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War and Natural Resources in History: Introduction

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Natural resources are rarely alone a sufficient reason for declaring war. Nevertheless, through human history natural resources have been an important motive, target, and resource for warfare. Until recently armies lived off the land; their logistical support systems were so rudimentary that nothing else was possible. This process provides the key to much of the damage caused by wars, from pre-historic tribal wars onwards. Colonial states initiated an era of systematic global looting of natural resources that affected above all indigenous people. Industrial warfare multiplied both qualitatively and quantitatively the consumption of strategic raw materials and energy sources. Today they are targets of a global power play that cover all continents, oceans and seabed.

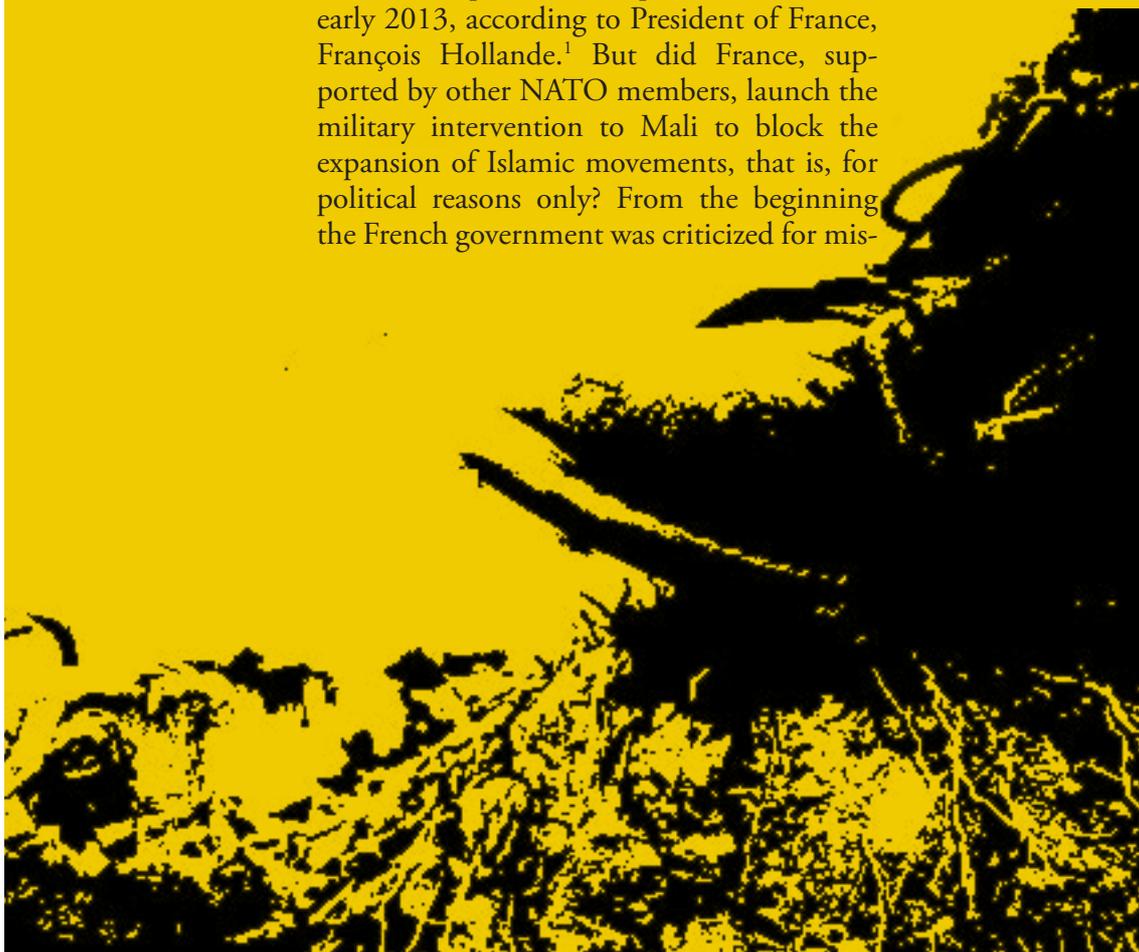
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“*We have one goal. To ensure that when we leave, when we end our intervention, Mali is safe, has legitimate authorities, an electoral process and there are no more terrorists threatening its territory*”.

This was the aim of the intervention of French troops to the Republic of Mali, in early 2013, according to President of France, François Hollande.¹ But did France, supported by other NATO members, launch the military intervention to Mali to block the expansion of Islamic movements, that is, for political reasons only? From the beginning the French government was criticized for mis-



leading about the real reasons for sending over 2,000 troops of the Foreign Legion to Mali. The intervention quickly brought the question of war and natural resources to headlines.²

Media soon pointed out that Mali was an Eldorado of natural resources. Mali has been famous for its gold for centuries. When Emperor Kankou Moussa made a pilgrimage to Mecca in 1324, he was said to have carried eight tons of gold on his caravan. Today Mali is the third largest producer of gold in Africa. Furthermore Mali has significant but mainly unexploited resources of iron ore, bauxite, manganese, copper, lithium, lignite, phosphate, diamond and oil.³ However, the main target of Mali's "resource war", as it has already been called, may have been its uranium reserves. This is indicated by the fact that after intervening in Mali France also sent special troops to secure uranium mines in the neighboring state of Niger. These operations only underscore the economic and geo-strategic motives behind French neo-colonialism in Sahelian Africa.⁴ The motives of France and NATO may include, in addition to blocking Islamic movements, supporting political allies and securing strategic natural resources also rivaling China in Africa in the future.

In practice France has been very cautious in defining the aims of its military intervention. The main reason for this is the numerous risks involved in such operations. Relations between natural resources and war are extremely complex. Securing control of selected natu-

¹ "France will leave Mali when it is stable, safe - Hollande", Reuters, January 15, 2013, available on the web at: <http://www.reuters.com/article/2013/01/15/mali-rebels-hollande-idUSP6E7N601A20130115> (accessed March 12, 2013).

² "Mali's untapped resources behind French-led war: Press TV poll", Press TV, February 3, 2013, available on the web at: <http://www.presstv.ir/detail/2013/02/03/287120/malis-resources-behind-frenchled-war> (accessed March 12, 2013).

³ R. Teichman, "The War on Mali. What you Should Know: An Eldorado of Uranium, Gold, Petroleum, Strategic Minerals...", in *Global Research*, January 15, 2013, available on the web at: <http://www.globalresearch.ca/the-war-on-mali-what-you-should-know/5319093> (accessed March 10, 2013).

⁴ B. Van Auken, "Mali "Resource War" Extends into Niger: France Sends Troops to Secure Niger Uranium Mines", in *Global Research*, January 29, 2013, available on the web at: <http://www.globalresearch.ca/mali-resource-war-extends-into-niger-france-sends-troops-to-secure-niger-uranium-mines/5320825> (accessed March 10, 2013).

ral resources requires planning and implementing political, military and economic operations that involve both the intervened and intervening countries. Firstly, the intervening power must ensure that the new government of the intervened country will remain cooperative for a long period of time, which is difficult. Secondly, national governments are often weak in developing countries, and hence securing a friendly government and administration does not actually guarantee anything, and imposing foreign military control over large areas and heterogeneous populations for long period of time is in practice impossible. Thirdly, critical infrastructures in developing countries are often poor, which makes securing access, exploitation and transport of selected natural resources highly difficult and costly in the long run. Consequently, few if any intervening powers have had the adequate political, military and economic needs, skills or resources to accomplish such large-scale and long-term operations without any major backlashes. Nevertheless the question of war and natural resources has been a key issue through world history.⁵

Natural resources and warfare in past

Until recent times armies lived off the land; their logistical support systems were so rudimentary that nothing else was possible.⁶ This process provides the key to much of the damage caused by wars, from ancient times onwards. Hence most warfare in mankind's history has focused on the temperate region. Classical Greece exemplified the process. The Mediterranean borderlands feature long hot summers and short wet winters; their topography is mostly mountainous, with soils that are light and easily eroded once natural vegetation is removed. Armies of the Greek city-states pillaged their enemies' farmlands, destroying annual crops and olive groves.⁷

⁵ For additional perspective, see R.P. Tucker, "War and the Environment", in *A Companion to Global Environmental History*, J.R. McNeill, E.S. Mauldin (eds), Wiley-Blackwell, Oxford 2012, pp. 319-339.

⁶ See, for example, J.A. Lynn (ed.), *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present*, Westview, Boulder 1993.

⁷ J.D. Hughes, "War and the Environment in the Ancient Mediterranean Lands",

In the monsoon climate belt the Indian subcontinent saw similar impacts of military movements. In the upper Indus and Ganges river basin, the Mughal empire's armies (1524-1707) led by elephant corps and cavalry devoured the food and fodder resources of the land. The imperial army was a mobile city of nearly a million fighters, camp followers, and suppliers, who stripped wide areas of everything useful as they moved. Cavalry swept the countryside, depopulating villages; rural society and its biological base could take decades to recover from the disruption.⁸

Medieval European history showed similar patterns on the land during wartime. The Hundred Years War in France (1337-1453) was a major example of undisciplined armies ravaging year after year crop lands, marshlands and woodlands.⁹ Lands deserted when rural people became refugees reverted toward natural woodlands and wetlands, with concomitantly increasing species diversity. The short-term damage to partially domesticated landscapes was evident to anyone with eyes. The long-term ecological transformations of the early medieval period are difficult to assess, since the long term was a matter of peacetime recovery processes. These campaigns were the grim precursors of modern "total war", obliterating the distinction between civilian and military targets.

Until the sixteenth century the ecological impacts of wars were largely limited to areas of conflict and their source locations for wood and metals. Then pressures on the biosphere rose, as the era of the imperial nation-state and large-scale capital and industry accelerated

in *Oxford Handbook of Warfare in the Classical World*, B. Campbell, L. Tritle, (eds), Oxford University Press, Oxford 2011. J. R. McNeill, "Woods and Warfare in World History," *Environmental History*, 9, 3, 2004, pp. 388-410. See also J. Diamond, *Collapse: How Societies Choose to Fail or Succeed*, Viking Penguin, New York 2005.

⁸ J. Gommens, *Mughal Warfare: Indian Frontiers and High Roads to Empire, 1500-1700*, Routledge, London 2002, chap. 4. S. Digby, *Warhorse and Elephant in the Delhi Sultanate*, Orient Monographs, Oxford 1971. S. Gordon, "War, the Military, and the Environment: Central India, 1560-1820," in *Natural Enemy, Natural Ally: Toward an Environmental History of War*, R.P. Tucker, E. Russell, (eds), Oregon State University Press, Corvallis 2004, pp. 42-64.

⁹ M. Keen, *Medieval Warfare*, Oxford University Press, Oxford 1999. J. Landers, *The Field and the Forge*, Oxford University Press, Oxford 2003.

the technological impacts associated with global trade and transport.¹⁰ The frontier wars of European conquest were the cutting edge. Over a half millennium European empires, later joined by the United States, dismantled non-state societies in temperate forests, savanna lands, and tropical rainforests. The Western empires commanded weaponry that ultimately overwhelmed all opponents by the late nineteenth century.

The great escalation of modern warfare and its environmental impacts began in Europe in the 1790s, when revolutionary France expanded armies, the intensity of warfare and its continent-wide reach.¹¹ Responding to counter-revolutionary military threats from other countries, the leaders of the revolution appealed to French patriotism (an emerging political alternative to religious fervor) and mobilized huge semi-trained conscript armies. From 1793 onward French mass armies moved into Belgium and all the way to Moscow. Badly supplied, they ravaged rural lands to the north as they moved. The era of patriotic armies had begun, though disciplined logistics of the industrial era were not keeping pace.

From the mid-nineteenth century onward Western European and American industry produced a leap upward in destructive capacity, through revolutionary innovations in mass production. By the late 1800s highly accurate breech-loading Enfield, Mauser, and Springfield rifles, Gatling gun and Maxim machine guns transformed the battlefield, and more powerful explosives were capable of ravaging both urban and rural targets. Moreover, telegraph, railroads and steamships gave industrialized nations far greater mobility and international reach. They moved information, materiel and troops rapidly, inexpensively, and far, making possible the conquest of the rest of the world.¹² Nineteenth century Africa underwent the culmination of Europe's globalization, based on the increasingly dominant military capacity of Europe.¹³

¹⁰ C.I. Archer, J.R. Ferris, H.H. Herwig, T.H.E. Travers, *World History of Warfare*, University of Nebraska Press, Lincoln 2002, chap. 11.

¹¹ M. van Creveld, *Supplying War: Logistics from Wallenstein to Patton*, Cambridge University Press, Cambridge 1977, chaps. 2-3.

¹² D.R. Headrick, *The Tools of Empire*, Oxford University Press, Oxford 1981.

¹³ Id., *Power over People: Technology, Environments, and Western Imperialism, 1400 to the Present*, Princeton University Press, Princeton 2010. R. Levine, "African War in

The U.S. Civil War in 1861-1865 had already given a grim demonstration of the environmental dangers of the new industrial warfare. Exhaustion of the South accompanied widespread destruction of croplands and fodder resources by Northern armies, extending to deliberate scorched-earth campaigns in its last two years.¹⁴ Ultimately the manpower, economic wealth, and industrial power of the North prevailed. The experience trained northern soldiers to attack and destroy the food supplies of the indigenous tribes in the American West, including their herds of bison and orchards, as an acceptable strategy in the conquest of that great frontier.¹⁵ In Europe in the same decade, Germany harnessed the industrial revolution to accelerate military mobilization. Rapid victories over the Austro-Hungarian Empire and then France in 1870-1871 resulted from skillful movement of the German armies over the new railway networks, with communications provided by the new telegraph, while more powerful artillery damaged woodlands and cities.¹⁶

During World War I the military-industrial complex finally matured. The industrial capacity for warfare had accelerated rapidly since 1870, and all combatant economies had forged close ties between military commanders and industrial designers and managers.¹⁷ By 1914 war in Europe could be pursued with railway and wheeled vehicles, and during the war the first air forces appeared. In the process, petroleum emerged as a strategic resource. On both sides of the

All Its Ferocity”: Changing Military Landscapes and Precolonial and Colonial Conflict in Southern Africa”, in Tucker, Russell (eds), *Natural Enemy* cit., pp. 65-92.

¹⁴ M. Fiege, “Gettysburg and the Organic Nature of the American Civil War,” in *ibid.*, pp. 93-109. L.M. Brady, “The Wilderness of War: Nature and Strategy in the American Civil War,” in *Environmental History*, 10, 2005, pp. 421-47.

¹⁵ M.E. Neely, Jr., *The Civil War and the Limits of Destruction*, Harvard University Press, Cambridge 2007, chap. 5. A.C. Isenberg, *The Destruction of the Bison: An Environmental History, 1750-1920*, Cambridge University Press, New York 2000.

¹⁶ For the broad setting, see G. Wawro, *Warfare and Society in Europe, 1792-1914*, Routledge, London 2000. C. Pearson, *Mobilizing Nature: The Environmental History of War and Militarization in Modern France*, Manchester University Press, Manchester 2012, ch. 2.

¹⁷ P.A.C. Koistinen, “The ‘Industrial-Military Complex’ in Historical Perspective: World War I”, in *Business History Review*, 41, 4, 1967, pp. 379-403.

war, improved long-distance food transport enabled mass armies to be sustained year-round, and battles to be fought almost endlessly. As the war on the Western front bogged down in a three-year stalemate, millions of bomb and shell craters left puddles, ponds, and mud where crop fields and woodlands had been before.¹⁸

Between the two world wars emerging Communism, Fascism, and Nazism led to further acceleration of military industry, which enabled militarized states to mobilize far greater resources from around the world than a quarter century before, and impose new levels of destruction.¹⁹ When Japan attacked China in 1937 and the Third Reich and the USSR invaded Poland in late 1939, they unleashed a war in which 70 million people would die, and Germany and Japan ultimately suffered some of the most total devastation, particularly at the hands of the Allied air forces. The atom bomb set a completely new threat for human kind.²⁰ The postwar reconstruction, physical as well as social, would be daunting but difficult to measure. World War II set into motion a number of other socio-environmental processes, which affected the world through the Cold War even up to today. In brief, war and natural resources have a long common history.

World War II and natural resources

The environmental legacy of warfare and mass violence has recently emerged as a recognized dimension of environmental history. However, there is not enough data on wars, even recent ones, to form a compre-

¹⁸ R. Beaumont, *War, Chaos and History*, Praeger, Westport 1994, p. 140.

¹⁹ J. Radkau, F. Uekötter (eds), *Naturschutz und Nationalsozialismus: Geschichte des Natur und Umweltschutzes*, Campus Verlag, Frankfurt am Main 2003. F.-J. Brüggemeier, M. Cioc, T. Zeller (eds), *How Green Were the Nazis? Nature, Environment, and Nation in the Third Reich*, Ohio University Press, Athens 2005.

²⁰ W.M. Tsutsui, "Landscapes in the Dark Valley: Toward an Environmental History of Wartime Japan", in *Environmental History*, 8, 2, 2003. S. Laakkonen, "Warfare: An Ecological Alternative for Peacetime? The Indirect Impacts of the Second World War on the Finnish Environment", in Russell and Tucker (eds), *Natural Enemy* cit., pp. 175-194. R. Lahtinen, T. Vuorisalo, "It's War and Everyone Can Do as They Please!': An Environmental History of a Finnish City in Wartime", in *Environmental History*, 9, 4, 2004, pp. 679-700. J.D. Hamblin, "Environmental

hensive picture of their environmental effects.²¹ This also holds for major wars of the 20th century.²² A full perspective on the worldwide history of war's ecological consequences is still to emerge. Consequently we focus in this special issue on one theme only, the historical relationship between war and natural resources, and on one war only, on the apparently deep but little known environmental impacts of World War Two. Consequently this special issue focuses on the following question: How did the Second World War affect natural resources, their conceptualization and use? These issues were discussed at an international workshop on the environmental history of WW II that was arranged in Helsinki, Finland in August 2012 with the support from the Foundation for Baltic and East European Studies (Östersjöstiftelsen) and Södertörn University, Sweden. Three of the proposed papers (J. Hamblin, P. Holm, N. Cuvi) were presented at our workshop. The four selected articles discuss the impact of World War II on agriculture, oceans, forests, minerals and other natural resources. The four case studies examine Asia, Europe, Latin America, and the United States. Due to its global impact World War II is the starting point in every article but they discuss mainly the Cold War era. The articles of this special issue show that the relation between war and natural resources has been during the World War II and the Cold War at least as close and complex as it is today in Mali and other countries where people suffer because of war.

Dimensions of World War II”, in T.W. Zeiler, D.M. DuBois (eds), *A Companion to World War II*, Wiley-Blackwell, Malden, Massachusetts 2013, pp. 698-716.

²¹ C.D. Stone, “The Environment and Wartime: An Overview”, in *The Environmental Consequences of War: Legal, Economic and Scientific Perspectives*, J.E. Austin, C.E. Bruch (eds), Cambridge University Press, Cambridge 2000. A.K. Biswas, “Scientific Assessment of the Long-Term Environmental Consequences of War”, in *ibid.* J. Brauer, *The Effect of War on the Natural Environment*, available on the web at: www.aug.edu/~sbajmb/paper-london3.PDF (accessed January 15, 2013).

²² As exceptions see, e.g., E. Russell, *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring*, Cambridge University Press, New York 2001. S. Laakkonen, T. Vuorisalo (eds), *Sodan ekologia. Nykyaikaisen sodankäynnin ympäristöhistoriaa*, Suomalaisen Kirjallisuuden Seura/Finnish Literature Society, Helsinki 2007, 775 pp. (*Ecology of War: Environmental History of Modern Warfare*).