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Article:

Duffy, R.V. and Humphreys, J. (2016) Poaching, Wildlife Trafficking and Human Security. Whitehall Papers, 86 (1). pp. 22-37. ISSN: 0268-1307

https://doi.org/10.1080/02681307.2016.1252122

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II. Poaching, Trafficking and Human Security

Rosaleen Duffy and Jasper Humphreys

Human security and underdevelopment are increasingly common themes in public debates about the security threat posed by illegal wildlife trade (IWT). Most frequently highlighted are the ways in which IWT can exacerbate poverty, by stripping local communities of the wildlife that tourists will pay to see. Such narratives, however, are oversimplified, underpinned by a series of assumptions around the circumstances and livelihoods strategies of populations in source areas, and around the role of wildlife tourism in rural development. Such narratives do not adequately address the reasons why poaching occurs in the first place, or the extent to which current responses to poaching *themselves* serve to ameliorate or threaten human security. This chapter examines the most common characterisations of the threat to human security and development posed by IWT, questioning the extent to which these accurately reflect evidence of the range of threats that play out on the ground.

The Human Impact of IWT

Current understandings of the impact of IWT on human security and development form part of a field of enquiry that is still developing. This field emerged in the late 1990s as part of a push to move beyond traditional, narrow definitions of national security that focused on the security of states, without adequately addressing the security of 'people'.[1] Defining human security, for the purposes of this chapter, is far from easy; different approaches to and understandings of the term are often proffered by the particular academic discipline or type of organisation (whether government, international organisation or NGO) looking to use it.[2] For example, it first depends on the underlying definition of what constitutes security, requires a shift in thinking from states to individuals/people as the main object of analysis and indicates the shift in thinking (from the end of the Cold War) that threats are primarily definined in military terms.[3] However, a useful working definition is provided by Karen O'Brien and Jon Barnett in their extensive review of the debates on human security and the Global Environmental Change and Human Security (GECHS) Project at the University of Oslo. which ran from 1999 to 2010,[4]; O'Brien and Barnett anchor the concept of human security in Amartya Sen's capabilities approach, which emphasises people's *aspirations* and how these can be met.[5] Aspirations, in Sen's analysis, encompass not only economics, but also power, voice and an ability to define one's own present and future. In line with this, O'Brien and

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[1] Karen O'Brien and Jon Barnett, 'Global Environmental Change and Human Security', *Annual Review of Environment and Resources* (No. 38, 2013), p. 373.

[2] O'Brien and Barnett, 'Global Environmental Change and Human Security', p. 375.

[3] There are substantial debates on security and human security, useful overviews are in: Suhrke A. 1999. Human security and the interests of states. *Security Dialogue* 30:265–76
Commission on Human Security 2003. *Human Security Now: Protecting and Empowering People.* New York: UN; Ken Booth, 1991. Security and emancipation. *Review of International Studies* 17:313–26
Matthew R, McDonald B, Barnett J, O'Brien K, eds. 2010. *Global Environmental Change and Human Security*. Cambridge, MA: MIT Press; Lipschutz, R. 1995. *On Security*. New York: Columbia University Press; Dalby S. 2009. *Security and Environmental Change*. Cambridge: Polity

[4] http://www.gechs.org/ (accessed 26.08.16)

[5] Amartya Sen, *Development As Freedom* (Oxford University Press, Oxford, 1999).

Barnett suggest that human security is a condition in which people and communities have the capacity to respond to threats to their basic needs and rights so that they can live with dignity.[6]

Following this line of argument, in their review of the links between poverty and poaching, Duffy, St John, Buscher and Brockington (2015) argue that it is important to place motivations for poaching and smuggling within a wider context, and take account of a more expansive definition of poverty as not just material deprivation, but also a lack of voice or capacity to develop one's own life path; this means that interventions to prevent poaching or smuggling need to about sustainable development and cannot be achieved solely by the use of technical or narrowly economic approaches. For example, provision of a limited amount of paid employment via tourism initiatives is unlikely to have a significant impact on rates of poaching and smuggling because the benefits are not widely disbursed enough, and because such interventions do not tackle the wider factors that produce poverty and inequality in the first place (Duffy, St John, Buscher and Brockington, 2015; Duffy and St. John, 2013).
Increasing attention to the intersections between human security and environmental change has resulted from a growing realisation that environmental degradation impacts upon the ability of people to meet their needs and to live well. A similar trend has occurred in relation to IWT specifically, and it is now often suggested that IWT has a straightforwardly negative impact on human security in and around source areas. It is assumed that this occurs as IWT removes the often-iconic wildlife that is key to tourism or community conservation schemes. These, in turn, it is emphasised, often form the only source of income in remote rural areas suffering high rates of poverty and a lack of access to other economic opportunities.

This argument forms a core part of calls to action by national governments in source and transit states, development and conservation NGOs and international organisations, as well as featuring frequently in mainstream media narratives. The 2014 London Conference on the Illegal Wildlife Trade – an international conference that brought together global leaders in an effort to inject high-level political commitment into efforts to tackle IWT – formally recognised the negative impact of IWT on sustainable livelihoods; the resulting London Declaration described the trade as 'a major barrier to sustainable, inclusive and balanced economic development'.[7] The Declaration went on to acknowledge the impact of the trade on 'reduc[ing] … the revenue earned from economic activities such as wildlife-based tourism... which can make a significant contribution to local livelihoods and national economic development'. This occurred, it noted, as the trade 'robs States and communities of their natural capital and cultural heritage, … undermines the livelihoods of natural

[6] O'Brien and Barnett, 'Global Environmental Change and Human Security'.

[7] 'London Conference on the Illegal Wildlife Trade, 12–13 February 2014: Declaration', 2014, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/281289/london-wildlife-conference-declaration-140213.pdf>, accessed 15 July 2016.

resource dependent communities ... [and] damages the health of the ecosystems they depend on, undermining sustainable economic development'.[8]

The follow-up to the London Conference, held in Kasane, Botswana in 2015, emphasised that, 'As a result of illegal wildlife trade, communities lose the potential value of the resource that poachers and organised criminal networks are stealing from them' – whilst also recognising that the impact on communities 'needs to be better understood and quantified'.[9] Meanwhile, proclaiming 3 March World Wildlife Day in 2013, the UN General Assembly reaffirmed 'the intrinsic value of wildlife and its various contributions, including its ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic contributions to sustainable development and human well-being'.[10] Media content, where it considers the human impact of wildlife trafficking, focuses predominantly on the loss of tourist revenues by dependent local communities. The key points usually suggested, here in relation to South Africa, are that, as a result of IWT, 'sustainable employment opportunities for a poverty stricken population will be lost'.[11] Numerous other articles focus similarly on the point that 'The extinction of a species can have a negative economic effect on a local community's tourism industry. A community that relies on its wildlife to attract tourists is at great risk for economic hardship if the prevalence of poaching is high'.[12]

These assessments are not necessarily inaccurate. IWT can indeed impact upon human security in these ways. The hunting of wildlife through organised commercial poaching operations can remove an important resource for local communities: wildlife may be part of community-based conservation schemes that generate important local revenues, in turn enhancing food and other forms of income and non-income security in marginalised areas. A range of attempts has been made to illustrate the ramifications of this process. The iWorry campaign by the David Sheldrick Wildlife Trust is a good example. The campaign notes that in Kenya, wildlife tourism generates 12 per cent of GDP, 300,000 jobs, and raised $47 million in national-park entrance fees in 2012 alone.[13] It then seeks to compare the value of a living versus a dead elephant, arguing that alive a single elephant can contribute up to $22,966 annually to the tourism industry – around $1.6 million over its lifetime, compared to an average one-off total of $21,000 for its tusks (in end markets).[14]

However, there is also evidence to suggest that this characterisation does not represent the full picture. Though there is little published work on the reasons people engage in illegal

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[8] *Ibid*.

[9] 'Kasane Conference on the Illegal Wildlife Trade, 25 March 2015: Statement', 2015, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417231/kasane-statement-150325.pdf>, accessed 15 July 2016.

[10] CITES, 'UN General Assembly Proclaims 3 March as World Wildlife Day', press release, 23 December 2013.

[11] Fin24, 'Rhino Poaching Threatens Tourism, Economy', 22 September 2013.

[12] Orietta C Estrada, 'The Devastating Effects of Wildlife Poaching', *One Green Planet*, 6 January 2014.

[13] iworry, 'Dead or Alive: Valuing an Elephant', 2014.

[14] *Ibid*.

hunting and trafficking of wildlife, there is growing evidence to suggest that IWT can in fact, somewhat counterintuitively, have a *positive* impact on human security, making the situation more complex than the narrative above would suggest. This is precisely because proactive engagement in poaching and trafficking of a range of wildlife and wildlife products can *itself* meet subsistence needs or constitute an important source of income for some marginalised and vulnerable communities around the world.[15] For example, accoding to the Rainforest Foundation UK forest-dependent peoples such as the Baka, Aka, Bagyeli, Bakola and Batwa in the Congo Basin have traditionally engaged in illegal hunting and fishing in protected areas to meet their protein needs.[16] Consumption of wildlife is critically important to their day-to-day survival, and increasing levels of enforcement are reported in the past to have led to malnutrition in some communities. [17] As Cooney et al point out IWT can be an important livelihood strategy for some communities.[18]

Meanwhile, IWT can provide other benefits and respond to other motivations, beyond subsistence, on the part of local communities. These are often ignored in media and political narratives positioning IWT as a straightforward threat to development. Such narratives tend to rely on a very narrow, predominantly economic definition of poverty; in a systematic review of evidence of the links between poverty and biodiversity, 70 per cent of published papers that addressed poverty as part of conservation used income as the key measure.[19] While poverty certainly encompasses material deprivation, it is necessary to engage with a much more complex understanding of the phenomenon.

Taking a human-security approach, poverty is more than just a matter of economic deprivation; it encompasses concerns about status, the ability to shape one's own future, and to lead a dignified life. If we use O'Brien and Barnett's expansive definition of poverty

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[15] IUCN, SULi, IIED, CEED, Austrian Ministry of Environment and TRAFFIC, 'Beyond Enforcement: Communities, Governance, Incentives and Sustainable Use in Combating Wildlife Crime', Symposium Report, 26–28 February 2015, Glenburn Lodge, Muldersdrift, South Africa, 2015; Catrina Mackenzie, Colin A Chapman and Raja Sengupta, 'Spatial Patterns of Illegal Resource Extraction in Kibale National Park, Uganda', *Environmental Conservation* (No. 39, 2011), pp. 38–50.

[16] A Pyhälä, A Osuna Orozco and S Counsell, *Protected Areas in the Congo Basin: Failing Both People and Biodiversity?* (London: Rainforest Foundation UK, 2016), pp.80-81; Also see Twinamatsiko et al. 2014. Linking Conservation, Equity and Poverty Alleviation: Understanding profiles and motivations of resource users and local perceptions of governance at Bwindi Impenetrable National Park, Uganda. IIED Research Report, London.

[17] A Pyhälä, A Osuna Orozco and S Counsell, *Protected Areas in the Congo Basin: Failing Both People and Biodiversity?* (London: Rainforest Foundation UK, 2016), pp.80-81; Also see IUCN, SULi, IIED, CEED, Austrian Ministry of Environment and TRAFFIC, 'Beyond Enforcement: Communities, Governance, Incentives and Sustainable Use in Combating Wildlife Crime', Symposium Report, 26–28 February 2015, Glenburn Lodge, Muldersdrift, South Africa, 2015;

[18] Cooney, R. et al (2015) *The Trade in Wildlife: A Framework to Improve Biodiversity and Livelihood Outcomes* Geneva: International Trade Centre (ITC), xii, 29 pages (Technical paper) Doc. No.: SC-15-311.E.; also see Roe, D. (ed). 2013. Biodiversity Conservation and Poverty Alleviation: Exploring the Evidence for a Link. Wiley-Blackwell, Oxford.

[19] Roe et al., 'Which Components or Attributes of Biodiversity Influence Which Dimensions of Poverty?'.

(and of human security) – which in line with the work of Sen[20] encompasses not only economic factors, but also a lack of power, prestige, voice, and an inability to define one's future and day-to-day activities –[21] then it is important to consider whether poaching and wildlife trafficking might also be driven by a need to affirm identity or gain prestige.[22] In line with this, there is evidence to suggest that these activities may represent an act of resistance against rules that local communities regard as unfair or illegitimate.[23] Indeed, little considered in the dominant narratives around poaching and human security is the fact that local communities may not agree with, or wish to conform to, rules set by national governments, NGOs or international conservation initiatives.

The lack of consideration of prevailing narratives relates to the fact that IWT debates are often underpinned by a simple definition of poaching: namely, the hunting of any animal not permitted by the state or a private owner.[24] This is not a 'neutral' definition, however; it is one that is predominantly informed and shaped by colonial histories. In sub-Saharan Africa, colonial authorities often outlawed hunting with the use of snares and traps, the very techniques used by communities to meet their subsistence needs.[25] While European sport hunters were portrayed as conservationists and respecters of wildlife, African hunting methods were instead presented as cruel and unsporting. Such images interlinked well with other colonial stereotypes of African communities as savage, uncivilised, barbaric and in need of European civilising missions,[26] with colonial images of sportsmen versus poachers still discernible in calls for militarised responses to IWT, as discussed later in this chapter.

These historical dynamics are reflected in many of the most common interpretations of subsistence versus commercial poaching today, even though hunting itself is hard to categorise in neat and discreet ways. The most common interpretation are that subsistence poaching is often thought of as 'hunting for the pot', relying on basic technologies such as traps and snares, because the target is small game, such as antelope. By contrast, commercial poachers are typically thought to operate within organised groups that target financially valuable species such as elephants and rhinos. Commercial poachers, it is widely assumed, use superior technologies to hunt, including firearms, GPS systems and mobile

[20] O'Brien and Barnett, 'Global Environmental Change and Human Security'.
[21] Amartya Sen, *Development As Freedom* (Oxford: Oxford University Press, 1999).
[22] Duffy et al., 'Towards a New Understanding of the Links Between Poverty and Illegal Wildlife Hunting'.
[23] Duffy, 'Waging a War to Save Biodiversity'; MacKenzie 1988
[24] Rosaleen Duffy et al., 'Towards a New Understanding of the Links Between Poverty and Illegal Wildlife Hunting'.
[25] William M Adams, *Against Extinction: The Story of Conservation* (London: Earthscan, 2004), pp.18–24; Rosaleen Duffy, 'Waging a War to Save Biodiversity: The Rise of Militarised Conservation', *International Affairs* (Vol. 90, No. 4, 2014) pp. 819–34.
[26] Roderick P Neumann, 'Moral and Discursive Geographies in the War for Biodiversity in Africa', *Political Geography* (No. 23, 2004), pp. 830; Adams, *Against Extinction*, pp. 331–41; John M MacKenzie, *Empire of Nature: Hunting Conservation and British Imperialism* (Manchester: Manchester University Press, 1988).

phones.[27] However, increasingly these simple categories do not reflect the changing and dynamic nature of illegal hunting. Subsistence hunters may use automatic wepaons, whiel commercial poachers may use traps and snares. For example, some forms of subsistence poaching have been transformed by the arrival of multinational mining and logging companies. In parts of Central and West Africa, this has facilitated the growth of commercial bushmeat trading through the introduction of roads which allow the transportation of meat to urban markets, or to feed demand for food from large commercial workforces in remote rural areas.[28]

A number of cases point to the inadequacy of what are commonly viewed, at a policy level, as neutral definitions – and the failure to take account of local attitudes to them. Dilys Roe et al illustrate the centrality of IWT to the livelihood strategies of some of the poorest communities in the world,[29] but argue also that IWT can represent more than a simple subsistence strategy. South Africa's rhino-poaching crisis, for example, is often attributed to poverty in Mozambique, singled out as a 'problem state' at the CITES Conference of the Parties 16 in 2013.[30] Mozambique remains one of the poorest countries in the world, despite the end of its long-running civil war in 1992. It shares a border with South Africa, one of the wealthiest countries on the continent, and is thought to constitute a major source of its neighbour's poaching problem as poachers enter South Africa to acquire rhino horn that is then sold on for consumption in destination countries.

The available information suggests that the economic rewards of poaching here can be significant: a few days of work in Kruger National Park, which lies along Mozambique's western border with South Africa, can earn a Mozambican poacher between $1,000 and

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[27] Rosaleen Duffy, *Nature Crime: How We're Getting Conservation Wrong* (New Haven, CT and London: Yale University Press, 2010), pp. 79–119; Twinamatsiko et al., 'Linking Conservation, Equity and Poverty Alleviation: Understanding Profiles and Motivations of Resource Users and Local Perceptions of Governance at Bwindi Impenetrable National Park, Uganda', IIED Research Report, London, 2014; Nellemann et al. (eds), 'The Environmental Crime Crisis'; Mariel Harrison et al, Wildlife Crime: A Review of the Evidence on Drivers and Impacts in Uganda (London: IIED, 2015).

[28] Kent H Redford, 'The Empty Forest', *American Institute of Biological Sciences*, (Vol. 42, No. 6, 1992), pp. 412–22. For further discussion see Massé, F. and E. Lunstrum. 2016. Accumulation by Securitzation: Commercial Poaching, Neoliberal Conservation and the Creation of New Wildlife Frontiers, *Geoforum,* **69:** 227-237
Milner-Gulland, E.J. and N. Leader-Williams, N. 1992. A model of incentives for the illegal exploitation of black rhinos and elephants; poaching pays in Luangwa Valley, Zambia. Journal of Applied Ecology **29**: 388-401; Damania, R., E.J. Milner-Gulland, D.J. Crookes. 2005. A bioeconomic analysis of bushmeat hunting. Proceedings of the Royal Society B-Biological Sciences **272**: 259-266. *Fischer, A., V. Kereži, B. Arroyo, M. Delibes-Mateos, D. Tadie, A. Lowassa, O. Krange and K. Skogen. 2013. (De)legitimising hunting – discourses over the morality of hunting in Europe and eastern Africa. Land Use Policy **32**: 261-270*

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[29] Dilys Roe et al., 'Which Components or Attributes of Biodiversity Influence Which Dimensions of Poverty?', *Environmental Evidence* (No. 3, 2014), pp. 1–16.

[30] Duffy, Emslie and Knight, 'Rhino Poaching', p. 6.

$5,000.[31] However, the argument that poverty drives Mozambicans to poach in South Africa ignores the wider political economy of poaching in the region. Mozambique's legislative framework, in particular, has contributed indirectly to poaching in South Africa because the penalties for involvement in poaching across the border have traditionally been minimal and the risks of being caught on return to Mozambique very low. Until the introduction of its 2014 Biodiversity Law, rhino-related offences such as possession of horn were considered as misdemeanours, not as crimes with associated penalties.[32] In addition, many of the communities on the Mozambican side of the border have a history of alienation from the parks, many of which encompass territories and resources to which local communities once enjoyed access. As a result, communities can regard poaching as a legitimate form of resistance to state authority.[33] In this case, IWT cannot simply be explained away as the sole result of economic deprivation.

Furthermore, a look back at the dynamics of elephant poaching during the crisis of the mid-1980s shows that even then poaching was not driven purely by poverty. In both East Africa in the 1980s and parts of Southern Africa in the 1970s and 1980s, the large-scale poaching witnessed was not simply the result of poorer communities seeking to make a small amount of money from ivory in order to survive. Such organised levels of poaching could not possibly have been carried out without corruption and complicity at the highest levels of government.[34] Indeed, the involvement of the former South African Defence Force directly in poaching, as well as in trafficking, was clearly exposed and detailed in the report of the Kumleben Commission, post Apartheid.

In 1995, Mr Justice Kumleben was appointed to head a commission of enquiry into the role played by the South African Defence Force (SADF) in poaching and wildlife trafficking during the 1980s. The resulting report detailed how the SADF used ivory, rhino horn, hardwoods and drugs to fund its wars and destabilisation campaigns in South West Africa (now Namibia), Angola and Mozambique.[35] The example of Southern Africa in the 1980s is not unique, with extensive evidence attesting to the high-level corruption behind today's poaching crisis, as observed in Chapter V. In this context, it is crucial that poaching is not

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[31] Francis Massé and Elizabeth Lunstrum, 'Accumulation by Securitization: Commercial Poaching, Neoliberal Conservation and the Creation of New Wildlife Frontiers', *Geoforum* (No. 69, 2016), pp. 227–37.

[32] See Richard H Emslie, Tom Milliken and Bibhab Talukdar, 'African and Asian Rhinoceroses: Status, Conservation and Trade – A Report from the IUCN Species Survival Commission (IUCN/SSC) African and Asian Rhino Specialist Groups and TRAFFIC to the CITES Secretariat, Pursuant to Resolution Conf. 9.14 (Rev. CoP15)', CoP16, Doc. 54.2-rev 1, 2012.

[33] Elizabeth Lunstrum, 'Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park', *Annals of the Association of American Geographers*, (Vol. 104, No. 4, 2014), pp. 816–32.

[34] Ros Reeve and S Ellis, 'An Insider's Account of the South African Security Force's Role in the Ivory Trade', *Journal of Contemporary African Studies*, (No. 13, 1995), pp. 222–43.

[35] Stephen Ellis, 'Of Elephants and Men: Politics and Nature Conservation in South Africa', *Journal of Southern African Studies* (No. 20, 1994), pp. 53–69; Reeve and Ellis, 'An Insider's Account of the South African Security Force's Role in the Ivory Trade'.

considered simply as a symptom of absolute poverty amongst communities living around protected areas.

This latter consideration points to the need to consider involvement in IWT beyond the poaching stage. Particularly at the next stages along the chain, it is crucial to acknowledge that IWT, and the corruption that comes with it, can constitute a regular source of income, whilst for others, it represents a safety net or a lucrative business opportunity.[36] Here, it may be relative poverty that is more important as a driver, with individuals in many rural areas motivated predominantly by opportunities to seek the levels of material wealth associated with inclusion in the global economy (expressed through ownership of consumer goods such as mobile phones, televisions and vehicles).[37] Though beyond the geographical focus of this paper, a 2008 report by TRAFFIC-Asia made exactly this point, concluding that the recent increase in illegal trading and smuggling of wildlife seen in Southeast Asia was not poverty-related, but was instead directly related to a rise in household incomes. This study sought to examine the different stages in the trafficking chain, categories that also apply in sub-Saharan Africa; from local-level rural harvesters, to professional hunters, traders, wholesalers and retailers. IWT provided varying forms of economic support along different stages of the network: as a source of regular income, a safety net or a profitable business venture.[38] Clearly, participation in IWT at progressively higher stages of the chain to meet these expectations is not the same as that which occurs to meet the basic subsistence needs of communities at the harvesting stage.

It is clear that poaching, development and human security are intertwined in more complex ways than the commonly invoked causal relationship would suggest. Indeed, the arguments positioning poaching as a straightforwardly negative force in relation to sustainable development and human security in source areas ignore the changing nature of poaching and trafficking, the immediate livelihoods demands on certain communities, and the range of other motivations and interests they may hold. These considerations are crucial to evaluating not only the adequacy of dominant narratives around the threat posed by poaching to human security, but also the effectiveness of policy responses. In source areas, these include a range of approaches, from those that seek to provide alternative livelihoods options, to those that seek to change the motivations and behaviours of poachers and

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[36] TRAFFIC, *What's Driving the Wildlife Trade? A Review of Expert Opinion on Economic and Social Drivers of the Wildlife Trade and Trade Control Efforts in Cambodia, Indonesia, Lao PDR and Vietnam* (Washington, DC: TRAFFIC International and World Bank, 2008; Roe et al. 'Which Components or Attributes of Biodiversity Influence Which Dimensions of Poverty?'; Christian Nellemann et al. (eds), 'The Environmental Crime Crisis – Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources', UNEP Rapid Response Assessment, United Nations Environment Programme and GRID-Arendal, Nairobi and Arendal, 2014.

[37] Daniel W S Challender and Douglas C MacMillan, 'Poaching is More Than an Enforcement Problem', *Conservation Letters* (No. 7, 2014), pp. 484–94.

[38] TRAFFIC, *What's Driving the Wildlife Trade?*.

members of local communities, and those that promote the use of greater levels of force in enforcement, regardless of the poacher's motivations.[39]

Policy Implications

Poverty-alleviation and alternative livelihoods approaches, first, have increasingly been viewed as central in a range of responses to poaching and wildlife trafficking. These approaches align with a view of IWT as a threat to human security, in light of its destructive impact upon natural heritage of critical economic and touristic value. They also respond to a view of poverty as the main cause of poaching, the logical solution to which is that of developing economic alternatives for local, would-be poachers. Such responses seek to develop alternative income-generating options, including job creation or the disbursement of revenue from wildlife tourism schemes.[40]

These approaches have underpinned initiatives such as Integrated Conservation and Development Projects – conservation projects that contained a rural development component – and later more 'development'-focused community conservation programmes such as Campfire in Zimbabwe and ADMADE in Zambia. These programmes seek to understand and tackle the structural and contextual factors that drive poorer communities to engage in poaching, however, they were increasingly criticised for the ways they intersects with existing community dynamics, often reinforcing hierarchies and failing to disburse benefits to the most marginalised and vulnerable community members.[41] Such approaches, remain anchored in a very narrow definition of poverty, conceived as a matter solely of economic deprivation. The result is that initiatives aiming to alleviate poverty or provide alternative livelihoods via income generation often have limited positive results – precisely because they fail to tackle wider problems of inequality, the historical processes that led to the establishment of poaching as a crime or, crucially, the wider aspirations of poorer communities. These factors need to be more fully considered and integrated into any efforts to change the balance of incentives available to would-be poachers. This requires a

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[39] Alternative approaches might include community based natural resource management, community participation, demand reduction programmes for wildlife products. For an overview see Wolfram Dressler et al., 'From Hope to Crisis and Back? A Critical History of the Global CBNRM Narrative', *Environmental Conservation* (No. 37, 2010), pp. 1–11; John Hutton, William M Adams and James C Murombedzi, 'Back to the Barriers? Changing Narratives in Biodiversity Conservation', *Forum for Development Studies* (No. 32, 2005), pp. 341–70; Stuart A Marks, 'Back to the Future: Some Unintended Consequences of Zambia's Community-Based Wildlife Program (ADMADE)', *Africa Today* (No. 48, 2001), pp. 120–41; and Duffy, R., 2016, 2016, 'Global Dynamics of the Wildlife Trade' in L. Elliot and W. Schaedla (eds) *Handbook of Transnational Environmental Crime* (Edward Elgar)

[40] Dilys Roe et al., 'Conservation and Human Rights: The Need for International Standards', policy briefing, IIED, 2010; C B Barrett and P Arcese, 'Are Integrated Conservation–Development Projects (ICDPs) Sustainable? On the Conservation of Large Mammals in sub-Saharan Africa', *World Development* (No. 23, 1995), pp. 1073–84.

[41] Wolfram Dressler et al., 'From Hope to Crisis and Back? A Critical History of the Global CBNRM Narrative', *Environmental Conservation* (No. 37, 2010), pp. 1–11; John Hutton, William M Adams and James C Murombedzi, 'Back to the Barriers? Changing Narratives in Biodiversity Conservation', *Forum for Development Studies* (No. 32, 2005), pp. 341–70; Stuart A Marks, 'Back to the Future: Some Unintended Consequences of Zambia's Community-Based Wildlife Program (ADMADE)', *Africa Today* (No. 48, 2001), pp. 120–41.

very different policy approach which seeks to address the aspirations of communities themselves, as well as engaging more fully with wider national and international development policies to reduce poverty and inequality (for further discussion see Duffy, St John, Buscher and Brockington, 2015). Rather than narrowly focusing on developing new models protected areas and wildlife management, it is important to place them in their broader social and political context.

A related policy response is to change the balance of risk and reward associated with poaching. This response, similarly, rests on the idea that poachers exercise individual choice (or agency) when deciding whether to hunt (or not to hunt).[42] For example, it is often assumed that an individual chooses to engage in poaching because they have decided that the potential rewards – commonly conceived as a means of economic subsistence in a context of absolute poverty – outweigh the potential risks. If we follow this logic, tackling poaching becomes a matter of increasing the rewards on offer for refraining from this activity, or increasing the risks and costs associated with it.

In order to deter poachers, therefore, government and conservation agencies may seek to increase the benefits or rewards available in exchange for a reduction in poaching, such as direct payments, or investment in community projects such as schools, water pumps or grinding mills, as has occurred in the case of both Campfire and ADMADE.[43] Government and other agencies may also seek to increase the risks of detection, arrest and imprisonment, such that greater levels of enforcement encourage compliance with the law and deter participation in poaching.[44] Again, however, the effectiveness of such approaches is tied up closely with many of the issues discussed previously. These include the question of the extent to which poaching is conducted purely as a means of economic subsistence – meaning that schemes such as direct payments would be considered attractive. On the other hand, where local communities regard rules around 'poaching' as illegitimate, the deterrent effect of increased rewards for abstinence – or greater penalties associated with participation in poaching – is likely to be limited. Instead, as Duffy, St John, Buscher and Brockington (2015) argue a better approach is to regard wildlife conservation as a development issue, and one that requires tackling inequality.

A final policy option is to rely on an increased use of force to offer protection to wildlife populations from poachers, no matter their reasons for involvement in this activity. The

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[42] Freya A V St. John et al., 'Conservation and Human Behaviour: Lessons from Social Psychology', *Wildlife Research* (Vol. 37, No. 8, 2010), pp. 658–67; Duffy et al., 'Towards a New Understanding of the Links Between Poverty and Illegal Wildlife Hunting'.

[43] A Keane et al., 'The Sleeping Policeman: Understanding Issues of Enforcement and Compliance in Conservation', *Animal Conservation* (No. 11, 2008), pp. 75–82; E J Milner-Gulland and N Leader-Williams, 'A Model of Incentives for the Illegal Exploitation of Black Rhinos and Elephants: Poaching Pays in Luangwa Valley, Zambia', *Journal of Applied Ecology* (No. 29, 1992), pp. 388–401; C A Litchfield, 'Rhino Poaching: Apply Conservation Psychology, *Science* (No. 340, 2013), pp. 1168.

[44] Rosaleen Duffy et al, 'Towards a New Understanding of the Links Between Poverty and Illegal Wildlife Hunting'; Esmond Martin, 'Effective Law Enforcement in Ghana Reduces Elephant Poaching and Illegal Ivory Trade', *Pachyderm* (No. 48, 2010), pp. 24–32.

dramatic rise, since the mid-2000s, in poaching of elephants and rhinos for ivory and horn has prompted a more enthusiastic embrace of this option, commonly witnessed in a forceful response in terms of enforcement.[45] Such militarised forms of anti-poaching are not new: there is a long history of co-operation between the military and conservation sectors and the integration of conservation initiatives into security agendas; early game wardens in British colonial administrations were often ex-military personnel.[46] However, today this has reached a level not seen previously, as poachers have become more heavily armed, making greater use of sophisticated weaponry and technologies such as GPS, night-vision goggles and even helicopters.[47] As the militarised activities of poachers are matched by correspondently militarised responses, the result has increasingly been framed as an existential 'war for wildlife'.

Many conservation agencies and supporters of military-style conservation point to the need for increased use of force in encounters with heavily armed poachers prepared to shoot to kill both animals and rangers that get in their way. Indeed, rangers can often encounter heavily armed poachers during patrols, and rangers and poachers can and do regularly exchange shots, as demonstrated in the number of rangers killed in the course of anti-poaching operations – and even whilst carrying out the routine duties associated with managing protected areas. The Thin Green Line, an organisation that campaigns on behalf of rangers killed or wounded on duty, estimates that 1,000 rangers have been killed (worldwide) in the last ten years whilst carrying out their duties.[48] This headline figure of 1,000 is likely to be an underestimate given the patchiness of data collection and reporting of rangers killed in action in some countries.

In this context, it is widely accepted that a robustly armed contribution to conservation is indispensable. To support this position, researchers Jasper Humphreys and M L R Smith invoke Clausewitz, who wrote that 'if one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand'.[49] This logic has underpinned the rise of what has come to resemble a niche variant of counter-insurgency in ungoverned spaces. Nir Kalron, a former Israeli paratrooper who runs Maisha Consulting's wildlife security operation, sees his role as a holistic union of war and wildlife protection: 'the transition from the Israeli Defence Forces to conservation was one of natural continuity: the standards and ethical code I was taught in special operations teams and the sense of fighting for just causes were and still are the core values that guide me'.[50] Similarly, former Coldstream Guards officer Ian Saunders of the Tsavo Trust promotes

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[45] Rosaleen Duffy et al., 'The Militarization of Anti-Poaching: Undermining Long Term Goals', *Environmental Conservation* (Vol. 42, No. 4, 2015), pp. 345–48.
[46] Neumann, 'Moral and Discursive Geographies in the War for Biodiversity in Africa'.
[47] Duffy et al., 'The Militarization of Anti-Poaching'.
[48] Figures reported by the organisation at <https://www.thingreenline.org.au/>, accessed 28 April 2016.
[49] Jasper Humphreys and M L R Smith, 'War and Wildlife: The Clausewitzian Connection', *International Affairs* (Vol. 87, No. 1, 2011).
[50] Nir Kalron, 'Role of the Private Sector', The Cipher Brief, 30 November 2015.

the Stabilization through Conservation, or 'StabilCon', concept in Kenya. StabilCon looks to 'to enhance the physical security of wildlife and communities in at-risk areas by deploying professional anti-poaching units, trained to meet the specific challenges of their local area, which provide physical safety for both people and wildlife'.[51]

The growing inclination towards militarised counter-poaching is unsurprising given the fractured political and security situation in parts of the continent; the heightened rhetoric around high-value wildlife such as elephants and rhinos; and the large numbers of former military personnel who have consequently sought to bring their special brand of knowledge, honed in Afghanistan and elsewhere, to wildlife conservation. However, as might be expected, these enhanced protection strategies have drawn criticism, especially from those who approach conservation as a development issue, as being too 'militarised', propagating 'green violence' and 'green militarisation'. The critique here is that force is being applied within a militaristic dynamic of 'weaponising' conservation and counter-poaching, and that the construction of a 'war' narrative around these issues is unhelpful. As Lunstrum argues, more militarised responses produce increasingly dangerous landscapes as state actors, private operators and poachers enter into conservation areas willing to engage in deadly force, and what follows is an inevitable cycle of escalation.[52] This can have limited or even counterproductive impacts, particularly on human security.

Indeed, while the justifications for increased use of force rely on a 'self defence' argument, some operations use force proactively and as a means of pre-emption – at times going as far as policies of shoot-to-kill – rather than as a reaction to a distinct threat.[53] The impact on human security is little considered; as Roe points out, communities can be negatively affected by heavy-handed militarised responses, which result in a proliferation of weapons and armed personnel in marginalised rural areas which may already be confronting insecurity. For example, the Democratic Republic of Congo has experienced decades of military activity by a wide range of rebel groups and by government forces; in this context, armed anti-poaching units may simply be regarded as yet another militia, alienating and estranging communities rather than including them and giving them a stake in wildlife protection strategies.[54]

Beyond this, narrowing the scope of the debate towards the moment that rangers encounter a possible threat (a group of armed poachers) fails to engage with the wider questions of whether this is an effective policy response in the longer term. A militarised approach may result in a short-term reduction in poaching, but may ultimately undermine

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[51] See Tzavo Conservation Group, 'Stabilization through Conservation (StabilCon)', <http://www.tsavocon.org/stabilcon/>, accessed 18 July 2016.

[52] Lunstrum, 'Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park'; Rosaleen Duffy, 'War by Conservation', *Geoforum* (Vol. 69, 2016), pp. 238–48.

[53] Duffy, 'Waging a War to Save Biodiversity'.

[54] Richard Milburn, 'Mainstreaming the Environment into Postwar Recovery: The Case for 'Ecological Development', *International Affairs* (Vol. 88, No. 5, 2012) pp.1083–100.

longer-term, community-based approaches.[55] This reflects the inability of militarised responses, alone, to engage with and tackle the complex social, political and economic contexts that produce illegal wildlife use in the first place. This can manifest itself in a failure to distinguish between poaching for profit and for subsistence,[56] involving a failure to acknowledge that IWT is often orchestrated by organised criminal syndicates, sometimes through the co-option or coercion of hunters from poorer local communities, with additional negative effects on human security.[57] In this context, an increased use of force can only hope to produce short-term results, to the possible detriment of longer-term ambitions to secure successful conservation via engagement with local people. Alone, it ignores the key question of how governments and conservation groups can devise ways for the benefits of wildlife conservation to be delivered to local communities – questions that must be considered simultaneously.

Finally, it must be acknowledged that there may be more to narratives of 'war' and militarisation of counter-poaching than those of animal protection and ranger self-defence – with further impacts at community level. Indeed, securitising a topic is commonly seen to have several important effects: to make the issue a top-priority issue for policy-makers; and to make it one that demands urgent solutions, usually militarised ones.[58] These effects can at times suit vested interests, an issue raised in relation to the situation in South Africa, where the militarisation of poaching and counter-poaching has perhaps extended to its furthest point. Here, the militarisation of anti-poaching received a boost from 2012 when General Johan Jooste (retired) became head of counter-poaching in South Africa's national parks. As he did, he declared his dismay that South Africa was 'under attack from armed foreign nationals' and stated his determination 'to take the war to these armed bandits and … to win it'.[59]

This idealistic 'rhino wars' narrative, however, has been criticised as having been hijacked by a number of private interests. These relate to the fact that a significant proportion of South Africa's rhinos – a full quarter by one estimate – live on private farms and ranches,[60]

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[55] Rosaleen Duffy et al., 'The Militarization of Anti-Poaching'.
[56] Dilys Roe (ed.), *Conservation, Crime and Communities: Case Studies of Efforts to Engage Local Communities in Tackling Illegal Wildlife Trade* (IIED, London, 2015), p.8.
[57] Robert W Burn, Fiona M Underwood and Julian Blanc, 'Global Trends and Factors Associated with the Illegal Killing of Elephants: A Hierarchical Bayesian Analysis of Carcass Encounter Data', 2011.
[58] Roger Mac Ginty, 'Against Stabilisation' *Stability* (Vol. 1, No. 1, 2012); Ashok Swain, 'Environmental Security: Cleaning Up the Concept', *Peace and Security* (Vol. 29, December 1997).
[59] South African National Parks, 'SANParks Enlists Retired Army General to Command Anti-Poaching', 12 December 2012, media release, <http://www.sanparks.org/about/news/default.php?id=55388>, accessed 12 June 2016.
[60] Michael H Knight, Richard H Emslie and R Smart, compilers, 'Biodiversity Management Plan for the White Rhinoceros (Diceros Bicornis) in South Africa 2013–2018', prepared by the SADC Rhino Management Group following a multi-stakeholder workshop at the request of the South African Minister of the Environment on behalf of the Department of Environmental Affairs (2013); Shirley Brooks et al., 'Creating a Commodified Wilderness: Tourism, Private Game Farming, and "Third Nature" Landscapes in KwaZulu-Natal', *Tijdschrift voor Sociale en Economische Geografie* (Vol. 102, No. 3, 2011).

providing numerous business opportunities for the South African farmer/rancher. South Africa is the only country (apart from a few permits issued in Namibia) to allow rhino hunting – providing a different motivation for an uncompromising approach to their protection.[61] Meanwhile, demand for rhino horn represents a potentially major financial opportunity for farmer/ranchers if international trade were to be legalised – again pointing to a different stimulus for militarised protection strategies. At the same time, South Africa's fight against poaching has become big business for the array of fundraising organisations synchronised with an endless stream of graphic TV presentations such as 'Battleground Rhino Wars'[62] and the already numerous private security companies that provide counter-poaching and de facto help to fill the rural security void.[63] These concerns have been outlined most forensically by journalist Julian Rademeyer, who argues that essentially South Africa's 'rhino wars' involve a series of inter-locking 'mini-wars' –[64] one involving the protection of a high-profile animal (even though the motivations for this are a variety of conservation, combat, political and economic ones), and another between competing groups engaged in cynical and logistically complex strategies to cash in on a valuable resource. In all of this, the impact on development and the security of populations in and around source areas is little considered.

In this context, it is clear that better, more effective and more socially just responses to the threat posed by poaching at local level are required, based around a more sophisticated understanding of how poaching and low-level trafficking impacts upon human security. This must involve recognition that these activities may have positive as well as negative impacts on human security, in the shorter as well as the longer term. In cases where poaching is an important part of subsistence or income-generating strategies for poorer communities, policy-makers must provide alternatives that genuinely address the aspirations of communities, rather than simply providing income or employment opportunities. They must also be aware of the potentially negative impacts of militarised responses on human security; the ultimate risk is that these approaches alienate the very communities upon which successful, long-term conservation ultimately relies.

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[61] David Bilchitz, 'Rhino Hunting is Not Compatible with Conservation', *Daily Maverick*, 14 March 2016.

[62] 'Rhino Wars: Taking Down the Bad Guys', *Battleground: Rhino Wars*, Animal Planet, 19 February 2013, <http://animal.discovery.com/tv-shows/battleground-rhino-wars>, accessed 12 June 2016.

[63] See, for example, Protrack Anti-Poaching Unit, <www.protrackapu.co.za>, accessed 12 June 2016. South Africa's private-security sector is already the largest in the world with some 9,000 registered businesses employing 400,000 registered security guards; see Victoria Eastwood, 'Bigger Than the Army: South Africa's Private Security Forces', *CNN*, 8 February 2013.

[64] Julian Rademeyer, *Killing for Profit: Exposing the Illegal Rhino Horn Trade* (Cape Town: Zebra Press, 2012).