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Reinforcing Environmental Dimensions of European Foreign and Security Policy
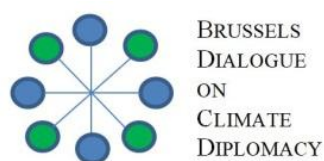
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Institute for European Environmental Policy

GLOBAL MILITARY ADVISORY COUNCIL ON CLIMATE CHANGE

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EXECUTIVE SUMMARY

Acknowledging the role environment and ecosystems play in underpinning security – both in terms of national and human security – means a departure from security and defence policy as traditionally perceived. It requires a more holistic regime that goes beyond military preparedness or response, with due links to a range of sectoral activities that impact the quality and resilience of the environment and ecosystem.

The impacts of a degrading environment and a changing climate on national and international security are becoming more and more apparent. Combined with an increasing world population, the pressures on the natural environment and competition over natural resources are considered one of the key peace and security challenges of the 21st century.

Environmental factors, including well-functioning ecosystems and the natural resources they provide, underpin several aspects of human wellbeing and security (e.g. supply of food and water, source of livelihoods, protection against natural hazards). This means that changes in the state of the natural environment – when interacting with the broader social, economic and political situation – can cause or aggravate conflicts. These changes can become an issue for national and international security, depending on their scale and how successfully they are addressed through local, regional or national governance.

Beyond being recognised as a driver of disputes and conflict, the natural environment and good governance of natural resources and ecosystems play a role in peacebuilding and, importantly, in preventing conflicts. Well-functioning ecosystems support the supply of natural resources and thus underpin resource security. In addition, protection and sustainable management of ecosystems contributes to disaster risk reduction since natural ecosystems can help to mitigate the impacts of, and support recovery from, natural hazards, preventing them becoming into full-blown natural disasters with long-lasting impacts.

The recently updated EU foreign policy framework provides a good basis for the integration of environment into security, paving the way towards a more holistic regime and interaction between the foreign, security and defence elements of the policy framework. It recognises the important role that environmental stability and well-functioning ecosystems play in conflict situations, in particular in mitigating the occurrence or severity of conflicts in the first place. This strategic vision must now be implemented in practice, through the means of environmental and climate diplomacy and pushing forward the environmental security agenda on the international level.

This paper outlines the environmental dimension of European security policy and security-related foreign policy and discusses how the integration of environmental concerns could – and should – be improved to support the delivery of the EU and global 2030 Sustainability Agenda.

It also examines how security forces on the ground (e.g. EU missions) are taking environmental issues into account and the role they could play in advancing a 'greener' and more integrated approach to security issues in the future. Finally, the paper provides a number of recommendations for both policy and concrete actions on the ground, to support this future integration.

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This paper and its recommendations should be placed in the wider framework of delivering the 2030 Agenda for Sustainable Development by the EU in the global context. These aspects are outlined in a dedicated Think2030 paper by Kettunen et al. (2018), with information provided on the wider EU policy framework of relevance (e.g. trade and development cooperation).

1 The role of environment in security

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

UN Secretary-General, António Guterres, in his opening remarks to the UN Environment Annual report 2016.
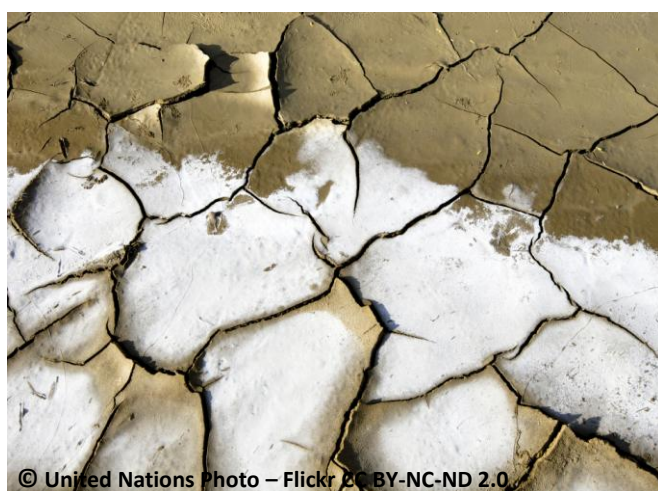
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Environmental factors, including well-functioning ecosystems and the natural resources they provide, underpin several aspects of human wellbeing and security (e.g. supply of food and water, source of livelihoods and protection against natural hazards[1]. This means that changes in the state of the natural environment can cause or aggravate – or on the other hand alleviate – conflicts. These changes can become an issue for national and international security, depending on their scale and how successfully they are mitigated through local, regional or national governance.

Environmental and ecosystem degradation in combination with climate change related events can exacerbate already vulnerable political, social or economic situations with the risk of worsening existing conflicts or creating new ones[2]. For example, there are over 270 watersheds around the world that cross the boundaries of two or more states, and demand for water within these international basins is estimated to be on the rise.

Environmental change can also lead to increased migration, usually within national borders or across neighbouring countries' borders, but might also have implications on a regional or even wider international scale. Consequently, environmental and ecosystem quality and stability underpin security, from local to global level. According to UNEP, at least 40% of internal conflicts since 1990 have a link to natural resources, with such conflicts more likely than othets to experience conflict relapse within five years of signing a peace agreement[3].

Beyond being recognised as a driver of disputes and conflict, the natural environment and good governance of natural resources and ecosystems play a role in peacebuilding and, importantly, in preventing conflicts[4]. Well-functioning ecosystems support the supply of natural resources such as

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[1] United Nations Environment Management Group (2018)

[2] Opitz Stapleton et al. (2017), Munia et al. (2017), Tignino and Mach (2018)

[3] UNEP (2009) From Conflict to Peacebuilding: The Role of Natural Resources and the Environment. Nairobi: UNEP

[4] Environmental Peacebuilding Knowledge Platform for a collection of 150 case studies; UNEP (2015a), UNEP (2015b), Airoud et al. (2017) Environmental Peacebuilding Training Manual, Conservation International

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water provisioning and food security, and thus underpin resource security[5]. In addition, protection and sustainable management of ecosystems contributes to disaster risk reduction. Natural ecosystems can help mitigate the impacts of, and support recovery from, natural hazards (flooding, drought, mudslides etc.), preventing them turning into full-blown natural disasters with long-lasting impacts. For example, protecting mangroves can increase resilience of rice production to cyclones, and green areas in urban centres help mitigate the impacts of heatwaves as well as urban flash floods due to heavy rainfall.

Box 1 Environmental degradation and climate change vulnerabilities in the Lake Chad region

The Lake Chad Basin is one location where climate change has devastating impacts, exacerbating existing inequalities, poverty and political instability. This has in turn led to violent conflict and population displacement. Climate change, together with inadequate water management and environmental degradation, have contributed to Lake Chad shrinking by more than 90% in the last 40 years[6]. This has resulted in acute water scarcity and food insecurity in the region. In late 2017 more than 7 million people were suffering from severe food insecurity, creating a breeding ground for violence and a number of terrorist groups, such as 'Boko Haram' and 'Islamic State West Africa'. At the same time more than 2 million persons were displaced by conflict in the region, leading to further instability[7].

In the Lake Chad region, a current project by Adelphi is aiming to raise awareness of climate-fragility risks and integrating them into policy processes[8] with efforts to work with humanitarian and development partners to design or adapt implementation strategies to tackle or eliminate these risks. The goal is to promote coherent processes, policies and action, taking account of the climate-fragility risks and opportunities in the region. Specific activities include: i) awareness raising and sensitisation on the risks in the region, including a joint mission of EU diplomats and a documentary film; ii) support in integrating risks into policy and operations, for example through expert dialogues and briefings; and iii) implementation support, including training on climate and conflict sensitive programming, and provision of a support tool for policy makers and practitioners.

The security threat posed by climate change and other environmental scarcities and changes is increasingly recognised in the context of international policy. Water security and climate change have featured on the UN Security Council (UNSC) agenda for over a decade. The UNSC held its first debate on the relationship between climate, energy and security in 2007 and since then there have been a number of informal discussions on the role that both climate and water play in security issues. In 2017 and 2018 the UNSC explicitly recognised the adverse effects of climate change and ecological changes on the stability of a specific region (Lake Chad Basin and Somalia, respectively)[9]. In addition, there is a recognition that fragile countries affected by an increasingly unstable climate are at risk of never reaching a stable state[10].

In October 2018 the UNSC held an important debate on natural resources and conflict which emphasised that competition over land, water, minerals and other natural resources will increasingly

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[5] Monty et al. (2014 and 2017), Murti and Buyck (2014)

[6] Gao et al. (2011)

[7] UN Migration Press (2016)

[8] Project 'Responding to Climate Change and Security Risks in the Lake Chad Basin'

[9] Resolution 2349 and Resolution 2408

[10] UN News (2018)

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fuel conflict. The UN Secretary-General highlighted that efforts should be stepped up to manage natural resources for the benefit of local people and to engender peace through sharing[11].

While the development of these new insights is promising, there is still a need for environmental security issues to gain a higher profile and more comprehensive acknowledgement in the UN system, including focusing not only on risk but also on promoting solutions linked to well-functioning ecosystems. The United Nations Framework Convention on Climate Change (UNFCCC), which addresses global mitigation and adaptation as a response to climate change, is one of the processes where the security implications of climate change need to be further recognised. In particular, adaptation measures should be advanced with a better understanding of climate-fragility risks. As the key global funder, the Global Environment Facility (GEF) also needs to do more to integrate environmental security risks across its programme portfolio.

Building on the above, this paper outlines the environmental dimension of European security policy and security-related foreign policy and discusses how the integration of environmental concerns could – and should – be improved to support the delivery of the EU and global 2030 Sustainability Agenda. The paper also examines how security forces on the ground (e.g. EU missions) are taking environmental issues into account and the role they could play in advancing a 'greener' and more integrated approach to security issues in the future.

As its starting point, the paper acknowledges the role that the environment plays in underpinning both human and national security. It builds on the recognition that environmental degradation and climate change exacerbate social and political tensions, with a risk of sparking violent conflicts, and examines opportunities for policy action primarily aimed at preventing conflicts in an integrated manner.

The paper uses the term "environment" to capture both the availability of and access to natural resources, and the role of ecosystems and their functioning in underpinning human welfare. It therefore encompasses both the availability and access to clean water, fertile land etc. and the ability of ecosystems to maintain water retention and purification, support mitigation of environmental hazards, maintain pollination of crops etc. The use of the term captures both biotic and abiotic elements of ecosystems, including in particular possible trade offs between different ecosystem resources and between the use of resources and maintaining ecosystem functioning and resilience.

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[11] Remarks by A. Guterres to UNSC (2018)

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2 EU Foreign and Security Policy

The EU Common Foreign and Security Policy (CFSP) forms the basis for the Union's joint security and defence diplomacy and actions. It consists of both dialogue and partnerships with partner countries and concrete actions on the ground. These on-the-ground actions are governed by the EU's Common Security and Defence Policy (CSDP), which covers humanitarian and rescue tasks, conflict prevention, peacekeeping and post-conflict stabilisation.

In terms of governance, the CFSP is chaired and represented by the EU's High Representative for Foreign Affairs and Security Policy and implemented by the European External Action Service (EEAS), which is the EU agency in charge of the Union's diplomatic, foreign and defence services). In addition, cooperation between the Member States' defence ministries is facilitated by the European Defence Agency (EDA), particularly in terms of capability development. The EEAS and EDA together form the Secretariat of the Permanent Structured Cooperation (PESCO), an instrument established in 2017 to enable willing Member States to pursue greater cooperation in security and defence. To date, 25 EU Member States have joined PESCO and thereby agreed to more binding commitments in the area of defence.

In terms of international cooperation, working closer with key partners, particularly the UN and the North Atlantic Treaty Organization (NATO), is considered important by the EU with a view to developing a comprehensive security policy.

The priorities and objectives for the foreign and security policy, including defence, are set by the EU Global Strategy (EUGS) adopted in 2016. The EUGS identified five broad priorities for the EU's external action focusing on:

- security outside and within the EU;
- resilience of states and societies with particular focus on the EU's surrounding regions;
- integrated approach to conflicts and crises;
- cooperative governance in a regional context (e.g. cooperation with regional organisations); and
- global governance for sustainable development, human rights and equitable access to resources.

Security and defence policy: Priorities for the EU's security and defence policy include enhancing the Union's response to external conflicts and crises through responsiveness in all phases of the conflict cycle, while contributing systematically to the resilience and stabilisation of partner countries, including through the nexus for security and development. Furthermore, civil protection and disaster response within the EU also remain a key priority. These priorities are recognised to be mutually reinforcing, with operations outside the EU's borders directly or indirectly supporting the EU's own security needs by tackling root causes of conflict and preventing spill-over effects into the Union. The EU advocates an integrated approach to conflicts and crises, focusing on addressing all dimensions and stages of a conflict from early action and prevention to peace-building, with a particular emphasis on early warning. The external action on resilience of states and societies spans from Central Asia to Central Africa (e.g. the Sahel region), explicitly recognising the interlinkages between climate change, natural disasters, environmental degradation, and political and societal resilience.

Broader foreign policy: Regarding the broader foreign policy element, while security and defence are core components of the CFSP, it is recognised that these policies can deliver successful outcomes

only when deployed alongside other relevant external and internal policies such as enlargement, development, trade, migration, energy, climate and environment. Consequently, for example, the set priorities and actions to support state and societal resilience outside the EU are closely linked with the EU's development cooperation and neighbourhood policy agendas. In particular, the recently updated EU policy framework for development cooperation (European Consensus on Development adopted in 2017) echoes the EUGS, committing the Union's development cooperation actions and related financial assistance to the service of human and environmental security with an emphasis on preventative action. It states that the EU and its Member States are to *"take a more coordinated, holistic and structured approach to migration"* while acknowledging that environmental degradation, climate change, extreme weather, and natural or man-made disasters can "*increase vulnerabilities and needs, jeopardise peace and stability and cause large-scale migration.*"

Finally, the EU is committed to respect and actively promote international law and policies on human rights, sustainable development and environment as a part of CFSP implementation, including the Paris Climate Agreement, the 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs).

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3 Changing the paradigm: drivers, barriers and windows of opportunity

It is evident from the above that environmental quality and the availability of and access to natural resources (including securing ecosystems' ability to maintain a reliable environment and resource supply through sustainable governance and management regimes) need to play an integral role in the EU's future security policy.

"The EU must be more proactive in making diplomatic and development interventions in crisis regions affected by climate change and security risks."

Fetzek and van Schaik (2018)[12]

Acknowledging the role environment and ecosystems play in underpinning security – both in terms of national and human security – means a departure from the traditional perception of security and defence policy. It requires a more holistic regime that goes beyond military preparedness or response, with due links to a range of sectoral activities that impact the quality and resilience of the environment and ecosystems.

This means that influencing governance and sectoral policies such as trade, forestry, agriculture and fisheries to reinforce sustainable and equitable use of natural resources or maintain ecosystems' beneficial functions becomes an integral part of the security framework. This further means that questions related to governance of the natural environment and resources in partner countries, such as benefit sharing, access to information, participation in decision making, transparency and accountability, become linked not only to sustainability but also to security. This in turn brings the EU's security policy increasingly closer to the realm of foreign policy, including broader cooperation (e.g. development cooperation) and diplomatic relationships with partner countries. Therefore there is a strong case for treating foreign policy efforts to increase long-term environmental sustainability as an integral part of security policy.

These needs have been recognised by the EU within the recently adopted EUGS framework, providing an explicit and relatively comprehensive basis for environmental integration and a more holistic regime. The strategic approach to resilience in the EU's external action (JOIN2017/21) acknowledges that climate change, natural disasters and environmental degradation cause or contribute to conflicts worldwide. Consequently, the EU is to "[…] *broaden its approach to these challenges and put greater emphasis on the conservation, restoration and sustainable management of natural resources and ecosystems, and maintenance of the services that they provide."* In this context, the EU is also encouraged to pay increasing attention to long-term environmental pressures and their aggravation of risks (e.g. deforestation, water demand, land degradation, sea level rise), and to systematic assessment and horizon scanning for various environmental, climate and disaster risks*. The policy also recognises the role well-functioning ecosystems play in mitigating environmental risks and explicitly advises to "*[…] promote the use of ecosystem-based approaches to*

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[12] Fetzek and van Schail (2018)

disaster risk-reduction", while simultaneously working with the local authorities to develop governance systems that promote climate change resilience and the sustainable management of natural resources.

Furthermore, the EUGS regime also recognises the role EU foreign policy needs to play in supporting security and raising partner countries' awareness of environmental contributions to stability and security, highlighting the needs for reinforced political outreach through diplomatic means such as Multilateral Environmental Agreements (MEAs) and the EU Green Diplomacy Network (GDN).

However, while the principles and objectives for EU foreign and security policy put environment and ecosystems in a rather prominent place, there is still a long way to go to operationalise this new regime. Firstly, the environment must no longer be perceived as relevant only to the final stages of a conflict cycle. It is not something only to be considered during – or restored after – military operations, by the EU and its Member States. Focus should also be placed on maintaining or restoring environmental and ecosystem quality with a view to *preventing and mitigating* resource-driven conflicts. Regarding post-conflict peacebuilding, the focus should be on more comprehensively emphasising and building on the understanding of the role of natural resources and how they are or should be managed. Good governance of natural resources not only supports some key elements of peacebuilding, such as the recovery of livelihoods and the economy, but can also build trust and enhance local cooperation.

On the ground, awareness has increased of the importance of decarbonising military operations (see Chapter 4 below). However, broader environmental concerns do not yet play an integral role on their agenda. For example, the scope of past and ongoing EU military and civilian missions does not seem to be in any way geared towards identifying and addressing the possible environmental issues that underpin conflicts[13]. This is despite the fact that several ongoing missions are taking place in areas with known pressures linked to climate change and/or resource use (e.g. sub-Saharan Africa).

Several key factors can either help with the integration of environment into security at a more operational level, or form a barrier to doing so.

Increasing the knowledge base, awareness and capacity: Understanding of the role that the environment plays in conflicts – from prevention to post-conflict situations – is constantly increasing. For example, further research is being conducted to better understand the relationship between different factors behind migration, such as climate change, the socio-economic situation, power structures and livelihood opportunities[14]. Similarly, knowledge on the "mechanics" of ecosystems in maintaining favourable environmental conditions and providing stability is becoming more concrete, allowing for the development of solutions to support human and national security. In other words, a robust evidence base is being created that provides – together with a precautionary approach – a basis for more comprehensive and holistic policy action on environmental security.

The EU has already co-funded activities such as the development of case studies on the role of natural resources in peacebuilding, a massive open online course (MOOC) on environmental security and sustaining peace, and the EU-UN partnership on preventing land and natural resource conflicts (see Annex 1). The key future need is to find more robust ways to map, measure and monitor environmental security risks at different scales[15]. In practice this means investment in developing data sets, methods and analytical approaches to not only identify risks but also track the effectiveness of mitigation measures.

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[13] EEAS Military and civilian mission and operations (2018)

[14] Opitz Stapleton et al. (2017)

[15] See e.g. Fetzek and van Schail (2018)

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Implementing and improving the international framework: As highlighted above, the UNSC has increasingly recognised climate related security issues, championed for example by Sweden as a non-permanent member of the UNSC in 2017-2018. This recognition now needs to lead to concrete outcomes, including a more integrated approach to security risk assessments that includes climate-fragility and environmental risks.

Furthermore, ecosystem degradation in its own right – with or without links to climate change – must be recognised as posing a threat to human and national security (e.g. through overexploitation of water, land and biodiversity resources and resultant loss of beneficial ecosystem processes). Consequently, a failure to address underlying factors of degradation, including in sectoral policies, hinders finding long-term sustainability solutions (e.g. by undermining strategies to address climate related risks). The climate and security agenda can provide a useful entry point to broader considerations such as water and food security.

Past experience indicates that mainstreaming climate and broader environmental security related issues onto the UNSC agenda can be an uphill battle. True to its Global Strategy, the EU and its Member States should try to advance the environment security agenda at the UNSC. However, they could – and should – also try to find other means for action within the UN system. This could include directly supporting UN Environment's environment and security work (UNEP 2017, UNEP and UN DPA 2015), taking a more proactive role in implementing the Sendai Framework for Disaster Risk Reduction under the UN Office for Disaster Risk Reduction (UNISDR), furthering existing cooperation in other international fora (e.g. the Organization for Security and Co-operation in Europe (OSCE), G7 and G20), and forging bilateral relationships with partners. In the past, the EU has been an active player in G7 initiatives on climate and fragility. It is also crucial that ongoing UNFCCC processes, any future UNSC action and other possible global processes are closely connected and coordinated.

Building momentum for EU environmental diplomacy: EU capacity and efforts in environmental and climate diplomacy have been increasing steadily during the past decade (Torney and Cross 2018). The EU's Green Diplomacy Network launched in 2003 has provided an initial focal point for these developments, with the establishment of the EEAS in 2010 creating an additional institutional platform. In addition, the adoption of the EU Partnership Instrument (PI) in 2014 has provided a means for the EU to pursue its foreign policy objectives with third countries outside the realms of development cooperation, providing an avenue for a more EU-led identification of opportunities for cooperation (see below). Together these three elements form a framework upon which to build consolidated action on environmental security.

The EU has already built a considerable track record in the area of water diplomacy, starting with the launch of the EU Water Initiative in 2002 that has led to several concrete successes in promoting sustainable water policies, especially in the EU's neighbouring countries[16]. The EU Neighbourhood Policy is a dedicated policy framework for cooperation with its neighbouring countries which provides another opportune starting point for dedicated cooperation on environmental security related issues. A range of environmentally orientated projects have been implemented under the auspices of the neighbourhood policy framework, for example linked to energy security and water.

The EEAS appears an obvious focal point for further EU diplomatic action linked to environmental and climate security. The GDN, with its strong track record in climate diplomacy, could lend its expertise to deepening the understanding on environmental issues in the context of EU security policy, creating appropriate links to both EDA and PESCO. However, these developments require an allocation of dedicated resources, as for now it has been recognised that the capacity of the EEAS, for example, is limited in terms of policy areas it can cover[17]. Furthermore, placing the

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[16] Foreign Affairs Council Conclusions (2013), Adelle et al. (2018) in Chapter 7
[17] Torney and Cross (2018) in Chapter 3

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environmental and climate diplomacy function closer to the EU High Representative in the EEAS hierarchy would help to integrate these aspects in all parts of external policies in a horizontal manner[18].

Diplomacy efforts in partner countries are also inherently linked to the EU's development cooperation. Consequently, close cooperation with and involvement of the Commission's Directorate-General for International Cooperation and Development (DG DEVCO), as the key implementing agency for EU development cooperation policy, will be required to support environment and climate security related issues to reach higher priority on partner countries' agendas.

Supporting policy action from the EU budget: The EU budget has been known to play an important role in supporting the uptake of environmental issues in practice, both within and outside the EU. Making environmental security – both in terms of risks and solutions – an explicit priority for EU funding would therefore help to lead to concrete pioneering actions on the ground.

The 2021-2027 EU Multiannual Financial Framework (MFF), currently under negotiation, plays a crucial role in the above. A climate mainstreaming marker – 25% of the budget to support the implementation of climate policy agenda – has been proposed but is still under discussion, including proposals to increase the marker. In addition to the 25% target, it is also acknowledged that 'climate proofing' of all EU financial support is needed so as to ensure the compatibility of the EU budget with EU climate objectives under the Paris agreement. In line with such climate-compatible budget, opportunities could be made available to foster and implement environmental security initiatives in the context of a range of EU funds. For example, the EU Regional Development Fund (ERDF) and its interregional arm (Interreg) have already been used to finance action linked to natural hazard mitigation, including nature-based solutions. In terms of pioneering action and innovation, EU research and development (R&D) funding could provide an avenue for financing more innovative actions on environmental security, such as the development of datasets and methods for monitoring risks and assessing the effectiveness of policy responses (as highlighted above).

In terms of environmental diplomacy, over the past four years the EU Partnership Instrument has been used to launch multiple dialogue-orientated projects between EU and partner countries, including several on environmental topics. Consequently, it would seem important to guarantee the future continuation of this instrument, using it as a mechanism to finance dialogue with interested third country partners to raise awareness and build capacity on environmental and climate security. This is particularly valuable since the EU instruments for development cooperation, rightfully driven by the partner countries' priorities, provide limited opportunities for the EU to put forward its own policy priorities.

Disappointingly the plans for the EU Defence Fund, while explicitly calling for innovation, seem almost entirely focused on defence technologies (European Commission 2018). Therefore it remains to be seen how the fund will deliver its contribution towards the proposed 25% climate marker of the EU budget, and whether more holistic projects and initiatives such as those linked to environment and security might play any role in this.

Finally, EU instruments for development cooperation (e.g. the European Development Fund (EDF) and Development Cooperation Instrument (DCI)) have a long track record in supporting sustainable development in partner countries, including environmental protection and management of natural resources. The 2021-2027 MFF is foreseen to bring a number of existing funding instruments for development cooperation and external assistance under the new Neighbourhood, Development and International Cooperation Instrument (NDICI). This may help to create a more integrated approach

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[18] As already argued by Mats Engstrom in 2009, see EUobserver

in cooperating with EU partner countries, including taking on board issues linked to environmental and climate security. It will be important, however, to ensure that short-term needs perceived from the perspective of European or national security do not in any way jeopardise the medium- to long-term needs for human security and sustainable development in partner countries[19].

Cooperation with key partners and supporting pioneering Member States: Successfully identifying key partners with whom to advance the environmental policy agenda will play a crucial role for the EU, both domestically and in the international arena.

Domestically, a number of Member States have already integrated climate change into their national security agendas. With strategic guidance and support from the EU level (e.g. financial support), these countries could become champions for bringing environmental security into practice in future EU on-the-ground missions (see below). As highlighted above, PESCO could play a role as an institutional agent facilitating dialogue and exchange of best practices.

In the external context, environmental diplomacy could be used to identify partners and suitable fora to take policy action forward. The EU Partnership Instrument can provide an avenue for scoping cooperation, with a long-term view to supporting making environmental security a priority on the partner country's agenda, for example by including it as an area of support for EU development cooperation.

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[19] See the dedicated Think2030 paper by Kettunen et al. (2018) 'Sustainable Development Goals and the EU: uncovering the nexus between external and internal policies' for further discussion on this.

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4 From policy to action: the role of military forces in environmental security

While the EU policy framework can – and indeed should – encourage and enable the integration of environmental aspects into the security and defence agenda, military forces play a crucial role in encountering and addressing the consequences of environmental security risks in practice.

The EU's on-the-ground missions, working closely with the EU delegations in partner countries, can play an important advocacy and/or pioneering role in mainstreaming environment into the security agenda and practices, including supporting a 'bottom-up' integration of environmental considerations into higher levels of policy.

The increase in climate and natural resource related conflicts is expected to have several direct implications for defence forces around the world, as missions become more frequent and more focused on Humanitarian Aid and Disaster Relief (HADR) and support to civil authorities[20]. Traditionally, military forces take the environment into account in the form of opportunities and limitations posed by the landscape, natural resources (e.g. water) and weather during a mission. Over the past decade, however, climate change has become one of the most important environmental considerations in the context of planning and executing missions. It first came to prominence due to a need to mitigate missions' carbon and environmental footprints (see Box 2 below). More recently, however, it has been recognised that the needs and opportunities for climate adaptation and climate risk management in the mission location need to be understood to support successful mission outcomes in the long term.

Understanding the notion of 3S, Sustainability – Stability – Security[21] offers a new insight on the environment in which the military operates. Being able to assess climate fragility and drivers of conflict in an integrated way during a mission is considered crucial to prevent future conflict and take part in what has been named *Comprehensive Climate Adaptation*[22]. Although there is no common agreement on the definition of the 'Comprehensive Approach', it is generally agreed to aim to address the many dimensions of conflict in an integrated way. This includes, but is not restricted to, humanitarian, financial, political (and/or diplomatic), rule of law, military (defence, and/or security), human rights and development dimensions[23]. Climate change and environment are crosscutting themes that impact most if not all of these dimensions. They can be incorporated into the approach by using climate mitigation, adaptation and decision-making strategies that have been tried and tested in other sectors.

Reducing emissions and other environmental impacts of military forces has long been understood to offer several operational advantages, mainly centred around reduced logistical requirements and

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[20] Centre for Land Warfare Studies (2017)

[21] Meunier (2018)

[22] Houben (2017); the idea builds on the Comprehensive Approach in use by NATO and the EU, the EU and UN Integrated Approach, the 3D Approach (Defence, Diplomacy and Development), and what is alternatively referred to as the 'whole-of-government approach'.

[23] European Commission (2013), Wilton Park (2012)

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dependence on supply convoys in areas of high insecurity, and cost savings. It also minimizes resource use, environmental degradation and pollution in mission areas, thereby protecting the positive reputation of the operation where resource scarcity is often already a contributing factor to conflict. Considerable work has been done on this subject both globally and within the EU. For example, UN Environment is providing technical support to the UN Department of Peacekeeping Operations to mitigate the environmental footprint of peacekeeping missions from 2017-2020[24]. Similarly, NATO has been working on environmental protection policies since the 1970s[25], and as part of its Environmental Protection portfolio it now includes guidance on energy use in the military through the Smart Energy LibGuide platform[26].

The EDA started a project in 2017 to explore the feasibility of implementing the circular economy concept and principles in the defence sector[27]. Implementing this model would not only mitigate climate impacts but also reduce the Union's defence industry dependence on raw materials. The EU is currently 100% dependent on imports from third countries for about half of the 39 raw materials required by its defence sector[28]. Around one third of these 39 materials originate from China, which is considered to have a high supply risk. Material recycling and reuse can minimize this import dependency.

Furthermore, EDA is also conducting a research project to develop a total energy and environment military capability assessment framework[29]. The purpose of this project is to develop a tool which will support national defence ministries in developing a better understanding of energy and environmental considerations so that these can be managed alongside other defence priorities. The project is due to be delivered by June 2019. The project is aimed to lead to the development of an intuitive and user-friendly decision-aid – or a logical framework – that maps different environmental and energy variables (e.g. the impact of climate change) and relationships between them within an interactive toolkit for decision-makers to help guide decisions on planning and delivering of military capability.

Reducing the environmental impact of a mission, however, is only a small part of the path to sustainable security. The military also has a role to play in climate change adaptation, both at home and in armed conflict or HADR situations[30]. Climate change means that defence forces can expect a higher risk to infrastructure and life in mission locations, as well as increasing investment needs in (assessment) capability and assets. As a result current infrastructure and equipment, as well as strategic, operational and tactical plans, policies and procedures, need to be reviewed. For example, the US Department of Defense (DoD) in its Climate Change Adaptation Roadmap identifies numerous potential effects of climate change on plans and operations, training and testing, built and natural infrastructure, and acquisition and supply chains. A vulnerability assessment survey of all US DoD structures worldwide indicated that 50% had experienced impacts from severe weather events[31].

The military often fulfils a central role in peacebuilding and reconstruction efforts. As such, its Civil Military Cooperation (CIMIC) and Civil Military Interaction (CMI) components in particular can support a number of practical climate change adaptation measures during and after conflict, with a

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[24] DFS (2016)

[25] www.natolibguides.info/environment

[26] http://www.natolibguides.info

[27] European Defence Agency (2017)

[28] Pavel and Tzimas (2016)

[29] Richard Brewin / EDA (pers. com.)

[30] Holloway et al. (2015)

[31] US Department of Defense (2018)

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view to improving environmental sustainability and security more broadly and in the long term[32]. Given the broadening of the scope, it is important that such activities are carried out in coordination with the wider EU foreign affairs and development cooperation agendas in partner countries, including executing them in close cooperation with, or under the leadership of, the EU country delegations.

These activities can include but are not restricted to:

- Raising awareness and, if the situation allows, building (local) stakeholder capacity on climate issues and the role of the environment in conflict. This is relevant both during missions such as HADR and at home.
- Together with or in support of the EU country delegation, facilitating regional and national government engagement in national adaptation strategies and land use planning, including engagement of relevant sectoral policy areas such as agriculture, fisheries and water.
- Collaborating with relevant partners to exchange tasks and required knowledge and, where possible, making available to local stakeholders the knowledge, approaches and technology to sustainably manage scarce resources.
- Sharing a unique and early stage insight about the drivers of environmental degradation with environmental and humanitarian organisations, especially when it is combined with knowledge about the local social structure.
- Pilot testing locally appropriate environmental technologies with low environmental footprints that can be handed over to local communities during the disengagement process.

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[32] Also refer to the 2018 Guidebook on Climate Risk Assessment for Ecosystem Based Adaptation

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As part of the Comprehensive Approach, successful technology and tools developed by and for the military to mitigate impacts can be shared with other departments, organisations and local stakeholders. Local sustainability and ownership must be considered in this, so the technology doesn't run into operational and maintenance challenges once the military operation ends and the troops disengage. This may only be feasible in certain cases due to budgetary and/or security constraints, but this sustainability should be one of the main considerations during the selection and handover process.

Furthermore, new technologies unfortunately also come with the so-called 'backdraft' risk. This can be defined as the negative impacts of the very technologies and methods used to address climate adaptation and mitigation or other environmental risks, that can lead to renewed conflict. Examples include action in one area exacerbating the situation in another area (e.g. water scarcity), the impacts of shifting resource requirements from one resource to another (e.g. lithium), and the possible risks of geoengineering (i.e. deliberate and large-scale intervention in the earth's climate system with the aim of mitigating the adverse effects of global warming). Consequently, long-term opportunities and risks associated with the application of new technologies need to be identified and assessed in a transparent manner, with proper safeguards put in place to mitigate and address any negative impacts.

Box 2: Existing examples of integrating environmental concerns into military operations

Swedish Armed Forces: The Swedish Government has set itself a number of environmental targets for 2020, and has tasked the Swedish military to take up its role in achieving them. The Swedish Armed Forces Environmental Policy states that 'the defence sector is working towards a sustainable development where environmental concern is integrated in all activities, nationally as well as internationally'[33]. In their 2016 Environmental Report, some concrete targets are given: a 20% reduction of electricity and heat use by 2020, and a 5% increase in recycled waste products to around 40% of the total waste stream[34]. The 'Criteria Document of the Defence Sector' restricts the chemicals that may be used or acquired by the Defence forces, contributing to the 'non-toxic environment' environmental policy objective. In addition, the Armed Forces comply with Swedish environmental legislation as much as possible, even when outside Swedish Territory. All exercises and missions now require an environmental annex in their order structure, incorporating environmental considerations from the planning to execution stage.

This is a good example of mitigating impacts and mainstreaming environmental awareness throughout a military organisation.

Royal Netherlands Army: The Royal Netherlands Army takes part in the current UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA). For the first time, a UN mission was required to take into account its environmental impact, in accordance with its mandate in Resolution 2164. In a region where water is already scarce, the presence of a military force with its own water requirements could exacerbate this situation, potentially causing increased competition for or with the local community. One response of the Dutch Army was to set up a so-called FieldLab Smart Base. The FieldLab brings together innovative businesses, knowledge institutions and the Dutch Ministry of Defence, to develop a safe military base that can operate anywhere in the world with the smallest environmental footprint possible. Several innovative technologies have been tested, including a dome providing shelter and cooling at a much lower energy cost than air-conditioned barracks. The Dutch Ministry of Defence is also part of the Dutch Coalition for Humanitarian Innovation, allowing these new technologies to be shared with other sectors.

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[33] Swedish Armed Forces (undated)
[34] Swedish Armed Forces (2016)

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> This example demonstrates how military actors and civilian entities can enjoy mutual benefits from collaboration.
>
> **US Department of Defense:** In 2014, the US Department of Defense (DOD) presented its Climate Change Adaptation Roadmap[35]. The three main goals of the Roadmap are to: 1. identify and assess the effects of climate change on the Department; 2. integrate climate change considerations across the Department and manage associated risks; and 3. collaborate with internal and external stakeholders on climate change challenges. One area under consideration is plans and operations. As part of climate adaptation, the DOD will review its plans and policies at all levels including department wide, country specific, internal policy, HADR and Combat Command, and provide climate-specific plans and guidance. This is one of the major commitments made by the DOD on the topic of climate change adaptation.
>
> This example underlines the principle that adaptation is not a stand-alone concept but must be integrated into existing management processes.

There is clearly a lot of potential for military forces to become the on-the-ground advocates – and in some situations the implementers – for a more holistic approach to security. However, there is still also a lot to learn. In particular, knowledge of the environmental attributes needs to be linked to the specifics of the conflict situation at hand, requiring situation specific risk assessments with long-term horizons, capacity building and inter-agency collaboration. Traditionally, military projects carried out on the ground are based on the premise of short-term (tactical) gain, with less consideration for the long term. In other cases the lack of local expertise and involvement leads to failures to understand and execute activities properly.

The NATO International Security Assistance Force (ISAF) mission in Afghanistan is a concrete warning example of the above. Access to water was an important element of the mission, as whoever controlled the flow of water in the area also controlled the agricultural success and wealth of the people downstream. Due to the existing security threats, sustainable management and maintenance of water systems and their supporting ecosystems was severely impacted, as well as the incentive to address water distribution issues. Requests from local leaders involved sustaining existing water supplies, providing improved or renewed access to other supplies, and mitigating flood damage. Numerous local and large-scale water-related projects were carried out by a coalition of security forces, local stakeholders and civilian institutions. In some cases, such as in the case of a cash-for-work plan, these eventually led to a worsening of the security situation. The cash-for-work plan centred around the idea of paying the community to maintain their

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irrigation system. As maintenance of the irrigation system had traditionally been a communal responsibility, rather a than a paid activity, the irrigation system failed to work once the payments

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[35] United States Department of Defense (2014)

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stopped leading to further degradation. Differing command structures, strategic aims, associated budgets and mandates between project agencies further complicated issues[36].

This example reveals the complexity of dealing with natural resources and climate change adaptation, especially in a conflict situation. It stresses the importance of situation-specific capacity building and agency collaboration, and makes the case for executing a thorough prior analysis to identify potential long-term destabilizing impacts. It also shows that the natural environment and ecosystems in themselves are highly complicated, and this is compounded by the presence of a human population with a highly complex social structure, economic basis and political dynamics. For successful long-term outcomes it is necessary to devise long-term solutions to the human-ecological systems without relying on continued external assistance – all this while still achieving military aims.

One example of a tool that can assist is the Rapid Ecological Assessment by IUCN (2016), developed for the military and building on the CBD ecosystem approach. The assessment guides the mission to examine the resource base, resource use and resource management, and lastly to undertake environmental precaution and planning. By using this tool, the military commander is guided to a more complete situational understanding which enables better-informed decision making for sustainable peace and stability within their mission. In discussion with local stakeholders, it will make it easier to identify opportunities for projects and relevant partnerships for long-term success. The potential concrete actions following such an assessment done in collaboration with stakeholders include preventing or stopping local illegal use or degradation of natural resources by securing the area, providing access to advice from environmental experts at an early stage through CMI, and addressing unsustainable coping strategies of the local population through CIMIC projects.

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[36] Groninger et al. (2015)

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5 Policy recommendations

The impacts of a degrading environment and a changing climate on national and international security are becoming more and more apparent. Combined with an increasing world population, the pressure on and competition over natural resources can be considered as one of the key peace and security challenges of the 21st century[37].

The integration of environment into the EU's defence and security frameworks, with increased links to broader foreign policy, plays a critical role in enabling the EU to uphold its promise to the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). A prevention-orientated, holistic and ecosystem-based approach to security questions – building on the understanding of how it underpins human security – supports the delivery of multiple SDGs beyond the dedicated goal on peaceful societies (SDG16), including those on hunger (SDG2), water (SDG6), climate (SDG13) and ecosystem conservation (SDGs 14 and 15).

The 2016 EU Global Strategy (EUGS) provides a good basis for the integration of environment into security, paving the way towards a more holistic regime and interaction between the foreign, security and defence elements of the policy framework. The EUGS recognises the important role that environmental stability and well-functioning ecosystems play in conflict situations, in particular in mitigating the occurrence or severity of conflicts in the first place. In the future this strategic vision must be implemented in practice, through the means of environmental and climate diplomacy and pushing forward the environmental security agenda on the international level. Furthermore, targeted EU funding and investment is needed to support the development and uptake of concrete initiatives, including those linked to knowledge creation and capacity building.

There are many opportunities for EU and Member State military forces to play a proactive role in rolling out the environment and climate security agenda in practice, building on the 'greening' of their own operations and moving towards actively encouraging environmentally sustainable natural resource management among local stakeholders (e.g. by raising awareness and monitoring the implementation of such practices). To ensure the best possible outcomes, the latter activities need to be carried out in coordination with the broader EU foreign affairs and development cooperation agendas, including being executed in close cooperation with, or if appropriate within the scope, under the leadership of EU country delegations.

Finally, encouraging environment and climate to be seen as a security issue would create opportunities for addressing these issues in a more holistic and effective manner that corresponds to the underlying causes of risks currently faced by Europe and the wider world. However, care should be taken that emphasising these aspects does not jeopardise the integrity of the EU's broader cooperation with aid to third countries, i.e. ensuring that short-term needs perceived from the perspective of European or national security override the medium- to long-term needs for human security and sustainable development in partner countries.

Building on the above, and in line with the EUGS and the EU Consensus on Development, this paper proposes the following policy recommendations for the EU and its key actors.

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[37] Rüttinger et al. (2015)

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5.1 Policy recommendations for EU foreign and security policy

Environmental diplomacy and international cooperation – by EEAS (supported by the EU High Representative), relevant European Commission DGs (DEVCO, CLIMA and ENV), EU delegations in partner countries, and the European Parliament

- Invest in <u>environmental and climate diplomacy</u> as a way to mainstream these aspects in EU foreign and security policy as key determinants for human, national, EU and international security. Focus in particular on promoting policies and actions linked to conflict prevention and peacebuilding with a long-term vision, and the role of well-functioning and well-managed ecosystems in delivering these goals, while simultaneously contributing to the delivery of ecosystem conservation and restoration.

- Increase the <u>capacity of and coordination between key institutional agents to increase policy coherence</u> including EEAS, DGs DEVCO, CLIMA and ENV, EU country delegations, EDN and possibly PESCO. Place the environmental and climate diplomacy function closer to the EU High Representative in the EEAS hierarchy to ensure better horizontal integration of environment and climate security in all parts of external policies.

- Recognise the role of water as a source of conflict as well as an opportunity for cooperation, increasing efforts on the EU's <u>water diplomacy</u> as a key area where the EU can show leadership while simultaneously contributing to the delivery of SDG6 on water, for example by integrating security aspects into the <u>EU Water Diplomacy Initiative</u> and related funding.

- Identify <u>priority regions or countries</u> to engage in a dedicated environmental and climate security dialogue, with appropriate links to the programming and implementation of related EU financing instruments (see below). An appropriate focus could be EU neighbouring regions and Africa.

- Actively <u>engage in debates in the international policy arena</u>, continue liaising with the relevant UN bodies, including the UN Security Council (UNSC), on climate and environmental security issues, with a view to creating a more coherent early warning capacity, policy framework and operational structure for these issues within the UN system. Simultaneously also explore other possibilities to take the environmental and climate security agenda forward in other relevant arenas, such as theG7 and G20.

- In particular, support and facilitate action by the EU Member States in the UNSC, with the aim of developing a more coherent and effective <u>framework of action on climate and environmental security under the UN system</u>. Forge strategic partnerships with the EU Member States on the UNSC, building on the momentum created by Sweden as UNSC non-permanent member (2017-2018), to be followed by Germany and Belgium (2019-2020)[38].

- Take a more proactive role in <u>implementing the Sendai Framework for Disaster Risk Reduction</u> under the UN Office for Disaster Risk Reduction (UNISDR), linking this as an integral part of supporting the environment and climate security agenda.

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[38] In a dedicated side event at UNFCCC COP24 (December 2018) the German Foreign Office announced its commitment to have climate security as a key issue on their UNSC agenda in 2019-2020, continuing to build on the advances made by Sweden. The focal areas for future action included, for example, improving the knowledge base for identifying and addressing climate and environment related risks, linking climate security to peacebuilding, and further cooperation with regional organisations.

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- Use domestic and international dialogues to <u>identify a number of partners</u> with whom to share leadership on pioneering holistic policies and developing concrete approaches to environmental security. These could include the current forerunner EU Member States (see Box 2) and other interested countries (e.g. countries with ongoing EU missions, neighbouring countries and/or development cooperation partners).

Funding under the EU budget – the European Parliament (in negotiation stage) and EEAS, relevant European Commission DGs and EU delegations (in implementation stage)

- Ensure that the <u>current and post-2020 EU MFFs</u> provide concrete opportunities to finance pioneering action on environmental and climate and security, including the aspect of human security at national, EU and international levels. Such opportunities should include access to various EU funds, ranging from research and innovation to diplomacy and concrete approaches to capacity building and risk reduction on the ground. The funding instruments to be considered include Horizon Europe, the European Defence Fund (EDF), European Regional Development Fund (ERDF) and Neighbourhood, Development and International Cooperation Instrument (NDICI).

- In particular, ensure that the EU Partnership Instrument (PI) and the EU Instrument for Stability and Peace are carried forward into the post-2020 MFF, as vehicles for EU environmental diplomacy.

- In addition to concrete financing opportunities, ensure 'climate proofing' of all EU financial support so that no activity financed from the EU budget undermines the climate agenda, this way ensuring the compatibility of the EU budget with EU climate objectives under the Paris agreement.

- In the context of the future NDICI and its practical implementation, ensure that funding for environmental and climate security is in line with long-term sustainable development in the partner countries (e.g. environmental, climate, water and food security). Such synergies are likely to be best obtained by focusing on conflict prevention through promoting sustainable and inclusive management practices for natural resources, and the conservation of the environment and ecosystems.

- Adopt a process to assess future partnership agreements with, and priorities of, EU partner countries (e.g. EU neighbourhood and African countries) vis-à-vis their impacts on and support for environmental and climate security. This should be carried out as part of the broader 'SDG-proofing' of these agreements (see the dedicated Think2030 paper by Kettunen et al. on delivering the EU's global SDG commitments).

- Assess the feasibility of, and adopt a mechanism for, tracking the amount of EU funding supporting environmental and climate security, and its outcomes. This would be best carried out as part of the updated EU Results framework for Monitoring Development Cooperation by DG DEVCO and would allow evidence-based development of future policy and action.

Knowledge creation – by DG RTD and other relevant European Commission DGs (DEVCO, CLIMA and ENV) EU and Member State research institutes, in cooperation with international partners such as the UN

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- Improve <u>horizon scanning, early warning indicators and capacity</u> by supporting monitoring and early warning bodies focusing on climate change, environmental degradation and resource competition both within and outside the EU (e.g. in the neighbouring regions). This would advance the integration of such information into national, regional and global decision-making.

- Establish a more rigorous methodology to map, measure and monitor environmental and climate security risks and indicators, including automated approaches using planetary data, frontier technologies and open source software.

- Build national capacities to access, share and use planetary data and frontier technologies to monitor environmental security and climate change hotspots, including development of open data policies and the required infrastructure for data management and analytics.

5.2 Practical recommendations for defence and military actions

Capacity building – by relevant EU and Member State military and diplomatic personnel (e.g. EU missions and delegations)

- Invest in further <u>capacity building</u> of relevant military and diplomatic staff within the EU on the role of the environment in conflict (3S Approach). Appropriate institutional partners and opportunities would be military schools, the Civil-Military Cooperation Centre of Excellence, CMDR Centre of Excellence, pre-mission training courses and diplomat training courses. Continue to invest in the MOOC on Environmental Security and Sustaining Peace (co-financed by the EU) and ensure that it is systematically offered to all relevant EU staff.

- Improve military awareness and literacy on the subject of climate change and the role of the environment in conflict and peacebuilding through training, supported by doctrinal development. Encourage a whole of government approach to develop integrated solutions to support conflict prevention, peace-building and sustainable development.

- <u>Raise Member State awareness</u> on – and provide support in the light of – the expected increase of HADR type missions for national defence forces due to extreme weather events and other climate and environmental related aspects, which will have consequences for material and budgets required.

Integrating environment and climate in on-the-ground missions – by relevant EU and Member State military and diplomatic personnel (e.g. EU missions and delegations)

- <u>Streamline current efforts in climate mitigation and adaptation</u> in EU military missions, including connecting to Climate ADAPT (the European Climate Adaptation Platform). Furthermore, use the environment as a platform to build confidence and cooperation between divided groups on the ground.

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- Ensure that the mandate of EU missions specifically includes climate and environment provisions, and include implementation of effective and long-term climate adaptation measures as additional indicators of mission success. Additionally, expand EU Training Mission Strategic Advice to include climate and environmental considerations.

- In each EU partner country, <u>enhance cooperation with the EU and Member State delegation</u> vis-à-vis the EU and Member State military mission, with a view to ensuring effective division of roles and smooth coordination of environment and climate security related activities.

- Encourage and enable the development of a <u>bottom-up environmental approach in the security sector</u>, exploring what is feasible, what works and what does not. Identify an EU wide group of military 'functional specialists' who can answer any environment related questions during missions and operations and use this as a basis for doctrine development.

- Include <u>Rapid Ecological Assessment</u> in the analysis phase and before carrying out localized CIMIC activities, integrated with civilian agencies present in the area. Understand how existing environmental information systems can inform this work (e.g. UN MapX, World Environmental Situation Room and the UN Biodiversity Lab).

- Ensure that the EU conflict <u>early warning system</u> shares information with Member States military intelligence units, looking for root environmental causes of conflicts and sharing analysis for example of weather patterns and extreme weather events, land degradation, and water and resource scarcity).

- Use the <u>EDA's projects on integrating circular economy into the defence sector and the energy and environment military capability assessment framework</u> (see page 18) to explore broader links between defence and military actions and environmental sustainability, for example opportunities to use EU military missions as awareness and capacity building agents for circular economy in target countries.

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6 Annex: Sources of information linked to environment and security

The following resources have been developed by EU and/or UN

High-Value Natural Resources and Post-Conflict Peacebuilding. Edited by Päivi Lujala and Siri Aas Rustad. (UNEP and ELI). 30 case studies, Earthscan, Published in January 2012.

Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding. Edited by David Jensen and Steve Lonergan. (UNEP and ELI). 22 case studies, Earthscan, Published in October 2012.

Land and Post-Conflict Peacebuilding. Edited by Jon Unruh and Rhodri Williams. (UNEP and ELI). 21 case studies, Earthscan, Published in May 2013.

Water and Post-Conflict Peacebuilding. Edited by Jessica Troell, Mikiyasu Nakayama, and Erika Weinthal. (UNEP and ELI). 19 case studies, Earthscan, Published in February 2014.

Livelihoods and Natural Resources in Post-Conflict Peacebuilding. Edited by Helen Young and Lisa Goldman. (UNEP and ELI). 19 case studies, Earthscan, Launch date: Q2 2015.

Governance, Natural Resources, and Post-Conflict Peacebuilding. Edited by Carl Bruch, Carroll Muffett, and Sandy Nichols. (UNEP and ELI). 38 case studies, Earthscan, Launch date: Q2 2015.

UN Development Group: Guidance note on addressing natural resources in post-conflict transitional settings (UNDG with UNEP). Published in January 2013.

UN-EU Guidance note: Managing and preventing conflicts over renewable resources (UNEP with EU-UN Partnership on Land, Natural Resources and Conflict). Published in September 2012.

UN-EU Guidance note: Managing and preventing conflicts over extractive resources (DPA and EU-UN Partnership on Land, Natural Resources and Conflict). Published in September 2012.

UN-EU Guidance note: Managing and preventing conflicts over land (UN-Habitat and EU-UN Partnership on Land, Natural Resources and Conflict). Published in September 2012.

UN-EU Guidance note: Strengthening capacity for conflict sensitive natural resource management (UNDP and EU-UN Partnership on Land, Natural Resources and Conflict). Published in September 2012.

UN-EU Guidance note: Conflict Prevention in Resource Rich Economies (UNDP and EU-UN Partnership on Land, Natural Resources and Conflict). Published in September 2012.

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