



The Role of Natural Resources in Disarmament, Demobilization and Reintegration

Addressing Risks and Seizing Opportunities



United Nations Environment Programme and
United Nations Development Programme

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About this report

This report focuses on the role of natural resources in disarmament, demobilization and reintegration (DDR) programmes and illustrates how the management of natural resources can be used to promote more effective and sustainable reintegration. Part 1 of the report explores the relationship between natural resources, conflict economies and armed groups. Part 2 introduces the linkages between various natural resource sectors and DDR programmes, covering both potential risks as well as opportunities. Part 3 elaborates on the key entry points for DDR programmes to engage different natural resources sectors, particularly for reinsertion and reintegration activities. The recommendations put forward in Part 4 help policy makers and practitioners to effectively integrate the opportunities and mitigate the risks from natural resources to ensure more sustainable and effective DDR programmes.

The development of this report was supported jointly by UNDP and UNEP's Environmental Cooperation for Peacebuilding (ECP) Programme. It is the first outcome of the UNDP-UNEP Joint Initiative on DDR and Natural Resources and was conducted within the framework of the UN Inter-agency Working Group on Reintegration, Livelihoods Recovery and Natural Resources. Specific guidance for DDR practitioners on incorporating natural resources into the full DDR planning and implementation process can also be found in the Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS) Module 6.30, which builds on and was drafted in parallel with this report by UNDP and UNEP.

UNDP and UNEP are grateful for the generous contributions from the European Union and the Governments of the Netherlands and Finland that enabled the realization of this report. This report can be downloaded from:

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First published in December 2013 by the United Nations Environment Programme and the United Nations Development Programme
© 2013, United Nations Environment Programme and United Nations Development Programme

ISBN: 978-92-807-3349-5
Job No.: DEP/1692/GE

United Nations Environment Programme
P.O. Box 30552, Nairobi, KENYA
Tel.: +254 (0)20 762 1234
Fax: +254 (0)20 762 3927
Email: uneppub@unep.org
Web: <http://www.unep.org>

United Nations Development Programme
One United Nations Plaza
New York, NY 10017, USA
Tel.: +1 (212) 906 5000
Email: publications.queries@undp.org
Web: <http://www.undp.org>

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Series editors: David Jensen and Silja Halle
Design and layout: Matija Potocnik
Cover image: © Jerome Starkey, M23 rebels in DR Congo, June 2013

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Addressing Risks and Seizing Opportunities

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Foreword

Natural resources, both renewable and non-renewable, offer enormous potential for helping people in developing countries to escape from poverty and build resilient societies. Natural resource management is a multidisciplinary endeavour which becomes particularly complex in conflict settings, where risk factors for conflict, corruption, and resource degradation are typically high, and specialized capacity and skills are typically low. In the past, promoting effective and sustainable natural resource management has not traditionally been prioritized within the post-crisis recovery process. However, as this report notes, the international community should perhaps look more closely at the immense economic recovery and peacebuilding potential of natural resources – particularly in the context of disarmament, demobilization, and reintegration (DDR) efforts.

Experience shows that ex-combatants need social and economic incentives to permanently lay down their weapons. This report discusses how the natural resources sector can be an important catalyst in the immediate aftermath of conflict for generating attractive jobs for ex-combatants and returnees, when grounded in broader post-conflict recovery support to entire communities, including women and other vulnerable groups.

In this context, the main purpose of this report is to assist policymakers and practitioners to maximize the peacebuilding synergy and impact of natural resource management and disarmament, demobilization and reintegration (DDR) opportunities, in the context of broader early recovery and recovery interventions.

Of all the risks to development that natural resources have been known to heighten, none is more pernicious than the risk of conflict. Natural resources have not only fuelled major conflicts, but have also contributed to recurrent outbreaks of violence, both within and between communities. By financing the rise of rebel groups and militias in fragile settings, natural resources have played a key role not only in instigating but also in prolonging conflict and violence.

As this report discusses, natural resources, in and of themselves, are rarely a cause of conflict. However, when they are mismanaged and misused – for instance, to finance the rise of rebels or militias, or to promote specific group interests – they can have a multiplier effect on other causes and drivers, including underlying social divisions, governance deficits, fragile institutions and more.

The negative impact of natural resources is far from inevitable, even in the most challenging environments. A number of countries featured in the report, including, Afghanistan, Indonesia, Liberia, and Rwanda have leveraged natural resources into a platform for the generation of jobs, revenues, basic services, and infrastructure. Their experiences demonstrate the enormous potential – as yet not fully realized – by many other fragile countries to transform their natural resource wealth into the peace dividends needed to unite fractured societies and fuel post-conflict recovery.

The report reflects UNDP and UNEP's integrated and multidimensional approach to post-conflict recovery, which includes support to livelihoods and economic recovery, social cohesion, institutional capacity development, restoration of local governance, and environmental sustainability. This report has been developed under the *UNDP-UNEP Joint Initiative on Reintegration, Livelihoods Recovery and Natural Resources*, which operates within the framework of the UN Inter-Agency Working Group on DDR

We are sure that the report's findings will strengthen the ability of all those who read it in respect to identifying and addressing both the risks and opportunities related to natural resources and reintegration in fragile and post-conflict contexts.



Jordan Ryan

Assistant Secretary-General
Director
Bureau for Crisis Prevention and Recovery
United Nations Development Programme



Ibrahim Thiaw

Assistant Secretary-General
Deputy Executive Director
United Nations Environment Programme

Acknowledgements

The development of this report was supported jointly by the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP)/Post-conflict and Disaster Management Branch (PCDMB). It is the outcome of work under the UNDP-UNEP Joint Initiative on DDR and Natural Resources, led by Glaucia Boyer and Leontine Specker of UNDP and David Jensen of UNEP/PCDMB. Adrienne Stork, consultant for UNDP and UNEP, wrote the report.

This report represents the work of many individuals and institutions that contributed their time, energy and wisdom during missions, and interviews, as well as to reviews of previous drafts. Several individuals in particular deserve specific thanks as their contributions made a significant difference during the development of this report. These include Simonetta Rossi of UNOPS, Afghanistan, Nicolas Scherlen of MONUSCO, DRC, Mahdi Ismail of Flora and Fauna International, the Province of Aceh, Indonesia, Isabela Leao of Sierra Leone, Heidi-Marie Gutsche of GIZ, Nepal and Andrea Tamagnini of UNDP, who were instrumental in providing information for the case studies included in this report. During field missions, many individuals contributed their time and shared their experiences and knowledge on this relatively new subject. In particular, thanks goes to the following individuals in DRC: Jonas Mfouatie, Michel DuBois, Pierre Guisiera, Jean-Claude Kalala, Cryspin Bolela, Jean-Claude Cigwerhe, Claudine Nzigire and Moussa Diagana of UNDP, Elisha Moore-Delate of Mercy Corps and Ilaria Carpen of MONUSCO. In Rwanda, Maggy Gatera of

UNDP, Francis Musoni and Frank Musonera of the RDRC, Kunde Foster of the Drainage and Banking Cooperative and Didier Sagashya of the Rwanda National Land Center provided excellent opportunities to better understand the linkages between natural resources and reintegration. In Uganda, the help of IOM staff James Bean, Alexandra Bean, Lucy Moore, Lana Oh and Gareth McKibben was indispensable and uniquely informative. In Indonesia, the support of Kristanto Sinandang, Maja Suhud, Budhi Ulaen, Teuku Budi Hermawan, Siti Ruhanawati and Susi Lawaty of UNDP and resulted in a very enriching and informative mission to the Province of Aceh that greatly enhanced this report.

In addition, special thanks goes to all who contributed to reviews of this report and helped to strengthen it, including Nika Saeedi, Yama Helaman, Lorena Jaramillo, Andrea Tamagnini, Irma Specht, Clara Ruiz de Gauna, Valerie Puleo, Kathryn Chelminski, Matti Lehtonen, Kyungmoo Heo, Laura Ronkainen, Christina Harris, Kerry Maze, Chiara Gonella and Desirée Bernhardt. Participants in the workshop on *"Managing Natural Resources for Post-conflict Reintegration and Recovery"* co-hosted by UNDP, UNEP, the Inter-Agency Working Group on DDR and the Centre for Stabilization and Reconstruction Studies, held from 27 February to 3 March 2012 in Montreux, Switzerland, also contributed to the review of a final draft of this report, in particular Oli Brown, Craig Castro, Nancy Archer, Srijana Rana, Hassan Partow, Brendan Bromwich, Teresa Krafft, Florian Bruyas, and Gerald Pachoud.

Acronyms

ANBP	Afghanistan's New Beginnings Programme
CBNRM	Community-based Natural Resource Management
CNDP	Congrès national pour la défense du peuple (Democratic Republic of the Congo)
CSAC	Community Security and Arms Control
DDR	Disarmament, Demobilization and Reintegration
DPKO	United Nations Department of Peacekeeping Operations
DRC	Democratic Republic of the Congo
EITI	Extractive Industries Transparency Initiative
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDLR	Forces démocratique pour la libération du Rwanda
FFI	Flora and Fauna International
FN	Forces Nouvelles (Côte d'Ivoire)
FLEGT	Forest Law Enforcement, Governance and Trade
GAM	Free Aceh Movement (Indonesia, Province of Aceh)
GIZ	German International Development Corporation
IAWG	United Nations Inter-Agency Working Group on DDR
IDDRS	Integrated Disarmament, Demobilization and Reintegration Standards
ISACS	International Small Arms Control Standards
IOM	International Organization for Migration
LER	Local Economic Recovery
LRA	Lord's Resistance Army (Uganda)
LURD	Liberians United for Reconciliation and Democracy
MODEL	Movement for Democracy in Liberia
MONUSCO	United Nations Stabilization Mission in the Democratic Republic of the Congo
NGO	Non-governmental organization
NTFP	Non-timber forest products
OECD	Organization for Economic Co-operation and Development
PCDMB	Post-Conflict and Disaster Management Branch (UNEP)
PCNA	Post-Conflict Needs Assessment
PCEIR	United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration
RDRC	Rwanda Demobilization and Reintegration Commission
RUF	Revolutionary United Front (Sierra Leone)
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UN-HABITAT	United Nations Human Settlements Programme
UNMIL	United Nations Peacekeeping Mission in Liberia
UNODC	United Nations Office on Drugs and Crime

Executive summary

This report examines the role of natural resources in disarmament, demobilization and reintegration (DDR) programmes and illustrates how the management of natural resources can be used to promote more effective and sustainable reintegration.

Since 1990, one-third of peacekeeping operations have taken place in areas where the conflicts have been economically fuelled by - or otherwise driven by - natural resources. Disputes over natural resources have been linked to grievances that can lead to outbreaks of violence and motivate individuals to join armed groups. Moreover, the mismanagement of natural resources can impede peacebuilding and recovery by yielding limited access to productive resources, inequitable wealth-sharing and potential risk of land disputes.

Effective natural resource management also has the potential to generate important opportunities for peacebuilding, through economic growth, employment and sustainable livelihoods recovery amongst others. However, it is still too often considered as an issue to be addressed at a later stage of development, and the linkages with DDR programmes thus far have been relatively narrow given the breadth of opportunities available.

UN Secretary-General's reports have consistently called for more attention to be given to the role of natural resources in DDR as well as in post-conflict job creation and peacebuilding more generally. This report is an initial response to that call. It aims to inform DDR practitioners and policy makers of the risks and opportunities that natural resources pose for their programmes and to provide options for appropriate responses.

The first part of the report explores the relationship between natural resources, conflict economies and armed groups. The role of natural resources in financing conflict and the ensuing impact of the conflict has specific implications for DDR programmes and recovery. For example, curtailing the economic motivations of members of armed forces and groups to exploit natural resources requires collective efforts between DDR programmes, customs and border controls, financial institutions and the private sector.

The second part of the report introduces the linkages between various natural resource sectors and DDR

programmes. Depending on the physical, environmental, economic and infrastructural conditions where DDR is taking place, natural resources can present different risks and opportunities. For example, where ex-combatants have been involved in the looting or trafficking of natural resources, or rent seeking in natural resource sectors, a continuation of such practices poses a significant threat to sustainable natural resource management as well as stability and peacebuilding.

Likewise, where livelihoods are based upon access and rights to natural resources, reintegration opportunities will be as well. In the UNDP Community Recovery and Reintegration Programme in eastern DRC, for instance, 39 per cent of the participants in North Kivu and 83 per cent of those in South Kivu are directly dependent on agriculture for their livelihoods. Similarly, agriculture, fisheries and forest resources are the basis for the majority of livelihoods in post-conflict Aceh, Indonesia. In some cases, natural resource management itself is a component of small business development. In Rwanda's demobilization and reintegration programme, for example, ex-combatants in urban areas have started successful businesses as contractors providing water and sanitation services.

Natural resources go beyond economic recovery and are also important factors for social reintegration and reconciliation, as well as for overcoming gender biases and promoting gender-responsive programming. By working with other planners and managers early on in the recovery and peacebuilding phase, DDR programmes can help to ensure that natural resources contribute positively to social reintegration and support improved gender equality.

Building on these linkages, part three of the report elaborates on the key entry points for DDR programmes to engage in natural resource sectors, particularly for reinsertion and reintegration activities. The employment opportunities that have already been identified and/or could be better developed include quick-impact projects to rehabilitate infrastructure, such as irrigation canals or improved sanitation systems, or employment within the value chain of products and services derived from natural resources and/or within the private sector. Specific sectors explored include: agriculture; forestry; water and sanitation; renewable energy; mining;

fisheries; protected areas and ecotourism; and ecosystem restoration. Examples come from past and present DDR programmes or from related interventions.

The recommendations put forward in this report aim to help policy makers and practitioners to effectively integrate the opportunities and mitigate the risks from natural resources to ensure more sustainable and effective DDR programmes.

Recommendations

1. Incorporate key elements of the relationship between natural resources and armed forces and groups into conflict analysis, assessments and planning for DDR programming.

DDR practitioners should incorporate the relationship between natural resources and armed forces and groups in conflict settings into all analysis, assessment and planning exercises that take place prior to a DDR programme. They should understand the role of natural resources as a root cause of conflict, as a financing source for conflict, or as a source of motivation for engagement in conflict. All analyses should be gender-sensitive and consider the different responsibilities, activities, interests and priorities of women and men, and how their needs may differ.

Fully appreciating this complex relationship will help DDR practitioners to ensure that the main risks to security, posed by the engagement of armed forces and groups with natural resources, are addressed. The analysis and assessment process should also map potential areas for reintegration opportunities in natural resource sectors.

2. Target opportunities to rehabilitate infrastructure that will improve the potential for natural resources to contribute to employment creation and reintegration in line with various tracks of the United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration.

In natural resource sectors that offer potential for economic growth, labour-intensive infrastructure projects can provide temporary jobs and, at the same time, improve conditions that enable successful reintegration and access to natural resources and related markets. For example, the rehabilitation of irrigation systems and local roads may drive the growth and improvement in productivity of markets for agricultural goods and products. Potential projects could also include the construction of food storage facilities and processing equipment, which can further increase the resilience of agricultural livelihoods to any changes in climate and market conditions, thereby preparing communities for long-term development activities. Such activities should then be linked with support for the development of value chains and resulting products and services, so that market access, financing and

small business development can be improved and the reintegration process strengthened.

The rehabilitation and restoration of natural resources also provides employment opportunities and can support the development of sustainable livelihoods. Examples include reforestation projects, restoration of riparian or coastal zones, rehabilitation of fisheries, reclamation of degraded mining areas, soil improvement activities, slope stabilization and flood protection interventions. These activities and the resulting improvement in the condition of natural resources can offer increased opportunities to productively use such resources for employment and livelihoods.

3. Assess the sustainability of livelihoods for re-integration based on natural resources to identify potential risks and opportunities and avoid maladaptive coping strategies.

DDR planning teams should include sustainability assessments, or environmental screenings, for re-integration programmes in order to fully assess the impact of such programmes on the availability and accessibility of natural resources. This may include assessments of the carrying capacity of land areas for livestock, availability and accessibility of water resources for drinking, sanitation and irrigation, and the use of best management practices to prevent the degradation of natural resources and to maximize the productivity of related sectors. Access to land and security of land tenure should also be assessed to avoid any potential conflict that could arise between individuals or groups as a result of reintegration activities. To further improve the sustainability of reintegration activities, disaster risk reduction experts should also be engaged in order to identify potential areas of complementarity or overlap, such as employment opportunities in ecosystem rehabilitation that specifically reduce disaster risks to livelihoods.

4. Ensure that a gender-responsive approach to all natural resource-related issues (especially land) is adopted throughout the DDR programme cycle.

Pre-programme assessments should map the gender-specific roles of women and men in natural resource management and thoroughly consult representatives of both sexes when planning for programme activities. The information should not lead to categorically enforcing existing gender norms, but to serve in planning for activities that tap into the specific knowledge and skills of all programme participants and beneficiaries.

By facilitating access to natural resources for both male and female ex-combatants, those associated with armed forces and groups, their dependants and relevant community members, DDR programmes can improve the security of livelihoods and improve access to income-generating opportunities for both men and women. Improving access to natural resources can also reduce their risk of suffering gender-based violence and further marginalization of women in particular.

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To achieve this, female ex-combatants, women associated with armed forces and groups and women from conflict-affected communities should be included in assessments and decision-making structures as part of reintegration programmes to ensure that their expertise, knowledge and viewpoints are fully considered. Further information on the role of women and natural resources in peacebuilding can be found in the UNEP – UN Women – PBSO – UNDP policy report entitled *Women and Natural Resources: Unlocking the Peacebuilding Potential*.

5. Support the creation of employment opportunities in natural resource sectors and adopt conflict-sensitive value chain approaches in reintegration programmes to improve sustainable management in these sectors.

The natural resource sectors that are most often implicated in armed conflict – minerals, oil, agricultural commodities, land and timber – are also important sectors for economic recovery. These sectors are critical to economic revitalization and have the potential to lead to job creation and increased revenue for the country in question. DDR programmes can work with recovery actors to promote sustainable approaches in natural resource sectors. Liaising with institutions that are working on improved management, organization and governance of these sectors – such as government ministries for environment, sustainable development, agriculture and finance, as well as the supporting UN entities – can help DDR programmes to ensure greater job security and more equitable distribution of benefits and opportunities from natural resources to the communities at large.

To support sustainable employment based on the exploitation of natural resources, a conflict-sensitive value chain approach in natural resource sectors should be applied. This is an important tool to improve reintegration opportunities by diversifying livelihoods activities in the development of specific sectors. Value chain development efforts should be well-coordinated and based on sound market data and concentrated in sectors where there is existing demand to ensure that the resulting activities are more likely to be sustainable in the long-term.

6. Improve coordination within the UN and national and regional authorities to effectively address potential stability risks from natural resources linked to DDR programmes.

The continued illegal exploitation of natural resources can pose a stability risk in contexts where DDR programmes take place, either within countries or in neighbouring fragile states. In many cases, ex-combatants and associated groups have been involved in the looting or trafficking of natural resources, or rent seeking in natural resource sectors. A continuation of

such practices poses a significant threat to sustainable natural resource management as well as local stability.

Since DDR programmes are often planned and implemented through joint processes between multiple UN agencies in support of national authorities, it is important that a coordinated effort is made to fully incorporate the risks presented by natural resources and to engage other necessary capacities to respond to them. This is especially important for natural resources that are used to fuel conflict and which are trafficked across borders in response to regional and global demand. In mission contexts, coordination amongst DPKO, UNDP, UNEP, FAO, UNHABITAT, Interpol, UNODC and other UN actors during DDR planning is important to ensure such risks are taken into account. Further coordination is also needed among actors involved in security sector reform as well as borders and customs agencies to minimize the potential for natural resources to be used to fuel further conflict.

The most important actor in any DDR programme is the national commission or entity, who will ultimately make the final decisions on the DDR process in any particular country. Through collective action, the UN should seek to coordinate all support given to national counterparts on DDR in order to address natural resource risks sufficiently and holistically, as well as to ensure that natural resources are used to support DDR objectives of improved security in the present as well as recovery and long-term development in the future.

7. Provide resources to key national stakeholders and international actors on linkages between DDR processes, natural resource management, conflict and peacebuilding, in order to build capacity and ensure the collection of best practices and lessons learned.

Capacity-building efforts to ensure that national DDR commissions - and the UN actors and donors who support them - are able to successfully mitigate risks and take advantage of opportunities are needed in order to implement all of the recommendations in this report. Trainings on the role of natural resources in conflict and DDR, practical tools for the integration of natural resource management into programming outcomes and outputs, and information sharing workshops to encourage South-South cooperation can all be used to increase capacities and to ensure that natural resources are included in DDR programme planning and implementation. In addition, capacity-building can include the collection of best practices and lessons learned on natural resources and DDR to support improvements in existing policy. Implementation of these recommendations can be facilitated through the Inter-Agency Working Group on DDR and the Integrated DDR Training Group, as well as through additional bilateral partnerships on a country-by-country basis.

Introduction

Introduction

The control and use of natural resources have always been a factor in armed conflicts. However, globalized economies and modern warfare have increased and intensified the scope and magnitude of conflicts in recent years, leading to greater negative impacts on natural resources.¹ For instance, the exploitation of high-value natural resources, such as oil, gas, minerals and timber, has often been cited as a key factor in triggering, escalating or sustaining wars around the globe. Furthermore, increasing competition for diminishing renewable resources, such as land and water, is on the rise, compounded by environmental degradation, population growth and climate change.²

In response, the international community has produced a wide range of policy guidelines and tools to help individuals, governments and organizations to understand, anticipate, prevent, and mitigate potential conflicts over natural resources.³ Reports by the United Nations, the 2011 World Development Report by the World Bank, and work by NGOs and civil society groups have clearly recognized the importance of natural resource management for post-conflict recovery, peacebuilding and sustainable development.⁴

The growing body of research around this issue recognizes that members of armed forces and groups, who are at the core of conflicts, often rely upon the exploitation of natural resources to finance their activities, including payment of personnel and purchasing of arms. However, the opportunities that natural resources present for improving security, ensuring sustainable reintegration and promoting peacebuilding are less well understood.

Disarmament, demobilization and reintegration (DDR) programmes and related interventions, such as community security and arms control (CSAC) and community-based reintegration programmes, have become the accepted responses to facilitate the transition of combatants and those associated with armed forces and groups to a peaceful civilian life in conflict-affected countries.⁵ Usually undertaken within highly political and often volatile contexts, DDR promotes security, supports the overall peace process, and lays the foundations for sustainable economic recovery and development by targeting members of armed forces and groups who might otherwise pose a significant risk to stability and

security in fragile and conflict-affected environments.⁶ When implemented successfully, DDR has the potential to support ex-combatants to become positive agents for peace and thereby plays a catalytic role in promoting recovery and sustainable development.

DDR programmes are politically sensitive processes defined by specific timelines and budgets. Natural resource management, on the other hand, is a much broader field that includes different actors and sectors beyond the scope of DDR. While not setting out to address grievances linked to natural resources per se, a DDR programme may nevertheless face various risks and opportunities related to natural resources. For instance, the ability for ex-combatants to continue exploiting natural resources to finance conflict poses a serious security risk. On the other hand, former combatants may be engaged in a number of natural resource sectors as part of reintegration activities based in agriculture, fishing, forestry, or the management of national parks and protected areas. Failing to adequately support sustainable reintegration in these natural resource sectors can inadvertently undermine their success.

In summary, decisions taken around the management of natural resources can impact the ability of DDR programmes to achieve their stabilization and security objectives. Likewise, a better understanding of the connection between DDR and natural resources provides several entry points for promoting more strategic socio-economic reintegration opportunities in natural resource sectors. In recognizing the relationship between armed forces and groups and natural resources, this report therefore contributes to identifying and mitigating potential risks to peacebuilding.

Policy context

The reports of the UN Secretary-General on peacebuilding in the immediate aftermath of conflict for 2009, 2010 and 2012, specifically note that natural resources and related environmental issues are among the drivers of conflict that must be addressed in the implementation of peace agreements and should therefore be included in peacekeeping and peacebuilding efforts. Furthermore, in the 2010 report, the UN Secretary-General specifically called on member states and the UN system "to make

questions of natural resource ownership, allocation and access a part of peacebuilding.”⁷

A study on “second generation” DDR by the UN Department of Peacekeeping Operations in 2010 also noted the role of natural resources in financing armed groups, funding political elites who undermine state authority and legitimacy, and in contributing to political instability in countries with peacekeeping operations (and DDR programmes).⁸ Furthermore, this study noted the lack of inclusion of natural resources in peace agreements as an inhibiting factor to address them more comprehensively in the post-conflict period, including through DDR.

The 2011 UN Secretary-General’s report on DDR notes that illicit trafficking in natural resources is amongst the key issues affecting the implementation of DDR and that there is a need for closer examination of the relationship between natural resources and armed groups.⁹ In addition to that, the UN Policy on Post-conflict Employment Creation, Income Generation and Reintegration underlines the importance of natural resources for supporting livelihoods and reintegration in post-conflict settings and their role as a potential underlying driver of conflict.

In response to this increasing recognition of the role of natural resources in DDR and to fill the gap in knowledge needed to help strengthen the policy and programmatic responses, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) launched the Joint Initiative on DDR and Natural Resources in 2009. This report, combined with policy guidance developed for the Integrated DDR Standards, are the first contributions of this timely partnership.¹⁰

Overview of report

This report presents the findings of field interviews conducted with national governments, UN departments, agencies and programmes, donors, civil society and non-governmental counterparts in the eastern Democratic Republic of the Congo (DRC), Rwanda, Uganda and Indonesia (Province of Aceh).¹¹ The findings from these interviews were complemented by a thorough desk review of all relevant literature, policy reports, programme documents and stakeholder publications for Afghanistan, Liberia, Côte d’Ivoire, Sierra Leone, Sudan, Nepal and Colombia. In line with the commitments of the Beijing Declaration and Platform for Action¹² and the UN Security Council Resolution 1325 on Women,

Peace and Security,¹³ there is a special emphasis placed on gender issues in natural resource management as related to DDR. An earlier draft of this report was presented to the participants of a joint workshop on “*Managing Natural Resources for Post-conflict Reintegration and Recovery*”, organized by UNEP, UNDP, the Inter-Agency Working Group on DDR and the Centre for Stabilization and Reconstruction Studies, held from 27 February to 3 March 2012 in Montreux, Switzerland. Workshop participants provided valuable feedback and shared relevant experiences that were duly incorporated.¹⁴

Organized into four main parts, the first part of the report establishes the framework for understanding the relationship between natural resources, conflict and armed groups. The second part then discusses the role of natural resource management in each component of DDR programmes while the third part maps the entry points for natural resources management sectors and DDR programmes, particularly related to reintegration. The final part provides main findings and recommendations for policy makers and practitioners to effectively address natural resources for more sustainable and effective DDR programmes.

The findings of this report and its recommendations target both the DDR and natural resource management communities. It aims to help DDR policy makers and practitioners to prepare conflict-sensitive, gender-responsive programmes that mitigate risks posed by the potential capture of natural resources by former members of armed forces and groups and to identify opportunities to use natural resources to contribute to post-conflict economic recovery, reintegration and sustainable development. Likewise, all natural resource management stakeholders in governments, international organizations, financial institutions, civil society and private sectors will benefit from a better understanding of how their work is related to DDR and how they can engage with DDR and livelihoods recovery programmes to identify potential synergies. These include national land administration and ministries in charge of environment, sustainable development, agriculture, fisheries, forestry, water, sanitation, waste management, energy, mining, infrastructure, planning, and protected areas and tourism. Specific guidance for DDR practitioners on incorporating natural resources into the full DDR planning and implementation process can also be found in the Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS) Module 6.30, which builds on and was drafted in parallel with this report by UNDP and UNEP.

Part 1

The natural resource-conflict nexus

P A R T **1**

The natural resource-conflict nexus

Natural resources are often an underlying driver of or source of financing for conflict. Since 1990, one-third of peacekeeping operations have taken place in areas where the conflicts have been economically fuelled by – or otherwise driven by – natural resources.¹⁵ The ways in which natural resources influence or drive conflict, and the behaviour of armed groups in particular, is described in the following sections.

Natural resources as triggers or drivers of conflict

Countries rich in natural resources, and with high levels of biodiversity, experience higher rates of violent conflict.¹⁶ According to the 2011 World Development Report, low-income developing countries that are highly dependent on natural resources are also ten times more likely to lapse into civil war.¹⁷ Furthermore, research has shown that conflicts involving natural resources are more likely to relapse into violence within five years of a peace agreement.¹⁸

Economies that are highly dependent on natural resources may be more susceptible to violent conflict since they are less likely to be diversified and thus offer fewer opportunities to accumulate wealth and evenly distribute incomes, or to achieve equitable and inclusive development.¹⁹ Furthermore, low-levels of development and weak government capacity, combined with a lack of good transportation infrastructure and effective security structures, mean that governments will have greater difficulty controlling and managing natural resources in their territories or sharing their benefits in an equitable manner. In such contexts, research suggests that the formation of insurgent armed groups is more likely.²⁰ This becomes a particular security risk where economically valuable natural resources can be easily obtained by artisanal, high-labour and low-industrial means (termed ‘lootable’). Consequently, these resources and their supply chains can be relatively easily co-opted and used to support belligerent activities by armed groups.²¹

At the same time, non-lootable natural resources (i.e. those that require significant infrastructure investment and technical expertise to extract or transport, such as oil, natural gas and kimberlite diamonds) can be either stolen or informally taxed along the value chain in order

to provide a source of revenue for armed groups.²² As a result, it is important to understand the availability of both lootable and non-lootable natural resources in any conflict context and how these may be used to drive conflict from an economic or political perspective.

Furthermore, disputes over natural resources contribute to grievances that motivate individuals to join armed groups.²³ In Nepal, for instance, access to land was one of the issues provoking the rural poor, including numerous women and girls traditionally excluded from land ownership, to join the Maoist insurgency.²⁴ Prior to or during violent conflict, changes in access or the degradation of natural resources and the environment may directly aggravate already existing societal cleavages around ethnicity, nationality, geographic identity, religion or politics.²⁵ Political instability and horizontal social inequalities, compounded by such aggravations, can further increase the likelihood of conflict.²⁶ In the case of the Province of Aceh, Indonesia, for example, research suggests that existing grievances over natural resources were easily aggravated and further exploited by insurgent leaders to gain sympathy and encourage recruitment (see Case study 1).²⁷ In the Philippines more recently, wealth sharing over natural resources has emerged as a key concern and element in the peace negotiations.

Natural resources and conflict economies

The control and exploitation of natural resources has played a role in many violent conflicts throughout history.²⁸ Although evidence shows that natural resources are not often used for the initial start-up costs of armed groups, the financing opportunities that stem from access to lootable natural resources is shown to play a key role in sustaining and prolonging conflicts.²⁹

Taking advantage of the chaos and breakdown of governance mechanisms caused by sustained violence, conflict economies often emerge to cope with the economic decline that results from violent conflict. Coping strategies that implicate natural resources often result, leading to over-exploitation and increasing rates of environmental degradation. In Liberia, for instance, pre-conflict economic activity was heavily dependent on natural resource sectors, including forests, rubber plantations and mines, all of

Case study 1. Natural resource grievances in the Province of Aceh, Indonesia



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Acehnese girls in traditional Muslim dress pose with assault rifles at the camp of the Free Aceh Movement (GAM) in Pidie, Aceh province, Indonesia

Multiple grievances motivated the actions of the Free Aceh Movement (GAM) during the 30 years of civil conflict in the Province of Aceh, Indonesia, but the roots of these problems were connected to the operations and distribution of benefits from the local liquid natural gas (LNG) facility. There was a sense of injustice among the local populations stemming from the allocation of higher-paying jobs to workers from outside the province, combined with corruption and declining quality of life in the areas surrounding the operations, due to high levels of contamination and pollution. While LNG exports accounted for around 69 per cent of the Province of Aceh's GDP, most of these resources went directly to the central government in Jakarta and few development benefits were perceived in the province. In addition, there were other industrial developments in the area at the time, such as cement and chemical factories, that also gave cause for grievances, since few Acehnese were employed in these sectors. Local people complained of environmental degradation and the appropriation of traditional and culturally significant lands without compensation. They also resented the influx of foreign workers whose cultures were construed as offensive to the traditional Muslim communities in Aceh.

GAM used the grievances over these economic and social inequalities to divide Acehnese from non-Acehnese and to stir resentment towards the central government in Jakarta. This narrative of deprivation and economic oppression resonated strongly with the Acehnese. GAM found it easy to exploit the situation for two reasons. Firstly, in general the pre-existing socially constructed identities of both the central government and the Province of Aceh were mutually hostile. And secondly, the particular circumstances of the LNG plant heightened those negative perceptions considerably. GAM's rhetoric of grievance over the distribution of natural resource wealth continued to the extent that most of the population fully believed that Jakarta was - and had been - taking the majority of Province's natural resources for their own profit, although actual amounts were much lower.³⁰ As a result, GAM's leadership did not face difficulty in recruiting Acehnese to fight and continued to focus on natural resource revenues and environmental degradation as a pillar of the group's main grievances.

Case study 2. Natural resources, armed groups and DDR in the DRC



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M23 rebels man a position overlooking Goma, in the shadow of the Nyiragongo Volcano, in the eastern Democratic Republic of Congo

The Democratic Republic of Congo (DRC) has suffered from conflict since the early 1990s, which has left over 5.4 million people dead and nearly 2 million people displaced.³¹ With its total mineral wealth estimated at US \$24 trillion, including more than 70 per cent of the world's coltan and an estimated 30 per cent of diamond reserves (together with vast deposits of bauxite, copper and cobalt), the DRC has the potential to be one of the wealthiest countries in the world.³² In spite of this potential, the country is currently highly underdeveloped, with over 70 per cent of its population living below the poverty line.

This extreme mineral wealth has also fuelled the country's ongoing civil war. Revenues from the trade in natural resources, including minerals, timber, wildlife and charcoal, represent the primary means of financing violent conflict in the DRC by both state forces and armed groups. It is estimated that over half of the mines in eastern DRC are under the control of armed groups, generating revenues estimated to be in the hundreds of millions of dollars per year.³³ Reports of the UN Group of Experts and numerous NGOs have subsequently reflected this reality. As a result, in 2008, further to UN Security Council Resolution 1856 on DRC, the UN Organization Stabilization Mission in DRC (MONUSCO) was mandated to "use its monitoring and inspection capacities to curtail the provision of support to illegal armed groups derived from illicit trade in natural resources". In March 2013, UN Security Council resolution 2098 provided a mandate for enabled 'offensive' combat force to 'neutralize and disarm' Congolese rebels and foreign armed groups.

While many DDR initiatives have been implemented in the DRC due to the continued resurgence of violence in recent years and a lack of a comprehensive peace agreement solution, it is clear that natural resources – especially mineral resources – will play a key role in protecting peace and in the reintegration of ex-combatants in the future. Furthermore, the mineral wealth of eastern DRC is likely to play a key role in livelihoods and community recovery overall, such that it will inevitably be part of the overall context in which DDR is implemented. In this sense, the governance of the mineral sector and the implementation of mineral supply chain certification schemes are issues which should be of special concern to DDR practitioners in the region.

which were over-exploited during the conflict.³⁴ Unless directly addressed, such activities typically continue in the post-conflict phase, where the dynamics of the conflict economy can become entrenched and may thwart recovery and peacebuilding efforts.

In general, conflict economies are highly decentralized and show diminished governance capacity. They also involve the destruction or circumvention of the formal economy, giving way to increasingly informal and black markets.³⁵ Moreover, economic assets (including natural resources) are directly linked with other political and social gains in conflict settings.³⁶ These dynamics can continue after physical fighting has stopped, thereby perpetuating the power dynamics of the conflict period and undermining peace efforts.

In some cases, armed groups gain so much power and wealth through natural resource extraction that governments are reluctant to confront them for fear of being politically challenged, or of losing their own share of natural resource rents.³⁷ In such cases, targeted efforts by the UN and the international community may be required to address the role of natural resources in financing and prolonging the conflict, as is seen in the case of the eastern region of the Democratic Republic of Congo (see Case study 2).

Where natural resources play a significant role in conflict economies, multiple governance challenges may exist, such as:

1. limited government control or oversight over the extraction and use of natural resources within its borders;
2. limited ability by the government to tax and obtain revenues from natural resource extraction and to translate these revenues into development benefits for the population;
3. accessibility challenges caused by large distances between the capital cities and the location of the resources, or by poor infrastructure;
4. elite control of valuable natural resources; and
5. high lootability of the natural resources.³⁸

Research suggests that the management of natural resources, including their ease of access and capture and the distribution of derived benefits, remains the most important determinant factor as to whether they may be used to support violent conflict.³⁹ As part of conflict analysis, understanding these dynamics can help to identify potential conflict hotspots and to ascertain whether armed groups are likely to use natural resources to acquire arms and sustain violence. This relationship is explored further in the following section.

Armed groups and natural resources

For armed groups, control over natural resources not only allows for the financing of war efforts (including

purchasing weapons and ammunition), but it also serves as an important symbol of power. The ability of armed groups to dominate access to natural resources and their exploitation depends on a range of influential factors, such as:

1. the level of control of the state over its territory;
2. the geographic distribution of the resources and distance from the state capital;
3. the extent to which armed groups can extract, tax and/or control the movement of natural resources;
4. access by armed groups to cross-border trading networks (including transnational organized criminal groups); and
5. the ability of state security forces and the international community to respond effectively and coherently to security threats.

For example, in Côte d'Ivoire the conflict was financed on both sides by revenues and taxes obtained from the production and export of cacao and diamonds (see Case study 3).

The availability, geographic distribution and type of natural resources present in a country will have implications for the structure and functioning of the chains of command within an armed group. For example, where lootable natural resources are readily available, economic motivations to join armed groups can be strong. During the conflicts in Liberia, Sierra Leone and Côte d'Ivoire, armed groups, their leaders and mercenaries took advantage of the porous borders and opportunities for economic rewards from natural resources (primarily from diamonds, gold and timber) to recruit combatants from neighbouring countries and were thus able to sustain the conflict.⁴⁰

The availability of lootable resources can also make it more difficult for commanding officers to apply control over their own forces.⁴¹ This in turn can lead to combatant predation at local levels that can 'multiply the points of conflict' and cause secondary grievances amongst the civilian population.⁴² For instance, communities living near natural resources, which are not otherwise implicated in the conflict, may become so when armed groups move in to control these areas. This has been the case during the conflict in Colombia, where attempts to control land and mineral resources has spread the conflict throughout rural areas.⁴³

Control over lucrative natural resources can also become a source of economic motivation for armed groups to continue engaging in conflict, thereby reducing the incentive to participate in peace negotiations. For some, access to such wealth may give them cause to perpetuate the chaotic economic environment of the conflict and to act as peace spoilers rather than working towards conflict resolution. In the Liberian conflict, described in Case study 4, the control over rubber plantations by combatants after the signing of the peace agreement illustrates the type of entrenched behaviour that members of armed groups may demonstrate when it comes to the illicit exploitation of natural resources for economic benefits.

Case study 3. Natural resources and conflict in Côte d'Ivoire

Throughout the conflict and political crisis that plagued Côte d'Ivoire between 2002 and 2007, revenues derived from natural resources were used to finance conflict by both sides, through both licit and illicit means. The government relied primarily on revenues received from cacao exports (Côte d'Ivoire supplies over 30 per cent of the world's cacao market and is the largest producing country in West Africa) through the national cacao institution at that time, *Bourse du Café et Cacao* (BCC), to support state armed forces. In contrast, the *Forces Nouvelles* (FN), the main opposition group to the government, was able to derive revenues from cacao production in the areas under their control by taxing the production and transport of cocoa. It is estimated that the FN controlled up to 10 per cent of Côte d'Ivoire's cacao production at the height of the conflict.⁴⁴ They also relied on revenues derived from illicit diamond exploitation. Trade in diamonds was eventually curtailed in 2005, following the application of UN Sanctions by Security Council Resolution 1623, which prevented the import of all diamonds sourced from Côte d'Ivoire, but cacao was never subjected to trade restrictions.

Following the 2007 peace accord, Côte d'Ivoire remained largely divided between North and South. FN sub-commanders retained control over the northern region of the country and continued to derive profits through taxes on cacao, and other natural resources, including cashews and timber, exported to neighboring countries. This revenue allowed the group to retain most of its structure and to secure its power across the northern region.

DDR in Côte d'Ivoire started in 2008 and was implemented through the National DDR Commission.⁴⁵ To support the reintegration of ex-combatants, an initiative entitled "1000 Micro Projects" was enacted through a partnership among the UN peacekeeping mission, UNDP, the World Bank and the EU. This effort included the training and formation of microenterprises run by ex-combatants, many of which supported the sale and processing of agricultural goods, livestock, gardens for market produce, construction materials and other activities using natural resources.⁴⁶ However, many of the ex-combatants supported through this programme were re-mobilized during the 2010-2011 post-election crisis and participated in the violent episode that killed thousands and displaced many others. Grievances around continued lack of access to land and tenure security were also motivating factors for re-mobilization and the continued violence in the western region of the country.

When the new government of Alassane Ouattara took office in May 2011, a new DDR programme was deemed necessary within the framework of a larger security sector reform. This programme is currently being planned and natural resources are likely to play an important role in reintegration. In 2013, UNEP began supporting the government's efforts to undertake a post-conflict environmental assessment, which will provide information on the linkages between the conflict and the governance of natural resources, and highlight potential natural resource-based peacebuilding opportunities within the context of ongoing community recovery and development.



A Flame of Peace ceremony marks the start of DDR in Côte d'Ivoire in 2004

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Case study 4. Ex-combatants in rubber plantations in Liberia



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UNMIL peacekeepers move in to secure Guthrie rubber plantation from ex-combatants who were illegally tapping rubber in the area. Liberia, 2006

During the armed conflict in Liberia that ended in 2003, militia groups seized several lucrative rubber plantations, notably Guthrie and Sinoe.⁴⁷ The ex-combatants working on these plantations profited through the extortion of local rubber tappers and illegally imposed taxes, amassing tens of thousands of dollars per week.⁴⁸ While the UN Security Council put sanctions on diamonds and timber from Liberia during the conflict, rubber was not subject to any restrictions, in spite of its prominent role in the Liberian economy.

To address the threat posed by the occupation of rubber plantation to security, stability and human rights, newly-elected President Ellen Johnson Sirleaf established the Rubber Plantation Task Force (RPTF) in 2006. The RPTF was a multi-stakeholder platform that included government ministries, national security institutions, the national DDR commission, private sector associations, UN actors, donors and civil society organizations. The variety of actors involved in this effort reflected the complexity of the problem and the need for a multi-pronged approach of coordinated interventions by legal, security, political and livelihoods actors. This combination of efforts eventually led to dialogue between UNMIL and the ex-combatants and resulted in their engagement in the national DDR programme as well as the re-establishment of government control over the plantations.

Within the national DDR programme, 509 ex-combatants from Guthrie plantation were selected to receive training in the Tumutu Agricultural Training Centre in Bong County. 110 of these trained ex-combatants were eventually re-employed by the Interim Management Team that managed the plantation until the rightful owner of the concession was identified.⁴⁹ These employment activities were important for security in Liberia as well as in the region, since many ex-combatants who were not fully reintegrated were later easily recruited as mercenaries to participate in efforts to destabilize neighboring Côte d'Ivoire. As of 2009, some 100 ex-combatants were still employed on the Guthrie plantation and received regular wages and social security benefits.

For Sinoe plantation, information on the rightful owner of the plantation was less clear and thus UNMIL was unwilling to engage in efforts to regain control of the plantation. Efforts to regain control of Sinoe were also challenged by its distance from the capital and lack of accessibility by road. However, ex-combatants eventually disengaged from the plantation after a steep drop in rubber prices.⁵⁰ Many sought alternative livelihoods through illegal logging or gold mining in nearby Sapo National Park (see Case study 11).

Overall, the efforts of the RPTF eventually led to the establishment of broader reforms for the rubber sector, including an export ban on raw rubber and an executive order that established a “Rubber Development Fee” on processed exports, 20 per cent of which is earmarked for return to local communities. While the implementation of these funds for community development has not fully materialized due to low government capacity, poor accountability and corruption, the efforts show a strong political willingness to put in place legal frameworks for good natural resource management. However, the experience of the RPTF in addressing the challenges posed by poor natural resource governance and resource revenue capture by armed groups illustrates the importance of comprehensive approaches to ensure that DDR and security objectives are achieved where lucrative natural resource exploitation poses a risk.

Part 1. The natural resource-conflict nexus

In addition, the hierarchy and structure of an armed group itself can break down as a result of the easy accessibility and control over natural resources. In eastern DRC for example, members of armed groups often control valuable mining areas or they tax transport routes for charcoal and minerals. Past arrests of top leaders of some of the largest armed groups operating in eastern DRC (i.e. the FDLR and CNDP) had little impact on the conflict, which reinforces the notion that when combatants can finance themselves by exploiting natural resources, military hierarchies may erode.⁵¹

The availability of accessible and lucrative natural resources can also lead to a splintering of armed groups, thereby multiplying the actors involved and further complicating peace negotiations. Where conflicts span large geographical distances between their political centers and areas of armed group operations, such as in the DR Congo, Republic of the Congo, Colombia and Central African Republic, research shows that splinter groups may be more likely to form as mid-level commanders gain control of key geographical areas or groups.⁵² Similarly, research on demobilized combatants in Colombia shows that secondary armed group formations (e.g., paramilitary groups) are primarily motivated by wealth. Economic motivations for recruitment in these groups are also more likely to be tied to violence towards civilian populations, and accessible natural resources are a clear incentive to continue the conflict in order to accumulate wealth.⁵³

Breaking patterns of behaviour in command structures can be difficult when lootable natural resources are available, but it is even more so when there are few economic options for reintegration. Following the war in Liberia, for example, rubber plantations were one of the only remaining profitable industries. Case study 4 discusses the case of the Guthrie and Sinoe Rubber Plantations, which were taken over by ex-combatants and their leaders following the end of the conflict.

Civilian impacts

Armed groups have been notoriously associated with brutal and ruthless means of acquiring control over natural resources in many conflicts. In such settings, pillage, predation and extortion are routinely inflicted upon civilian populations, including children.⁵⁴

Predatory behaviour is not limited to insurgent groups. State security forces, such as in the DRC, Colombia and in the Province of Aceh, Indonesia, have also been reportedly involved in the illegal exploitation of natural resources to finance conflict activities, as well as in pillaging and predation as a reward for fighting.⁵⁵ Such behaviour can be seriously damaging to civil relations as it degrades public trust in the government and its security apparatus, and undermines the rule of law.⁵⁶ Furthermore, the involvement of state security forces in profit-seeking ventures, including through natural resource exploitation, heightens the overall risk

of corruption and leads to compromising conflicts of interest.⁵⁷

A lack of security and protection combined with predatory behaviour towards communities by armed groups and/or state security forces can multiply points of conflict, potentially resulting in the formation of additional armed groups.⁵⁸ For example, secondary groups may form to defend communities in areas where there is low state presence and poor security. In many conflicts, fighting between paramilitary groups, insurgent movements and state security forces results in a proliferation of violence in rural communities, thereby leading to the formation of subsequent groups for additional protection. In these circumstances, civilians have often been caught in the crossfire and women, children and youth have been targeted for recruitment as a result.⁵⁹

Conflicts can also impact civilian access to natural resources and disrupt livelihoods. Violent conflict can prevent people from accessing their land for agriculture, grazing livestock or harvesting non-timber forest products, thereby increasing the pressure on land and natural resources that are safely accessible. For example, in the Aceh Selatan district of the Province of Aceh, Indonesia, farmers were prevented from accessing their fields and nutmeg crops during the conflict, which led to a devastated and diseased nutmeg crop in the following years.

Violent conflict can also degrade natural resources directly or indirectly, either through targeted actions or unintentionally. Such degradation can in turn undermine development and a community's capacity to recover from conflict and to rebuild their livelihoods.⁶⁰ In order to survive the negative fallout from conflict and their access to natural resources, communities may modify their livelihoods strategies in maladaptive or unproductive ways.⁶¹ Pressure on marginal agricultural land, for example, can cause erosion or degradation of soil. Efforts to increase available land for food cultivation can also lead to the conversion of forested areas to crop land; in areas with steep slopes, such deforestation may then increase the risk of disaster from landslides, as well as loss of other forest resources, including non-timber forest products and wildlife populations. Overcrowding on limited land areas can lead to sanitation problems that cause pollution and disease and can make unsustainable demands on drinking and irrigation water resources.⁶² The consequences of these strategies – both in long and short-term – can be dire.

Post-conflict recovery will also be affected by a number of other factors, including the impairment of national and local institutions to effectively manage natural resources – such as line ministries at the national or sub-national level – as well as agricultural extension services and infrastructure repair. In the Province of Aceh, Indonesia, for example, the conflict significantly degraded local natural resource management regimes, though these are slowly beginning to be revitalized.

Case study 5. DDR and criminality in Colombia

Multiple conflicts in Colombia have been ongoing at various levels of intensity since the mid-1960s and have involved a variety of armed entities, including insurgent and paramilitary groups and government forces. In 2002, the Government of Colombia negotiated an agreement with leaders of the foremost paramilitary group - the *Autodefensas Unidas de Colombia* (AUC) - to demobilize 31,671 of their members, as well as created incentives for some 10,200 insurgent combatants from other groups to self-demobilize. Far from improving the security situation, however, rates of criminal gang violence and internal displacement have risen.

According to the UN High Commissioner for Human Rights, members of the AUC who were not fully reintegrated through the government programme are behind the formation of the gangs that are responsible for this violence. The violence has mostly targeted minority populations who seek to reclaim land, and those seeking justice against the AUC, including government dissenters, human rights activists, students and indigenous groups.

Major natural resource-related issues in the Colombian conflict include land seizures by armed groups for illicit narcotics cultivation and deforestation. More recently, militia groups composed of ex-demobilized fighters and FARC have targeted gold mines in the Córdoba region in north-east Colombia.⁶³ More recently, the government of Colombia and the leadership of the FARC have initiated peace talks and a first agreement was reached in May 2013 on rural land reform in the country. This agreement tackles one of the primary grievances and motivating factors for the decades-old insurgency.⁶⁴ Ensuing discussions on this throughout 2013 will determine if land reform will become a driver for peace or if it will continue to be factor in conflict.



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Coca seed beds, light green rectangles, are seen on the bank of a river in the Garrapatas Canyon, in Colombia's western Choco state. Natural resource-related issues in the Colombian conflict include land seizures by armed groups for illicit narcotics cultivation and deforestation

Natural resource management in post-conflict recovery

Sound and effective management of natural resource sectors in post-conflict economies is critical for recovery, especially since natural resource sectors are often the main sources of gross domestic product (GDP) growth and foreign exchange revenue in post-conflict economies. How well those sectors are managed – and how successfully a government is able to develop and tax them – will have a substantial effect on the government's legitimacy and overall recovery, especially if the revenues are applied to development projects and basic services. Many will also remain major economic sectors in the long-term. For example, in Sierra Leone, natural resources that were implicated in the conflict (i.e., mineral resources) now make up 90 per cent of the country's exports.⁶⁵

To achieve long-term peace and sustainable development, and to take advantage of the opportunities presented by natural resource sectors, (re)building infrastructure is crucial. It contributes to recovery in several key ways; first, the post-conflict reconstruction process immediately creates job opportunities. Secondly, the establishment of appropriate infrastructure will allow for the improved management of natural resources that can result in additional benefits for health and economic activities. Sanitation systems, for example, help to improve public health and the environment, and the establishment of alternative energy sources can reduce the demand for fuel wood while also freeing the time

of those responsible for collecting fuel wood (usually women) for other tasks. Lastly and most importantly, infrastructure improvements in transportation and the establishment of basic services are the foundation for economic growth in general and successful reintegration programmes in particular.⁶⁶ Furthermore, the social aspects of such activities, including the need for cooperation between different natural resource user groups, represents a key opportunity for bringing DDR participants and local community members together to generate dividends for peace and reconciliation.

Employment is crucial to ensuring stability in the immediate post-conflict period and to paving the way for sustainable development. Effective management of natural resources is likewise essential to employment creation. However, when the exploitation of natural resources has been used to finance armed groups, there is an inherent risk that ex-combatants will continue these activities after a peace agreement.⁶⁷ If former members of armed forces or groups are not (adequately) demobilized and reintegrated into sustainable livelihoods, they may continue to exploit and attempt to control natural resources, potentially provoking a return to conflict.⁶⁸

Similarly, delays in the effective management of natural resources following the end of conflict may allow former members and commanders of armed groups to continue profiting from the exploitation of natural resources or can even lead to the creation of organized crime syndicates.⁶⁹ In Colombia, for example, demobilized members of paramilitary groups have joined urban gangs that are associated with committing serious crimes and human rights abuses (see Case study 5).⁷⁰

Part 2

Disarmament, demobilization
and reintegration
and natural resources

P A R T **2**

Disarmament, demobilization and reintegration and natural resources

Part 1 demonstrates the importance of understanding the complex relationship between natural resources, armed forces and groups, and conflict. As illustrated in Table 1 below, many recent armed conflicts have been linked to natural resources and have also included DDR programmes following the signing of peace agreements. To explore the role of natural resources in each of the components of DDR further, Part 2 describes the DDR process and shows the linkages between DDR and natural resource management.

Over the past twenty years, DDR programmes have become a standard element of post-conflict recovery. In a study of peace agreements negotiated between 1980 and 1997, the demobilization and reintegration of ex-combatants was the single most important sub-goal for the successful implementation of the peace agreement.⁷¹ Recently UN entities and their counterparts supported such programmes in nearly 30 different countries.⁷²

The objectives of DDR (see Box 1) are highly influenced by factors external to the DDR programme itself,

Table 1. Natural resources in conflict and corresponding DDR programmes

Country	Duration of conflict	DDR programme dates	Natural resources implicated in conflict
Afghanistan	1978 - present	2002 - 2006 2011 - present	Opium (Taliban) Lapis lazuli, emeralds, opium (Northern Alliance)
Angola	1995 - 2002	1992 - 1994 1994 - 1998 2002 - 2008	Oil, diamonds
Burundi	1993 - 2005	2004 - 2006	Land
Cambodia	1978 - 1997	1991 - 1993 1999 - 2005	Timber, gems
Colombia	1984 - present	2002 - present	Oil, gold, coca, timber, emeralds, palm oil, land
Democratic Republic of Congo	1996 - present	1999 - present	Copper, coltan, diamonds, gold, cobalt, timber, tin
Côte d'Ivoire	2002 - 2007 2010 - 2011	2005 - 2010 2012 - present	Diamonds, cocoa, cotton
Indonesia-Aceh	1975 - 2006	2006 - 2009	Timber, natural gas, marijuana, wildlife
Liberia	1989 - 2003	1996 - 1997 2003 - 2006	Timber, diamonds, iron, palm oil, cocoa, coffee, rubber, gold
Nepal	1996 - 2007	2007 - present	Land
Papua New Guinea-Bougainville	1989 - 1998	2001 - present	Copper, gold
Philippines	1969 - 2012	1986 - present	Land, sugar cane, timber, gold, copper
Republic of Congo	1997 - 2008	2000 - 2005 2008 - present	Oil
Rwanda	1994	1995 - present (including repatriation of combatants from DRC)	Land
Sierra Leone	1991 - 2000	1996 - 2004	Diamonds, cocoa, coffee
Sudan	1983 - 2005	2006 - present	Oil

Box 1. Definition of Disarmament, Demobilization and Reintegration

Based on the policy guidance on the UN Secretary-General in 2005, the UN Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS) define DDR as “a process that contributes to security and stability in a post-conflict recovery context by removing weapons from the hands of combatants, taking the combatants out of military structures and helping them to integrate socially and economically into society by finding civilian livelihoods.”⁷³

Rewrites to the guidance in 2011, however, have additionally emphasized that while “reintegration programmes supported by the United Nations are time-bound by nature ... the reintegration of ex-combatants and associated groups is a long-term process that takes place at the individual, community, national and regional levels, and is dependent upon wider recovery and development.”⁷⁴

Participants of DDR programmes include male and female adult, youth and child combatants, and others associated with armed forces or groups in non-combat roles.⁷⁵

such as political will, challenges to the on-going peace process - where one exists - and external security threats. Since country contexts differ according to the nature, duration and causes of conflict, DDR programmes must be flexible and adapted to each context.

Natural resources are implicated in DDR in a variety of ways, depending on the physical, environmental, economic and infrastructural conditions where the process is taking place. While the main risks and opportunities are primarily related to reintegration and some reinsertion measures, disarmament and demobilization are also implicated. The sections below explore the relationship of natural resources with each component of DDR in turn.

Disarmament

The disarmament phase, defined in Box 2, is a critical step in any DDR process. In cases where natural resource exploitation is used to finance the acquisition of arms, coordinated efforts, including sanctions, can help to

Box 2. Definition of disarmament

“The collection, documentation, control and disposal of small arms, ammunition, explosives and light and heavy weapons of combatants and often also of the civilian population. Disarmament also includes the development of responsible arms management programmes.”⁷⁶

“dismantle the links that guarantee the combatants the finances and provisions of arms.”⁷⁷

Any sanctions regime designed as a tool for ending a conflict where natural resources are implicated must have related provisions for both natural resources and arms. For example, if sanctions are used to limit the trafficking of arms without addressing the exploitation of the natural resources used to procure those arms, their effects may be limited.⁷⁸ Furthermore, it is likely that disarming combatants without limiting access to valuable natural resources will do little to ensure that they are not able to re-arm themselves and return to conflict.

The management of arms collected during disarmament can also have an impact on natural resources and the environment if protocols are not put in place and followed. In order to encourage the establishment of safeguards which mitigate negative impacts, a UN Secretary-General’s Report in 2008 noted the importance of observing environmental norms in the implementation of disarmament and arms control activities.⁷⁹ In response, the International Small Arms Control Standards (ISACS) set out provisions for protecting natural resources during the destruction of collected weapons so as to minimize environmental impact for air, soils, water and human health, which can be applied in DDR.⁸⁰

Demobilization

Demobilization (see Box 3 for definition) can take place either through static cantonments (i.e. where combatants stay in specific sites for a determined period of time) or through temporary centres and mobile demobilization units, which bring services to combatants and associated groups. Under the correct circumstances, the latter is considered a more cost-effective, faster and more flexible option.⁸¹ Moreover, in recent DDR programmes, where the phases of DDR are not always linear, cantonments have rarely been used.

When cantonment sites are built, however, measures should be taken to ensure that environmental impacts are minimized through proper sanitation facilities, sound management of water resources and planning to ensure that the energy usage of these sites does not threaten the availability, accessibility or sustainability of local natural resources.⁸² For instance, this entails ensuring that fuel wood is not overharvested

Box 3. Definition of demobilization

“The formal and controlled discharge of active combatants from armed forces or other armed groups. The first stage of demobilization may comprise the processing of individual combatants in temporary centres to the massing of troops in camps designated for this purpose (cantonment sites, encampments, assembly areas or barracks). The second stage of demobilization encompasses the support package provided to the demobilized, which is termed reinsertion.”⁸³

Part 2. Disarmament, demobilization and reintegration and natural resources

from local forests; waste is disposed of according to international standards; wildlife are not overexploited or illegally traded; local water sources are properly managed to avoid contamination; and that the sites do not affect the access and availability of natural resources for nearby local communities.⁸⁴ It is especially important to integrate gender-sensitive measures in terms of natural resource use during cantonment, since women and girls are primarily responsible for the collection of fuel wood and water for their households in many countries and will suffer disproportionate impacts if their access to these resources is changed.

The equitable and sustainable management of natural resources is thus important to guarantee that cantonments do not create unintended tensions with neighbouring communities or negatively affect vulnerable local populations by limiting their access to natural resources. In the case of Nepal (see Case study 6), easing community tensions was achieved by extending services to surrounding communities and promoting inclusive decision-making for the management of local natural resources. Similarly, in cases where combatants are kept in cantonment camps for an extended period of time present opportunities to provide training in the maintenance of water and sanitation services – skills that can continue to be promoted throughout the recovery phase with national and civil society partners.

Reinsertion

Reinsertion, short-term in nature, fills the gap in support that can arise between demobilization and reintegration activities. Reinsertion and reintegration may therefore overlap or run in parallel with different levels of intensity.⁸⁵

Reinsertion may have immediate direct linkages to natural resources, such as the implementation of labour-intensive quick impact projects that seek to rehabilitate key infrastructure in the water sector, including irrigation

canals, drinking water and sanitation infrastructure, or for the restoration of infrastructure and basic services needed to better manage natural resources, such as roads, schools, and government buildings, including offices for agricultural extension services and farmer's lending institutions. In Afghanistan, for example (see Case study 7), ex-combatants were employed in de-mining teams as part of a short-term labour project, the results of which made both the country's transportation routes and its agricultural areas considerably safer and more accessible.

Reinsertion activities can also provide opportunities for ex-combatants, associated groups, their dependants and other returning populations to learn skills that will further support them during reintegration, while simultaneously contributing to tangible benefits and peace dividends at the community level. If properly designed and implemented, such activities can also provide opportunities to help to overcome gender biases. Projects that encourage women to participate equally in natural resource-related projects (including in non-traditional roles) provides an opportunity to empower women and ensure their participation in natural resource management.

Reintegration

The reintegration of ex-combatants and associated groups (see Box 4) is a long-term process that occurs at an individual, community, national and at times even regional level and fits within wider community security, reconciliation, recovery and development efforts. While programmes must take care not to be perceived as "rewarding" ex-combatants, they should nevertheless lead to sustainable income, social belonging and political participation. Moreover, reintegration aims to tackle the motives that led ex-combatants to join armed forces and groups and thus to dissuade them from re-recruitment.

Box 4. Definition of reintegration

"The process by which former combatants acquire civilian status and gain sustainable employment and income. Reintegration is essentially a social and economic process with an open time frame, primarily taking place in communities at the local level. It is part of the general development of a country and a national responsibility and often necessitates long-term external assistance."

The UN Secretary-General elaborated on this definition in 2011, observing that, "in most countries, economic aspects, while central, are not sufficient for the sustainable reintegration of ex-combatants. Serious consideration of the social and political aspects of reintegration...is [also] crucial for the sustainability and success of reintegration programmes". This includes interventions, such as psychosocial support, mental health counselling and clinical treatment and medical health support, as well as reconciliation, access to justice, transitional justice, as well as participation in political processes.

Economic reintegration involves the provision of vocational or professional training, grants, apprenticeships or micro-financing to capacitate individuals in the areas of agriculture, animal husbandry, microbusiness or entry into public or private service.

Social reintegration provides the necessary complement to economic reintegration by focusing on interventions that seek to disarm and demobilize minds and behaviours through such areas as psychosocial and mental health counselling, medical treatment and activities that promote reconciliation and social cohesion.

Political reintegration supports interventions such as civic education and providing ex-combatants with valid identification documents that support the ex-combatant "in claiming rights and fulfilling duties, including those related to participation in political processes, such as elections and community-based decision-making processes." Political reintegration promotes confidence and investment in the peace process and transitional state structure.⁸⁶

Case study 6. Promoting natural resource management in cantonment camps in Nepal



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Former Maoist rebels attend an integration program at Shaktikhor Cantonment in Chitwan, Nepal in 2011. The interviews determined who will join the national army; the process continued for six years

After the signing of the peace agreement in Nepal in 2006, approximately 19,600 members of the Maoist fighters were registered and directed to one of 28 cantonment sites where they awaited news of their integration into the Nepalese National Army. Although the cantonments were originally intended to be in place for six months to one year, the process continued for six years.

The infrastructure supported in the cantonment camps included boreholes, deep wells, pipelines, water storage tanks and taps. As part of the vocational training programmes, combatants were taught how to upkeep the water systems and how to respond when water quality tests show below standard conditions. These operations and maintenance training continued in the camps and surrounding communities until camps were dismantled in 2012, with funding for future activities in this area coming from the Nepal Peace Programme Fund.

Supplies of fuel wood was an issue in the areas where the cantonment camps were established, and a challenge for the surrounding communities. In some camps where fuel wood shortages were especially prevalent, GIZ supported the distribution of improved cooking stoves in both the camps and surrounding communities, which reduced the fuel wood consumed by 50 per cent. The Maoist combatants were also trained in the use of the improved cooking stoves as part of their vocational training programme.⁸⁷

To varying degrees, the type and availability of natural resources in a country - as well as the availability of necessary infrastructure to exploit them - affects nearly all DDR programmes, particularly in terms of identifying the relevant reintegration options for ex-combatants. The differences in livelihoods dependence on natural resources can vary substantially within countries as well. For instance, in the UNDP Community Recovery and Reintegration Programme in eastern DRC, 39 per cent of the participants in North Kivu were directly dependent on natural resources for their livelihoods. In comparison, 83 per cent of participants in South Kivu were dependent on

natural resources.⁸⁸ In the province of Aceh, Indonesia, agriculture, fisheries and forest resources are mainstays for post-conflict livelihoods. In some cases, natural resource management is even a key component of small business development. In Rwanda's reintegration programme for example, ex-combatants in urban areas have started successful businesses as contractors providing water and sanitation infrastructure services.⁸⁹

Beyond economic recovery, there are several aspects of natural resource management that are also relevant for social and political reintegration.

Case study 7. Employing ex-combatants through de-mining in Afghanistan



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A deminer of the Afghan Technical Consultant Demining works on a minefield in Aka-Khail village in Bagram north of Kabul, Afghanistan, April 2010

Following the signing of the Bonn Peace Agreement in December of 2001, Afghanistan had an estimated 100,000 combatants to be disarmed, demobilized and reintegrated into society. Through the *Afghanistan's New Beginnings Programme* (ANBP), thousands of ex-combatants were trained in community-based de-mining skills, given literacy classes, and offered vocational and community mobilization training. These former combatants were then referred to the UN Mine Action Center for Peace and recruited as part of the *Mine Action for Peace Programme* (MAFP) and employed for a minimum of 12 months.

The average age of the former combatants participating in the MAFP was 31, and all were men. In addition to contributing to safety and security through de-mining in the provinces of Kunduz, Parwan, Kabul, Mazar and Kandahar, these former combatants also reported improved internal relations as a result of working together for a common goal. The de-mining work also helped them to reintegrate into their communities and to gain trust and support.

The MAFP component of the ANBP represents an important tactic for solving two of the most difficult obstacles to peacebuilding in post-conflict contexts: the need to remove landmines and other unexploded ordnances, and the reintegration of ex-combatants. The programme employed 1,102 former combatants in total, representing around 1.4 per cent of the total number to be reintegrated. Natural resources played an important role in reintegration overall as well. Of the nearly 60,000 who had participated in DDR and chosen a reintegration option by 2005, 43 per cent opted for agriculture and over 25 per cent chose vocational training or small business.⁹⁰

A programme aimed at disarming and demobilizing members of armed groups, called the *Disbandment of Illegal Armed Groups*, succeeded the ANBP and ran from 2006 to 2011. In 2011, it became part of the *Afghanistan Peace and Reintegration Programme*. To date, this programme has reintegrated 417 ex-combatants and 3,465 community members through natural resource management, including agriculture and reforestation activities in 11 provinces.⁹¹

Case study 8. Former Lord's Resistance Army combatants and access to land in Northern Uganda

Uganda has suffered from localized insurgencies since it gained independence from the UK in 1969. Despite its progress towards stability, northern Uganda has been particularly impacted by violence caused by one of the region's largest militia groups: the Lord's Resistance Army (LRA). The LRA has accounted for hundreds of thousands of deaths and left 1.6 million people displaced in Uganda alone. Peace talks between the Ugandan government and the LRA have been ongoing since 2008 but have not lead to any concrete outcomes. Most LRA leaders fled to neighbouring countries such as the Central African Republic, South Sudan and the DRC after arrest warrants were issued by the International Criminal Court (ICC) in 2005 and global pressure for action increased.

Despite the creation of the National Amnesty Commission in Uganda, which ensures that former members of the LRA can return to Uganda without facing criminal charges for their roles in the conflict, ex-combatants from the LRA struggle to reintegrate into society, in part because of a lack of access to land. This is especially true in northern Uganda, where a study by the International Organization for Migration and the United Nations Development Programme in 2010 showed that: "Nearly all - 93 per cent - former Lord's Resistance Army combatants surveyed in Gulu municipality reported being unable to access land upon return; 67 per cent pointed to their inability to access land as a key driver behind their being unable to reintegrate into their original communities, and as a result migrating to nearby urban centers."⁹² The study furthermore presents the following barriers ex-combatants especially endure during their social and economic reintegration:

- Death of recognizable chiefs, elders and/or parents: when asked, nearly half of former LRA respondents (43 per cent) reported that the death of these traditional figures practically equates to loss of evidence, and therefore, loss of their land (traditionally, access and ownership rights as regards land are undocumented across the sub-region);
- Sale of land: 20 per cent of respondents noted that their family's land had been sold to third parties by their brothers or uncles before they returned; and
- Greed of home communities: 17 per cent of respondents pointed to excess land grabs, and highlighted examples whereby existing land owners occupied land owned by former LRA combatants thereby increasing their acreage.⁹³

Women and children represent a particularly vulnerable group impacted by the conflict, as they were frequently abducted by the LRA in northern Uganda. Female LRA ex-combatants typically suffer from severe marginalization in northern Uganda when attempting to reintegrate. Often rejected by their former communities, they struggle to return to normal day-to-day life and are forced to look for alternative means of survival. As a result, they struggle to participate in the reintegration and recovery process.

- The same combined study also outlines the following statistics relevant for female ex-LRA:
- 30 per cent of households in the Acholi sub-region were estimated to be female-headed;
- Most female former members of the LRA prefer to resettle in rural areas or new towns other than those of origin;
- 83 per cent expressed the wish to own their own home; 51 per cent expressed the wish to own land;
- Lack of access to land by women formerly in the LRA has forced many into vulnerable positions to find means for their livelihoods; 87 per cent of the female former members of the LRA who are now commercial sex workers in Kasubi Parish did not have access to land upon return; and
- 63 per cent of former female combatants were rejected outright by their families and communities upon return to Kasubi Parish; 62 per cent of these were single mothers.⁹⁴



Members of Uganda's Lord's Resistance Army (LRA), 2006

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Part 2. Disarmament, demobilization and reintegration and natural resources

The environment and natural resources often hold cultural significance and represent a key component of social status and identity.⁹⁵ Access to natural resources, especially land, thus carries considerable importance for ex-combatants during reintegration, regardless of whether they are returning to a place of origin or to a new location. In Uganda, for instance, 67 per cent of returning Lord's Resistance Army (LRA) combatants noted that they were limited in their reintegration options by lack of land.⁹⁶ For women, who are often responsible for food security but tend to be more vulnerable to exclusion from land ownership or lack access to land, natural resources can be an entry point for addressing gender equality issues.⁹⁷ In the same country, 51 per cent of women returning from the LRA wished to own land, as over 60 per cent of these women were rejected by their families (and thus access to their family's land) upon return (see Case study 8).⁹⁸

Engaging ex-combatants and associated groups in the management of natural resources, including in decision-making and community forums, helps to reinforce or consolidate their status as civil citizens, thus reinforcing their political reintegration. This is particularly true for women, and provides an opportunity to enhance their political participation. Moreover, including the participation of ex-combatants in community dialogues, for instance on shared goals and interests related to the use and protection of natural resources, can have positive dividends for community-building and reconciliation between ex-combatants and their communities, across communities and between communities and the state.⁹⁹

Enabling conditions for reintegration and natural resource management

The reintegration component of DDR programmes is highly influenced by the surrounding context, including the absorption capacity of communities, social relations and the economic climate of the area. With respect to natural resources, there are three areas in particular which are of interest to DDR practitioners: i) issues of land rights; ii) engagement of private sector actors working in the extractive industries; and iii) sustainable value chain development in natural resource sectors. These are described in more detail in the following sections.

Land rights

In many countries where DDR takes place, ownership rights and equitable access to land and natural resources are important prerequisites for successful and sustainable reintegration, especially in areas where livelihoods are primarily based upon agriculture and livestock production. Since the ownership of property can be used as leverage to access loans and sources of financing, the value of land ownership takes on great significance.¹⁰⁰ However, peace agreements in general, their DDR components in particular, rarely make provisions to ensure that ex-combatants have access to land.¹⁰¹

Competition over access to land can also become a source of tension between returnees and community members,

especially where land resources are limited.¹⁰² In certain contexts, where agriculturalists and pastoralists share land and water resources, the potential for conflict can be high, especially in areas that face droughts or shortages of land and water. Also, land taken by force during the conflict may be considered by ex-combatants to be a rightful appropriation or reward for fighting.¹⁰³ This can have a negative impact on the relationship between ex-combatants and the communities, particularly if the former occupants of the land were displaced and return to find their land occupied. In the absence of a mechanism that adequately accommodates statutory and customary land tenure systems and applies it justly, access to dispute resolution can become a key element to avoid relapses into conflict.¹⁰⁴

A functional land tenure regime is essential to encourage people to resettle and invest in restarting livelihoods in a given area.¹⁰⁵ Long-term, sustainable resettlement and investments into the land are more likely to occur when individuals have confidence that the land they live on is protected by non-eviction guidelines, occupancy licenses, lease arrangements or customary user rights. Formal land registration may not always be necessary to secure tenure however, depending on the context. According to studies, perceptions of land and natural resource tenure security are just as important as holding a land title.¹⁰⁶

In urban settings, rights or tenure over commercial or residential space are equally important so that ex-combatants and associated groups cannot easily be displaced from either their homes or their place of business.

In addition to being an important economic asset in many post-conflict environments, land ownership and tenure are intrinsically tied to cultural and social status and identities for both men and women. Indeed, research shows that families who own or have tenure rights to land are more likely to successfully cope with economic or social stressors and that "resources controlled by women are more likely to be used to improve family food consumption and welfare, reduce child malnutrition, and increase overall wellbeing of the family".¹⁰⁷ However, gaining access to land often depends on customary decision-making and patriarchal inheritance systems.¹⁰⁸ These systems can have very distinct implications for female and male DDR programme participants, as demonstrated in Case study 8.

Women are often at a distinct disadvantage when it comes to accessing land. This is particularly true of unmarried women and women who are not closely associated with a male relative, as women's land rights are often based on customary agreements systems and viewed as an extension of male family members' rights to land.¹⁰⁹ The situation can be even more complicated for unmarried female ex-combatants or women and girls associated with armed forces and groups, as they often suffer further marginalization, discrimination and rejection by their families and communities for their real or perceived roles during the conflict. Due to the social stigmas related to a woman's association with armed forces or groups, many women, especially single or widowed, often choose not to return to their original communities and migrate instead to urban centres.¹¹⁰

Many female DDR participants also have dependants and are heads of their households, which makes access to land all the more critical. In many cases where customary and statutory land tenure systems exist side-by-side, customary norms can take precedence over statutory laws in practice. Linking reintegration efforts with wider rule of law initiatives is important to ensure that both female and male programme participants are able to claim land that they are legally entitled to. Guidance on these issues was recently released through the European Union and United Nations Partnership on *Land and Natural Resource Conflicts*.¹¹¹

Private sector engagement

Involvement of the private sector – and multinational enterprises in particular – in natural resource sectors in conflict and post-conflict settings can have both positive and negative impacts.¹¹² For example, private companies may directly or indirectly engage with armed groups when purchasing or transporting natural resources as part of their product supply chains. At the same time, some companies may halt operations in a country due to violent conflict, thereby opening the space for other actors to begin natural resource exploitation. Regardless, global supply chains and markets ensure that the demand for these resources continues despite conflict. Without strong international standards and enforceable requirements for transparency, due diligence, labelling and ethical conduct on the part of corporations and governments, conflict resources will remain a part of global supply chains.

Recently there have been a number of initiatives to address the role of conflict resources in global supply chains, as well as the transparency of these supply chains, for example:

- Kimberly Certification Process for diamonds;
- Extractives Industries Transparency Initiative (EITI);
- Organization for Economic Co-operation and Development's (OECD) Due Diligence Guidelines;
- UN Global Compact;
- The Natural Resource Charter;
- European Union's Forest Law Enforcement, Governance and Trade (FLEGT) for certified forestry products;
- International Conference on the Great Lakes Region (ICGLR);
- International Consortium on Combating Wildlife Crime; and
- US Dodd-Frank Act, US Lacey Act, EU 1502/1504.

Recent steps taken towards the certification of mineral supply chains in the Great Lakes Region in Africa through the ICGLR shows that there is an increased awareness on the part of both consumers and governments on the need for greater transparency from companies sourcing minerals from conflict-affected areas. Likewise, the implementation of FLEGT for the timber trade in Liberia, and soon in Côte d'Ivoire, hopes to improve both the management of forest resources and to curb illegal trafficking of timber.¹¹³

These initiatives represent important advances in trying to trace and track the origins and destinations of conflict resources in the global market. Their effectiveness, however, is hampered by the fact that compliance with them is not compulsory and that they cannot solve issues related to the lack of good governance in natural resource sectors. Moreover, many are focused specifically on the traceability of the supply chain, with limited effect on the broader socioeconomic dynamics taking place at the points of extraction, such as the impact of such activities on women, children and the surrounding local economy, all of which are important in fragile and post-conflict settings.

The implementation of traceability systems in mineral supply chains, such as those being developed through the ICGLR, include improved enforcement of labour laws, including restrictions on child labour in mines and improved health and safety regulations. These efforts could be further applied to include improved environmental safeguards as well, which would reduce exposure to hazardous materials used in the extraction of minerals and metal ores and improve environmental health in the surrounding communities. Such provisions could benefit the health and livelihoods of women and children in particular, as they are typically the main processors of ores in mining areas.

To create better conditions for reintegration, the improved management of extractive industries should also ensure transparency in bidding and contracting and guarantee fair and equitable sharing of benefits between the companies and the communities. This in turn can create greater opportunities for ex-combatants where benefits and financial revenues for communities are used to support employment creation, the establishment of training and learning centres and improved health facilities. In addition, the private sector can provide direct opportunities for training and employment of ex-combatants alongside community members, thereby also supporting social reintegration and reconciliation. The inclusion of gender issues and women's specific needs is increasingly critical to ensure successful benefit distribution and good relations between companies and communities.

Given these opportunities, it is important that DDR programmes engage directly with the private sector in countries where extractive natural resource industries will play a significant role in economic recovery. In so doing, they can identify specific areas of intervention where the private sector can support reintegration and help to improve the success of DDR overall. In addition to the extractive sectors, efforts to improve the development and management of supply chains in other natural resource sectors can also help to support additional opportunities for social and economic reintegration of ex-combatants into their communities. In particular, a value chain development approach in sectors producing important raw materials, such as in agriculture, fisheries and non-timber forest products, can be used to support the creation of employment opportunities and to engage various groups along a value chain to work together to improve overall productivity and access to markets. This approach is described in more detail in the following section.

Sustainable value chain development

Value chain development is driven by market demand and seeks to connect all of the various activities and stages related to the development of particular goods or services. This includes sourcing the raw material, processing, packaging, commercializing, marketing, and selling of the final product or service. In this process, the value of the product is increased at each stage, thereby creating employment opportunities and opportunities to grow and expand the business in question.

Connecting all the actors along a single-purpose value chain facilitates cooperation between participants. Similarly, if ex-combatants and associated groups participate in one or more of the value chain stages, this can also foster social reintegration, reconciliation and community acceptance. The diversity of activities needed for value chain development offers specific opportunities for women and other marginalized groups, especially in the harvesting, processing and commercialization of goods and services.

A value chain approach can be applied to any natural resource sector where raw materials are produced for domestic use or for export, and which involves a diverse set of actors, including community members, local and national government, the private sector, and NGOs.

As the global demand for ethical and environmentally friendly products increases, so do the economic incentives for industries and individual businesses to produce these goods and services. Supporting both existing and new businesses in conflict-affected settings

to improve harvesting and production techniques, as well as access to additional markets for their products and services, can be used strategically for reintegration and local economic recovery programmes. This can increase employment opportunities for both ex-combatants and conflict-affected communities alike and support them to meet the increased market demand for sustainably produced goods and services.

The use of certification schemes in value chains is also increasing in response to this global demand. These certification schemes typically require improved social, economic and environmental practices within the value chain. Reintegration and local economic recovery programmes in conflict-affected communities can work to identify opportunities to link value chain development efforts in natural resource sectors with such certification schemes to improve incentives for good social and environmental management.

For example, in the Province of Aceh, Indonesia, UNDP supported the development of coffee production value chains in conflict-affected areas and linked this with certification efforts, including the establishment of a geographic indication of origin for the area. Some companies went further by seeking certifications for fair trade and good environmental practices as well. All of these efforts have helped the certified coffee sector in Aceh to grow and expand, with increase visibility in the world market. The impacts on local communities have also been positive, as the companies employ local populations in their production chains and their growing practices help to conserve valuable local biodiversity (see Box 5).¹¹⁴

Box 5. Value chain development for BioTrade¹¹⁵

The UN Conference on Trade and Development (UNCTAD) supports the global BioTrade Initiative and the implementation of BioTrade programmes in South America and southern Africa, as well as more recently in the Province of Aceh, Indonesia. The term *BioTrade* refers to the production, harvesting, processing, marketing and sale of products that are derived from native biodiversity, the extraction of which is done in such a way as to protect the biodiversity of the ecosystem from which they were derived. BioTrade products include flora and fauna as natural ingredients for cosmetic and food products and often are based on indigenous knowledge of the species. Ecosystem services, such as ecotourism, are also considered as part of BioTrade.

BioTrade follows a value chain approach that targets biodiversity-based products within niche markets that offer high-value livelihood opportunities. Working with the value chain of a particular product or sector, BioTrade programmes strive to ensure that technical and financial assistance is available to people and institutions involved in every step in the value chain – the government, individual people and businesses – in order to improve production and to meet quality standards that in turn will facilitate access to national and international markets (see Case study 9).

In order to take advantage of these opportunities, DDR – and specifically reintegration practitioners – will need to include the expertise of value chain development practitioners in their planning and programme development in order to identify potential opportunities for their particular reintegration programmes. These will depend specifically on the market demand and raw materials available in their area of intervention. Once the potential for value chain development is confirmed, the programme will need to work with additional actors, including those working in local economic recovery, governance and macroeconomic development, to ensure that appropriate policies are in place to create an enabling environment for appropriate private sector investments in value chain development.

In order to support reintegration and peacebuilding objectives, such enabling policies should promote social inclusion, equitable distribution of economic benefits and the sustainable management of natural resources. With such an approach in place, benefits for reintegration can include income-generating opportunities, employment, and access to credit. There are also non-monetary benefits: capacity building, technology transfer, and access to information. In addition, a value chain approach can create a range of benefits for specific groups such as women, youth, elderly, and disabled persons.

Part 3

Natural resource management and reintegration

P A R T **3**

Natural resource management and reintegration

Natural resource management offers distinct entry points for supporting short-term income generation activities and sustainable employment creation during reintegration and recovery process. The following section identifies entry points in various natural resource management sectors and links them with the approach of the UN Policy for Post-conflict Employment Creation, Income Generation and Reintegration (PCEIR).

Post-conflict employment creation

A key objective of reintegration is to support ex-combatants and associated groups to successfully participate in the broader economic recovery of their communities and to find sustainable, alternative employment opportunities for them as civilians.¹¹⁶ The UN Policy for Post-conflict Employment Creation, Income Generation and Reintegration sets out to improve the coherency and effectiveness of policy and programmes in such settings along three concurrent tracks: A) stabilizing income generation and emergency

employment (stabilization track); B) local economic recovery (local reintegration track); and C) sustainable employment creation (transition and policy track).¹¹⁷

Natural resource sectors provide both short-term (Track A) and long-term opportunities (Tracks B and C), which can accommodate the employment needs and capacities of ex-combatants and other conflict-affected groups, particularly women and youth. Although reintegration processes are often closely linked with natural resource sectors, such as agriculture, fisheries, forestry, and protected area management, ensuring that natural resources are sustainably used to support peacebuilding and development would considerably strengthen the outcomes of DDR and could have positive multiplier effects on wider recovery efforts.

Reinsertion activities fall under the temporary stabilization activities of Track A, while reintegration activities may begin as Track A, but are a stronger focus of Tracks B and C, which include long-term employment generation efforts that take place during reintegration and beyond. All tracks are recommended to start as early as possible in a peacebuilding phase, but have different intensities over time, as shown in Figure 1.

Figure 1. One programme on three concurrent tracks

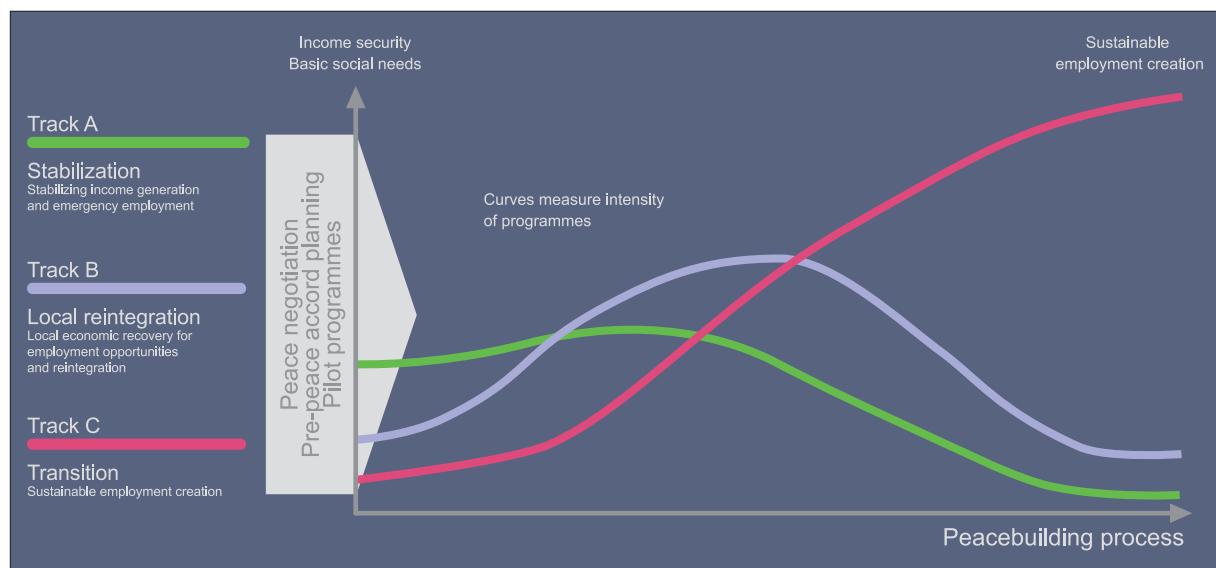


Table 2. PCEIR tracks and opportunities for linking natural resource management in reinsertion and reintegration

Track A Emergency Employment Activities	Linkages to Tracks B and C Employment Opportunities	Outcomes for Improved Natural Resource Management and DDR
Rehabilitation and construction of roads (and de-mining of fields and transportation routes)	Development of employment opportunities in the agricultural sector and access to markets, information, goods and services	Provides safe corridors for transportation of goods and services; de-mining allows for livelihoods activities to restart
Rehabilitation and construction of irrigation infrastructure	Increased water availability for improved agricultural livelihoods and food security	Improves efficiency of water usage and reduces pressure on wildlife as a food source with improved agricultural output
Rehabilitation and improvement of water and sanitation infrastructure	Improved public health, reduced water born diseases, opportunities for the development of jobs around reusable and recyclable products for direct use and sale	Reduces uncontrolled release of biological and other wastes into the environment and water sources
Rehabilitation and establishment of energy services	Allows for additional activities and services including social and educational pursuits; employment of appropriate technologies; encourages local means of production and maintenance	Reduces pressure on biomass for fuel (wood, charcoal, fodder, etc.) and pressure on forest resources to meet basic fuel needs; allows for establishment of functional health and education centres for youth and other at-risk groups
Rehabilitation and construction of agricultural extension services and centres	Physical infrastructure for improved agricultural extension services, educational facilities and trade and distribution centres for improved food security and agricultural market development	Improves efficiency in use of land and other resources for agricultural inputs, allowing for other areas to remain protected for improved resiliency to disasters or as natural habitat for wildlife
(Re)establishment of authority and rehabilitation of protected areas	Along with Security Sector Reform, allows for employment opportunities as protected area staff and park rangers; creates future opportunities for ecotourism	Facilitates the creation and management of protected areas for conservation of critical habitats and wildlife

Many of the linkages and economic opportunities listed in Table 2 can also be considered green jobs, which are defined by UNEP as “work in agricultural, manufacturing, research and development, administrative, and service activities that contribute substantially to preserving or restoring environmental quality.”¹¹⁸ Specifically, but

not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution.”¹¹⁹

Reintegration opportunities in natural resource sectors

The following natural resource management sectors are important for reintegration and offer opportunities to contribute to the DDR objectives of improving security and laying the groundwork for recovery and long-term development.

Agriculture

Agriculture, including animal husbandry, is one of the most important sectors for post-conflict recovery, providing food security and boosting local and national economies. It is also one of the most commonly selected economic reintegration options in many DDR programmes, including in Afghanistan, Sudan, Côte d'Ivoire and the DRC.¹²⁰

Despite the high number of ex-combatants who reintegrate into agricultural and livestock production, support is often limited to the provision of basic inputs, such as seeds, animals, tools and short-term training. Instead of this narrow approach to support, DDR programmes should seek to establish linkages to wider agricultural recovery programmes that provide access to water, grazing land, infrastructure, transport, credit and diversification of goods and services (such as through value chain development). They could also seek to generate additional employment through the provision of goods and services (e.g. production of fertilizers, creation of nurseries, supplemental animal feed and medicine, as well as access to credit and financing) and evolve into more diversified rural economies.

Men and women usually have different roles in agriculture-related reintegration options in DDR programmes. For example, responsibility for the cultivation, processing and marketing of food crops or small farm animals, such as poultry, for local markets falls primarily to women and girls, whereas commercial, large-scale agricultural production tends to be done by men.¹²¹ Men also tend to be responsible for animal husbandry and livestock practices, especially in pastoral communities, whereas women are responsible for producing and selling secondary products, such as milk and cheeses. To improve food security and achieve greater gender equality for the benefit of communities, reintegration options in agriculture need to look beyond the traditional division of labour.

It is also important to note that women often face structural discrimination in agricultural and livestock policies and programmes that can negatively impact their reintegration processes. For example, agricultural extension services are often staffed primarily by men, who may unintentionally deny access to means of production and credit to female farmers.¹²² In order to incorporate gender-sensitive support into agricultural and livestock reintegration options, DDR programmes need to identify specific roles for women and men in value chain development of goods and services.

Furthermore, improvements in the type of support offered to agricultural reintegration programmes can have a profound effect on overall productivity as well as how well farmers combat stresses and risks associated with natural hazards, including droughts and flooding. If practices like mulching or the use of cover crops, for example, are used to enhance the capture and percolation of rainwater into topsoil in water-scarce regions, then the yield from rain-fed agriculture can potentially double or quadruple.¹²³ Such positive changes also have important security and peacebuilding implications, as shortages in rainfall and the ensuing stress on food security have together been linked to conflict and civil war.¹²⁴

Forestry (timber and non-timber forest products)

Forests provide ecosystem services that are necessary for livelihoods, including fresh water cycling and provisioning, soil stabilization and protection from flooding in downstream areas. Good governance of the forestry sector is increasingly recognized as important to halt biodiversity loss. There are also increasingly new opportunities to gain revenue from forests through the voluntary carbon markets and from payments for ecosystem services.

The forest sector (both timber and non-timber forest products) is an important source of livelihoods and relevant for DDR.¹²⁵ The agroforestry plantation sector can also be a source of salaried employment for ex-combatants, associated groups and community members if it is properly managed.

Successful management of the sector will require clarity on ownership and tenure rights, as well as concession review, which will need strong political will and the participation of both the government and donors.¹²⁶ Furthermore, large-scale production on plantations must be carefully managed, since intensive cultivation practices have the potential to reduce the productivity of the soil, contribute to biodiversity loss, and contaminate local water resources. As in the other sectors, employment must be accompanied by policy reforms, to ensure that exploitation of the resource is properly taxed and reported and that labour conditions are legal, just and fair.¹²⁷

Non-timber forest products (NTFPs) can provide a potential source of livelihoods during reintegration, particularly if the communities, or parts thereof, are already using NTFPs to support themselves. Since livelihoods that are based on NTFPs are often constrained by their technical capacity or credit facility, there is frequently room to improve both productivity and profitability through value chain development efforts. As illustrated in the section on sustainable value chain development, such work is best done in partnership, and can benefit from other people or institutions with relevant expertise, such as the UNCTAD BioTrade Initiative.¹²⁸ The example from the Province of Aceh, Indonesia in Case study 9 illustrates how such collaboration can be used to support gender-sensitive reintegration programmes.

Case study 9. Supporting gender-responsive reintegration through the development of non-timber forest product value chains in the Province of Aceh, Indonesia

Nutmeg farmers and producers in the district of Aceh Selatan, in the southwest corner of the Province of Aceh, Indonesia, suffered the loss of many of their nutmeg trees as a result of a thirty year civil conflict in their region. The UNDP Gender responsive Approach to Reintegration and Peace Stabilization Project, implemented from June 2010 to December 2011, was designed to specifically address the adverse impacts of the conflict on the women of Aceh Selatan.¹²⁹ The project strengthened participatory and conflict-sensitive development planning in pilot villages of Aceh Selatan and provided individual and institutional capacity building to improve legal, psychosocial, and economic services to vulnerable people, in particular women. The economic component of this programme was centered around improved value chain development for nutmeg farmers in the area through a partnership between UNDP and the UNCTAD BioTrade Initiative.

Through support by UNDP and technical expertise from UNCTAD, communities in Aceh Selatan were supported to improve the quality and quantity of the nutmeg harvested, as well as in the diversification of nutmeg products. A total of 516 nutmeg producers and 182 farmers were trained in improved techniques, nearly 50 per cent of whom were women. The trainings have resulted in improved agricultural methods and the application of new farming methods to increase productivity.¹³⁰ The Agency for Food Security and Agriculture Facilitation provided guidance to the farmers on group management of nutmeg trees and the benefits of working collectively to ensure improved harvests. In nine sub-districts, farmers were also supported by field extension workers and trained in cultivation and pest management.

Enhancing livelihoods and economic opportunities for intended beneficiaries requires the active collaboration of many actors and institutions. *Forum Pala Aceh* (Aceh Nutmeg Forum), established through this programme, and related government institutions, have all collectively participated in the implementation of the value chain strategy, covering cultivation, processing and marketing.¹³¹ Particular efforts were made to engage business enterprises in strengthening supply chains and linking local producers and farmers. The product diversification trainings have not only improved their technical skills and knowledge of nutmeg farmers, but have also enabled them to expand their markets to other districts.



Women in Aceh Selatan supplement their income by making nutmeg fruit candies for local markets, whereas the seed and mace of the nutmeg is used to produce essential oil

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Utilization of timber and non-timber forest resources is often based on traditional gender roles. As in the case of land, women also often lack legal access to forest resources and related decision making, while poor management and the resulting depletion of forests usually increases workloads for women and girls. On the other hand, due to the gender-specific roles in forestry, both women and men possess unique knowledge and skills that, if properly tapped into during DDR programmes, can create productive, comprehensive and environmentally sound new livelihoods in the forestry sector.¹³² In addition, training in business management and marketing skills is essential to allow,

participants, especially women, to diversify their livelihoods and assume new roles in the post-conflict market economy.

Water and sanitation

Access to improved water sources is still a challenge for nearly one billion people worldwide; it is also one of the most pressing needs in post-conflict settings. Lack of access to clean water can be marginalizing from a social and economic standpoint, and should be prioritized as part of livelihood support in any DDR or recovery programme.

Case study 10. Lessons in the sanitation sector from Sierra Leone¹³³

In Sierra Leone, attempts to employ ex-combatants in the sanitation sector met with resistance; ex-combatants felt that they were being singled out to work as waste management workers specifically *because* they were ex-combatants, and were resentful as a result. The initiative was discontinued as a consequence.

Importantly, however, many of the ex-combatants involved said that they would be willing to work in waste management if the government had been in charge of the initiative, had hired them as salaried government employees, and had mixed them with community members in the project.

Employment in the sanitation sector should be approached both with caution and with a clear understanding of responsibilities of the government and the recovery partners.



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In Sierra Leone an attempt was made to employ ex-combatants in waste collection and management

Furthermore, water source points are often the site of local level conflicts in areas where there are competing user groups, such as between agriculturalists and pastoralists. Conversely, good water resource management offers many opportunities to build cooperation and enhance social cohesion both within and amongst communities. Indeed, water source points have been targeted as part of community security programmes in Darfur, Sudan to promote good cooperation amongst different groups.¹³⁴

To improve existing water resources in a community, DDR programme participants and beneficiaries can make use of simple, renewable technologies – such as gravel or sand filtration tanks – that increase access to clean drinking water, improve public health, and reduce child mortality levels. Furthermore, access to improved water sources can mean less time spent fetching water for women and children, thereby freeing their time for other income-generating activities and school, respectively.

Innovative and simple technologies for water management in agriculture – such as rain water harvesting, planting of trees around fields to reduce erosion and increase water absorption of the soil and drip irrigation techniques – are being designed and implemented in areas that are vulnerable to drought, and likely to become more so in the face of climate change. By providing training and support to build and implement such technologies as part of reintegration, DDR programme participants can help to improve agricultural yields, combat desertification, and raise their resilience to climate change.

Improved sanitation can also help reduce the risk of disease in a community and thus improve health overall. Waste management can offer socioeconomic benefits for DDR participants through the collection and recycling of waste materials and the transformation of this waste material into a useful product. Examples include the following: the clean-up of waste in Sierra Leone (see Case study 10); making of briquettes from organic waste in Haiti to replace charcoal in cooking stoves; and the use of metal or plastic waste as ingredients for construction and building materials, also in Haiti.¹³⁵ Such opportunities can form part of wider initiatives to implement green jobs in conflict-affected contexts, thus opening up the possibility for these communities to access related development funding and programming, following the recovery phase.

Renewable energy

Lack of access to energy – and electricity in particular – is one of the main challenges for recovery and development in post-conflict areas and can severely limit economic growth. In addition, the reliance of local populations on biomass, such as charcoal and wood, for cooking and heating requirements puts pressure on local forests and can lead to degradation of this

important resource. However, in many rural and rapidly expanding urban areas, populations are often not able to access energy for electricity or heating from a grid at affordable prices. In addition, non-renewable sources, like diesel, kerosene and gas for cooking, are often expensive and only intermittently available.

Power shortages limit options for schools, training centres, small businesses and other income-generating activities for reintegration and recovery programmes. In areas where reintegration programmes are being implemented, improving energy efficiency and increasing access to energy can provide a needed boost to reintegration options. However, the installation of a power grid in a post-conflict setting can be outside of the time frame and scope of a DDR intervention, therefore alternative means of providing energy that are practical and effective should be sought.

Renewable sources of energy in particular lend themselves more easily to off-grid options for generating electricity, as well as fuel sources for cooking and heating. Some examples include locally-appropriate options for generating power, like using waste, existing renewable sources such as rivers and streams for microhydro projects (i.e., those producing up to 100 kW of power), or certain types of solar technologies. Examples of these opportunities are detailed further in Table 3.

DDR programmes can also link agricultural activities and energy generation options through the use of biomass from harvest waste for fuel. Options for this include processing agriculture and livestock waste in anaerobic digesters to produce methane biogas that can run cooking stoves and generate electricity, or compacting unused plant materials into briquettes that can be burned in fuel-efficient stoves. Other opportunities include supporting biofuel plantations, though only in suitable areas where they will not be in direct competition with food crops. Furthermore, the use of renewable energy technology may be used to gain carbon credits that can be sold on the international market to bring in further cash income.

Women and girls will especially benefit from access to household energy sources, as they are often responsible for collecting fuel wood. Such activities consume large amounts of their time on a daily basis, thus restricting opportunities for education or income-generating activities and even increasing their risk of physical violence. In Darfur and in eastern DRC for example, many women are susceptible to attacks and sexual violence when gathering supplies outside of their villages or camps. Access to sufficient energy for cooking and water purification can also result in lowered rates of communicable diseases, thereby improving the health of communities overall.

Table 3. Select renewable energy technologies and associated employment opportunities

Renewable Energy Technology	Social Cohesion & Peacebuilding Benefits	Employment Opportunities
Solar lanterns	Lighting for education, business and household use; replaces expensive diesel electricity; reduced noise and air pollution from diesel generators	<ul style="list-style-type: none"> • Construction of lanterns • Sale and maintenance of lanterns • Ability to establish other businesses or services reliant on indoor lighting
Improved cook stoves	Improved indoor air quality and respiratory health; awareness and education campaigns on proper use of cook stoves	<ul style="list-style-type: none"> • Fabrication of briquettes for fuel • Construction, sale and maintenance of cook stoves
Biomass (small and large scale)	Applicable for small-scale farming operations; can generate small amounts of electricity or fuel at no/low cost	<ul style="list-style-type: none"> • Generation and gathering of biomass (from farming areas, etc.) • Building and maintaining biomass equipment
Micro-hydro (up to 100 kW of electricity using a natural flow of water although definitions vary)	Provides power to communities that are not connected to a power grid; platform for community participation; opportunity to link with private sector	<ul style="list-style-type: none"> • Basis for numerous other businesses and activities (i.e. charging mobile phones, running radios and televisions, etc.) • Allows value-added process to develop agricultural livelihoods in rural regions
Biogas digesters (transform animal waste into cooking and heating fuel)	Improved health and indoor air quality; improved household sanitation when latrines are attached	<ul style="list-style-type: none"> • Construction and maintenance of digesters • Energy and cost efficient to start small business in restaurants or food production • Production of fertilizer from digester slurry

Mining and extractive industries

The mining sector has played a direct role in financing and driving conflict in many countries worldwide, including Papua New Guinea, Liberia, Sierra Leone, Angola and the DRC. Armed groups controlling the mines and the points of sale, as seen in the DRC, often exploit artisanal miners in conflict areas. The revenues and benefits of this work go primarily to the mid and high-level commanders of those groups - most artisanal miners will rarely make enough to lift themselves out of poverty.

Reform of the mining sector in post-conflict contexts is a clear opportunity to improve overall security as well as to revitalize an important economic sector that could provide much needed employment and government revenue. Mining areas that are targeted for exploitation as part of a post-conflict recovery and development strategy should be identified to DDR programmes, as they could represent sources of either risk (i.e., alternative financing for armed groups, see Case study 11) or an opportunity (i.e., employment). Engagement in the mining sector should be part of larger security and governance efforts, since armed groups may wish to keep the UN mission away from extraction areas, as was seen in Sierra Leone.¹³⁶ If they are successful

in this, such areas risk being kept out of the reach of government control and also pose a threat to stability and peacebuilding.

However, policy changes that affect the mining sector, including changes in concession policies and allocation of land rights, need to be considered very carefully as they can have major unintended consequences. For instance, the allocation of mining concessions on community-owned lands can place local livelihoods at risk if they reduce the availability of arable land or result in environmental degradation that poses a subsequent risk to public health. Poor judgment in this area could lead to or exacerbate the militarization of mines and might have disastrous secondary economic consequences, such as a reduction in transport capacity in the trade of agricultural goods.¹³⁷ Restricting the trade of specific natural resources can also have negative impacts on legitimate local level livelihoods – thereby further depressing local economies and potentially triggering new grievances and forms of conflict.

Mining sector reform takes place within the national policies of the host country and requires private sector engagement. Training and capacity-building for local authorities is often necessary to better manage the mining sector. Efforts to increase the transparency of

mineral supply chains in the conflict-affected Great Lakes Region in Africa provide one example of how to approach and engage the mining sector in a recovery context. Estimations show that there are approximately US\$24 trillion in mineral resources in DRC, where 90 per cent of the mining sector is artisanal. However, despite a recent US\$2 billion dollar investment in one copper mining site, fewer than 3,000 jobs were created due to the high level of processing technology used.¹³⁸ Without concerted efforts to link the development of natural resource management sectors with job creation and ensuring that the DDR participants acquire adequate technical skills through training, the potential for employment may not be met.

According to a World Bank estimate, men hold 90–95 per cent of all formal jobs in extractive industry worldwide.¹³⁹ Due to gender discrimination that restricts their activities to family caretaking, agriculture and household maintenance at the expense of education, women typically suffer from lower levels of skills training that limits their access to these jobs. Many such obstacles can be addressed in DDR programmes by working with the private sector to ensure that those limitations to women's participation in the mining sector, such as the need for childcare support, are addressed.

In industrial mining operations, most employment opportunities will come from direct employment by the mining company or indirect opportunities through the provisioning of services to the mining operations, such as restaurants, lodging or delivery of goods and services. To enhance these opportunities for reintegration, DDR programmes could directly engage with mining companies and seek to identify employment opportunities for programme beneficiaries. This could include skills training or apprenticeships that could increase the technical capacities and employability of former combatants in that sector.

For artisanal miners, who often make up a large percentage of the population in mineral-rich areas, reintegration opportunities stem from the ability for miners to organize themselves and to ensure fair access to markets for the minerals they produce. The use of cooperatives can be used to organize groups of ex-combatants and community members around artisanal mining operations, provided that they do not reinforce command structures. In addition, where companies are overseeing artisanal mining operations, DDR programmes can engage to ensure that social, environmental and labour standards are upheld and that benefits from the operation are distributed equitably to the miners and surrounding communities. This can ensure that the effects on reintegration yield positive peace dividends overall.

Mining can also create indirect jobs for communities, many of which are in typically female-led roles, such as tailoring, laundry and catering. To capitalize on these opportunities in areas where DDR programmes cooperate with the mining sector, the programme could consider offering economic reintegration options

in service sector skills training and micro-enterprise development, including access to credit.¹⁴⁰

When planning for reintegration options in mining and other extractive industries, the potential social side effects also need to be carefully considered. In areas where there is a multitude of migrant male workers separated from their families and with access to cash, drug abuse and prostitution rates tend to increase.¹⁴¹ This typically also increases levels of violence against local women, while exposing both sexes to the spread of HIV/AIDS and other sexually transmitted diseases. Incorporating awareness raising and campaigning against HIV/AIDS and sexual and gender-based violence should thus be incorporated in all DDR programmes to reduce these effects and resulting conflict with local communities.

In other extractive sectors, such as gas and oil, employment opportunities could potentially be created through partnership with the companies themselves, provided that sufficient skills training and capacity can be created. More importantly, the perception of equitable distribution of benefits from such extraction and careful treatment of land rights in exploration and extraction areas is important to ensure that such activities will not become a source of grievance for the local population and a motivating factor for renewed violent conflict. This must be assessed on a case by case basis, but basic principles, such as direct participation of affected communities in negotiations, transparency and accountability for the companies and opportunities for employment and other direct development benefits, are key. In communities where ex-combatants and associated groups are reintegrating, DDR programmes should seek to engage with the companies and government to ensure that operations will take place in a conflict-sensitive manner. They can also consult good governance mechanisms being put into place to ensure that they are aware of the potential impacts of such industries on the national DDR programme.

Fisheries (wild and aquaculture)

Fisheries are important sources of livelihoods in any area with rivers, lakes and coastal access. In such areas, communities are often highly reliant on fishing for their food security, but also a source of cash income.

DDR programmes have promoted responsible fishing practices where livelihoods are dependent on fisheries, such as in the Great Lakes Region, the West African coast, and the Province of Aceh, Indonesia. Programmes that provide fishing options can also help ensure that men and women receive fair market prices for their catch.

Processing in the fisheries industry is also a potential source of livelihoods in coastal communities. Support for the establishment of processing centres and training in quality control will assist these communities in improving both their access to larger markets and their employment opportunities.

Case study 11. Ending natural resource exploitation in Sapo National Park, Liberia

Sapo National Park, in southeast Liberia, is one of the largest remaining tracts of Upper Guinean Rainforest in West Africa. It is home to many species of wildlife, including African forest elephants, pygmy hippos, leopards and chimpanzees. At the end of the civil conflict in Liberia, ex-combatants and former commanders of armed groups loyal to then-exiled president Charles Taylor began settling in Sapo National Park. Civilians from neighboring countries also flooded to the park to benefit from the natural resource extraction opportunities there, including gold, diamonds and bush meat. The influx of approximately 8,000 people to the park and their ensuing activities posed a serious threat to the management of the park and protection of the biodiversity contained there within.

The miners used especially destructive techniques to look for gold: water pumps driven by diesel generators were used to uproot large, ancient trees, rivers were diverted to channel water to the mines and there was a lack of sanitation facilities for the populations working there.

To address this problem, UNMIL and the Forestry Development Authority (FDA) created the “Sapo Working Group”. Sensitization meetings and alternative livelihoods programmes were put in place to incentivize miners to leave the park. In addition, newly discovered diamond mines outside of the park attracted a number of miners to also leave. Eventually, however, the FDA had no choice but to attempt a forced evacuation of the remaining 1,000 miners left in the park. Those miners who were also ex-combatants requested entry to the DDR programme at the time, though the programme had by then closed after three opportunities for registration had been offered across the country. Failure to directly link the DDR programme with the occupation of the park meant that many ex-combatants were not able to benefit from reintegration support. In addition, the park suffered considerable damage from the mining activities taking place, which undermined government authority over the area.¹⁴²



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Sapo National Park in Liberia is located in the southern county of Sinoe near the city of Greenville. The park represents the largest remaining section of primary rainforest in West Africa. After leaving the nearby Sinoe Rubber Plantation, many ex-combatants moved into Sapo National Park and began destructively exploiting gold mines and harvesting timber

Case study 12. Ex-combatants as community rangers in conservation response units



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GAM combatants have become community forest rangers in the Ulu Masen ecosystem in the Province of Aceh, Indonesia. They help to prevent conflicts between farmers, elephants and tigers and protect some of the scarce remaining habitat for Asian elephants

The Ulu Masen ecosystem is 750,000 ha of forested area spread over five districts in the Province of Aceh in Indonesia. It is home to elephants, tigers, orangutans and other endangered species. In 2006, under the Aceh Forests and Environment Programme, Flora and Fauna International (FFI) began supporting Conservation Response Units in the districts of Aceh Pidie Jaya and Aceh Besar. These units were formed in response to the growing threat of human-wildlife conflict (elephants and tigers), in part triggered by increased demand for timber due to the tsunami reconstruction boom in 2005, as well as conversion of forests for plantations and increased gold mining in the forests, which effectively reduced the habitat available for wildlife. The conversion of forest area to oil palm in particular has triggered human-elephant conflicts, which have resulted in the loss of crops as well as injuries and on occasion, death.

The Conservation Response Units (CRUs) are comprised of community rangers trained by FFI to specifically deal with human-wildlife conflicts. Many of the community rangers, known as Blang Rawen Rangers (Green Leaders), are ex-GAM. FFI recruited them for their programmes due to the skills they demonstrated from their previous livelihoods as soldiers, and then trained them in surveying, GPS, monitoring, forest law, and ecosystem health. In addition to working in the CRU programme, the Blang Rawen Rangers also support tree nurseries by planting agroforestry seedlings, such as durian, cacao and coffee, and work as guides to take groups of students and tourists on jungle treks throughout the Ulu Masen ecosystem.

FFI reports that the ex-combatants who are now part of the Blang Rawen Rangers and the CRU programme have successfully reintegrated into their communities. They noted that working in Ulu Masen and helping to find solutions for the human-wildlife conflicts has given them a sense of purpose and has helped their communities to accept the ex-combatants back into their social networks.¹⁴³

Case study 13. Reforestation, conservation, and employment of ex-combatants in Afghanistan



© SIMONETTA SULICATO, UNOPS

The Head of the Pistachio Forest Management Committee of Samangan monitoring pistachio seedling growth. Samangan province, Afghanistan, 2009

In the 2003 Post-Conflict Environmental Assessment of Afghanistan, the United Nations Environment Programme (UNEP) estimated that forest and woodland cover had been reduced in some provinces by 50 to 70 per cent over the past twenty years.¹⁴⁴ In a country where 80 per cent of the population is directly dependent on natural resources for their main source of livelihoods, forest are important sources of fuel wood for heating and cooking and for non-timber forest products, including pistachio nuts.

To address both the needs of vulnerable populations, and the reintegration of former combatants, the Government of Afghanistan created the Afghan Conservation Corps (ACC) project.¹⁴⁵ Through the ACC, former combatants and vulnerable populations were hired to assist in reforestation activities in the Pistachio Woodlands and the Eastern Conifer forests. By 2009, the ACC had deployed 350 projects in 23 provinces, and generated about 400,000 labour days for vulnerable Afghans. They rehabilitated 108 nurseries, restored 32 public parks, planted pistachio seeds on 226 ha of pistachio woodland in 7 provinces, and planted an average of 150,000 conifer and 350,000 fruit trees each year in different projects across the country.¹⁴⁶

In addition, the Women's and Youth Conservation Corps were established with specific projects such as women's garden revitalization, women's dormitories and school compound beautification, planting fruit tree seedlings in their homes for future income and cultivating home nurseries. Employment was also created in Nuristan, a province with extensive forest cover that was heavily threatened by illegal logging. In particular, traditional Nuristani carpentry was promoted, which provided additional added value to the timber resources and required less wood than commercial logging operations. Three projects involving garbage cleaning activities also helped to generate immediate employment while collecting 1000 m³ of waste.

Community capacity and development were enhanced by the establishment of Forest Management Committees (FMCs) by community elders in seven provinces. These FMCs were supported by the ACC and the Afghan Ministry of Agriculture, Irrigation and Livestock (MAIL). As of 2007, forest protection plans have been drafted to protect 3,200 hectares of woodlands, and 40 full-time community forest guards were established to protect the pistachio woodlands. Due to increased protection and the other improvements in management practices, villagers in the biggest pistachio woodland site, Shareek Yaar, estimated that revenues for their 2006 pistachio harvest went up by 65 per cent.¹⁴⁷

Such centres can be established using labour-intensive work projects, complemented by skills training, engagement of public or private sector processing companies, and access to capital to start smaller processing facilities as small and medium enterprises.

Aquaculture, or fish farming, is another sector that can contribute to reintegration in appropriate areas. Small-scale aquaculture can support families and provide a much needed source of protein in food-insecure areas following a conflict. In addition, aquaculture is an activity that both men and women can engage in, as it can be done outside of the home or in common village areas.

Protected areas and ecotourism

The high levels of biodiversity found in many conflict areas can support economic recovery and employment for ex-combatants and associated groups. By seeking opportunities to employ ex-combatants and associated groups in the restoration and management of protected areas, a DDR programme can achieve both livelihood and conservation goals. Members of armed groups have often spent considerable time in remote forested areas, have extensive knowledge of the terrain, and as a result make very capable forest and park rangers or ecotourism guides.

In the DDR programme in Mozambique, ex-combatants were reintegrated as forest rangers. In the Province of Aceh, Indonesia, ex-combatants were similarly targeted as community forest rangers. These initiatives have shown to lead to successful reintegration and to building trust between ex-combatants and members of the community (see Case study 12). Likewise, the Côte d'Ivoire DDR programme intends to reintegration 1000 ex-combatants as forest rangers in 2013 as part of a public sector

reintegration strategy. While former members of armed groups may have many requisite skills for becoming forest rangers, caution should be taken to ensure accountability and oversight to avoid the development of any illegal poaching or logging operations in protected areas.

Ecosystem restoration

Violent conflict can have significant direct and indirect negative impacts on the environment. The rehabilitation of ecosystems, including forest and agricultural areas, river basins and water resources, can help both to ensure productive livelihoods and to reduce vulnerabilities to natural hazards. For example, reforestation might be necessary in order to regenerate forests and to stabilize eroding slopes. Similarly, shorelines and riverbanks might need to be rehabilitated in order to control flooding, or mangroves might need to be restored in coastal areas to protect from storm surges and coastal erosion as well as fish rearing grounds. In addition, the reclamation of mining sites will be particularly important in areas where unregulated artisanal mining has resulted in soil erosion, loss of productive agricultural land and the pollution of waterways.

Ecosystem rehabilitation can offer employment opportunities for men and women as a labour-intensive or quick impact project, as demonstrated through the work of the Afghan Conservation Corps (see Case study 13). While both men and women's contributions to the sustainable management of natural resources are critical, women's use of many everyday resources is particularly key in managing local biodiversity.¹⁴⁸ Therefore, it is important to especially engage and target women in opportunities to promote knowledge of environment-conserving livelihood alternatives.

Findings and recommendations

Findings and recommendations

Based on the evidence presented in this report, this section will provide a summary of main findings and specific recommendations to address the risks and opportunities from natural resources for DDR programmes.

Summary of main findings

Natural resources are frequently an underlying driver or contributing financier of conflict. While sanctions regimes and other international instruments attempt to address this problem in some cases, they are very blunt tools with which to address the complex relationships between armed groups and natural resources.

The ways in which armed groups use natural resources to sustain conflict is highly dependent on the context of the conflict itself, as well as the presence of lootable natural resources. Grievances over natural resource management or inequitable benefit sharing can also serve as a motivating factor to encourage recruitment into armed groups.

The motivations of members of armed forces and groups often change over the course of a conflict, thereby implicating natural resources differently as a result. How and to what extent natural resources are implicated include factors such as the governance capacity of the state; the reach of government control over its territory; the extent to which armed forces and groups can extract, tax and/or control the movement of natural resources; the ability for natural resources to be trafficked and sold on the international market; influence of the presence of sanctions and embargoes (if any); and the ability of state security forces and the international community to respond effectively and coherently to security threats.

If ex-combatants and associated groups are not provided with opportunities to achieve alternative and sustainable livelihoods, they may continue to exploit and attempt to control the natural resources as they did while with armed forces and groups; or they may simply become idle and disillusioned with the peace process and become vulnerable to re-recruitment, thereby posing a security risk in the peacebuilding period. Further, if natural resource sectors are not managed in an equitable and inclusive manner, many of the grievances that led to conflict in the first place may continue to exist or resurface.

Alternatively, effective natural resource management has the potential to generate important opportunities for peacebuilding, amongst others through reducing risk of the capture of natural resources by armed forces and groups and peace spoilers and as the basis for sustainable livelihoods. However, it is still too often considered as an issue to be addressed at a later stage in the recovery process and the linkages with DDR programmes thus far have been relatively limited given the breadth of opportunities available. By working with other actors, including at the national and international levels in private and public sectors, early on in recovery, peacebuilding and development initiatives, DDR programmes can help to ensure that natural resources contribute positively to economically, socially and environmentally sustainable reintegration for male and female ex-combatants and associated groups.

DDR programmes, particularly during the reinsertion and reintegration phases, target a number of natural resource sectors, most often in agriculture and livestock, but also in reforestation and protected area management. The employment opportunities that exist include short-term stabilization projects that help rehabilitate infrastructure, such as irrigation canals or improve sanitation systems; long-term employment and income-generating opportunities across numerous different natural resource sectors, supported by value chain development to maximize employment creation potential.

In extractive industries, such as mining, there is an employment multiplier effect as the volume of workers leads to an increased demand for goods and services, bringing with it additional employment, micro-enterprise development or skills training opportunities. The extractive sectors offer employment potential for both men and women if targeted properly, though this must be complemented by broader efforts to reform and improve the governance of such sectors to be effective. Indeed, without accountable, transparent management of extractive natural resources and equitable distribution of benefits back to communities, natural resources may serve as a source of grievance for future conflict rather than a dividend for peace. Moreover, poorly managed and lootable natural resources may remain a security risk and means of financing for armed groups.

Beyond economic recovery, several aspects of natural resource management are also relevant for social and political reintegration. Engaging male and female ex-combatants and associated groups in dialogue relating to natural resources, such as in decision-making and community forums, can help reinforce and empower their relationships with surrounding communities, as shown in the case of community forest rangers in the Province of Aceh, Indonesia. Moreover, promoting inclusive dialogue around shared goals and interests related to natural resources (e.g. environmental concerns and the protection of natural resources) can contribute to cooperation, trust building and reconciliation.

Policy makers and practitioners in natural resource management should also be aware of the impacts that DDR could have on natural resources and the communities that depend upon them. For instance, reintegration programmes are typically responsible for supporting large numbers of ex-combatants and associated groups to find alternative livelihoods in the aftermath of violent conflict. In many cases, these individuals have been involved in the looting or trafficking of natural resources, or rent seeking in natural resource sectors. A continuation of such practices poses a significant threat to sustainable natural resource management as well as local stability and peacebuilding. On the other hand, supporting environmentally sustainable reintegration options, including sensitization efforts to increase the awareness of ex-combatants and associated groups to environmental issues, represents an opportunity to transform these individuals into advocates for sustainable development.

Female programme participants in DDR are also implicated in natural resource sectors. However, their ownership and rights to such resources, especially land, is often limited. This is particularly true of unmarried women and women who are not closely associated with a male relative and for female ex-combatants, who often face high levels of stigmas when trying to return to their communities. Women also typically have less access to financial and technological resources than men and often have lower levels of training and education, thereby limiting their ability to compete for jobs in natural resource sectors. There are several ways to help overcome gender biases and to promote inclusive gender-responsive programmes. These include factoring in the safety and security of all participants, developing joint projects for female and male participants and encouraging women to participate in the reintegration opportunities of their choosing (including non-traditional women roles), as well as concerted efforts to correct the social stigmas that female ex-combatants face.

Recommendations

Based on the findings of this report, the following recommendations are offered to support policy makers and practitioners in incorporating sound, sustainable natural resource management into DDR in a way that supports the consolidation of peace and paves the way for sustainable development.

1. Incorporate key elements of the relationship between natural resources and armed forces and groups into conflict analysis, assessments and planning for DDR programming.

DDR practitioners should incorporate the relationship between natural resources and armed forces and groups in conflict settings into all analysis, assessment and planning exercises that take place prior to a DDR programme. They should understand the role of natural resources as a root cause of conflict, as a financing source for conflict, or as a source of motivation for engagement in conflict. All analyses should be gender-sensitive and consider the different responsibilities, activities, interests and priorities of women and men, and how their needs may differ.

Fully appreciating this complex relationship will help DDR practitioners to ensure that the main risks to security, posed by the engagement of armed forces and groups with natural resources, are addressed. The analysis and assessment process should also map potential areas for reintegration opportunities in natural resource sectors.

2. Target opportunities to rehabilitate infrastructure that will improve the potential for natural resources to contribute to employment creation and reintegration in line with various tracks of the United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration.

In natural resource sectors that offer potential for economic growth, labour-intensive infrastructure projects can provide temporary jobs and, at the same time, improve conditions that enable successful reintegration and access to natural resources and related markets. For example, the rehabilitation of irrigation systems and local roads may drive the growth and improvement in productivity of markets for agricultural goods and products. Potential projects could also include the construction of food storage facilities and processing equipment, which can further increase the resilience of agricultural livelihoods to any changes in climate and market conditions, thereby preparing communities for long-term development activities. Such activities should then be linked with support for the development of value chains and resulting products and services, so that market access, financing and small business development can be improved and the reintegration process strengthened.

The rehabilitation and restoration of natural resources also provides employment opportunities and can support the development of sustainable livelihoods. Examples include reforestation projects, restoration of riparian or coastal zones, rehabilitation of fisheries, reclamation of degraded mining areas, soil improvement activities, slope stabilization and flood protection interventions. These activities and the resulting improvement in the condition of natural resources can offer increased opportunities to productively use such resources for employment and livelihoods.

3. Assess the sustainability of livelihoods for re-integration based on natural resources to identify potential risks and opportunities and avoid maladaptive coping strategies.

DDR planning teams should include sustainability assessments, or environmental screenings, for re-integration programmes in order to fully assess the impact of such programmes on the availability and accessibility of natural resources. This may include assessments of the carrying capacity of land areas for livestock, availability and accessibility of water resources for drinking, sanitation and irrigation, and the use of best management practices to prevent the degradation of natural resources and to maximize the productivity of related sectors. Access to land and security of land tenure should also be assessed to avoid any potential conflict that could arise between individuals or groups as a result of reintegration activities. To further improve the sustainability of reintegration activities, disaster risk reduction experts should also be engaged in order to identify potential areas of complementarity or overlap, such as employment opportunities in ecosystem rehabilitation that specifically reduce disaster risks to livelihoods.

4. Ensure that a gender-responsive approach to all natural resource-related issues (especially land) is adopted throughout the DDR programme cycle.

Pre-programme assessments should map the gender-specific roles of women and men in natural resource management and thoroughly consult representatives of both sexes when planning for programme activities. The information should not lead to categorically enforcing existing gender norms, but to serve in planning for activities that tap into the specific knowledge and skills of all programme participants and beneficiaries.

By facilitating access to natural resources for both male and female ex-combatants, those associated with armed forces and groups, their dependants and relevant community members, DDR programmes can improve the security of livelihoods and improve access to income-generating opportunities for both men and women. Improving access to natural resources can also reduce their risk of suffering gender-based violence and further marginalization of women in particular.

To achieve this, female ex-combatants, women associated with armed forces and groups and women from conflict-affected communities should be included in assessments and decision-making structures as part of reintegration programmes to ensure that their expertise, knowledge and viewpoints are fully considered. Further information on the role of women and natural resources in peacebuilding can be found in the UNEP – UN Women – PBSO – UNDP policy report entitled *Women and Natural Resources: Unlocking the Peacebuilding Potential*.

5. Support the creation of employment opportunities in natural resource sectors and adopt conflict-sensitive value chain approaches in reintegration

programmes to improve sustainable management in these sectors.

The natural resource sectors that are most often implicated in armed conflict – minerals, oil, agricultural commodities, land and timber – are also important sectors for economic recovery. These sectors are critical to economic revitalization and have the potential to lead to job creation and increased revenue for the country in question. DDR programmes can work with recovery actors to promote sustainable approaches in natural resource sectors. Liaising with institutions that are working on improved management, organization and governance of these sectors – such as government ministries for environment, sustainable development, agriculture and finance, as well as the supporting UN entities – can help DDR programmes to ensure greater job security and more equitable distribution of benefits and opportunities from natural resources to the communities at large.

To support sustainable employment based on the exploitation of natural resources, a conflict-sensitive value chain approach in natural resource sectors should be applied. This is an important tool to improve reintegration opportunities by diversifying livelihoods activities in the development of specific sectors. Value chain development efforts should be well-coordinated and based on sound market data and concentrated in sectors where there is existing demand to ensure that the resulting activities are more likely to be sustainable in the long-term.

6. Improve coordination within the UN and national and regional authorities to effectively address potential stability risks from natural resources linked to DDR programmes.

The continued illegal exploitation of natural resources can pose a stability risk in contexts where DDR programmes take place, either within countries or in neighbouring fragile states. In many cases, ex-combatants and associated groups have been involved in the looting or trafficking of natural resources, or rent seeking in natural resource sectors. A continuation of such practices poses a significant threat to sustainable natural resource management as well as local stability.

Since DDR programmes are often planned and implemented through joint processes between multiple UN agencies in support of national authorities, it is important that a coordinated effort is made to fully incorporate the risks presented by natural resources and to engage other necessary capacities to respond to them. This is especially important for natural resources that are used to fuel conflict and which are trafficked across borders in response to regional and global demand. In mission contexts, coordination amongst DPKO, UNDP, UNEP, FAO, UNHABITAT, Interpol, UNODC and other UN actors during DDR planning is important to ensure such risks are taken into account. Further coordination is also needed among actors involved in security sector

reform as well as borders and customs agencies to minimize the potential for natural resources to be used to fuel further conflict.

The most important actor in any DDR programme is the national commission or entity, who will ultimately make the final decisions on the DDR process in any particular country. Through collective action, the UN should seek to coordinate all support given to national counterparts on DDR in order to address natural resource risks sufficiently and holistically, as well as to ensure that natural resources are used to support DDR objectives of improved security in the present as well as recovery and long-term development in the future.

7. Provide resources to key national stakeholders and international actors on linkages between DDR processes, natural resource management, conflict and peacebuilding, in order to build capacity and ensure the collection of best practices and lessons learned.

Capacity-building efforts to ensure that national DDR commissions - and the UN actors and donors who support them - are able to successfully mitigate risks and take advantage of opportunities are needed in order to implement all of the recommendations in this report. Trainings on the role of natural resources in conflict and DDR, practical tools for the integration of natural resource management into programming outcomes and outputs, and information sharing workshops to encourage South-South cooperation can all be used to increase capacities and to ensure that natural resources are included in DDR programme planning and implementation. In addition, capacity-building can include the collection of best practices and lessons learned on natural resources and DDR to support improvements in existing policy. Implementation of these recommendations can be facilitated through the Inter-Agency Working Group on DDR and the Integrated DDR Training Group, as well as through additional bilateral partnerships on a country-by-country basis.

Annexes

Annex 1

Key terms and definitions

Armed forces: The armed forces of a party to the conflict consist of all organized armed forces, groups and units which are under a command responsible to that party for the conduct of its subordinates. Article 4 of the third Geneva Convention further specifies that in countries where militia or volunteer corps (so-called “irregular” armed forces) constitute the army, or form part of it, they are included under the denomination “army”.

Armed groups: a category of non-state actors consisting of four subtypes: insurgents, terrorists, militias, and criminal organizations. All armed groups challenge the power and legitimacy of states, seeking to undermine or co-opt them. To do so, they employ a clandestine infrastructure as their key organizational method, although they may maintain overt political fronts. Their leaders believe in the use of violence to achieve their aims, challenging the state’s monopoly over coercive power. Armed groups employ multidimensional strategies to secure the loyalty or compliance of relevant populations. They operate within and across state boundaries, may exercise some degree of territorial control, and have at least a minimum degree of independence from state control.

Conflict: Conflict is a dispute or incompatibility caused by the actual or perceived opposition of needs, values and interests. In political terms, conflict refers to wars or other struggles that involve the use of force. In this report, the term “conflict” is understood to mean violent conflict.

Criminal organization: A type of armed group that possesses a clandestine or secret hierarchical structure and leadership infrastructure and whose primary purpose is to operate with impunity outside the law in one or more criminal enterprises. Such groups frequently engage in more than one type of criminal activity and can operate over large areas of a region and globally. Often, these groups have a family or ethnic base that enhances the cohesion and security of its members. These types of armed groups typically maintain their position through the threat or use of violence, corruption of public officials, graft, or extortion.

Disarmament, demobilization and reintegration: A process that contributes to security and stability in a post-conflict recovery context by removing weapons from the hands of combatants, taking the combatants out of military structures and helping them to integrate socially and economically into society by finding civilian livelihoods.

Environment: The environment is the sum of all external conditions affecting the life, development and survival of an organism. In the context of this report, “environment” refers to the physical conditions that affect natural resources (climate, geology, hazards) and the ecosystem services that sustain them (e.g. carbon, nutrient and hydrological cycles).

Extractive resources: Extractive resources comprise natural resources that are often of high economic value and are extracted through industrial or artisanal means, such as oil, natural gas, metals and minerals.

Gender: The social attributes and opportunities associated with being male and female and the relationships between women, men, girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes. They are context/time-specific and changeable. Gender is part of the broader socio-cultural context. Other important criteria for socio-cultural analysis include class, race, poverty level, ethnic group and age.

Gender analysis: The collection and analysis of sex-disaggregated information. Men and women perform different roles in societies and in armed groups and forces. This leads to women and men having different experience, knowledge,

talents and needs. Gender analysis explores these differences so that policies, programmes and projects can identify and meet the different needs of men and women. Gender analysis also facilitates the strategic use of distinct knowledge and skills possessed by women and men, which can greatly improve the long-term sustainability of interventions. In the context of DDR, gender analysis should be used to design policies and interventions that will reflect the different roles, capacity and needs of women, men, girls and boys.

Gender-responsive DDR programmes: Programmes that are planned, implemented, monitored and evaluated in a gender-responsive manner to meet the different needs of female and male ex-combatants, supporters and dependants.

Guerrilla group: A member of an irregular, usually indigenous military or paramilitary unit operating in small bands in occupied territory to harass and undermine the enemy, as by surprise raids.

Insurgent group: Also see armed group definition above. Insurgent groups a type of armed group that employ protracted political and military activities with the objective of gaining partial or complete control over the territory of a state through the use of irregular military tactics and illegal political activities. Insurgents engage in actions ranging from guerrilla operations, terrorism, and sabotage to political mobilization, political action, intelligence and counterintelligence activities, propaganda, and psychological warfare. These instruments are employed to weaken or destroy the power and legitimacy of a ruling government, while at the same time increase the power and legitimacy of the insurgent group.

Livelihoods: A livelihood comprises the capabilities, assets (both material and social resources) and activities required for a means of living. It is considered sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. Livelihoods include five different dimensions, or types of capital: human capital, social capital, natural capital, physical capital and financial capital.

Militia group: Militia groups generally refer to an army or other fighting force that is composed of non-professional fighters; citizens of a nation or subjects of a state or government that can be called upon to enter a combat situation, as opposed to a professional force of regular, full-time soldiers.

Natural resources: Natural resources are actual or potential sources of wealth that occur in a natural state, such as timber, water, fertile land, wildlife, minerals, metals, stones and hydrocarbons. A natural resource qualifies as a renewable resource if it is replenished by natural processes at a rate comparable to its rate of consumption by humans or other users. A natural resources is considered non-renewable when it exists in a fixed amount, or when it cannot be regenerated on a scale comparative to its consumption.

Non-state actors: Non-state actors (e.g., armed groups, tribes, warlords, political movements, and charismatic leaders) have legitimacy because they have, or are believed to have, a just cause or a moral or legal right to act. Non-state actors win legitimacy through tangible actions taken in furtherance of a cause or through a vision of the future that is perceived as being more just. Non-state actors may also exploit their legitimacy to undermine states, to influence or control populations on a regional or global scale, or to justify a global struggle.

Paramilitary group: Also see definition of armed group above. A group of private citizens who receive military training in order to be ready to defend their state or country in times of emergency. A paramilitary group is distinct from regular military forces, which are units of professional soldiers maintained both in war and peace by a federal government.

Annex 3

List of contributors

Report development team

- David Jensen** Head, Environmental Cooperation for Peacebuilding, UNEP
Glaucia Boyer Programme Officer, Conflict Recovery Partnerships Specialist, UNDP
Adrienne Stork Project Advisor, UNEP-UNDP
Leontine Specker Livelihoods and Environmental Specialist, UNDP

Peer reviewers

- Fabrizio Andreuzzi** Programme Specialist, UNDP
Srijana Rana Policy Specialist, UNDP Private Sector Division
Irma Specht Director, Transition International
Valeria Puleo Extractive Industries Transparency Initiative
Oli Brown Programme Officer, UNEP Sierra Leone
Sandra Joireman Professor of Political Science and Weinstein Chair of International Studies,
University of Richmond
Yama Helaman Programme Officer, UNDP
Matti Lehtonen Programme Officer, UNEP
Kyungmoo Heo Research Assistant, UNEP
Siti Ruhanawati Programme Officer, UNDP

Other contributors

- Kathryn Chelminski** UNEP
Desirée Bernhardt UNEP
Hassan Partow UNEP
Brendan Bromwich UNEP Sudan
Nika Saeedi UNDP
Chiara Gonella UNDP
Gérald Pachoud UN Peacebuilding Support Office
Simonetta Rossi UNOPS Afghanistan
Nicolas Scherlen MONUSCO
Ilaria Carpen MONUSCO
Andrea Tamagnini UNDP
Jonas Mfouatie UNDP DRC (Goma)

Moussa Diagana UNDP DRC (Goma)
Pierre Guisiera UNDP DRC (Goma)
Jean-Claude Kalala UNDP DRC (Goma)
Cryspin Bolela UNDP DRC (Goma)
Michel DuBois UNDP DRC (Bukavu)
Jean-Claude Cigwerhe UNDP DRC (Bukavu)
Claudine Nzigire UNDP DRC (Bukavu)
Maja Suhud UNDP Indonesia
Budhi Ulaen UNDP Indonesia
Teuku Budi Hermawan UNDP Indonesia
Siti Ruhanawati UNDP Indonesia
Susi Lawaty UNDP Indonesia
Craig Castro UNDP Burundi
Nancy Archer UNDP Sudan
Elisha Moore Mercy Corps DRC
Maggy Gatera UNDP Rwanda
Mahdi Ismail Flora and Fauna International (Aceh Indonesia)
Isabela Leao World Bank
Heidi-Marie Gutsche GIZ Nepal
Francis Musoni Rwanda Demobilization and Reintegration Commission
Frank Musonera Rwanda Demobilization and Reintegration Commission
Kunde Foster Drainage and Banking Cooperative, Kigali, Rwanda
Didier Sagashya Rwanda National Land Center
James Bean IOM Uganda
Alexandra Bean IOM Uganda
Lucy Moore IOM Uganda
Lana Oh IOM Uganda
Gareth McKibben IOM Uganda
Kristanto Sinandang UNDP Indonesia
Lorena Jaramillo UNCTAD BioTrade Initiative
Teresa Krafft UNMISS, South Sudan
Florian Bruyas UN Framework Team on Preventive Action
Laura Ronkainen Independent consultant
Christina Harris Independent consultant
Kerry Maze Independent consultant

Annex 3

References

- 1 FAO. 2000. *Conflict and Natural Resource Management*. Food and Agriculture Organization of the United Nations: Rome.
- 2 United Nations Environment Programme (UNEP). 2009. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. UNEP: Geneva.
- 3 For instance, the European Union (EU) and United Nations (UN) Partnership on Land and Natural Resource Conflicts launched a toolkit to support natural resource management in conflict prevention in October 2012. The toolkit contains five guidance notes for key natural resource sectors. The guidance notes are designed to enhance policy development and programme coordination in these sectors and are further accompanied by the implementation and facilitation of trainings. The toolkit is authored jointly by the UN Environment Programme (UNEP), the UN Department of Economic and Social Affairs (UNDESA), the UN Development Programme (UNDP), the UN Human Settlements Programme (UN-HABITAT), the UN Department of Political Affairs (DPA), and the Peacebuilding Support Office (PBSO), was financed by the EU's Instrument for Stability and coordinated by the UN Interagency Framework Team for Preventive Action.
- 4 Including UN Security Council Resolution 1625; the *Progress report of the Secretary-General on the Prevention of Armed Conflict and the Report on the Causes of Conflict and the Promotion of Durable Peace and Sustainable Development in Africa*. (A/63/304); the UN Secretary General's High Level Panel on Threats, Challenges and Change, and the establishment of UN Groups of Experts (as seen in Angola, Liberia, DRC, Sierra Leone and Côte d'Ivoire). Some of the most prominent NGOs working on the linkages between natural resources and conflict include Global Witness and International Alert, while many development organizations and NGOs working in post-conflict settings have produced important issue papers and briefings on the topic, including GIZ, USAID, Mercy Corps, CARE and others.
- 5 In a study of peace agreements negotiated between 1980 and 1997, the demobilization and reintegration of ex-combatants was the single most important sub-goal for the implementation of the peace agreement. See: Stedman, Stephen John. 2001. *International Implementation of Peace Agreements in Civil Wars: Findings from a Study of Sixteen Cases*, in Chester A. Crocker, Fen Osler Hampson & Pamela Aall, eds, "Turbulent Peace: The Challenges of Managing International Conflict". Washington, DC: United States Institute of Peace Press (737–752).
- 6 Stockholm Initiative on DDR (SIDDR). 2006. *Stockholm Initiative on DDR Report*. Ministry of Foreign Affairs: Stockholm.
- 7 UN. 2010. *Progress Report of the Secretary-General on Peacebuilding in the Immediate Aftermath of Conflict*. A 64/866. United Nations: New York.
- 8 DPKO. 2010. *Second Generation disarmament, demobilization and reintegration (DDR) practices in peace operations*. UN Department of Peacekeeping Operations: New York.
- 9 UN. 2011. *Report of the Secretary-General on Disarmament, Demobilization and Reintegration*. A/65/741. United Nations: New York.
- 10 The Integrated DDR Standards (IDDRS) features a new module (Module 6.30) on Natural Resource Management and DDR. A summary of this guidance is also available for the IDDRS Operational Guide and training modules have been developed for the Integrated DDR Training Group.
- 11 Case study countries were prioritized and selected jointly by UNDP and UNEP.
- 12 Fourth World Conference on Women. 1995. *Beijing Declaration and Platform for Action*. 4 to 15 September 1995. Beijing: China.

- 13 UN. 2000. *Security Council Resolution 1325*. S/RES/1325. United Nations: New York.
- 14 A summary report from this workshop is available from UNEP's Environmental Cooperation for Peacebuilding (ECP) Programme website: <http://www.unep.org/ecp>.
- 15 Global Witness. 2010. *Lessons Unlearned*. Global Witness: London. Also, UNEP. 2011. *Greening the Blue Helmets: Natural Resources in Peacekeeping*. United Nations Environment Programme: Geneva.
- 16 Hanson et al. 2009. *Warfare in Biodiversity Hotspots*. Conservation Biology. Vol 23, Issue 3, 578-587.
- 17 World Bank. 2011. *World Development Report*. World Bank: Washington, DC.
- 18 Binningsbø, H. & S.A. Rustad. 2008. PRIO working paper: *Resource conflicts, resource management and postconflict peace*. Uppsala University & International Peace Research Institute: Oslo.
- 19 Dunning, T. 2005. *Resource Dependence, Economic Performance, and Political Stability*. Journal of Conflict Resolution, Vol. 49 No. 4, 451-482.
- 20 Dunning, T. 2005. *Resource Dependence, Economic Performance, and Political Stability*. Journal of Conflict Resolution, Vol. 49 No. 4, 451-482.
- 21 Snyder, R. and R. Bhavnani. 2005. *Diamonds, Blood and Taxes: A Revenue-Centered Framework for Explaining Political Order*. Journal of Conflict Resolution. Vol 49, No. 4, 563-597.
- 22 UNEP. 2009. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. United Nations Environment Programme: Geneva.; McCulloch, Lesley. 2005. *Greed: The silent force of the conflict in Aceh*. In: Violence in between: Conflict and security in archipelagic Southeast Asia. Ed. D. Kingsbury, 203-27. Clayton: Australia.
- 23 Humphreys, M. 2005. *Natural Resources, Conflict and Conflict Resolution: Uncovering the Mechanisms*. Journal of Conflict Resolution. Vol 49, No. 4, 508-537.
- 24 Lawoti, M. 2010. *Evolution and growth of the Maoist insurgency*. In Lawoti, M. & Pahari, A. K. (eds.). 2010. *The Maoist Insurgency in Nepal*. Routledge: Abingdon.
- 25 UNDG-ECHA. 2013. *Natural Resource Management in Transitional Settings*. UNDG-ECHA Guidance Note. United Nations: New York; see also the work of Mats Berdal and David M. Malone (2000) as well as Paul Collier and Anke Hoeffler (1998, 2004) and Michael Ross (2003) for further discussion of the greed and grievance debate. Karen Ballentine and Heiko Nitzschke (2003) provide a continuation of this discussion in Berdal, M. and D. M. Malone, eds. 2000. *Greed and Grievance: Economic Agendas in Civil Wars*. International Peace Academy. Lynne Reinner: Boulder.
- 26 Dunning, T. 2005. *Resource Dependence, Economic Performance, and Political Stability*. Journal of Conflict Resolution, Vol. 49 No. 4, 451-482.; Varisco, A.E. 2009. *A Study on the Inter-Relation between Armed Conflict and Natural Resources and its Implications for Conflict Resolution and Peacebuilding*. Journal of Peace, Conflict and Development. Issue 15, March 2010.; Stewart, F. 2010. *Horizontal Inequalities As A Cause of Conflict: A Review of CRISE Findings*. World Development Report 2011 Background paper. World Bank: Washington, DC.
- 27 Aspinall, E. 2009. *Combatants to Contractors: The Political Economy of Peace in Aceh*. Indonesia 87.; Englebert, P. and J. Ron. 2004. *Primary Commodities and War: Congo-Brazzaville's Ambivalent Resource Curse*. Comparative Politics, Vol. 37, No. 1, pp 61-81; Collier, P. et al. 2006. *Beyond Greed and Grievance: Feasibility and Civil War*. CSAE-WPS-2006/10.
- 28 Berdal, M. and D. M. Malone, eds. 2000. *Greed and Grievance: Economic Agendas in Civil Wars*. International Peace Academy: New York.
- 29 Ross, M. 2004. *How do Natural Resources Influence Civil War? Evidence from 13 Cases*. International Organization, Vol. 58, Winter 2004.
- 30 Ross, M. 2004. *How do Natural Resources Influence Civil War? Evidence from 13 Cases*. International Organization, Vol. 58, Winter 2004.
- 31 IRC. 2013. *Special Report : Congo*. International Rescue Committee: Washington, D.C.
- 32 UNEP. 2012. *République Démocratique du Congo: évaluation environnementale post-conflit*. United Nations Environment Programme: Geneva.

References

- 33 BSR. 2010. *Conflict Minerals and the Democratic Republic of the Congo*. BSR: New York.
- 34 Candan, Zuleika. 2012. *Enhancing socio-economic opportunities for ex-combatants in Liberia*. International Alert: London.
- 35 Ballentine, K. and H. Nitzschke. 2003. *Beyond Greed and Grievance: Policy Lessons from Studies in the Political Economy of Armed Conflict*. International Peace Academy: New York.
- 36 Ballentine, K. and H. Nitzschke. 2003. *Beyond Greed and Grievance: Policy Lessons from Studies in the Political Economy of Armed Conflict*. International Peace Academy: New York. ; Ross, M. 2004. How do Natural Resources Influence Civil War? Evidence from 13 Cases. *International Organization*, Vol. 58, Winter 2004.; Sobek, D. and C. Payne. 2010. A Tale of Two Types: *Rebel Goals and the Onset of Civil Wars*. *International Studies Quarterly*. Vol. 54, Issue 1, March 2010.
- 37 World Bank. 2001. *World Development Report*. World Bank: Washington, DC.
- 38 Varisco, A.E. 2010. *A Study on the Inter-Relation between Armed Conflict and Natural Resources and its Implications for Conflict Resolution and Peacebuilding*. *Journal of Peace, Conflict and Development*. Issue 15, March 2010.
- 39 Global Witness. 2010. *Lessons Unlearned*. Global Witness: London.
- 40 Weinstein, J. M. 2005. *Resources and the Information Problem in Rebel Recruitment*. *Journal of Conflict Resolution*, 49(4) pp. 598-624.
- 41 Ballentine, K. and H. Nitzschke. 2003. *Beyond Greed and Grievance: Policy Lessons from Studies in the Political Economy of Armed Conflict*. International Peace Academy: New York.
- 42 *Ibid.*
- 43 Englebert, P. and J. Ron. 2004. *Primary Commodities and War: Congo-Brazzaville's Ambivalent Resource Curse*. *Comparative Politics*, Vol. 37, No. 1, pp 61-81; UN. 2010. *Report of the Secretary-General to the Security Council on Children in Armed Conflict*. Report A/64/742. United Nations: New York.
- 44 Global Witness. 2007. *Hot Chocolate: How Cocoa Fuelled the Conflict in Côte d'Ivoire*. Global Witness: London.
- 45 *Ibid.*
- 46 United Nations Peacekeeping Mission in Côte d'Ivoire. 2008. *1000 Microprojets*. Available from: <http://www.onuci.org/spip.php?rubrique81>
- 47 Verité. 2011. *Rubber Production in Liberia*. Amherst: Massachusetts.
- 48 Harwell, E. 2011. *Forests, ex-combatants and durable security: cross-sectoral implications of post-conflict programming*. In "Forests, Fragility and Conflict", PROFOR: Washington, D.C.
- 49 Tamagnini, A. 2009. *UNMIL Reintegration, Rehabilitation and Recovery Programme: End of Assignment Report*. United Nations Department of Peacekeeping Operations: New York.
- 50 Harwell, E. 2011. *Forests, ex-combatants and durable security: cross-sectoral implications of post-conflict programming*. In "Forests, Fragility and Conflict", PROFOR: Washington, D.C.
- 51 Christian Science Monitor. 2010. *FDLR Leader's arrest doesn't change much in Congo*. Accessed on May 29, 2011 from: <http://www.csmonitor.com/World/Africa/Africa-Monitor/2010/1014/FDLR-leader-s-arrest-doesn-t-change-much-in-Congo>
- 52 Englebert, P. and J. Ron. 2004. *Primary Commodities and War: Congo-Brazzaville's Ambivalent Resource Curse*. *Comparative Politics*, Vol. 37, No. 1, pp 61-81; and UN. 2010. *Report of the Secretary-General to the Security Council on Children in Armed Conflict*. A/64/742. United Nations: New York.
- 53 Arjona, A. and S. Kalyvas. 2009. *Mobilization for Political Violence: What Do We Know?* CRISE Workshop proceedings, 18-19 March 2009. Oxford: UK.
- 54 Ballentine, K. and H. Nitzschke. 2003. *Beyond Greed and Grievance: Policy Lessons from Studies in the Political Economy of Armed Conflict*. International Peace Academy Report; and United Nations Office of the Special Representative of the Secretary-General for Children and Armed Conflict. 2011. *Impact on children of illicit exploitation of natural resources in conflict zones*. United Nations: New York.

- 55 United Nations Office of the Special Representative of the Secretary-General for Children and Armed Conflict. 2011. *Impact on children of illicit exploitation of natural resources in conflict zones*. United Nations: New York.; Renner, M. 2002. *The Anatomy of Resource Wars*. State of the World 2002, World Watch Paper 162. World Watch Institute: Washington, D.C.
- 56 Mbadlanyana, T. and F. C. Onuoha. 2009. *Peacekeeping and Post-conflict Criminality: Challenges to the (re)-establishment of Rule of Law in Liberia*. Institute for Security Studies, Paper 190.
- 57 Transparency International. 2012. *Military-Owned Businesses*. International Defense and Security Programme. Retrieved on 24 April 2012 from <http://www.ti-defence.org/our-work/defence-corruption-risks-typology/financial/military-owned-businesses>.
- 58 McNeish, J-A. 2010. *Rethinking Resource Conflict*. Background paper for the World Development Report 2011. World Bank: Washington, D.C.
- 59 UN. 2010. *Report of the Secretary-General to the Security Council on Children in Armed Conflict*. A/64/742. United Nations: New York.
- 60 UNEP. 2009. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. United Nations Environment Programme: Geneva.
- 61 UNEP. 2013. *Relationships and Resources*. Draft version. United Nations Environment Programme: Geneva.
- 62 UNEP. 2009. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. United Nations Environment Programme: Geneva.
- 63 Hazen, J. 2010. *Force Multiplier: Pro-Government Armed Groups*. In, Small Arms Survey 2010. Graduate institute of International and Development Studies: Geneva.; and Maguire, K. 2011. *Colombia Expresses Concern over Growing Gang Violence*. PBS News Wide Angle. Accessed on 5 July, 2011 from: <http://www.pbs.org/wnet/wideangle/blog/6497/6497/>
Internal Displacement Monitoring Center. 2011. *Global Overview of Trends and Developments in 2010*. Geneva.; Romero, S. 2011. *In Colombia, New Gold rush fuels Old Conflict*. New York Times, July 25, 2011.
- 64 <http://www.cbc.ca/news/world/story/2013/05/26/colombia-farc-peace-talks-land-reform.html>
- 65 Sierra Leone Ministry of Mines and Diamonds. 2013. *Overview of the Sierra Leone Mining Sector*. Available from: <http://www.slminerals.org/index.php/country-information/mineral-sector-overview>
- 66 Quick impact projects and infrastructure projects are included as part of Track A interventions in the United Nations Policy for Post-conflict Employment Creation, Income Generation and Reintegration. See UN. 2008. *United Nations Policy for Employment Creation, Income Generation and Reintegration*. United Nations: New York and Geneva.
- 67 Andreas, P. 2004. *The Clandestine Political Economy of War and Peace in Bosnia*. International Studies Quarterly, Vol. 48 pp 29-51.
- 68 Mbadlanyana, T. and F. C. Onuoha. 2009. *Peacekeeping and Post-conflict Criminality: Challenges to the (re)-establishment of Rule of Law in Liberia*. Institute for Security Studies, Paper 190.
- 69 Aspinall, E. 2009. *Combatants to Contractors: The Political Economy of Peace in Aceh*. Indonesia 87.
- 70 United Nations. 2010. *Report of the United Nations Office for the High Commissioner for Human Rights on the situation of human rights in Colombia*. A/HRC/13/72. United Nations: New York.
- 71 In a study of peace agreements negotiated between 1980 and 1997, the demobilization and reintegration of excombatants was the single most important sub-goal for the implementation of the peace agreement. Stedman, Stephen John, 2001. *International Implementation of Peace Agreements in Civil Wars: Findings from a Study of Sixteen Cases*, in Chester A. Crocker, Fen Osler Hampson & Pamela Aall, eds, "Turbulent Peace: The Challenges of Managing International Conflict". Washington, DC: United States Institute of Peace Press (737–752).
- 72 UN. 2011. *Report of the Secretary-General on Disarmament, demobilization and reintegration*, A/65/741. United Nations: New York.
- 73 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards*, Module 1.20. United Nations: New York.
- 74 UN. 2011. *Report of the Secretary-General on Disarmament, demobilization and reintegration*, A/65/741. United Nations: New York.

References

- 75 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*, Module 2.30. United Nations: New York.
- 76 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*, Module 1.20. United Nations: New York.
- 77 Renner, M. 2002. *The Anatomy of Resource Wars*. State of the World 2002, World Watch Paper 162, World Watch Institute; Varisco, A.E. 2010. *A Study on the Inter-Relation between Armed Conflict and Natural Resources and its Implications for Conflict Resolution and Peacebuilding*. Journal of Peace, Conflict and Development. Issue 15.
- 78 Fruchart, D. et al . 2007. *United Nations Arms Embargoes: Their Impact on Arms Flows and Target Behavior*. Stockholm International Peace Research Institute. Department of Peace and Conflict Research, Uppsala University: Sweden.
- 79 UN. 2008. *Report of the Secretary-General*. A/RES/62/28. United Nations: New York.
- 80 International Small Arms Control Standards. 2011. *United Nations Coordinating Action on Small Arms*. Project site: <http://www.un-casa-isacs.org/isacs/Welcome.html>
- 81 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*, Module 4.20, United Nations: New York.
- 82 UNHCR. 2005. *United Nations High Commissioner for Refugees Environmental Guidelines*. United Nations High Commissioner for Refugees: Geneva.
- 83 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*, Module 1.20. United Nations: New York.
- 84 UNHCR. 2005. *United Nations High Commissioner for Refugees Environmental Guidelines*. United Nations High Commissioner for Refugees: Geneva.
- 85 UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*. United Nations: New York.
- 86 UN. 2005. *Note by the Secretary-General on administrative and budgetary aspects of the financing of UN peacekeeping operations*. A/C.5/59/31. United Nations: New York; UN. 2006. *Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS)*, Module 1.20. United Nations: New York; UN. 2011. *Third report of the Secretary-General on Disarmament, demobilization and reintegration*. A/65/741. United Nations: New York.
- 87 Interview with GIZ, Nepal, 2011.
- 88 UNDP Goma Office Monitoring and Evaluation Unit, 2010.
- 89 Interview with former FDLR combatant in Kigali, Rwanda, April 2010.
- 90 IRIN. 2005. *Afghanistan: Mine Action for Peace helps reintegrate ex-combatants*. United Nations Office for the Coordination of Humanitarian Affairs News and Analysis Unit.; Striuli, L. and Termentini, F. 2008. *Afghanistan: Disarmament, Demobilization and Reintegration*. Analisi e Ricerche Geopolitiche sull’Oriente Osservatorio sull’Asia minore, centrale e meridionale. Italy; Afghanistan’s New Beginnings Programme. 2005. *Client Satisfaction Survey*. Available from:
<http://www.undp.org/evaluationadmin/downloaddocument.html?docid=1064>
- Strand, A. 2004. *The ‘Mine Action for Peace’ programme Afghanistan*. Workshop report, Kabul, 29 April 2004. Chr. Michelsen Institute: Oslo.
- 91 UNDP Afghanistan. 2012. *Fast Facts: Reintegrating Insurgents*. United Nations Development Programme: New York.
- 92 McKibben, D. and Bean, J. 2010. *Land or Else – Land-Based Conflict, Vulnerability and Disintegration in Northern Uganda*. International Organization for Migration, United Nations Development Programme and Norwegian Refugee Council: New York and Geneva.
- 93 *Ibid.*
- 94 *Ibid.*

- 95 UN-HABITAT. 2008. *Secure Land Rights for All*. United Nations Human Settlements Programme: Nairobi.
- 96 McKibben, D. and Bean, J. 2010. *Land or Else – Land-Based Conflict, Vulnerability and Disintegration in Northern Uganda*. International Organization for Migration, United Nations Development Programme and Norwegian Refugee Council: New York and Geneva.
- 97 In Uganda, only 7 per cent of women have land titles and only 25 per cent have control over their access to land. Source: USAID. 2011. *Effective Gender Integration Practices for Agriculture. Brief 5: Improving Women's Security of Access and Tenure to Land*. United States Agency for International Development: Washington, D.C.
- 98 McKibben, D. and Bean, J. 2010. *Land or Else – Land-Based Conflict, Vulnerability and Disintegration in Northern Uganda*. International Organization for Migration, United Nations Development Programme and Norwegian Refugee Council: New York and Geneva.
- 99 UNEP. 2013. *Resources and Relationship*. Draft version. United Nations Environment Programme: Geneva.
- 100 Green, A. 2010. *Social Identity, Natural resources and Peacebuilding*. CAPRI Workshop on Collective Action, Property Rights, and Conflict in Natural Resources Management. Siem Reap, Cambodia, June 28- July 1, 2010.
- 101 One notable exception to that statement is the case of the Helsinki Memorandum of Understanding, which concluded the 30-year conflict in the Province of Aceh, Indonesia. The memorandum allocated two hectares of land to each ex-combatant as part of their reintegration package. However, the terms of the memorandum proved to be difficult to implement in practice: the number of ex-combatants turned out to be many times higher than originally expected; and to date, many ex-combatants are yet to receive the land or other entitlements that they were promised in the peace agreement.
- 102 Giustozzi, A. 2009. *Bureaucratic Façade and Political Realities of Disarmament and Demobilisation in Afghanistan*. In Berdal, M. and Ucko, D., eds. 2009. *Reintegrating Armed Groups after Conflict*. Routledge Press.
- 103 Rincon, J. M. 2010. *Ex-combatants, Returnees, Land and Conflict in Liberia*. Danish Institute for International Studies Working Paper 2010:05; Bonn International Centre for Conversion. 2009. *Natural Resources in Côte d'Ivoire: Fostering Crisis or Peace?* Brief 40, November 2009. Bonn: Germany.
- 104 Mbadlanyana, T. and F. C. Onuoha. 2009. *Peacekeeping and Post-conflict Criminality: Challenges to the (re)-establishment of Rule of Law in Liberia*. Institute for Security Studies, Paper 190.
- 105 Rincon, J. M. 2010. *Ex-combatants, Returnees, Land and Conflict in Liberia*. Danish Institute for International Studies Working Paper 2010:05. Tenure refers to a bundle of rights associated with land or a natural resource (or both), including the rights of ownership, use, and the ability to rent and derive income from land and natural resources. In many developing countries, customary systems of communal land use and inheritance rights are the predominant system of accessing land and natural resources. Such systems may be degraded due to the conflict or may become unclear or insufficient due to changing policies regarding land in a country.
- 106 Payne, G. et al. 2008. *Social and economic impacts of land titling programmes in urban and peri-urban areas: International experience and case studies of Senegal and South Africa*. Global Land Tool Network: Geneva.
- 107 Lastarria-Cornheil, S. 2005. *Gender and Property Rights within Post-conflict Situations*. USAID, Bureau for Policy and Program Coordination. United States Agency for International Development: Washington, D.C.
- 108 Nyukuri, E. 2006. *Women, Land and Resource Conflicts: Policy Interventions and Implications in Kenya*. African Center for Technology Studies: Nairobi.
- 109 USAID. 2011. *Effective Gender Integration Practices for Agriculture. Brief 5: Improving Women's Security of Access and Tenure to Land*. United States Agency for International Development: Washington, D.C.
- 110 In some cases, customary law will take precedence over statutory norms. It is important that these laws and contexts are well understood by DDR programme planners. Experts on local and national land laws should be included in the consultation process for programme design and the conflict analysis.
- 111 EU-UN Partnership on Land and Natural Resource Conflicts. 2012. Guidance Note: Land and Conflict. UN Framework Team (UNEP, UNDP, PBSO, HABITAT, DPA and DESA): New York..
- 112 Renner, M. 2002. *The Anatomy of Resource Wars*. State of the World 2002, World Watch Paper 162, World Watch Institute: Washington, D.C.
- 113 California State Senate Bill 861. 2011. California State Legislature: Sacramento, California..

References

- 114 UNDP. 2010. *Aceh Partnership for Economic Development*. United Nations Development Programme: Jakarta.
- 115 UNCTAD. 2007. *BioTrade Principles and Criteria*. United Nations Conference on Trade And Development: Geneva.
- 116 Reintegration programmes seek to address the security threat posed by ex-combatants who are returning to civilian life without jobs and often with few employable skills, through both individual and community-based approaches that target social and economic livelihoods factors.
- 117 UN. 2008. *United Nations Policy for Employment Creation, Income Generation and Reintegration*. United Nations: New York and Geneva.
- 118 UNEP. 2008. *Background paper on Green Jobs*. United Nations Environment Programme : Nairobi.
- 119 *Ibid.*
- 120 This statement is taken from evidence shared from the UNDP Goma Monitoring and Evaluation Unit, the UNDP Sudan Reporting Unit and UNDP Afghanistan. 2012, *Fast Facts: Reintegrating Insurgents*. United Nations Development Programme: New York.
- 121 In Sub-Saharan Africa, multiple studies and international organizations estimate that 80-90 per cent of agricultural activities are performed by women, while they typically own less than 20 per cent of the land. Globally, women produce 60-80 per cent of agricultural goods, while having official ownership rights to less than 1 per cent of land.
- 122 UN Women. 2009. *Securing the Rights and Livelihoods of Rural Women in Africa in the Context of the Food Crisis and Climate Change*. United Nations Entity for Gender Equality and Women's Empowerment, New York; The World Bank, Food and Agriculture Organization, and International Fund for Agricultural Development. 2009. *Gender in Agriculture Sourcebook*. The World Bank. Washington, D.C.
- 123 Herren, H.R. et al. 2011. *UNEP Green Economy Report: Agriculture: Investing in Natural Capital*. United Nations Environment Programme: Nairobi.
- 124 Miguel, E. et al. 2004. *Economic Shocks and Civil Conflict: An Instrumental Variables Approach*. Journal of Political Economy. Vol 12, no 4. University of Chicago: Chicago.
- 125 Non-timber forest products may include medicinal plants, seeds, spices, dyes, herbs, food products (berries, nuts, fruits), as well as ingredients for cosmetics or materials for the construction of textiles, rope or furniture.
- 126 Harwell, E. 2010. *Forests, Ex-combatants and Durable Security: Cross-sectoral implications of post-conflict programming*. Working Paper. Programme on Forests (PROFOR): Washington, D.C.
- 127 UNMIL supported research on rubber market reform in Liberia that articulated the main problems with the sector, namely loss of government tax revenue, dysfunctional behavior by foreign concessionaires, market inefficiencies that deter investment, threats of illicit tapping and a general state of lawlessness in rubber growing areas that contributed to fear by smallholders and even violence in rubber growing areas. Unfortunately, rubber was not included in Liberia Extractive Industries Transparency Initiative. See: Jordan, M. 2008. *Final report of the Joint Liberia Ministry of Agriculture/UNMIL Study on Rubber Theft*. United Nations Mission in Liberia: Monrovia and New York.
- 128 The UNDP-UNEP Joint Initiative on DDR and Natural Resources worked with UNCTAD's BioTrade programme in the Province of Aceh, Indonesia on a pilot project to support gender-sensitive reintegration of female former combatants, widows and female heads of household through development of the value chain for nutmeg, a native NTFP.
- 129 UNDP. 2012. *A Gender-Responsive Approach to Reintegration and Peace Stabilization: Pilot Project in South Aceh District, Under the Framework of the Peace Through Development (PTD) Project*. Internal project document. United Nations Development Programme: Jakarta and New York.
- 130 Due to project duration, it is difficult to measure the extent to which productivity and profitability increased. Furthermore, nutmeg trees take 3-7 years to mature. Although there is evidence of improvements from interviews with individuals, no widespread survey was conducted to measure the changes in productivity and profitability.
- 131 Formally established in December 2010, Forum Pala Aceh's main goal is to enhance economic welfare of the nutmeg farmers' community through strengthened collaboration and cooperation amongst farmers, producers, distillers, and the local government.

- 132 The World Bank, Food and Agriculture Organization, and International Fund for Agricultural Development. 2009. *Gender in Agriculture Sourcebook*. World Bank: Washington, D.C.
- 133 Interview with Isabela Leao. January 22, 2011.
- 134 UNDP Sudan. 2013. *Community Security and Arms Control Programmes*. Briefing Note. United Nations Development Programme: Khartoum and New York.
- 135 Clinton Foundation. 2013. *Long-term recovery projects in Haiti*. Available from: www.clintonfoundation.org
- 136 UNEP 2011. Interview with General Vijay K. Jetley. Conducted by Anne-Cecile Vialle, United Nations Environment Programme: Geneva.
- 137 The ban on mining in eastern DRC that was passed in autumn 2010 by President Kabila has resulted in mixed reports of efficacy; in areas where armed groups were not controlling mines, the army has moved in and in documented cases individual soldiers are now moving to control access to mines for profit. Secondary effects include reduced transportation access between rural areas and markets, thus slowing or halting trade in agricultural goods. See Geenen, S. Guest blog on 18 December 2010. *The DRC mining ban: the view from Kamituga*. In Seay, L.: Texas in Africa. Available from: <http://texasinafrica.blogspot.com/2010/12/drc-mining-ban-view-from-kamituga.html>
- 138 UNEP. 2012. *Post-conflict Environmental Assessment in DR Congo*. United Nations Environment Programme: Geneva.
- 139 Eftimie, A.; Heller, K. and Strongman, J. 2009. *Gender Dimensions of the Extractive Industries: Mining for Equity*. Extractive Industries and Development Series #8. World Bank: Washington, D.C.
- 140 McCandless, E. and T. Christie. 2006. *Beyond Sanctions: Evolving Integrated Strategies to Address Natural Resource-based Challenges in Post-Conflict Liberia*. Journal of Peacebuilding and Development, Vol. 3, No 1..
- 141 Hayes, K. (n.d.). *Women in Artisanal Mining in the Democratic Republic of Congo*. Pact Congo: Kinshasa.
- 142 McCandless, E. and T. Christie. 2006. *Beyond Sanctions: Evolving Integrated Strategies to Address Natural Resource-based Challenges in Post-Conflict Liberia*. Journal of Peacebuilding and Development, Vol. 3, No 1..
- 143 Interview with Flora and Fauna International staff, Ulu Masen, Aceh, Indonesia. October 5, 2010.
- 144 UNEP. 2003. *Post-conflict Environmental Assessment: Afghanistan*. United Nations Environment Programme: Geneva.
- 145 ICG. 2003. *Disarmament and Reintegration in Afghanistan*. ICG Asia Report No. 65. International Crisis Group: Washington D.C. and Brussels.
- 146 Rossi, S. and A. Giustozzi. 2006. *Disarmament, Demobilization and Reintegration of Ex-combatants (DDR) in Afghanistan: Constraints and Limited Capabilities*. Crisis States Research Centre, LSE: London, UK; Personal correspondence with Simonetta Siligato, UNOPS, Afghanistan, 2009, and Wendy MacClinchy, DPKO, New York, 2009.
- 147 MacClinchy, W. 2004. *Greening Afghanistan: Restoring Severely Degraded Natural Resources through Livelihoods*. IUFRO 7th Extension Working Party Symposium.; USAID. 2007. *Case Study: Pistachio Woodlands Rehabilitation*. United States Agency for International Development: Kabul and Washington, D.C.
- 148 The World Bank, Food and Agriculture Organization, and International Fund for Agricultural Development. 2009. *Gender in Agriculture Sourcebook*. World Bank: Washington, DC.



<http://unep.org/ecp>

Further information

Further technical information may be obtained from the UNEP Post-Conflict and Disaster Management Branch website at: <http://www.unep.org/disastersandconflicts/> or by email: postconflict@unep.org



One of the key factors in the successful implementation of a peace agreement is the disarmament, demobilization and reintegration (DDR) of ex-combatants into civilian life. However, natural resources pose specific risks and opportunities for DDR programmes and can either support or undermine durable peace. On the one hand, many ex-combatants have been involved in looting, trafficking, or rent seeking in natural resource sectors. The continued illegal exploitation of natural resources can pose a stability risk in contexts where DDR programmes take place, either within countries or in neighboring fragile states. On the other hand, natural resources offer tremendous opportunities for both emergency employment for ex-combatants, as well as longer term sustainable livelihoods. Rehabilitation of ecosystems, including forest areas, agricultural areas, river basins and water resources, can help to ensure productive livelihoods and reduce vulnerabilities to natural hazards. However, using natural resources for sustainable livelihoods also requires key enabling conditions to be met such as land tenure security combined with sustainable levels of resource use.

UN Secretary-General's reports have consistently called for more attention to be given to the role of natural resources in DDR programmes as well as to post-conflict job creation and peacebuilding more generally. This report is an initial response to that call. It is meant to guide DDR practitioners and policy on how to effectively integrate the opportunities and mitigate the risks from natural resources to ensure more sustainable and effective DDR programmes.



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Fax: +254 (0)20 762 3927
Email: uneppub@unep.org

