing the quality and range of goods and services consumed or producing a new range of products never before contemplated or contemplated only in exceptional circumstances.

4. Exploiting other Peoples Scarcities

Exploiting other people's scarcities could mean taking advantage of resource incompatibility in order to take advantages of scarcities elsewhere. In most pastoral societies a system of contracting out one's animals is sought as a means of reducing pressure on labour or local resources. Share-cropping is also a common practice where those who have more land than they can manage enter into an arrangement in which they claim a certain proportion of the land produce. Another arrangement involves children moving to the animal camp of a wealthy relative and growing up with his children with the understanding that they can make claims on the animals needed for a dowry.

5. Activating Social Support Networks

Activating social support networks often takes place during social crises emanating from food shortage and severe droughts where the sustenance of crop and livestock production almost ceases to exist. It is increasingly evident that social networks traverse the rural communities in search of close relatives and family members in towns, urban centres and squatter settlements. Such networks are more evident in the case of ethnic associations and collective labour formations.

6. Migration

Migration or mobility is probably the most ancient form of human response to scarcity, ranging from colonisation to peaceful and voluntary resettlement in new and more conducive resource-base conditions. In fact the current debate on migration and the conflicts it engenders cannot be separated from the manner in which international migration is a symptom of environmental and other scarcities in the societies sending away their people. In one's own local and regional setting, migration or mobility takes various forms, ranging from coping with seasonal scarcity emanating from seasonal variation of water and grazing land availability due to climatic variation to seasonal migratory patterns to deal with seasonal variability of grazing and pasture.

7. Conflict

A more dramatic response to scarcity is violence, or what can be referred to as high intensity conflicts. Referring to the general remarks made in the outset of this talk, it is obvious that current official policy interventions to mitigate scarcity problems at the local level have not outgrown their antecedents. Four major social science perspectives inform the debate on scarcity and violence.

1. The scarcity-violence perspective identifies three types of scarcity:¹⁰
 - a) supply-induced,

¹⁰ Homer-Dixon, Thomas F (1999) *Environment, Scarcity, and Violence*. Princeton, NJ : Princeton University Press.

- b) demand-induced and
- c) structural scarcity.

Central to these scarcities are population, technological development and the availability of resources. At the crudest level of generalization, environmental scarcity has profound social effects that generate grievances, which lead to conflict. Homer-Dixon's definition of environmental scarcity includes environmental depletion or damage as a form of scarcity applicable to renewable resources.

2. The genocide-scarcity perspective developed hinges on five scenarios:
 - a) Genocide that leads to scarcity by creating chaos, disrupting the economy and destroying the skills and productive abilities of large number of people, such as the cases of Cambodia and Rwanda.
 - b) Genocide that results from direct conflict over resources; the cases of Africa's Great Lakes, Sierra Leone and Liberia.
 - c) Genocide as averted omission, where the dominant power does not provide the necessary resources to support the afflicted peoples. The only cited example here is the British Government reaction to the Great Famine in Ireland from 1845 to 1848;
 - d) Genocide as a result of the creation of scarcity through monopoly and exclusion or depriving victims of food, such as using food as a weapon and
 - e) Scarcity as a contributing factor in the decision to resort to genocide, for instance, in the case of indigenous people's inequitable access to resources.
3. The scarcity-distribution perspective. This is a Marxist or neo-Marxist inspired political economy approach to natural resources, also referred to as radical political ecology, in which scarcity is described as human-induced; it should be explained mainly against the dynamics of an exploitative capitalist system. The solution here is the dialectical opposite of accumulation: re-distribution as the cornerstone of coping with scarcity and its inhumane consequences.
4. The scarcity-growth or accumulation perspective. Neo-liberalism brought to question the ethos of the Marxist and neo-Marxist perspectives on the question of scarcity. The neo-liberal perspective privileges property rights and is very sceptical of redistribution and pro-active social justice regimes. It offers the market as a rational institutional mechanism for allocating scarce resources. While advocating free trade at home, the powers behind trade liberalization have put in place trade barriers and subsidies that are not helpful in developing countries.

All forms of responding to scarcity imply direct or indirect low-intensity conflict over what organisational form they should take: diversification, adaptation, taking advantage of other peoples' scarcities or migrating to use other peoples' resources. To this extent, low-intensity conflicts are common in most human societies, but even more so when they occur in relation to scarcity, which involves interacting with others or even wanting a share of another's resources.

Although these perspectives provide useful frameworks for debating multiple explanations for the scarcity problematic, their policy prescriptions have more than often been at odds with local realities. While these perspectives could delineate the larger synthesis, the ability to confront the realities under which people actually respond to scarcity remains illusive. However, recent research on local responses to scarcity has seized to produce surprises or visionary statements. This is not because social scientists have abandoned the rigor of theoretical, instrumental, incremental and even speculative future research, but because what technology and organization have done for the industrially advanced societies has, so far, not been replicated in local situations in developing countries.

At least four main propositions inform us on the consistency or discrepancy between what we have learned from the antecedence of scarcity studies and the current human/environmental conditions:

1. Scarcity is absolute, relative and context-driven and what is considered as scarce in one society could be considered abundant in another. Because societies are at different levels of socio-economic development with different consumption and production patterns, the resource base that could be sustainable at a particular population level, could also be far below the level of resources needed for the same level of population.
2. Scarcity is not location-specific but dependent on a society's given technological reach, organizational and institutional capabilities, and the knowledge base deployable for abating resource shortages, probably by creating structural scarcities elsewhere. Thus, there is distinction between global and local collapses, which could empower local processes and transform them into environmental or social footprints.
3. Scarcity is not only material, but also social and psychological, having to do with how societies develop their social- and cultural-specific perceptions about scarcity and how to overcome its consequences.¹¹
4. Scarcity cannot be treated in isolation from the global structures and restructuring processes taking place, and their impact on local realities and their ability to incorporate the local in fundamental global processes. Examples here are trade regimes, development policies, investment flows, technological development and their local consequences.

To some extent, there is nothing like responding to localized scarcity, without realizing that not all scarcities are products of local processes. The integrative nature of the environmental support system means that the consequences of most scarcities cut across region and locality. Obviously, integrative problems require integrative solutions.

¹¹ Rousseau, J. J. (1960). *Politics and the Arts: Letter to M. d' Alembert on the Theatre*. Translated and with notes by Allan Bloom. Glencoe, Ill.: Free Press. p. 275.

Eva Ludi: 'Household and Communal Strategies dealing with Resource Scarcity: Case Studies from the Ethiopian Highlands'

Eva Ludi works for Swisspeace. During her PhD studies in Geography for Bern University she did extensive field research in different rural areas of Ethiopia and was assigned part-time as a consultant for the UN Capital Development Fund in Ethiopia from 1995 until 1997. Later she joined Swisspeace as a senior researcher in the ECOMAN Project (Environmental Conflict Management in the Horn of Africa). Two years ago, she joined the 'Environmental Change and Conflict Transformation' project of the Swiss National Centre of Competence in Research called, 'Research Partnerships for Mitigating Syndromes of Global Change'.

The following text represents a recapitulation of Ms. Ludi's talk at the conference, which has been approved by the author.

Ms. Ludi's presentation was based on field research in the Ethiopian highlands. In the context of the ECOMAN Project, she did one specific case study and incorporated insights from four other case studies around the question: How do households and communities deal with scarcity of natural resources?

Ethiopia was ravaged by a civil war in the 1980s, ending in 1991 and by the recent war with Eritrea. The impact on the already famine-prone country was large. The recruitment of soldiers left the villages short of men. Because women are culturally not supposed to plough the land, production was negatively affected in some parts of the country. The large majority - about 85% - of the Ethiopian population is engaged in subsistence agriculture. Timber, irrigation water and both arable land and grassland are increasingly scarce in Ethiopia. The distribution of resources and land, in particular, has come to be an issue of contention. In principle, the government owns all the land. Farmers only have user rights to the fields. Conflicts over user rights do occur. As good land is extremely scarce, farmers are forced to farm the very steep slopes, areas hard to cultivate where the risk of soil erosion is eminent. The topsoil being washed away, people are left with totally degraded sections of land. Because most are subsistence farmers, the resulting drop in productivity has direct consequences for the welfare - and in some case the survival - of families. In a reaction to the process of soil erosion, new technology has been introduced and existing technologies are being adapted. Terraces and small-scale irrigation systems have been promoted in order to protect the soil and augment the harvest. The success of these measures has not been uncontested: erosion has persisted and the new irrigation systems have given rise to a new range of conflicts.

Ethiopian communities have a long history of coping with scarcity collectively. Resources and means of production - like oxen - are shared among farmers, even when the individual yield of these collective strategies becomes very small. In order to solve conflicts between individuals, villages have traditional, often religion-based, councils that act to resolve issues. In addition to these local mechanisms, the government has introduced councils, including judges, to act on disputes. In most cases these judges are

young men close to the dominant party who are being rewarded for their efforts during the liberation war. With these judges in place, Ethiopian communities are facing two kinds of mechanisms: a modern and a traditional one. Drawing from her research, Ms. Ludi concluded that most villagers have a preference for the latter.

- Traditional structures are made up of respected, elderly people, rather than of young men, who are selected for political reasons rather than for their ability to deal with the situations they are supposed to act on.
- Traditional councils take personal circumstances into account.
- Traditional mechanisms are problem-specific. They don't work with standardised solutions, but draw from local norms and values. They thus carry a moral obligation, so that sanctions are hardly ever necessary.
- Village councils are made up of 'wise men' rather than judges. They are solution-oriented, rather than judgement-oriented. They facilitate a solution that can leave both parties satisfied. However, judges tend to create winners and losers, which does not enhance sustainability and cooperation.

Villagers are obviously not unanimous in their judgement of these mechanisms. Young people may be particularly more critical of traditional systems. Though the respect for older people is large, they may feel restricted by traditional customs and decisions. Christian rules, for example, enforce holidays, which do not allow people to plough their land sufficiently. Traditional sharing systems are also criticised, for some people feel there's nothing left to share. The councils of old men are not unbiased in the generation conflict potentially occurring in many Ethiopian communities. In conclusion, Ms Ludi summed up the following points:

- Ethiopian farmers have a multitude of household and communal strategies. These are location-specific and cannot be exported to other areas without modification.
- Scarcity is a serious challenge, but due to the different strategies and mechanisms for dealing with clashes of interests, violent conflict is relatively rare.
- Traditional and modern resolution mechanisms are complementary.
- It is problematic that there is no land and resource policy to guide the search for solutions or fair and consistent judgements in case of conflict.
- Given the locality-specific character of resolution mechanisms and the absence of general policy, it is hardly surprising that decisions and solutions are very different, depending on the case, even when the basic parameters are very similar.

- The government-installed judges face major problems because of their limited acceptance among the community, their lack of experience and the absence of laws to frame their decisions.
- Apart from community-level mechanisms, there are no higher-level mechanisms to deal with conflicts and environmental problems that transcend the community level. This may be problematic in the future.

Mirjam de Bruijn and Han van Dijk: 'Resource Conflict in Chad'

Mirjam de Bruijn is an anthropologist at the Africa Study Centre in Leiden. An important theme throughout her work is how people manage risk (drought, war, etc). Her fields of interest are pastoralism, nomadism, ecology, social (in)security, poverty, urban-rural linkages and inter-ethnic relations. She is also working on a project on climate change and consequences for rural and urban areas.

Han van Dijk, also at the Africa Study Centre, studied anthropology and forestry. His research focuses on political decentralization, land tenure, natural resource management and farmer-herder strategies in response to climate variability and development policy. He has a special interest in the interaction between society and the environment and the social and political struggles arising from it.

The presentation of Han van Dijk and Mirjam de Bruijn was based on recent fieldwork in Chad. Due to the short time span between their return and the conference, this presentation could only provide impressions of work in progress and should not be taken as a consolidated analysis.

Introduction

The objective of the research project in Chad was to study the effects and impact of drought and war on Chadian society, in particular, the Guera district, a mountainous area in Central Chad. The question asked was whether there was anything specific about resource conflicts in Chad, not only in comparison to other conflicts there, but also to other countries?

Chad is a conflict-ridden country. During 1965 to 1985 the country was in a constant state of civil war, especially important with reference to field research. Between 1985 and 1990 it was suffering from one of the most horrible and oppressive regimes ever in Africa, the rule of Hissein Habré. Between 1990 and the present, a period of relative calm has set in. Nevertheless, there have been 18 armed rebellions against the government of Idriss Déby, who chased Hissein Habré out in 1990.

Apart from some historical studies of the civil war and the political situation at the national level, hardly any information is available on what happened in the interior of Chad. There are very few historians and anthropologists who ventured into the country to talk with people at local level. Chadian researchers have also refrained from doing this, because they will always be associated with one or another party. This type of human-interest study has been much more common in countries like Angola, Mozambique, Sudan, Liberia, Sierra Leone and Rwanda. This is a serious obstacle for understanding resource conflicts in Chad. Background information on the level of violence, political coalitions and changes in power relations in the countryside are mostly lacking. However, this information remains a necessary component of an analysis of resource conflicts, since much of the behaviour of people in conflicts is in one way or another a logical sequel of events earlier on in history. The question that follows is whether Chad is a particular case with respect to resource conflicts. The answer is yes, or it seems to be. The level of conflict in some parts of Chad is extremely high, when compared to other countries in this part of Africa, Mali, Niger, Burkina Faso, Senegal, but not if you look eastward to Sudan and Somalia.

This brings us immediately to a second issue for treatment, namely, methodology. Is it possible at all to isolate these conflicts from other forms of conflict? And, what precisely constitutes a resource conflict? The first question is, of course, a rhetorical one, and should be answered in the negative. The second question is much more difficult to answer because it leads into a discussion of the causes of conflict in the realm of ecology, ecological change and our notion of scarcity, along with the perceptions of people of scarcity and the reasons for them to engage in conflict. To outline our thoughts on this, we will discuss the following issues:

- History of Chad in relation to resource management and resource scarcity.
- The specific form of so-called resource conflicts in Chad.
- A preliminary attempt to analyse the backgrounds of these conflicts.

Historical Background

At present, Chad is one of the poorest and most miserable countries in Africa. Its physical infrastructure is probably the worst in the world. Until recently there were only 400 kilometres of tarmac road on a surface area of 1.24 million km². At present, the provision of electricity and potable water in the capital is worse than during the civil war. Though official figures of child mortality do not deviate much from other countries in West Africa, there are indications that in some parts of the countryside it may be as high as 50%, with malnutrition reaching famine conditions on a regular basis. The incidence of crop damage in the forms of pests, and weeds such as 'striga', is probably higher than in other areas in the absence of policies and agencies to co-ordinate the suppression of these pests. Rainfall is not only low in many parts of the country but also extremely erratic. In some parts, the war and labour migration have reduced the number of able-bodied men to such an extent that the local economy is crippled. Government representatives are without exception extremely corrupt and geared to

exploiting the population. Political strife dominates life to such an extent that people are not able to develop their own initiatives to improve their situation.

Many of the political opposition groups in Chad have their roots in pre-colonial history. The north was dominated by Arab influences. The centre of the country was the territory of three empires, Kanem north of Lake Chad, Baguirmi south-east of the present capital N'Djaména and Ouaddaï in the east of the country. These empires were part of the string of savannah and Sahel empires. The greater part of the south was a savannah zone without any higher order of political organisation. This area served as a slave-raiding zone for the Sahel empires, which exported slaves to the Arab and Ottoman world across the Sahara desert. Slave-raiding was so intense that a number of ethnic groups in the south were brought to the verge of extinction. This did not happen due to colonial occupation that started around 1900. The mutual perceptions and stereotypes formed in this period are still relevant to understanding the relationship between northern population (Muslims), and southern ones (Pagans, Kirdi in local Arab).

The colonial occupation did nothing to resolve or reconcile these opposition groups. Rather, they reinforced them. No one had plans for forming anything like the present Republic of Chad. The south benefited much more from the colonial occupation in terms of investment, education possibilities and promotion into the rank and file of the colonial administration and army. The only reason was that the south was much better endowed with natural resources and productive land. It was called '*le Tchad utile*' by the French as opposed to the dry, inhospitable north, though the French had much more esteem and respect for the Muslim civilisations of the north than for the pagan cultures of the south.

Soon after independence, the disparities between the two parts of the country became the source of political tensions and conflict. Though leading politicians (parliament, government ministers) were relatively equally divided between north and south, the government apparatus and the army were dominated by southerners. The latter felt it was their turn to rule and behaved as an occupying power in the north, exploiting and oppressing the Muslim population. From 1965 peasant rebellions in the central district of the Guera, later on fostered by a political movement, the FROLINAT (FRONT pour la Libération NAtional du Tchad), challenged the authority of the central government. These rebellions developed into a mature civil war in which all kinds of political contradictions played a role. Political unrest has continued ever since.

The Current Situation

After 20 years of large-scale political unrest, a government dominated by Muslim northerners, headed by Hissein Habré, took power. This government was particularly oppressive and was toppled in 1990 by a military uprising from the east, and Idriss Déby took power. Muslims and northerners dominated this administration as well. In 1993 the regime embarked on a gradual course of democratisation: basically, a smoke screen for donors. Internally, in the countryside, nothing much has changed, with oppression and

mass killings having occurred regularly, going unnoticed by international observers. The effects of this political and military insecurity were compounded by severe droughts, which struck the country precisely during the civil war. Aid could only be distributed on a piecemeal basis, and the suffering in the countryside was immense. These droughts, and the war, had a devastating effect on the economy, ecology and the social cohesion, leading to massive migration both from rural to urban areas and from northern to southern rural areas.

This has led to the situation that large numbers of nomadic pastoralists from the north (Arabs, Teda, Daza, Zaghawa) have moved into the southern districts and have occupied bushland to pasture their animals. Since their clansmen dominate the administration at all levels and the security forces in the upper ranks, nothing is put in their way when moving south. One question we may ask is this: Are these migrations the result of scarcity and environmental decline, or are they part of a more general movement of pastoralists to the south, looking for better economic opportunities and pasture conditions as in other Sahelian countries? Or are they perhaps part of a plan or political design to extend political influence of northern politicians over the south?

The Anatomy of Farmer-Herder Conflicts in Chad

Both in the Chadian press and the popular imagination, conflicts between sedentary agriculturalists in the south and nomadic pastoralists from the north have taken on biblical dimensions. Newspapers regularly report on extremely violent clashes between various ethnic groups, and the insecurity and hatred produced by these incidents are a national concern, said to undermine national stability. These conflicts are mostly about access to wells, and the establishment of settlements by pastoralists in cultivators' villages, damage to crops and land tenure. Consequently, these conflicts can be labelled conflicts over scarce resources that are getting scarcer and scarcer in the popular imagination. It is reported that farmers in some areas have stopped cultivating because the livestock pressure is so great that their crops do not have the chance to reach maturity

In 1998, a national conference was held to discuss how to tackle the issue. The government appointed a special commissioner for the reconciliation of farmers and pastoralists. Foreign NGOs and the Catholic missions have undertaken efforts to reconcile the various population groups involved. Over the past years substantial grey literature has emerged on these conflicts. The analyses and reports are extremely varied in their content and the attribution of responsibility for these conflicts. On the one hand, there is a real problem with drought in the north of the country, where the water situation and the availability of pasture have worsened over the last decades, leading to recurrent disasters in drought years. However, on the other hand, there are numerous groups of people (bands) among southern cultivators, as well as northern pastoralists and related leaders, who behave in an irresponsible manner to pursue their personal and/or group interests at the expense of others.

In central and southern Chad, many pastoralists who have lost their livestock have taken refuge in small towns and large villages. Some have been successful in rebuilding their livelihood on the basis of cultivation, commercial activities and wage labour. Over the last decades numerous Muslim northerners have established large commercial enterprises in southern towns to the extent that they have come to dominate the trading sector here. Others remain extremely poor and have remained dependent on less remunerative activities such as manufacturing, herding animals for other livestock owners and begging. In this way, pastoral society has come to be divided into three groups.

1. An elite - commercial and political - with strong positions in trade and the government.
2. Self-owned pastoralists who have moved south to look for better opportunities.
3. Impoverished proletarian pastoralists who work as dependants for their high-placed clansmen.

It would be interesting to investigate whether the inequality within pastoral society has increased with the droughts and the war. Our hypothesis is that it has increased, to the extent that the majority of the pastoralists cannot exist on their own resource basis in the form of livestock. We have also indications that pastoralists are as much plundered by their fellow kinsmen in the army as by the security forces who rob their livestock. Their clansmen, in the meantime, have come to occupy high positions in government circles, following the conquest of the state by the northern population groups. Very probably, the spoils of these high positions are invested in livestock that is herded by impoverished fellow clansmen of pastoral origin. In case of conflict - the victims, the agriculturalists - have no recourse to the regional and local administration, and security forces, as these are dominated by the northerners, who may even be the owners of the livestock causing the damage to these cultivators. The latter, being powerless, have no resort but to retort with violence, evoking a violent reaction from the side of the pastoralists and the authorities on turn.

Even more violent are conflicts over water resources, since these concern whole communities. Let us take a recent newspaper report as an example. Somewhere in the centre of Chad a group of Tubu, pastoralists from the north of Chad wanted to dig a well. The site chosen for this well did not satisfy the population of a sedentary village of cultivators nearby on whose territory the site was located. They tried to chase away the Tubu, who informed their clansmen in the capital, N'Djaména, who, being in the army and the 'gendarmerie' (local police), came to their rescue with heavy arms and all-terrain vehicles. The result was a fierce battle, and numerous deaths and wounded, among both pastoralists and agriculturalists. The government did not intervene. These incidents, far from being an isolated phenomenon, are quite common in Chad. The fall-out of these conflicts is enormous. The relations between Muslims and Christians, between northerners and southerners, and in general, between any ethnic groups are already strained as a result of the damage done during the civil wars and what came afterwards. This only leads to more 'inter-community violence', as it is called.

Chadian observers of these conflicts do their very best to conceal the real background of these conflicts, as they are almost all a party to the conflict. One of the most important

consultants for foreign agencies dealing with these conflicts consistently depicts the pastoralists as an undifferentiated whole, so that the whole group is blamed for the behaviour of some, or maybe even a few, of its representatives. Human rights organisations, NGOs and the farmers' organisations are not united in a front. Though the press reports regularly on abuse of power by local administrators and security forces, nothing is being done about this state of affairs, as there is no pressure from outside or inside to comply with the law.

The Guera

Let us now turn to the Guera and discuss a case study to show some of the problems associated with resource conflict, and the ways in which local-level conflicts on scarce resources are connected to higher administrative levels. As observed already, the Guera district is one of the areas where insurrections against the government began. Though most of the international attention has been directed to the east of the country, the FROLINAT base, the impact of the civil war and the droughts were severe in the Guera.

- Most of the countryside was dominated by rebel forces living off the population, causing impoverishment.
- Large numbers of men were killed, fled to urban areas or Sudan, or joined rebel forces at various stages of the war, leading to an imbalance in sex ratios and the current lack of male labour.
- Government forces carried out massacres on the population at various times, notably 1987-88, 1993, 1997.
- There was a stagnation of economic development.
- Nothing was done to counter the long-term effects of droughts, such as receding water tables and pests.
- Forced conversion to Islam became common.

This particular conflict arose in the course of several decades. Since the droughts, numerous Arabs have moved into the area with their camels and cattle. They settle in the bush, dig wells and are even trying to get their settlements recognised by the government, though they are settled on territory of other villages. They can do so, because the war has destroyed local authority structures for the allocation of land. Firstly, because entire villages were deserted or displaced after mass killings and famine. Secondly, forced Islamisation has destroyed the authority of the *Margay* priests, who ritually have controlled access to land and village territory. The immigrating pastoralists are supported by the authorities and bribe neo-traditional authorities, such as village chiefs and canton chiefs, who have been appointed by the colonial government and taken over from the *Margay* priests. This has caused deep resentment among the original population, which has always been victim of slave-raiding by these northern populations and of massacres of the government dominated by the same northerners.

So anywhere in the Guera one can find camping pastoralists on a permanent and temporary basis. They can settle anywhere they want, and often do not even ask permission of local authorities. In the valleys, thousands of families have settled on a more or less permanent basis. These pastoralists do not intend to leave, because the situation to the north is such that they cannot continue their way of life there. They create fields, and are trying to get official recognition of their villages by the administration. During the dry season they are joined by thousands of camel nomads. The camels feed primarily on trees, which are a major source of famine food for the local sedentary population.

Since there was a bad rainy season in 2002, the local sedentary population had a bad harvest, and would have to subsist on the gathering of leaves, wild grains and tree fruits. Unfortunately, locusts ate most of the trees. This problem was aggravated by the arrival of a large number of Arab camel herdsman, who were finishing up the last of the wild food resources.

The local administrator therefore decided to close off a valley belonging to a game reserve to preserve food resources for the sedentary population. This action is entirely within the domain of the law and his competence as an administrator. The camel herdsman protested since the 'land is owned by the state, and any Chadian citizen is entitled to its use'. They visited the district governor, and when the president was on tour in their home district, the president himself. Subsequently, the local administrator was summoned with a letter from the President's office to open the valley.

Conclusion

Conflicts over resources have ramifications in the highest levels of administration and politics. The problem with respect to resource conflict is therefore mainly political. It is very difficult to solve because of the personal involvement of high-placed people, and the lack of checks and balances resulting from the northern domination of the state apparatus and the high ranks of the security forces. The presence of a proletariat of pastoralists creates a reservoir of clients for these high-placed people, who act on their behalf at local level. One cannot call this a conspiracy, because it cannot be proven that this is an agreed policy among the northerners to gain control over the south. It is a fact though that northern nomadic pastoralists can now be found in the most remote southern corners of Chad.

The situation is explosive because the relationships between the population groups have never been good. In the south there is a lot of mistrust based on age-old enmity resulting from slave-raiding. The Muslim northerners still regard the southerners as inferior pagans (called Kirdi), and have no moral problem dominating them. The step from peaceful co-existence to violence is not as large as in other situations. This is promoted by the presence of large quantities of light firearms.

Scarcity has a long and a short-term dimension. Surprisingly, no theorist of resources conflict has ever looked at the role of temporary scarcity in the causal chain leading to

these conflicts. Temporary scarcity may be a trigger event leading to violent conflict. In addition, most of the semi-arid ecosystems are characterised by a large variation in resource availability, and strategies of both pastoralists and sedentary cultivators are adapted to this condition. This needs to be taken into account when analysing resource conflicts.

Overlooking the Chadian landscape, it is worrying that intervening agencies, civil society and the government are not able or do not dare to tackle the root causes of these conflicts. First, one needs to have the political will and courage to do so, but everyone in Chad belongs to a particular party in the struggle. In summary, the following points warrant further attention in the future:

- The problem is mainly political.
- Personal involvement of the political elite is problematic.
- The state apparatus is dominated by northern elites.
- One can speak here of a proletariat of pastoralists.
- There is a historical continuity of mistrust and the use of violence.
- Scarcity is often a temporary phenomenon.
- The quality of intervening agencies (civil society and governmental) is limited.
- There is a lack of well-founded empirical research.
- Prevention and policy-making can only take place on the basis of facts, therefore careful empirical research is needed to provide a basis for policy and reconciliation.

Conclusions

Though the different aspects of the problems were laid down in several of the discussions, a diversity of views and opinions remained. Caution should thus be taken when formulating general conclusions on the topics discussed.

The terms 'environmental conflict' and 'resource war' remain questionable. Simplistic relationships between resources and violence could fail to appreciate the relevance of social, economic and political factors. Nonetheless, the relevance of the resource dimensions of conflict was strongly underlined. Access to resources, extraction processes, distribution mechanisms, trade networks and finance flows are of eminent importance in many intra-state wars.

The resource dimensions of conflict constitute a problematic field. The seeming dichotomy between scarcity and abundance is associated on both sides with violence. In addition, there is a divergence between local and global perspectives on the role of resources and conflict. Reconciling these different perspectives into one comprehensive conceptual approach is difficult. Drawing on information from the conference, we can conclude that livelihood is a promising starting point to initiate such an approach. Both in scarcity and in abundance, livelihoods are of crucial importance. Both in local and global perspectives, livelihoods have a role to play. If we better understand how people make a living to survive, we can, arguably, better react to their grievances, greed susceptibility in joining a military organisation.

Dealing with scarcity and conflict is not just a matter of policy, processes also matter. This will require local approaches. There are many unresolved questions in this field. Local knowledge, local perspectives and local interests must be included. On the other hand, these local inputs are not necessarily inclusive and not necessarily good. How can participation be made practical when conflict and violence form a common local response to scarcity? How can the legitimacy of local representatives and the role of external agencies as an agent of change be balanced?

In addition, there is a tension between (local) governments and local populations. How is legitimacy defined and how are interests traded off? What role is there for external interventions in this field? Further research on the functioning of Multi Stakeholder Platforms is required. Best practices may teach us something about what works and what doesn't. For example, more insight on the role and approach of so-called 'facilitators' in these platforms is needed.

Finally, trade should be a central issue on the policy agenda. Until recently, the relevance of trade to security has received too little attention. Apart from the analytical loopholes on the potential impact of trade and the balance between the public and the private sectors, there is a lack of political will to implement changes. The conceptual difficulties

in this field should not serve as a smoke screen to allow short-term trade interest to prevail over longer term global needs.

Annex 1: Programme

Introduction

The conference comprises two major parts. The first day will try to outline how to conceptually approach questions of scarcity and conflict and discuss the relevance of adopting an environmental perspective. The second day focuses on pertinent governance issues when responding to challenges of scarcity and conflict.

Thursday 3 July

On this first day of the conference different perspectives on scarcity and conflict will be debated. As discussed in the background paper, scarcity may lead to both conflict and co-operation. To complicate matters, abundance of valuable resources may also lead to conflict and possibly also to co-operation. Resources thus create opportunities and risks. The question here is which factors determine the outcome. Drawing from two keynote speeches and a case study questions will be explored in small working groups and a plenary. The discussions on the first day are intended to reach some level of common understanding - either by reaching agreement or by identifying points of disagreement - to be drawn from discussion during the second day.

10.00 **Opening**

Fred Langeweg

Georg Frerks

Fred Langeweg is the Deputy Director of the Netherlands Environmental Assessment Agency. A coastal management engineer, he has 35 years of experience in the field of environmental modelling, assessments and other policy-relevant research. Organisations he has worked for include the UNEP, World Bank and the OECD.

Seconded from the Ministry of Foreign Affairs, *Georg Frerks* is the Head of the Conflict Research Unit of the Clingendael Institute. In addition, he works as Professor of Disaster Studies at Wageningen University and as Professor of Conflict Prevention and Conflict Management at Utrecht University. He specializes in development-related conflict and emergencies in developing countries.

10.15 **Keynote speech 'A resource curse? Scarcity, abundance and conflict'**

Nils Petter Gleditsch

During the 1990s *Nils Petter Gleditsch* of the International Peace Research Institute Oslo (PRIO) was one of the most salient scholars in the field of environmental conflict. He is also a Professor of International Relations at Trondheim University and has contributed to a large number of research

assignments and consultancies for organisations like the World Bank, UN agencies and different ministries of Foreign Affairs. Apart from resource scarcity, abundance of valuable resources has also been an interest of Gleditsch. In line with this interest, he advocates an integrated approach to both scarcity and abundance.

11.20 **Keynote speech 'Livelihood conflicts and the need for an Environmental Marshall Plan'**

Leif Ohlsson

Originally a journalist, *Leif Ohlsson* also holds a PhD on environment, scarcity and conflict. Ohlsson works with the term 'social resource scarcity' and has analysed ways of adapting to it. In the past few years, he has published a large number of articles at the crossroads of environment, poverty, development and conflict. He is currently employed at the Department of Peace and Development Research, University of Göteborg.

11.55 **Keynote speech 'The Link between trade, aid and security'**

Mark Halle

Mark Halle has both policy and academic experience in the field of environmental security. He is currently the Director of Geneva Office of the International Institute for Sustainable Development and is attached to the IUCN as a senior advisor. In the past he has worked for the World Wildlife Fund and the United Nations Environment Programme. More recently, he has conducted a study for the OECD on the implications of the linkages between environment and security for development assistance.

13.45 **Working groups**

The following comprise the key issues to be discussed in small groups.

An environmental perspective

Clearly, the causes of conflict are multi-dimensional and complex. No confrontation can be downsized merely to a manifestation of scarcity. Political, economic and social mechanisms, processes and structures have a salient position on the playing field. The questions are: What does an environmental perspective add to our understanding? Which political, economic and social mechanisms or processes are most directly related to that perspective? If we were to create a model, what would be the main components and their causal relation?

Explaining conflict and cooperation

Scarcity may be a catalyst both for conflict and peaceful cooperation. In which realm (environmental, political, economic or other) do we seek the factors explaining different outcomes? Which environmental circumstances have a role to play here? If we were to make a conceptual model, would we consider cooperation and conflict as mutually exclusive categories or envisage more complicated forms of linkage?

Scarcity and abundance

Both the scarcity of elementary resources - like fresh water, fertile land and wood - and the abundance of resources - like diamonds or gold - have been argued to be contributors to conflict. Do we consider these two environmental factors as mutually exclusive categories? Can we incorporate them into one body of understanding? What basic factors would be part of such a body of understanding?

Differences between resources

Basic resources like land, water and wood are often put under one banner. All three are of crucial importance to the livelihoods and the survival of population groups. All three are also subject to environmental degradation. What may be questioned though is whether we need to make a distinction between these resources. Each one may have unique characteristics with regard to its conflict potential, opportunities for cooperation and managing mechanisms.

15.45 Plenary debate

Drawing from the working groups, issues of common understanding and parts of relative consensus or disagreement will be identified.

17.00 Closure, drinks and dinner**Friday 4 July**

Drawing from the first day, the presentations and discussions of the second day will move beyond the academic debate on links between scarcity and conflict and focus on practical approaches to deal with scarcity in a peaceful manner. What lessons can be drawn to frame models of governance or management that will contribute to the cooperation rather than to violent confrontations. If we have identified some determinants of cooperation or conflict, the question to be asked is how the different actors can play on these determining factors. The role of the state, the private sector, civil society and the donor community, and the different approaches to be taken - like regulations, enhanced governance or market mechanisms - will form the central issues of debate.

10.00 Opening**10.10 Keynote speech 'Responding to scarcity'**

Mohammed Salih

Mohammed Salih is attached to the Institute of Social Studies in The Hague and is a Professor of Politics of Development at Leiden University. He received his masters in sociology and anthropology at the University of Khartoum, Sudan and his PhD in economic and social studies at Manchester University. He has contributed to a wide range of publications in the field of environmental governance, democracy, sustainable development, pastoralism and local

environmental change in different parts of the world, but in eastern Africa particularly.

11.15 Case study Household and communal strategies dealing with resource scarcity: a case study from the Ethiopian highlands'

Eva Ludi

Eva Ludi works for Swisspeace. During her PhD studies in Geography for Bern University she did extensive field research in different rural areas of Ethiopia and was assigned part-time as a consultant for UN Capital Development Fund in Ethiopia from 1995 until 1997. Afterwards, she joined Swisspeace as a senior researcher in the ECOMAN Project. Two years ago, she joined the 'Environmental Change and Conflict Transformation' project of the Swiss National Centre of Competence in Research.

11.50 Case study: 'Politics and Resource conflicts: A Case Study from Chad'

Han van Dijk

Mirjam de Bruijn

Mirjam de Bruijn is anthropologist. She has just returned with Han van Dijk from extensive fieldwork in Chad. An important theme throughout her work is how people manage risk (drought, war, etc). Her fields of interest are pastoralism, nomadism, ecology, social (in)security, poverty, urban-rural linkages and inter-ethnic relations. She is also working on a project on climate change and consequences for rural and urban areas.

Han van Dijk is an anthropologist who studied forestry. His research focuses on political decentralization, land tenure, natural resource management and farmer-herder strategies in response to climate variability and development policy. He has a special interest in the interaction between society and the environment, and the social and political struggles arising from it.

13.45 Working groups

The following indicates the key issues to be discussed in small groups.

An environmental perspective

Is there a potential for 'environmental conflict management and peace-building'? What opportunities does it create for policy-makers? Which actors are the most relevant for taking action in accordance with this perspective? Drawing from our analysis on the first day on the different outcomes of scarcity (cooperation or conflict), what lessons can be learnt to amplify the peace-building potential of scarcity and mitigate the conflict catalysing potential? What can be done to seize the opportunities for cooperation that scarcity - and possible abundance - create?

Scarcity and abundance

Scarcity and abundance as a cause of conflict are usually approached very differently. Abundance is associated with illicit trade and the mitigation of the enrichment of violent groups elites, for example, through the introduction of

certification systems. Scarcity is associated with popular grievances, conservation efforts, distribution mechanisms and the creation of alternative economic opportunities. Is it feasible and desirable to approach the two phenomena in unison in an effort to prevent violent conflict? What are the implications for governance?

Differences between resources

Having identified differences between scarce resources like water, land and wood on the first day, the question arises as to what opportunities and risks each resource brings with regard to conflict prevention and peace-building.

Approaches

Different approaches have been suggested to address grievances and disagreements resulting from scarcity. A rights-based approach takes regulations and legal mechanisms as a point of departure. Other researchers have argued for enhanced local governance, which could include state mechanisms or traditional conflict resolution mechanisms at community level. Thirdly, the market has been suggested as a mechanism for dealing with scarcity and to stimulate better use of resources and the creation of opportunities for people. Each of these approaches may include aspects of conservation, distribution, innovation, or demographic interventions.

Actors

In view of the divergent actor interests and agendas, the question arises as to what mechanisms or procedures should be adopted to effect concerted action on environmental conflict. For example, are experiences like Multi Stakeholder Platforms in irrigation management relevant to other resources?

Comprehensiveness, coherence and multiple realities

It has been fashionable, especially for NGOs and multilateral agencies to take a comprehensive approach and to integrate dimensions like gender, political mechanisms, economic circumstances and socio-cultural aspects into one holistic whole. Including the environment as another integrated policy field might seem a logical step. However, broadening concepts and mainstreaming a wide variety of issues into policy does not necessarily result in true integration or coherent analysis, policy and implementation. The basic principle of social sciences i.e. that there are (unavoidably) multiple theories and multiple ways of looking at reality - multiple realities in short - poses a fundamental challenge to any effort to design a comprehensive and coherent policy. Thus the question arises as to what levels of holism and coherence are feasible?

15.45 **Plenary debate**

The working groups will elucidate their discussions and kick-start the final exchange of views on some of the key issues.

16.30 **Closure and drinks**

Annex 2: List of participants

Mrs W. van den Bovenkamp National Institute of Public Health and Environment (RIVM)	Mrs J. Broerse Ministry of Foreign Affairs DML/MI
Mr A. Brouwer Law and Governance Group Department of Social Sciences, WUR	Mrs M. de Bruijn African Studies Centre University of Leiden
Mr T. Dietz Amsterdam Research Institute for Global Issues and Development Studies	Mr H. van Dijk African Studies Centre University of Leiden
Mrs T. Ellingsen Norwegian University of Science and Technology (NTNU)	Prof R. Fox Rhodes University, South Africa Department of Geography
Prof. G.E. Frerks Clingendael Institute CRU	Mr N.P. Gleditsch International Peace Research Institute Oslo (PRIO)
Mr M. Halle International Institute for Sustainable Development, Genève	Mr H. Hilderink National Institute of Public Health and Environment (RIVM)
Mrs T. Hilhorst Disaster Studies Wageningen University	Mr B. Klem Clingendael Institute CRU
Mr F. Langeweg National Institute of Public Health and Environment (RIVM)	Mrs E. Ludi Swiss Peace Foundation, NCCR North-South - IP7: Environment & Conflict
Mrs R. Noorduijn University of Leiden	Mr L. Ohlsson Goteborg University, Department of Peace & Development Research
Mr R. Post Netherlands Commission for Environmental Impact Assessment, Utrecht	Mrs K. Rowntree Rhodes University, South Africa Department of Geography
Mr M. Salih Institute of Social Studies The Hague	Mr S. Simonse Pax Christi Utrecht
Mr W. Veening Institute for Environmental Security The Hague	Mrs S. Verstegen Clingendael Institute CRU
Mr G.W.F. Vigeveno Ministry of Foreign Affairs SPL	Mr R. Visser Ministry of Foreign Affairs DSI
Mr J. Vogler School of Politics, International Relations and the Environment, University of Keele	Mr J. Warner University of Wageningen Irrigation and Water Engineering Group
Mrs K.M. Witsenburg Amsterdam Research Institute for Global Issues and Development Studies	