



**Textbook for Massive Open Online Course on  
“Environmental Security and Sustaining Peace”**

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## BACKGROUND

“Many conflicts are triggered, exacerbated or prolonged by competition over scarce natural resources; climate change will only make the situation worse. That is why protecting our environment is critical to the founding goals of the United Nations to prevent war and sustain peace.”

— UN Secretary-General António Guterres

This textbook accompanies the massive open online course (MOOC) on Environmental Security and Sustaining Peace. Conflicts over natural resources and the environment pose some of the greatest challenges in 21<sup>st</sup> century geopolitics, presenting serious threats to human security at the local, national, and international levels. Nonetheless, natural resources and the environment can serve as a vehicle for peace if managed in a sustainable and equitable manner. Consequently, environmental peacebuilding has emerged as a new frontier in interdisciplinary studies. It offers a conceptual and operational framework to understand the positive peacebuilding potential of natural resources across the conflict lifecycle while mitigating potential risks.

This MOOC provides an introduction to the multiple roles that natural resources and the environment play in the onset, escalation, resolution of, and recovery from violent conflicts. Many of the considerations and approaches presented in this course are also relevant to understanding and addressing social conflicts around natural resources and the environment.

This course is targeted to:

- Peace and security specialists that want to understand more about natural resources.
- Natural resource experts that want to design better and more conflict-sensitive programs.
- Sustainable development practitioners as well as private sector actors that need to understand how natural resources can be developed in fragile contexts with weak governance.
- Advanced undergraduates and graduate students interested in the key concepts and practices of this growing field.

This textbook consists of lecture transcripts alongside key images, required readings, and optional readings and toolkits students may find useful. We are grateful to the many people whose hard work and dedication made this textbook possible. We would like to give special thanks to those who compiled and produced the textbook: Nora Moraga-Lewy and Alexandra Caplan.

If you would like to use any of the material presented in this textbook or the course outside the MOOC context, permission is granted as long as the source is clearly acknowledged.

UN Environment, the Environmental Law Institute, Duke University, Columbia University, and the University of California-Irvine, the UN Development Programme, and the SDG Academy--who

collectively developed this MOOC--thank you for choosing to embark on this exciting opportunity with us!

## MODULE 1: COURSE OVERVIEW

### READINGS

From Conflict to Peacebuilding: The Role of Natural Resources and the Environment (2009) (pp. 5-31)

Natural Resources and Peacebuilding in Afghanistan (2013) (pp. 4-7, 37-42)

Greening the Peace in Colombia (2017)

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### OPTIONAL READINGS

Copper Bottomed? Bolstering the Aynak Contract: Afghanistan's First Major Mining Deal (2012) (pp. 9-14)

Defenders of the Earth Report - Global Killings of Land and Environmental Defenders in 2016 (2017)

Environment for Peace: UN Environment's Proposed Contribution to the Post Conflict Development of Colombia (2017)

Mapping the Frontiers and Front Lines of Global Environmental Justice - the EJ Atlas (2015)

The Resource Curse: The Political and Economic Challenges of Resource Wealth (2015)

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### TOOLS & GUIDEBOOKS

What Does "Sustaining Peace" Mean? (2017)



## 1.1 WELCOME AND INTRODUCTION (LECTURER: DAVID JENSEN)

Hi everyone, welcome to this Massive Open Online Course on Environmental Security and Sustaining Peace. Now, this course examines the relationship between natural resources and the environment on the one hand and peace and conflict on the other. We're really trying to bring these two worlds together because natural resources and the environment play a variety of roles across the conflict cycle and throughout peacebuilding. So, this is an extremely timely and relevant course, because many of the armed conflicts around the world today have an important natural resource dimension. For example, oil revenues financing ISIS in Iraq and Syria. Or charcoal sales funding Al-Shabaab in Somalia. We have climate change and drought amplifying the conflict in Syria. We have illegal gold mining financing criminal groups in DR Congo and Colombia.

In fact, just about every armed conflict ongoing or concluded in the last 10 years has had some important link to natural resources, and over the past 60 years nearly half of all armed conflicts have either been fueled or financed by natural resources. There are also thousands of local conflicts linked to natural resources that can benefit from the material presented in this course.

This is a map showing a global view of all environmental conflicts around the world today. For example, there are conflicts over access to land and water resources in Kenya. Tensions and grievances from the environmental impacts of mining and oil projects in Peru. Major social protests over the Dakota access pipeline in the US. Now, while such conflicts may not escalate to armed warfare, they can be violent.



In 2016 Global Witness reported that an average of four people are killed per week defending their land and their natural resources from commercial development. So this is why the UN Secretary-General António Guterres recently observed that “many conflicts are triggered, exacerbated or prolonged by competition over scarce climate change will only make the situation worse. That is why protecting our environment is critical to the founding goals of the United Nations to prevent war and sustain peace.”

So within this course we're going to answer three critical questions:

1. How do natural resources and the environment contribute to or amplify armed conflict and violence?
2. How are natural resources and the environment impacted by war?
3. And how can natural resources and the environment support peacebuilding and reconstruction?

And in fact, helping you answer these questions is one of the first learning objectives of the course. The second learning objective is to provide you with concepts and case studies and a series of concrete tools for assessing and responding to these issues in your programs or your policies. And finally, we're also going to help you access a global pool of knowledge and a community of practitioners for help and advice as you take the learnings from this course into the field. Now, please keep in mind this is a foundational course. We plan to develop more advanced courses focusing on preventing and resolving conflicts with links to specific natural resources such as water, land, and extractives. So if there's a demand for future courses, let us know.

So, is this course right for you? Well, we've tried to make the course relevant to a number of different audiences. First, peace and security specialists that really want to understand more about the role that natural resources play in conflict. Second, natural resource experts that want to design better and more conflict-sensitive programs. And third, sustainable development practitioners, as well as private sector actors that need to understand how natural resources can be developed in fragile contexts with weak governance. We've tried to design the course for an international audience, as well as for experts and communities on the ground in conflict-affected countries.

So, the course will be delivered primarily by a core team of experts that have been working on these topics for the last two decades. Together, the core team has around 100 years of combined experience. Now let's introduce the team one by one:



Hello, I'm Erika Weinthal. I'm a Professor of Environmental Policy at the Nicholas School of the Environment at Duke University. I specialize in global environmental politics and environmental security with a particular emphasis on water and energy.



Hi, I'm Carl Bruch and I direct International Programs at the Environmental Law Institute.



Hi, my name is Richard Matthew. I'm a Professor of Urban Planning and Public Policy at the University of California Irvine, where I also direct the Blum Center for Poverty Alleviation.



Hi, my name is Marc Levy. I'm a political scientist who studies how social systems and biophysical systems interact, especially how they create patterns of vulnerability or resilience.



My name is David Jensen. I've been working at UN Environment on assessing and addressing natural resources, conflict, and peacebuilding for the past 15 years. I'm primarily interested in benefits sharing with local communities, participatory decision-making, and conflict prevention.

In addition to the core team, from time to time, we'll also have a few guest lecturers deliver some of the content. So, while the course is being delivered by a core team, it is actually based on the contributions and expertise of over 1,000 individuals. In particular, we're using a series of peer-reviewed case studies submitted by 225 experts, covering more than 60 post-conflict countries. We're basing it on a series of policy reports on natural resources, conflict, and peacebuilding that were issued by a combination of ten UN agencies. And we're also building it on the nearly two

decades of field experience in over 30 different post-conflict countries conducted by UN Environment.

Now, in designing the course, we conducted consultations with a range of practitioners in order to deliver something of maximum value. We intend to improve the course each time we offer it, so we will rely on your constructive feedback and guidance.

Now, one final word about the content. We have followed the conflict lifecycle as the basic structure for the course. So, Module Two really focuses on the risks and the drivers from natural resources and the environment that affect the outbreak of violent conflict. Module Three focuses on risks to natural resources and the environment during armed conflict and how they influence the conduct of armed conflict. And finally, Module Four focuses on the risks and opportunities from natural resources and the environment to post-conflict peacebuilding. So basically, the modules address the role natural resources can play before, during and after armed conflict. And this is a simple way to divide up the content, but please keep in mind that most of the tools and strategies we recommend can be applied across the entire conflict lifecycle. For example, we'll discuss mediation in Module Two, but mediation equally applies during armed conflict and throughout post-conflict peacebuilding.

So, while we have tried to develop each chapter to be self-contained, we will notify you if there are important links to other chapters. I also wanted to emphasize that while armed conflict is the structural framework for the course, many of the tools and strategies equally apply to the resolution of localized natural resource conflicts. So if you're dealing with a local conflict over natural resources, this course is still highly relevant for you.

Now, no introduction to the course would be complete without mentioning our generous sponsors. In particular, we want to extend our thanks and gratitude to the Government of Finland, to the European Commission, and to the UN Development Account for making this course possible. We also want to thank Minal Patel for coordinating the course and Karena Albers and her team for filming and post-production. We also have a range of research assistants and interns that require a huge amount of thanks. So, enough about the course background and approach. I know you want to get started, so let's go.

## 1.2 EVOLUTION OF ENVIRONMENT, PEACE, AND CONFLICT LINKAGES (LECTURER: KEN CONCA)

Hi, my name is Ken Conca. I'm a Professor of International Relations in the School of International Service at American University in Washington (D.C.). My teaching and research focused primarily on environment, conflict and peacebuilding; the politics of water; global environmental governance; and international institutions.

The relationship between environment, natural resources, conflict, and peacebuilding has a long pedigree, and it's important to stress that the causal arrow runs in both directions. On the one hand, we know that war can take an enormous toll on the environment -- both directly, in terms of the damage that it does, and indirectly, in terms of the disruption of institutions and the disruption of positive environmental and natural resource practices. On the other hand, we've learned that processes of environmental degradation and change and certain practices in natural resource management can enhance vulnerability, fragility, and increase conflict risks. World War II gave the world an increased appreciation of the destructive power that humanity held over the natural world. The scorched earth policies, the carpet bombing, the firebombing of Dresden, and of course the use of nuclear weapons in Hiroshima and Nagasaki really underscored our ability to damage the natural world.

By the early 1960s, it was common to hear both scholars and activists speak about two great planetary risks: the quick death from nuclear holocaust, but also the slow and creeping death, the cumulative result of pollution, natural resource degradation, population dynamics, and disruption of critical ecosystems. The Viet Nam War underscored this problem and gave us substantial new evidence: the tragic result of the use of chemical defoliants and the unprecedented amount of ordnance that American bombers dropped on Southeast Asia.

Vietnam became a serious point of contention at the UN Conference on the Human Environment, which took place in Stockholm in 1972. Activists pressed, largely without success, to persuade the delegates to engage the question of Viet Nam and the wider question of war's destructive potential for both the human and natural environment.

By the 1980s in the wake of the Chernobyl nuclear disaster, Soviet Premier Gorbachev was calling for a transcendence of Cold War thinking to challenge new planetary risks with the environment chief among them. The seminal report of the World Commission on Environment and Development, popularly known as the Brundtland Commission for its chair Gro Brundtland, the Prime Minister of Norway, is most remembered for popularizing the concept of sustainable development. However, the Commission was well aware of conflict risks around the environment, devoting an entire chapter of its report to that question.

By the early 1990s, a few important strands of scholarly research were beginning to emerge that reversed the causal arrow, asking questions not simply about war's toll on the environment, but also about how environmental degradation and practices of natural resource management may create increased conflict. During the Cold War, there were episodes that today we would read as having a clear natural resources or environmental signature. The dynamics around the Suez

Crisis and the building of the Aswan Dam in the 1950s; the conflicts on the Belgian departure from colonial rule in Congo and the struggle for political and economic control of the vast resource wealth of that region; and the Biafran secession and the tragic civil war in Nigeria in the late 1960s, today would all be recognized as having a clear environmental or natural resource signature.

But at the time we lacked the scholarly research and conceptual frameworks to understand them in those terms. One important new strand of research emerging in the early 1990s focused on localized forms of environmental scarcity, including soil erosion, water scarcity, overfishing, deforestation, and the possibility that those dynamics might create grievances that could trigger violent conflict or exacerbate existing social cleavages that might run along the lines of region, class, or ethnicity.

A second important strand of research during this period focused not on the problem of ecologically induced scarcity, but rather on the problem of natural resource abundance and wealth. Growing out of economic research on the resource curse, which suggested that richly endowed countries may not necessarily have the forms of economic development that we might expect, political scientists began to discover that there may also be a political resource curse. That patterns of corruption, weak governance, and a tendency to cash in on short-term debt-driven development models could increase social fragility and also increase the risk of violent conflict. Both of these important strands of research seemed to be enforced by the headlines of the day.

On the one hand, we saw civil conflict in places as diverse as Haiti, Rwanda, and Somalia in the early 1990s, with the common denominator seeming to be decades of environmental stress and degradation. At the same time, we saw the emergence of a new and particularly violent form of civil war that seemed to be driven not so much by grievance, but rather by greed. By the rich endowments of natural resources, by the incentives for secession and insurgency that those resources may create, and by the pernicious problem that a steady stream of resource wealth could fund the men and materiel that was required to sustain and prolong violent conflict.

It was at this point that we began to see the United Nations Security Council deploy a new tool of natural resource sanctions on trade in an attempt to control, contain, and shorten such conflict. Since the appearance of these important strands of research, I think over the last two decades we've seen a certain refinement in our thinking. Much of the early work was driven by a few key critical, in-depth case studies but as scholars began to pursue broader and more rigorous attempts at statistical analysis of global patterns, we began to realize that there was not always a strong correlation in the data between environmental stresses and results of violent conflict. This gave us a hint that there were important mediating variables; that the quality of governance, that the ability to express dissent peacefully through various channels in society could be important mediators of whether upstream stressors led to downstream conflict occurrence. We also realized that it was not simply the presence of grievances or greed as incentives for conflict; it was also the capacity to mobilize those toward violence which also was highly variable across a range of cases.

A third important recognition was the idea that cooperation was also possible. If we consider the example of shared international river basins, one of the things that we've learned is that despite water stress and despite tensions between upstream and downstream states, cooperation is much more likely to be the result than violent conflict. On a very different scale, while it is true that farmers and herders who are competing for increasingly scarce natural resources of land and water may come into conflict, that as they adapt their livelihoods it is also possible that they establish new forms of social relations that create the potential for cooperation, peace, and social solidarity.

But perhaps the most important insight that we've gained as we've refined our frameworks, is the idea that there are also important peacebuilding opportunities upon which we may capitalize strategically. Beginning in the early 2000s, a group of scholars, myself included, concerned that a zero-sum and conflict-oriented narrative about environmental security was beginning to seize the international environmental agenda, began theorizing in a new direction.

If environmental and resource dynamics can be a trigger of conflict, then perhaps they can also be a trigger of peace. We theorized that ecological interdependencies created social relationships upon which we could capitalize, that there were interdependencies that could create win-win circumstances, that there were cooperative knowledge opportunities, that there were even opportunities to construct place-based identities that might be a basis for solidarity, rather than a basis for division and conflict.

While much of this new insight came from scholarship and theorizing, much of it also came from the work of actors on the ground – intergovernmental organizations, non-governmental organizations, donor agencies, and local communities that were working through socio-ecological dynamics that while they contained the seeds for potential conflict, also contained the seeds for cooperation.

An important example in this regard is the Post-conflict and Disaster Management Branch of the UN Environment Programme, which beginning in the late 1990s, started to partner with governments in war-torn societies emerging from periods of conflict to do rapid appraisal environmental assessments that could then be a basis for making sure that the environmental and natural resource dimensions of recovery were not lost amidst larger economic and security concerns.

Today, we know less about the preventive potential of environmental peacebuilding, in part because governments have been more reluctant to invest time, effort, and resources in such an agenda. However, in examples such as the rise of conversation in the UN Security Council around preventive diplomacy on climate change and preventive diplomacy on water scarcity and water access, I believe we see the seeds of new opportunities to build out our understanding and make proactive interventions for peace.

Today, the Sustainable Development Goals provide an important arena in which we see opportunities to marry on the one hand, the effort to manage environmental and natural resource conflict risks, while at the same time exploiting peacebuilding opportunities. We know that the

tools and knowledge frameworks we've developed in the last two decades around sustainable development will be one key to providing safe drinking water, breathable air, reduced disaster risk, and resilient livelihoods for people. But we also know that forthrightly addressing the risks of conflict around environmental natural resources and proactively embracing peacebuilding opportunities must also be part of that agenda.

This means that a second set of tools will also be important. Rights-based approaches, conflict sensitivity screening, environmental mediation, chain-of-custody and transparency systems at the international and transnational levels, and perhaps most importantly, building proactive and anticipatory institutions for conflict resolution. This second set of tools will be equally important to the achievement of the Sustainable Development Goals. Thank you.



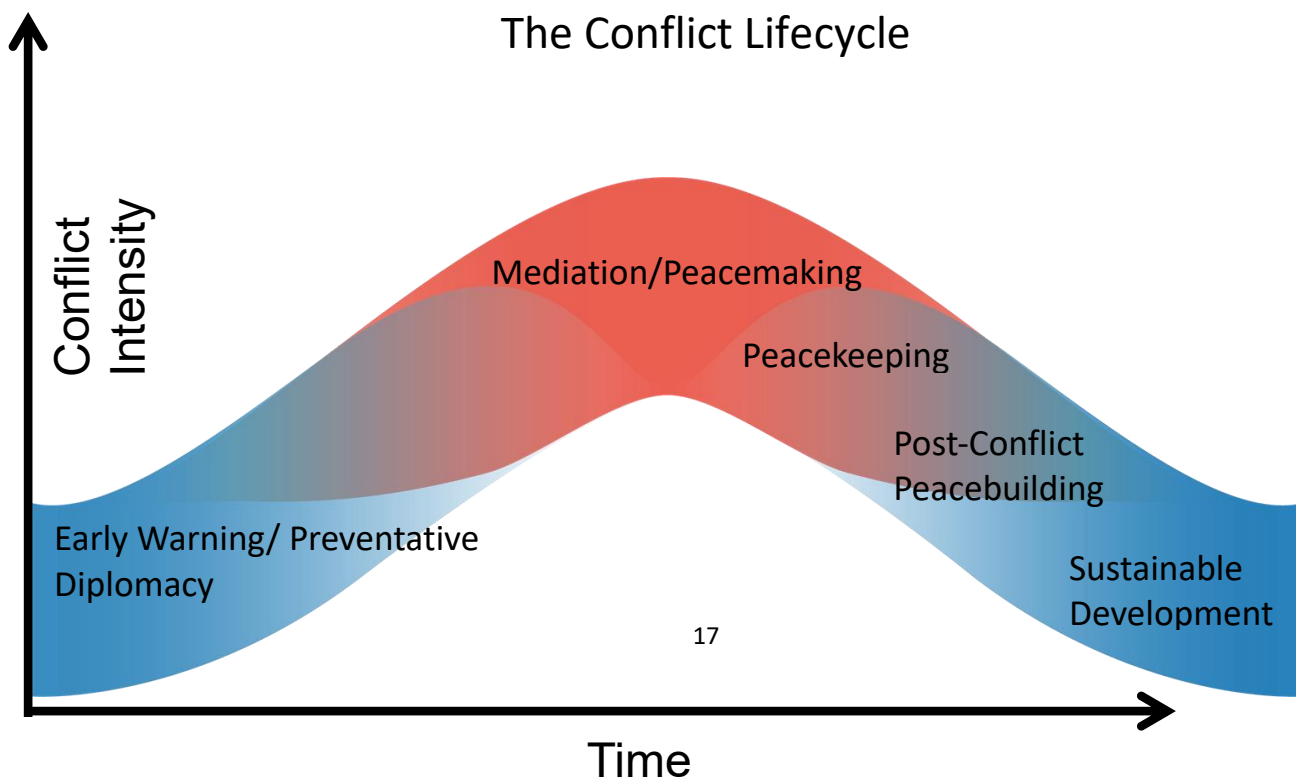
### 1.3 CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL PEACEBUILDING (LECTURER: CARL BRUCH)

This chapter provides an introduction to the various ways that natural resources and the environment affect conflict and peace across the conflict lifecycle. Often, armed conflicts begin as social disputes. These may be over power, wealth, values, abuses, political marginalization, or some combination of these factors. There are often efforts to detect and resolve disputes before they escalate to violence. Once disputes have escalated to violence, or further to armed conflict, efforts become focused on ending conflict. This is known as peacemaking.

After a peace agreement is in place, international soldiers, police, and civilians often are invited to help preserve the fragile peace. This is referred to as peacekeeping. With the end of hostilities, there's a transition to post-conflict peacebuilding and, if successful, there's another transition to sustainable development. The transition from post-conflict peacebuilding to sustainable development is often difficult to discern precisely, although it may be said that the distinction is when social and political dialogues and debates are no longer dominated by considerations of the conflict, its cause or its effects.

It's important to note that this is an incredibly simplified depiction of conflict. Not all conflicts go through this process, or go through it linearly. Sometimes, disputes are resolved before they escalate to violence, and between a quarter to a half of all armed conflicts relapse within ten years. In many cases there's a political conflict between leaders that builds off or feeds into a social conflict between groups.

Let's take a moment to reflect on four key terms that appear throughout this course. Conflict is an often protracted disagreement among two or more parties. Violent conflict occurs when there is collective violence such as civil unrest, riots, isolated acts of terrorism, or other sporadic acts of violence. Armed conflicts are political conflicts where the sustained use of armed force results in at least 25 battle deaths and in which at least one of the two parties is a government of a state. Post-conflict refers to the period following armed conflict; when violence is stopped but grievances, mistrust, and social conflict often persist.



Natural resources and the environment present both risks and opportunities at different phases of the conflict lifecycle. Grievances around the inequitable allocation of natural resources and the revenues can be a contributing cause of conflict. Indeed, corruption-fueled grievances can be a substantial cause of conflict. In Sierra Leone, grievances over the distribution of land, corruption in the diamond sector, and the inadequate sharing of benefits were driving causes of the civil war that killed more than 70,000 people and displaced more than 2 million.

Extreme pollution and environmental degradation can also be a contributing cause of conflict. In Bougainville, Papua New Guinea, water pollution from the Panguna gold and copper mine and the lack of beneficiary drove a secessionist movement that escalated to civil war.

There are three separate risks to natural resources and the environment during armed conflict: financing conflict, environment as a weapon of war, and being damaged by the conflict. Natural resources can provide a revenue stream for rebels and other armed groups. Since the end of the Cold War, rebels have used natural resource revenues to finance major armed conflicts in more than 35 countries. Diamonds, in Sierra Leone, Côte d'Ivoire and Angola. Most people will be familiar with so-called blood diamonds but there are also a diverse array of other natural resources that can finance conflict. Charcoal, fisheries, and bananas in Somalia and opium poppy and lapis lazuli in Afghanistan. Any natural resource that provides a revenue stream can provide a revenue stream that rebels can tap into to finance armed conflict.

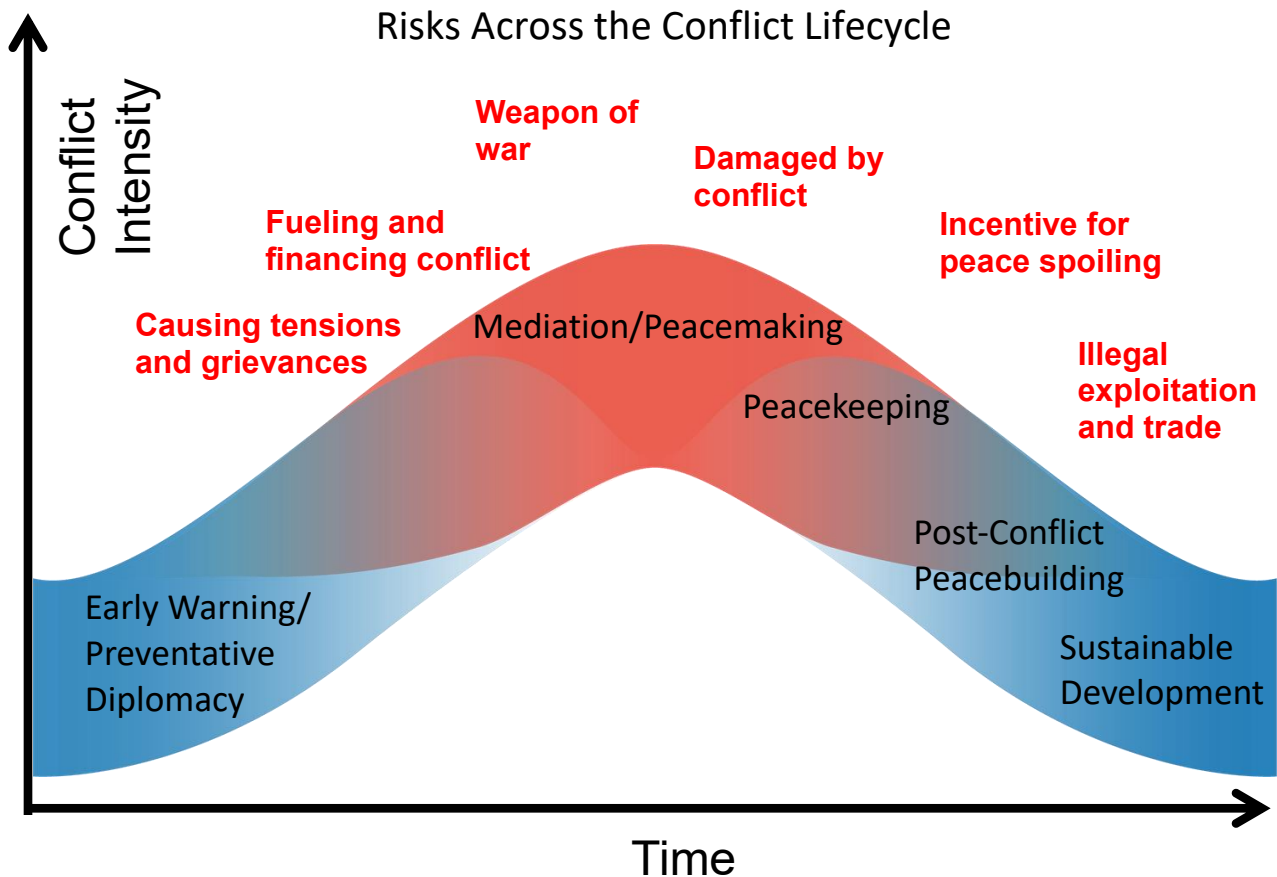
The environment can also be used as a weapon of war. During the Viet Nam War, US troops seeded clouds over North Viet Nam in order to slow down military advancement of the Viet Cong. And in the 1990-91 Gulf War, Iraq set fire to more than 600 oil wells and opened the valves to an offshore oil terminal that created the largest oil spill this world has ever seen. The Taliban blew up a dam in southern Kandahar province in Afghanistan, and there have been similar concerns that the Islamic State would blow up dams in Iraq. And in a number of wars characterized by ethnic cleansing, such as those in Darfur and the former Yugoslav Republics, combatants have poisoned wells to drive people from their communities.

While people are often familiar with conflict resources and using the environment as a weapon, the more common and often more serious environmental damages come from the breakdown of environmental governance and the short-term survival strategies that people have to adopt during armed conflict. For example, in Afghanistan, there was widespread deforestation, as the government could not prevent criminal gangs from cutting down trees. Subsequently, people cut down their own orchards to sell firewood so that they would at least secure some of the benefits for themselves. In some areas, woodland cover declined significantly. In the Badghis province, for example, woodland cover declined by 98 percent from 1977 to 2002.

Natural resources also present risks after armed conflict ends. Even when peace agreements have been concluded and fighting has ostensibly stopped, natural resources can provide an incentive for peace spoiling. Armed groups and other individuals that exploit natural resources illegally or illicitly during armed conflict often seek to continue to benefit from this exploitation. In eastern DRC, for example, weak governance enable the armed groups to continue extracting gold, tin, and other minerals despite an existing peace agreement. This exploitation led to further tensions and instability.

Taking a step back, then, one sees a wide range of risks at different phases of the conflict lifecycle. These risks have traditionally been the focus of the field known as environmental security. However, understanding the drivers of conflict is only the first step in creating environment for

sustaining peace. Equally important is understanding the opportunities. Natural resources and the environment offer positive opportunities to end conflict, strengthen recovery, and build peace.



Recognizing that the mismanagement of natural resources and the environment can be a contributing cause of conflict, a growing number of efforts seek to prevent conflict from escalating by improving governance of natural resources and the environment. These include, for example, the Extractive Industries Transparency Initiative or EITI, which seeks to use transparency to prevent corruption in the payment of fees associated with oil, gas, and minerals.

The principle of free, prior, informed consent also seeks to prevent conflicts from escalating. Another strategy has been adopted is early warning and preventive diplomacy. By detecting disputes around natural resources and the environment early, these approaches seek to prevent disputes from escalating to armed conflict. In Latin America, an Early Action Fund enabled communities to find lasting solutions to disputes around natural resources before they escalated to violence.

Natural resources and the environment also provide entry points for dialogue and an economic incentive to end armed conflict. For example, the sharing of oil revenues was central to ending the decades-long conflict between Sudan and then Southern Sudan. Increasingly, peace negotiators and belligerent parties have recognized the importance of natural resources in the peace process. Indeed, every major peace agreement from 2005 to 2016 has included provisions on natural resources and the environment, often multiple provisions related to multiple dimensions.

During post-conflict peacebuilding natural resources are particularly important to employment and livelihoods and to government revenues that are necessary to providing for basic services. Here, as elsewhere, the characteristics of the particular natural resource and the broader political economy determine which resources are important for which objective. Sometimes, the resource is necessary for livelihoods and revenues are similar, as was the case with cacao and Côte d'Ivoire. Often, the resources necessary for livelihoods and revenues are different. For example, more than 99 percent of the exports in post-conflict Angola, one of the primary sources of government revenues, came from oil, gas, and diamonds. At the same time nearly 80% of Angolans depended on agriculture for livelihoods, highlighting the importance of land and water.

Combining the risks and opportunities presented by natural resources and the environment we see the following big picture. Often these risks and opportunities are linked thematically and across the conflict lifecycle. But, how does one make sense of all of this? Environmental peacebuilding provides a conceptual framework for understanding the linkages between natural resources and environment on one hand, and peace and conflict on the other.

Environmental peacebuilding is the process of governing and managing natural resources and the environment to support durable peace. In 2017, the UN Security Council and the UN General Assembly adopted a conceptual framework of sustaining peace. Creating an environment for sustaining peace requires a comprehensive approach to preventing conflict and addressing its root causes through the strengthening of the rule of law, promoting sustained and sustainable economic growth, poverty eradication, social development, sustainable natural resource development, and reconciliation and unity.

Environmental peacebuilding includes a broad range of considerations and actions across the conflict lifecycle, but it's really about how natural resources and the environment can support the sustaining peace agenda. This includes efforts to prevent, mitigate resolve, and recover from violent conflict. It comprises methods for both addressing underlying problems – this is often referred to as addressing negative peace, that is, the absence of conflict – and building trust, which is referred to as positive peace.

Environmental peacebuilding involves both renewable natural resources, such as land, water, and fisheries, and non-renewable resources, such as minerals, oil, and gas. It also includes broader environmental considerations, such as ecosystems and ecosystem services, environmental degradation, and climate change.

Environmental peacebuilding activities occur on multiple levels, from local to national to regional and international. The linkages between the environment and natural resources and conflict and peace are widespread. In many cases they're central to conflict and peace dynamics. These linkages are often connected to other causal dynamics of conflicts, such as weak governance and religious or ethnic marginalization.

Environmental peacebuilding provides an overarching framework for understanding the diverse linkages between the environment, conflict, and peace and for acting on those linkages. It should be noted that the considerations and approaches for managing natural resources to build and sustain peace can and should be approached from multiple perspectives. From a security perspective, from an economic perspective, from a social perspective, from an environmental perspective, and from a humanitarian perspective.

In this context, the Sustainable Development Goals, or SDGs, are important. Adopted in 2015, the SDGs integrate economic, social, environmental and peace dimensions. They recognize that there can be no peace without sustainable development, that there can be no sustainable development without peace. Goal sixteen emphasizes the importance of peace and good governance as cross-cutting issues, affecting all other goals. Indeed, many other goals and targets are also relevant to environment peacebuilding.

## 1.4 CASE STUDY: ENVIRONMENTAL PEACEBUILDING IN COLOMBIA (LECTURER: DAVID JENSEN)

Welcome to this case study on environmental peacebuilding in Colombia. This is a great case study because it brings together many of the challenges we will be discussing throughout this course.

There are probably few other civil wars that have been influenced and shaped by natural resources as much as we see in Colombia. In fact, the very future of the peace process itself will largely depend on how long-standing grievances over land and natural resources will be resolved, and how those resources can contribute to economic development in the rural areas.

Now, if your perceptions of Colombia have been shaped by old documentaries about the civil war, or by series such as <<Narcos>>, it's time to really update those perceptions. Colombia is a country of unbelievable beauty and diversity, underpinned by a stunning array of natural resources. In fact, it is one of the most biodiverse countries in the world, and it can be divided into five distinct regions. Let's just take a quick geographic tour.



First, the Pacific region. This is an area of tropical rainforests and a global biodiversity hotspot.

The Caribbean region is in the northernmost part of the country and is well known for some of the best beaches in the world.

The Andean region, dominated by the Andean mountains and also coffee growing country.

The Amazon region, another hotspot for biodiversity, that is relatively isolated from the rest of Colombia.

And the Orinoquia region, primarily grasslands, and plains, and livestock production.

So now that we've had a quick geographic tour, let's get into the case. Now, the Colombian conflict is complex and it's really difficult to summarize in a straightforward way, as it went through many phases and involved a range of different actors. The conflict began in the mid-1960s as a low-intensity guerrilla warfare between rebel armed groups and the Colombian government. The relationships between the conflict actors in Colombia is complex, but essentially we can boil it down into five main groups.

The government, the FARC, the ELN, different paramilitary groups that formed in response to the conflict and eventually merged into the United Self-Defense Forces of Colombia or the AUC, and organized criminal groups called <<Bandas Criminales>>, or BACRIM. Over five decades, the conflict has ebbed and flowed, resulting in over two hundred and twenty thousand directly attributable deaths, over five million displaced people, and over 7.4 million officially listed and registered as war victims.

While the conflict has important political and socio-economic dimensions, one of the key drivers has been the issue of land tenure and the highly unequal land ownership. Since colonial times, property rights have been unbalanced and unstable and the need for an agrarian reform has been a constant topic of discussion since the beginning of the 19th century. All attempts to implement an effective land reform have failed.

In 1957, the Liberals and the Conservatives created an alliance called the <<National Front>>, which split the seats in Congress between them, and they effectively took turns in leading the country. The exclusion of left-leaning political parties gave rise to, and support for, alternative political movements. 1964 saw the establishment of both the FARC and the ELN. Both the FARC and the ELN claimed to represent the poor and mobilized political support by supporting land reform and redistribution.

However, to finance their campaigns, the FARC specifically became dependent on different sources of revenue, including extortion and a taxation system that charged all levels of cocaine production, from harvesting, to processing, to trafficking. Eventually, in the 1980s, paramilitary groups emerged as self-defense forces for rural landowners and drug cartels in response to attacks and extortion by the FARC and the ELN. And between 1994 and 1997, these paramilitary groups unified into the <<United Defense Forces of Colombia>>, also known as the AUC. Although they were initially a self-defense force they also became increasingly connected to drug cartels as a source of revenue and power. During this same period, the FARC was declared the richest guerrilla army in the world, with an estimated annual income of 800 million US dollars.

By early 2000, the government was committed to ending the conflict. Peace talks with the FARC lasted three years but they eventually broke down. By 2002, the AUC were present in 28 of the 32 Colombian departments, where they fought against guerrilla groups for territorial control.

In 2003, the Colombian government and the paramilitary groups signed the <<Santa Fe de Ralito Agreement>>, which started the demobilization of the AUC. However, not all of the paramilitary is disbanded. Some morphed into criminal gangs called <<Bandas Criminales>>, or BACRIM. By 2006, there were around 33 criminal gangs that were heavily involved in the drug trade. Many of them also established alliances with the FARC or ELN in order to maintain cocaine production and trade.

Eventually, the guerrilla groups and the criminal gangs also added illegal mining as a vehicle for revenue generation. By 2010, gold was actually displacing cocaine production as a way of

financing armed groups in at least eight departments. The Ombudsman's Office stated that by 2010 at least 50% of the mines in Colombia were illegal, and armed actors controlled many of them. Also, 44% of the municipalities across the country were impacted by illegal exploitation of gold, coal, and other minerals. Gold was also very useful for money laundering. In contrast with cocaine, gold is a legal product that can be legally exported, and its source is not easily traceable. Indeed, between 2008 and 2010, Colombia's gold exports increased by 135 percent and were generating revenues between 1.9 and 2.6 billion dollars a year.

In 2010, President Juan Manuel Santos was elected. He committed to a peace process with the FARC which concluded with the <<Havana Peace Agreement>> in November 2016.

After this success, in 2017 the government started peace talks with the ELN. The Havana Agreement is composed of six major points, which include: integral rural reform, political participation, bilateral ceasefire and cessation of hostilities, solutions to the illicit drug problem, victims, and implementation and verification mechanisms.

Now, the peace agreement sets an important precedent, as it includes precise actions regarding environmental sustainability, natural resource management, and very progressive perspectives on gender. One of the priorities of the government for the post-conflict phase is promoting sustainable technologies, practices, and economic alternatives that make it possible to maximize the environmental dividends of peace and the use of natural resources. UN Environment has been invited by the President to provide technical assistance in this process.

Now, there are five main activities linked to the peace process that relate to or depend on natural resources and the environment. These include: territorial planning and integral rural reform; illegal crops; illegal mining; disarmament, demobilization, and reintegration of ex combatants; and environmental conservation and deforestation.

There are clearly many priorities in the Colombian peace process, and natural resources underpin many of them. But where does one begin? How can we coordinate actions, and how can we ensure that natural resources and the environment contribute concretely to the peace process? That is the core question that guides and motivates this course.

As Colombia moves forward with the peace process, it will hold many practical lessons on environmental peacebuilding. Hopefully, many of the tools and approaches used in this course can be practically deployed on the ground. We're going to refer back to the Colombian example throughout the course, and don't be surprised if it also reappears on the final exam. Thank you.



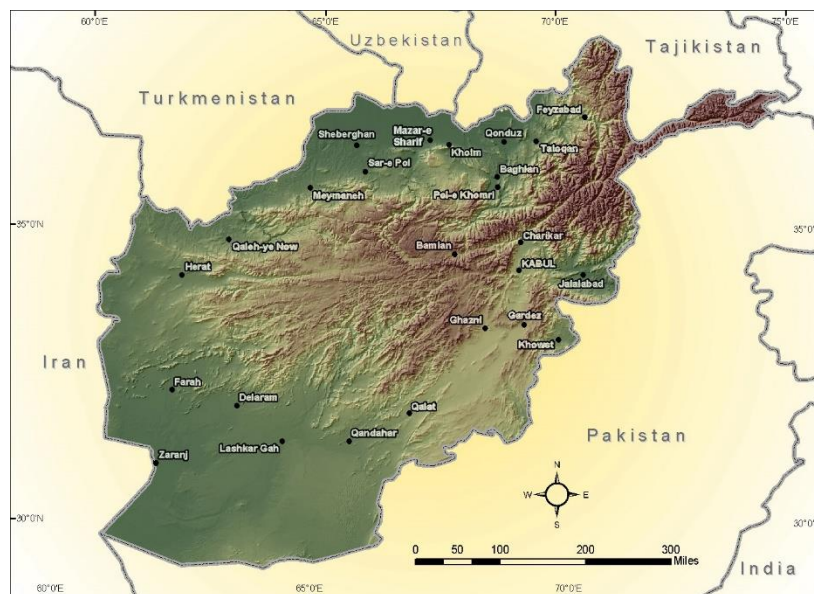
## 1.5 CASE STUDY: EXTRACTIVES AND PEACEBUILDING IN AYNAK, AFGHANISTAN (LECTURER: DAVID JENSEN)

Hi everyone, and welcome to this case study on extractive resources and peacebuilding in Afghanistan. Now, this is another great case study for the course, as it brings together many of the issues we've been talking about in some of the other chapters. UN Environment has been working on natural resources and peacebuilding in Afghanistan since 2003, so we will also be drawing directly on some of our experiences and lessons learned.

Now, in this case, we're going to explore Afghanistan's mineral wealth and how it could potentially contribute to stabilization and post-conflict reconstruction. The latest estimates suggest that Afghanistan holds between 1 to 3 trillion dollars' worth of mineral resources. But how can the mines and the related infrastructure be developed in a context of insecurity, weak governance, and low public trust? And in this context, how can Afghanistan ensure that the minerals become a blessing and driver of economic growth, rather than a curse and a source of conflict?

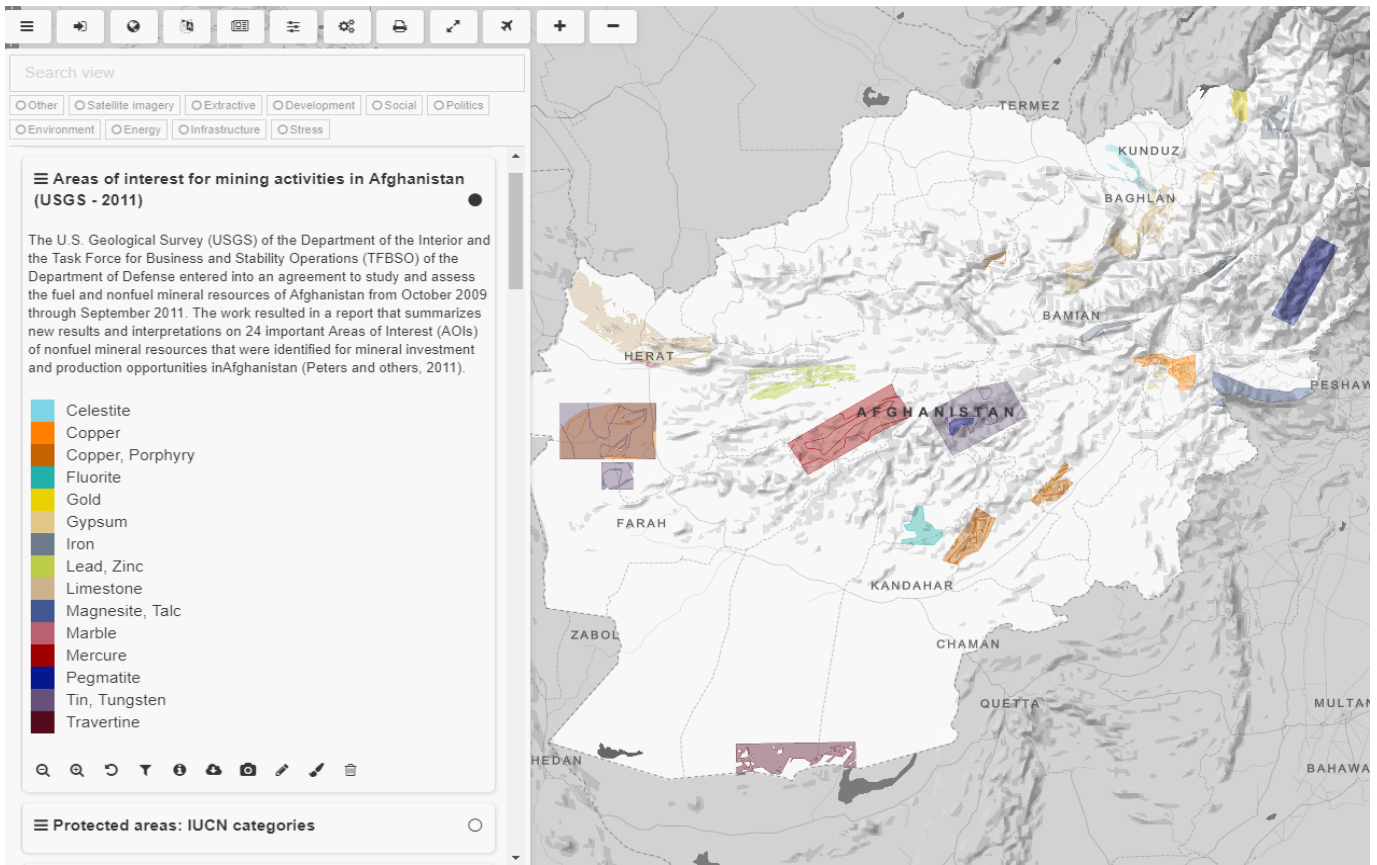
So we're going to focus today on the Aynak copper mine in Logar province. Managed well, the Aynak project could yield up to 100 billion dollars' worth of copper, making a significant contribution to the country's development. But the project will need to address and overcome six key challenges that could spark local level conflict and prevent the project from going forward.

So, let's get started with the case. We're going to begin with a quick geographic orientation of Afghanistan. So, most impressions of Afghanistan are usually shaped by media reports, or images of NATO soldiers operating in the deserts of Helmand province. But Afghanistan is a beautiful place, and in reality, Afghanistan has many more diverse landscapes. There are the fertile foothills in the Northern Plains. There are the high mountains in the Central Highlands, for example, and there are the high plateaus and sandy deserts of the Southern Plateau.



Now, taking the natural landscape into account, only about 12% of the country provides arable land suitable for agricultural cultivation, and this obviously contributes to competition over land and other natural resources. About 80% of precipitation falls as snow in the high mountains, which

also has very important implications for climate change. Here's a map of Afghanistan's national mining potential. It's estimated to range in value between 1 to 3 trillion US dollars. It includes copper, iron, gold, lithium, as well as a range of rare earth minerals.



Currently there are three large-scale commercial investments, around 170 medium to small scale operators, and up to about 3000 artisanal miners. Of course, there are many governance challenges across the sector. The Ministry of Mines has little capacity to regulate the medium- and small-scale operators or collect taxes. The country has not yet achieved compliance with the Extractive Industries Transparency Initiative, and there are armed groups, including the Taliban, who are interfering with segments of small-scale mining, including lapis lazuli and various precious stones.

We will now investigate some of the challenges of the project level using the Aynak copper mine as a case study. So the Aynak mine represents a world-class mining deposit. It's estimated to be the second largest copper deposit in the world. In 2008, the government of Afghanistan signed a 30-year lease with the Chinese state-backed consortium <<China Metallurgical Group Corporation and Jiangxi Copper>> known as MCC-JCL. The investment deal for Aynak was worth a total of 3 billion US dollars. The investment includes a 500 million dollar power plant, roads, and the construction of a railway line from Tajikistan to Pakistan. The mining company estimates that the deposit contains up to 100 billion dollars' worth of copper, with a production capacity of around 250,000 tons annually.

Now, the benefits of such an investment are significant. The World Bank estimates that job creation could include around 4,500 direct jobs, 7,600 indirect jobs, and around 62,500 induced jobs. Of course, the successful development of the Aynak deposit is dependent on overcoming six key challenges. These include: insecurity; resettlement and local community conflicts; infrastructure deficit; environmental impacts; cultural heritage impacts; and weak governance. Now let's look at each of these in more detail.

First, insecurity. The natural resource development in Afghanistan cannot really be considered in isolation from the overall security context. The following factors need to be understood and addressed. First and foremost, Logar province has recently witnessed the resurgence of the Taliban in the region, as well as the growing threat of ISIS. The region has seen an increase of violence with the inception of mining activities, including attacks on the perimeter of the site, and threats have also been made against the future energy and rail infrastructure that would be very difficult to protect. Inter-tribal fighting has also intensified over access and control of the territory, and in response, the government has deployed a 1,700 strong mine protection force, but they are frequently in conflict with the local population who report incidents of harassment. Of course, the geopolitical interests in Afghanistan's mineral resources also continue to evolve. The recent announcement by the US to increase troop levels could shift the security landscape both nationally and around Aynak.

The second challenge: resettlement and local community conflicts. The development of the mine requires the relocation of five villages containing a total of 117 project-affected families. The total amount of compensation paid to those families was 811 thousand dollars (US), plus they were each given a residential plot in a resettlement area of around 450 square meters, as well as access to new facilities. So in addition to those five villages, at least two more villages will likely be resettled if the project goes forward. Now, the resettlement and the delayed development of the mine have led to a number of grievances by local villagers. Focus group discussions that we've been involved in revealed the grievances to include a massive lack of respect felt by local communities throughout the resettlement process, lack of access to their new agricultural plots due to the curfews imposed by the security forces, insufficient compensation payments, competition over land and water in the resettled locations, inter-tribal tensions exacerbated by this relocation, and a lack of access to grievance redress mechanisms.

The third challenge is the infrastructure deficit. Now, as we talked about before, given Afghanistan's landlocked status and distance to port, extensive infrastructure development, including railways and energy infrastructure, is required to unlock Aynak's wealth. Copper prices have dropped from \$9,000 per tonne down to \$6,000. The drop in copper prices has contributed to the mining company asking for a renegotiation of the contract terms. In particular, they're looking to reduce infrastructure investments and royalty payments. Now, negotiations have currently stalled and the project remains suspended. If an agreement on infrastructure cost-sharing cannot be reached, the project won't proceed.

The fourth challenge is environmental impacts. The development and operation of the mine could create significant environmental impacts. These could include 1) water. The total water consumption for the Aynak copper mine is estimated to be around 584,000 cubic meters per day for the first 16 years. Without a proper environmental management plan, Logar province, Kabul, and the surrounding areas could face a water crisis, and climate change will only amplify and compound water scarcity in the area. 2) Waste. Strong regulatory capacity will be required to ensure the careful design and oversight over the planned construction of the tailings dam to manage mine wastes and to prevent river contamination.

The fifth challenge is cultural heritage. Nested near Aynak is one of Afghanistan's most prolific archaeological sites, Mes Aynak. Mes Aynak is a spectacular collection of 5<sup>th</sup> to 6th century Buddhist monasteries, residential, and commercial areas. There are Bronze Age remnants and ancient fortifications that surround a once- prosperous city based on the exploitation of the underlying copper deposit.

And finally, weak governance. Now, establishing a strong governance framework will be absolutely critical to ensuring the successful development of Aynak. The current governance landscape is characterized by a number of challenges. First and foremost: lack of transparency. The concession agreement is still not in the public domain and many people don't know how the various impacts on the social side, the environmental side, or the archaeological side will be mitigated. Second, there's a lack of trust between communities to local government and the private sector operator that is contributing to a breakdown of dialogue and communication channels between all the stakeholders. Third, provisions and safeguards around revenue and benefits sharing are also unclear. The many potential benefits that were linked to construction of the site, or access new infrastructure, have not materialized, leading to local grievances. And finally: grievance redress mechanisms. Now even though a formal committee has been established by the government to address grievances, the authority does not appear to be universally recognized by the affected communities.

So, clearly the project is at a crossroads. If it goes ahead, it will be essential to improve the level of transparency, and regular communication about the progress, about benefit sharing, and about the mitigation of risks.

And in closing, I hope this case study has really demonstrated both the potential opportunity that extractive resources, such as the copper deposit Aynak, represent for Afghanistan, but also the tremendous challenge in bringing such projects to commercial viability. Can projects such as Aynak be developed in a general context of insecurity? And what will be needed to secure both the site itself and the resource corridor going forward?

If the project proceeds, the questions of revenue management, benefit sharing, and environmental performance, will likely remain relevant for years to come. So as you reflect on the learning from other chapters in this course take some time to consider how you might recommend taking a project like this forward. Thank you.

## MODULE 2: NATURAL RESOURCES AND CONFLICT CAUSES

### READINGS

A New Climate for Peace. Taking Action on Climate and Fragility Risks (Executive Summary) (2015) (24pp)

Darfur: Rainfall and Conflict (2008) (10pp)

Backdraft - The Conflict Potential of Climate Change (2013) (pp. 2-4)

Why Do Conflicts over Scarce Renewable Resources Turn Violent? A Qualitative Comparative Analysis (2014) (10pp)

Natural Resources and Conflict: A Guide for Mediation Practitioners (2015) (pp. 7-27)

Fragile Environment, Fragile State: What Role for Conflict-Sensitivity and Peace-Building? (2009) (10pp)

Building Peace in Fragile Contexts: Lessons on Conflict-Sensitivity from South Sudan (2016) (3pp)

Building Peace through Principle 10: Access Rights and the Prevention of Environmental Conflict (2015) (pp. 1-9, 19-26)

Analytical Frameworks to Understand the Historical Context, Process, and Determinants of Natural Resource Conflict. Andrews (2018) 4 pp.

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### OPTIONAL READINGS

Diamonds in War, Diamonds for Peace: Diamond Sector Management and Kimberlite Mining in Sierra Leone (2012) (26pp)

Negotiation and Mediation Techniques for Natural Resource Management (2007)

Addressing Natural Resource Conflicts: Working Towards More Effective Resolution of National and Sub-National Resource Disputes (2015)

Early Warning and Economic, Social and Cultural Rights (2016)

Natural Resources Charter

Power, Contested Institutions and Land: Repoliticizing Analysis of Natural Resources and Conflict in Darfur (2017)

The Politics of the Resource Curse (2013)

Diamonds in War, Diamonds for Peace: Diamond Sector Management and Kimberlite Mining in Sierra Leone (2012) (26pp)

Negotiation and Mediation Techniques for Natural Resource Management (2007)

Addressing Natural Resource Conflicts: Working Towards More Effective Resolution of National and Sub-National Resource Disputes (2015)

The Rise in Conflict Associated with Mining Operations: What Lies Beneath? (2016)

Resilience and Environmental Security: Towards Joint Application in Peacebuilding (2017)

Harnessing the Fourth Industrial Revolution for the Earth (2017)

Harnessing Artificial Intelligence for the Earth (2018)

Contracts Confidential: Ending Secret Deals in the Extractive Industries (2009)

Conflict Translates Environmental and Social Risk into Business Costs (2014)

What Lies Beneath? CIRDI Study

The Case for a Digital Ecosystem for the Environment: Bringing together data, algorithms, and insights for sustainable development

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## TOOLKITS AND GUIDES

UN Guidelines for Effective Mediation (2012)

Conflict-Sensitive Conservation: Practitioners' Manual (2009)

Conflict-Sensitive Business Practice: Guidance for Extractive Industries (2005)

Conflict and Natural Resource Management (2000)

OECD Guidelines for Multinational Enterprises (2011)

## 2.1 INTRODUCTION TO MODULE 2 (LECTURER: MARC LEVY)

Hi, my name is Marc Levy. I'm a political scientist who studies how social systems and biophysical systems interact - especially how they create patterns of vulnerability or resilience. I've worked a lot on climate-security connections. I'm at Columbia University's Earth Institute, where I'm deputy director of CIESIN, the Center for International Earth Science Information Network.

In this module, we're looking at conditions in which environment, natural resources, and climate elevate the risk of violent conflict emergence. Sometimes, as shorthand, we'll use the word environment to refer to the collection of all three of these elements: environment, natural resources, and climate. In this module, we'll explain why virtually all the conflict prevention programs now incorporate these factors into their work, and we illustrate the many different ways that environmental security problems can emerge.

As recognition of these problems has grown, efforts to manage the problem have risen. So we also have a large body of experience and a community of practice to draw on in making judgments about how best to respond to particular challenges. We show how even though environment, natural resources, and climate pose very serious threats to security, the question of how big the threat is in any one place is a function of factors that can be controlled.

The choices we make in response to environmental risks determine the ultimate outcomes. I want to be clear that some of the claims are contested. The topics here are the subject of very active debate, and sometimes the debate can get quite heated. You may encounter people who present information about these topics differently than we do, perhaps with very different conclusions.

We think such debate is healthy, and it's a sign that we are taking these issues seriously. As we elaborate how environment contributes to the risk of violent conflict emergence and how this risk can be mitigated, we're not asking you to accept everything we say uncritically; rather, we want you to understand the reasoning and experience that has led us to our conclusions for you to use in formulating your own perspective.



## 2.2 DRIVERS OF VIOLENT CONFLICT EMERGENCE (LECTURER: MARC LEVY)

I've been working on environmental security issues since the mid-1990s, when there was a big upsurge of interest in the connections between environmental change and security dynamics. At the time, I was somewhat of a skeptic of the claims that were made back then, largely because I thought the evidence was a bit weak. Over time, more and more evidence has come into focus, and now I realize how strongly these two phenomena are connected. In this chapter, we're looking at drivers of violent conflict emergence.

A lot of evidence has accumulated showing that many environmental problems contribute to the risk of violent conflict emergence. Natural resources can play a role in creating grievances or a valuable commodity to fight over. Climate stress can create upheaval in societies that can make conflict more likely, and environmental degradation can create an array of social problems that can promote conflicts.

Knowledge about these risks comes from many sources. There's scholarly research on individual cases, such as the Darfur genocide and the civil war in Papua New Guinea. There are statistical analyses using large datasets spanning multiple cases, and there's a body of experience from practitioners working in various countries. All of these sources of knowledge are important for deriving conclusions about these relationships.

Now, when we say that an environmental factor is a driver of violent conflict or that it increases the risk of violent conflict, we're making a specific causal claim. To avoid confusion, it helps to be specific about what kind of causal claims we are making, and there are different types. For example, if I say, <<if you eat some cyanide you will die>> that's one type of causal claim. However if I say, if you eat a handful of peanuts it will kill you, if you have a severe peanut allergy, and if you don't get quick medical treatment - that's a different type of causal claim.

In the second case, we say that one thing, eating the peanuts, causes another thing, dying, only in the presence of other factors. Or, take another comparison. If I say, if you drink a quantity of alcohol and then drive a car, it's going to significantly increase the risk of you having an accident, that's one type of causal claim. But if I say, if you eat a diet high in saturated fat, it's going to increase the probability that you'll get heart disease if you have the right genetic background and if other factors are also present, then that's a different kind of causal claim.

Now, when we look at the range of causal statements that are made about the connections between environment and violent conflict, they tend to have more in common with the alcohol and driving claim or the saturated fat and heart disease claim. That is, the causal linkages between environment and violent conflict are probabilistic, in general, and they are always contingent on the presence of other factors. So, it's important to keep in mind the ways these different causal claims can be formulated so that if you read a debate about whether people agree with a particular claim, you can first make sure that they're under which type of claim is in question.

Now, the rise in concern over environment, natural resources, and climate as a driver of violent conflict has been going up. And it's been going up because of the alarming increase in the pressures with respect to these environmental factors simultaneously with the increase in violent conflict around the world, especially over the past decade. For a long time after the end of the Cold War, in the early 1990s, the trend towards violent conflict worldwide was declining.



However, in the last 10 to 12 years, the trend has gone the other direction - we've had an increase in the presence of violent conflicts around the world. There's a demand for a framework to understand how these things go together: environment and violent conflict. The direct causes of violent conflict are choices by people who control the means of violence, typically rebel groups and governments.

The forces that influence those choices - what makes a rebel group take up arms or what makes a government use violence to suppress a portion of the population – are typically a set of root causes that also do not include environmental factors. Those root causes are things like patterns of oppression, institutional barriers to peaceful resolution of conflicts, or incentives that are in conflict with one another. Where the environment comes in is in influencing those root causes or in altering the enabling environment within which the choices to use violence take place.

For example, you can have an environmental factor that increases patterns of oppression in society, and that in turn will increase the likelihood that someone in that society may choose violence. So, let's look at the major categories of environmental dry that have been linked to conflict. We're going to look at scarcity, environmental degradation, the resource curse, and climate stress.

So, take scarcity to start with. There are many examples in which environmental scarcity or scarcity of a natural resource has altered incentives on the part of social actors to the point where it became more likely that one of them was going to embark upon a strategy of violence. In Sierra Leone for example, a scarcity of arable land made it easier for rebels seeking to overthrow that government to recruit young men in the rural areas who had a very hard time earning a livelihood under those conditions. In Sudan, the concentration of oil in the south magnified the identity and nationalist politics and created concerns of the scarcity of oil in the north and contributed to the civil war in that location.

There are many examples where scarcity locally - over water, forests, fish resources, and so on - leads to violent disputes over access to those resources. There are also many examples when a period of drought leads to scarcity of grazing land which can be followed under some circumstances by violent conflict among pastoralist communities.

Environmental degradation is a different way in which environment and resources can be linked to conflict. If there's a particular group in a country that's suffering from a major degradation of environmental conditions - say, increasing contamination of water supplies - and if they consider that degradation unfair; they're not compensated for it; they had no voice in the actions that led to it; and so on, and if they don't have access to nonviolent mechanisms for resolving those problems, then violence is possible and it can escalate severely.

We see examples of this phenomenon in the Niger Delta with oil pollution, in Nigeria. We see this in Bougainville, Papua New Guinea, with contamination associated with copper mining. And we see this in many Andean communities, where water contamination from an array of extractive activities has led to violent conflict.

Now, just as scarcity can create trouble, it could also be the case that having too much of a natural resource can create problems. And this type of problem is referred to as the resource curse. If there's an abundance, especially of a high-value natural resource such as oil, then there's a range of things that can happen that are not good for maintaining the peace. Valuable natural resources can be used to finance armed groups. We've seen this with the so-called blood diamonds and

Sierra Leone. We've seen it with coca in Colombia, and we've seen it with rare earth minerals in the Northeast Congo. We see lots of examples of this, and in fact, it's one of the strongest pieces of evidence for linkage between natural resources and conflict that there is.

The resource curse, in addition to making it possible to finance armed groups, can contribute to a separation of interests between the government and its population. And this is driven by the fact that where there are high-value resources and a government can extract revenue from their extraction, then they don't have much of a need to collect taxes – and therefore, they don't have much of a need to maintain legitimacy on the part of the population, and their interests can diverge.

Now, the resource curse was first discovered with respect to oil, and then it has shown up with other high-value resources like coca and diamonds. But unfortunately, you can get the resource curse problem even with lower value resources, and these effects have been documented even with resources such as bananas, charcoal, and gravel.

Finally, climate stress is a way that these phenomena can be linked to the emergence of violent conflict. Climate stress can take the form of drought or flooding or heat waves or extreme storms, and they can trigger a variety of indirect effects on conflict because climate, especially in developing countries, has such a large influence on livelihoods and human security. Severe climate stress can make it harder to earn a livelihood. It can trigger a movement of population. It can induce competition over scarce resources, and if there are series of climate-related disasters that are not managed well, it can degrade confidence in the government.

In some of the statistical analyses, severe climate stress has been found to approximately double the risk of violent conflict emergence. This relationship is especially dangerous because climate change is affecting the conflict prone countries most of all. The countries that have high baseline risks of conflict are typically the countries that are experiencing the biggest human impacts from climate change.

Let's wrap up. When looking at the risk of emergence of violent conflict there are many ways that environment, natural resources, and climate stress can make things worse. The effects are indirect, but they can be quite large. The effects will be different in each place. Some risks are focused narrowly, such as the possibility that diamonds may help rebel groups finance arms purchases. Others are more diffuse, such as the possibility that large-scale droughts may severely depress livelihoods. Some risks are extremely well-studied and have a rich body of practitioner experience, such as the resource curse. Other risks have only recently been the subject of intense scholarship and practitioner synthesis, such as the climate migration link.

And then finally, we can conclude that in the absence of concerted action the problem of environment as a driver of violent conflict is likely to keep getting worse, because the pressures over global resource consumption are rising. Climate change is getting worse. And many parts of the world are experiencing demands for a political change that in the presence of these other confounding factors can combine to generate risk of instability.

## 2.3 CASE STUDY: DIAMONDS AND CONFLICT IN SIERRA LEONE (LECTURER: RICHARD MATTHEW)

Hi, my name is Richard Matthew. I'm a professor of urban planning and public policy at the University of California, Irvine, where I also direct the Blum Center for Poverty Alleviation. I've spent most of my career studying the interaction between poverty, environmental change, violent conflict, and peacebuilding.

In the 1990s, a small country on the western edge of Africa caught the attention of the entire world as it struggled through more than a decade of shockingly brutal civil war waged in large measure by child soldiers and characterized by mass rape and mutilation campaigns. In a country of some four million people, the war displaced 2 million. It killed 50 to 75 thousand and that left as many as a hundred thousand injured and maimed.

This was a war of greed and grievance. It was a war in which diamonds played a major role. Of course, in Sierra Leone, as elsewhere, a variety of conditions and factors led to the outbreak of war, determined its course, and informed its resolution. Among these were ethnic and religious divisions, poverty and inequality, government that wasn't transparent or participatory or effective, turbulent neighbors.

So, while there's considerable evidence that natural resources can contribute to violent conflict, they're not usually a necessary or sufficient cause of war, and they don't reduce the importance of other well-known variables. Nonetheless, in an era of dramatic environmental change, the story of natural resources and war is an important one to tell, and the case of Sierra Leone tells the story well.

In the late 1860's, two very large diamonds were discovered in South Africa which led to a diamond rush and a flood of European investment. Within just 20 years, De Beers was established and it quickly gained control of diamond mines across most of Africa. For the next century, people living in Angola, Botswana, South Africa, and elsewhere would watch diamond wealth fill a small number of pockets at home and abroad. For many of these people, the diamond industry became the epitome of colonial rule, of exploitation, inequality, and corruption. Transforming this situation became the focal point of decolonization, key to economic development and critical for social justice.

By the time diamonds were discovered in Sierra Leone in the 1930s, De Beers had developed a model for gaining full control of a region's diamond fields by forming a partnership with the colonial government that ruled there. And this is what it did in Sierra Leone. Consequently, since the 1930s, the bulk of Sierra Leoneans have watched diamond wealth fund luxurious lifestyles for a select few at home and abroad rather than the jobs, schools, roads, and hospitals that they have wanted.

Independence didn't change things much. Instead, it ushered in three decades of corruption and nepotism as native elites and foreign investors and buyers monopolized the country's considerable mineral wealth.

Decade after decade, a majority of people found themselves trapped in grinding poverty, in spite of the considerable potential of their natural resource based economy. In just a matter of years, diamonds played a key role in transforming a beautiful country of white sand beaches, rolling

mountains and dense forests into a land pockmarked by pit mines. And they also played a key role during more than a decade of brutal civil war.

Today, still recovering from that war, Sierra Leone faces ongoing challenges of grinding poverty, public health crisis, and environmental disaster. But against tremendous odds, the country has been making progress. While violence did not break out until 1991, the sides were formed in 1984 when Foday Sankoh, a retired corporal teacher and wedding photographer, founded the Revolutionary United Front as a vehicle for revolution. Among his promises were education for everyone, extensive land reform, and mineral wealth harnessed to social good. The RUF attracted angry youth from the rural areas and also from the urban middle class. In training camps in Libya, Sankoh met Charles Taylor who had fled from Liberia after being with embezzlement. Taylor left Libya to found the National Patriotic Front of Liberia.

In 1989, he invaded his homeland from neighboring Côte d'Ivoire. Taylor was displeased that the government of Sierra Leone did not support him and he was also enticed by the country's diamond wealth. In 1991 the RUF, led by Sankoh and fortified with Liberian soldiers, began attacking villages in rural Sierra Leone. The civil war in Sierra Leone would last from 1991 until 2002. It became a war of young versus old, of the provinces versus Freetown, of rural versus urban. Reinforcing every axis of confrontation was the promise of mining sector reform and a return of diamond wealth to the people.

But diamonds were not just a justification for war, they also shaped and funded the conduct of the war. From the outset, diamonds were used to finance the conflict, often smuggled through Liberia in exchange for weapons and ammunition. They also became a source of personal gain for rebels and for many others. Because of this, all of the early skirmishes between the RUF and the Army took place in the eastern provinces where the diamond fields are located. As the RUF sought to gain and maintain control of the diamond mines, it initiated a campaign of intimidation and terror that included mutilations, rapes, amputations, and slavery.

By 1995 the RUF you have controlled Kono district, the primary source of diamonds in Sierra Leone. In Freetown, displeased with the early success of the RUF, in April of 1992, a faction of the military led by Captain Valentine Strasser staged a coup. Strasser quadrupled the military to 13,000 troops. To fund this expansion he turned his attention to the diamond fields, but unable to push back the RUF in 1995, Strasser hired Executive Outcomes, a South African mercenary group to assist them.

Executive Outcomes quickly ousted the rebels from Kono and they were paid for their efforts with diamond concessions. The government of Sierra Leone also encouraged local communities to form militias to protect themselves in their land. These groups, jointly known as the Civil Defense Forces, was as violent in their tactics as the rebels and as focused on securing diamonds.

During the war there were several failed attempts at peace. In the Abidjan Accord, President Kabbah agreed to Sankoh's request that Executive Outcomes leave Sierra Leone - which they did, breathing fresh life into the rebel movement. Three months later Kabbah was ousted in another coup. After a substantial period of bloodshed and human rights violations, negotiations resumed and led to the 1997 Conakry Accord, which attempted to reinstate President Kabbah but fighting continued and the Accord failed.

The 1999 Lome Peace Accord was a final attempt to end the war in Sierra Leone. This time the diamond mines, ignored in earlier negotiations, were used as leverage by both sides to come to

an agreement. While negotiating the Lome Agreement, Sankoh had lobbied successfully to prevent the Mandate of the UN peacekeeping mission from addressing the diamond trade. He did this by appealing to national sovereignty and the right to self-determination. Because of this, diamonds continued to fund conflict after 1999.

However, after kidnapping 500 UN peacekeepers in 2000, Sankoh was arrested for breaking the agreement, and by 2002 peace had been secured. As the violence came to an end, the UN Security Council requested the Secretary-General to establish a panel of experts to investigate the link between diamonds and the war. Resolution 1306 also called for UN member states to take the necessary measures to prohibit the direct or indirect import of all rough diamonds from Sierra Leone to their territory, and it requested that the government of Sierra Leone implement and enforce an effective certificate of origin regime for the diamond trade. In September 2004 the Security Council updated the UN mission's mandate to require to support the Sierra Leone armed forces in patrolling the border and diamond mining areas.

Outside of Sierra Leone, another important development was catalyzed by the role of diamonds in the wars there and also in Angola and Côte d'Ivoire. In 2002, states, the diamond industry, and civil society crafted the Kimberley Process Certification Scheme for rough diamonds. While widely regarded as imperfect, the Kimberley Process has increased transparency and encouraged a more equitable distribution of diamond wealth. Today, Sierra Leone is a participant in good standing and great strides have been made in cleaning up the diamond trade there and around the world.

In summary, from the outset of the war diamonds were used to finance the conflict, often funneled through Liberia in exchange for weapons and ammunition. Diamonds also became a source of personal gain for many rebels and soldiers, creating an incentive not to end the war. This made negotiating peace incredibly difficult. When a peace agreement finally was forged, a great deal of attention was focused on the reform of diamond sector.

To rebuild trust, it was crucial that transparency be brought to the mining sectors of Sierra Leone. Over the years great strides have been made in bringing transparency to the mining sector, and the country's mineral wealth and other natural assets have gradually been mobilized around rebuilding and maintaining peace.

## 2.4 CLIMATE STRESS, CONFLICT, AND PEACEBUILDING (LECTURER: MARC LEVY)

Hi, today we're looking at the role of climate as a factor influencing peace and security. There are many different aspects to climate that matter in this regard. There's the average temperature and climatic conditions that can change. There's the variability from year to year or season to season. There are climatic extremes. Heat waves, droughts, storms and so on. And then there are climatic patterns, such as the monsoon, that make a difference. The science is strongest on the averages and variability because that's where our data and models are best. These aspects of climate have natural patterns and they are also undergoing change, both natural climatic fluctuations and long-term climate change pose challenges for peace and security.

It can be hard to disentangle in a specific case whether a climatic shock is an example of natural fluctuation or of long-term climate change. But for the societies that are affected, it doesn't really matter whether the climate stress is natural or human induced, and therefore, when we talk about climate stress, we include both natural climate fluctuations and long-term climate change induced by greenhouse gas concentrations.

We have an increasingly good understanding of the linkage between climate stress and security risk that has increased fast as new data and new methods have become available - and also as we have experienced case after case of fragile societies coping with unprecedented climate shocks. On the research front, the new findings tend to find more reason for worry, not fewer. And among practitioners, the more people consider the linkages, the more alarmed they tend to become.

There's high convergence around four core types of linkages. There's a linkage between climate and the ability to regulate violence. There's linkage between climate and the change in the value of strategic natural assets. There's a linkage between climate and systemic instability. And finally, there's a linkage between policy responses to climate change and unanticipated backlashes against it.

The first example is the relationship between climate stress and the ability to regulate violence. The strongest evidence for this claim comes from the statistical work that has taken data on political violence and on climatic stress and identified a very strong, quantitative relationship between the two. Climate anomalies are associated with higher risk of civil war, as well as many of the contributing factors to political violence, such as poverty, population displacement and anti-government protests.

The causal mechanisms linking climate stress and a declining ability to regulate violence are not yet fully understood. There are likely multiple mechanisms at work. But as a general matter, what we are finding is that if the level of climate stress rises to unusually high levels, then you can expect the risk of violent conflict to rise as well, and frequently a doubling of the baseline risk is not unusual.

We can also get a connection between climate stress and changes in the value of assets that are

strategically important for maintaining the peace. Climate stress can disrupt the political equilibrium by making formerly low value assets high value or making formerly high value assets low value. For example, a major shift in rainfall can alter the value of land for agricultural production and that can lead to competition over access to that land.

Parts of the Sahel that are recovering from the long-term drought of the '80s and '90s have seen this kind of conflict. If climate stress results in a society entering a condition of high water insecurity, then control and distribution of water assets can become a dangerous point of contention. In some urban areas facing acute water shortages, political opposition movements have taken over water distribution functions as a way to undermine government legitimacy and to build popular support for their movements.

Climate stress can also trigger changes that are systemic in nature. And many of the studies that have looked into the relationship between climate stress and security breakdowns have found connections through these complex systemic forces. For example, a drought in one part of the world that is a major food producing region can trigger high food prices around the world. The impact of climate stress on security can make it harder to anticipate and prepare for major security breakdowns and this can lead to an entire security system becoming less stable. Another example comes from infectious diseases that are influenced in part by changes in climate conditions. Cholera is one example. When these types of changes in the disease environment take place, then that can make it harder to manage security problems.

Finally, there can be a backlash against efforts to manage climate problems. In a fragmented, political world, it's not unusual for efforts to manage these problems in one region to elevate the risk that climate poses in another region. Social scientists call this the security dilemma. And it has the potential to generate spirals of escalation.

For example, during the 2010 food crisis, there were countries that responded by banning export of their food production. And this of course had the effect of increasing food insecurity in other countries. We also have several examples of countries that are worried about climate-induced food security problems responding by buying up long-term access to agricultural land in places that are themselves facing high food security problems, such as large parts of sub Saharan Africa.

We also are finding many examples where countries are worried about water scarcity triggered by climate change and are responding by diverting trans-boundary water flows which has the effect of increasing insecurity on the part of downstream countries.

Another good example of this policy backlash mechanism comes from the experience with biofuels. Several countries responded to early desires to reduce greenhouse gas emissions by mandating use of biofuels in their vehicle fleets. This had the effect of increasing the demand for crops that were used to produce biofuels, and that had the effect displacing agricultural production, and that had the effect increasing food prices.

So how can we respond effectively to this range of challenges that climate stress poses for security? The menu of response options is still somewhat in its infancy. There's a comprehensive review that was undertaken on behalf of the G20 countries that looked at the whole set of climate

security connections and formulated a set of comprehensive response recommendations. And those recommendations can be thought of as systemic approaches to policy innovation.

First, they recommend focusing on integration across the many different policy elements that play a role in climate security linkages- not to have a single policy on climate security by itself. Second, they recommend that these policies set, as their primary goal, enhancing resilience to climate shocks - not on reducing more narrowly framed security breakdowns, because enhancing resilience will protect against a range of security problems and therefore it's more appropriate to this problem.

They also recommend aiming for enhancement of a set of very specific policy tools focused on warning and assessment, on strategy and planning, and on finance and implementation. And these tools are emphasized because they have the potential to enhance the resilience of societies facing climate shocks. And then, finally, they recommend concentrating on thematic topics that have large impacts as well as good potential for getting better. These include food security, disaster risk reduction, and trans-boundary water management.

So these systemic approaches to policy are appropriate because they improve outcomes by enhancing the effectiveness of the overall policy apparatus. And this makes sense in the case of climate security connections because of the many different ways that climate can create security problems and the dense set of connections across policy areas.



## 2.5 CASE STUDY: CLIMATE CHANGE DIMENSIONS OF THE ARAB SPRING (LECTURER: MARC LEVY)

In 2010, North Africa was considered a region at relatively low risk of political violence and instability. Yet, over the course of the next year, a wave of unrest spread through the region, with political leaders in Tunisia, Libya and Egypt forced from office. The unrest expanded into many neighboring countries of the Middle East. Syria experienced the worst violence in the region even though it had been considered one of the lower risk countries in the Middle East, just the year before.

The Arab Spring caught so many by surprise that the international response was in many ways ineffective, and in some countries a state of crisis continued to deepen. As the decade continued, the region became home to the worst humanitarian crisis since the Second World War. How did such a crisis take so many people by surprise? How did it get so bad so fast? What can we learn from the experience if we want to avoid such outcomes in the future?

A major reason the crisis unfolded as it did and caught so many by surprise, is that a series of extreme climate stresses hit the region during 2010. These climate stresses interacted with underlying political vulnerabilities that predated the climate shocks and with decisions and actions that took place during the crisis. The climate shocks that hit the region took place in the context of structural political vulnerabilities and systemic connections.

Among the political vulnerabilities were unmet demands for increased political participation across the region. Some political leaders had been in power for a very long time, such as Gaddafi in Libya and Mubarak in Egypt. The countries were far from identical. Some were monarchies, some allowed a degree of dissent, but they all had in common this pent up demand for greater political openness.

The political repercussions of the climate and food shocks stemmed from specific decisions and actions. Vladimir Putin chose to ban wheat exports from Russia. He justified this decision in terms of protecting Russian food security. However, it was not necessary. Experts consider it a policy error. It had the effect of magnifying the price shock in the wheat import countries of North Africa. The protests over food prices were also decisions that affected the political impacts. In some countries, including Tunisia, many people took to the streets to protest the rising prices, and what they saw as an inadequate response from their governments.

On December 17th, 2010 Mohamed Bouazizi, a bread vendor in Tunisia, doused himself in gasoline and set himself on fire as an act of protest against government authorities, whom he said had engaged in a long period of systemic harassment that interfered with his ability to earn a living. Part of his protest was that he was denied a right to challenge the government actions against him. Mohamed Bouazizi's action fused the two widespread sources of discontent: the food crisis and abuse of government power. It was followed by a dramatic increase in popular protests that resulted in President Ben Ali fleeing the country.

On January 14th, 2011, a series of political transformations took place across the region. There was a revolution in Egypt. There was civil war in Libya and Syria. Syria was a special case. In addition to the wave of unrest triggered initially by food price shocks, other extreme climate shocks were taking place within the country. There were water shortages in many parts of the country. This led to large-scale population movement, and the government policies that responded to

these shocks made things worse - not better. Overall there was a severe disruption of livelihoods and settlements, and this added to the popular grievances against the regime.

The net effect was to magnify the already high levels of opposition against the Assad government and to throw large parts of the country into social, political, and economic disorder. Armed opposition groups responded to these changes by escalating their military actions against the regime, and they found the heightened disorder to make it easier for them to operate and easier to mobilize new recruits.

Throughout, the choices made by the Assad regime consistently made things worse. He failed to correct policy problems that exacerbated water shortages. He failed to provide relief to affected communities. He failed to engage in political dialogue with the peaceful opposition. He responded to violence by specific armed groups with horrific violence targeting entire communities. What was happening in Syria as a result of these choices had repercussions throughout the region.

As the country descended into civil war with mounting casualties and no political resolution in sight, refugee flows increased dramatically. This is a very predictable consequence of civil war. In keeping with normal tendencies, most refugees initially settled in nearby countries such as Jordan and Lebanon. However, because the numbers grew so fast and the international humanitarian response had trouble keeping up with needs, many refugees became convinced that their safety required finding a way to Europe.

Because Libya was still in a condition of state failure, regulation of border crossings and port activity fell largely to groups operating outside the law. This created an opportunity for refugees determined to make it to Europe to attempt passage across the Mediterranean. Other routes were relevant but the Libya connection was most important. As a result of the unanticipated flow of refugees across the Mediterranean into Europe, many countries were forced to cope with flows that they were not prepared for.

The situation led to many humanitarian tragedies and to a politicization of the refugee question that tended to make it more difficult yet to respond effectively, and in some cases threatened to erode support for political regional integration. This case poses several challenging questions. For some observers the case highlights the dramatic conflict risk that can flow from climate stress.

From this perspective it is crucial to work harder on questions such as, <<are we ready for the next climate triggered political upheaval?>> and <<can we find a way to anticipate such climate triggered upheavals>>, even when the causal links can get so intricate so that we have a better chance at responding effectively.

For others however, the case is a manifestation of dynamics having to do with political choices by governments and civil society at both national and international levels, around themes that have been the focus of peacebuilding for many decades and continue to prove challenging to build and maintain sustained effective focus. Shifting the spotlight suddenly to climate change in this context undermines the questions that really matter. How can we support demands for political reforms without risking violence? How can we hold leaders more accountable for actions that undermine peace?

We encourage you to think about which of these framings you most identify with and to think about whether one framing has to be right and one wrong, or whether the two can be compatible

with one another. There are many perspectives on these questions. We encourage you to come to grips with how to think about them on your own.

## 2.6 GOVERNANCE AND RESILIENCE (LECTURER: MARC LEVY)

Hi. Today we're focusing on governance and resilience - exploring how they are important pieces of the environment-violent conflict equation. We've seen that environment, natural resources, and climate are important forces shaping peace and security, but we know that these forces do not have the same effects all the time or in all places. To more fully understand the risks and the response options, it's necessary to look at the factors that mediate between environmental stress and security outcomes.

Governance and resilience are two of the most important factors. So let's start with governance. There are multiple approaches to thinking about governance, but there are core elements that are shared across most of them.

They include rule of law, which refers to a presence of conditions in which what governments, individuals, and organizations do is controlled by rules that bind everyone equally that are formulated through consistent, regular processes, free of corruption, and that operate under a culture of compliance.

A second element of good governance is access to information and transparency, which means that information about what governments do and the information that governments collect are made available to all.

Participation is a third element. It means that decision-making processes allow for participation on the part of all relevant groups and individuals.

Accountability is an element of good governance. Under conditions of accountability, institutions created to carry out governance functions and the officials who lead them are subject to public review and face tangible consequences for poor performance.

And finally there's fairness, which means the application of governance functions in a way that is non-discriminatory.

In the past, some of these elements have been contested as not universally applicable. However, there is now consensus that they are valid components of a good governance agenda. Each of them are targets within the Sustainable Development Goal 16 on peace, justice, and strong institutions, which has been endorsed by all governments in the world.

So, how does good governance relate to environment-security issues? They shape the sensitivity of societies to environment, natural resource, and climate stress with respect to security breakdown. A society that is weak in all governance elements will find its major environmental problems frequently lead to security problems. Environmental problems will be more likely to trigger social grievances. Disputes over natural resources will be harder to resolve through peaceful means, and climate shocks will be more likely to escalate into complex patterns of suffering that are hard to control.

These elements of good governance also provide practical, useful entry points for reducing environmental security risks. Transparency mechanisms regarding natural resource extraction and revenue sharing is one example. Dispute resolution mechanisms for land, water, and other critical resources are another, and finally, assessment and regulatory procedures to manage environmental degradation provide another example.

Now, the traditional good governance agenda by itself has proven not to be sufficient to fully understand or manage environmental security risks. And this is where resilience comes in. Resilience is a complimentary approach to preventing environmental problems from escalating into violent conflict. In this context, resilience refers to the ability of a society to absorb a shock concerning the environment, resources, or climate and to recover quickly, efficiently, and fairly. Resilience differs from the traditional good governance framework by putting a major emphasis on social networks, practices, and capabilities. Resilience is also less procedural in its focus and concentrates instead on dynamics of risk and vulnerability. Resilience puts more emphasis on place-specific context than the traditional good governance agenda. This is because the nature of the risks that are relevant vary significantly from place to place.

So, how do we bring resilience into the management of environmental security problems? When resilience as a framework is combined with the good governance approach, it permits more accurate assessments of environment security risk. Some places that might be weak in traditional good governance benchmarks might be high in resilience. For example, there are pastoral communities that lack many of the traditional elements of good governance but have very robust social practices that make them resilient against climate shocks. A given society might be resilient against some kinds of shocks but not against others. For example a smallholder farming community may have effective practices for coping with drought, but not for coping with catastrophic flooding. The resilience framework is better equipped to identify these differences.

In addition, the resilience framework is good for providing an entry point that expands the menu of options for effective action. For example, there have been cases where shifting from informal to formal governance of land resources – although they constituted progress from the perspective of the traditional good governance agenda – made societies more conflict-prone because they undermined the social institutions and practice that provided resilience. So looking at resilience alongside the traditional good governance agenda helps avoid mistakes and helps identify promising new approaches.

## 2.7 TRANSPARENCY AND ACCESS TO INFORMATION (LECTURER: ERIKA WEINTHAL)

In this chapter, we are going to be discussing the importance of transparency and access to information by stakeholders regarding the environment and natural resources. Transparency and access to information is an important strategy for conflict prevention and for peacebuilding across a conflict lifecycle because the lack of information about the sharing of financial benefits and about the risks from natural resource extraction often undermine trust and drive conflict. In particular, transparency and access to information are essential for building trust. Because developing trust among all the actors involved in the natural resource sector is required for successful peacebuilding initiatives, this chapter will look at several initiatives that seek to develop transparency in natural resource and environmental sectors and make information regarding natural resource use, management, and profits publicly accessible.

Access to information and transparency can help prevent conflict in a number of ways. By providing access to information and transparency, this can help fight corruption. It can help manage public expectations, which is important so that everyone is aware of what is written in contracts and licenses so that there are no mistaken impressions about who is benefiting. It can also improve participatory monitoring of compliance with resource agreements and contracts.

Access to information and transparency is also important for empowering people so they have a voice in decisions regarding the natural resource sector. And it can help promote better communication between citizens and the government. Just take the case of Nigeria to understand why transparency matters. Nigeria is an oil-rich country, and between 1970 and to 2000 it accrued approximately US\$350 billion in oil revenues; but, during the same time period, its economy shrunk and the poverty rate increased from 36% to 70% as measured as the population subsisting on a dollar a day. As such, we can see that despite having a large amount of oil revenue, these revenues did not translate into better human development outcomes for the population.

After conflict, transparency and access to information can also help with post-conflict recovery and in many ways take on a greater urgency – largely because natural resources often provide one of the few streams of revenue available to the state immediately following a conflict. As such, transparency and access to information in natural resource sectors can help prevent corruption at the end of conflict and encourage trust and good governance which are required for maintaining peace. With transparency and revenues, this can also help with better economic planning, investments in human development, and can also encourage much-needed foreign investment by increasing investor confidence.

In the context of natural resources in the environment, transparency relates to the disclosure of information by companies and the government regarding the activities, including such things as making more publicly available the potential risks and benefits from natural resource exploitation, making available the revenue flows from the resource sector to the government, and also the different impacts on the environment. Regarding revenue flows in particular, we are talking about transparency and access to information about the management of revenue from the natural resource sector. So, “this is how much revenue the government receives, how these revenues are spent, and how the benefits are allocated among the population.”

There is a need and an opportunity to reform the natural resource sector through devising programs that promote transparency, accountability, equity, and public participation in decision-

making. It's important to get such reforms right because decisions taken or not taken can be locked in for a very long time.

There have been a number of efforts ongoing to build transparency for several decades. Many of these efforts have been led by a number of international nongovernmental organizations that have worked on promoting transparency in the extractive sectors. Some of these organizations include Global Witness, the Natural Resource Governance Institute, Oxfam, Save the Children, and the Open Society Institute - all of which have focused on financial flows from the mineral sector that are paid to host governments through such campaigns as Publish What You Pay, Revenue Watch, and the Extractive Industries Transparency Initiative, which I will talk about in greater detail.

The Extractive Industries Transparency Initiative was created in 2003 to use transparency to fight corruption in the collection of revenue from oil, gas, and minerals. It focuses on promoting cooperation between government, industry, and civil society. The Extractive Industries Transparency Initiative standard requires companies to disclose information on the key steps in the governance of oil, gas, and mining revenues. Emphasis is placed on disclosure, but over time this emphasis on disclosure has also expanded to look at a wider array of governance mechanisms related to the extractive resources and their revenues, including contract transparency and transparency and commodity trading.

So, what does it mean to participate in the Extractive Industries Transparency Initiative? One of the key standards is reconciling payments related to the extractive industries through multiple forms of oversight. So, companies have to report all their fees, taxes, and other payments that they make to a government regarding the extractive sector. The government needs then to report all the monies it has received. And then you have an external auditing company, a third party, that is responsible for reconciling the payment information from the companies and the government. And after that, a multi-stakeholder group is convened that includes representatives from government, companies, civil society, that makes these reports public and works to ensure transparency in the extractive sector.

As of July 2017, there are 52 countries that are implementing the Extractive Industries Transparency Initiative standards. These countries are scattered across the globe. To date, the natural resource governance Institute has found that 29 Extractive Industries Transparency Initiative implementing governments have disclosed at least some of their contracts and licenses with companies and several more are taking steps to do so.

Liberia provides an excellent example to understand the importance of transparency and access to information and the role that the Extractive Industries Transparency Initiative can play in a country emerging from conflict. Liberia experienced 14 years of civil war between 1989 and 2003, where corruption was rampant in the mineral and forestry sectors. President Ellen Johnson Sirleaf, who also happens to be the first woman president in Africa and a recipient of the Nobel Peace Prize, established the Liberia Extractive Industries Transparency Initiative in 2006.

In 2009, Liberia became the first African country to pass validation and to be designated Extractive Industry Transparency Initiative compliant. The Liberia Extractive Industries Transparency Initiative was innovative in a number of ways. Given the historic challenges that it had with corruption in the timber and rubber sectors, Liberia extended the requirements to cover both timber and rubber. As such, it became the first country to require, too, that concession agreements

be made publicly available. This was something that most other countries that have signed on to the Extractive Industries Transparency Initiative had not done prior to this.

Liberia published its first report in 2009, and what was really important about this report for a country like Liberia that had experienced corruption in the extractive sector was that it showed discrepancies between what Liberian companies had claimed to have paid to the government and what the government had claimed to have received from the companies. This report has helped citizens understand the importance of the extractive industries for their country's economy, it has provided information both to citizens and government about what taxes are paid, what's written into the contracts, and it has forced companies to look inside to see whether there has been any incidences of internal fraud.

Overall, the Liberia Extractive Industries Transparency Initiative has played an incredibly important role in improving access to information, fostering oversight and disclosure within the country, and empowering its citizens to have a stronger role in the extractive industries and managing natural resources.

Beyond the Extractive Industries Transparency Initiative, many countries are adopting new legislation to support transparency in the extractive resource sector. For example, Canada, the European Union, and the United States have adopted harmonized and mandatory reporting standards such as the Extractive Sector Transparency Measures Act in Canada in 2015.

To conclude, transparency and access to information about natural resources and the environment are key to environmental peacebuilding. It requires the participation of governments, corporations, civil society, to promote better management of revenues from the natural resource sector. The use of transparency in such initiatives as the Extractive Industry Transparency Initiative is important in building trust between citizens, the government, and the private sector around one of the most valuable sectors in many countries - that is, the extractive sector. Thank you.



## 2.8 CONFLICT SENSITIVITY (LECTURER: MARC LEVY)

Hi. Today we're talking about conflict sensitivity. Aid is not conflict neutral. It can strengthen peace capacities or reduce them. It can favor one party over another. In many countries that have high conflict risk, development aid has a large impact on what happens in the country. It's not that unusual for aid to constitute a third or more of the national economy. A significant portion of development aid is either directly targeted at environment, natural resource, and climate issues, or it indirectly has a significant effect on these issues. Therefore, finding practical ways to make environment, resource, and climate development interventions more conflict-sensitive has the potential to bring large benefits.

The emphasis here is on the “do no harm” aspect of conflict sensitivity, defined as designing development interventions that avoid raising the risk of violent conflict. There's also a “do some good” aspect, designing development interventions that lower the risk of violent conflict. These aspects will be covered in the module on post-conflict settings.

The focus on conflict sensitivity initially focused on all aspects of development aid. As the end of the Cold War made it more politically acceptable to integrate development and peacebuilding policies, and as evidence accumulated that the overall effect of aid in high conflict-risk countries seemed to be making conflict more likely. Later, there arose a community of practice focused on improving the conflict sensitivity of natural resource interventions, because of the specific linkages around natural resource interventions and conflict.

The Sierra Leone and Liberia cases were influential. More recently, there has been a lot of activity around the conflict sensitivity of climate interventions. There are common elements to promoting conflict sensitivity in an environmental security context. First, there's the conduct of a conflict assessment. Second, there's identifying the environment, resource, and climate linkages. Third, there's mapping the development plans against the identified environment conflict risks. Fourth, there's a modification to the development plans to neutralize the risks that have been identified. And then finally, fifth, there's the monitoring of the risks in order to provide adequate warning.

We will go through each of these five. First: conducting a conflict assessment. Conflict assessments include specification of the root causes of conflict. They include identification of critical groups, regions, and individuals and their potential to promote conflict escalation or de-escalation. For example, if you are doing a conflict assessment in Sierra Leone in the late 1980s, you would probably identify restricted political participation, high poverty, and land scarcity, as well as factional competition, as among the root causes. The Revolutionary United Front would be a critical group or potential spoiler.

The second element is identifying the environmental linkages. This requires answering the question, what are the environment, natural resource, and climate issues that have a major bearing on the things that you identify in your conflict assessment? What could happen on the environmental front that would make conflict more likely? If we go back to the hypothetical 1980s conflict assessment for Sierra Leone, you would have certainly included land scarcity and diamonds here. In retrospect, we now know that drought was also a major risk because of its effect on the rural poor. Today, it would be included in a conflict assessment of such a situation - though in the 1980s it would probably have been overlooked.

Third, mapping your development plans against the identified environment-conflict risks. Here you look at the different ways that your interventions, that have been planned, might increase the risk

of conflict escalation. How might they unintentionally worsen some of the root conflict causes? How might they induce critical groups to escalate violence? For example, in a case where land scarcity and rural poverty are important root causes, like Sierra Leone in the 1980s, you might discover that a plan to attract foreign investment in agriculture, even if it had many benefits, could be disastrous if it made land scarcer for the rural poor.

The fourth step is modifying your development plans to neutralize the risk you've identified. Once you've identified the conflict risks associated with the first order development plans your job is to neutralize those risks as much as possible. In some cases, you may fundamentally shift your development focus. In our example, you could conceivably shift from an effort to increase foreign investment in agriculture toward a focus on boosting the productivity of smallholder farmers. In other cases, you may retain the original approach, but supplement it with development initiatives that offset the conflict risk. For example, you could retain a foreign investment approach to agriculture and add major efforts on rural jobs.

The last step is monitoring the risks and providing adequate warning. At this point, you know how aid interventions could potentially elevate the risk of conflict escalation. No matter how much you work at neutralizing this risk, you will not eliminate it entirely. Therefore you have a moral obligation to monitor the impact of your aid activities on conflict risk and to provide adequate warning when needed.

For example, if you have determined that a major risk has to do with making land scarcity problems worse, you need to monitor changes in the land scarcity problems. Such monitoring might include tracking things such as acquisition of large land parcels, large movements of population into land-scarce areas, disputes over land ownership and access, increases in the number of unemployed rural youth, and so on.

Effective warning is seldom easy. It can be hard to design the right metrics. It can be hard to obtain the right information. It can be hard to convert the information into valid risk estimates. It can be hard to communicate useful warnings. In fact, if not undertaken carefully, sometimes warnings can themselves end up making conflict escalation more likely. In general, warning around the conflict risk of environment, resource, and climate interventions is more effective when it's aimed at supporting specific decisions. For example, it might be focused on decisions having to do with increasing income support transfers in an area where depressed livelihoods is the source of the warning. Warning is also more effective when it's developed with active participation of all relevant stakeholders. Perhaps some of the information might be collected through citizen surveillance, for example.

These ideas around conflict sensitivity can be applied more broadly than this. They emerged initially within the development aid community, but now, conflict sensitivity is being applied by a wide range of actors including multinational corporations, humanitarian response organizations, and national and local governments in situations of fragility. The evidence that development interventions around environment, resources, and climate can raise the risk of violent conflict escalation is quite high. In fact, in the absence of offsetting conflict sensitivity efforts, that is by far the most likely outcome.

That's why conflict sensitivity is universally accepted as best practice when designing interventions where baseline conflict risks are significant. As a result, the community of practice is growing rapidly, and usable lessons are accumulating. It may still be difficult to achieve complete success, but it has become easier to mount a vigorous attempt.

## 2.9 CONCEPTUAL FRAMEWORKS TO UNDERSTAND THE CONTEXT, PROCESS, AND DETERMINANTS OF MINERAL-RELATED CONFLICTS (LECTURER: BERNARDA ELIZALDE)

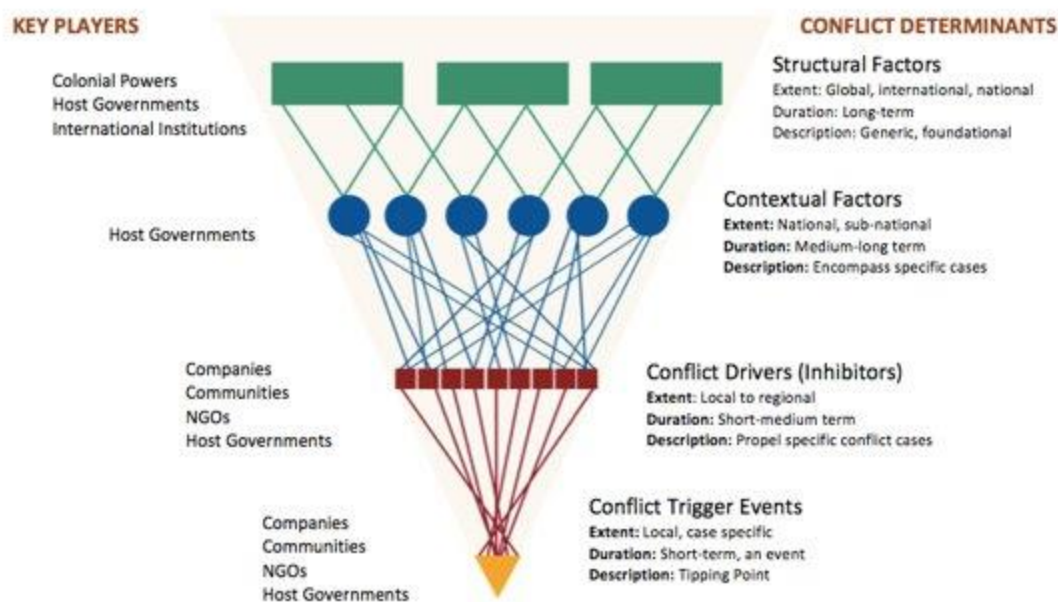
Hello, my name is Bernarda Elizalde, and I am the co-founder of the Center for Responsible Mineral Development. I am a social and environmental field practitioner. I currently work for a Canadian mining company. Previously I have advised government agencies, communities, financial, and international institutions on social and environmental performance and utilities in North America, South America, and Africa. I was a team member on a global research project focused on the rise in conflict associated in mining operations in partnership with a Canadian International Resources & Development Institute and the UN Development Programme.

In this lecture, I'm going to explore how conceptual frameworks can improve our understanding of the complex systems that lead to conflict in the mining, oil, and gas sectors. Today I will present two conceptual frameworks, which are useful in helping to understand specific aspects of conflict associated with extractive industries. These models allow us to consider root causes, systems, and pathways for extractive conflict and the key players involved. By understanding these pathways we can better prevent social conflicts from escalating to violence and improve development outcomes in resource-rich areas.

This first conceptual framework is a Conflict Pathway Model. This model helps us to understand conflict as a process that is predictable and manageable. It is based on an ongoing global project to improve understanding of conflict associated with mining, which has increased dramatically over the past 15 years. The Conflict Pathway Model was devised from field-based investigations, a literature review, and a quantitative analysis of more than 330 mining public incidents worldwide. Our team examined in-depth cases of conflicts linked to mines in Latin America and Africa. Our investigations focused on improving understanding of social conflict between mining companies and communities. Conflict situations can involve both negative and positive outcomes. We learn valuable lessons from investigating both.

For the purpose of this investigation, we define conflict as the interaction of two or more parties with perceived incompatible goals who engage each other through a range of practices including dialogue, persuasion, negotiation, arbitration, legal action, protest, intimidation and physical violence. This definition is consistent with a broad view of conflict used in this MOOC.

Viewed through the Conflict Pathway Model, the conflict process can be seen as a watershed consisting of a cascade of decisions and actions and their consequences that form a pathway from top to bottom. The conflict determinants are seen on the right side of this figure. They represent a hierarchy, which gradually narrows from top to bottom in terms of space, geographic scope of determinants, and time, the duration of determinants.



There is connectivity among the conflict determinants from one level to the next. Long-term global scale structural factors give rise to country level contextual factors, which in turn give rise to more local level conflict drivers. The cumulative effect of these conflict determinants sets the scene for conflict outbreak triggers, which are highly localized and take place at specific moments in time.

The left-hand side of the figure indicates where the key players contribute to the conflict process. Host governments, the country where destructive project is taking place, are implicated at all levels. Host governments play a role not only at the national level but also the regional and local levels. Companies, civil society organizations, and communities contribute mainly at the level of conflict drivers and conflict trigger events.

Let's consider a case that highlights how the Conflict Pathway Model works. This example is from the adjacent Las Bambas and Haquira Copper Mine developments in the southern Peruvian highlands. We started at the conflict trigger event: conflict outbreak was ignited when community leaders discovered that the government and the mining company had bypassed them in an important decision. A protest march was organized, which got out of control when the police arrived. Seven people were killed, and 16 were hospitalized.

The model reveals other factors contributed to this outcome. Among the structural factors affecting Peru, colonialism was followed by years of authoritarian and military rule. Neoliberalism then opened the doors to foreign direct investment and establishment of natural resource-dependent economies. At the contextual level, this pattern entrenched central government control of the country's natural resource development. However, the central government lacked capacity to govern effectively in the country's remote, mineral-rich regions.

Good governance of mining depends on effective regional and local governance institutions. Governance decentralization in Peru has often been unsuccessful to-date without adequate

resources provided in remote areas. Inadequate governance and regulatory capacity at the local level gave rise to challenges at the level of conflict drivers. These included: unresolved land ownership and land-use issues; competition among local communities over land ownership; and perceived unfair distribution of benefits from mining operations; also dependents of local communities on mining companies for social development programs. The persistent and unresolved tensions around these issues contributed to violent conflict outbreak.

The conflicts we analyzed with this model gave us three key insights. First, conflict is not an event; it is a process with a history and a pathway prior to conflict outbreak. Second, conflict results from the interplay among multiple actors and the progression of conflict determinants. The primary actors include government agencies at the national, regional, and local levels, companies, and communities. There are also important secondary actors including NGOs. The actions and decisions of governments at each level set the pathway towards either sustained development or a high risk of conflict. Third, while the end result of violent conflict outbreak is seemingly chaotic, in reality, the conflict process is a systematic, predictable pathway as demonstrated by the Conflict Pathway Model; thus, the escalation of conflict to violence is preventable.

A second model for analyzing extractive resource conflicts also sheds light on conflict drivers and how this collision of conflict can be mitigated. This model builds on previous work looking at the costs of company-community conflict. The framework was informed by over 200 conflict-affected projects across six sectors. The nature and drivers of conflicts were assessed as well as their implications for each of the sectors.

The drivers of conflict are analyzed by four categories: environmental, social, governance, and economic. It should be noted that conflict here generally refers to social conflict, which may escalate to violence. We look at which drivers were the most significant in the resource sector, which included mining, oil, and gas conflicts. Particularly strong environmental drivers of conflict related to mining, oil, and gas were pollution and the degradation of ecosystems. Other environmental drivers include deforestation and water issues, especially pollution of potable water.

Social drivers in mining, oil, and gas conflicts included reduced access to resources where communities were concerned about losing access to agriculture and fishing for their livelihoods. Lack of community benefits was also a strong driver where communities felt that the negative impacts of the project would not be compensated adequately. This is parity between who benefits from extraction and who bears the environmental and social impacts is often a key conflict driver.

The most dominant governance driver of conflicts related to mining, oil, and gas was inadequate planning. This included deficiencies related to the project type and site selection and long-term strategies for how to prepare the site prior to resource development and how to manage closure and rehabilitation. Another key governance concern was lack of transparency, contributing to corruption. An additional conflict driver was the lack of adequate consultation, in particular for projects that affected indigenous communities.

One economic driver of conflict was when governments did not provide agreed-upon infrastructure or follow-through on commitments. Another economic driver was when communities felt that project profits were distributed unjustly to urban centers rather than project-affected areas.

Both models considered here illustrate key factors and opportunities where companies and governments can help mitigate conflict with communities. This lesson summarized what the

framework tells us about how future conflict can be prevented in the mining, oil, and gas sectors. First, the nature of conflict is multi-dimensional and dynamic. Most projects face social challenges that can lead to conflict escalation with negative consequences including violence; for example, social and environmental drivers of conflict are interrelated. Conflict can be understood as a process with a history and a pathway prior to conflict outbreak, and the result of the interplay of identifiable actors.

Second, there is a need for better planning earlier on. Projects typically face more conflicts in the early phases. When governments and other actors engage in long-term, transparent planning, it can help local communities develop sustainably, reduce conflict risk, and help rural communities prepare. Minimal engagement helps to put conditions in place for the local community to benefit when projects proceed as part of a broader development plan. This requires governments' capacity-building at the local level.

Third, there is a lack of government capacity to contain conflicts. In many remote resource-rich regions, there is a lack of government presence and regulation at the local level. This, combined with mistrust of rural people towards governments and companies, contributes concerns about contamination of land and water. Enhancing institutional capacity to govern natural resources and as improved capacity to manage social conflict should be a top priority for all levels of government; in particular, resolving land use and land ownership issues can contribute to reducing the risk of conflict escalating.

Four, the need for fair distribution of benefits. Benefits are often not shared equitably with areas affected by the projects. Ensuring that the benefit distribution system allocates benefits fairly helps to avoid conflict.

Five, build capacity for implementing environmental regulations among all actors. Environmental degradation and impacts on the lands and livelihoods of communities consistently drives social conflicts to escalate. Companies and governments can help to mitigate conflict in extractives by adhering to a higher quality of Environmental Impact Assessment than required and by effective monitoring that engages communities.

Conflict is an inevitable aspect of resource development that can have negative or positive outcomes. The key question is whether conflict is managed to build consensus across a range of interests or whether the failure to manage the conflict causes it to escalate to violence.

This chapter has highlighted two conceptual frameworks that help to understand conflict as a process with a history and pathway that can be understood in a systematic way. Understanding the conflict pathways and determinants help the actors involved make decisions, which lead to more constructive outcomes.

Careful project planning and engagement supports sustainable development in resource-rich areas helping to keep livelihoods and lands viable for future generations. Thank you for joining me in this course.

## 2.10 MEDIATING NATURAL RESOURCE CONFLICTS (LECTURER: DAVID JENSEN)

Welcome everyone. This chapter focuses on the role that mediation can play in the resolution or de-escalation of disputes and conflicts that involve natural resources. Mediation is an essential tool that is suited to some kind of resource disputes, provided the process is designed to fit a specific context. In other cases, especially when resource conflicts are linked to major power asymmetries or structural issues, different approaches are needed.

One particularly relevant characteristic of many natural resource disputes is their dual nature. On the one hand, they're technically complex. On the other hand, they're often politically very sensitive. The technical complexity stems from the fact that they have a mix of scientific, technical, economic, and legal dimensions. There is often uncertainty, confusion, or disagreement over information about their status or ownership. And natural resources are often embedded in wider supply chains far beyond the immediate area of conflict. The political sensitivity comes from the fact that they are economically very valuable; the vested interests of elite groups are often involved; natural resources are very commonly connected to other cultural, historical, or spiritual values; there are commonly links to group identity; and, sometimes, local conflicts around natural resources can be embedded in broader political conflicts.

So, mediation is a useful conflict management tool that can handle the technical complexity and the political sensitivity. Mediation is a process whereby a third party assists two or more parties with their consent to prevent, manage, or resolve a conflict by helping them to develop mutually acceptable agreements.

There are a number of reasons why mediation is particularly suited to resolving natural resource disputes. First, it's a flexible tool. It can handle complex technical issues. It involves a range of approaches to manage technical information from many sources. Second, it's a voluntary tool requiring mutual consent, meaning that it is suited to politically sensitive conflicts. The parties create and own the solution rather than having a top-down imposition. Third, it focuses on creating and maintaining good relationships, which is suited to long term situations where cooperation is needed. It emphasizes collaborative decision-making and collaborative management over natural resources in the long-term. And finally it is a win-win approach suited to maximizing mutual resource benefits. It really can help unlock entrenched or zero-sum positions and really helps maximize the mutual benefit derived from natural resources for all parties.

Of course, there are also some limitations to keep in mind. There are three situations where mediation might not be the right tool. First, protracted or deep-rooted structural issues which require legal, economic, political, or social reforms in order to address the conflict adequately. Mediation is not intended to transform unequal or unjust power relations or social structures. Second, the intractable nature of some value or identity conflicts can mean that some parties refuse to enter into a negotiation. Win-win solutions in this case are not always possible. Finally, situations involving a major power imbalance or lack of trust between the parties can also be difficult for mediation to overcome.

So, UN Environment and the UN Department of Political Affairs established a partnership to explore best practices in the mediation of resource disputes. I'd like to spend the rest of this chapter walking through seven of the key strategies identified through this collaboration. First, it's

important to understand that mediation is a process. The design of that process is a key success factor in reaching a positive outcome. Mediation can be divided into four main phases.

1. Phase one is an assessment. The whole purpose of this phase is to assess the conflict dynamics to determine whether mediation is appropriate and likely to reach any kind of agreement.
2. Phase two is all about preparedness and designing the mediation process. The goal here is to agree on the process design and to establish the best possible conditions for successful mediation.
3. Phase three is all about the negotiation process. Here is where we attempt to reach a mutually acceptable agreement, and ideally, to strengthen the relationships and move towards greater collaboration.
4. And phase four is all about implementation. And this is really to help the parties resolve disputes during the implementation of an agreement to increase its sustainability and durability.

The second key lesson: any good mediation process is based on a detailed understanding of stakeholders, their capacities, their positions, and interests. This should always include analysis, mapping of the positions and the interests of all the actors, evaluating stakeholders' capacity to actually engage in the mediation (including both men and women), assessing each stakeholder's access to information about natural resources, and agreeing which stakeholders will have a direct voice in the mediation process, and how other stakeholders will be consulted or involved.

The third lesson is that there's massive value in technicizing the debate and ensuring all parties have equal access to impartial information and expertise. It's a very common tactic to direct talks towards technical issues and away from sensitive political, cultural, or ideological matters. Here, it's very useful to use objective standards, criteria, or data where possible. Impartial technical experts can also be brought into the mediation to help provide reliable data or help to validate data provided by the parties. This can help overcome impasses when parties have different information or inaccurate perceptions, interpretations, or conclusions, and in some cases joint information collection can be used to build confidence between the parties and to maximize transparency in a data collection process.

A good example of technicizing the debate and providing access to impartial information comes from Ogoniland, Nigeria. Now, you may be familiar with this case. The Ogoniland region of Nigeria has a long history of resource-based conflict due primarily to oil contamination and unfair benefit sharing. Now, when the government kick-started a mediated reconciliation process, it realized that one of the first challenges was for the parties to agree on the facts. And local communities did not trust the data presented by the government or the oil operator.

To overcome this impasse, the government requested UN Environment to conduct an independent environmental assessment of the oil contamination. This is a great example where the assessment process was as important as the scientific and technical outcome. It was conducted in a fully transparent manner which sought to involve local communities and build confidence in the process itself. In total, 23,000 people were directly engaged in the process. The final assessment report was then used as a common and trusted information base by all the parties to agree on a clean-up program.



The fourth strategy is to unlink resource ownership from resource use and management. The ownership of natural resources is typically a delicate and complex issue and may be linked to issues of identity, history, and culture. It can be very useful to separate issues of ownership from issues of management or the distribution of revenues. In fact, in some cases, the question of ownership can even be removed from the negotiation table if it's too sensitive or too complex to resolve. When this occurs, the parties typically agree that they disagree over ownership but are willing to negotiate on resource access, use, and management for mutual benefit, provided it does not compromise their ownership claims in the future.

One example of this is joint development zones for trans-boundary resources. Another example where this occurred was in the comprehensive peace process for Sudan. The parties could not agree on who owned the oil resource, but they could agree to leave it unresolved while focusing on management and revenue sharing.

The fifth strategy is to try to expand the pie and collaborate over shared benefits. When a negotiation over natural resources focuses on how a limited supply of those resources should be allocated among different stakeholders, there is a risk of falling into a win-lose dynamic – often referred to as a zero-sum game. A common strategy of resource mediators is therefore to try to identify a broader range of benefits that are available from the resource, thereby expanding the pie that can be shared or used jointly. Resource benefits can include employment, revenues, services, infrastructure, tourism, ecosystem benefits.

The more a mediator can help the parties maximize the number and range of mutual benefits available for the different stakeholders, the more solutions are potentially available that allow for win-win outcomes. One of the essential lessons is that a mutually beneficial solution is often far more sustainable than a win-lose outcome. Mediation should really help the parties establish processes and relationships where they can collaborate over these shared benefits going forward.

The sixth strategy is helping the parties explore scenarios and visualize their shared future. There are a number of techniques that can be used to help the parties discuss potential solutions to resource conflicts without jeopardizing their current interests or requiring a political decision or mandate. Scenario building and back-casting can both help develop plausible alternative visions of the future which the parties can explore and compare different options and outcomes. These tools can help the parties generate new ideas and provide constructive solutions in a non-committal environment that can indirectly inform their negotiation strategies as well as the feasibility of proposals from the mediator.

And, finally, it's really important to account for natural variability, uncertainty, and other possible shocks or stresses in a mediated agreement. To the extent possible, the parties should anticipate potential changes that could occur to the availability and distribution of specific natural resources, and include mechanisms for modification and adaptation. This is particularly important for resources that are vulnerable to climate change.

In conclusion, mediation is a great tool for resolving resource disputes when used in the right context and when due attention is given in the design of the mediation process. Now, we covered a number of successful strategies throughout this chapter, and I would strongly encourage you to read the UN Resource Mediation Guide for more information. For more assistance on this issue the UN Department of Political Affairs runs a standby team of mediation experts that have experience on issues such as natural resources, gender, transitional justice, and peace process

design. UN Environment is also available upon request by governments to provide impartial technical expertise on natural resources that can support a peace mediation process. Thank you.

## 2.11 CASE STUDY: LAND AS A CONFLICT DRIVER IN SIERRA LEONE (LECTURER: RICHARD MATTHEW)

In 1991, the brutal war in Sierra Leone caught the attention of the entire world. While widely known as a war over diamonds, it was also a war about who had access to and control of the land. Of course the land was not the only factor of shaping the war. The relationship between land and war is an important aspect of what happened in Sierra Leone, and it's an example relevant to many other parts of the world.

Sierra Leone is a country that contains considerable mineral resources. Mining for diamonds, gold, and iron began in the 1930s. For rutile and bauxite, in the 1960s. Artisanal diamond mining, involving as many as 250,000 miners, has been a particularly aggressive form of land degradation. Forests once covered seventy to ninety percent of Sierra Leone, but by 1924 only about three and a half percent of original forest cover remained. This led to conservation efforts, and today most of the country's forest is protected in some fifty-five reserves and conservation areas.

But, while forests provide important ecosystem services and deserve to be protected, they are constantly threatened by agriculture and by the strong demand for firewood, charcoal, and construction materials. Sierra Leone's population is 60 to 70% rural and, it depends heavily on subsistence crop agriculture. Prior to the war the agricultural sector was growing at a rate of 3 percent per year - faster than population growth – and with a heavy reliance on shifting cultivation, this sector placed considerable pressure on forest cover.

Sierra Leone also has considerable freshwater resources including nine major watersheds and an extensive discontinuous aquifer. According to a 1993 study at the outset of the war, 44 percent of the population obtained water from rivers, 37 percent from wells, and 16 percent from pipes sources.

Sierra Leone is also a country with a remarkably rich biodiversity. Some 15,000 plant species and 761 mammal and bird species have been identified. So, the economy and the future of the country are closely linked to its vast natural capital, which the decade-long war affected in many ways.

Today, still recovering from the war, Sierra Leone faces ongoing environmental challenges. Land tenure, land use, and land management are at the core of a lot of these issues. Land tenure in Sierra Leone is in large measure a reflection of its colonial heritage. In the small Western Area Peninsula, which includes the capital Freetown, land is private property and ownership follows the procedures and practices of the United Kingdom.

But in the northern, eastern, and southern provinces the colonial rulers established a system of paramount chiefdoms as custodians of the land. The paramount chiefs have the right to allocate access to this land. Throughout the colonial period and into the early decades of independence, paramount chiefs rented land for purposes such as mining and forestry. There have been long-standing allegations that these rents have mainly benefitted the Chiefs and their families. Frustration with land tenure and land use has mirrored the related frustration with the distribution of diamond wealth in Sierra Leone, fueling widespread grievances and creating openness to arguments for revolution.

In 1984 Foday Sankoh, a retired corporal teacher and wedding photographer, founded the Revolutionary United Front as a vehicle for revolution. His promises included education for all,

mineral wealth harnessed for social good, and land reform. The civil war in Sierra Leone would last from 1991 until 2002. It was a war of young versus old, of the provinces versus Freetown, of rural dwellers versus urban ones, and for Sankoh and the RUF, land reform was key to resolving all of these divisions.

The land in Sierra Leone was directly impacted during the war due to military tactics and a collapse of governance capacity. For example, during the conflict the RUF, the national army and citizen militias all worked to intensify diamond mining. Unproductive mining sites were not rehabilitated. These efforts left a legacy of degradation, effluents, and lost arable land. Considerable damage to the agricultural sector was also direct and widespread during the war as rebels sacked villages and farms and rural dwellers abandoned their plots of land which soon became overgrown and unusable for farming.

RUF fighters also targeted water infrastructure, including pipes and wells. Access to sanitation across the entire country is estimated to have declined from 30% of the population in 1990 to less than 20% ten years later in 2000. As a result of the use of streams and rivers for sewage and solid waste disposal, the overcrowded living conditions of urban areas, and the high reliance on pit latrines, the incidence of waterborne diseases increased dramatically. The civil war also resulted in considerable destruction of industrial infrastructure in sites like the port of Freetown. This caused both environmental and public health problems as industrial chemicals and hazardous waste leaked into the water table.

In addition to these very direct impacts, the war had a number of indirect impacts. People displaced from their farms and villages often sought cover in the country's protected forests, where they practiced agriculture, cut trees for firewood, and made charcoal. Moreover, the movement of people into urban areas for protection increased demands for water, firewood, and food – demands met in ways that often were not sustainable.

These impacts were felt both in Sierra Leone and in neighboring countries. For example, many Sierra Leoneans fled to refugee camps in Guinea to a region known as the Parrot's Beak. Tens and possibly hundreds of thousands of refugees migrated to this unique forest region nestled between the Meli and Mokona rivers, where they raised force for housing materials, for charcoal, and for arable land. Changes in land cover and land use led to notable decreases in biodiversity. In a study conducted in the Western Area Peninsula Forest Reserve, a biodiversity hotspot and one of the major sites of the civil war, located five kilometers south of Freetown and surrounded by 50 IDP settlements, researchers concluded that threats to biodiversity increased significantly because of the war effort. Pressure on biodiversity resulted from practices like shifting cultivation and a dramatic increase in bushmeat hunting.

Finally, the war also had considerable institutional impacts. It undermined environmental governance throughout Sierra Leone. Information and other resources were not available to support environmental management and conservation efforts, and perennial challenges linked to inadequate data low levels of transparency and weak governance capacity were amplified. As the violence came to an end, a period of peacebuilding began.

Early in this process, a number of environmental risks were identified that might jeopardize peace consolidation and development. There were a number of general areas of concern, including unrealistically high expectations of what land reform could achieve after the war. But the fragmented land system, in which control of much of the land lay with paramount chiefs while the environmental management system was the responsibility of the central government, made land

reform challenging. And corruption and perceptions of corruption were hard to be objective about, let alone manage. In addition to this broad concern there were many areas of specific concern, including the challenges of restoring forest management, rehabilitating the agricultural sector, rebuilding and improving water infrastructure, and reforming the mining sector.

Risks, however, can also be framed as opportunities. And the peacebuilding process sought to engage in widespread consultation to promote trust and confidence and to identify environmental challenges and priorities that could then be used as the basis for building local and national capacity around a shared baseline of scientific data and a shared vision of a sustainable, climate-resilient Sierra Leone.

## 2.12 WRAP-UP OF MODULE 2 (LECTURER: MARC LEVY)

Hello. We've now come to the end of this module – investigating the risks of escalation to violent conflict stemming from environment, natural resources, and climate challenges. I've personally witnessed the questions addressed here go through dramatic change in the last 30 years. What I've seen makes me excited and optimistic about the opportunities.

In the early days, we were struggling to figure out what the risks really were and the answers weren't always clear. Then, we made a lot of progress on understanding the risks, but we didn't have satisfying answers to the question: what should we do? Then we innovated a range of responses, learned from our experiences, spread the promising approaches, and built up a lot of practical knowledge.

So, today, we have widespread recognition on the severity of these risks and the necessity for action. We have a knowledge base; we have access to relevant data and information; and we have a community of practice that is well integrated with the research community. Those are the requirements for scaling up effective responses to the environmental threats to security.

That such a possibility is within reach is what is so exciting about the present day. In this module we've covered some of the most important elements of this evolution. We've seen how environment, natural resources, and climate are capable of exacerbating the risk of violent conflict in many different ways.

We've portrayed these risks in a framework that is faithful to the scientific findings regarding the cause of linkages, while also mindful of the political, social, and moral context within which such forces operate.

We've seen how the trends are ominous, and therefore, in the absence of concerted action we can expect violent conflict stemming from environmental causes that is more frequent, more widespread, and more intense, than what has come before.

We looked in depth at two cases: Sierra Leone and Arab Spring. These cases remind us of the magnitude of the human tragedy that follows from failing to manage these risks appropriately and of the intricate complexity that ties everything together and makes effective responses challenging.

We've reviewed some of the policy responses most intensively utilized to manage such risks: promoting good governance, enhancing resilience, incorporating conflict sensitivity into development, mediation, and transparency and access to information. Each of these constitutes a collection of pragmatic tools that are strongly grounded in the scientific research, supported by practical experience, and endorsed through normative processes at global, regional, and national levels. In short, there's no longer any excuse for not understanding the conflict escalation risks associated with environment, natural resources, and climate, nor for failing to undertake tangible measures to manage such risks.

While it is true that there remains much to learn, it is also true that most of that learning will come from people like you vigorously implementing the lessons conveyed here.

## **MODULE 3: NATURAL RESOURCES AND THE ENVIRONMENT DURING ARMED CONFLICT**

### **READINGS**

Conflict Pollution and the Toxic Remnants of War: A Global Problem That Receives Too Little Attention (2017) (8pp)

Warfare in Biodiversity Hotspots (2009) (10pp)

Hot Chocolate: How Cocoa Fuelled the Conflict in Cote d'Ivoire (2007) (pp. 2-5)

Corporate War Crimes: Prosecuting the Pillage of Natural Resources (2011) (2nd ed.) (pp. 9-14, 19-22)

Protecting the Environment During Armed Conflict: An Inventory and Analysis of International Law (2009) (pp. 4-20, 51-54)

Taking the Gun out of Extraction: UN Responses to the Role of Natural Resources in Conflicts (2016) (pp. 249-272)

Stepping Stones to Peace? Natural Resource Provisions in Peace Agreements (2016) (pp. 71-78, 98-101)

Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations (2012) (pp. 8-16, 78-82)

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### **OPTIONAL READINGS**

Effectiveness of UN Targeted Sanctions (2013)

Effects of War and Civil Strife on Wildlife and Wildlife Habitats (2002) (11pp)

Strategic Report: Environment, Peace and Security A Convergence of Threats (2016)

Pollution Politics: Power, Accountability and the Toxic Remnants of War (2014)

Amidst the Debris - A Desktop Study on the Environmental and Public Health Impact of Syria's Conflict (2015)

Environmental Assessment of the Gaza Strip Following the Escalation of Hostilities in December 2008 – January 2009 (2009)

Technical Note for Iraq: Environmental Issues in Areas Retaken from ISIL around Mosul, Iraq (2017)

Living Under a Black Sky - Conflict Pollution and Environmental Health Concerns in Iraq (2017)

UN Sanctions: Natural Resources (2015) (24pp)

Experts' Background Report on Illegal Exploitation and Trade in Natural Resources Benefitting Organized Criminal Groups and Recommendations on MONUSCO's Role in Fostering Stability and Peace in Eastern DR Congo (2015)

Pollution Politics: Power, Accountability and Toxic Remnants of War (2015)

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## TOOLKITS AND GUIDES

OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (2016)



### 3.1 INTRODUCTION TO MODULE 3 (LECTURER: CARL BRUCH)

Hi. I'm Carl Bruch, and I direct International Programs at the Environmental Law Institute. Welcome to Module 3. We are now transitioning from the environmental risks and drivers that affect the outbreak of violent conflict and moving to the risks and opportunities presented by natural resources and the environment during armed conflict.

The chapters in this module first examine how natural resources in the environment are affected by armed conflict and how they can, in turn, finance, drive, and otherwise affect ongoing armed conflict. We will use a couple of detailed case studies from Côte d'Ivoire and Liberia to understand these dynamics. Then, we will discuss different tools that countries, international organizations, and others can use to protect and otherwise address natural resources and the environment during armed conflict.

This module has three learning objectives. At the end of this module, you should be able to understand how and why armed conflict affects natural resources and the environment; understand how natural resources affect the conduct of armed conflict; and understand the comparative advantages and limitations of the various tools to protect natural resources and the environment during armed conflict.

Throughout this module, we will address several key themes. The first relates to the effects of the governance vacuum during armed conflict. The second are the direct and indirect effects of armed conflict on the environment, including coping strategies, the conflict economy, and various military tactics and weapons. The third theme includes the various strengths and limitations of tools and strategies for addressing natural resources and the environment during armed conflict.

Since the mid-1970s after the Vietnam War, there's been a steady growth and development of international law seeking to prevent and punish wanton harm to the environment during armed conflict. There has been an implementation and enforcement gap, though this is starting to change. We see a growing number of national and international measures to operationalize international law such as national legislation, military manuals, and dedicated environmental staff. Moreover, UN Security Council tools address conflict resources including resolutions, presidential statements, peacekeeping mission mandates, sanctions, and panels of experts.

There are also national tools to address conflict resources including certification schemes, due diligence, consumer awareness campaigns, and prosecution.

The last set of tools that we consider is the inclusion of provisions related to natural resources in the environment in peace agreements. Many of these tools can be used by various actors at different levels. You will see that the context and scope of an armed conflict may influence whether, when, and how to use the different tools.

## 3.2 THE IMPORTANCE OF NATURAL RESOURCES DURING CONFLICT (LECTURER: CARL BRUCH)

This chapter focuses on the importance of natural resources during conflict and the ways in which natural resources and the environment are essential to survival. In most countries affected by armed conflict, between 60 and 80 percent of the population depends directly on land, forests, and other natural resources for their livelihoods, for their food security, and for their well-being. However, armed conflicts often harm these natural resources upon which people depend.

The environmental effects range from deliberate to collateral. They're all well established, though. Bombs and incendiary weapons are often used in areas where opposing forces are hiding, devastating forests and protected areas. Landmines, cluster bombs, and other toxic remnants of war render agricultural lands unusable. Pollution from depleted uranium and leaks from damaged industrial facilities can harm surface water and groundwater, threatening human health and the environment. Poisoning of wells and other water sources is a common strategy in ethnic conflict, and scorched earth tactics that deliberately destroy and degrade resources can damage the environment, forcing people to leave their land. As discussed in another chapter, rebels often use natural resource revenues to finance armed conflict.

In the rest of this chapter, I will focus on two key dynamics that drive how armed conflict affects natural resources and the environment, and how natural resources affect the conduct of armed conflict. These are, first, coping strategies and second, the role of natural resources in the conflict economy. During armed conflict, natural resources that had served as a source of livelihoods and food become a critical lifeline for many people. The prevalence of subsistence agriculture in many conflict affected countries means that even when trade and markets are compromised, people are able to continue feeding themselves – unless the food is taken, the land or water source is destroyed, or people have to adopt short-term coping strategies.

The urgency of survival often results in short-term coping strategies that compromise long-term prosperity. There are three common types of maladaptive coping strategies that we see during armed conflict. They're associated with the liquidation of assets, flight, and resource use by displaced persons. Resource-dependent communities often invest substantial time, effort, and money to develop and maintain agricultural fields, orchards, and community forests.

In times of armed conflict, though, concerns about survival often mean that people liquidate their assets so that they can buy food and other necessities or they flee to safety, even if these actions compromised their ability to return. This liquidation of assets often results in the rapid and intense exploitation of natural resources, typically at the expense of its ability to recover and not always for its highest and best use. Livestock, for example, can be a particularly risky livelihood asset to hold on to during conflict since it's easily stolen or killed.

For example, during Burundi's civil war, about one-fifth of the households in conflict-affected areas reported losing livestock due to theft and looting. Accordingly, during conflict many rural households sell livestock as a coping strategy. Instead of keeping livestock, rural households tend to resort to the cultivation of low risk, low return crops that feed their families and are less likely to attract combatants.

Another coping strategy is to flee. This is a common strategy for people living in rural areas who seek protection in cities and peri-urban areas and in camps for refugees and internally displaced persons. Flight, however, can result in the loss of rights to land and other resources that are held

under customary tenure. In fact, the prospect of being able to keep land that they acquired in the course of armed conflict was a strong factor and recruitment for the Janjaweed in Darfur, Sudan. Another effect of flight is that with the landowners absent, others may move in and exploit the resources in less sustainable ways. Displaced persons need food, water, and wood for their immediate survival.

Their initial focus is on survival; however, weeks turn into months, months turn into years. People displaced by conflicts in Afghanistan, Somalia, and elsewhere have been displaced for ten years, twenty years, sometimes more. Displaced persons base-settle in areas not previously used for human occupation such as forests and protected areas. These areas provide resources such as food, wood for cooking and construction, and they also provide an opportunity to make a little money where livelihood options may otherwise be limited.

In Côte d'Ivoire, for example, large numbers of people resettled in forest preserves and protected areas. They became dependent on previously unexploited resources as a lifeline. In such circumstances people are often tightly packed into spaces that exceed the natural carrying capacity of the area, leading to over exploitation of the resources and degradation of the environment. For example, during the civil wars in Sierra Leone and Liberia, hundreds of thousands of refugees fled to the safety of a region of Guinea known as the Parrot's Beak. Integrating into local villages, many refugee families cut down trees and built homes. They also took up logging as a means for income; forests were quickly depleted as illustrated in the satellite images.

During armed conflict, the ability of the government to govern is often reduced, sometimes substantially. This is often the case in resource-rich rural areas far from cities where the government may more effectively exert its authority. This can lead to greater violence, crimes, and opportunism, all of which can help to sustain the conflict. In these situations there's a conflict economy, which can be distinguished in some ways from the economy that exists during relative peace.

Understanding the role of natural resources in the conflict can help to better understand the dynamics of a conflict economy, and this understanding is key to effective interventions to build peace. The conflict economy has four main dimensions: the formal economy, the informal economy, the international aid economy, and the illicit criminal economy.

1. The formal economy is what contributes to GNP and GDP, the sectors monitored, regulated, unusually taxed by governments.
2. The informal economy is not governed by the state, but it's not necessarily illicit. While frequently stigmatized, it may provide important livelihood opportunities.
3. Governments and international aid organizations are key actors in the international aid economy, which plays a large role in development projects and initiatives. The international aid economy can have substantial impacts; for example, depending on how it's undertaken, food aid can distort local food prices and undermine local agricultural livelihoods.
4. And finally, the illicit criminal economy operates outside of or violates the law and is characterized by opportunistic and illicit seizure and trade in commodities such as minerals, timber, and narcotics.

These four components may exist to varying degrees in times of peace, but during armed conflict their relative importance often changes as the informal, international aid, and illicit criminal economies become more prominent. Understanding the conflict economy is important to understanding many natural resource dynamics during conflict including the use of conflict resources, the degradation of governance and social relations, and coping strategies.

In conclusion, natural resources are essential for peoples' livelihoods, food security, and well-being. During armed conflict these resources become a lifeline for survival; however, armed conflict can also be devastating for the resources that provide that lifeline. The resources may be destroyed as a tactic in conflict, degraded due to collateral damage, or be affected by coping strategies. It's important to understand how natural resources support livelihoods in food security during armed conflict, and being aware of the dynamics of a conflict economy can improve how conflict-affected countries manage natural resources during armed conflict.

### 3.3 ENVIRONMENTAL IMPACTS OF ARMED CONFLICT (LECTURER: DAVID JENSEN)

Hi everyone. This chapter focuses on the range of environmental impacts and damages caused by armed conflict. The key takeaway from this chapter is that all armed conflicts lead to some form of environmental damage – causing risks to human health, to livelihoods, and to security, and these need to be understood as part of any post-conflict recovery strategy. Now, damage and risks come from multiple pathways that we'll explore throughout the lecture, so let's get started.

Now, when most people think about the environmental impacts of armed conflict, dramatic images of burning oil wells from the first Gulf War often come to mind, but this kind of damage is only one of the ways that natural resources and the environment are impacted during conflict. In fact, there are three main pathways that cause environmental damage and degradation: there are direct impacts; there are secondary impacts; and there are governance impacts. Now let's explore each of these.

So, direct impacts are caused by the intentional targeting or physical destruction of the environment from military operations, and there are four examples we can walk through. First, scorched earth tactics that aim to deprive local populations of resources for their livelihoods. For example, Saddam Hussein intentionally drained the Iraqi marshlands to deprive the Marsh Arabs of their livelihoods, and in so doing impacted and degraded around 85% of the wetlands.

Another example comes from the use of weapons, land mines, and from the contamination of unexploded ordnance. For example, during the conflict between Lebanon and Israel in 2006, an estimated 1 million cluster bombs contaminated about 3271 hectares of land; about 62% of this land was agricultural.

Another cause of direct impacts is from the release of chemicals and waste from the bombing of industrial sites and infrastructure. For example, during the Kosovo conflict in 1999, around 50 industrial sites were bombed by NATO forces, resulting in four environmental hotspots from the release of chemicals and waste.

So, the final cause of direct impacts is from the use of natural resources by armed groups to finance conflict. So, unregulated and illegal use of natural resources to finance military operations can lead to a whole range of environmental impacts. For example, artisanal gold mining involving armed groups is causing massive environmental damage in the Chocó region of Colombia, a world biodiversity hotspot.

So, these are examples of direct impacts to the environment from armed conflict; these are often very visible, very much in the public eye, and they cause a range of acute risks and damages. Let's move on to secondary impacts. Now, these are impacts that result from the coping strategies used by local communities and displaced populations to survive the socioeconomic disruption and the loss of basic services caused by conflict.

Again, there are four main causes of damage. First, liquidation of natural assets. Now, natural resources are sold to earn a basic income and used as a lifeline for survival during conflicts. One of the studies that UN Environment did in Afghanistan found that many natural pistachio woodlands, for example, had been completely liquidated in order to transform them into charcoal used for sale and survival.

The second cause of damage stems from displacement and temporary settlements. For example, during the conflict in the Democratic Republic of Congo 2007-2008, around 250,000 people were displaced and relocated next to Virunga National Park. Now, some of the camps were actually within the park boundary, and thousands of displaced people relied on charcoal from the park for cooking.

The third major cause of secondary impacts stems from the proliferation of informal economies that tends to happen during a conflict. Now, what we tend to see is that informal sectors expand, and these are largely unregulated, and this leads to a whole range of environmental impacts. For instance, in eastern parts of DR Congo, informal, artisanal mining now accounts for around 90% of all mining activity, supporting around 2 million informal jobs.

And, finally, we have the delivery of humanitarian and peacekeeping support and the kinds of resources that support requires. In Darfur for example, humanitarian and peacekeeping operations led to a five-fold increase in brick demand for their compounds, resulting in deforestation of around 52,000 trees per year.

So, secondary impacts are often more widespread and long-term. But there's a third category of impacts that you also have to be aware of, and perhaps these are the most difficult to deal with – and this is all around governance and the breakdown of governance that happens during a conflict. So, governance impacts appear when conflicts cause a disruption of state institutions, mechanisms of policy coordination, and the social relationships between resource users.

Again, there are four main causes of damage; first and foremost, the breakdown of environmental investments, environmental regulation, coordination, monitoring, and enforcement. For example, in a review of 70 timber concessions issued during the conflict in Liberia, none were found to be legitimate. They collectively covered around 10 million hectares while the forested area in Liberia is only 4.5 million, so you had a significant breakdown in the capacity to govern natural resources.

The second main cause of damage is a lack of engagement in transboundary environmental institutions and multilateral environmental agreements. Relationships in these agreements simply break down. For example, following the conflict between Iran and Iraq, water management authorities lost contact with each other for over 20 years, and this led to a major breakdown in transboundary water cooperation and management.

The third main cause: when governance systems break down, you also tend to have an expansion of illegal and criminal exploitation of natural resources. So, again in DRC, we've done an assessment which determined that on an annual basis, around 1.25 billion US dollars' worth of natural resources are being exploited by a combination of armed groups and criminal networks, and obviously that exploitation is leading to a very large environmental impact.

And then finally, loss of land tenure security. Now, shifting land tenure and uncertainty really acts as a disincentive to invest in sustainable practices. So in Haiti, for example, lack of land tenure security was identified as a key driver of environmental degradation and a lack of investment. So, when governments are involved in conflicts, they're not able to protect and maintain land tenure security, and that leads to a whole range of follow-on impacts.

So, environmental damage is largely a function of three major factors: the type of weapons and the tactics used, the location of the battles (whether they're in the rural areas or the urban areas),

and the duration of warfare (short-term, long-term). So, in general, direct impacts are much more acute, more site-specific, and short-term while secondary and governance impacts are more chronic, widespread, and long-term.

It's important for you to know that one of the core mandates of UN Environment is to assess and address the environmental causes and consequences of armed conflict at the request of countries. So we have a mandate to do this, and we can offer this service to countries that are affected by armed conflict. Now, the UN Environment Assembly has also recently passed a historic resolution on protecting the environment in areas affected by armed conflict, and there will be an annual debate during the Assembly on this topic.

Now, we will address a range of different assessment tools and other response measures in other chapters of this course. I also wanted to flag that the International Law Commission is developing principles on protecting the environment during armed conflict. The principles aim to improve measures that designate and protect areas of environmental and cultural importance. They will also improve cooperation and data sharing among international actors to rapidly assess and remediate damage as well as improve public access to information on environmental damage.

So, finally, if this particular issue is an area of concern to you, get ready to mark your calendars. I wanted to let you know that November 6 is the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict. This day tries to raise attention to the environmental impacts caused by war in order to call for further protection. In conclusion, ultimately the number-one environmental risk from armed conflict is that as countries are engaged in war, environment drops down from the mainstream political agenda. For an extended period of time, environmental management gets minimal attention, and some sectors may go beyond a tipping point. That is why urgent action is needed to identify and mitigate these damages and risks as part of any post-conflict intervention.

### 3.4 BREAKDOWN OF ENVIRONMENTAL GOVERNANCE AND SOCIAL RELATIONSHIPS (LECTURER: CARL BRUCH)

This chapter examines ways in which armed conflict affects environmental governance and undermines social relationships. One of the most significant long-term impacts of armed conflict is that it undermines governance's social relationships that are essential to managing natural resources and the environment. Governance provides the laws, institutions, and practices that are necessary to allocate and manage natural resources in a way that sustains both the environment and local livelihoods. In contrast, social relationships determine environmental norms; they also determine how environmental issues will be addressed by community members in practice. This really is about trust.

During armed conflict, governments usually experience reduced capacity to govern, plan, invest in, and police natural resources and the environment. Coordination is disrupted, many people flee the countries seeking personal safety, and this can lead to brain drain and further diminishment of capacity.

In the conflict setting, the national government often places a lower priority on environmental issues. Vehicles and other equipment needed for investigation and enforcement may be commandeered for the war effort, and financial resources are diverted. National authorities often lose legitimacy especially in remote areas of the country, and this affects governance.

This reduced capacity to govern the environment and natural resources creates a governance vacuum, in which unregulated and illegal activity is rampant. In this context, criminal organizations and rebels can exploit natural resources and capture the revenues. This behavior is particularly common with high-value resources that were traded internationally. For example: gold, tin, and other minerals in eastern Democratic Republic of the Congo, timber in Liberia, and coca in Colombia.

Conflict also creates situations where governments need cash. This trifecta of first, an urgent need for cash; second, a less attractive investment environment and weakened negotiating leverage; and third, reduced public oversight often leads to unfavorable resource contracts and concessions. Simply put, under such circumstances, countries do not get the revenues or other benefits that they should be getting, and in fact they often incur more environmental and social cost than they otherwise would incur.

Armed conflict may intentionally target or otherwise weaken environmental resource governance and regulation. One example often witnessed in ethnic conflicts is the destruction of land records and land records offices. This is a blunt approach to remove evidence that the land was ever owned by someone from a different ethnic group. This has happened, for example, in the former Yugoslavia and in Timor-Leste. In Cambodia, the Khmer Rouge sought to eliminate the entire concept of property.

Conflict weakens social relationships that are essential to managing natural resources in the environment in three key ways. First, violent conflicts can weaken both formal and informal mechanisms for resolving disputes peacefully - including disputes related to land, water, and other natural resources. In Darfur, for example, conflict- weakened customary institutions responsible for governing natural resources that were important for local livelihoods. The erosion of these institutions allowed the civil war to intensify. In other cases, communities lost complete confidence in the ability of the government to solve resource conflicts in a fair and impartial manner.



Second, civil conflicts often tear apart the social fabric of society and aggravate factional divisions along religious, tribal, or ethnic lines.

Third, the reduced ability to resolve disputes and increased factional divisions undermines dialogue and cooperation between groups over shared interests in natural resources. Without trust in one another or in the government, communities lose social capital. They become less resilient to shocks and stresses that impact the distribution and availability of natural resources. The breakdown in environmental governance and in social relationships is closely linked to the adoption by many people of short-term survival strategies during conflict.

Let's consider an example from Afghanistan. Decades of conflict eroded both statutory and traditional systems of natural resource governance, including those governing the country's land. Land records were lost, they were destroyed, and many skilled civil servants who could have helped rebuild the land management system fled, or they were killed. With extended conflict, a weakened state, and courts that were widely viewed as corrupt, many people became accustomed to resolving disputes over land through violence. Land grabbing proliferated, and land-related disputes worsened. For example, between the agricultural Hazara communities and the pastoral Kuchi communities.

While the extended conflict eroded the ability of government and society to peacefully govern land resources, it would be an overstatement to say that land governance and the land governance system disappeared. People continued to sell land; they continued to buy land; they continued to inherit and develop land. Sometimes this was through the statutory processes, but in many cases, people used customary processes informed by Islamic law. The weakened system for governing land and resolving land-related disputes presented many challenges to post-conflict peacebuilding in Afghanistan. There were simultaneous needs to rebuild and records, resettle people on land after years of war and displacement, reign in land grabbing, and provided effective and credible means for resolving land disputes.

In conclusion, the breakdown of environmental governance and social relationships is often less visible than the deliberate targeting of the environment during armed conflict or the use of conflict resources. It's not in the press or in the public mind the way that burning oil fires are poisoned wells or conflict diamonds are; however, it is more common, and it often has more serious, widespread, and long-lasting effects.

### 3.5 CONFLICT RESOURCES AND PILLAGE (LECTURER: CARL BRUCH)

This chapter examines ways that the extraction and trade in natural resources can finance armed conflict. Resources that finance armed conflict are often referred to as “conflict resources.” The NGO Global Witness defines conflict resources as, “natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from, or result in the commission of serious violations of human rights, violations of international humanitarian law, or violations amounting to crimes under international law.”

This definition has three important implications. First, it distinguishes between cases where natural resources are legitimately used to pay for the costs of conflict and cases where the extraction and trade of such resources is funding illegitimate and illegal activity. Second, it helps to identify situations where natural resources are likely to become conflict resources. And third, it can also help deter trade in these resources by providing a clear red flag for businesses and individuals operating in conflict zones.

While there are some examples of conflict resources in the historic record and during the Cold War, the use of conflict resources really flourished with the end of the Cold War. The Soviet Union and the United States engaged in numerous proxy wars where one side would support the government and the other would support rebel groups. With the end of the Cold War, the financing for proxy wars dried up. While governments had the ability to raise funds through taxation and fees on timber, mining, and other natural resource concessions, rebels had to find other means. They quickly realized that they could extract, trade in, or informally tax trade in natural resources. And so we see from the end of the Cold War in 1989 to 2016, more than thirty-five major armed conflicts were financed by a range of natural resources.

We also see that any natural resource that provides a revenue stream provides a potential source of financing for rebel groups. In many conflicts, such as in the Democratic Republic of the Congo and Somalia, multiple natural resources provide revenue streams, and armed groups can switch easily between natural resources as enforcement measures curtail their access to one resource or another.

Conflict resources can yield substantial revenues; in Sierra Leone the RUF earned an estimated 25 to 125 million US dollars a year from conflict diamonds. At its peak, the Islamic state earned between 1 million and 3 million US dollars a day from oil totaling as much as 550 million US dollars in 2015 and a total of 1.25 billion US dollars since 2014. In Colombia, it was estimated that the FARC earned hundreds of millions of US dollars each year from the coca trade, and this happened every year for two decades starting in the 1990s.

There are three basic ways that rebels and other armed groups can exploit conflict resources. First, they can control the extraction of the resource. For example, in eastern DRC, rebel groups controlled many of the artisanal mines, extracting gold, coltan, and other minerals. And each mined may have 1,500 to 2,000 workers. Reports estimate that out of approximately 1 billion US dollars in diamond exports in 2000, 854 million US dollars of that was illegally smuggled. By 2015, the armed groups were substantially depleted and fragmented; even so, more than 25 armed groups were earning an estimated 13 million US dollars a year from natural resources - enough for 8,000 fighters to subsist. And by that time, criminal networks were earning an estimated 70 to 420 million US dollars a year from gold, timber, charcoal, diamonds, wildlife, tin, tantalum, and tungsten. As I said, many different resources can be exploited.

Second, rebels can trade in the resource even if they're not extracting it. For example in Cote d'Ivoire, the Forces Nouvelles bought cacao from farmers, and took the cacao to market, skirting the government monopoly and making an estimated 30 million dollars a year between 2004 and 2007.

Third, rebels can tax trade in the resource. For example in Afghanistan, the Taliban tax the marble industry in territory that had controlled. These taxes included a fifteen hundred dollar commission for each concession to extract marble and then a seven dollar tax on each truckload of marble.

While there's an incredible diversity of resources that could become conflict resources, in practice certain resources are more likely to become conflict resources. Philippe Le Billon has identified a number of risk factors that determine when a natural resource might become a conflict resource. Natural resources are more likely to fuel conflicts when the potential rewards are great; that is, they have a high value per weight. When resources can be exploited with minimal technology and without the need to control the capital or machinery of the state. Some resources - such as timber or alluvial diamonds, coltan - can be extracted with minimal investments, and they can be traded without the need for extensive transportation capacities.

Third, when resources are found far from the capital where the government does not have an effective presence, they're more likely to be exploited as conflict resources. Finally, when the natural resources are diffuse, that is to say they're scattered geographically, it's more difficult for the government to control access to the resource, and those resources have been more likely to be exploited as conflict resources.

Let's look at how these factors apply to specific resources:

- For example, alluvial diamonds are a diffuse resource that are valuable, remotely located, easily mined through artisanal means, easily concealable, easily transported, and they're anonymous. As a result, diamonds have been termed a "guerilla's best friend" and the resource of choice for rebels from Sierra Leone to al-Qaeda.
- Coffee and cacao are diffuse resources that can be easily looted but are bulky, of comparatively low value, and require a large workforce. As such, while initial stocks have offered loot for rebels in the DRC, in Sierra Leone, the lack of manpower diminished their role as a sustainable source of funds in these conflicts.
- Oil is a concentrated resource that requires large-scale investments. As such, it presents opportunities most likely for governments. However, opportunities for oil bunkering, that is to say tapping into pipelines in conducting artisanal refining, do provide financing opportunities for non-governmental actors as we have seen in Nigeria.
- Timber is a bulky, commonly available, and diffuse resource of medium value. But logging can be mechanized, and it requires little workforce and can be done quickly. Furthermore, forests offer a favorable terrain to guerilla movements; as such timber is one of the most frequent conflict resources. It should be noted that in the DRC, Somalia, and other countries, charcoal derived from forest products in logs is a conflict resource that can generate substantial revenues in the aggregate.

In conclusion, since the end of the Cold War, there's been a rapid expansion in the use of natural resources to finance armed conflict. There are things that can be done to address these conflict resources. International law prohibits pillage of these resources, and a number of national, regional, and global initiatives have sought to curtail trade and conflict resources from diamonds to gold to tin, tantalum, and tungsten. Other chapters address these tools and approaches.

### 3.6 CASE STUDY: BLOOD CHOCOLATE - CACAO AND CONFLICT IN CÔTE D'IVOIRE (LECTURER: RICHARD MATTHEW)

Around the world, conflicts have been sustained by extractive resources such as diamonds, oil, and timber, but they've also been funded by agricultural resources such as cacao, cashews, and coffee. In fact, both extractive and agricultural resources were used to fund the two civil wars in Côte d'Ivoire. In addition to trading diamonds for arms, the rebels implemented taxation and blockade regimes to collect funds from cacao producers.

So, what is cacao? Cacao refers to the seed pods of the cacao tree. These seeds are the irreplaceable input into the production of chocolate. In the past two centuries, chocolate has grown into a global industry for which there is an insatiable demand. For the handful of countries able to cultivate cacao trees, growing demand has generated enormous economic benefits.

Unfortunately, in the case of the world's largest cacao producer, Côte d'Ivoire, this high-value resource has also been mobilized around violent conflict. Of course, in Côte d'Ivoire as elsewhere, a variety of conditions and factors are linked to the outbreak and conduct of its two civil wars, and cacao was not the only natural resource used to fund the war. In fact, the United Nations has estimated the diamonds worth between 12 and 23 million US dollars were smuggled out of the country each year to purchase arms. But during both its periods of relative peace and its periods of civil war, cacao played an unmatched role in the economy of Côte d'Ivoire.

In this case study, we focus on that role. To provide some context for this, let's begin with a brief history of cacao to show how in a short time it became integral to the economy of Côte d'Ivoire. Historians believe cacao was discovered by the Olmec people in southern Mexico some 4,000 years ago, and it was used by them for its remarkable flavor and high nutritional value. For a very long time, cacao remained unique to a small region of the world, but about thirty five centuries after its discovery, the Spanish explorer Hernán Cortés visited the region and subsequently introduced cacao to Europe, where it immediately joined gold, exotic spices, and silk as a sought-after, high-value import.

Europeans fell in love with cacao, and they developed the process for using it to produce chocolate. The Swedish botanist Carl Linnaeus named the cacao tree *Theobroma cacao*, the food of the gods, and gradually a chocolate industry emerged in Europe. Growing demand for chocolate became the platform for the expansion of cacao cultivation, but cacao trees can only flourish in a small band around the equator in areas that have fertile soil, ample sunlight, warm temperatures, and a humid climate. European colonialists took the cacao plant from the Americas and introduced it into a few places in Equatorial Africa and Southeast Asia.

Today, the world's top producers are Côte d'Ivoire, Ghana, Indonesia, Nigeria, Cameroon, Brazil, and Ecuador. Over time, West Africa emerged as the center of global cacao production. In some years, Côte d'Ivoire and Ghana together have accounted for as much as 60% of world supply. The benefits notwithstanding, the expansion of cacao cultivation has been in many ways an ugly and coercive process. Chocolate has not only a dark variant; it also has a dark history: a history that includes child labor, human trafficking, slavery, corruption, and war.

Further complicating matters today, finicky cacao trees are especially vulnerable to climate change. The cacao industry produces a product that is widely loved, but it does so through a process that has been assailed from many sides. In Côte d'Ivoire, today the world's largest producer of cacao, one sees the sector's complicated matrix of risk and opportunity. The story of

cacao here is a story of great economic benefit, but it's also a story of moral failure and violent conflict.

Côte d'Ivoire is well known for long sandy beaches, the culture influenced by the French, and decades of post-colonial prosperity and peace. Its capital, Abidjan, is called the pearl of lights. After independence, the country was widely regarded as a model for other countries in sub-Saharan Africa, and it's famous for its cultivation of cacao. But in the early 21st century, Côte d'Ivoire gained a new form of global attention as it plunged into two periods of violent civil war, bringing the cacao trade with it.

Cacao was not a cause of either civil war. Côte d'Ivoire had gained independence from France in 1960, and for the next 33 years, it was led by President Felix Houphouët-Boigny. During this period the global economy was kind to cacao producers, and President Houphouët-Boigny was successful in managing social tensions. His death in 1993, however, created a power vacuum, and political entrepreneurs mobilized support in large measure by inflaming long-standing ethnic and political divisions.

Two divisions were especially salient: between Muslims in the north and Christians in the south, and between those who regarded themselves as natives of Côte d'Ivoire and those who were represented as foreigners or migratory people from neighboring countries. The land policy of the time of President Houphouët-Boigny's death was a land-to-the-tiller policy; he worked the land to gain possession of it. After his death, questions arose about both voting rights and land ownership.

For almost a decade, these issues remained unresolved and highly contentious. During this period, the government, assisted by the World Bank, introduced a new land law. This allowed customary land to become private property, but it excluded non-Ivoirien's from ownership, which added salience to the question of who was a native and who was not. The government also passed a law defining who could run for the office of President: only those with two Ivoirien parents. This law ruled out a popular candidate from the largely Muslim northern region.

Mounting tension followed the 2000 election of President Gbagbo until in 2002, factions of the military mutinied and began a series of vicious attacks to express their dissatisfaction with both the political situation and land tenure policy. In 2003, they established the Forces Nouvelles de Côte d'Ivoire. Although a ceasefire agreement was negotiated that same year and UN peacekeepers were deployed in 2004, open civil conflict, human rights violations, and wartime atrocities ensued until 2007 when the violence ended with the signing of the Ouagadougou Peace Agreement.

Tensions flared again in 2010 after Mr. Ouattara won the election and President Gbagbo refused to step down. The following year, former President Gbagbo was arrested and sent to the International Criminal Court in The Hague to face charges of crimes against humanity. Although natural resources did not play a role in creating or escalating the conflict in Côte d'Ivoire, analysts have noted that the country's agricultural exports were generating less and less revenue in the decade leading up to the civil war, and so there may have been a subtle contribution to the background conditions favorable to violent conflict.

During the two civil wars, however, both sides reaped considerable political and economic benefits from tapping into the global cacao trade in both licit and illicit fashions. Cacao was central to financing the government's military activities through a set of institutions set up by President Gbagbo. At the time of Gbagbo's election, the cacao sector was managed through the "Autorité

de regulation du café et du cacao." The Gbagbo government established four new institutions, ostensibly to support cacao farmers and to regulate the cacao trade. To finance these institutions, the government imposed levies on all cacao being exported.

However, the levies and the institutions they funded lacked transparency, and the government was able to funnel money from the levies back to itself and then use these funds to wage war. Ultimately, these cacao levies contributed over 20.3 million US dollars to the war effort. Additionally, President Gbagbo retained control of the national cacao institutions and used at least 38.5 million US dollars of their cacao revenues to finance the war as well. While the rebel side, the Forces Nouvelles, smuggled illicit diamonds through neighboring countries to purchase arms, it also relied on cacao to fund its efforts.

Companies exporting cacao from the rebel-controlled zone were compelled to pay a tax to the rebels, and blockades were established to enforce this. Although only about 10% of Côte d'Ivoire cacao was grown in rebel-controlled territory, estimates indicate that over 77,500 tons of cacao were exported annually from this area, generating about US thirty million dollars in taxes each year.

As a result of this taxation scheme, the Forces Nouvelles was able to accrue significant wealth and political power throughout the conflict. In particular, it was able to control the North's valuable diamond region. In 2004, the European Union published a financial audit that disclosed cacao sales during the period from October 2000 to June 2003. This report informed the EU's decision not to finance the cacao and coffee sectors in Côte d'Ivoire. Since then, the United Nations and the World Bank have published multiple reports suggesting the levies be removed and encouraging increased oversight and transparency.

Despite these efforts, the levies have not been suspended nor have they decreased significantly. In June 2007, Global Witness published an investigative report titled "Hot Chocolate: How Cacao Fueled the Conflict in Côte d'Ivoire." This report heightened global awareness about the relationship between the cacao trade and civil conflict. Responding to these reports and other pressures, in 2008, the government of Côte d'Ivoire for the first time published its own report, disclosing revenues obtained from the taxes collected from the cacao sector and providing information about how those revenues were being spent.

So what's the situation in Côte d'Ivoire today? Since the end of the war in 2012, considerable progress has been made in both the cacao and diamond sectors. The economy, which during the war shrank at a rate of minus 1.9 percent annually, causing enormous hardship, has rebounded dramatically growing at a rate of six percent since 2012. Considerably less progress has been made in terms of land reform; the laws introduced in 1998 were scarcely implemented, and tensions and disagreement persisted. But in 2017, the government of Côte d'Ivoire established the Rural Land Tenure Agency with a mandate to formalize informal rural boundaries and clarify property rights, a process expected to take ten years.

Ultimately, two wars funded with cacao and diamonds took some four thousand lives and imposed considerable hardship on millions of people. But today, those same resources are fueling renewed hope and rapid economic development.

### 3.7 NATIONAL TOOLS FOR ADDRESSING CONFLICT RESOURCES (LECTURER: CARL BRUCH)

Increasingly, countries are adopting and implementing measures to prevent natural resources from financing armed conflict. These measures are being undertaken domestically and with other countries. This chapter considers five key tools that countries have adopted to fight conflict resources. The first tool is securing extraction sites for minerals, timber, and other natural resources. The second tool is certification; the third tool is due diligence; the fourth tool is awareness campaigns; the fifth tool is prosecution.

The first tool, and often the first step, is to secure the sites of extraction so as to ensure that resources at those sites are not used to fund illegal armed groups. Securing extraction sites is often done with the combination of domestic forces including military, police, or both, and international peacekeepers. When securing natural resource extraction sites, considerations should be paid to the risk that moving military forces into a region with substantial natural resource wealth could backfire. For example, in eastern portions of the Democratic Republic of the Congo, the national military was able to eject rebel groups from mining areas, but then, members of the National Army were later accused of getting involved in mining illegally.

There are three important certification schemes the countries can use to address conflict resources. The first is the Kimberley Process Certification scheme. States that join the Kimberley Process must adopt national legislation and create institutions and practices to control the import and export of diamonds. They also must certify that diamonds intended for sale are conflict-free. One of the interesting things about the Kimberley Process is that it's an international initiative by the diamond industry, states, and civil society jointly to use a chain of custody system that ensures that diamonds do not fund violence and other activities aimed to destabilize legitimate governments.

The Kimberley Process became operational in 2003 as one of the measures used to stop diamonds from funding conflict in Sierra Leone, Angola, and Cote d'Ivoire. One key measure in the Kimberley Process is improving the monitoring and inspection at airports, border crossings, and other key zones of import and export. For example, to address international trade in diamonds that have financed conflict in the past, Sierra Leone has stationed what they call Mines Monitoring Officers at airports. These officers ensure that the diamonds that are being imported or exported have the necessary certificates and otherwise comply with the Kimberley Process Certification Scheme.

Currently, 81 countries participate in the Kimberley Process. These include all of the major rough diamond producing, exporting, and importing countries, covering 99.8 percent of the global production of raw diamonds. Under the Kimberley Process, member states cannot trade with non-participants, so there is a powerful incentive for the other states who are not participating to join. Many conflict-affected states have joined the Kimberley Process including Liberia, Cote d'Ivoire, Sierra Leone, and the Democratic Republic of the Congo. These countries have both the greatest need for the Kimberley Process and the greatest challenges in implementing and verifying compliance.

While many conflict-affected countries have struggled to implement the Kimberley Process across their entire territory, new innovations to the scheme allow for certification from sites or specific geographic zones. This is being pilot tested in Sierra Leone. In addition, Sierra Leone is actively involved with the Mano River Union, which also includes Liberia, Cote d'Ivoire, and Guinea, to

improve enforcement of the Kimberley Process at the sub-regional level. This work includes cross-border dialogue, harmonization of policies, and standardization of the diamond market in the region.

The second certification system that we'll consider is the EU's FLEGT; this stands for a "Forest Law Enforcement, Governance and Trade." The FLEGT Action Plan was established in 2003 as a way to reduce illegal logging by creating a chain of custody system and ensuring that only legal timber is sold in the EU. This has the practical effect of preventing illegally harvested timber from becoming a conflict resource. FLEGT operates in 15 countries, including Liberia, Central African Republic, Democratic Republic of the Congo, and Cote d'Ivoire. It operates through what are called voluntary partnership agreements. These are legally binding agreements between the EU and a specific timber-producing country. The voluntary partnership agreements call for a chain of custody system and a legality assurance system. Together these are designed to identify and license legally-produced timber, ensure that only legally-produced timber is exported from the country, and thereby help timber-exporting countries to create economic incentives to stop illegal logging.

The third certification system we will consider is that of the International Conference on the Great Lakes Region. The ICGLR is an intergovernmental organization of 12 African countries that promotes sustainable peace and development in the Great Lakes Region of Africa. The ICGLR Protocol against the Illegal Exploitation of Natural Resources entered into force in 2006. It establishes a regional scheme for certifying natural resources and requires that mineral exports have a certificate.

In most cases, due diligence is adopted and applied by importing countries and companies, rather than by countries that are the source of conflict resources. Due diligence is a process that companies or individuals undertake to ensure that the extraction and trade of mineral ores support peace and development, not conflict. This includes measures to ensure strong systems of control over the supply chain; pass vital information to buyers and to governments and regional institutions that regulate the mineral trade; assess conflict conditions at mine sites, transportation routes, and points where minerals are traded; and report on due diligence.

In 2010, the UN Security Council adopted resolutions calling for due diligence in mineral supply chains. These resolutions related to the Democratic Republic of the Congo and Cote d'Ivoire. Subsequently, the Organization for Economic Development in cooperation, or OECD, has developed guidance to help countries operationalize these resolutions. The most recent edition of the guidance was published in April 2016. When applying the guidance, a country will employ either a traceability or a chain of custody system. These may include, for example, the ITSCI bag and tag scheme for tin, the electronic tagging system, or any other chain of custody or traceability system that meets the standards set out in the guidance and in the certification manual of the ICGLR Regional Certification Mechanism.

One of the initial national efforts to use due diligence to combat conflict resources is found in the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States. Section 1502 of the Act requires publicly traded companies to disclose annually whether any conflict minerals necessary to the production or functionality of a product originated in the Democratic Republic of the Congo or in an adjoining country - and, if so, to then report measures taken to ensure due diligence. In 2012, the Securities and Exchange Commission adopted rules detailing precisely how companies had to disclose their due diligence efforts. Pursuant to these rules, companies started investigating and reporting yearly how they source to tin, tantalum tungsten,



and gold from Central Africa. Over time, we saw both an improvement in the number of companies reporting and in the quality of reporting. While the Trump Administration has suspended enforcement of the rule, other countries are now adopting due diligence requirements to fight conflict resources.

For example, in May 2017, the European Union adopted a conflict minerals regulation which will take effect January of 2021. This regulation aims to prevent conflict minerals from entering the European Union. It's important to note that this regulation applies to all countries around the world, not just to the DRC in neighboring countries. It also sets an important precedent, as it not only aims to stop the financing of armed groups in developing countries through the trade of tin, tantalum, tungsten, and gold; it also addresses human rights and governance issues. It does this by providing both support for importers, especially small and medium-sized enterprises, as well as a range of development aid and foreign policy actions to effectively implement and enforce the regulation on the ground.

Recognizing that broad due diligence requirements aimed at conflict minerals can have unintended consequences on artisanal miners, Partnership Africa Canada has pioneered a system which they call "Just Gold" to certify artisanal gold from the Democratic Republic of the Congo as conflict-free. This is an independent effort, not led by a government and without a government mandate that applies the OECD due diligence guidance and the regional certification standards of the ICGLR to provide conflict-free gold at the same market price as gold globally.

Another example of due diligence is the Conflict-Free Smelter Program, which is part of the Conflict-free Sourcing Initiative, a partnership between the Electronic Industry Citizenship Coalition and the Global e-Sustainability Initiative established in 2008. With over 350 companies and associations, this initiative has become one of the most utilized and respected resources for companies to manage conflict minerals in their supply chains. It assists companies in making informed choices about conflict minerals in their supply chains by employing an independent third party audit of sourcing practices and management systems to ensure compliance with the CFSP protocols and relevant global standards. The audit utilizes a risk-based approach to validate smelters' adherence to responsible mineral procurement. Companies can then use this information to inform their sourcing choices.

Consumer awareness campaigns: as with due diligence, these are usually in consuming countries rather than source countries. Public awareness about conflict minerals is crucial as it drives consumer demand and influences reputation risks. For example, Fairphone is a company committed to using only conflict-free minerals. It establishes transparent supply chains for the minerals used in their phones and creates demand for conflict-free resources. Apple has also announced that it will move to procuring only recycled materials for all of its product lines in order to avoid sourcing from mining sites where human rights abuses, conflict financing, or environmental damages may be occurring.

Finally, a number of countries have prosecuted their citizens for trading in conflict resources. This is often referred to as "extraterritorial legislation," as it speaks to the legal ability of a government to exercise authority beyond its normal territorial boundaries – albeit usually still over its citizens. For example, in 2004, the Belgian court convicted Aziz Nassour and Samih Ossaily under Belgian law for criminal offences related to trade in conflict diamonds. Nassour and Ossaily smuggled diamonds out of Sierra Leone and illicit weapons into Liberia in violation of UN Security Council embargoes.

On April 21<sup>st</sup> 2017, a Dutch appeal court sentenced Guus Kouwenhoven, who is involved in illegal arms and timber trade in Liberia, to 19 years in prison. The prosecution took 12 years and involved a lengthy appeals process. The court ultimately found Kouwenhoven guilty of providing weapons to the former Liberian President Charles Taylor in return for special treatment of Kouwenhoven's timber company.

There are four key takeaways regarding national measures to combat conflict resources. First, most conflict resources rely on international trade and access to markets. Second, many countries including both source countries and consuming countries are adopting measures to address conflict resources. As may be expected, most of these measures including certification, due diligence, and awareness campaigns focus on trade and market access. Third, due to the international nature of the trade in conflict resources, partnerships are essential to success - both with the private sector and civil society as well as with other countries. Finally, for conflict-affected countries, international assistance is key to building capacity for implementation and reducing the collateral effects of the measures, for example, on artisanal miners.

All of this shows that there is much that countries can do, not only collectively as part of the international community, but also individually to curtail the use of conflict resources.

### 3.8 INTERNATIONAL LAW PROTECTING THE ENVIRONMENT DURING ARMED CONFLICT (LECTURER: CARL BRUCH)

This chapter reviews the different bodies of international law protecting the environment during armed conflict. It may come as a surprise to many of you that there is a rich body of international law from various sources. At the same time, it probably will not come as a surprise that there are gaps in the law – particularly with respect to implementation and to civil wars. These gaps undermine the comprehensive protection of the environment during armed conflict under international law.

The key point to remember, though, is that these gaps indicate that the international legal framework remains a work in progress. There are many provisions, there are many bodies that are starting to apply the law, and there's a slow but steady increase in the application of that law.

Four distinct bodies of international law provide important protections for the environment during armed conflict including International Humanitarian Law, International Criminal Law, International Environmental Law, and International Human Rights Law. Central to the protections are four key principles of customary international humanitarian law that protect the environment during armed conflict:

1. The principle of discrimination, which requires military forces to distinguish between military objects which are legitimate targets and civilian persons and objects that are not legitimate. As such it prohibits indiscriminate attacks and direct attacks against civilian objects.
2. Second, the principle of necessity provides that the use of military force is only justified to the extent that it is necessary to achieve a defined military objective.
3. Third, the principle of proportionality prohibits attacks in which the collateral damage would be regarded as excessive in relation to the anticipated direct military advantage gained.
4. And fourth, the principle of humanity prohibits inflicting unnecessary suffering, injury, and destruction.

These principles are enshrined in various treaties and in several national military manuals. A number of treaties directly and indirectly protect the environment during armed conflict. A suite of international law was developed in the 1970s in the wake of environmental impacts of conflicts such as the Viet Nam War. These include the Environmental Modification Convention, often referred to as ENMOD, and additional Protocols I and II to the 1949 Geneva Conventions.

The Environmental Modification Convention prohibits State Parties from engaging in military or other hostile use of environmental modification techniques having widespread, long-lasting, or severe effects as the means of destruction, damage, or injury to any other State Party.

Additional Protocol 1 to the 1949 Geneva Conventions governs international armed conflicts. It prohibits methods or means of warfare which are intended or may be expected to cause widespread, long-term, and severe damage to the natural environment. It also prohibits attacks against the natural environment by way of reprisals. Additional Protocol II to the 1949 Geneva Conventions addresses non-international armed conflicts or civil wars. In contrast to Additional Protocol 1 which covers international armed conflict, Additional Protocol II does not have any

express protections of the environment during armed conflict. It does, however, have some indirect protections including, for example, those related to protection of civilian objects, installations containing dangerous forces, and cultural objects and places of worship.

One of the chief challenges is that many of the relevant international legal frameworks lack the means for effectively enforcing their protections. The 1998 Rome Statute, which established the International Criminal Court, sought to address this enforcement gap not only for wartime environmental violations, but more generally for war crimes, crimes against humanity, genocide, and the crime of aggression. For example, one of the articles provides that it's a war crime to intentionally launch an attack knowing that the attack will cause widespread long-term and severe damage to the environment, which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated. While it does enable the court to prosecute specific wartime environmental violations, this article applies only to international armed conflict, and most of the conflicts that we are seeing in the world are non-international armed conflicts.

So far, we have been considering protections under International Humanitarian Law. Other bodies of law also protect the environment during armed conflict including, for example, International Environmental Law. The International Law Commission has noted that an armed conflict does not necessarily terminate or suspend treaties. Accordingly, multilateral environmental agreements continue to apply during armed conflict unless the agreement expressly provides that it does not apply during armed conflict, that is to say that there is a suspension clause or that there is a direct conflict with international humanitarian law, in which case international humanitarian law governs.

Most of the protections that I have just mentioned relate to the destruction of the environment during armed conflict. One of the most common environmental problems during armed conflict, though, is the illegal and illicit exploitation of natural resources to finance armed conflict - the use of so-called the conflict resources.

Here, again, international law can help. There's a well-established prohibition in international law against pillage. Under international law, pillage, sometimes referred to as "plunder," is intentionally taking, seizing, confiscating, or appropriating public or private property (including commodities) from the legitimate owner without consent in an armed conflict. This prohibition applies both in international and in non-international armed conflicts, and it applies to people, entities, and countries.

There are three key gaps and weaknesses of the current international legal framework. First, many of the international legal protections do not apply to non-international armed conflicts. This is problematic as the vast majority of conflicts over the past thirty years have been non-international or some hybrid. Second, the threshold definition requiring that environmental harm be widespread, long-term, and severe has also been criticized alternatively as being unclear and imprecise, making it difficult to prove the damage, or imposing such high threshold that few actions, if any, would be prohibited. And third, there are few mechanisms to enforce international law protecting the environment during armed conflict.

As an example of the challenges and opportunities in practice, let's consider the 1990-91 Gulf War. Following the war in which Iraq caused extensive environmental damage, including setting more than six hundred Kuwaiti oil wells on fire, the UN Security Council held Iraq responsible for the environmental and other damage that it caused. The Security Council cannot invoke Additional Protocol 1 as the basis for responsibility because Iraq was not party to the Additional Protocol 1. Instead, the Security Council held that Iraq had illegally invaded Kuwait, violating

Article 2(4) of the UN Charter, which prohibits aggressive warfare, and was therefore liable for all damages that it caused.

To determine the amount of damages, the Security Council established the UN Compensation Commission to receive, review, and make decisions on claims for damages. Using methodologies and standards from international environmental law, the UN Compensation Commission awarded 5.3 billion US dollars in compensation for environmental damage and depletion of natural resources. It should be noted that the particular facts of this case are relatively uncommon; Iraq had caused serious and extensive environmental damage that captured the international attention, it lost the war, and it had substantial revenues from oil to pay for the damage it caused.

There are three key conclusions regarding international law protecting the environment during armed conflict. First, there are numerous provisions protecting the environment during armed conflict. These provisions are found in diverse bodies of law and apply to different contexts. Second, there are gaps in the law, most notably regarding non-international armed conflict and mechanisms for enforcement. And third, the key challenge now is implementation and enforcement of those provisions. We will explore how States international organizations, and others are implementing and enforcing international law protecting the environment during armed conflict in other chapters.

### 3.9 IMPLEMENTING INTERNATIONAL LAW DURING ARMED CONFLICT (LECTURER: CARL BRUCH)

There's often a gap in implementation and enforcement of international law protecting the environment during armed conflict. This chapter examines concrete ways that countries and international organizations have operationalized their international legal obligations to protect the environment during armed conflict. It focuses on four specific tools: legislation, military manuals and training, staffing, and reporting on compliance. Together, these measures seek to breathe life into international law that protects the environment and natural resources during armed conflict.

Adopting national legislation that governs how a country's armed forces address the environment and natural resources is an important first step. Armed forces rely on discipline and on chain of command: follow the rules or be penalized. The important question, then, is what rules apply to the environment. National legislation codifies international legal requirements and often adds new domestic requirements

The UN's Special Rapporteur on Protection of the Environment in Relation to Armed Conflict has identified at least 30 different countries that have adopted national rules and legislation specifically addressing how their military forces must incorporate considerations of the environment. For example, in Sweden, the Armed Forces must comply with Sweden's 1998 Environmental Code, and in Denmark, armed forces have to comply with legislation on energy, environment, and spatial planning.

Military manuals constitute a second way to clearly articulate the environmental rules governing Armed Forces. Generally speaking, military manuals established policies governing operations. These policies include requirements from international law, from national law, and operational considerations. Training of the military manuals is an essential complement. Militaries like to train like they fight, so they fight like they train. That is to say, if they have been trained to consider the environment, they're more likely to actually consider the environment when they're in combat.

For example, Norway has published a handbook as well as an action plan to address environmental protection in the Armed Forces. Additionally, the Norwegian Armed Forces maintained an environmental database to which all units must continuously report all activities, products, or services that may have an impact on the environment. Many countries in addition to Norway including Germany, China, Finland, Sweden, and the United States have incorporated environmental requirements into their military manuals.

The North Atlantic Treaty Organization (NATO) and the International Committee for the Red Cross (ICRC) have adopted guidelines and policies to inform national military manuals. The NATO military principles and policies for environmental protection encouraged NATO and partner nations to adopt environmental standards, and NATO Status of Forces agreements also contain provisions relating to environmental protection. Moreover, NATO has multiple standardization agreements, which address various aspects of environmental protection. The ICRC guidelines for military manuals and instructions for protection of the environment in times of armed conflict summarize existing international rules and offer guidance to countries on how to address protection of the environment in their military manuals.

Both the UN Department of Peacekeeping Operations and the UN Department of Field Support explicitly acknowledge the potential harm that peacekeeping operations may have on the local

environment. In June 2009, the two agencies developed the Environmental Policy for UN Field Missions. This policy requires each field mission to take actions to integrate environmental measures into its planning and operations. This is in order to avoid and minimize the impact of activities carried out by the mission and its staff on the environment and to protect human health from such environmental impacts.

Many armed forces have made it standard practice to have dedicated environmental experts on staff; these experts can provide both policy and operational expertise and the environmental dimensions of planning, deployment, and engagement. It should be noted that not everyone in the Armed Forces needs to be an environmental expert. What is important is for officers to be aware of the basic environmental requirements, and to understand the critical role that environmental staff play in helping the force to comply with its international obligations and to reduce its footprint. And it's also important to have the dedicated experts on staff and to have them empowered. We will examine three ways in which dedicated environmental staffs are used: UN peacekeeping missions, environmental attorneys, and environmental units in the military.

The environmental policy for UN field missions requires individual missions to hire an Environmental Officer who is responsible for overseeing all of the mission's environmental concerns. One example comes from the mission in Mali; in the 2013 mandate for the UN mission in Mali (MINUSMA) the UN Security Council included a requirement that the mission considers environmental impacts. MINUSMA became the first UN peacekeeping mission tasked with considering its potential environmental impacts when executing its peacekeeping mandate. It should be noted that earlier peacekeeping missions also had had dedicated environmental staff.

The armed forces of a number of states have environmental attorneys to ensure that international and domestic law protecting the environment is complied with during armed conflicts. For example, the US Navy has both environmental and energy attorneys. They are charged with advising on issues of environmental law and policy, including environmental planning, natural and cultural resource compliance, and water, air, and land environmental compliance and enforcement. They also play a significant role in policy development for the Department of Defense.

Some national militaries have also created dedicated units to operationalize environmental considerations. Since 2006, the Swedish Defense Research Agency has been working to bolster the awareness of the influence of environmental factors both as a cause of conflict and as a means of achieving a successful mission. The agency has been integral in developing policy and manuals for the Swedish military, has assisted UN peacekeeping missions to address environmental issues, and has advanced learning and practice domestically and internationally.

The final tool I will discuss in this chapter is reporting and compliance. In 2016, the UN Environment Assembly adopted a resolution on protection of the environment in areas affected by armed conflict. This resolution urges states and others to undertake a series of measures to implement and comply with international law protecting the environment during armed conflict. It also mandates the Executive Director of UN Environment to report back on implementation of the resolution. This mandate provides an important international forum for member states to share information on their progress in implementing international law protecting the environment during armed conflict.

In conclusion, there's an increasing awareness and ambition on the part of both States and international organizations to consider potential environmental impacts of military operations during both peacetime and armed conflict. Although states' armed forces are central to this

process, other institutions including the International Committee of the Red Cross and UN peacekeeping missions are important and indeed they play an increasingly critical role in mitigating pollution and environmental damage during armed conflicts. Finally, it's critical that measures continue to be taken both at the national and international levels to prevent violations of international law, rather than merely focusing on reactive efforts following the conflict.



### 3.10 UN SECURITY COUNCIL TOOLS FOR ADDRESSING RESOURCE CONFLICTS (LECTURER: CARL BRUCH)

This chapter considers the role that the UN Security Council plays in addressing resource-driven conflicts as well as the environmental dimensions of other conflicts. It also presents some of the key tools that the UN Security Council has utilized toward this end. The Security Council has the primary responsibility for maintenance of international peace and security.

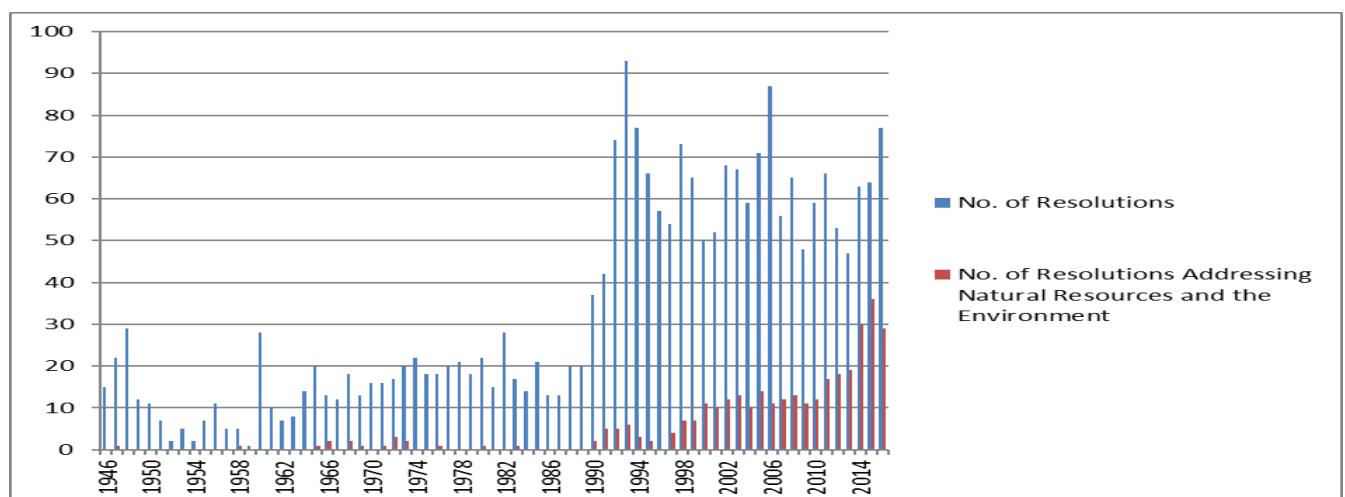
In contrast, issues related to the environment in natural resources have historically been considered development issues, and thus more properly the domain of the UN General Assembly and the various UN agencies and organizations that report to the General Assembly. So, many have been reluctant to securitize the environment; however, as we've seen there are often strong linkages between environment and natural resources on the one hand and conflict, peace, and security on the other. Accordingly, the Security Council has had to increasingly address natural resources and other environmental considerations in specific armed conflicts.

The Security Council has utilized four key tools to address resource driven conflicts:

1. Resolutions and presidential statements
2. Peacekeeping mission mandates
3. Sanctions
4. Panels of experts

First, resolutions are formal expressions of the opinion or will of the Security Council, and they combined member states, UN agencies, and others. With the end of the Cold War, the Security Council started using more resolutions, which have also increasingly addressed natural resources in the environment. From 1946 to 1989, the Security Council adopted only 646 resolutions on all issues. This is an average of less than 15 a year. In contrast from 1990 through the end of 2016, when it adopted 1,690 resolutions – an average of more than 62 a year.

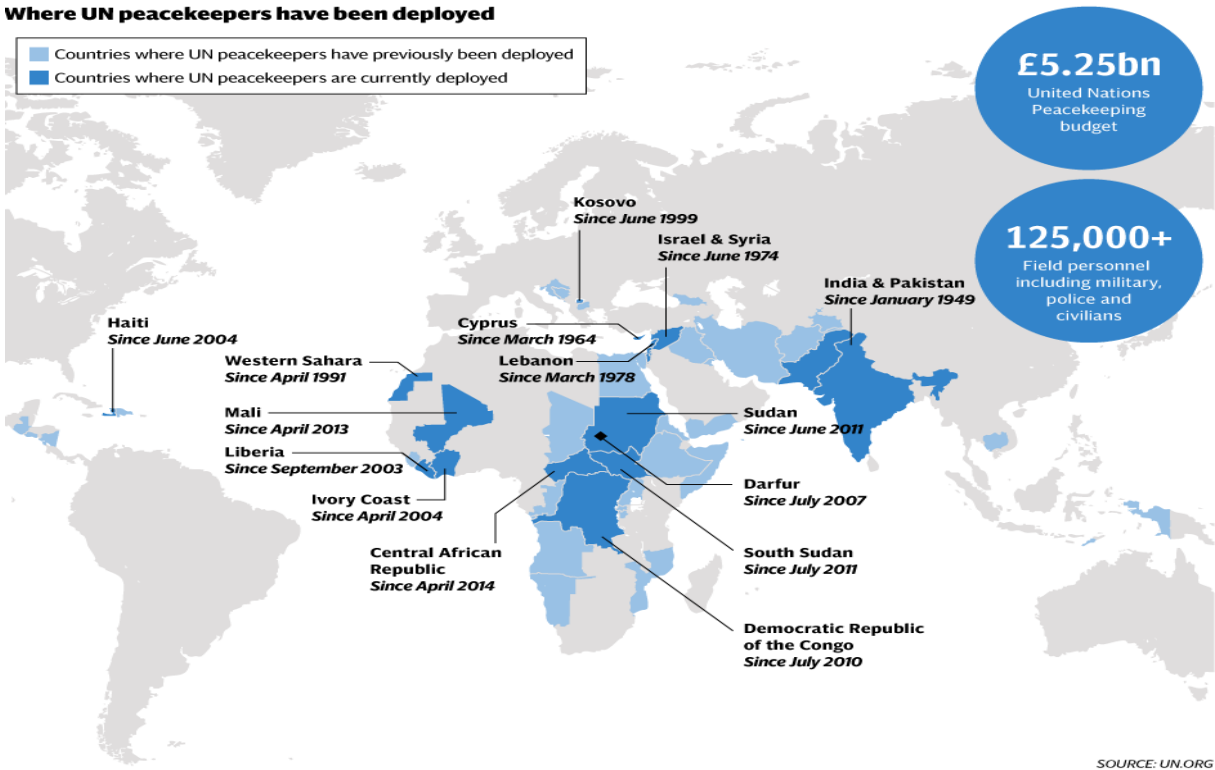
When we look at the subjects covered by the resolutions, we see that, from 1946 through to 1989, only 17 resolutions addressed natural resources in the environment. This averages out to less than one every other year. From 1990 to 2016, this jumped to 319 resolutions that addressed natural resources and the environment – or about 12 per year. Through the end of 2016, with a total of 336 Security Council resolutions, 14.4 percent of all resolutions had addressed natural resources or the environment in some way.



Security Council resolutions have often focused on conflict resources as a source of financing. They also addressed the other three tools discussed in this chapter: mandates for UN peacekeeping missions, imposing sanctions on trading conflict resources, and empowering panels of experts to examine the role that natural resources have in financing or fueling conflict.

The Security Council has issued a number of non-binding Presidential Statements that address emerging issues at the intersection of environment and security. For example, in 2007 and 2011, Security Council Presidential Statements addressed ways in which natural resources and climate change, respectively, could affect international security.

I will now turn to the second key tool that the UN Security Council has at its disposal: peacekeeping mission mandates. The Security Council determines whether, when, and under what circumstances the UN peacekeeping mission should be deployed. In June 2017, there are sixteen ongoing UN peacekeeping missions with more than 110,000 uniformed and civilian personnel and an annual budget of almost eight billion US dollars. Fifty percent of the total UN peacekeeping budget to-date are in situations where natural resources have financed or fueled conflict.



Peacekeeping operations in some countries are also affected by challenges associated with the governance of natural resources in the environment; and, in a number of countries affected by armed conflict, peacekeeping missions have had to confront illegal and predatory natural resource exploitation that threatens the fragile peace. As a result, the Security Council has granted mandates to a growing number of peacekeeping missions to address natural resource issues important to post-conflict peacebuilding.

Resolutions have provided mandates for peacekeeping missions to help countries manage natural resources in four primary ways: one, restoring control over militarized areas or protecting key natural resource infrastructure; two, using their monitoring enforcement capacities to prevent illegal exploitation and trade; three, restoring administration over natural resources; and four, minimizing environmental impacts and helping to provide environmental technology.

The peacekeeping mandate for the UN mission in Sierra Leone, or UNAMSIL, is illustrative. The initial 1999 mandate for UNAMSIL did not address natural resources at all; however, in 2001 the Security Council revised UNAMSIL's mandate to assist the government of Sierra Leone in re-establishing its authority throughout the country, including the diamond-producing areas. A year later, UNAMSIL was explicitly asked to assist the government of Sierra Leone to accelerate the restoration of civil authority and public services throughout the country, in particular in the diamond mining areas. And in 2004, UNAMSIL was mandated to support the Sierra Leone armed forces and police in patrolling the border and diamond mining areas, including through joint planning and joint operations where appropriate. With these mandates, the peacekeeping mission successfully reinforced national capacity to patrol, manage, and ultimately regain control of these areas.

The third key tool used by the UN Security Council to address resource conflicts is sanctions; where the Security Council has determined that natural resources are helping to finance and fuel conflict, it may impose sanctions that prevent the import or export of those resources. Indeed, sanctions imposed under Chapter 7, Article 41 of the UN Charter is the most common way that the Security Council has sought to prevent belligerence from benefiting from the illegal exploitation of natural resources.

During the Cold War, only seven resolutions addressed natural resource-related sanctions during conflict. Since the end of the Cold War, the Security Council has adopted 72 such resolutions. For example the Security Council banned imports of all diamonds and timber from Liberia. The Security Council has also imposed targeted sanctions to minimize adverse effects on non-conflict parties. These measures permit the legitimate exploitation and sale of natural resources by authorized groups such as public authorities under the control of the internationally recognized state government, while at the same time, choking off a source of rebel funding.

Sanctions are not always effective. They can be blunt instruments. They can harm livelihoods of many people in the country and not just the warlords and elites who are using natural resources to finance conflict. And indeed, this is the rationale underlying the use of targeted sanctions. With sanctions regimes in place, people may try to cheat, and even when they are caught, it can be difficult to prosecute successfully. In addition to imposing sanctions on countries, the Security Council can impose sanctions on private individuals and entities. For example, those found to be trading and conflict resources.

The UN maintains a consolidated sanctions list that includes all individuals, groups, and entities subject to sanctions measures imposed by the Security Council. The inclusion of all names on one consolidated sanctions list facilitates the implementation of these sanctions measures.

Panels of experts have been used to monitor and conduct field investigations on the application and violation of commodity sanctions. They've also been used to assess natural resource and conflict linkages and advise the Security Council on the scope of sanctions and the mandate for peacekeeping operations. Finally, they can monitor natural resource governance reforms both during and after commodity sanctions in cooperation with a peacekeeping mission.

Since 1999, the Security Council established panels of experts in Angola, Sierra Leone, Liberia, the DRC, Cote d'Ivoire, Somalia, Central African Republic, and Libya. These have been used to monitor and report and the linkages between natural resources and conflict. It's often better in the context of whether to impose sanctions on conflict resources and especially to assess the effectiveness of a sanctions regime.

The Security Council has also instructed peacekeeping missions to support the work of expert panels in the context of the environment and natural resources. This was the case in Liberia, DRC, in other countries. There are some important limitations on the tools that the UN Security Council deploys. First, the Security Council remains cautious about addressing environmental and natural resources, and some argue that it has been too cautious given the proven linkages to peace, conflict, and security. Second, to-date, the Security Council has only addressed these linkages in an ad hoc manner – even when there's a sound foundation for a coherent and strategic approach. For example, it has repeatedly addressed diverse conflict resources in specific instances, yet it is resisted calls to define what constitutes a conflict resource or what responses flow when the conflict resource has been identified. The Security Council uses its tools usually in a time-bound manner; peacekeeping mandates, sanctions, and panels of experts all expire unless renewed.

Notwithstanding these limitations, the UN Security Council has an important role to play in addressing resource-driven conflicts. It has a global mandate. It has the legal authority to take strong measures necessary to address conflict resources and other challenges. It's able to impose restrictions on countries, companies, and private individuals as well as empowering, guiding, and restricting action by UN bodies. And this growing body of experience has refined and improved the effectiveness of these tools, reinforcing the important role that the Security Council has had and will continue to have in this field.

### 3.11 CASE STUDY: DIAMONDS, TIMBER, AND CONFLICT IN LIBERIA (LECTURER: RICHARD MATTHEW)

There is wide agreement that diamonds and timber played an important role in sustaining the violent conflicts that afflicted Liberia from 1989 to 1996 and again from 1999 to 2003. In a survey conducted in Liberia on the causes of its civil wars, greed and corruption were the top responses. The survey respondents also identified identity and ethnic divisions, poverty, inequality, land tenure issues, and food prices as factors contributing to the onset of war. The case of Liberia is also an excellent example of how violence related to natural resources can expand across borders. The civil wars in Sierra Leone and Cote d'Ivoire were both linked to Liberia and to the region's illicit trade in diamonds and other natural resources such as cacao.

In the 1820s, the American Colonization Society founded a settlement in West Africa that was named Monrovia. The settlers and their descendants were largely former slaves and freeborn African Americans, and today they are known as Americo-Liberians. As the settlement expanded eastward, it encountered and sought to westernize indigenous populations. In 1847, Liberia declared independence, making it Africa's oldest republic.

For more than a century, Liberia grew in partnership with American corporations that were attracted by its abundance of natural resources. The benefits from these partnerships were concentrated in a few hands, and over time, grievances occasionally erupted into riots and other acts of violence. Some efforts were made to bridge the economic and political gaps that had grown between the Americo-Liberians on the coast and the indigenous Liberians of the interior, but a strong sense of inequality persisted between these two groups.

In 1951 Samuel Kanyon Doe was born in a small village in the interior. At 18, he joined the military. At the age of 29, he led a successful coup. This coup was widely praised by indigenous Liberians for ending 133 years of Americo-Liberian rule. While Doe promised to rule in the interests of the people, the country quickly sank into a decade of fear, corruption, and repression.

Charles Taylor, a contemporary of Doe, was an Americo-Liberian educated in the United States. He returned to Liberia soon after Doe had seized power and immediately landed a position in the new government. But accused of embezzlement in 1983, Taylor was forced to flee the country, traveling first the United States where he was arrested and then escaped, ultimately ending up in Cote d'Ivoire with a brief stint in Libya. It was in Libya, while undergoing guerrilla training, that he met the Sierra Leonean rebel leader Foday Sankoh. In Cote d'Ivoire, Taylor founded the National Patriotic Front of Liberia.

In 1989, the NPFL invaded Liberia, starting the first civil war. The following year, Doe was tortured and killed by a faction of the NPFL. Liberia's first civil war continued until 1997. It was one of Africa's bloodiest wars, with child soldiers, rape campaigns, and the slaughter of over 200,000 people. The United Nations High Commissioner for Refugees estimated that a total of 1.9 million people, or roughly half the national population at the time, was displaced by the war.

What caused this period of intense violence is disputed, but as noted earlier, many Liberians have identified greed and a long history of grievance between Americo-Liberians and indigenous librarians as the primary causes. A central focus of greed in Liberia has been control of the country's rich natural assets, including diamonds and timber. Ultimately, the first civil war came to an end with the election of Charles Taylor, and violence subsided briefly. In spite of his populist

rhetoric, his campaign slogan “he killed my ma, he killed my pa, but I will vote for him” did not entice everyone to the polls.

Two years later in 1999, war erupted again, this time lasting four years. Liberia's second civil war resulted in an estimated 150,000 to 300,000 deaths. The extent to which natural resources contributed to the onset of Liberia's two civil wars is unclear, but there is wide agreement that timber, diamonds, rubber, and iron ore were significant sources of conflict financing. After ousting Doe, Taylor gain control of 90% of Liberia's territory, and colluded with extractive companies to export hundreds of millions of US dollars' worth of resources annually. Most of these funds were used to purchase weapons. Liberia also served as a transit point for diamonds mined by the RUF rebels in Sierra Leone to fund their insurrection.

In 2000, a UN panel of experts in Sierra Leone determined that diamonds valued at between 25 and 125 million US dollars annually were exported through Liberia with the permission and involvement of Liberian government officials at the highest levels. This report also concluded that as long as there were no certification regimes in neighboring countries, the rebels would continue to be able to profit from the export of diamonds. Also as a follow-up to the report, the UN Security Council adopted Resolution 1306, which instituted an embargo on uncertified rough diamonds from Sierra Leone. In 2001, the embargo was extended to include diamonds from Liberia.

As it became difficult for Charles Taylor to rely on diamonds to finance his military activities, he began to rely more heavily on timber, selling logging concessions to generate revenue. By the end of the second civil war in 2003, logging concessions accounted for more than 50% of the nation's income. That same year, the UN Security Council imposed sanctions on the import of Liberian timber through Resolution 1478.

Now, beginning in 1993, at least five unsuccessful attempts were made to negotiate peace agreements. Finally, in August 2003, after pressure from US President George W. Bush, Charles Taylor left Liberia, and the Accra Comprehensive Peace Agreement was signed. In September 2003 the UN mission in Liberia was established with the first peacekeeping mandate ever to address natural resource management.

At the end of the second civil war, Liberia faced many urgent challenges including reforming the government, demobilizing ex-combatants, regaining control of the timber and diamond sectors , rebuilding infrastructure, and restoring livelihoods. To address these challenges, it was essential that the government harnessed the country's extensive natural resources to post-conflict peacebuilding and economic development.

To begin this process, the transitional government established a Forest Concession Review Committee, which included representatives from the government, civil society, the United Nations Peacekeeping Mission, and other partners. In mid-2005 the committee published its review of forced concessions for the previous 25 years. Of the 70 concessions analyzed, not a single one complied with Liberian law. The committee also found that the government had granted overlapping concessions; although Liberia has 4.5 million hectares of forests, approximately 10 million hectares had been allocated. In response to the report, some advocates called for the transitional government to cancel forest concessions. However, the transitional government was concerned that it did not have a mandate to do this, and it left the task to an elected government.

Ellen Johnson Sirleaf was elected president in November 2005. Her political leadership played a crucial role in addressing the management of natural resources in Liberia – especially diamonds

and timber. Both of these resources had been targeted by UN sanctions, and these sanctions would drive many of the initial reforms. President Johnson Sirleaf committed to a high level of transparency regarding the use of revenues from natural resources.

In fact, in her first Executive Order, she canceled all forest concessions. Later that year Liberia adopted the National Forestry Reform Law of 2006, and the UN Security Council lifted sanctions. This law provides an overarching framework governing forests for commercial, community, and conservation purposes, and it requires public participation. In 2009, Liberia and the European Union began negotiating a voluntary partnership agreement, which entered into force in 2013. This is a legally-binding trade agreement to make sure that Liberian timber exports to EU countries comply with Liberia's forestry laws. Also in 2009, the government adopted the Community Rights Law to create a legal framework that outlines the rights of communities in the management and use of forest resources.

But despite considerable improvement, there remain challenges in managing Liberia's forests. In 2012, for example, it became apparent that a provision for private use permits was being abused to illegally grant about 40% of Liberian forests to private companies. Part of the explanation for this is that even after a decade of capacity-building, the Forestry Development Authority lacks the equipment, trained staff, and funding to adequately implement, inspect, and enforce laws.

But questions have also been raised about political will. The new government also acted to reform the diamond sector, and four years after the war ended, the United Nations Security Council was able to lift the embargo placed on diamonds from Liberia, and Liberia was admitted into the Kimberley Process. The government went further than this; in 2009 Liberia joined the Extractive Industries Transparency Initiative. Liberia not only applied the EITI standards to extractive resources such as diamonds, but it also extended the requirements to forest products and rubber. Liberia also required that concession agreements be made public.

The various reforms in the diamond sector seem to have worked. In 2015, Liberia exported fifty four thousand two hundred carats of diamonds totaling 2.37 million US dollars. In May 2016, the Security Council adopted Resolution 2288, which ended the sanctions regime for Liberia. This also disbanded the Security Council Committee and panel of experts concerning Liberia, which was established by Resolution 1521 in 2003 to monitor sanctions.

Although land was neither a cause of conflict nor a conflict resource in Liberia, disputes over land constitute a lingering threat to long-term peace. This insecurity has been aggravated by the granting of logging, mining, and agricultural concessions. It's estimated that various concessions cover some 40 percent of Liberia's territory. Insecurity in land tenure is rooted in Liberia's dual land tenure system that is divided between customary rules that govern land in rural areas and statutes that govern all remaining public land. A lack of legal clarity has led to improper transfers of land to elites, lack of documentation to protect land claims, large-scale concessions of land to outsiders without community consultation, government acquisitions of land, and conflicting claims to land among IDPs and refugees.

President Sirleaf Johnson has suggested that if there were to be another civil war, it would likely be over land. So in 2013 the Liberian Land Commission, an independent entity, convened a public dialogue that led to a proposed Land Rights Act. This Act, when approved, will recognize customary claims and grant them legal parity with statutory rights. It will also allocate most of the land in the country to communities.

Diamonds and timber were clearly exploited during the two wars to fund military activity and for personal gain. As global pressure mounted on conflict diamonds, Charles Taylor pivoted to timber. These and other conflict resources required some level of complicity by people outside the country, highlighting the need for regional and international regimes to address specific conflict resources. But on a more positive note, diamonds and timber have played an important role in the post-conflict peacebuilding process in Liberia.



### 3.12 NATURAL RESOURCES IN PEACE AGREEMENTS (LECTURER: DAVID JENSEN)

Welcome. This chapter focuses on how different peace agreements have addressed natural resources. The key takeaway here is that natural resource provisions in peace agreements must be tailored to the specific role that natural resources played in the conflict or will play in peacebuilding. Now, we'll explore this point and other key lessons throughout the lecture, so let's get started.

Now, the last few decades have seen a growing recognition of the importance of addressing natural resources and peace agreements. Historically, fewer than 15% of peace agreements addressed natural resources; however, as natural resources became an increasing source of contention and conflict financing, more and more peace agreements started to include natural resources provisions. For example, in peace agreements conducted between 1989 and 2004, this was a period of 15 years where 94 agreements were signed, more than half of all those peace agreements had natural resource provisions. Between 2005 and 2016 where nine peace agreements were signed, all of these agreements had natural resource provisions.

So, if you look at the numbers – if you look at the entire range of peace agreements from 1989 to 2016 – and you ask, well, which natural resources were most commonly included, the answer is this: 46% of those agreements had provisions around land. Whether it was arable land, pastures, or human settlements, land was the most common natural resource reflected in peace agreements. The second and third were actually tied. Extractive resources and renewable resources such as water showed up in about 14% of all peace agreements, respectively.

So, let's explore the reasons why natural resources might or might not be included in a peace agreement. So, the reasons to include natural resources: first, where they were a cause or trigger of the conflict; second, where they finance the conflict; third, where they've been damaged or destroyed by the conflict; or finally, where they can be used collaboratively to build confidence and trust.

Now, what are the forces against inclusion? First, when there are competing priorities in the aftermath of a crisis where people feel that natural resources would overload the political agenda. Second, when the political economy of the peace agreement and the vested interests of elites prevent them from being included in the agreement. Third, natural resources are perceived as an economic issue that really lack urgency to resolve in the conflict resolution process. Or finally, concerns about a lack of technical expertise, time, or mandate to include robust provisions.

Now, let's look at a couple of examples. Natural resources played multiple roles in the Colombia conflict and are actually extensively reflected in the peace agreement. It's a precedent-setting agreement, which includes provisions around water, access to land, extractives, agriculture, sustainable development, territorial planning, women's empowerment, and reconciliation. If you compare that to Angola, where diamonds and oil financed the conflict, neither commodity was included in the final peace accord from 2002. In both Sierra Leone and Liberia, where natural resources played a key role in conflict financing, only weak provisions were really included in the peace agreement. In fact, in Sierra Leone, the rebel leader Foday Sankoh was appointed to lead the Commission for the Management of Strategic Mineral Resources, placing him in de facto control of the diamond sector.

So, what are the areas where provisions on natural resources are often sought? Well, there are four key areas: first, access and ownership of natural resources including land; second, allocation access and ownership to manage and develop those resources; third, sharing of natural resource revenues and benefits; and finally, confidence-building measures.

Now, provisions around natural resources in peace agreements can either be direct provisions (for example, wealth-sharing provisions, which specifically mention the resource) or indirect provisions (for example, establishing broad governance reforms that include a mandate which cover natural resources, such as the case in Liberia). In 2012, the UN Environment and the UN Department of Political Affairs teamed up to explore lessons learned and best practices in addressing natural resources in peace agreements. Now, this process was precedent-setting in that it involved 40 mediation practitioners and considered extractive resources, land, and water.

So, the following sections of this chapter will discuss five of the key lessons learned in this process. So, lesson one: address natural resources in a manner suited to their role in the conflict. Ideally there are three basic categories where provisions around natural resources should be included:

1. First, if natural resources were central to the conflict, provisions should address resource ownership, access, and/or management. For example, in the Guatemalan conflict, land was a key driver, and there are extensive provisions around land in the Guatemala Peace Agreement.
2. Second, if resources have helped finance armed groups, provisions should really limit access to resource revenues and include transparency safeguards.
3. Finally, if resources were damaged by the conflict, provisions should include environmental assessments, restoration, and compensation for the damage or access to alternative livelihoods. And there's an example in the DRC peace agreement that included compensation for environmental damage.

The second lesson is really to use the potential benefits from natural resources as an incentive to keep parties at the table. So, the economic prospects associated with natural resources can really be used as an incentive to keep negotiations going when they slow down or risk being derailed. Part of the challenge is to really help the parties see natural resources as part of a future economic vision. Another strategy is to help parties recognize the lost economic opportunity associated with a return to conflict. So natural resources should really be used as an opportunity for confidence-building measures and for exploiting the mutual benefits of peace.

The third lesson is really to establish mechanisms and institutions to address natural resources in the future. Now, natural resource issues and conflicts often require solutions that are too complex, too comprehensive, or long-term to be fully addressed in any peace agreement. So accordingly, peace agreements can really create the governance or legal framework that will in turn address natural resources in the future. New legal frameworks are constitutions, land trusts, or resource funds... There are a lot of options to lay the foundation for addressing natural resources in the future. In developing these future options, it's really important to think about the institutional mechanisms that are needed on an interim basis in the early post-conflict period as well as what is needed for the longer term. It's important to think about issues around safeguards to ensure transparency, accountability, benefit sharing, public participation in decision-making

including how can women's perspectives be included in the discussions and in negotiations and reflected in any future institutions and processes.

Lesson four: one technique that can be used is to establish a technical track on natural resources within a broader political negotiation. So, for example, a mediation process for a peace agreement can establish a technical table to deal with a specific natural resource in parallel to the main political negotiation. These parallel technical tracks can address natural resources; they can involve external experts; and they can explore different scenarios. But it's really important that these technical tracks be linked to the main political negotiations to ensure political acceptance of any kind of resource deal that comes out of a technical track.

The fifth lesson is to design wealth and benefit sharing provisions that will support confidence building going forward. It's really important to establish provisions that are clear around the sharing of natural resource revenues and their benefits. Now, revenues may need to be shared at different government levels and the provisions must address this accordingly (for example, sharing between the central versus local governments, or sharing between resource rich and resource poor regions, or sharing between different groups).

Now, there's a few fundamental questions when designing wealth sharing provisions. First, who will issue the resource contracts and who will collect the revenues? Second, who should receive the resource revenues and in what proportion? Third, how will monitoring be done and transparency assured? And it is also essential to think through the distribution of benefits between men and women and between specific groups that are often marginalized from decision making.

Now, apart from revenue sharing, addressing the shared environmental threats or the joint development of natural resources can also act as an early confidence-building measure that can generate trust between the parties that is needed to tackle other issues during the implementation of the peace agreement.

So, in conclusion, the issue of natural resources is both part of the backward-looking function of the peace process that addresses the cause of past disputes and the forward-looking function that shaped a vision of a new society. As peace agreements can play an important role in post-conflict economic recovery, the way that natural resources are managed from the outset can have an important implication for livelihoods, economic development, and confidence in the peace process. On the other hand, an economy that perpetuates economic inequality and elite capture of key resources can undermine and complicate the task of building peace. For more assistance on this issue, the UN Department of Political Affairs runs a standby team of mediation experts that have experience on issues such as natural resources, gender, transitional justice, and peace process design. UN Environment is also available upon request by governments to provide impartial technical expertise on natural resources that can support a peace mediation process.

### 3.13 WRAP-UP OF MODULE 3 (LECTURER: CARL BRUCH)

This module has covered the risks and opportunities presented by natural resources and the environment during armed conflict. First, we covered how natural resources and environment are affected by armed conflict and how they affect ongoing armed conflict. We also explored some tools that can help prevent damage to the environment and address conflict resources and end armed conflict.

The story of environmental damage during armed conflict and the protection of the environment is an old one. Someone invents a new weapon or finds a new way to fight war, which causes damage to the environment. And then there's a response that seeks to prevent such harm in the future. Someone finds new ways to finance armed conflict using natural resources, and the international community and countries adopt measures to fight conflict resources. This has been so since biblical times. For example in Deuteronomy, the Old Testament commands, "the trees of the fields are not your enemies that you should besiege them," and in the book of Joshua we see parameters that set forth when it's permissible to pillage during armed conflict.

The technological revolutions of the 20<sup>th</sup> century brought about new horrors of war – from chemical weapons to the widespread use of defoliants to efforts to manipulate the weather. We now know that armed conflicts affect natural resources in the environment through three main pathways: direct impacts, including those associated with specific weapons and tactics; secondary impacts, including those from coping strategies and conflict resources; and the breakdown of environmental governance and social relationships. These new horrors generated new international law that sought to prevent and minimize further such harm. This was the genesis, for example, of the Environmental Modification Convention and the two additional protocols to the Geneva Conventions.

Moreover, this growing attention to legal protections beyond international humanitarian law that draw upon international criminal law, international environmental law, and international human rights law to protect the environment during armed conflict. We've seen, though, that is not enough to lay down international law. In many instances, there is a persistent implementation and enforcement gap. Some of this relates to the content of the law, which is relatively weak when it comes to controlling actions in non-international armed conflicts. This is problematic because most of the ongoing armed conflicts are civil wars.

That said, over the past thirty years, there's been a substantial expansion and measures to implement and enforce international law and to take other measures to protect the environment and natural resources during armed conflict. These efforts extend beyond traditional regulatory efforts. Given the substantial role that international trade plays in creating demand for diamonds, timber, and minerals that can serve as conflict resources, a growing number of efforts use that very context of international trade and consumer demand to fight the use of natural resource revenues to finance armed conflict. Increasingly, these measures focus on preventing wanton harm to the environment and natural resources during armed conflict rather than responding to damage after the fact.

There are diverse actors who are driving the emphasis on implementation and enforcement. States and their militaries are certainly key, but so are numerous UN bodies, regional bodies, the private sector, and nongovernmental organizations. There's also growing awareness of the importance to address natural resources and peace agreements in ending armed conflict.

As we close this module, it's safe to say that more remains to be done. But it's also equally important to recognize how far we've come in trying to prevent wanton damage to the environment and natural resources during armed conflict and capitalizing on the peacemaking opportunities of natural resources and the environment.

## MODULE 4: POST-CONFLICT ENVIRONMENTAL PEACEBUILDING

### READINGS

Natural Resources and Post-Conflict Assessment, Remediation, Restoration, and Reconstruction: Lessons and Emerging Issues (2012) (pp. 411-423)

The Role of Natural Resources in Disarmament, Demobilization Reintegration: Addressing Risks and Seizing Opportunities (2013) (pp. 8-10, 26-34)

Lessons Learned: Managing Natural Resources for Livelihoods: Helping Post-Conflict Communities Survive and Thrive (2015) (pp. 394-412, 433-447)

Transboundary Cooperation in the Lower Jordan River Basin (2014) (7pp)

Natural Resources and Post-Conflict Governance: Building a Sustainable Peace (2016) (pp. 1-10)

Facilitating Peace or Fueling Conflict? Lessons in Post-Conflict Governance and Natural Resource Management (2016) (pp. 958-960, 1016-1024)

Women and Natural Resources: Unlocking the Peacebuilding Potential (2013) (pp. 7-8, 32-45)

Natural Resources and Post-Conflict Assessment, Remediation, Restoration, and Reconstruction: Lessons and Emerging Issues (2012) (pp. 433-443)

Wadi El Ku Final Report for Phase 1 (2017) (pp. 6-11)

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### OPTIONAL READINGS

Environmental Priorities in Post-Conflict Recovery: Efficacy of the Needs-Assessment Process (2016)

Scientific Assessment of the Long-term Environmental Consequences of War (2000)

"Harnessing Water Management for More Effective Peacebuilding: Lessons Learned," in Water and Post-Conflict Peacebuilding (2014)

"Lessons Learned in Land Tenure and Natural Resource Management in Post-Conflict Societies," in Land and Post-Conflict Peacebuilding (2013)

"Building or Spoiling Peace? Lessons from the Management of High-Value Natural Resources," in High-Value Natural Resources and Post-Conflict Peacebuilding (2012)

Encouraging Peace-building through Better Environmental and Natural Resource Management (2013)

Relationships and Resources Environmental Governance for Peacebuilding and Resilient Livelihoods in Sudan (2014)

Investing in Stability: Can Extractive-Sector Development Help Build Peace? (2015)

Resource Governance Index (2017)

Toward Sustainable Peace: A New Research Agenda for Post-Conflict Natural Resource Management (2017)

Addressing Conflict through Collective Action in Natural Resource Management (2017)

Resource Conflict, Collective Action, and Resilience--An Analytical Framework (2013)

A Global Assessment of Community Based Natural Resource Management -- Addressing the Critical Challenges of the Rural Sector (2013)

Environmental Mechanics: Re-Imagining Post-Conflict Environmental Assistance (2015)

A Framework Approach to Shared Use of Mining-Related Infrastructure (2014)

Democratic Dialogue Handbook (2007)

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## TOOLKITS & GUIDES

UNDG Guide to Addressing Natural Resources in Post-Conflict Transitional Settings (2013)

UNDG Guidance Note on Conducting a Conflict and Development Analysis (2016)

The EITI Standard (2016)

Voluntary Guidelines on the Responsible Governance of Tenure (2012)

Natural Resource Charter (2nd edition, 2014)

Land Use Planning Concept, Tools and Applications (2011)

EI Source Book (2017)

Livelihoods and Economic Recovery in Crisis Situations (2013)

Mining Contracts: How to Read and Understand Them (2015)

## 4.1 INTRODUCTION TO MODULE 4 (LECTURER: ERIKA WEINTHAL)

Hello. I'm Erika Weinthal. I'm a Professor of Environmental Policy at the Nicholas School of the Environment at Duke University. I specialize in global environmental politics and environmental security with a particular emphasis on water and energy. My research has focused on water and energy in the Middle East, in Central Asia, and in East Africa.

This module examines the different ways in which natural resources and the environment can directly support the core post-conflict peacebuilding priorities, which include helping to ensure security, rebuild livelihoods, foster economic recovery, restore governance, and rebuild trust.

In particular, chapters will explore topics such as the different role of renewable and nonrenewable resources for recovery; how natural resources can be strategically used as an entry point for fostering dialogue; building confidence and cooperation among adversaries.

Other chapters will look at different strategies and tools for managing natural resources in the environment to support post-conflict recovery, build sustainable livelihoods. Chapters will look at the importance of assessments, spatial mapping, and gender-sensitive approaches, and we will use case studies to highlight the importance of rebuilding governance mechanisms and institutional capacity. Thank you!



## 4.2 ENVIRONMENT AND NATURAL RESOURCES IN POST-CONFLICT ASSESSMENTS (LECTURER: DAVID JENSEN)

Hi everyone. Today's chapter focuses on assessments, and it really explores the kinds of assessments that can be conducted to inform post-conflict priorities and programs around natural resources and the environment. These assessments are absolutely essential to understand how natural resources were impacted by the conflict and how they can effectively support post-conflict recovery in peacebuilding. The natural tendency of most people is to want to rush into a post-conflict situation and try to provide help as soon as possible, but the best and most efficient way to do this is on the basis of a structured assessment.

So, why are assessments important? Well, in general, assessments provide three main benefits. First, they really help build a common understanding of the conflict impacts and needs. Second, they support an evidence base for priority setting and decision-making. And third, they act as a baseline against which the impact of programs can be measured.

The results of an assessment can be used in three ways; first, to define national priorities and determine the financing required for post-conflict relief, recovery, and peacebuilding; second, to build local and international awareness as well as political will for action; and third, to design and implement projects and programs at the local level.

Let's start with recovery and peacebuilding assessments. An RPA is really used to define, prioritize, and cost the needs of a post-conflict country. These assessments really help the international community and the country to jointly identify and finance a shared strategy for post-conflict recovery. The general process includes five key components: first of all, a scoping mission to agree on the methodology for the assessment; second of all, an analysis of the drivers of conflict; third, an assessment of the impacts of conflict; fourth, an estimation of recovery priorities; and finally, a strategy for implementation and financing. An RPA often concludes with a pledging conference to raise funds for recovery and peacebuilding efforts.

Now, UN Environment has been responsible for assessing environmental recovery and natural resource management needs in the majority of UN needs assessments since about 1999. First generation needs assessments often included environment as a cross-cutting issue. The results of this approach is that environmental needs often got blended into larger secretary needs, and therefore, did not receive a dedicated budget in the final document. For example, in the 2003 post-conflict needs assessment for Iraq, environmental needs were treated as a cross-cutting issue only, and there was no dedicated budget for environment recovery in the final calculation.

Learning this lesson, we developed a second generation suite of needs assessments where we began to include specific and costed sections for environment and natural resources. So, in the latest recovery and peacebuilding assessment that was conducted by the UN and World Bank for the conflict-affected regions of eastern Ukraine in 2014, a costed budget of 30 million dollars was included in the final costing table for environmental recovery needs based on the fieldwork we conducted. And this budget covered further technical assessments, risk monitoring, rehabilitation of protected areas, combating environmental crime, and strengthening environmental emergency response capacities.

Recovery and peacebuilding assessments are not the only assessment process in our toolkit. RPAs cover multiple sectors and provide an overview of national needs, but more granular information is often needed to inform the design of recovery programs. Therefore post-conflict

environmental assessments evaluate the status of the environment and natural resources in much more detail. They look at key risks and opportunities from natural resources, both renewable and nonrenewable, to support peacebuilding. They can take a national scope or focus on a specific region or theme.

Since 1999, UN Environment has conducted post-conflict environmental assessments in over 20 countries and has used these assessments to raise over 200 million dollars for environmental recovery and capacity-building programs. Perhaps the most dramatic assessment findings came from Gaza. The 2009 assessment revealed that groundwater supplies used by 1.5 million Palestinians for drinking and agriculture were in danger of collapse. Pollution levels were so high that infants in the Gaza Strip were at risk from nitrate poisoning, causing a condition called blue baby syndrome.

So what is the scope of a post-conflict environmental assessment? Direct impacts to the environment from military operations during the conduct of conflict, secondary impacts resulting from the coping strategies used by local populations, and the governance impacts arising when conflict causes a disruption of state institutions and the breakdown of social relations.

By assessing these three impact pathways, post-conflict environmental assessments can identify three kinds of risk: first, risks to human health, typically from chemical contamination and pollution; second, risks to livelihoods from the degradation of natural resources or a breakdown in their governance; and finally, security risks linked to conflict resources or to increased vulnerability to natural hazards and climate change.

Increasingly, post-conflict environmental assessments also address forward-looking and positive opportunities for natural resources to support peacebuilding: in particular, economic recovery and job creation; reintegration of ex-combatants and security sector reform; empowerment of women or marginalized groups; restoring livelihoods and building resilience; or rebuilding state institutions, governance mechanisms, and inclusive political processes.

So, who conducts assessments? Well, typically post-conflict environmental assessments are conducted and coordinated by the national environmental authority; however, there are three cases where the UN might be requested to conduct the assessment. These include where damaged natural resources may be politicized and where an impartial study is needed; where there are potential transboundary impacts; or, where a national government lacks the capacity to conduct a robust assessment by itself.

At the outset of an assessment, it's also important to clarify the following: who owns and who is responsible for the assessment findings; what is the process for public consultation, final review, and signoff; what is the decision-making process that the assessment is meant to influence or inform; and how will the findings be communicated and monitored?

Post-conflict environmental assessments often vary in their time frame based on the needs of a specific situation. These typically depend on the duration of conflict, the location the types of weapons used, and the military technology. Irrespective of the time frame, post-conflict environmental assessments do follow a standard series of steps. We start with a scoping phase to prioritize areas and issues. We move into a field phase where we collect samples and conduct public consultations. We then move into a laboratory and analysis phase to take the samples and analyze them in the lab. Then a reporting phase, and then finally a follow-up phase to mobilize resources and implement projects. There are a variety of inputs that go into an assessment.

Today, assessments are multidisciplinary endeavors that rely on a mix of quantitative and qualitative data and tools. The approach is always customized to the specific context, needs, security situation, and logistical constraints. Now, by quantitative data we mean data that can be objectively measured and quantified. These include samples of air, soil, water, and vegetation that are analyzed in a laboratory; remote sensing of damaged areas; and also increasing use of drone technology; geographic information systems and analysis; and modeling of contamination plumes.

Now, by qualitative data we mean data that is more subjective and largely depends on the experiences, perceptions, opinions, and attitudes of people. In our toolkit we use surveys, focus group discussions, and key informant interviews. Now, historical and other sources of secondary data are also important for understanding baseline environmental conditions, and, in some cases, the very process of conducting the assessment can be used as an early stakeholder engagement and confidence-building tool.

I hope you are now convinced that the first step of any post-conflict recovery program is to conduct an assessment in order to have a firm evidence base upon which to set priorities, raise awareness, and mobilize political support for action.

### 4.3 RENEWABLE AND NONRENEWABLE RESOURCES FOR RECOVERY (LECTURER: ERIKA WEINTHAL)

This chapter highlights the importance for why post-conflict peacebuilding strategies need to address both renewable and nonrenewable resources. It also explores why these strategies need to take into account the potential risks and benefits streams from different resource opportunities.

In most post-conflict settings, there is variation in the types of renewable and nonrenewable natural resources that are important for restoring human well-being, building livelihoods, fostering economic recovery, and promoting security. Just take the Democratic Republic of Congo. It is home to half of Africa's forests and water resources. It is rich in biodiversity, has a large amount of different resources for mining such as gold, and also contains inland fisheries.

Natural resources can also be a primary source of employment. At least 70% of the labor force in Burundi, the Central African Republic, Cote d'Ivoire, and the Democratic Republic of Congo work in agriculture, fishing, or pastoralism. Specifically for countries with extractive resources, these resources are seen as an opportunity to kickstart economic growth, to create jobs, and generate revenue for the state. Mining has become a major focus in a number of post-conflict countries to help promote economic recovery, such as in Sierra Leone, and is a current focus of recovery efforts in Afghanistan.

Yet, they seldom live up to these expectations and should not be used as the only pathway out of fragility. The key point is not to neglect the renewable sector as it also provides opportunities for post-conflict recovery. Renewables should be addressed as livelihood restoration is linked to accessing these resources as is the provision of basic services, resolving identity-related disputes over land, and ensuring food security. And in many cases, the development of the extractive sector will take much longer because there is a need for large investments for large-scale infrastructure. As such, investments in water and livelihood resources may be quicker, and also generate important social welfare gains for the population, and also support for the government.

Just take the case of Iraq where after the war many policymakers were focusing on reviving the oil industry, but water is also critical for restoring livelihoods and ecosystem services for the marshland families in southern Iraq. The marshland population depends on the marshland sources for food, for livestock, for fisheries, transportation, and they use the reeds for housing.

Another case in which the renewable sector has mattered is in Aceh, which previously - under Indonesian rule - much of the timber and oil and fisheries were heavily exploited. Following the tsunami in Indonesia in 2004 and the end of the secessionist conflict in 2005, the Governor of Aceh worked with a number of NGOs and development partners to create Aceh Green, which is an initiative that would generate revenue and jobs by prioritizing renewable energy, growth. It would work to generate food and stable livelihoods.

In determining how to use renewable and nonrenewable resources, it is important to first look at their location and their different characteristics as this might help to determine how they may best be used and how they can be leveraged to support post-conflict peacebuilding. Thus there are a number of special considerations that I will discuss regarding both nonrenewable resources and renewable resources.

Let's start with nonrenewable resources. Nonrenewable resources can be very high-value, and they are important for generating government revenues. For example in Nigeria, oil revenues in

2011 were 60% higher than the total international aid to all of sub-Saharan Africa. Yet, these resources are finite. It is necessary, then, to think about how they can be used instead as a bridge to a more diversified economy that is reliant on renewable resources and services.

Nonrenewable resources can also complicate post-conflict peacebuilding efforts as different political groups often compete to control revenue streams and capture benefits. A focus on the extractive resources often generates short time horizons where policymakers and different actors are often concerned about generating as much revenue in the short-term as possible. And in combination, these risks can often undermine fragile institutions unless mechanisms to promote transparency and accountability are created at the outset.

Due to the scale of the revenue that is generated from nonrenewable natural resources, it is imperative to think about different ways to use these revenues as best to prevent conflict and promote better resource management. The first is to think about how to spend it, to spend it wisely on infrastructure and human development and education, for example. Another way is to save it to set up an endowment fund or a natural resource fund, which can benefit future generations. And a third way is to create a stabilization fund that will help to smooth out the impacts of fluctuations in commodity prices.

Let's look at some of the special considerations also for renewable resources. Where there is a need for quick impact projects, renewable resources such as land, agriculture, forests, and fisheries can be important. Yet here, too, one needs to think about long-term planning to ensure sustainability. One needs to build safeguards in to prevent such things as liquidating an entire forest.

There are also different capital requirements and timelines necessary to bring renewable natural resource projects online. While we often think that agriculture and fisheries may take only a few months to yield benefits, it may not be as easy as that. There are still investments needed in restoring fisheries, such as in Aceh, or for rebuilding irrigation networks as in Afghanistan. Renewable resources are also subject to natural fluctuation and are likely to be more impacted by climate change.

Another special consideration is that conflict over renewable resources occurs if stress over these resources are pushed by different economic, political, and security tensions. Policymakers need to pay attention to three important drivers of renewable resource conflict that include: competition over increasingly scarce renewable resources; they need to pay attention to poor governance of renewable natural resources and the environment; and they need to look at different transboundary natural resource dynamics and pressures such as when traditional livelihood practices or wildlife popular migrate across national borders.

Overall, it's important to have a strategy that addresses both renewables and nonrenewable resources in the short-term and in the long-term. It's important to think about how nonrenewable resources and the wealth generated can serve as a bridge to building out the renewable sector to provide longer-term and a more sustainable stream of livelihoods, wealth, and revenue. It's also important to consider how to set and manage expectations because unmet expectations are often a key driver of grievances.

Countries such as Nigeria and Angola that are both oil-rich are beginning to look at how they can use oil revenues to develop the agricultural sector and to foster economic diversification. Nigeria is also beginning to recognize the need to diversify through growing small and medium enterprises

and integrating them into the value chain of industrialization. In 2001, Sierra Leone launched a Diamond Area Community Development Fund as part of its post-conflict reform of the diamond sector. Here, Sierra Leone has used funds it receives from diamond exports and disperses them to the diamond-producing regions where funds can then be used for small-scale development projects such as education, health services, and community infrastructure.

There are a few other issues pertaining to economic diversification that need to be considered. Any economic recovery strategy that relies heavily on a single resource sector - whether renewable or nonrenewable - is highly vulnerable to shocks. A more diverse economy, instead, can resist shocks – that may be economic, climate, or disasters – more easily. Also, if a commodity fails, the country can have other commodities to fall back on. Thus, it's important to develop the manufacturing and service sectors, too.

A growing number of post-conflict countries including Sierra Leone and Liberia have sought to retain some of the raw materials such as wood to help develop manufacturing within their countries using these raw materials. These efforts to focus more broadly on adding value along the entire value chain can be challenging to implement, especially where domestic capacity is limited. Thus, there is also a need to build out domestic capacity in both the renewable and nonrenewable sectors.

Ultimately, a blended approach to developing countries' natural assets should include these main pillars. These pillars include: building the institutions and good governance of the resource sector; developing infrastructure that can be shared with other economic sectors, such as the extractive sector with the agricultural sector; ensuring robust fiscal policy and competitiveness; supporting local employment and value chains; deciding how to share and spend a resource windfall wisely; and thinking about how to transform resource wealth into broader economic development and diversification. They need to think about how to leverage nonrenewable resources to expand the renewable sector, expand agriculture, and foster economic diversification.

#### 4.4 NATURAL RESOURCES IN SECURITY AND STABILIZATION (LECTURER: DAVID JENSEN)

Welcome to this chapter. Today, we're going to examine how post-conflict security and stabilization programs often interact with natural resources. Now, this is an extremely broad and complex topic; so much of the detail depends on the nature of the conflict, the final peace agreement, and whether international peacekeeping assistance has been deployed. Of course, even in armed conflicts where natural resources played absolutely no role, specific issues need to be thought through as security is restored, ex-combatants are demobilized, and as people return to their homes and settlements. So, let's get started.

Now, as a post-conflict actor working on security and stabilization, it really goes without saying that your first job is to understand the post-conflict political framework. Specifically, you need to identify the security and stabilization elements in the following key documents: the peace agreement and provisions linked to ceasefire and the demobilization of ex-combatants; UN Security Council sanctions and specific interdictions against natural resources; the UN peacekeeping mandate and, in particular, how UN peacekeeping troops will assist in security operations and in the demobilization of ex-combatants; review also the security chapter of the Peacebuilding and Recovery Assessment, and any specific assessments around demining and unexploded ordnance.

Across these different documents, there are typically five important security and stabilization operations that have direct links to natural resources. So, let's explore each of these in more detail. First, securing or restoring control over areas containing high-value natural resources and also preventing environmental crimes. Now, depending on the conflict context, many areas rich in natural resources may have been occupied by armed groups or criminal elements, and one of the first priorities is to secure these areas and restore government control over them in order to cut any potential opportunities for conflict financing or illegal resource extraction.

UN peacekeeping troops are often mandated to provide assistance. For example, in the Democratic Republic of Congo in 2009, the UN peacekeeping mission began assisting the Congolese Army in a military operation, which aimed to dislodge armed rebel groups from a number of mining sites, and, in doing so, diminishing their financial resource base. The three major operations succeeded in establishing control of the mining sites by the national army and in securing the mineral resources. But there was a significant cost, and we'll discuss that in a few minutes.

In many post-conflict situations, it can also be very important to secure other high-value natural resource areas to prevent against possible looting and illegal extraction in the future. A good example comes from the post-conflict situation in Liberia; with a post-conflict unemployment rate of 88 percent, two rubber plantations were illegally occupied by over 2,500 former combatants. They began illegal rubber tapping and mining in the plantations. A concerted security effort was needed by UN peacekeeping troops and local authorities to remove the ex-combatants and to offer them alternative livelihoods.

There are also important risks that must be taken into account when armed groups suddenly leave resource-rich areas. In the case of Colombia, for example, FARC soldiers are demobilizing into containment camps and releasing their grip over drug cultivation and mining areas. But the security vacuum is now being taken up by other armed groups such as the ELN as well as by criminal groups, the BACRIM.

The second major security operation involves ongoing monitoring of security incidences and also offering dialogue and mediation support. So, as the basic safety and security is restored to any post-conflict country, it's really important to establish programs that can continue to monitor the outbreak of localized violence and rapidly deploy conflict management tools such as dialogue or mediation support. Conflict incidence monitoring should include detailed information on the drivers of conflict in each case, including where land or natural resources played a key role. All UN peacekeeping operations work in collaboration with national counterparts to constantly monitor the security situation through the collection of field intelligence as well as remote sensing data from satellites and other forms of aerial surveillance. This information is managed by the Joint Mission Analysis Center or JMAC.

The civil affairs side of many peacekeeping operations also offers dialogue and mediation support to help deescalate intercommunal conflicts over land and other natural resources. For example, the peacekeeping missions in Sudan, Cote d'Ivoire, and Chad all became directly involved in supporting dialogue and conflict resolution processes between different farming and herding communities over access to land and other natural resources. And some peacekeeping missions, such as in Liberia, Darfur, and Lebanon have also used quick impact projects involving natural resources as a way to engage with local communities and build good will towards the peacekeeping mission itself.

The third major security operation involves initiating de-mining campaigns and clearing unexploded ordnance. Now some people might not immediately see the link between de-mining and natural resources, but where landmines are used, they often fundamentally block or deny access to resource-rich areas such as farming plots. As a result, restoring agricultural livelihoods often requires as a first step, the clearing of land mines and unexploded ordnance.

And one of the key lessons learned here is the need for very careful planning of de-mining operations, especially where land has not been used for extended periods of time and where land title is no longer clear. De-mining often opens up very valuable land, which might be grabbed by elite actors or foreign interests if land title and tenure is not considered in advance, using a community-based process. Now, Cambodia pioneered an approach that engaged communities in prioritizing which lands to de-mine first, enabling a common understanding about whose land it was and how the land would be used.

The fourth major security operation is about designing and implementing disarmament, demobilization, and reintegration programs for ex-combatants, otherwise known as DDR. Now DDR is a process that contributes to security and stability in a post-conflict recovery context by removing weapons from the hands of combatants, by taking the combatants out of military structures, and by helping them to integrate socially and economically into society by finding civilian livelihoods.

In a study of peace agreements over the last 20 years, the successful demobilization and reintegration of ex-combatants was identified as one of the single most important accomplishments for the successful implementation of the peace agreement. Natural resources are extremely important for the success of DDR programs. Between 50 to 80 percent of all ex-combatants return to agriculture, meaning access to land and natural resources are critical for their resettlement and successful reintegration.



Now in terms of job opportunities, natural resources provide a range of potential options. For example: reforestation; rehabilitation of ecosystems; renewable energy programs; green job creation; support for value chain developments in agriculture or forestry products; mine action; an incorporation of ex-combatants into quick impact projects on natural resources related to the reconstruction or rehabilitation of infrastructure. The fifth and final security operation links back to security sector reform.

Now security sector reform, or SSR, includes activities undertaken by a nation and its partners to improve the way it provides safety, security, and justice to its citizens in an accountable manner. SSR programs may connect directly to natural resources where national elements of the security force became involved in the illegal extraction of natural resources during the conflict. If we go back to our example from DRC, although the UN Peacekeeping Mission helped the National Army retake control of the different mining sites, there was a major unintended consequence. Certain units within the National Army began exploiting the minerals themselves in defiance of national law.

So, in such contexts, security sector reform programs should incorporate elements relating to natural resources exploitation; training programs for security forces should include clear guidelines and instructions prohibiting members of the armed forces from exploiting natural resources; and vetting procedures should exclude from the security forces individuals known to have engaged or ordered the illicit exploitation or trade of natural resources.

In conclusion, we've gone through a rather quick overview of the different ways that natural resources connect to post-conflict security and stabilization. As noted, these linkages will always be extremely context-specific as well as politically sensitive, especially where conflict resources were involved. Thank you.

#### 4.5 RESTORING LIVELIHOODS AND BUILDING RESILIENCE (LECTURER: ERIKA WEINTHAL)

This chapter highlights the importance of restoring livelihoods and building resilience in post-conflict environments. Specifically, this chapter discusses strategies for how to support sustainable recovery and livelihoods in post-conflict environments. Livelihoods are the resources people need to survive and the process by which they obtain and utilize those resources. Livelihood resources may include charcoal, wildlife, and fisheries.

For livelihoods to support peacebuilding efforts, they must be resilient. They need to be able to recover from environmental stresses and adapt to potential environmental shocks. Designing resilient livelihoods is thus one aspect of the post-conflict phase that includes rebuilding economies and governance mechanisms as well as alleviating poverty. Ensuring food security, supporting the reintegration of ex-combatants, and providing peace dividends are also important reasons for establishing sustainable and resilient livelihoods.

Conflict can take a heavy toll on peoples' livelihoods by affecting the availability of land, trees, and other resources that are needed for peoples' everyday well-being, economic well-being, and for their food security. During conflict natural resources may be destroyed or overly exploited; in addition, conflict can destroy the physical infrastructure and governance mechanisms needed to support economic development and livelihood. Moreover, conflict can also result in the depletion of natural resource reserves in regions where people displaced by the conflict flee.

As such, there is a need to look at the impact of conflict on livelihoods as a first step in rebuilding resilient and sustainable livelihoods. Since sixty to eighty percent of livelihoods rely on agriculture and natural resources in post-conflict countries, conflicts which impact natural resources directly affect livelihoods. As such, restoring livelihoods must deal with the impact of conflict on the environment and natural resources and devise policies to manage the resources on which people rely to sustain themselves over the long-term.

In building sustainable and resilient livelihoods, it's important to look first at the agricultural sector. Studies have found that, on average, conflict leads to production losses of 12% and slows agricultural growth by 3% per year. Syria is a case in point where prior to the conflict in Syria there was a vibrant agricultural economy. Wheat production is 40 percent lower now than pre-crisis levels. As such, conflict can have long-term impacts on the agricultural sector, which has tremendous impacts for human well-being, food security, and long-term human development.

Another place where we see the impacts of conflict on livelihoods is Wajir County of Kenya. This is part of the arid lands of Kenya which borders Somalia to the east and Ethiopia to the north. This region has experienced inter-communal conflict among different clans in 2014. The main challenge for this region is the development of water as it is a water-scarce region. Localized conflict linked to scarcity of pasture and water compounded by internal migration are placing increasing pressure on watering points. That 69 percent of households have experienced reduced access to food due to local conflict illustrates the influence on livelihoods in this part of the world.

When a household is unable to provide for itself through traditional livelihood strategies, it may need to adopt a maladaptive or coping livelihood strategy. Often these strategies are considered to be inferior to traditional livelihood strategies because they can devastate the environment if many individuals within the community pursue the same coping strategy during times of difficulty. An example of a maladaptive coping strategy is the cutting down of productive trees such as the

pistachio orchards in Afghanistan that have been used for firewood. Because coping strategies are not sustainable over the long term, the key challenge, then, after conflict is to move from coping to rebuilding livelihood strategies that are sustainable and resilient to future stresses.

Introducing a sustainable livelihoods approach is critical. A sustainable livelihood approach uses livelihoods as a lens through which to consider peacebuilding objectives and tactics to best support both people and the environment over the long-term. A number of factors will determine a household's resilience and ability to absorb distress and shock, which accompanies conflict, without turning to violence. As such, in building a sustainable livelihoods approach and fostering resilience, we need to look at the type of assets available to households, which range from physical assets; to social assets; financial and economic assets; as well as natural resources.

And, in addition, we need to look at the institution's policies and processes that can influence a household's assets and the resilience of the livelihoods of those who live there. The Afghanistan Conservation Corps has had a number of successes, including the rehabilitation of fruit and forestry nurseries as well as the establishment of more than eight hundred orchards and home nurseries in different provinces throughout Afghanistan.

Another way to support sustainable livelihoods can come from market-based approaches, especially from the use of a value chain approach. A value chain refers to the social and economic relationships that would take a product or service from its supply source to the consumer. Using a value-chain approach to peacebuilding means a focus is placed on identifying essential value chains within a community and supporting individual livelihoods as part of a longer value chain that is to ensure economic opportunities at the local level that are environmentally and socially sustainable. More so, it means creating mutually beneficial social and economic relationships among a wide array of actors, including individuals, private entities, government bodies, and communities.

Recently, we are seeing value chain approaches being introduced into peacebuilding efforts. Some of the basic elements promoted in a value chain approach include having a participatory process, focusing on market demand and making sure a sector has a potential to enter into a market, and having a flexible process that can be adapted to specific conditions within a country.

If we look specifically at Colombia's BioTrade program, this program is focusing on livelihoods as a means of combating long-standing conflict in the country. It is contributing to the peace process by developing local businesses so that citizens have an alternative to the production of illicit crops. As such, it has focused on the building of sustainable agricultural systems for medicinal plants, fruits, grains, and other products. It has nurtured non-timber forest products such as fruits and flowers, fibers, and honey. It has also sought to promote ecotourism. The program focuses on sustainable rural development, and, as such, it has generated a number of social and environmental economic benefits that have been helpful for lifting individuals out of poverty. Moreover, it demonstrates the importance of a sustainable livelihoods approach for post-conflict peacebuilding by giving Colombians jobs or livelihoods based in sustainable markets and developing the capacity of the government to support and protect sustainable livelihood initiatives.

An example comes from Afghanistan with the creation of the Afghan Conservation Corps. In Afghanistan, 80% of the rural population directly relies on natural resources for livelihoods. The Afghan Conservation Corps program was funded by the US government and managed by the United Nations. It works with government agencies in Afghanistan and local communities to conserve Afghanistan's biodiversity while also focusing on improving rural livelihoods and building

capacity to restore and manage forests, rangelands, and watersheds sustainably. It has generated numerous benefits, especially for providing work for vulnerable local residents, including work for returning refugees, internally displaced persons, women, and ex-combatants.

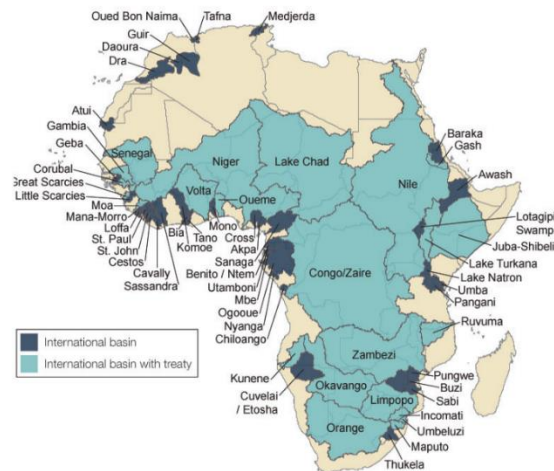
To conclude, this chapter has looked at the importance of restoring sustainable and resilient livelihoods with a particular focus on the agricultural sector. Sustainable livelihoods and other initiatives such as value chain approaches are vital for restoring livelihoods and building resilience in the aftermath of conflict. They provide an important tool for restoring livelihood resources that are also essential for peacebuilding. Thank you.

## 4.6 RESOURCES AS ENTRY POINTS FOR DIALOGUE AND COOPERATION (LECTURER: ERIKA WEINTHAL)

This chapter looks at the role of natural resources and the environment as an entry point at war's end for fostering cooperation among states and also among communities. At the same time that the environment and natural resources have contributed to the underlying causes of conflict and have also helped to prolong conflict in many situations, a focus on natural resources and the environment can help us to demonstrate shared interests, to foster communication, and rebuild trust and confidence in both the post-conflict peacebuilding process and also in state institutions.

What do we mean by cooperation? Cooperation occurs when two or more parties work together toward a common purpose or mutual benefit. Cooperation over natural resources can thus be an effective way to build mutual trust and promote reconciliation. Natural resources are often shared, and because they are shared, it means that different actors, be it states or communities, are all dependent upon the same natural resource. Even when communities or states have political differences, they may depend upon resources such as water, land, forest, or wildlife.

Often, shared resources will cross political and social boundaries, and, as such, create a form of resource dependence. There are also shared interests that emerge in addressing environmental threats, such as threats from floods, erosion, drought, pollution, or invasive species. These shared interests in addressing environmental threats also demand cooperation. If you just look at a map of international rivers, you will see that the political borders do not comport with the physical borders of a river basin: just take the Nile River Basin, which is shared by 11 states, including the newest member of the international community of nation-states, South Sudan. Other international rivers include the Jordan River Basin and the Indus River Basin in South Asia.



Forests that are important for conservation and the protection of biodiversity will also often cross political borders and require cooperation for their management and the protection of wildlife corridors. Natural resources and the environment provide an opportunity also for reconciliation at the local level and provide a critical entry point here. They can unite communities around issues such as clean water, resources for livelihoods, and the promotion of a healthy environment.

In particular, the provision of safe water is among the highest priorities for post-conflict recovery and also important for livelihoods recovery. Water is a resource critical for rebuilding trust and relationships among communities impacted by violence.

Just take the case from eastern Congo: the second Congo war took place from 1998 to 2003. During this war, the piped water system that was built by the government fell into disrepair as many villagers fled and sought refuge elsewhere. When villagers began to return to eastern Congo, because there was a lack of clean drinking water, there was also a high incidence, then, of cholera.

In order to address this need for drinking water, women in particular here played a leadership role. This was a real window of opportunity to use water as a mechanism for reconciliation. As women identified the rehabilitation of water as one of the highest priorities, they became the primary advocates for clean water for their households. But to attain this water, they had to access water upstream but needed first to resolve the conflict between two villages in the eastern Congo. And here, women were able to use water for dialogue and reconciliation.

There are a number of ways in which natural resources and the environment can also foster dialogue and cooperation. They can help provide an incentive for peace; they can help foster technical cooperation; they can help promote a common vision and joint strategy to improve livelihoods; and they can be useful for joint management and benefit-sharing. And I will walk you through each of these very briefly.

Natural resources and the environment can provide an incentive for peace because they can help to bring about an end to conflict. In the case of Myanmar, where you had a conflict between the government and ethnic armies, natural resources were addressed in peace agreements. Beginning in 1989 into the mid-1990s, the government began to negotiate a series of ceasefires and peace agreements with different ethnic groups.

But in these peace agreements, they also included natural resource provisions, so many of the ceasefires that were negotiated were motivated by the joint desire to extract natural resources. The environment and natural resources can serve as an entry point in rebuilding scientific cooperation. With the Israel-Jordan Peace Treaty in 1994, a joint water committee was established that has played a critical role in using science and technical cooperation as a mechanism for strengthening trust and confidence among former adversaries.

Water has served as a catalyst for fostering dialogue and building confidence in the Sava River Basin. Following the dissolution of Yugoslavia, the first main cooperative effort among the new states was the creation of a treaty to manage the Sava River, and this treaty then led to other efforts to develop Balkan platforms for cooperation.

Natural resources and the environment can also help states to develop a common vision and a joint strategy to improve livelihoods. A catchment management project in Wadi El Ku in North Darfur provides an example of how the international community worked with the government of North Darfur, with NGOs, and civil society to devise a program to reduce vulnerability to water-related hazards such as droughts and floods and that helped to foster livelihoods.

Another example in which natural resources can foster dialogue and cooperation concerns managing resources to demonstrate shared benefits. Peace parks here provide another illustrative example. One peace park is the Cordillera del Condor region between Ecuador and Peru, but even recently is the nascent Peace Park in the Balkans between Albania and Kosovo and Montenegro, which is working to bring together communities to identify shared interests along their borders.

These peace parks provide a framework for collaboration in a historically conflicted border area. It allows different actors, be it mayors, government ministries, and local NGOs, to work together to protect their traditional cultural heritage. Some of the outcomes of working on this proposed peace park has been that it is also helped to generate jobs for different members of the local community but also for scientists and engineers, especially in the area of water resource management.

There are a number of ways, too, in which natural resources and the environment can foster dialogue and cooperation. Ones that we have looked at in this chapter include: providing an incentive for peace; helping to foster technical cooperation; helping states and communities to develop a common vision and a joint strategy to improve livelihoods; and also highlighting the need for joint management and benefits sharing in conflict-affected countries. Thank you.

## 4.7 CASE STUDY: COOPERATION AROUND SHARED WATER IN THE JORDAN RIVER (LECTURER: ERIKA WEINTHAL)

International rivers are often a source of conflict, but with proper resource management, they can be used as a way to foster cooperation and build trust and confidence between adversaries. Today there are 276 river basins that flow between two or more states. The focus of this case study is the Jordan River, which flows through Lebanon, Syria, Israel, Palestine, and Jordan.

These five political entities are considered riparians to the river basin. The Jordan River is often linked to the broader Israel Palestine conflict surrounding groundwater resources. I'm going to focus on the Jordan River simply as an international river. Let's begin with some geography.

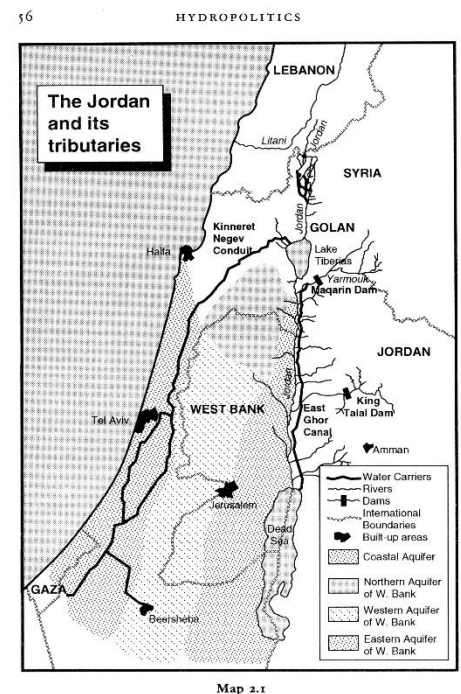
When we look at an international river, we often talk about a river as upstream and downstream or as a contiguous river. The headwaters of the Jordan originate from three rivers: the Dan, the Banias, and the Hasbani. These tributaries merge and flow into the Sea of Galilee, which is also known as Lake Tiberias and the Kinneret. From there, the Jordan River leaves the Sea of Galilee, and more water enters from the Yarmouk River below the Sea of Galilee.

What is known as the Lower Jordan then continues flowing south toward the Dead Sea. The Jordan River holds significant importance for many religions, but specifically for the Christians, it is where John the Baptist is known to have baptized Jesus, and it is recognized as the start of his ministry. It has also been an extremely important food source, and agriculture along its banks has been responsible for not only food but livelihoods.

There has been a long history over the 20th century of trying to develop a water sharing strategy for the entire water basin. As early as 1913, the Ottoman Commission proposed a plan for the intended irrigation of the Jordan River. This plan would have utilized the Yarmouk River for both irrigation and power development. Efforts collapsed, however, with the outbreak of World War I and the demise of the Ottoman Empire.

With the collapse of the Ottoman Empire, parts of what include the Jordan River Basin came the British administration, known as the British Mandate of Palestine that took place from 1920 to 1948. This included what is now known as Israel, Jordan, the West Bank, and Gaza. It is important to also note that in 1923 Britain granted limited autonomy to Trans-Jordan, which later became Jordan. In November 1947, the UN General Assembly approved the partition plan that created the state of Israel.

When the British pulled out of Palestine in May 1948, the First Arab-Israeli War erupted. A UN-brokered ceasefire took place in 1949. This war led to the displacement of hundreds of thousands of Palestinians. Capturing water became critical for the development of the new state of Israel, especially to absorb large numbers of immigrants - many of which were coming from Europe at the end of World War II. Capturing water was also important for providing employment for them in the agricultural sector and for promoting food security.





In the early 1950s, capturing water was also critical for economic development for Jordan. In 1951, Jordan announced plans to divert the Yarmouk River for irrigation. It sought to build the East Ghor Canal, which later became the King Abdullah Canal. Since the partition of Palestine, water has been a source of ongoing conflict between Israel and its Arab neighbors, and it has taken many different forms throughout most of the 20th century. In 1953, when Israel began the construction of its National Water Carrier, it sought to divert water unilaterally from the Jordan River.

This then led to military skirmishes between Israel and the Syrian Arab Republic. In the 1960s, there were other examples of water conflicts between Israel and its Arab neighbors. The National Water Carrier was opened in 1964 when Israel began to divert water from the north to bring water to the cities along the coast and then to the south of Israel. As Israel was nearing completion of its water carrier, the Arab states approved a plan to divert the Jordan River to Syria and Jordan.

Israel then attacked Syrian construction sites in 1965 and 1966, which further increased tensions between Israel and its Arab neighbors. Although water was not a source of the war that broke out between Israel and its Arab neighbors in 1967, many have linked water to these earlier conflicts between Israel and its Arab neighbors. In 1967, what is known as the Six-Day War took place. As a result of this war, Israel occupied the Golan Heights, the West Bank, and the Gaza Strip.

In response to some of these earlier water conflicts, there were some early attempts to use water as a source of peacebuilding. Following the skirmishes in the 1950s, President Eisenhower sought to use water to reduce tensions between Israel and the Arab states. President Eisenhower sent Eric Johnston to secure an agreement over the use of the Jordan River. Between 1953 and 1955, American-sponsored efforts under Eric Johnston took place to focus on bringing about a water sharing agreement that would look at water needs for irrigation within the Jordan Valley Basin.

Mediation came to a halt for political reasons in 1955, and ultimately these efforts failed, and the U.S. supported instead separate Israeli and Jordanian projects to divert water for irrigation. Many have argued that it was impossible to reach an agreement over water during these early years because of the intensity of the political conflict. That is, it was necessary to resolve the larger political conflict first between Israel and its Arab neighbors. Thus, while water may not have been a mechanism for bringing about peace in the 1950s, it did play a role between the 1950s and the 1990s in helping to reduce tensions between Israel and some of its Arab neighbors, and later it has been used as a mechanism to help bolster peace in the post-conflict phase.

Let's just look at an example of water relations between Israel and Jordan where water has served as a lifeline between the two countries – what is known as the Israel-Jordan Picnic Table Talks. These Picnic Table Talks took place over many years while Israel and Jordan were technically at war. Water managers would come together along the banks of the Jordan River to respond to requests from each other to adjust the flow of water to the other country, especially in dry months.

There has also been an attempt to build bilateral accords between a number of the riparians. In particular, the Syrian Arab Republic and Jordan agreed in 1987 to define Syria's share of the Yarmouk River. The next big moment in water relations between Israel and its Arab neighbors came in the 1990s. In 1993, Israel and the Palestinian Liberation Organization signed the Declaration of Principles on Interim Self-government Arrangements; this is known as the Oslo I Agreement. Water was included in these negotiations.

As part of Oslo I, the agreement called for the establishment of the Palestinian Water Authority, and then in 1995 when Israel and the Palestinian Liberation Organization negotiated the Israel-Palestinian interim agreement on the West Bank and the Gaza Strip known as Oslo II, water was fleshed out even more in Article 40, where the negotiators dealt with water, including the recognition of Palestinian water rights in the West Bank. Jordan and Israel at this time also sat down to negotiate a cessation of hostilities. It should be noted that the importance of water was also recognized during their negotiations.

In 1994, Israel and Jordan negotiated the Treaty of Peace in which there was a separate section that focused entirely on water. This is Article 6 and Annex 2 of the treaty. Here we see an instance where water was included in the treaty - both in Oslo I and Oslo 2 - but also in the Israel-Jordan peace treaty, water was not separated out as was the case in the Johnston Accords. Thus given the importance of water in a region that is defined by water scarcity, having water included in a peace agreement demonstrates the incredible importance of water for peacebuilding. The Israel-Jordan treaty introduced a number of innovative mechanisms. It constituted a Joint Water Committee that brings together three members from each country that would meet to discuss specific water allocations and also looking for additional sources of water and coming together to talk about how to deal with increasing water shortages in the region.

All of this together has helped to build trust and confidence between Israel and Jordan over water. Today, because demand surpasses natural supply, nearly all of the river is diverted. What remains in the Lower Jordan, which is a very small river, is largely comprised of sewage water and naturally- occurring saline groundwater. In order to address some of these issues of water sharing that are ongoing in the Jordan River, we are seeing an expanded role not just for states but also for sub-national actors and for NGOs.

Most notably is the group EcoPeace Middle East, which was earlier called Friends of the Earth Middle East. They have worked together at the local level to establish relationships among individuals and communities to work together on restoring the Lower Jordan River using water as a mechanism for peacebuilding. Part of what their work does is to identify shared interests through programs such as the Good Water Neighbors, the Youth Water Trustees program.

One of the highlights of their work in trying to foster cooperation and build trust and establish relationships was the big jump into the Lower Jordan River in 2010 where members of EcoPeace Middle East, different mayors and municipal representatives, and youth from Israel, Palestine, and Jordan jumped in the river to call upon their governments to rehabilitate the river. There are many challenges still remaining in the Jordan River. Most notably, the 1994 peace treaty that has committed Israel and Jordan to joint planning and development of their water resources leaves out a number of other riparians. Palestinians are not included as part of the treaty, nor are the other riparians, Lebanon and Syria. Thus there is a need to move beyond bilateral treaty making to multilateral treaties.

Today, the Jordan River is still a contaminated river. there is a need for proper resource management. There is a need to bring water back to the Jordan River and to bring water to the Dead Sea, which is desiccating and drying up year by year. There has been some movement on bringing water from the Red Sea to the Dead Sea through the Red-Dead Conveyance Project, which includes Jordan, Israel, and Palestine.

Thus, while there has been progress in using the Jordan River as a mechanism to help deepen peace between Israel and its neighbors, there is still a lot more that can be done, especially to address some of these lingering problems such as water contamination and the desiccation of

the Dead Sea. But this case study does show that water can play an important role in helping states to bolster peace, deepen cooperation, build trust and confidence among former adversaries. Thank you.

#### 4.8 REBUILDING ENVIRONMENTAL GOVERNANCE (LECTURER: CARL BRUCH)

After conflict, there are a wide range of priorities: restoring security, rebuilding livelihoods in the economy, rebuilding inclusive governance, providing basic services, and fostering cooperation and reconciliation. This is the standard list, but it's a little misleading. While governance is indeed a discrete area of effort, it also underpins all the other objectives - as do natural resources and the environment. As such, the potential scope of this chapter is incredibly wide-ranging. Recognizing that there's too much to say in the time that I have, this chapter briefly touches on seven core themes related to governance, natural resources and post-conflict peacebuilding.

So, what is governance? Governance is the system of values, policies, and institutions by which a society manages its economic, political, and social affairs – through interactions within and among the state, civil society and the private sector. In other words, governance refers to the way society organizes itself to distribute rights and responsibilities between different interests and to resolve differences in a peaceful manner. This broad view of governance recognizes that governance operates at every level of human enterprise, be it the household, village, municipality, nation, region, or globe.

Indeed, governance includes both statutory and customary laws, institutions, and practices. As we discussed in another chapter, armed conflict weakens governance in many ways. Common governance impacts of conflict include the loss of expertise in capacity including equipment, staff, and information; reduced governmental legitimacy, especially in regions where insurgencies may have had popular support; the rise of the rule of gun over the rule of law; the proliferation of criminal and informal economies as criminal organizations move into the governance vacuums so common in many conflict-affected countries; in the loss of trust between communities and with local authorities.

Rebuilding natural resource governance after conflict is critical for many reasons. Studies have shown that the risk of renewed conflict in countries with good governance drops rapidly after conflict while the countries with poor governance remain vulnerable to conflict relapse for much longer. This reinforces other research findings that confirm that bad resource governance leads to the resource curse and violence.

The post-conflict period offers a window of opportunity to address the causes of conflict, to reform inequitable laws and practices, and to lay a foundation for a sustained peace. After conflict, the government and the public are often willing to try alternative approaches to managing land, sharing revenues from extractive resources, and new ways of governing natural resources – approaches that had been politically impossible before or during conflict.

As such, post-conflict countries often review and reform environmental and natural resource laws and implementing regulations. They build or rebuild institutions governing natural resources and the environment, and they change their practices in an effort to be more equitable, more participatory, and more sustainable. Most post-conflict environmental and resource governance efforts emphasize one or more of the following key components of good governance: a shared vision for how to manage natural resources; transparency and participation; protecting resource rights; equity and sharing benefits; access to justice and peaceful dispute resolution; institutional capacity; and rebuilding stakeholder relationships and trust.

I'm now going to briefly discuss each of these in turn. There are often competing visions for how best to manage natural resources. In these situations, a shared vision can be essential to reducing

the likelihood that those resources will contribute to new conflicts. Countries often rely on consultative processes to develop a shared vision around contested resources such as land. South Sudan, Liberia, and other countries emerging from armed conflict have created Land Commissions to steer post-conflict land reform processes.

A first step for these Commissions is to hold a series of public consultations across the country. These consultations have dual purposes. They seek to educate the public on the process as well as the options. They also seek to solicit feedback from the public on their needs, concerns, and thoughts on the options. Through these consultations, the Land Commissions are often able to develop a shared vision for land reform. Similar processes have been undertaken at the local level. For example, the case study on Darfur explains how a shared vision was developed for local water resources.

The second good governance approach is transparency and public participation. Corruption is one of the primary obstacles to good natural resource governance following conflict. As corruption thrives when there's no public oversight, transparency is considered the primary tool to fighting corruption and generally improving governance of natural resources. Public participation can also improve environmental decision-making and decrease corruption around natural resources in post-conflict settings. When citizens participate in governmental decision making, they're often given a voice and are thus more likely to take ownership of the process and respect and therefore follow the decisions that come out of the process. Decisions based on public participation are likely to be longer-lasting since they reflect a diversity of perspectives. They're also more likely to reflect the best available information as public participation often brings additional information to light.

Four common ways the countries emerging from conflict advanced transparency and public participation in managing natural resources and the environment include:

1. Implementing the Extractive Industries Transparency Initiative to make extractive revenues in contracts public. Many countries emerging from conflict have prioritized implementation of EITI.
2. Adopting and implementing environmental impact assessment procedures.
3. Providing for transparency and participation in decisions related to natural resource concessions, land-use planning, and environmental permitting.
4. Operationalizing the principle of Free Prior Informed Consent. FPIC, as this is often known, provides that communities, usually indigenous communities, have the right to give or withhold consent to propose projects that may affect the lands they customarily own, occupy, or otherwise use.

The third key governance approach is protecting resource rights. In many conflict-affected countries, sixty to eighty percent of the population live in rural areas and depend directly on land, forests, and other natural resources for their livelihoods, food security, and well-being. However, they often do not have formal statutory title to these resources. Instead, their rights to access and use these resources is governed by customary tenure. Without formal title, though, the rights are insecure. Indeed in the post- conflict rush to rebuild the country, there's often profound pressure on the government to grant agricultural, forestry, and mineral concessions to generate revenues.

In many cases, these concessions include lands held under customary tenure. These large concessions then often lead to claims of land grabbing, which can escalate to social violence and

even sometimes violent conflict. Countries adopt a number of ways to protect resource rights of communities and households. These include, for example:

1. Recognizing both customary and statutory tenure rights (this is often referred to as legal pluralism)
2. Converting customary resource rights into the statutory framework
3. Decentralizing resource management so that decisions about the resources are made locally

The fourth governance approach is the equitable sharing of revenues and other benefits. Grievances regarding inequitable sharing of revenues and other benefits from natural resources is a driver of many conflicts, both local and national. Increasingly, countries emerging from conflict have sought to improve the equitable sharing of benefits. This can be done through peace agreements, local content provisions, and benefit sharing agreements, among other means. For example, part of the comprehensive peace agreement between Sudan and then Southern Sudan split oil revenues equally. And in Sierra Leone, a portion of a tax placed on diamonds being exported is sent back to local diamond mining communities to be invested in local development through what's called the Diamond Area Community Development Fund or DACDF.

The fifth governance approach is the peaceful resolution of disputes and access to justice. These are related, but distinct approaches. Peaceful dispute resolution ensures that there are mechanisms for people to resolve their disputes over water, land, and other resources through peaceful means. Indeed one of the most significant challenges in transitioning from conflict to peace is transforming the rule of gun into the rule of law. Access to justice ensures that people have access to those mechanisms to protect their rights. One key way to improve peaceful dispute resolution and access to justice in countries emerging from conflict is to formally recognize traditional institutions.

For example, in post-conflict Afghanistan, courts were difficult to access; many people didn't trust them. Land-grabbing was a widespread problem. The rule of law ensures that all persons, institutions, and entities, including the state itself, are bound by the law. The key way of advancing peaceful dispute resolution, access to justice, and rule of law and countries emerging from conflict is judicial training. Judicial training often addresses a combination of the substantive environmental law, procedural and administrative aspects (for example, on public access to courts), and practical considerations such as judicial independence.

Moreover, a growing number of countries are focusing on environmental rule of law, which recognizes that there are distinct challenges and risks associated with promoting rule of law in the context of natural resources and the environment. Environmental rule of law provides a useful set of tools and way of thinking to ensure that environmental and natural resource laws are equally enforced and adjudicated.

Building institutional capacity is the sixth key governance approach. Efforts to strengthen institutional capacity include: the standing up of environmental institutions; training and mentoring staff on core functions such as permitting, environmental impact assessment, and inspection; provision of vehicles, testing equipment, and other necessary materials; the seconding of staff to provide on-site assistance and mentoring; and training on mediation and dispute resolution.

The seventh governance approach is rebuilding stakeholder relationships and trust. When former adversaries are able to work cooperatively over natural resource management, it can serve as a

low stakes entry point for dialogue and foster future communication and cooperation that's so important for sustaining peace. Use of natural resources as an entry point for dialogue, cooperation, and rebuilding trust is explored in more detail in other chapters and in the case studies on the Jordan River and Darfur.

Before I conclude, I would like to highlight two initiatives that can be used to improve governance of natural resources and the environment and are particularly important to conflict-affected countries. The first is the Natural Resource Charter, and the second is the Resource Governance Index.

In conclusion, I'd like to highlight a few lessons. First, there's no universal approach or solution to governing natural resources after conflict, and context is essential. The laws, rules, and procedures governing natural resources and the environment must both be adequate and feasible. Of particular interest are the rules for allocating and protecting resource rights, managing conflicts, and regulating use and access.

While there's often consideration of what is necessary, too often post-conflict legal reform fails to accurately assess what is feasible in the post-conflict country. Reforming and establishing good governance of natural resources depends on leadership, especially from within the government, but also from civil society, the private sector, and the international community. When reforming the rules, institutions, and practices underpinning environmental and natural resource governance, it is essential to consider gender aspects. And finally, governance reform takes a long time, and everyone needs to recognize that and plan for it.

#### 4.9 EMPOWERING WOMEN IN NATURAL RESOURCE MANAGEMENT AND PEACEBUILDING (LECTURER: SILJA HALLE)

Hi. My name is Silja Halle, and I'm an expert in gender, natural resources, and peace. I currently work for UN Environment, and I'm pleased to be able to provide this chapter on gender. So, until recently, when gender, women, and natural resources were mentioned together in the context of conflict and peacebuilding, it was generally to highlight that women in conflict settings are often victims of violence when carrying out natural resource-related roles, such as collecting water or firewood, and to call for better protection.

While ensuring stronger protections for women and girls is crucially important, a more comprehensive understanding of the relationship between gender, natural resources, conflict, and peace, and the related challenges and opportunities is now developing. There's also a new field of practice emerging on using opportunities related to natural resources to strengthen women's political and economic participation in conflict prevention and peacebuilding. So in this chapter, we're going to look at two things. First, we're going to understand why it's important to understand and address gender in relation to natural resources, conflict and peace; and second, we're going to look at the opportunities that are emerging to use natural resources to strengthen women's contributions to peace.

Before we go any further, however, two very important points need to be mentioned. First, in this chapter, we're focusing specifically on women's roles, challenges, and opportunities, which is one aspect of the gender question, but obviously not the only one. Masculinities and sexual and gender minorities in conflict are also important fields of research and practice, but we won't be addressing those issues here. Second, women are not a homogenous group. While we will be discussing issues that are common to many groups of women, many of the challenges are found at the intersection of gender and socioeconomic class, age, and ethnic and religious backgrounds.

With that background, let's get started. So, why focus on women? Well, women around the world play a very significant role in natural resource management. For example, women comprise 43 percent of the agricultural labor force in developing countries and are responsible for some 80 percent of food produced in Africa. Two-thirds of livestock keepers worldwide are women, and, perhaps less known, women represent one-third of artisanal miners worldwide.

Women in conflict-affected settings are often the primary managers of water and energy needs at the household and community levels. So women are actually well-positioned to capitalize on the social, political, and economic benefits of natural resources, but they typically face many challenges and obstacles in realizing this potential. We've already noted that carrying out traditionally gendered tasks such as collecting firewood and water can become a significant security issue in conflict contexts where sexual and gender-based violence are often used to terrorize civilian populations.

But more generally, because women tend to be highly dependent on natural resources for their livelihoods, they are particularly affected by changes in their availability and quality during and after conflict. This vulnerability is magnified by laws and cultural practices that discriminate against women. For example, women often do not have legal or practical access to land, which underpins access and tenure rights to other important resources such as agricultural crops, forest products, as well as metals and minerals. Only 11% of landholders in conflict and post-conflict countries are women as compared to almost 20% globally.



Land, of course, is also a key asset for securing credit and other forms of productive input. So the lack of, and lack of enforcement of, rights to land can force women and those who depend on them into increasingly vulnerable situations and expose them to higher levels of physical and livelihood risk. And this has far-reaching consequences because we know that in peacebuilding settings, up to 40% of households are headed by women, so the trickle-down impacts on families and communities is significant.

But conflict can also create opportunities for women as the traditional roles and division of labor between men and women often change during and after conflict. Women often assume new roles with respect to natural resources to meet the needs of their households and compensate for the loss of revenue usually provided by male family members. They can take up alternative income-generating activities or move into traditional male sectors like farming, cash crops, or artisanal mining. In the aftermath of conflict, capitalizing on these shifting roles can help empower women and enhance their productivity in sectors that are often critical to economic recovery and sustainable development - as well, of course, as to their livelihood security and well-being.

However, natural resource programming in conflict-affected countries is often gender-blind, as aid for women is largely directed toward the health and education sectors. Less than 2% of development aid to economic and productive sectors, which includes agriculture, for example, actually targets gender equality programs. As a result, many gains in women's employment and income and generation are often lost after conflict when programs such as economic restructuring, resettlement of displaced populations, and demobilization and reintegration of ex combatants ignore the shifts or gains that have occurred and do not consider women's needs and opportunities.

This has a detrimental impact on women and their families but also on the effectiveness of the peacebuilding process as a whole. And this is really unfortunate because interventions around natural resources and peacebuilding processes provide significant opportunities to empower women and strengthen their contributions to peace in three areas: first, in dialogue, mediation, and conflict resolution efforts; second, in governance and decision-making at all levels; and third, in contributions to economic recovery and sustainable development.

In this sense, gender-responsive natural resource programming in conflict-affected context supports the implementation of UN Security Council Resolution 1325 and many other international and regional commitments related to women, peace, and security. Now, let's look at the opportunities in these three areas.

First, involving women can help prevent and resolve resource driven conflicts at the local and national levels. Recent research has shown that women's participation increases the probability of a peace agreement lasting at least two years by twenty percent and by thirty-five percent the probability of a peace agreement lasting 15 years. Yet women's participation in peace negotiations remains incredibly low. Between 1992 and 2011, only 4% of signatories to peace agreements and less than 10% of negotiators at peace tables were women. There has been a gradual increase in the numbers, but many barriers remain in ensuring that women have the opportunity to engage substantively and the capacity to influence key outcomes.

This is a significant missed opportunity because experience shows that the most important effect of women's engagement in peace processes is not just the greater attention to gender related elements but a shift in dynamics, a broadening of the issues discussed, an increase in the chances of community buy-in, and, most importantly, an increase in the possibility of addressing

root causes. Among these root causes, women have been shown to consistently prioritize equitable access to natural resources, such as land and water, and more equitable benefit sharing from extractive resource exploitation as an important part of peace.

At the local level, conflict resolution efforts that build on women's capacity for mediation and influence within their communities have been shown to be particularly successful. For example, in South Kordofan, Sudan, actively involving women pastoralists in local mediation and natural resource governance processes has been essential for preventing conflicts over grazing lands and access to water.

Now to the second opportunity related to political participation and governance. Working with natural resource management authorities, from local user councils, to national water boards, forestry and land commissions, or national ministries, can help increase women's participation in decision making. At the local level in particular, the knowledge and experience that women may have of a particular natural resource due to their roles and responsibilities can provide a clear entry point for engagement. However, targeted support is needed for overcoming the structural, social, and cultural barriers to women's formal and informal political participation in conflict-affected settings.

In Rwanda, for example, quotas were used to ensure women's representation in the Commission's undertaking the massive post-conflict land reform process, which among other outcomes, led to a significant increase in women's tenure rights and land as single or equal joint owners with their spouse. Building inclusive institutions for the governance of natural resources is key to peacebuilding efforts. This includes promoting women's representation and participation in formal and informal decision-making and governance of natural resources at the local, sub-national, and national levels, and this can start immediately after the signature of the peace agreement.

In Colombia, for example, UN Environment together with UN Women and UNDP are supporting the government to ensure the substantive and meaningful participation of diverse groups of women in planning processes related to natural resources that are taking place as part of the implementation of the peace agreement with the FARC. This will be tested in Chaco, a region devastated by the impacts of illegal gold mining, and will include consultations with women's groups and networks (including indigenous women, Afro-Colombian women, and peasant women) and will also include targeted technical support and capacity-building initiatives to ensure that women's needs and concerns are fully taken into account and addressed in post-conflict development. This process, if successful, can then be replicated in other regions of Colombia as the peace process unfolds.

Now to the third opportunity on economic recovery. Re-establishing livelihoods and providing opportunities for income generation is a critical step towards sustaining peace, and sustainable natural resource management provides significant opportunities for women's wage and self-employment. The Small Grants Program of the Global Environment Facility, the GEF, has supported many successful women-led small business ventures related to natural resources from an artisanal ice cream company using sustainably harvested forest fruits in Colombia to a tree nursery that contributed to the restoration of the Kibira forest in Burundi. These examples show that collective organizing can be a powerful tool in terms of access to capital and other forms of support. In Sierra Leone and Afghanistan, the India-based Barefoot College has teamed up with local women to train them as solar panel engineers, allowing them to run microenterprises charging mobile phones.

For this to be successful, however, enabling conditions need to be created that allow women to realize their potential for the productive and sustainable use of natural resources for economic recovery. This comprises: prioritizing legal and institutional reforms on land and other resource rights; and importantly providing legal aid, mediation, and negotiating services to women to enable them to enforce their resource-related rights; and access dispute resolution mechanisms to address violations. It also means prioritizing access to finance, inputs, and skills training for women as well as for men and consulting women on the type of finance and extension services they need most. And finally: upholding human rights and minimum labor standards (for example, for women's involvement in the extractive sectors), especially in global due diligence and transparency initiatives.

As mentioned in the introduction, this field of practice is still developing. Within the UN we are working to test different approaches, identify best practices, and make the case for more effective programming on these issues. This requires different agencies with different mandates and expertise to work together to tackle this multi-dimensional problem in a holistic, integrated way. One example comes from North Kordofan in Sudan where UN Environment, together with UN Women and UNDP, are testing an integrated approach to addressing this complex nexus of issues by combining different measures targeting women in a broader project aiming to reduce conflict between different user groups over scarce resources such as grazing land and water.

To support women's economic empowerment, we are working to develop alternative livelihoods for women through skills training, inputs, and the establishment of women's cooperatives that help bring their products to market. We're also supporting the participation of women representatives from different backgrounds in community environmental action planning, building on their traditional knowledge, roles, and responsibilities. And finally, we're promoting greater integration of women in existing conflict resolution structures, including by working with traditional leaders and state authorities to address negative perceptions, attitudes, and behaviors.

So, in conclusion, there are many linkages and opportunities for integrating gender, natural resources, and peacebuilding. The opportunities go both ways. Consideration of gender in managing natural resources after conflict is important for peace building, and natural resource management after conflict can be an important tool for improving gender equality and women's empowerment.

There is a growing body of experience in addressing gender and natural resources after conflict. And there is a growing body of strategies and tools, which the UN is contributing to. It will be up to you to determine which of these is relevant for your projects, but please be sure to share your lessons and experiences as part of our growing community of practice. Thank you.

#### 4.10 USING MULTI-STAKEHOLDER DIALOGUE TO NAVIGATE NATURAL RESOURCE CONFLICTS (LECTURER: REBECA ARIAS FLORES)

Hello, my name is Rebeca Arias. I'm the United Nations Resident Coordinator and the Resident Representative of the United Nations Development Programme in Guatemala. As Resident Coordinator I lead the UN country team with Guatemala and ensure coordination of UN Development cooperation in its alignment with the 2030 Agenda and national development priorities.

This chapter looks at how multi-stakeholder dialogue processes can help navigate and transform natural resource-related conflicts. We will take a closer look at a case from Peru, where a multi-stakeholder dialogue process, though difficult, was a useful tool to transform conflict in an area experiencing a prolonged oil dispute and occasional violence. We will consider how dialogue and inclusive processes are essential for building consensus on the use of natural resources and in maintaining the social licence to operate in areas where company activities affect communities.

In Latin America, and in other natural resource-rich regions, UNDP has supported the use of multi-stakeholder dialogue processes as one tool to build consensus in the midst of natural resource-related conflict. UNDP has helped generate the conditions for conducting the dialogue process. A key UNDP contribution is supporting governments in building the necessary institutional framework to lead multi-stakeholder dialogue. As an impartial actor, UNDP also has been asked to oversee the provision of technical support, such as an environmental remediation issues.

In this chapter, we would like to share some of our learning about what works well when multi-stakeholder dialogue is used as a tool for transforming natural resource-related conflicts. We will also look at what is still challenging and what trade-offs have to be made.

Following the commodity boom of the 2000s in Latin America, long-term grievances developed. Many communities, including indigenous peoples, felt they lacked a voice in decision-making. Communities often were not adequately consulted about company activities affecting their territories and livelihoods. Governments also played an important role, as they approved licenses on environmental plans and concessions for exploitation of natural resources. Governments, international organizations, civil society, and private sector began to assess what tools can help to resolve and transform social conflict before they escalate to violence and how these tools can be institutionalized moving beyond crisis mitigation to build institutional competency.

The UN defines dialogue as a process of people coming together to build mutual understanding and trust across their differences and to create positive outcomes through conversation. Multi-stakeholder dialogues are deliberative meetings that address both politically controversial and technically complex issues. Multi-stakeholder dialogues seek to exchange information and build consensus recommendations between the government, companies, communities, and other stakeholders. Multi-stakeholder dialogues are a tool to seek consensus on difficult resource-related issues before there is any conflict or at different points during the conflict lifecycle.

These dialogues have a convener, a negotiated goal, stakeholders who are willing to sit and discuss and dialogue on a tough issue and address it in a disciplined manner, and facilitators to help organize and moderate proceedings. The convener has to be an organization that is credible and positioned to bring the key actors together and an organization that participants are willing to work with and engage with.

Multi-stakeholder dialogues bring diverse interest to the table, often focusing on a regulatory, policy, or planning issue that is of common interest. These dialogues seek to build practical solutions to complex issues while these dialogues can take different forms the process should be structured around four main stages.

The first stage is an assessment of the readiness for dialogue, analyzing the context, conditions, conveners, willingness of actors, and the potential for dialogue. In the second stage, collaborative process design helps to guarantee an environment that encourages trust, facilitates a balanced negotiation, and promotes equal participation among parties. In the third stage, the implementation of dialogue processes, participants jointly validate the ground rules of the process, construct an agenda, prioritize issues, and launch deliberation sessions. Often the aim is of this stage is to reach agreement. In the final stage, honoring commitments, participants ensure agreements can be implemented and there is a plan to monitor progress –including accountability, transparency, and mutual ownership of the agreements.

Multi-stakeholder dialogue is complementary to other tools such as mediation in conflict prevention for navigating natural resource-related disputes. Multi-stakeholder dialogue helps to achieve a range of outcomes even when the dispute is not resolved. It contributes to building mutual trust and understanding across differences, analyzing a shared problem or contexts jointly, developing a shared agenda for action, and developing conflict-sensitive programming with broad buy-in.

Implementing multi-stakeholder dialogue processes is challenging and specific issues must be addressed, such as: imbalances of power; when mistrust at ways with the will to find common ground; the issue of representation, in particular when key groups are not sufficiently organized or lack a clear sense of collective identity or common interests; balancing time pressure with the need for collaboration; low capacity for follow-up and implementing agreements; and strong, specific, often hidden interests.

We will now discuss how multi-stakeholder dialogue was used in a complex oil dispute in Peru. In the four basins of Pastaza, Tigre, Corrientes, and Marañon in the Amazon region of Peru, two oil sites produced over 25 percent of the national oil production. The area surrounding these basins is characterized by high levels of poverty and weak state presence. Extractive industry projects have not yet translated into tangible benefits for the communities, mainly indigenous populations. In this area, oil production had caused serious damage to the environment, and effect on human health was also a concern. The state had not remediated damages caused by company oil spills and poor practice by some companies led to deep distrust between the communities and the state.

Communities' unmet demands led social organizations to organize and carry out protests from 2006 onwards. A government effort to resolve the various social and environmental complaints did not meet the citizens' social demands. In 2011 a new law was passed requiring prior consultation to granting licenses for exploration or exploitation of oil, gas, and other natural resources.

Prior consultation to indigenous populations: In this new legal context, indigenous communities made five demands in order to agree to participate in the required consultation. These were: environmental remediation; land titling; potable water and sanitation; compensation for the use of land; and compensation for environmental damages. These demands were addressed in a multi-stakeholder dialogue platform called Multi-sector Commission for Development, convened by the

former Office of National Dialogue and Sustainability (ONDS), an agency of the Peruvian government which nowadays is the Vice Ministry of Territorial Governance.

Established in 2012 to analyze and address conflict driven by the extractive sector in Peru, the ONDS focused on dialogue as a tool to transform conflict and to ensure public policy more effectively addresses social conflict. In this case, UNDP supported the ONDS, helping to create conditions for dialogue. UNDP helped build capacity of the parties to participate. The parties' view of UNDP as an impartial organization proved an important factor in motivating them to engage in this process.

After 10 months of dialogue between 2014 and 2015, agreements were signed. The Commission aimed to improve conditions of the communities in the basins while supporting the implementation of development projects. The Commission was structured in three dialogue tables. Table 1 addressed intercultural development, sanitation, public services, and productive projects. Table 2 addressed environmental remediation and compensation. And, Table 3 addressed land titling and compensation for damages.

Each of these tables had a coordinator and a reporter and were composed of parties from each sector. Dialogue tables met regularly throughout the ten month process. The process reached agreements for the design and implementation of water and sanitation projects, installation of water treatment plants strengthening of bilingual and intercultural education programs, establishing and UNDP-led independent technical study to guide environmental remediation, creation of a contingency fund for environmental remediation, and the recognition and land titling for 124 native communities in the four basins.

As a result of reaching agreement, the indigenous peoples' organizations were willing to participate in the new required consultation process for granting oil and gas licenses. The Commission's work was fully documented and published. Currently, these outcomes are being implemented and monitored.

Although the dialogue achieved strong outcomes, the Commission's work in Peru faced challenges. First there was mutual distrust among the participants linked to unfulfilled agreements of the past. Second, the intercultural barriers between the parties were significant. The government did not have staff or sufficient staff who could speak indigenous languages and this impeded progress. Third, the process design roles and responsibilities were not fully clear and collaborative. Poorly-defined and overlapping roles led to confusion and was counterproductive to overcome distrust. Fourth, there was asymmetry of technical information between communities on one hand and public officials and companies on the other, and this hampered progress. Finally, implementation of the agreement has been lengthy and is not complete, as government did not allocate sufficient budget to implement all aspects of the agreement.

These delays have undermined trust in the process. From the experience in Peru and from other multi-stakeholder dialogues, we have learned six key lessons to help this dialogue transform into understanding and build consensus during natural resource disputes. It is important to:

1. Have an inclusive, culturally aware design for the process
2. Invest in trust building among the parties prior to formal dialogue
3. Promote efforts and resources for collaborative process design
4. Establish clarity about the rules of the group process and the roles of the parties involved is essential (and most effective when designed in a collaborative manner with all parties)

5. Overcome imbalances in technical capacity and information (this includes ensuring that the asymmetries of specialized knowledge between communities companies and public officials (this can be done through a neutral party that can provide training and technical advice to all parties – e.g., the UN agencies).
6. Have financial support for the implementation of agreements. When agreements result in the obligation to deliver for example public, say basic services such as water, health, - there must be a budget from the government or company to cover the costs of implementation. Without this, agreements easily fall apart and conflicts can resume.

In conclusion, achieving sustainable development in the context of social and violent conflicts over natural resources is not possible. The 2030 agenda has established that peace is essential to sustainable development. In areas that are exploiting natural resources, we must redouble efforts to legitimize genuine and democratic dialogue. This will enable us to develop respect, to build trust, consensus, to transform relationships, and strengthen the foundations of sustainable development and lasting peace. Multi-stakeholder dialogue tools must be institutionalized by governments to move beyond crisis mitigation to building institutional competency for dialogue. Dialogue is a critical tool for building both peace and inclusive sustainable development. Thank you.

#### 4.11 SPATIAL PLANNING AND RECOVERY (LECTURER: DAVID JENSEN)

Hi everyone and welcome to this chapter on spatial planning. Now, as any post-conflict recovery and reconstruction process unfolds, it's absolutely essential to understand the spatial context. In other words: the geographic location of each project and the spatial relationships to other projects, human settlements, infrastructure, natural resources, and key risks.

Now, these risks could include ongoing local conflicts, areas controlled by armed groups, or areas contaminated by mines and unexploded ordnance. And increasingly, it is also important to take into account future risks such as from natural hazards or climate change in order to increase resilience to these future shocks and stresses as part of the planning process.

Now, all of this information comes together in some kind of spatial plan, and we're going to walk through different spatial planning tools throughout the rest of this chapter, so let's get started. Now, ultimately developing natural resources to support post-conflict peacebuilding is really about understanding the spatial distribution and relationships between four key variables:

1. The location of natural resources relative to key infrastructure such as roads, ports, and energy
2. The existing livelihoods, land use, and legal rights to resource access in those areas
3. The potential risks to a resource investment from natural hazards, climate change, or from ongoing insecurity
4. Existing environmental, cultural, and social sensitivities in the planned area of operation

Now, let's look at how these variables can be addressed in different spatial planning processes. When it comes to post-conflict spatial planning, there are often three main types and associated scales of planning that are needed: first, national level integrated spatial plans. Now, these really focus on the allocation of private and public resources and the coordination of infrastructure investments in a planned national framework. At a national scale, one of the main goals of planning is to understand which core investments are needed to stimulate economic growth, and to assess different trade-offs, including how to protect or conserve different natural resources.

Second, sectoral plans focus on the development of specific sectors: for example, mining, forests, or waters. These sectoral plans also feed into the national development strategy. And third, local land use plans. Now these involve comprehensive planning carried out by units of local government for all of the areas under their jurisdiction, and these plans identify the optimum uses of land and really serve as a basis for the adoption of zoning or other land use controls. Now, national level and sectoral plans tend to be more expert-lead and technically oriented while local level plans are much more participatory and inclusive processes where multiple demands are balanced. As a result, local plans are often regarded as a key tool for conflict prevention over natural resources. In many cases, local land use plans can be used as important inputs to national level and sectoral plans especially in terms of zoning plans for different natural resources.

So, national-level integrated spatial plans really provide a big-picture overview for economic development based on the spatial distribution of people, infrastructure, and economic activities. And in many cases, they reflect the national vision and aspirations for development. In post-conflict peacebuilding, the main challenge is really how to leverage and coordinate a combination of public and private sector investments to support poverty reduction, economic recovery, and further economic diversification – and how to do that in equitable ways that support reconciliation and sustained peace.



So, obviously natural resources play a major role at achieving these objectives. In particular, investments in a specific natural resource can be a catalyst to stimulate other kinds of economic development and infrastructure. For example, investments in the extractive sector can also help to support the development of agricultural markets or new processing capacity.

Within national-level planning, there are two key concepts that you should become familiar with: growth poles and resource corridors. The central idea of growth poles is that economic development or growth is not uniform over an entire region but instead takes place around a specific pole. This pole is often characterized by key industries and related infrastructure around which linked industries developed. Silicon Valley is a well-known example of a technology-based growth pole. In post-conflict economic recovery planning, coordinated public and private investment is often directed towards growth poles in the hope that it will lead to diffusion of growth into surrounding regions or even to the emergence of secondary growth poles. The growth pole theory is being applied in a number of different post-conflict countries.

For example, Mozambique has embarked on a post-conflict reconstruction and economic recovery program based on the growth pole theory. The economy has grown at an average rate of around 8%. Growth has been driven by a large number of investment projects as well as by large inflows of overseas development assistance. The Tete growth pole really aimed to strengthen the mineral, agriculture, fisheries, and tourism sectors. The Nampula growth pole focused on agriculture, light manufacturing, and logistics, also leveraging the rail and the port infrastructure. And the Beira growth pole focuses on commercial agriculture.

The second major concept is the resource corridor. Now resource corridors are infrastructure developments that allow for the development of otherwise economically unviable natural resources, either renewable or non-renewable. Resource corridors consist of an anchor project that can be optimized to deliver wider development outcomes, including economic diversification and increased trade. So, resource corridors help connect existing growth poles and potentially generate secondary poles.

In particular, resource corridors should allow for dual uses of the infrastructure to support the development of other related sectors such as agriculture. For example, rail infrastructure developed for a mine can also be used to haul produce or people. Now Mozambique is also experimenting with resource corridors, and there's a case study on the Aynak Mine in Afghanistan, which also provides a more detailed field example.

Let's move on now to sectoral planning. Many countries also rely on sectoral plans to coordinate investments and management strategies for a specific natural resource. Now three of the most common resource plans you might encounter in a post-conflict context include Integrated Water Resource Management Plans, or IWRM Plans. The aim of an IWRM plan is to provide enough water for development and social needs without compromising the water needs of key ecosystems. A Forest Management Plan aims to maximize and manage a mix of forest benefits including wildlife, timber, recreation, aesthetic value, and other benefits for different users. And finally, a Pasture Management Plan regulates the use of different grazing areas and related migration routes.

Now, let's move on to the third and final planning tool. We're gonna drop down now in our scale and review local level land use plans. Now local land use planning is more of a participatory process designed to identify the optimum uses of land, and it aims to serve as the basis for zoning

and other land use controls. At the core of land use planning is the balancing of competing land uses by all stakeholders. It is therefore inherently a conflict prevention tool - provided competing land uses can be resolved.

Ultimately, it's about managing a landscape in which the natural resources are sustainably managed and exploited as one of several activities on that landscape. Local land use plans are much more flexible tools, and they must be adaptive to constant changes in circumstances in the landscape and in neighboring areas. And it's important to connect local land use plans with national-level plans.

A good example comes from Colombia. As part of the peace process, they have started a comprehensive territorial planning process. Each municipality must decide on land use, zoning, natural resource management, environmental protection, etc. And each of these territorial plans will feed into a national level peacebuilding and investment plan. This kind of nesting works well if there's trust between municipal levels of government and national levels of government, but it can be a challenge if that trust is broken.

Finally, a few words about good governance and spatial planning. Now, in any context, integrated spatial planning rests upon the clarity of laws, policies, and regulations; having strong institutions; and skilled professionals who are resource planners. It requires an understanding of the roles and responsibilities of the different players and the accountability mechanisms. So in short, good governance really underpins integrated spatial planning, and in a post-conflict context, international organizations may need to reinforce capacities of national and local institutions to carry out spatial planning. Now, while this can be a challenge, it's an important investment to make especially to maximize the benefits that natural resources can bring to peacebuilding and development.

In conclusion, we have briefly introduced you to the value of spatial planning to support post-conflict reconstruction at different scales. It's important to be aware that new technologies and access to real-time information are revolutionizing the field of spatial planning, bringing down the costs and further democratizing the process. There is also a newfound understanding of the need to develop spatial plans that are resilient to major shocks and stresses such as from natural disasters and climate change. Thank you.

## 4.12 MITIGATING ENVIRONMENTAL IMPACTS OF RECONSTRUCTION (LECTURER: DAVID JENSEN)

Okay, so we're going to shift things up a little bit. Now in this chapter, we're going to focus on mitigating the environmental impacts from reconstruction. Now, as the post-conflict reconstruction process begins, there are many projects that need to be undertaken at a rapid rate. Roads and bridges must be rebuilt, buildings restored, and water infrastructure repaired or built anew. This is a period of hyperdevelopment where a massive injection of international assistance supports the reconstruction effort.

Now, the scale and intensity of this process means that a multitude of projects have the potential to negatively impact natural resources and the environment. The massive demand for energy, sand, gravel, wood, and water will likely be unprecedented and difficult for governments to manage the impacts across the supply chain. One of the tools that can help identify and mitigate the potential environmental impacts of reconstruction is called an Environmental Impact Assessment, or EIA. In fact, conducting some form of EIA is now a standard operating requirement of most international organizations, financial institutions, and host countries.

So, this lecture really focuses on the kinds of EIA processes and tools that you might encounter in a post-conflict setting. These include standard environmental impact assessments, accelerated environmental impact assessments, and strategic environmental assessments. So let's start with a standard environmental impact assessment. These are used to study the potential or the anticipated environmental impacts of a proposed project. An EIA enables a project team and a decision maker to understand the environmental risks of a project, to identify mitigation measures, and to really make an informed decision based on those risks.

Importantly, EIAs should consider the impacts of alternative designs to the proposed project, including the no action alternative. They should look at direct physical impacts from the project as well as secondary impacts from the sourcing of building materials or from new demands created for natural resources that a project will create. EIAs should be transparent, and they should engage the public in the process, and, as such, they can really be used as an early dialogue and confidence-building measure with communities around the project area.

Now, it's important to understand that EIAs do not require decision makers to choose the option that causes the least harm to the environment. In some cases, the security, development, or other priorities may argue in favor of actions that have an environmental impact. EIAs should consider differential impacts of projects on men and women as well as on different groups in the project area of influence. Increasingly, the environmental impacts of a project are being assessed together with the social impacts, a process known as Environmental and Social Impact Assessment. As post-conflict contexts are extremely fragile, environmental and social impact assessments are important to undertake to prevent potential impacts that could spark new conflicts or undermine public confidence in a government.

To give you a practical example on why EIA requirements are so important, let's consider the case of post-conflict Sierra Leone. Now, mining represents a huge economic development opportunity that the country is keen to capture. By 2009, more than 150 prospecting and exploration licenses had been granted to more than 100 companies. Collectively, the licenses covered approximately 60,000 square kilometers, or 82 percent of the country's surface. So, even if a quarter of these licenses discovered commercial grade minerals and metals, can you imagine the potential scale and range of environmental impacts across the country?

Fortunately, the government required an EIA to be conducted by all of the proponents for all major mining projects for review and approval by Sierra Leone's Environmental Protection Authority. Now this is where the case also yields a very important lesson. The EPA was given the mandate to review and approve EIAs without the resources or the capacity to do so. Soon, it was facing a backlog of over 200 EIAs that it needed to review and approve. Soon, the EIA requirement was seen to be blocking investments, and there were calls from the business community to scrap it. So, clearly the lesson here is that EIA processes need to be fit for purpose and suitable to the context and capacity of the country they're operating in.

So, let's move on to discuss how EIA processes can be accelerated or streamlined for post-conflict reconstruction situations. Especially in the immediate post-conflict period, there is insufficient time or capacity to conduct full EIAs for all reconstruction projects. There are also political pressures for immediate and visible projects that make time-consuming EIA processes difficult to undertake. However, EIAs should not be scrapped entirely. These contexts simply require an accelerated EIA process that is fit for purpose.

At a minimum, any accelerated EIA process should help a project proponent work through the following key steps: first, contextualize projects and take into account the environmental vulnerabilities and the main livelihoods of the areas where projects are located; second, assess projects for potential negative environmental impacts given the context; third, mitigate those impacts by modifying the project design or compensating for negative impacts; and finally, and this is very important, enhancing the environmental benefits of the project where possible. Now, there are many options for developing an accelerated EIA process. Let's look through three of them.

The easiest method is for proponents of reconstruction projects to complete standard checklists or self-assessments of potential impacts as well as complete an environmental marker. So in this context, proponents are required to submit this information as part of the project review and approval process to the Ministry of Finance or to a trust fund operated by the UN and World Bank. Provided the paperwork has been completed properly, there is typically no further technical review of the potential environmental impacts. The documentation they submit simply captures key issues and raises awareness of potential impacts enabling governments to begin tracking issues in key sectors. An environmental marker has been designed by UN Environment to code humanitarian and recovery projects depending on their potential negative impact on the environment and whether or not enhancement or mitigation measures to reduce this impact have been integrated into the project. The marker really serves as a proxy indicator to measure the extent to which environment is being considered during project design.

This approach was first pilot tested in Afghanistan. In 2004, out of a total of 432 reconstruction projects, 188 (some 44%) were identified as likely to have some impact on the environment. Key risks were linked to energy, mining, transport, and irrigation. But it demonstrated just how important basic checklists and an environmental marker were to understand the potential risks.

Now, a more robust process involves a third party conducting an independent environmental screening of each project submission as part of the review and approval process. In this process, each project is categorized in terms of a potential impact by an impartial third party who then recommends mitigation and enhancement measures. These can either be binding or, more commonly, left up to the discretion of the project proponents.

For example, during 2004-2005, the total value of the Iraq trust fund stood at 1.5 billion dollars. UN Environment acted as an impartial third party to screen all of the projects for potential environmental impacts and then recommended mitigation strategies. A total of 47 projects representing around 350 million dollars were assessed for their environmental impacts and mitigation measures were recommended. And mitigation measure impacts involved the protection of surface water quality and quantity, the safe disposal of solid waste, and the sustainable use of biological resources including plants, trees, wildlife, and fisheries. However, as the recommendations were non-binding, in this specific case, none of the projects were actually amended due to a lack of additional funding required for mitigation. So the lesson learned is that in an impartial review, it's very important to have additional money available to finance mitigation measures.

Perhaps the best option is when an organization adopts a streamlined or rapid environmental review process as an internal requirement of all projects. This often includes a range of measures that help build a standard set of mitigation measures into the design of each project based on the kind of impacts they typically generate. It includes extensive internal safeguards; standards and guidelines; as well as staff training and access to internal experts that can provide real-time advice. USAID's environmental review process for international projects is a great example.

This process begins with an initial environmental examination of the project. This seeks to determine the level of potential impact and if the project already follows best practice for impact mitigation. Now one of three outcomes results from this initial environmental examination. First, reconstruction projects that do not typically cause environmental impacts are given a categorical exclusion from any further environmental review. Second, projects that have caused some kind of known environmental impact in other jurisdictions are categorized and reviewed according to the level of mitigation measures they have adopted. If the proposed mitigation measure matches the expected impacts, no further environmental review is needed.

So, USAID documents the impacts of the following project categories and has very specific standards and guidelines for successful impact mitigation. The third outcome only happens when a proposed project cannot sufficiently demonstrate how the expected impacts will be mitigated. In this case, an in-depth environmental review is triggered. This approach enables essential projects to begin quickly, only putting projects on hold when they contain insufficient or uncertain mitigation information.

So, let's move on to the final toolkit in this chapter. While EIAs or accelerated EIAs focus on the individual environmental impacts of projects, they do not consider the combined or cumulative impacts of multiple projects as well as broader policies, plans, or programs. This is really the domain of Strategic Environmental Assessments, or SEAs, and they can help to understand and address cumulative effects that may not be apparent when considering specific projects in isolation of each other. They can also help governments understand how different projects come together spatially and begin to influence land use.

So, SEAs really help to understand the bigger picture, which can then help to refine project approval criteria going forward as well as land use planning. So, for example, an SEA was applied to the Sudan Humanitarian Work Plan for 2014 using the data from the environmental markers that were submitted by each project. An analysis of this data revealed that 54 percent of the projects included environmental mitigation or enhancement measures; however, 33 percent of projects that had a potential environmental impact did not attempt to mitigate the risk. These projects were linked to recovery, return, and reintegration of displaced people. So, this analysis

enabled targeted training and technical support to this very specific sector in order to help improve their performance in subsequent years.

So, this chapter has really covered a range of tools for mitigating the environmental impact of a reconstruction project or program. EIAs don't have to be time-consuming or necessarily lead to long delays and project approvals. They can be fit for purpose and streamlined. Now countries or organizations that are managing EIA submissions for different reconstruction projects should ensure they can eventually be aggregated and analyzed within a Strategic Environmental Assessment so the overall impact of a sector policy or program can be understood across a geographic area. Thank you.

#### 4.13 COORDINATION IN PEACEBUILDING (LECTURER: ERIKA WEINTHAL)

This chapter looks at the importance of coordination in post-conflict peacebuilding efforts. There is an old saying in the development world, “everyone sees the need for coordination, and yet no one wants to be coordinated.” In a post-conflict setting where you have a very fluid situation owing to unsettled institutions and multiple actors, coordination is vital given the high stakes of not wanting to revert back to conflict.

As such, effective coordination needs to take place in three different ways. There is a need for coordination among governments; that is, we need intergovernmental coordination or interinstitutional coordination, which involves coordination among donors, between donors and government, or among different government actors. There is a need for intersectoral coordination: that is, coordinating among different resource sectors. And then there is a need for coordination among different users dependent upon the same resource.

While we know that coordination is important, it still remains challenging due to a number of factors that include cost, effort, lack of time, among others. Who needs to coordinate? In a post-conflict setting, there are often hundreds of different actors that are each advancing their own objective. As such, coordination is messy and complicated.

Just take Sierra Leone: there were more than 400 organizations that have helped the country recover from conflict. These include 17 UN agencies, 95 international NGOs, and many other international, national, and private sector organizations. All these organizations have different objectives; they may have different security, developmental, humanitarian, and environmental mandates. As such, coordination can help to ensure that efforts in one group does not undermine efforts by another group.

If we look at Liberia, we can also see why coordination is necessary in the forestry sector. In Liberia, Charles Taylor utilized high-value timber resources to finance the Civil War. He exported hundreds of millions of dollars of timber to purchase weapons. In the post-conflict phase, forests can play numerous roles in recovery. They're important for commercial forestry; they're important also for conservation purposes. Because forests had been used to finance armed conflict and provide cover for insurgents, they are also important for furthering security concerns. And, because forest management has often been characterized by corruption, forests becomes central to governance reform.

As a result, coordination among different government actors, firms in the extractive sector, human rights, and conservation organizations as well as a wide array of international actors is necessary to ensure that post-conflict peacebuilding efforts to improve commercial forestry also generate community benefits and meet conservation and governance objectives. In Liberia, to deal with these goals and objectives a diverse group of international, bilateral, and domestic organizations came together. Only through coordination of these actors was it possible to reform the forestry sector through the Liberia Forest Initiative.

When is coordination around natural resources possible and desirable? First, coordination is necessary when natural resources are important for multiple objectives such as for economic recovery, for livelihoods, or security and governance concerns. Second, there's often a need to coordinate across resources – so as to coordinate when natural resources can provide the infrastructure needed to develop another type of natural resources and diversify the economy. Thus, coordination may be necessary for linking the extractive industries to the agricultural sector.

Coordination is also desirable when socio-economic and livelihood outcomes depend on coordination across sectors. Thus, water and energy are both needed for food production. And lastly, coordination is necessary when there are multiple actors using or working on the same resource. Next, we will look at some of the tools and approaches that have been tried to foster coordination among different governments, donors, and civil society as well as NGOs in post-conflict settings.

The first solution we will look at is a cluster approach to foster coordination among multiple actors working on the same resource. Humanitarian actors often use a cluster approach to coordinate their activities. Clusters are defined by a sector, and in a cluster approach you will have a lead organization that is appointed to oversee implementation and capacity building in each sector. For example, the United Nations Children's Fund (UNICEF) was designated as the Global Water Sanitation and Hygiene Cluster Lead.

Another solution for coordination concerns assessment tools. One type of assessment tool that has been used is the Recovery and Peacebuilding Assessment, which was formally called a Post-conflict Needs Assessment. These assessments are carried out in coordination between the United Nations, the European Union, and the World Bank. They help governments to identify, prioritize, and sequence recovery and peacebuilding activities. These assessments have been introduced in Ukraine, northern Mali, and Northeast Nigeria. Another assessment pertaining to the environmental sector is a Post-conflict Environmental Assessment that is used to help and prioritize interventions when it comes to the environment and natural resources.

Another way coordination is fostered is through donor coordination at conferences and meetings. Having coordination at donor conferences is important because it allows the different donors to figure out who is doing what. Often they are using online platforms and tools such as spatial mapping. Donors will often also have internal thematic coordination, such as a group that works on the environment and natural resources.

And then there are regular donor meetings, which bring people together in the same room to help them understand again the different objectives and goals of each donors' programs and try to orchestrate a plan to achieve a coordinated, desired outcome. An example would be in the Middle East; USAID does work to coordinate meetings of donors working on water in Palestine and Israel.

Another solution for fostering coordination is joint programming. Joint programming refers to the decision of two or more agencies to work jointly in the design, implementation and assessment of a project to enhance its impact. An example of joint programming comes from Sierra Leone where, in 2009, you had 18 UN organizations and agencies come together to work on peacebuilding efforts. Together, they produced a joint vision for Sierra Leone. As part of this joint programming, they agreed to five goals which include: the consolidation of peace and stability; integrating rural areas into the national economy; economic and social integration of youth; equitable and affordable access to health; and promoting accessible and credible public services.

Another solution concerns area-based programs. An area-based program refers to targeting a specific geographical area in a country that is characterized by a particular complex development problem through an integrated, inclusive, participatory, and flexible approach. The approach uses an area as an entry point for peacebuilding and can be especially effective in environmental peacebuilding given the area-based nature of many natural resources.



Let's look at an example from Haiti's south coast. In Haiti, UN Environment leads an area-based initiative on the southern coast that focuses on its recovery and development. This area needs specifically-tailored policies and programs because the southern coast of Haiti is suffering from extensive land degradation, high susceptibility to natural disasters, and has limited financial support. This initiative involves the national government and multiple UN agencies, and they focused on topics such as land, roads, energy, and governance, as well as the sea.

Another solution concerns inter-sectoral coordination: that is, focusing on coordination between sectors such as energy, water, and land. Often these sectors are all important for restoring resilient and sustainable livelihoods. And to rekindle agriculture, it's not just enough to have reform concerning land, but you also need to ensure that water is available.

Lastly, there is also a need for government coordination. So we're not just looking at donor coordination, but we're also looking at inter-ministerial coordination. And this is important when you have a large extractive project in a country where you need large investments in the extractive sector. Thus, it's important to make sure that all the ministries are involved - that the entire administration comes together. The key challenge here is that the ministry of environment is typically the weakest of the ministries, and, as a result, there is a need to help to work to bolster the capacity of the environmental ministry to create effective coordination.

The bottom line is: coordination matters.

#### 4.14 CASE STUDY: ENVIRONMENTAL PEACEBUILDING THROUGH WATER MANAGEMENT IN WADI EL KU, SUDAN (LECTURER: DAVID JENSEN)

Welcome to this case study on environmental peacebuilding using integrated water resources management in Darfur. Now the region of Darfur in Sudan provides a practical example of natural resources being used as an entry point for dialogue and cooperation between divided groups and different levels of government. Despite all of the problems and conflicts Darfur is faced in the past years, it's an amazing region with lots of potential, especially in its natural resources.

The Wadi el Ku Water Management Project has been tapping into this potential and through this process has been building relationships and trust as part of local peacebuilding. It's also a great example of how a natural resource project can be used as an opportunity for women's engagement and empowerment.

Before we go into the case study, let's locate ourselves on this map very quickly. Sudan is in the northeastern part of Africa and has a population of around 38 million people. Darfur is in the west of Sudan, covering a land area roughly the size of Spain. It's home to around 8 million people, about 20% of the total population of Sudan. Now, Darfur isn't only what you might see in the media.

If you do a Google search for Darfur, this is the typical kind of image that comes up. We often see harsh conditions, dry Dust Bowl landscapes, drought, conflict, guns. These are all, of course, realities, but Darfur is richer and much more nuanced than that. Darfur is rich in natural resources. You find water, including seasonal streams and groundwater, rangelands, agriculture, forests. But if you visit Darfur in the wrong season, you may miss this beauty. Darfur hosts many productive livelihoods, about 60 percent of which are directly dependent upon natural resources. Farming and pastoralism are the dominant livelihoods.



Now, the conflict in Darfur that began in 2003 has displaced around 2.5 million people. In 2017, the conflict continues though at a lower intensity, popping up at localized flash points throughout the region. The conflict can be understood as having three main levels, which interact. There's a local-level conflict involving around 36 different tribes over access to land and water. There's a national-level conflict involving the marginalization of the Darfur region, poor governance, and ethnic tensions. And there's a transboundary-level to the conflict involving regional interests, tensions, and pastoral migration.

One of the main impacts from the decades of conflict in Darfur has been on the institutions and social relationships linked to the governance of natural resources. It has pitted people against one another and eroded communication and trust, which is the bedrock of social relationships in Darfur.

Livelihoods have further been weakened by the direct toll the conflict has taken on natural resources, which as we know, underpin most of Darfur's livelihoods. Maladaptive livelihoods have taken root, meaning they've had a negative impact on the livelihoods of others. For instance, tree

cutting for fuel wood and construction are now commonplace, and pastoral youths have been joining salaried militias.

This is all being compounded by climate stress, which is impacting the availability and distribution of key natural resources such as water. Peacebuilding in Darfur, therefore, means re-establishing both the social relationships and the local institutions for managing natural resources.

Let's move on to the specifics of the Wadi el Ku region. So, Wadi el Ku is a seasonal river in North Darfur. The river's catchment is around 27,000 square kilometers, which is larger than the size of Slovenia, and its waters – even though seasonal – are the lifeblood of the state. What happens in this wadi directly affects more than 700,000 people and indirectly the entire population of the state, around 1.5 million. This is an area that's been affected by conflict and environmental degradation for decades.

In 2012, UN Environment and our partners were invited by the government of North Darfur to demonstrate in a 50 kilometer stretch of this wadi how improving the use and management of natural resources could contribute to local level environmental peacebuilding. So when we first started work on the project, we learned quite quickly that the various actors in the state be it government, communities, or NGOs had very different ideas about what the project was about and about what the project should be doing, and they were not particularly enthusiastic about working together.

In fact, there was a major trust deficit between all of the actors. Communities and NGOs were highly mistrustful of the government given the weak presence and lack of engagement in rural areas. Communities were also mistrustful of one another given the highly politicized and polarized context. Line ministries had overlapping mandates and did not share information, collaborate, or coordinate. And the government was also mistrustful of the motivations of international actors including international NGOs and UN agencies. However, everyone did agree that degraded natural resources and the unsustainable use of water and land was a critical problem that needed solving.

To address these issues, I want to emphasize that the process itself was the most important aspect of the project. We began by engaging all stakeholders and establishing a common vision on what the project hoped to achieve. In particular, we co-designed the process with stakeholders that would ensure their ownership, buy-in, and trust. This was a bottom-up process with local stakeholders as well as a top-down process with key line ministries.

In particular, we had to make sure that people in the 34 villages were fully on board and driving the process by defining their landscape, their problems, and their priority actions. We also had to assure that women could have an effective voice in the process from the outset. We partnered with and worked through a local NGO called Practical Action that already held the trust of the local communities. We adopted an integrated water resource management approach in order to manage the water within the context of the larger watershed or catchment area.

A conflict-sensitive approach was also fundamental given the fact that upstream changes in water availability could have potential impacts to downstream users. One of the key techniques we used was to invite representatives from the communities to construct a three-dimensional and to-scale map of their area. This process included all of the different land users including farmers and pastoralists. They began by constructing a map together in order to define the main environmental

problems of the region, and it was interesting to observe farmers listening to pastoralists and appreciating their understanding of the landscape and vice versa.

For many communities, it was the first time they'd had these kind of discussions. Slowly, over the course of days, the map took shape, and it became more and more obvious than what happened in terms of water use and land use upstream affected downstream areas and how natural resources and improving the condition of these resources is critical for all local livelihoods. Once the map was complete, the community presented the map to the local government as a homegrown planning tool.

Communities found an innovative channel to engage with the relevant government ministries including Environment, Planning, and Agriculture. As part of the process, communities then defined local action plans for their specific villages. This was a finer-grained exercise where a wider base of people within each different village came together to map out their resources and to define their priority actions. These village-level plans informed all other project interventions.

One of the main priorities that emerge from these village plans related to water management. The project then set about demonstrating ways in which communities could better harvest and use the limited rains. We helped local communities locate and design three water spreading earth weirs designed to make the best use of rainfall for irrigation, so when it rains, water does not simply rush off downstream, but the weirs slow down the rainwater and spread it across a wide area making water available to more farmers and allowing this water to infiltrate better into the soil.

From the start, the dams were designed to make better use of the limited rainwater without denying downstream communities their water flow. Stakeholders selected three locations to build the water spreading weirs. In the construction of these weirs, local communities offered to contribute all of the construction labor as their investment in the weirs and also contributed cash.

When the time for construction came, community mobilization was impressive. People worked around the clock to build the dams in time for the rains, in some cases in 40-degree heat while fasting during Ramadan because they did not want to miss the rainy season. Relevant national government ministries were also very supportive of the project and took ownership. The first weir they constructed serves around 20 villages and has increased cultivation by around 4,000 acres. Since then, two additional dams have been built. So what are the major peacebuilding outcomes from this case?

First and foremost, relationship building and joint action. The project succeeded in bringing together multiple communities and stakeholders that had previously held a high level of mistrust into direct dialogue and also into direct cooperation. They are owning the solution and cooperating over project management. We also helped connect local communities with national authorities using water as the bridge. Different national ministries also came together to support the project.

Now, hopefully, the relationships established and the joint action conducted over water management can build confidence in working together. This can potentially spill over into other forms of cooperation. This social capital is also important in strengthening local resilience to conflicts that might arise.

A second major outcome: improved livelihoods. The project increased agricultural productivity and local livelihoods; this is important for reducing poverty and increasing local resilience to other

shocks and stresses. Most importantly, local stakeholders are calling the project a success and are super motivated to share their experiences with other communities. And finally: the sustained participation of women.

Throughout the project, we've been able to enable women to engage at every stage in the project, and they've become more and more vocal in terms of expressing their interest and engaging in local water management. On the basis of these successes, the project is now being extended into a second phase with continued support from the European Commission. So, this case study has really demonstrated the importance of local level ownership and local level involvement in driving the process forward and benefiting from the outcomes.

#### 4.15 WRAP-UP OF MODULE 4 (LECTURER: ERIKA WEINTHAL)

The chapters in this module have covered the different ways in which addressing natural resources and the environment can directly support the core post-conflict peacebuilding priorities, including helping to ensure security; rebuilding livelihoods; fostering economic recovery; restoring governance; and rebuilding trust. This concluding chapter seeks to recap briefly some of the main themes and takeaway points across the chapters.

First and foremost, there is an important role for assessments. Once a ceasefire or a peace agreement is in place, the critical first step is to conduct an assessment to inform post-conflict programming around natural resources and the environment. Assessments can help to identify, prioritize, and cost the needs of a post-conflict country. Any post-conflict peacebuilding strategy also needs to address both renewable resources and nonrenewable resources and to understand the potential risks and benefits streams from different resource opportunities.

Maintaining peace also requires establishing sustainable and resilient livelihoods and working to promote economic diversification. More so, the chapters showed that at war's end, effective management of natural resources and the environment can play a critical role in fostering dialogue, confidence-building, and cooperation among former adversaries. Maintaining peace is vital to preventing a relapse to conflict, and the environment and natural resources can also be leveraged in peacekeeping operations. Indeed, agriculture and other resource-based livelihoods are an important component of most efforts to reintegrate ex-combatants.

There are a number of cross-cutting themes that were highlighted in the chapters. One concerns gender: women's roles are often changing during conflict and after conflict. Thus post-conflict programming needs to consider gender in managing natural resources as a way to promote successful post-conflict peacebuilding and economic recovery. Building gender-responsive and inclusive institutions for the governance of natural resources and the environment starts with promoting women's representation and participation in the management and ownership of natural resources.

Another cross-cutting theme has to do with coordination. Managing both renewable and nonrenewable resources requires coordination among different actors, across resources, and within a resource sector. Coordination, however, takes time and effort, so it's important that the benefits of coordination are clear to the different stakeholders. In many cases, coordination around natural resources comes together with some kind of spatial plan.

The last cross-cutting theme has to do with rebuilding natural resource governance in post-conflict countries as this is essential to maintaining peace. In particular, post-conflict, peacebuilding, natural resources, and governance are closely tied together.

Overall, the chapters highlighted seven core approaches for improving governance of natural resources and the environment. These included having a shared vision for how to manage natural resources; promoting transparency and participation; protecting resource rights; focusing on equity and sharing revenue and benefits; looking at questions of access to justice and peaceful dispute resolution. Another mechanism concerns building institutional capacity and then also rebuilding stakeholder relationships and trust.

Ultimately, there is no universal approach or solution to governing natural resources and the environment after conflict. These chapters highlighted the fact that there is no one approach fits all. Context is essential for developing programs to meet the needs of any post-conflict country.

## MODULE 5: COURSE WRAP-UP AND FINAL ASSESSMENT

### 5.1 COURSE WRAP-UP AND FINAL ASSESSMENT (LECTURER: DAVID JENSEN)

Congratulations. You have successfully made it to the end of the course. We all hope you enjoyed taking the course as much as we enjoyed creating it for you. Now, we've tried to walk you through the conflict lifecycle and really explore the different risks and opportunities from natural resources and the environment. We've highlighted the importance of context again and again, and really emphasized that every single conflict-affected situation is unique and that you really need to spend time understanding the context. We've tried to give you a language and set of terms to speak about these issues with a range of different actors, and we've tried to address different entry points.

Now, these are difficult issues to address. For each step forward, there is normally one step back. But we hope we've also offered a set of tools and strategies to overcome setbacks or find new ways to engage. Throughout the course, we've addressed a range of natural resources, from land and water to agriculture and extractives. We've also addressed a range of Considerations, from livelihoods to gender to security.

Now, we're planning to develop more advanced courses on specific natural resources and tools, and we really need your feedback in the course evaluation on your specific needs. If you're interested in using any of the content of this MOOC, please go ahead. We encourage you to share this content as widely as possible.

We also want to let you know that by completing this course you are now an ambassador for this cause. One of the first steps you can take is to join our Environmental Peacebuilding Community of Practice (<https://environmentalpeacebuilding.org/about/contact/>). Within this community, we would encourage you to share your experience and expertise in this area to really help us take forward the growing Community of Practice on Environmental Peacebuilding. Thanks again for spending the time with us. We greatly appreciate your interest and hope it will inspire you to make a real impact.