

State of Nature
2nd International Workshop of the
NATURE AND NATION Network
Bucharest, 2-4 December 2011

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STATE OF NATURE

2nd International Workshop of the Nature and Nation Network Bucharest, 2-4 December 2011

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State of Nature – Introduction

*Marco Armiero, Wilko Graf von Hardenberg
and Valentin Quintus Nicolescu*

Environmental history was born with a promise to overcome the nationalist obsession of the historical disciplines. In a seminal essay published in 1985 Donald Worster envisioned the future of environmental history as a post nationalistic field going beyond the frontiers of the states. Among many other innovations, environmental history was meant to be also transnational; environmental issues did not fit well into human-made political borders.¹ Nevertheless, Worster's prophecy did not come true, after all. In fact the individual nation has shown itself to be extraordinarily resilient in analyses of environments through time. For example, national environmental histories have been written about a great number of countries, from Great Britain to Costa Rica, from Peru to Israel and the *Encyclopedia of World Environmental History* includes thirty four national entries.²

¹ Donald Worster, 'World Without Borders: The Internationalizing of Environmental History,' in *Environmental History: Critical Issues in Comparative Perspective*, ed. Kendal E. Bailes (Lanham, MD: University Press of America, 1985).

² Brian W. Clapp, *An Environmental History of Britain Since the Industrial Revolution* (London: Longman, 1994); John Sheail, *An Environmental History of Twentieth-Century Britain* (New York: Palgrave, 2002); Alon Tal, *Pollution in a Promised Land : An Environmental History of Israel* (Berkeley: University of California Press, 2002); Madhav Gadgil and Ramachandra Guha, *This Fissured Land: An Ecological History of India* (Delhi: Oxford University Press, 1992); Mark Elvin and Ts'ui-jung Liu, *Sediments of Time: Environment and Society in Chinese History* (Cambridge: Cambridge University Press, 1998); Conrad Totman, *History of Japan* (Malden: Blackwell Pub., 2005); Carolyn Merchant, *The Columbia Guide to*

How can we explain the persistence of *nation* and states within the history of nature?

The first and perhaps most obvious explanation for this national penchant is the availability of sources. Nations have been crucial entities for documenting, classifying, and surveying the natural world, so that when historians sit down to write about this world their geographical limits are already set.¹

American Environmental History (New York: Columbia University Press, 2002); Ted Steinberg, *Down to Earth: Nature's Role in American History* (New York: Oxford University Press, 2002); Joseph M. Petulla, *American Environmental History: The Exploitation and Conservation of Natural Resources* (San Francisco: Boyd & Fraser, 1977); John Opie, *Nature's Nation: An Environmental History of the United States* (Fort Worth : Harcourt Brace College Publishers, 1998); Manuel González de Molina Navarro and Joan Martínez Alier, *Naturaleza transformada: Estudios de historia ambiental en España* (Barcelona: Icaria Editorial, 2001); Thomas Lekan and Thomas Zeller (editors), *Germany's Nature: Cultural Landscapes and Environmental History* (New Brunswick: Rutgers University Press, 2005); Thomas M. Lekan, *Imagining the Nation in Nature: Landscape Preservation and German Identity* (Cambridge: Harvard University Press, 2004); David Blackburn, *The Conquest of Nature. Water, Landscape and the Making of Modern Germany* (New York: W. W. Norton & C., 2006); Christof Mauch, *Nature in German History* (New York: Berghahn Books, 2004); Lizardo Seiner Lizárraga, *Estudios de historia medioambiental: Perú, siglos XVI-XX* (Lima: Universidad de Lima, 2002); Sterling Evans, *The Development of an Environmental Conscience: A Conservation History of Costa Rica* (M.A. Thesis, University of Kansas, 1992); William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950* (Oxford: Oxford University Press, 2003); Nancy J. Jacobs, *Environment, Power, and Injustice: a South African History* (Cambridge: Cambridge University Press, 2003). *Encyclopedia of World Environmental History*, eds. Shepard Krech III, John R. McNeill, Carolyn Merchant (New York: Berkshire Publishing Group, Routledge 2004).¹ See James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).

There should be no discussion: whatever you want to study, forests in Germany, mountains in Italy, pollution in France, or wolves in the US you will turn to the official papers produced by national governments.

On paper, nature looks thus incredibly national. But is it so just on paper? Are the Italian Alps, the German forests, the French urban and industrial environments, or even the US wildlife Italian, German, French and US just on papers, in the national surveys and statistics and in the writings of nationalistic intellectuals, or is there something national in the land, within the environment? A nation's laws, economic policies, legal systems, urban development, transportation systems, national parks, and military-industrial complexes: all shape landscapes, imprinting them with a national matrix. So, if it is not only a matter of laws (no one would ever doubt that to study Russian forests you need to know something about the Russian forest code), what does it mean to think of environment and nation together?

Putting nature and nation together can be quite a dangerous alchemy. As David Blackbourn has recently written no scholar in Germany can be comfortable in speaking of “people and land” or of “roots in the land”; all these metaphors, which connect nature and nation, have a bitter taste, related to the tragic experiences of the European totalitarian regimes.¹ Racist theories, deterministic approaches, and nationalistic chauvinism seem to be under every discourse on nature and nation. At the turn of the 20th century several historians tried to dismiss a naturalistic approach to nations: nations were historical rather than ecological products. Mixing the two has brought anything but good.

¹ David Blackbourn, *The Conquest of Nature. Water, Landscape and the Making of Modern Germany* (New York: W. W. Norton, 2006), 18.

Nevertheless, precisely the fact that we are managing an explosive potion is evidence that nature has played a role in the invention of nations; there would be no imagined communities without a place to be transformed into the Fatherland. The mutual constituency of imagined communities and – more or less – imagined natures is at the very core of this workshop. No one here is interested in arguing that a special bond actually links a nation state with “its” nature; we all know that nations are products of historical processes and that there is no such a thing like a German, Italian, or Romanian character with its particular attitude towards nature. Nevertheless, the use of nature in the construction of nation is worth to be analyzed, as well as it is crucial to look at the other way around, that is, how the use of nationalistic discourse and the actual policies implemented by nation-states have shaped the construction of nature. Our task is to historicize nature rather than to naturalize history.

So far the environmental history of nations has followed three main paths

1. the 'seeing like a state' approach – the state extends its rule to the realm of nature, creating a new nature which will be understandable by it. Generally, it has a strong materialistic basis (the making of new nature implies transforming nature on the ground); this kind of environmental history of nations has focused on external nature, with a very scant attention to internal nature, that is, to an environmental history of the nationalization of bodies;

2. the 'landscape and memory' approach – the fortune of Simon Schama's book combined to the overwhelming post-modernist turn in the historical field have driven to a new interest in nation and the environment. If nature is a cultural construction, then the nationalistic discourses, which have been powerful cultural matrices, have shaped nature;

3. the post colonial approach – the complex relationships between imperial nations and colonial territories and subjects is the core of this approach. Many times it has focused on exploitation of natural resources or on misunderstanding of local practices and environments. Rarely it has explicitly dealt with the issue of nationalism in both the colonial and colonized countries.

Probably we have missed something here, and above all, it is rather arbitrary to make such distinctions. In fact, many times the best works are those which mix different approaches. Think about Peter Coates' *Strangers on the Land*, where eucalyptus and nationalistic discourses go hand in hand in his analysis of the making of a national landscape.¹

Unpacking the narratives of nation-states and nature does not imply to be stuck in a nationalistic scale approach. On the contrary, we believe that this is a great opportunity to face the problems underneath many environmental history narratives which have been national in scale without dealing openly with the choice of the very scale, in other words, without dealing with the fact that they are national environmental histories. One can take into account the appropriation of nature by nation-states, both symbolically and materially, on a different scale, dealing with the history of a community or working on a continental scale or in a comparative perspective. The Nature&Nation project is not about national histories of nature – as we have seen we have already a lot of national environmental stories; in this network we want to work explicitly on the connections between nationalist discourses, state policies, and nature.

¹ Peter Coates, *American Perceptions of Immigrant and Invasive Species: Strangers on the Land* (Berkeley: University of California Press, 2006).

1. Report of the „State of Nature” workshop

*Wilko Graf von Hardenberg,
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The „State of Nature” workshop, held in Bucharest, Romania, on the first weekend of December 2011 has been the second one in a series organised by the Nature&Nation Network. Similarly to the workshop's first edition, held in Trento, Italy, in mid-September 2011, “State of Nature” gathered a group of scholars from various disciplines interested in the historical links between nature and nation-states. The workshop, hosted by the Nicolae Titulescu University (NTU), the National School of Political Studies and Public Administration (SNSPA) and the Center for the Study of Political Ideas (CeSIP), was funded by UEFISCDI. The workshop's conveners were Valentin Quintus Nicolescu (NTU/SNSPA/CeSIP, Bucharest), Wilko Graf von Hardenberg (Rachel Carson Center for Environment and Society, Munich) and Marco Armiero (ISSM-CNR, Naples / ICTA-UAB, Barcelona).

The workshop aimed at showcasing and debating researches and case studies on the role of nation-states in transforming, representing and even creating nature. States have had a significant role in the modification of landscapes and natural environments of the nineteenth and twentieth century. Good part of this change may be ascribed to what James C. Scott has defined the high-modernist tendencies within modern nation-states¹. States, both under democratic and totalitarian rule, have thus attempted to simplify, as to make more legible and

¹ James Scott, *Seeing like a state: how certain schemes to improve the human condition have failed* (New Haven: Yale University Press, 1998).

manageable, both the landscapes and the systems of relationships, constructed over centuries of settlement, that human communities had with these natural environments. Modern states have thus proceeded at an appropriation of nature, in both its physical and symbolical facets, and attempted repeatedly to monopolize, beside other social systems of relationship, also the way society has interpreted nature. Both nature itself and the society/nature relationship have in fact been radically modified over the last two centuries by state-driven engineering projects, economic policies, propagandist rhetoric and legal systems. Determining property rights, planning urban and industrial development, implementing public/private transportations, building national parks, fighting malaria or other, and bloodier, wars have definitely played a major role in shaping the natural environment.

The workshop was organized in three panels, two keynote lectures, a junior forum (i.e. an innovative discussion space for the presentation of research projects by bachelor and master students), and a couple of side events. Complete video footage of the workshop is available on the network's website: <http://www.natureandnation.eu/workshops/bucharest/videos/>.

The workshop was opened by GUIVION ZUMBADO's (Munich) talk about the role of nature conservation in national identity building in Costa Rica. Zumbado's main interest was the development of the country's image in such items as banknotes, stamps and tourist ads. His tale was split in two chronologically distinct sections, before and after the rise of a democratic government in 1949. The late 19th – early 20th century era, which featured both a classical liberal-conservative regime and a short dictatorship, was marked by a strictly utilitarian representation of nature, seen as an agricultural landscape of plantations and a backdrop for emblems of high-modernism (e.g. trains). In the same years Costa Rica

underwent considerable habitat loss, deforestation and irreparable ecosystem transformations. In contrast to this period in the second half of the 20th century the state seems to have focussed on propagandizing the image of a lush and undisturbed nature, in an effort to transform national identity from that of a prototypical mesoamerican plantation country to that of an internationally recognised eco-tourist destination. Zumbado's point is that political changes were reflected in the changes of the ideal representation of the country and that a new „ecological symbolism“ ot over time a leading role in shaping national awareness.

The following talk was given by MIROSLAV TASCU-STAVRE and CRISTINA STANCA (Bucharest). Their topic was the alleged greening of communist ideology in Romania in the late 1970s - early 1980s and its role as a possible tool of mass mobilization for a regime that was increasingly losing credibility. According to Tascu-Stavre and Stanca, green ideology was one of the common grounds in which a form of detente between East and West took place and thus also an arena for Ceausescu's regime to free himself from Soviet influence and affirm Romania independently on the international scene. The Romanian regime took moreover hold of some green catchwords (recycling, energy conservation, nature conservation) to conceal and justify the difficult economic conditions of the early 1980s. But the environmental policies of the Romanian communist government seem to have been rather opportunistic, aimed more at being tools of propaganda, rather than being backed by real environmental concerns. One of the themes of discussion spurred by this presentation, and a recurring one during the whole workshop, was that about the viability of making a historical distinction between a real-socialist and a capitalist approach to the management of nature. The audience seems to have settled on the idea that similarities were more than the

differences and that both ideologies had a strongly anti-environmentalist stance, based on what has been termed and industrialist “religion of growth.”

The first day of the workshop was closed by WILKO GRAF VON HARDENBERG (Munich) with the presentation of the new RCC Environment & Society Portal (www.environmentandsociety.org), a not-for-profit education, research and outreach project that aims to make environmental humanities materials freely and openly accessible.

The second day opened with a panel focussed on the role of water management policies within the relationship of nation-states with the natural environment. DOROTHY ZEISLER-VRALSTED (Spokane), whose idea of nature as part of our cultural fabric is inspired by Simon Schama's work¹, presented a comparison of the Mississippi and Volga rivers and of how they respectively informed the history of the United States and Russia, becoming integral part of each country's historical memories. An example of the overarching cultural similarities of these two very different countries in respect to their perception of the environment may be given by the fact that the ideal benchmark of beauty for the historical representations of both rivers has been the landscape of such European rivers as the Rhine. The main focus of Zeisler-Vralsted's interest in this instance was however the “hydromodernization” that took place in both Russia and the United States in the 1920s and the 1930s. This process, that involved the building of great dams and canals, was enacted independently from ideology: from the point of view of the river it did not matter if the modernization was pursued within a capitalist or communist framework, since the effects on the natural world were essentially the same in both

¹ Simon Schama, *Landscape and memory*, (New York: Random House, 1995).

countries. The dialogue between the state and nature remained the same. As had already been hinted to after Tascu-Stavre's and Stanca's talk, Zeisler-Vraslsted explained how a common ideology of growth and modernization overshadowed political distinctions in the way nature was perceived and managed already since the 1930s. According to Zeisler-Vraslsted looking at history through the lens of nature may allow to better understand the role and aims of this common ideology.

ARNOST STANZEL (Munich) discussed the role of hydraulic structures in contributing to create a new social order in Slovakia under communist rule. Using examples taken from the party press Stanzel has attempted to give insights into the relationship of the Czechoslovak regime with the environment, its approach to the use of water as an energy resource, and its rhetorical use of hydropower. In the early years of the regime, just after World War Two, the creation of new infrastructures and the development of peripheral regions were important aspects of regime propaganda, and hydropower was presented as one of the main means to achieve these goals. In this context taming and subjugating nature was presented by the party press, even using a religiously coloured word choice, as an essential element in the construction of a new social order supposed to be able to produce a radical improvement of life conditions. What was undoubtedly lacking was however the understanding of the actual role of nature, which, thanks to the efforts of the new communist regime, was supposed to become a perfectly controllable resource. A completely different, less enthusiastic and more techno-bureaucratic approach to hydropower was adopted after 1960, when, according to Stanzel, nuclear power seemed to take over the role as the most advanced and modern means to overcome the country's energy deficit.

MAURO VAN AKEN (Milan) gave a fascinating talk about the process by which in the last twenty years the east

bank of the Jordan Valley has become a living laboratory in the management of water resources in arid areas. Water has been nationalised in the Jordan Valley, in an attempt to face major social and environmental changes in a transnational region marked over the years by armed conflicts, tense international relationships and a rising agribusiness sector. A wholly new spatial organisation, part of a new resource centralisation policy and including major resettlement project for Bedouins and Palestinian refugees, has been imposed in the region. Again, examples of intensive “hydromodernisation” processes that have disrupted traditional rural uses of the resources were mentioned: local knowledge and use rights have been disrupted in favour of the creation of a new state-driven use regime. Scarcity, property, and expertise have become the notions defining a completely new relationship between water and society and leading to a “desocialization” of water. Nonetheless, as Van Aken has related, the local communities have found also ways to maintain their traditional rights of use along the hypertecnicised new management system.

STEFANIA BARCA (Coimbra) gave then her keynote lecture about nature and political economy in the Kingdom of Naples before 1860. This kingdom at the periphery of Europe, seems, with the huge social turmoils and frequent political changes it experienced in the 18th and early 19th century (from enlightened absolutism to a short-lived jacobin republic, from French colonial rule to Bourbon restauration), an exceptionally apt case study for the analysis of the modification over time of the state/nature relationship. Economically the kingdom was specialised in agricultural production, dependent on external markets and widely considered a backward area. Enlightened intellectuals started soon to ask for the development of the country following the precepts of political economy and the English example: private property should overcome feudal and

mercantilist remnants. Political economy of the late 18th century aimed in fact at the improvement of the “natural forces” of a country and at the elimination of any waste, including customary rights of use and collective resource uses, both deemed irrational. The means used, all over Europe, for such an improvement were cartography and new cadasters, which allowed a better understanding of the territory, and also infrastructural works, land enclosures, and state expenditures, which all had major environmental and social impacts. In the Neapolitan periphery this project acquired the added value of a project of a liberation, able to free both society and nature from the greed of feudal structures. Particularly relevant seemed at this regard the ambivalence of peasant reactions to state modernization: on the one side peasants often protested or rioted, on the other almost as often they asked for the intervention of the state as a means to achieve security in respect to environmental risks and against feudality. Through the rereading of various economists and geographers of the time and of political acts produced by very diverse political systems Barca has delineated the development over time of the approach adopted in the Kingdom of Naples in respect to development and nature, showing how the new understanding of resources offered by political economy was instrumental in the creation of a new national conscience. On the long term however the weakness of the state in southern Italy hindered a real development, since the schemes made to redesign the nature/society relationship, in particular as regards management of watercourses, flood control, and land reclamation, were only scantily implemented: Barca says thus that the different regimes that ruled the Kingdom of Naples at the turn of 1800 proved to be, despite the magnitude of the theoretical debate on political economy, actually “unimproving states.”

In the Junior Forum ELENA DAVIGO (Bologna) shortly presented her ongoing research about the origins of the Italian environmental movement and ELENA DIANA MUSAT (Sibiu) gave a talk on her prospective research about the role of environment induced conflicts in the Sahel region.

In the second half of the afternoon MARK BASSIN (Stockholm) spoke about the politics of nature in Stalinist art, in particular in respect to what Cosgrove and Daniels have called the iconography of landscape¹. Bassin's keynote lecture stressed thus, by showing a great amount of fascinating and impressive socialist realist paintings, the projection of different ideological meanings on the natural world and nature's role as a representing space for nation and nationhood. According to Bassin socialist realism was instrumental, as a propaganda tool, in building the utopian landscapes of Soviet power through a precise use of symbology. This kind of art, in fact, was not realist at all since it did not reflect how the landscapes of Stalinist Russia really looked like, but rather aimed at creating an “hyper-reality” and at educating the population in how it was supposed to see the Soviet Union and its landscapes as utopia incarnate. This symbology was centered initially around modernization, a central facet of Soviet propaganda, with the creation of a completely new genre dedicated to “industrial landscapes” (e.g. the depiction of oil fields and wood mills) and the inclusion in any natural and agricultural landscape of elements exemplary of the modernization process (e.g. bicycles, trains, tractors, boats). There was thus no landscape in the early official art of the Stalinist era that was not subject in some way or the other to human control, in accordance with the Soviet ideological aim of an overall

¹ Cosgrove, Denis, and Stephen Daniels. *The Iconography of landscape: essays on the symbolic representation, design, and use of past environments*. Cambridge/New York: Cambridge University Press, 1988.

industrialization of nature. A further challenge of Stalinist artist was to try to embed national features and peculiarities in their paintings, especially in the non-Russian republics of the Union, keeping however a Soviet, modern appearance and ideological message. At a much later stage, beside industrial and natural paintings, deindustrialized landscapes started to be depicted. These were characteristic of the postwar period, representing a clear cut in respect to the past and helping to represent the scars of the war, without forgetting the alleged harmony and inner virtues of Russian countryside. On the contrary, these values, which had already been part of zarist propaganda and had been despised during the first years of Stalinist rule, in response to the aftermath of World War Two came back at full force, occupying the centre of the stage. It is thus possible to see a sort of evolution (or involution) process, or at least a strong dichotomy, in the representation of nature in socialist realism: from the creation of an imaginary landscape of total modernization in the early years, to a return to more traditional values and forms of representation towards the end of Stalin's rule.

The second day of the workshop was closed by a discussion with Marco Armiero about his latest book “A Rugged Nation”, in which the author has been interviewed by Wilko Graf von Hardenberg about some of themes of his book: the role of wilderness in Italy, mountains as an archetypical backdrop for rebellion, the construction of a mountain rhetoric during World War One, and Fascist experiences of wilderness “redemption”.¹

On the third day STEFAN DORONDEL (Bucharest) discussed the transformation of rights to access and use resources in the Dragova commune, within the Romanian national park of Piatra Craiului. Dorondel's main focus was on

¹ Marco Armiero, *A rugged nation: mountains and the making of modern italy*. (Cambridge: White Horse Press, 2011).

the different approaches and claims that park officials and local communities have in respect to rights of use and access to resources. In fact, while the local communities see the forests and pastures that surround them as their own, because they have belonged to their community for generations, focusing on historical and moral rights, the park officials stress out more non-utilitarian aspects, such as biodiversity and leisure. The main accusation that the park officials make against the local community regards the overexploitation of the forests and meadows and a lack of care in respect of the conservation of nature. On the other hand the villagers, as in many other cases where national parks have been overimposed on existing rights' structures and new "crimes" have been created, make any possible attempt to legitimise their claims, seeing the access and use rights as central to their livelihood. According to Doronderl the outstanding winners in these conflicts are the local political elites, which have the role to mediate constantly between the community and the park administration, selecting with whom to side on a case by case basis and increasing thus their political and economic power. Dorondel conclusion is that different actors build and legitimate their claims on a continuous scale going from the local to the national level, from an utilitarian to a post-materialistic approach.

MATTHEW CHEW (Phoenix) has offered the audience, as a conclusion to the workshop, an enlightening talk about the history and politics of the notion of invading alien species. Chew stressed in particular out how this concept, even if it is often disguised as a scientifically sound biological concept, is inherently a cultural and political product, more linked to the concept of nation-state than to ecology as a science. The concept arose in the late 18th century, in parallel to the strengthening of national identities, but is still today prominently present in political and scientific discourses on

conservation biology. For example in both the US-based *Nonindigenous Aquatic Species* database and the EU *Delivering Alien Invasive Species Inventories for Europe* project political and administrative boundaries are still used as the main analytical units, even if only most rarely these correspond to ecological habitat-units. As case studies Chew proposed three very diverse examples: the American ruddy ducks (*Oxyura jamaicensis*) in Spain, the Scandinavian pool frogs (*Pelophylax lessonae*) in England, and the Australian blue gum trees (*Eucalyptus globulus*) in Portugal.

The second workshop of the Nature&Nation was definitely a success. A very varied set of case studies and methodologies related to the relationship between nation-states and the natural world were presented and the workshop allowed practitioners in very different disciplines (history, anthropology, political sciences, biology) to meet and discuss in a small setting differences and similarities in their research approaches and results. The hope of the organisers is that this experience may be a first step in future collaborations that go beyond traditional disciplinary boundaries and in the long-term strengthening of the network. Moreover, the workshop gave the participants the opportunity to get to know the rising community of Romanian scholars interested in the study of nature/society relationships and also the members of this community the occasion to meet and tie new bonds. The Nature&Nation Network held during the workshop also its traditional roundtable, in which the participants discussed the possibility for future cooperation, further research activities and the possible developments of the network. The main result of the roundtable, beside a number of ideas for joint research and publication projects, was the proposal to possibly hold the network's next workshop in Spokane, at Eastern Washington University.

2. Extended Abstract

Prescriptive Political Biogeography: National identity and ‘invading alien’ species

Matthew K. Chew

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The advent of unfamiliar plants and animals resulting from long-distance commerce has been discussed since at least the early 1600s. In 1847 Englishman Hewett Cottrell Watson adapted the terms *native* and *alien* from Common Law to differentiate ‘truly British’ plants from those with ‘lesser claims’, i.e., those known (or suspected) to have been introduced from elsewhere by human agency. Swiss botanists Alphonse De Candolle and (later) Albert Thellung applied the distinction on the European continent, each using idiosyncratically labeled categories that were adopted and ‘stuck’ in various degrees in different countries and traditions.

Modern ‘invasion biology’ continues to use the same concepts and even the same terminology, which serves mainly to differentiate the realm of ‘natural history’ from ‘history proper’ in the early 19th century fashion. Despite the intervening Darwinian revolution and the entire development of ecological science, there have been no significant revisions to the taxonomy of belonging (anekitaxonomy) since 1855 and only one conceptual extension: creation of the alien subcategory “invasive”.

By the early 20th century, regulations, laws and treaties were being promulgated prescribing which plant and animal taxa would be protected, tolerated, or suppressed, typically according to belonging within national or quasi-national boundaries rather

than ecological or habitat-based units. Today biotic nativeness is still conceived and mapped as a matter of national belonging by many (perhaps most) countries. Listings such as the Nonindigenous Aquatic Species (NAS) database maintained by the US Geological Survey (USGS) and the European Union's Project DAISIE (Delivering Alien Invasive Species Inventories for Europe) continue to use international borders as their primary baseline despite their general non-correspondence with any biotic barriers actual organisms encounter.

USGS-NAS catalogs species occurrence data using two different, incommensurate sets of spatial criteria: the political boundaries of states and counties, and the physiographic boundaries of watersheds. EU DAISIE also uses two different spatial plots, national or quasi-national boundaries and a 50 km² grid adapted from a military targeting system. All of these criteria amount to identifying, as H.C. Watson put it in 1868, "the plants [biota] of places", by specifying boundaries and recording whatever falls inside them. The alternative, in Watson's parlance, is to record "the places of plants [biota]" representing taxa by mapping point occurrences regardless of political jurisdiction.

Mapping the occurrence of plant and animal taxa by political boundaries has arguable administrative advantages for governments, and assigning national identities to biota can help promote national conservation goals. But it also creates ethical dilemmas and management priorities many find redolent of ethnic cleansing, and exploits traditional international tensions to generate concerns about species identified with particular nations.

Three cases help introduce the varied implications of the practices described: despised American ruddy ducks (*Oxyura jamaicensis*) in Spain, desired Scandinavian pool frogs (*Pelophylax lessonae*) in England, and commercially farmed Australian blue gum trees (*Eucalyptus globulus*) in Portugal.

3. Extended abstract

Environmentally induced conflicts. Case Study: Sudan

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Although environmentally induced conflicts are not new phenomena, they have come to the attention of scientists few years ago and are still controversial concepts. The vulnerable communities are those dealing with human insecurity, poverty or violent conflicts. It is the case of developing countries confronting intrastate conflict. In failed states, environmental degradation and resource scarcity are important causes of social instability.

Ethnic diversity and poverty are also factors which contribute to social instability, this combined with environmental stress can (under certain circumstances) lead to intrastate conflict. Climate change and resource scarcity do not lead directly to new types of conflicts, they exacerbate ethnic, religious or racial conflicts. Although there is little empirical evidence that environmental stress can directly generate violent conflicts, there are enough examples that demonstrate how environmental stress can cause migration which in turn cause conflicts. There is a vicious circle, because conflict can lead to environmentally degradation and resource scarcity and environmentally degradation and resource scarcity exacerbates violence leading to conflict. There is a complex connection between environment and conflict. This is why, the environmentally induced conflict is a controversial security issue and many intrastate and interstate conflicts have structural causes regarding environmental security.

Tobias Hagmann denies the existing relationship between environment and conflict after analyzing case studies such as South Africa, Rwanda and the Gaza Strip. According to his view the research of environmental induced conflicts has no constructive impact on the development of international relations domain. His arguments are based on the fact that there are divergent methodologies, conceptual approaches and levels of analysis regarding environmental conflicts.

In the 90's Thomas Homer Dixon started researching environmentally induced conflicts. He stated that armed conflicts can be determined by environmental factors. He admits the fact that ethnic cleavages also play a major role in armed conflicts. His work shows the linkages between environment, resource scarcity and violence and also between environment, population and security.

Other researchers who had a major role in the evolution of the environmental conflict concept are: Nils Petter Gleditsch - the Norwegian research professor has established the theoretical approach, and Baechler Günter - who developed a typology of environmental conflicts in his book.

Environmental Project on Violence and Conflicts Caused by Environmental Degradation (ENCOP) is an initiative of the Swiss Peace Foundation, Bern and the Center for Security Studies and Conflict Research at the Swiss Federal Institute of Technology, Zurich. It was founded in 1992 and aims to investigate the relationship between environmental degradation and existing or possible armed conflicts and also to find mechanisms of peaceful conflict resolution.

Established in 1996, by the Scientific Committee of the International Human Dimensions of Global Change Programme (IHDP), the Global Environmental Change and Human Security Project (GECHS) is an interdisciplinary research project which focuses on the research of how climate

change, diseases, poverty and conflict interact and their negative impact on human security.

Sudan is a developing country which illustrates how resource scarcity, climate change, and degradation of the environment can fuel social tensions leading to new violent scenarios. When communities deal with environmental stress and poverty, racial and religious tensions escalate, transforming instability into violence.

Many scientists argue that violent conflicts in Sudan are consequences of ethnic, cultural or religious cleavages, therefore the environmental factor is completely ignored when analyzing structural causes of violence. It is true that some ethnic groups have been favored by the government, but it is also true that interethnic hate has not been influenced only by discriminatory policies.

The environmental dimension of the Darfur conflict is obvious. Severe drought has made pastoralism impossible for the tribes living in the north. The desertification process and environmental degradation forced northern pastoralist tribes to go south in order to find pasturelands. When those Arabian Nordic tribes have reached south they have met sedentary agricultural tribes and that is how conflict began. Fighting over land tenure intensified already existing tensions between Arabs and non-Arabs.

Food insecurity has always been a major problem of Sudan, apart from this, climate change is worsening the situation. Traditional societies are unable to provide crucial subsistence products for their citizens, such as food. In this context, water and land become valuable resources. There is evidence that tribes are fighting over diminishing resources such as: water, cropland or pastureland. Resource scarcity and environmental degradation have a negative impact on human security. Apart from this, there are many other linkages between resource scarcity and armed conflicts.

Apart from Darfur, Sudan is confronting another major conflict that has environmental causes in the south. Nowadays, the two independent countries - Sudan and South Sudan - are fighting over oil resources. There is not a traditional interstate armed conflict, the governments support rebel groups and some of the insurgents initiate offensive actions against civilians in order to determine them to leave those oil-rich areas so oil companies could start drilling. Therefore, oil companies have a negative impact on traditional societies. Forced migration is another issue which connects environmental problems and conflict because the Sudanese government supports rebel groups which are forcing civilians to leave their homes. Traditional local leaders have lost their authority and cannot maintain stability among their communities. The proliferation of small arms and light weapons also contributes to instability, because social ethnic tensions determined by resource scarcity can easily transform into an armed conflict when citizens have unlimited access to guns.

4. Socialist hydraulic engineering structures in the Slovakian Carpathians – A new Society through the Rule over Nature?

Arnošt Štanžel, Collegium Carolinum, Munich

After the take-over of power, the Communist Party of Czechoslovakia aimed for the comprehensive reorganisation of the country. One of the central measures was the change from a capitalistic, market-oriented economic system to a socialist planned economy. Equally important as the change of the economic system was the concept of a new social order with the idea of the „New Man“ at its core¹. The ruling doctrine said that the buildup of communism was only possible if men would stop adhering to capitalistic traits – the „New Man“ was urged to renounce individualism, live for the community and work for the benefit of his fellow men and not for his own enrichment.² Especially in the Soviet Union great construction works like dams and hydroelectric power plants had been very important for this process for two reasons: For one, the construction sites themselves symbolised the places in the socialist societies, where the „New Man“ was propagandised offensively. Secondly, the hydraulic engineering structures were regarded as the tools to electrify, irrigate and develop industrially the countryside.³ The worker, liberated by this

¹ See Sinjavskij, Andrej: *Der Traum vom neuen Menschen oder Die Sowjetzivilisation*. Frankfurt/Main 1989. For the connection between „New Man“ and great constructions like Dams see *Schattenberg*, Susanne: *Stalins Ingenieure. Lebenswelten zwischen Technik und Terror in den 1930er Jahren*. München 2002.

² See *Zsolany*, Vilmos von: *Der „neue Mensch“ in Osteuropa*. In: *Aus Politik und Zeitgeschichte vom 20. März 1968* H. 12, 20–32, here , 20–22.

³ See *Gestwa*, Klaus: *Die Stalinschen Großbauten des Kommunismus: Sowjetische Technik- und Umweltgeschichte, 1948–1967*. München 2010.

measures from the burdens of capitalism, was supposed to shape up himself in communism – this was at least the ideal. Thus big infrastructures are to be seen in connection with further measures in the realms of society, culture and economic policy, that were supposed to integrate the population into the new order of the society and by these pave the way to communism. For example in literature and art this meant the adherence to socialist realism.

But in the present study the accelerated industrialisation of cities and the transformation of the Czechoslovak countryside by the nation-state through the use of the natural resource water is in the focus. This process was especially true for the Slovak part of the country, as it was compared to Czechia still very rural. One important step-stone for the modernisation and development of Slovakia was electrification. While in 1947 nearly 100% of Czech settlements were connected to the electricity grid, the numbers for Slovakia had been significantly lower: In Bratislava 80%, in the district of Banksá Bystrica 43% and in Prešov in East-Slovakia only 25%.¹ One can state an increased necessity for action in these regions – i.e. as the foundation for the the establishment of new industries, that were welcomed by the regime for the improvement of living conditions in underdeveloped regions and the necessary impulse for the change of the social structure. Socialism saw electric energy as a way to alleviate the lives of the formerly suppressed countrymen and make them „New man“ – and

¹ Vgl. *Průcha*, Vaclav: *Hospodářské a sociální dějiny Československa* [Economic and Social History of Czechoslovakia]. Vol. 1. Brno 2009, 232. *Sabol*, Miroslav: *Elektrifikačný proces na východnom Slovensku v rokoch* [The electrification process in eastern Slovakia in the years] 1929–1945. In: *Morovics*, Miroslav Tibor/*Hympánová*, Ingrid: *Medzinárodný seminár. XXIV. zborník dejín fyziky* [International Seminar. XXIV. Collection on the History of Physics]. Bratislava 2007, 135–145.

dams were supposed to deliver the needed electricity, protect the people against the dangers of an uncontrolled nature like floods and secure nutrition by irrigation of vast stretches of agricultural land.

With this background, the presentation wants to examine to what extent the use of nature, i.e. water, played an important part in the conceptions of state socialism for the build-up of the „New Man“. How did hydraulic engineering structures contribute to the build-up of a new social order in state-socialist Slovakia? The talk will shed some lights on the socialist modes of resource use and its implications, the appropriation of nature and the symbolical and rhetorical use of the natural world. The covered time stretches from 1950 till 1975 and articles from the party newspaper of the Communist Party of Czechoslovakia (Rudé Právo) and the Communist Party of Slovakia (Pravda) will be used. As an introduction, there will be given a short overview on the topic of environmental history and water, followed by the case study and a conclusion.

An environmental history perspective?

The idea of an environmental history perspective in this article is twofold: Firstly as a approach within the science of history, that uses the relation of humans and environment as a way to analyse history. Secondly as the basis for narratives that help to systematise and present the results. Said this, it is important to mention that the human-environment-relation is not seen as a one-way-street: Neither a conquest of nature, in which the story of rigorously straightened rivers is told, nor shall be stated, that the development of human societies is determined only by environmental conditions. It is rather assumed, that the relation men – environment is shaped by an permanent process of mutual adjustments – through the straightening of rivers men want to lower the danger of floods, what they might accomplish

on a local scale, but globally seen the problem will be just moved to another place – and the adjustment process starts again. The environment reacts to human actions and equally forces men to new actions – nature as agency.¹

The article supposes that dams represent a place where one can analyse the relation between men and environment very well: There is a multitude of mutual influences between both spheres that can be observed on a geographically limited scale. They are like magnifying glasses for the examination of the men-environment-relationship and thus for questions about the connections between nature and state.

The Sound of Water in Environmental History

There are manifold works in the field of environmental history that report about water in its many facets. One strain is connected with cultural references to water and hydraulic engineering structures: Rule over water as a sign for technical superiority of a nation: Your dam collapsed, ours is still standing.² Furthermore rivers play often an important role in the self-conceptions of nations – just think of the Rhine and Germany.³ Or take the example of the Marathon Dam in

¹ For examples for the agency of Nature see: *Lübken, Uwe*: „Der große Brückentod“: Überschwemmungen als infrastrukturelle Konflikte im 19. und 20. Jahrhundert. In: *Engels, Jens-Ivo/Obertreis, Julia* (Eds.): *Saeculum. Jahrbuch für Universalgeschichte. Themenheft Infrastrukturen 58* (2007) H. 1, 89-114. *Mauch, Christof/Pfister, Christian* (Eds.): *Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History*. Lanham 2009.

² See *Blackbourn, David*: *Conquest of Nature*. New York 2006.

³ See the famous song and poem „Wacht am Rhein“ by Max Schneckenburg (https://de.wikisource.org/wiki/Die_Wacht_am_Rhein, (on 31.10.2011)). For the Rhine in general see for example *Cioc, Mark*: *The Rhine: An eco-biography, 1815 – 2000*. Seattle 2002. For the Thames: *Ackroyd, Peter*: *Thames. The Biography*. New York 2008.— For the Oder:

Greece: Built in the last century to secure the provision of potable water to Athens, the site of the dam was also a very clear symbol – look, we built this marvellous technical artefact at a site connected with our glorious past.¹ And as a last point, images play also a significant role: Just recall the role of the Hoover Dam in Hollywood Cinema, the last major example dating back to 2007 with the Transformers movie.²

One can interpret human history as a *liquid history*.³ Mankind cannot survive without water, ancient civilisations developed around the regulation and control of water.⁴ There has always been a political and societal component within hydraulic infrastructures.⁵ Due to this fact, they give hints about the regime's ideas of the environment within their political program and ideology. They even can be seen as real manifestations of these ideologies, they are impressive expressions of the utopian

Schlögel, Karl/Halicka, Beata (Eds.): *Odra – Oder. Panorama europejskiej rzeki* [Panorama of a European river]. Skórczyn 2008. — For the Wisła: *Stolberg, Eva-Maria*: „O biegu rzek“: Zwischen Oder und Weichsel. Flüsse und ihre Bedeutung für die Nationsbildung in Ostmitteleuropa. In: *Kreye, Lars/Stühling, Carsten/Zwingelberg, Tanja* (Eds.): *Natur als Grenzerfahrung. Europäische Perspektiven der Mensch-Natur-Beziehung in Mittelalter und Neuzeit: Ressourcennutzung, Entdeckungen, Naturkatastrophen*. Göttingen 2009, 113–132.

¹ *Kaika, Maria*: Dams as Symbols of Modernization: The Urbanization of Nature between Geographical Imagination and Materiality. In: *Annals of the Association of American Geographers* 96 (2006) H. 2, 276–301.

² The last example dates from the year 2007, with the Hoover Dam playing an important role in the Blockbuster *Transformers*: https://secure.wikimedia.org/wikipedia/de/wiki/Transformers_%28Film%29, (on 31.10.2011).

³ Vgl. zum Begriff der liquid history: Ackroyd: *Thames*.

⁴ Vgl. *Radkau, Joachim*: *Natur und Macht. Eine Weltgeschichte der Umwelt*. München 2002, 108–125.

⁵ *Idem* 113.

thoughts, tens of meters high and build of tons of concrete.¹ And they seem to cry at people: Look, we defeated the river! The demonstrative rule over formerly wild and destructive nature can also help with the strengthening of the own position. And not only symbolically, but also quite real: Dams are anchored within specific spaces, and they can help to control the population.² The grids of the water and electricity supply solve water and energy problems. But the improvement of living conditions comes with the dependency on these centralised infrastructures, leading to the centralisation of power – what counts for infrastructures in general is especially true for water-control structures: They consume, occupy and structure spaces and by this can be used for the social control of the population.³ On a more global level, they represent politics and power relations, as for example Donald Worster showed in his book *Rivers of Empire*.⁴ In the book he describes how the build up of widespread irrigation systems in the American west was deeply connected with the entanglement of politics, bureaucracy and engineering organisations. With all these interconnections between different levels of power and societal groups, water constructions give detailed insights to the power relations within societies and allow answers to different questions: How and for what shall the water be used, for the industry or for the provision with drinking water or as a recreational area? And who will get his plans through?

¹ *Gestwa*: Großbauten 15.

² *Hughes*, Thomas P.: *Networks of Power. Electrification in Western Society, 1880–1930*. Baltimore 1983.

³ See *Best*, Ulrich: *Arbeit, Internationalismus und Energie. Zukunftsvisionen in den Gaspipelineprojekten des RGW*. In: *Schulze Wessel, Martin/Brenner, Christiane* (Eds.): *Zukunftsvorstellungen und staatliche Planung im Sozialismus. Die Tschechoslowakei im ostmitteleuropäischen Kontext 1945–1989*. München 2010, 137–148, here 138.

⁴ *Worster*, Donald: *Rivers of Empire. Water, aridity, and the growth of the American West*. New York 1992.

For the present talk, the most relevant period of water control approaches starts with the enlightenment period: People started to cultivate vast stretches of swamps and marshes, like the Oderbruch in Prussia: King Frederic II. proclaimed, that he had conquered a whole province peacefully. David Blackbourn describes this notion as the „conquest of nature“¹ and presents further results of it: The straightening of rivers like the Rhine, the flooding of whole valleys by dams or the transformation of deserts to agricultural lands. Nature was supposed to be exploited by men through its subjugation. This process culminated finally in the modern period with the idea of water as a panacea: Providing energy and drinkable water, protecting against floods and irrigating fields. This narrative has been discussed quite often and especially for the Soviet Union: For example Klaus Gestwa told a story, where the progress of the country is connected tightly to the use of water. Stalin demanded that by the use of the resource water the foundation for the „New Man“ should be laid.² Soviet engineers were enthusiastic about the possibilities of great hydraulic engineering structures and regarded these as the solution to many problems, from energy generation to irrigation.³ But there was and is also a dark side: massive environmental problems like the desiccation of the Aral Sea.

We have seen, that water has played an important role since the beginnings of civilisation and especially water constructions can help to get better insights into the history of nations. In the talk, two lines of thinking are important: First, as said above, hydraulic engineering structures are not seen as

¹ See *Blackbourn: The Conquest of Nature*.

² Vgl. etwa *Gestwa: Großbauten* 15.

³ See as an example the Dawydow-Plan, that intended the diversion of Siberian rivers to Central Asia. *Salay, Jürgen: The Soviet Union river diversion project: from plan to cancellation 1976–1986. Uppsala 1988.*

mere technical artefacts, but also as infrastructures, through which power can be exerted and that have an impact on the society. Second, as we have seen, hydraulic engineering structures like dams do produce quite strong pictures. Thus the paper will explore in the following, how the communists spread their ideas and hopes regarding hydraulic engineering structures in the mass media, i.e. news papers: How did they present hydraulic engineering structures in these, and how were they supposed to lead to a „New Man“?

Case Study: Dams in Slovakia in the newspapers Rudé Právo and Pravda

In the second part of my talk I will give you some insights on the relation of Nature and Nation in Czechoslovakia during the 1950s, 60s and 70s, based on articles about dams in party news papers.

In the 1950s and 1960s many big infrastructure projects were initiated in order to modernise the society according to the communist ideology. Within these, hydraulic engineering structures were one of the key sectors of investment.¹ In Slovakia, two different regions are most suitable for the use of hydropower: One is the great European river Danube, and the other are the Slovakian rivers and streams that originate in the Carpathians. I will focus on hydro-structures in the latter for several reasons: First of all, I think that the mountainous regions of Slovakia are more typical for the nation compared to the Danubian lowlands. Just think of the national anthem featuring the High Tatra. Second, regions within the Carpathians belonged to the most underdeveloped in Czechoslovakia before and after

¹ In the years 1950–1968 fifty big dams in total have been built in Czechoslovakia, whereas in the years till 1945 only 47 of such constructions have been erected, see: *Průcha: Hospodářské a sociální dějiny Československa* 495.

WW II, thus creating a high pressure for action on the socialist regime to improve the living conditions there. And last, nature in the mountains reacts more sensitively to human actions than elsewhere, but also can be more dangerous than in other regions, see disasters like mudslides or floods in narrow valleys. Because of these reasons, the focus will not be on the Danube, but mainly on the coverage of construction projects on the Váh river and its tributaries in the newspapers. It is clear, that these kind of sources do not necessarily reflect the actual situation and events and are based on ideological directives. But it is exactly this feature, that makes them quite interesting for the study: They were the central organs for the transportation of the parties opinions and ideas, and as such they are perfect to study the rhetorical and symbolic uses of the natural world and the regime's appropriation of nature.

Case Study

Let's begin with an caption of the Orava-dam construction site in the Pravda form 1952.

The slovak people is building itself a new life, for which they have fought in the famous Slovak National Uprising. Even the formerly completely abandoned region of Slovakia, the Orava region, which became a land of emigration through the misery under capitalism, is becoming a new industrial region, which will be a strong pillar for our wealth in our homeland.¹

In this clipping it is obvious, how the regime is working to increase its own legitimation. This is done in explicit delimitation to the former regimes, especially to the capitalist „First Republic“. One of the measures for legitimation was the development of peripheral regions. The industrialisation process is praised as a cornerstone for the build up of the „New man“.

¹ Pravda, 29. August 1952.

This summer the Orava won't be unruly anymore

It is not just the big construction being finished now, that is the important news, but the change of the people within the last ten years. [...] Slovakia stepped towards the socialist future not just for ten, but for hundred years.¹

In this source one can see the connection of the taming of nature respectively water and the creation of the „New Man“ as well as the belief in the use of water for the alleviation of living conditions.

New Slovakia is growing

The dam at the Orava is one of many that are currently build. It will be a powerful source of electricity: Power poles will stretch over the countryside and the lines will carry the blessings of electricity to factories and villages. Furthermore, the dam will store water for times of draught – the field of the Slovak farmer shall never again thrive for water.²

Already in the title, the „new“ is mentioned. New Slovakia will be created with the help of hydroelectric power, the whole scenario resembles a salvation history. And the electricity grid will alleviate human life, but at the same time, a centralised system of power provision is being installed, making possible the control of society.

Change of nature in the USSR and here

On the way to socialism we will no longer exploit our natural wealth and live under the yoke of nature's powers, but with the help of the USSR and at its side we will engage with nature, make use of her by our plans, change and influence

¹ Rudé Právo, 7. November 1952: Tohoto jara už nebude Oravěnka zbojničit.

² Rudé Právo, 1. January 1952: Roste nové Slovensko.

nature with the goal of alleviating the lives and improving the living conditions of our workers.¹

With the help of the USSR nature will help to improve the living conditions. Regarding to this point, it would be very interesting, what the help was exactly or if it was just a propagandistic proclamation.

In the land of the Váh before 1st May

The river will bring blessed benefits in the next years. In the whole region factories will be build due to the huge amounts of electricity. Hardship will vanish from the fields and in the evenings, all villages will be illuminated. (...) At the ruins of castle Tematín, where you once heard just the untameable currents of the Váh, nowadays prevail the even louder sounds of the construction machines.²

On the central, secular holiday of state socialism again religiously coloured expressions can be found – the power of water as a blessing. Hardship will vanish, the life of the „New Man“ will become easier. As a second aspect, transformation of nature and engineering efforts are presented: Nature is being subjugated by the machines of the socialist state.

Slovakia will become an economically strong country

(...) The Váh, scare of our farmers, it's destructible power will be tamed by the knowledge of our engineers and the hands of our workers and forced not to destroy anymore, but to create. It makes us happy, that the formerly humiliated Slovak workers have become proud and self-conscious builders. (...).³

On can see, how big construction sites were presented as means for the creation of the consciousness of the „New Man“.

¹ Pravda, 30. July 1952: Premena prírody v SSSR a u nás.

² Rudé Právo, 20. April 1952: V pováží před I. Májem.

³ Rudé Právo, 28. März 1952: Ze Slovenska se stává silná prumyslová zeme.

Slovakia will become an economically strong country
(...) What great achievements man can accomplish! (...) Soon the dam [on the Orava] will tame the wild river, which caused every spring such damages. The formerly wild, now tamed power will be transformed through turbines and thrown over the heights of the Slovakian land and illuminate houses, power machines and will lead to a better and easier life for the people. Paths, alleys and streets will glow and show the way to the tree of the future, where one can pick the ripe fruits.¹

Again, the connection between the subjugation of nature and the „New Man“ is described in strong words and pictures. The dangerous nature is tamed, so the farmers no longer have to be afraid of losing their harvest. At the same time, the dam will provide electricity for whole Slovakia and thus leading to industrialisation and improvement of living conditions.

Váh, river of life

It has been always like this. And then stop. Stop – never again the water will take the harvest from the fields of the Orava [...] and destroy peoples' homes and lives. Never again, not even in the driest summer the Váh will become a small creek [...]. The melting snow of all the Orava region will be caught up by the Orava dam and the water, which rolled with fury and evilness will now flow as man commands.²

Humans are presented as being in full command of nature, not a drop of water will be wasted, and nature will be changed to the benefits of men, with no floods in the spring and no low water level in the summer – nature and the river as a perfectly controllable resource for production.

¹ Rudé Právo, 25. Dezember 1952: Nová Zem – Noví Lidé.

² Pravda, 11. Juni 1954: Váh, rieka života.

Until this point, we have seen articles from the early period of state socialism. So what pictures can be found in the following years?

Automatisation technique for the Váh hydroelectric powerplants

Together with the Orava dam there are 12 hydroelectric dams in operation on the Váh. (...) The build up of the biggest water construction in the Váh is scheduled to begin in 1965 – the dam and hydrocentral at Liptovská Mara. (...) The supply with electricity especially during peak demand will be improved dramatically.¹

It is quite obvious that the style has changed: Whereas ten years before there prevailed enthusiasm, now the article can be described as mostly technical and bureaucratic.

Consultation on hydraulic engineering structures on the Danube

Wednesday, January the 15th a consultation meeting took place in Prague with representatives from the ČSSR, USSR and PRH. Questions about the preparations for the extension of the water construction of Gabičkovo-Nagymaros were discussed. During the meeting the useful exchange of opinions could be observed, where the participants agreed on further proceedings and help from the USSR.²

Here the decreased enthusiasm for dams is flattering but also symptomatic for all articles within this period.

¹ Rudé Právo, 15. Januar 1961: Automatika do hydrocentrál na Váhu.

² Rudé Právo, 17. Januar 1975: Porada o vodních dílech na Dunaji.

Conclusion

Coming back to the questions asked in the beginning, about the socialist modes of resource use and its implications, the appropriation of nature and the symbolical and rhetorical use of the natural world, I think it is the easiest to answer the last one. There was a tendency, especially during the first 15 years of the new regime, to report about hydraulic engineering projects in a very enthusiastic way, often even in a religiously coloured language. Through taming and subjugation of nature, the society will prosper and get the fruits of the future. Often, the rule of the socialist state over nature is also presented in a very symbolic way: Look, where the capitalists have failed, were not able to use the power of nature, we have succeed and have built the dams on the Váh. With the regime in the 50s being still quite new, this also made perfect sense: As a way to seek legitimation within the population.

The socialist mode of resource use is probably best reflected in statements complaining about the huge amounts of water that are passing by unused. Just like other resources as coal it was crucial for the achievement of the economic plans. And with the supply of sufficient energy, especially electricity, being a permanent problem in the 50s and 60s in Slovakia, water was seen as a welcome solution to the looming energy crisis: If, as Lenin said, Communism was soviet power plus electrification, shortage of electricity was indeed a problem. Questions about the appropriation of nature point into the same direction and stand in a line of traditions dating back to enlightenment: Unused nature was regarded as a wasted resource, and socialism had to make use of it by damming the rivers.

Besides this, it is quite impressive how often the picture of a „New Man“ was used in the articles. The narrative was quite clear, with the help of hydroelectric power formerly poor regions will be prosperous. Especially with regard to the Orava

Region this can be observed: Under capitalism the poorest region in Slovakia, the construction of the Orava Dam led to the build up new factories in the whole region, thus enabling the „New Man“ – the communist goal of the development.

On the other side this narrative changes quite significantly during time. Both style and tone become more serious and shorter, and the quantity of articles on the topic also decreases: In 1952 there were 13 articles on dams in Slovakia, and a broad coverage on the use of water power in the soviet union – whereas in 1975 the overall number of articles receded to 5. Maybe nuclear power took over the role of hydro power as the new, technologically most advanced way of producing energy. At least the number of articles shifted quite significantly: Only between 1954 and 1958 coverage on nuclear power rose from 1 to 11 in the Pravda, while water-related topics became less important, down from 34 to 24.

I think the presentation has shown, that the analysis of hydraulic engineering structures can offer good insights into the relations between nations and nature, particularly for socialist countries. They are accompanied by massive interference with the nature, and due to their expensivness infrastructures like dams are investments that are backed by strong convictions about their advantages. And it is exactly this point, that I am looking forward to learn more about.

5. The origins of the Italian ecology movement: The birth of Nuova Ecologia

Davigo Elena, University of Bologna

Deciding to study the Italian ecology movement came after consideration of the active transformations that took place in Italy between the Seventies and the Eighties. The Italian historiography of these two decades was often a watershed; a breaking point which identifies the beginning of the crisis of political parties and moreover, many of the problems in the institutional setting issued by the constituent assembly.

Accepting the New Social Movement¹ theory as interpretative paradigm of this period and trying to overcome the idea that the so called “riflusso politico” (“political recession”) dates back to the Eighties², I started identifying the ecology movement as an important phenomenon to understand the new directions undertaken by the democratic system in the last thirty years. Mario Diani described this movement, whose studies have been carried out almost entirely by sociologists, through the image of a “green archipelago”, a metaphor that exemplifies its wide heterogeneity and fragmentariness.

¹ A great number of sociologists contributed to the creation and consolidation of the NSM theory, suffice it to mention names like A. Touraine, C. Offe, J. Habermas, A. Melucci, R. Inglehart.

² *Il paese mancato. Dal miracolo economico agli anni '80* Roma. Donzelli Editore (2003) is the text that most emphasizes the “teoria del riflusso”. Such theory is supported also in other texts of the 20th century like Lanaro Silvio Lanaro’s, *Storia dell’Italia Repubblicana*, Venezia, Marsilio (1992), or Ginborg’s, *Storia d’Italia dal dopoguerra ad oggi*, Torino, Einaudi (1998) and Simona Colarizi’s *La trasformazione della Leadership. Il PSI di Craxi in Gli anni Ottanta come storia* Soveria Mannelli, Rubettino Editore (2004).

Considering such a multiform movement part of one single subject is a difficult task: in time people with different cultural and social backgrounds fought different kinds of battles on the basis of different ideas of “environment”. The post-war conservationist environmentalism, for instance, wanted to protect nature considering it a work of art: the risk then was non-stop overbuilding that occurred during the economic boom. Contrary to this stance was political ecology, a movement that started with the student and worker’s protests at the end of the Sixties, wanted to protect nature seen from a social and anthropic point of view. These movements demanded the protection of the living environment of workers and common people.

The decision to dedicate this article to the events that led to the creation of the magazine “Nuova Ecologia” is part of a more generic individuation of the ecology press between the Seventies and the Eighties as a fundamental element inside the ecology movement and its evolution. The merit of the press of that period¹ on one side allowed information and coordination among the different parts of the movement, while on the other side they were able to take action inside the movement itself, aiming at fostering determined trends.

Created in 1978, “Nuova Ecologia” formed as a result of both internal and external factors. On one hand, the confusion of the state institutions, the murder of Moro and the spread of terrorism didn’t encourage any kind of protest, even peaceful ones. Conversely, the inability to cope with the Seveso²

¹ Among the most important magazines on a national scale, specialized in environmental issues, it’s worth mentioning “Sapere”, “Medicina Democratica”, “Geologia Democratica”.

² In July 1976 an accident occurred in the firm ICMESA in Seveso: a dioxin cloud was released, a highly toxic substance. Only those political ecologists whose class awareness was stronger than the environmental

emergency and having failed to organize an antinuclear referendum led to an internal stagnation. It has been truly interesting to identify, in such a context, the main steps of the beginning of an editorial story that - with different forms and objectives – is still living today.

From Ecologia to Nuova Ecologia

In order to precisely place the birth of Nuova Ecologia in the historical context it is helpful to describe the story of the magazine that came before it: Ecologia¹.

Ecologia was created in Milan in 1971 by editor Virginio Bettini. It was a scientific magazine that provided academic debate outside universities.

It specialized in topics related to water and air pollution and was made up of an heterogeneous group of editors who shared the same education and ideas. For example, environmentalists like Virginio Bettini and Giorgio Nebbia, who both came from Italia Nostra, the botanist Valerio Giacomini, president of the Pro Natura federation, Fulco Pratesi, vice president of the WWF, the hydro biologists Giorgio Marcuzzi and Menico Torchio. Apparently the main clash that led to an unavoidable divergence of opinions was the different way in which they approached the model of capitalistic development. Bettini states: « The problem, the

awareness took action. Their actions weren't suitable in a context where the interlocutors weren't workers but farmers and artisans. For more in-depth analysis of what happened see R. Biorcio, G. Lodi *La sfida verde. Il movimento ecologista in Italia Padova*, Liviana Editrice (1988) and Mario Diani (1988) *Isole nell'arcipelago. Il movimento ecologista in Italia Bologna*, Il Mulino (1988).

¹ For further information about Ecologia see the interview in the appendix and F.Lussana and G. Marramao *L'Italia repubblicana nella crisi degli anni Settanta: Culture, nuovi soggetti, identità* Roma, Rubettino editore, (2001) pag 422-424.

main question, was that it looked like [...] technology would have solved everything. I didn't believe that at all»¹. There was therefore a part of them that strongly believed in progress while the opposite side wanted to criticize the progress itself.

The outburst of contrasting view points arrived when the report “The limits to growth” by the Club di Roma was published (see Chapter 2). This report – which acknowledged the Western development model as the only one ever possible – saw an impending environmental disaster due to the faster rhythms of economic and demographic growth; the only alternative would be to go for “zero growth”. Barry Commoner, an American biologist with a Marxist background was against this idea. By organizing conferences and publishing the well known “The Closing Circle,” he supported the idea that the causes of the environmental crisis are to be found in an unfair distribution of resources and not in the demographic increase.

This debate was described in the pages of *Ecologia* and by the editorial staff – which was then defined as a «Ptolemaic Babel»². There was a discussion that led those who were against the theory of Commoner to leave the magazine. The end of this editorial experience officially ended in 1973. A description of these events is listed below:

Very few of us knew Commoner and his discovery, but the application of his analysis to our way to communicate and to do research was the outburst that destroyed our original group [...] We have always thought that ecology is left-winged not in the maximalist sense of the term, but inside a cultural approach that considers the environment an asset for everybody. Only a

¹ See interview in the appendix

² Virginio Bettini *La primavera dell'ecologia* in «La Nuova Ecologia» aprile 1981, pag. 5

political cult to the analysis could highlight the complexity of environmental problems.¹

“Denunciamo”, the newly created insert, survived “Ecologia”. This insert was started by the young people of the Milanese Ecology Movement that was made up of students who met at a series of conferences promoted by Italia Nostra in the schools of Lombardy. Bettini, a college professor, was one of the most important supporters of this activity and the first coordinator of the group. He remembers that period with these words: « They were students from high school whom I met at the conferences in high schools, then they became university students and we met again.» It’s important to focus on the story of “Denunciamo” because it is the starting point for the creation of “Nuova Ecologia”. Carlo Monguzzi and Andrea Poggio, engineering students, and Mario Zambrini, agriculture student, are the protagonists of the first phase of this adventure.

In 1978 students and scholars working for “Denunciamo” decided to start a new Ecologia – which had ended five years earlier – adding the adjective “Nuova” (new) to the title to highlight a renewed editorial project with a clear continuity with the past. The second version of the monthly magazine shows brand new elements as far as format and content are concerned. On one side, they refused to insert advertisings as that should assure the objectiveness of the scientific assessment. However, the new editorial staff seems to be far more homogeneous than before, since they share the same opinions about nature and they all think they should «reaffirm a left-winged line in the environmental analysis».²

¹ Ibid.

² Ibid.

A way of working: meetings, financing and the editorial committee

This is the first issue of a new series. It is different from the old and a bit sad eight-page „Ecologia”. It is different because we tried to make it livelier and closer to the battles fought for the environment. [...] Not less important, starting from this issue „Ecologia” is self-financed: it hasn’t been easy and we cannot take it for granted that we will be able to make it.¹

This collection of editorial staff introduced itself to its readers with these words in March 1978.

It is meaningful to see that there is a strong remark on the renewal of contents – dedicating more attention to the local area – and also a focus on the future financial and organizational settings. Bettini remembers that they hoped to publish „Ecologia” „having an advertising support also by those who produced systems for plant management and control”²: this wasn’t making it easier for the editors to get the scientific objectiveness they longed for.

Deciding to be independent from advertisings made it impossible to publish the magazine on a regular basis; the magazine depended on the number of subscriptions and sold copies. This is especially evident during the first years of activity, when the editorial project was brought into question several times. There were some instances where Nuova Ecologia didn’t come out for one or two months in a row. No issue of Nuova Ecologia came out, for instance, between July 1980 and April 1981. This was due to economic reasons and they are explained in a letter sent to the subscribers of the magazine:

¹ The collective of the editorial staff *Cosa siamo e cosa vogliamo essere* in in «Nuova Ecologia» marzo 1978.

² See interview in the appendix

A self-financed magazine like ours, that does not receive any subventions, if not those resulted from our work, cannot print issues that won't sell or that will sell just as a limited edition. Only printing a great number of copies can reduce the costs of the magazine. But this makes sense only if these copies are sold.¹

A problem with the distribution of the magazine in the bookshops was sufficient to damage the budget. This six month break fueled an economic recovery, but also brand new format for the magazine: the black and white cover was substituted with a colored one, its dimension went from A4 to A5 while the number of pages increased. On the whole, the graphics got more „vivacità” („brightness”) and „agilità” („vitality”).²

In the beginning, „Nuova Ecologia” looked very provincial: the editorial staff was based in Milan and the magazine was rarely distributed outside Lombardy.³ As far as the administration of a magazine is concerned, it is always difficult to describe its evolution. However, in this case it was a bit easier for us to collect data. Since its inception,, the magazine has dedicated the back of its cover to an important insert entitled „Come viviamo” („How we live”), which aimed at describing the technical aspects of the life of the magazine. In May 1978 about two thousand copies were printed and in August 1979 about ten thousand; as far as subscriptions are concerned – the biggest source of income – in 1978 the staff wished to get 1,500 subscribers and a year later the goal was

¹ Letter to the subscribers of «La Nuova Ecologia» September-October 1980

² The collective of the editorial staff *Cosa siamo e cosa vogliamo essere* in in «Nuova Ecologia» marzo 1978.

³ See *Ibid.*: «Soffriamo ancora di provincialismo (Milano e dintorni)»; and also *Come viviamo. Il collettivo e la redazione di Ecologia*. In «Nuova Ecologia» May 1978 and interview in the appendix.

3500.¹ An estimated seven to eight thousand copies were sold out of a possible ten thousand available. We cannot define this as a wide diffusion of the magazine, but it is certainly higher than magazines that specialized in one particular subject. The figures are even more appealing if we think that the magazine was mainly distributed only in Lombardy.

A second important element to analyze is the changes made in terms of division and organization of editing inside the editorial unit. As mentioned before, the original group was made up of no more than ten students or scholars who all shared the idea that science is not objective. The original division of competences was simple since the main goal was just to distinguish the collective of the editorial staff from the editor. Virginio Bettini was the first editor and he surely was a point of reference: he was the link to the previous magazine and a protagonist of the battle in favor of the protection of the environment in and outside Italy.² Bettini describes his role as a coordinator rather than as a decision-maker: the collective was made up of independent experts specialized in different disciplines. As he put it: «I became editor because I was enrolled in the register for journalists. When one of them, after

¹ See: Collettivo di redazione *Come viviamo* in «Nuova Ecologia» May 1978 with Collettivo di redazione *Come viviamo* in «Nuova Ecologia» July/August 1979.

² Virginio Bettini graduated in human geography at the University of Milan in 1967. In the following ten years he focused on the environmental analysis and assessment of energy sites with in-depth researches and involvement of students through seminars in the related areas. At an international level he took part in the Stockholm conference of 1972 and in the Bucharest conference of 1974, which was about the world population. Besides, he was the Italian translator of “The Closing Circle” by Barry Commoner in 1972; four years later he published a volume entitled “Ecologia e lotte sociali, ambiente, popolazione, inquinamento” together with Commoner.

having written numerous articles, became a journalist I left my office because I thought it would have been right that younger people than me dealt with these topics in a freer way. »¹ He was the editor until 1982 at which point Andrea Poggio took his place.

Between 1979 and 1980 there was a very important change taking place in terms of division of competences among the journalists: first, journalists outside Milan started working for the magazine in order to avoid «l'eccessiva milanesità»² («being too Milanese»). Secondly, in January 1980 a standing scientific committee was set up; it was made up of scholars and technicians who had seldom worked for the magazine previously. This committee highlighted even more the political influence of the magazine since people like Giorgio Nebbia and Laura Conti, both members of the Italian Communist Party, were part of it.³

It is interesting to see that nobody working for Nuova Ecologia got paid: the weekly meetings and the work in the editorial unit were extras (a «sort of militancy»⁴, as someone called it later) to be carried out to complete and refine their jobs. Bettini explains how being a journalist was integral to be a college professor: at the university there was knowledge and in Nuova Ecologia that knowledge was discussed and socially implemented.⁵ The magazine was an instrument to express ideas inside the society and to be proactive in the movement by talking about environmental questions and by pushing the movement towards one single direction. Even though not

¹ See interview in the appendix

² The editorial unit in *Per un rilancio* in «Nuova Ecologia», November, December 1979, pag. 4

³ See interview in the appendix

⁴ A. Melucci *Altri codici* Bologna, Il Mulino, (1984) pag 194

⁵ See interview in the appendix

everybody shared the same intents – each journalist followed a different path after having worked for Nuova Ecologia – it is possible to identify one main direction: the focus was on the international ecology scenario, social implication of environmental issues and political innovation. The latter seemed to be particularly urgent due to the crisis of the Italian institutions.

Contents

An international effort. The first article of the first issue of Nuova Ecologia is about the pre-electoral discussion of the French ecologists¹: in a brief text the collective of the editorial unit talks about the rise of the “green” party, its characteristics and its role among the already existing parties. French ecologists were able to take advantage of the institutional crisis and got more political space which was «much wider than the space based on environmental problems that the Left (even the new Left) had left empty». Moreover, looking at what was happening in France was a chance to look at what was happening in Italy, where the editorial unit wished the movement had a bigger political influence, that was, to be clearly left-winged.

It was not by chance that the magazine chose to debut by facing this issue: it was the first signal of an international prospect, which has been pursued since then. One of the sections of the magazine was immediately dedicated to foreign countries, where there was the possibility to discuss the environmental challenges and achievements on a European scale. The environmental matters made it desirable, if not necessary, to get a global view of the issues.

¹ The editorial unit *L'ecologia ha bisogno di un partito?* In «Nuova Ecologia», March 1978, pag 3

The oil crisis, nuclear energy, global warming, let alone problems related to air and ocean pollution – just to name a few – were all matters far beyond the national context. In 1979 “Nuova Ecologia” gave much room to the European antinuclear scenario: journalists wrote about the opposition in Germany, disapprovals in Finland and the referendum in Switzerland.

In 1981 Paolo Sala signed an important article, which described the first ecology opposition in the Eastern countries.¹ Tomasz Talbierski, member of the newly established Solidarnosc movement, talks about the ecology questions of its country in an interview. He talked about agricultural matters, water pollution, urban planning and health dangers related to factories. Rather than denouncing the «long known» global dimension of environmental issues, Sala wanted to make known «the existence of a relatively strong people’s awareness for these issues in real socialist countries».²

At an international level it’s interesting to notice the ideological relation between the editors of Nuova Ecologia and Barry Commoner and his thoughts. The US biologist’s ideas for the environment, especially in terms of energy resources, inspired each member of the magazine. Starting from the 1971 book *The Closing Circle*, Commoner showed to be a strong supporter of renewable energy sources, especially of solar power. Solar power was considered to be the best option both from an environmental and social point of view because it was less polluting and more democratic, since it was equally distributed all over the planet. The desire to involve the society in science and a Marxism-driven social analysis – as Commoner’s – were the guidelines of most articles of the magazine.

¹ Paolo Sala *Uomo ambiente e produzione in Polonia* in «Nuova Ecologia»

² Ibid.

The environment from a social point of view. Commoner's ideas, the student and worker's protests of 1968/1969 and their critics to science were the main elements which influenced Nuova Ecologia when dealing with the environment. The latter was socially and anthropically interpreted: the main topics were urban environment, ocean, air and land pollution, and energy resources. The environment to be protected was the one with the highest population, where people had fewer possibilities to defend themselves from the damages to nature, due to a profit-driven economic system. The working class was the protagonist of many articles, due to the fact that the magazine was created in a particular historical moment where the protests of workers were still going on. Denouncing the crimes of political leaders who didn't really care about the protection of health and lives of workers showed that workers themselves were the right people to pinpoint the ongoing contradiction between capitalistic development and environmental protection.¹ The following article is an example:

Our first priority is the development of a technology based on health and life, but such development must find a place in reality and give concrete answers for the environmental rehabilitation, the recovery of the biological balance. Workers can combine these two elements; they are the only people aware of the fact that these values can be an instrument (and not slogans) to change the society.²

However, the focus on the working class was not always systematic enough to create a clear editorial fashion. Beside

¹ *Come il lavoratore subisce la tecnologia (intervista a Giuseppe Erriquez, ex operaio della Montedison, uno dei pochi diplomati disoccupati, che ha avuto la fortuna di essere sottooccupato)* in «Nuova Ecologia», April 1978, pag. 8

² *Luigi Mara Ecologia è lotta, dentro e fuori dalla fabbrica* in «Nuova Ecologia» June 1978, pag. 24

articles based on what was happening among workers with more or less clear references to the Marxist ideology¹, there were other articles aiming at involving the society on the whole. The ultimate, we might say utopian, goal was a global transformation of cultural models by introducing new norms for social actions and the transformation of knowledge.² Bettini wrote: «Our work and our counter-information must be directed to normal workers», also clarifying the common ground of all articles.

Following these thoughts, “Nuova Ecologia” stood out against the referendum on nuclear power, which, if approved, would have become effective in the early Seventies. The editorial unit was against the Radical Party, accusing it of deceiving people by promising a direct democracy; the magazine believed that the right thing to do would be to raise people’s awareness about territory and science, and to not just promise them a vote.³

In favour of an institutional renewal. The editorial unit wanted to be an intellectual guide for the society and on the other hand it firmly criticized the Italian institutions. When the magazine was created the traditional structures of the State were facing a severe crisis, due to the spread of terrorism and the failure of the historic compromise. The gap between political parties and the electorate was getting bigger and bigger and

¹ See Andrea Poggio *Una nuova ecologia servirà per una sinistra nuova* in «Nuova Ecologia», pag. 8: «There are the bases for a new theoretical research inside Marxism and the worker’s movement. It is a different interpretation of the relation between nature and human history, which shall be rethought radically.»

² This is the analysis by Melucci of «Nuova Ecologia» in A.Melucci *Altri codici* Bologna, Il Mulino, (1984) pag. 206

³ Collective of the editorial unit *Antinucleare a colpi di referendum?* In «Nuova Ecologia» pag.3, 4

therefore the journalists of “Nuova Ecologia” often accused the Italian Left, especially the Italian Communist party, of not being able to seize the innovation in the society. In such context they didn’t see ecology as a gathering cross-party ideology of the already existing Catholicism and communism. On the contrary, a «abbraccio interclassista» («cross-class involvement») had always been strongly criticized; it was defined as «fatal for a correct political activity of a nation» and «a form of indifferent and sceptical behaviour towards politics that we do not support at all». The magazine was always in favour of a political struggle inside the parties.¹ This is why the editorial unit decided not to support the Green party at the 1980 local elections but to vote for those left-winged candidates who would prove to be most sensitive to environmental issues because «we won’t get supporters for our battles if workers are penalized».²

Beside the critics against the Green party, the editorial unit wished for a stronger relation between environment and economy, that is, introducing economic assessment parameters that cared about protecting the territory.³ The magazine claimed that a real environmental protection could be achieved only with efficient norms: examples are to be found in articles about the Merli law or others that support the importance of an adequate environmental plan.

¹ Virginio Bettini *Contro il partito verde* in «Nuova Ecologia» May 1978, pag. 4.

² Andrea Poggio *Un voto neppure verde* in «Nuova Ecologia» May 1980 pag. 3,4. There are other critics to the creation of the green party, see Virginio Bettini *Contro il partito verde* in «Nuova Ecologia» May 1978, pag. 4. and Andrea Poggio *Liste verdi per le amministrative?* in «Nuova Ecologia» January/February 1980.

³ See interview in the appendix when Bettini says: «I mean, we wanted the CBA to become the ECBA.. but now it is still “Cost Benefit Analysis”, CBA. We wanted the ECBA..» See also The collective of the editorial unit: *Ambiente e economia sono compatibili?* In «Nuova Ecologia» April '79, pag 4

It is clear that there is great gap between the program planning of the magazine and the instruments to make it work. It would have been impossible to meet goals like the transformation of the society and the institutions only by publishing a monthly magazine, which was printed as a limited edition and mostly read by ecology experts. Outside the editorial unit, the only effort made in order to turn ideas into practice was the foundation of Lega per l'Ambiente – today's Legambiente – in 1980. Making an in-depth description of its creation and evolution would have taken too much space and would have been off topic; suffice it to say that in time “Nuova Ecologia” would become part of Legambiente itself, by becoming its monthly magazine (as it is nowadays).

However, it would be reductive saying that this editorial experience ended with the creation of Legambiente, also for all those people who worked for the magazine. Not all of them joined Legambiente, some of them contributed for a while then went away and others continued working there. Andrea Poggio, for instance, is vice-president of the association¹. Some of his colleagues followed a different path; Virginio Bettini is still a college professor: even though he is still engaged in politics² he is still teaching and he has always tried to involve his students in his commitment for the environmental protection. Carlo Monguzzi, a member of Legambiente for a few years, started a political career; through the Federation of Green Parties he has fostered his work for the ecology in the Italian Democratic Party of which he is still a member.³ After many years of

¹ As of today – November 2011 – Andrea Poggio is Legambiente's general vice-director.

² Virginio Bettini was elected at the European Parliament in 1989 as a candidate for the „Federation of Green Parties”.

³ As a member of the Italian Democratic Party he was one of the supporters of Giuliano Pisapia who won the elections in Milan on June 1.

battles against nuclear power inside and outside “Nuova Ecologia”, other journalists ended up fighting against what they had supported till then: Chicco Tesa, for instance, was initially a member of the Italian Communist Party, then of the Democratic Party of the Left and then a strong supporter for the introduction of nuclear power in Italy during the 2011 referendum.

“Nuova Ecologia” was an experience that allowed people with different backgrounds to meet and work for common goals, maintaining their different opinions and ideas.

This magazine was a training ground of civic engagement and environmental awareness for those who worked there and it sure has left its mark on the Italian society, but most of all on those people who were part of it: the protagonists of its foundation supported their battles for the environmental protection also beyond this editorial experience, taking different paths, yet enriching the ecology scenario.

6. When Green Cleans Red. Or Why Romanian Communists Turned to Green Ideology

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The present paper shall present and explain the embracing of green ideology by the Socialist Republic of Romania (SRR). The following hypothesis is to be tested: green ideology offered a support for the credibility of the totalitarian regime instituted after 1945, regime that, by the 1970s, had less and less resources for mass mobilization. Therefore, the paper shall concentrate on analyzing the advantages that green ideology brings to consolidating state ideology.

- *Being shared by both the communist and the capitalist Blocks, green ideology became a common ground, that fostered the dialogue between East and West, in the same time offering SRR the possibility of: a) affirming itself on the international scene b) receiving international aid for overcoming major economic difficulties which started in the 1970s and c) reducing its dependency of USSR (an almost permanent desideratum of the Romanian communist leaders);*

- *A series of measures inspired by green ideology (re-usage, reconditioning, recovering, energy conservation) were used by SRR for both resolving and concealing the economic shortage installed in the early 1980s;*

- *Finally, the openness of SRR towards green ideology can be explained by appealing to the coherent transposition of ecologist ideas into the ideology of the Romanian Communist Party: both ideologies share a number of values – pacifism, anti-consumerism, anti-internationalist consumerism (and, in relation to this, of anti-capitalist imperialism); Adopting the principles of green ideology (as well as of disarmament or of*

those regarding the respect for human rights) constitutes an argument that SRR used for demonstrating its genuine support for the concept of 'popular democracy' and, as well as a source of legitimacy.

International context

The interest for environmental issues formally appeared on the international agenda in 1949, at the UN Scientific Conference on Conservation and the Utilization of Natural Resources. Since then, environment protection has been a permanent matter of concern and negotiation between states. Limiting the presentation to the direct interactions between the Communist and Capitalist blocs during the Cold War period, the context of preoccupation for environmentalism has been formally built on the following events:

- The 1963 Nuclear Test Ban Treaty between US and USSR, by which the two states agreed to stop above ground tests of nuclear weapons, one of the triggers of the accord having been the increasingly widespread dissatisfaction with the disastrous environmental damages of these practices¹.

- The 1975 Helsinki Declaration that closed the Conference on Security and Cooperation in Europe. Unlike the 1963 Treaty, which is much more likely to be analyzed solely through the realist paradigm of understanding international relations, it can be sustained that the Helsinki Final Act was built on “what came to be considered common values and political interests”² – among them, the values circumscribed by cooperation in the fields of economics, science and technology and *environment* (the second ‘basket’, or ‘dimension’ of the

¹ Mastny, p. 5

² Mastny, p. 24

conference agenda)¹.

- The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques opened for signature in 1977 and signed by most of the countries of the two blocs by the 1980s.

The cooperation between the two blocs presented a number of advantages and opportunities for the leaders of communist states.

Firstly, the accords represented a source of legitimacy for the communist leaders, for they became heads of states that are treated *equally* by the other members of the international community.²

Secondly, and related to the previous observation, among communist states, the USSR's satellite countries gained more independence from Soviet control – an objective common to both these countries and the USA: “Over the long term, they [Nixon, Kissinger and Ford] hoped, this support for the communist states' sovereignty would transform the Soviet sphere of influence in Eastern Europe from one based ultimately on Moscow's willingness to use raw military power.”³

Also, USA attempts to encourage communist states to affirm their sovereignty in relation to USSR sought the so-called “Finlandization” of Eastern Europe, the hope for “a transformation from above of the communist political systems in Eastern Europe toward a more Western model of government”⁴ – in other words, an attempt of negotiating and, finally, sharing certain political *values*.

¹ <http://www.osce.org/item/44318>

² Mastny, p. 10

³ Selvage, p. 672

⁴ Selvage, p. 672

And all these advantages suited perfectly Nicolae Ceaușescu's intentions – his plan of an independent Socialist Republic of Romania, led by an all-mighty hero. During his rule, Romania's attitude towards USSR had been, from time to time, a defying one, Ceaușescu having established close relations with China, Albania, Chile, and even with Western states such as UK or West Germany. Added to this, Romania's example served as the perfect illustration for the policy of 'differentiation' pursued by Nixon and Ford administrations. In Nixon's words, "his visit to Romania had <set in motion a series of cooperative programs in the economic, technical, scientific and cultural fields... A similar relationship is open to any Communist country that wishes to enter it.>"¹

However, although Ceaușescu's nationalism and megalomania can both provide perfect explanations for his political behavior, his eagerness to cooperate with the West was triggered by a third factor: the economic crisis Romania started to endure since the 1970s². More amiable relations with the Western bloc provided Romania with financial support from Capitalist states, in exchange for Ceaușescu's mere declaration of embracing Western political values.

Lack of trust, economic shortage and underdevelopment instead of sustainable development

The ideology of the Communist States (Marxism-Leninism) is easily recognizable, for it declares communism the final purpose. However, in the context of the 1980s crises, political systems that functioned on the principles of democratic centralism and planned centralized economy

¹ Selvage, p. 677

² See http://www.presidency.ro/static/ordine/RAPORT_FINAL_CPADCR.pdf, pp. 421-424

remain more and more behind in the competition with the West. There are various causes for the collapse of these regimes in Central and Eastern Europe.¹ Numerous studies and analyses have been dedicated to the presentation of these causes since the 1989 Revolutions. In this sense, in 1987 Paul Kennedy identified 9 factors (4 accelerating factors and 5 fundamental, long term factors) that would finally lead to the collapse of communist totalitarian regimes. Brown (1991:2-4) identified 6 factors of the same nature: 40 years of failures, delegitimization, societal opposition, loss of leading capacity amidst communist elite, better East-West cooperation, Gorbachev's government. Dahrnedorf (1990: 13-22) focuses on the following factors: Gorbachev's coming to power, the evidence that the socialist project was dysfunctional, the history of the 1980s, characterized by the deepening gaps between East and West. In another work, Kennedy (1993: 230-231) reduces the collapse of the communist system to three elements: a legitimacy crisis, an economic production crisis and an interethnic relations crisis. It is evident that a series of elements are discussed by all analysts – especially the „economic failure” of the communist states and the legitimacy crisis. We shall further try to analyze them, trying to explain the reasons for which communist political elite tried to incorporate ecologist principles.

Planned economies. Although communist economies initially entailed a number of successful results (Batt, 1991), during the 1980s „the communist world in general was not only incapable of catching up with the West, but, actually, was heading the other way around” (Holmes, 2004: 56). An explanation consisted in the fact that many centralized

¹ By 1994, only 5 of 23 states could be considered communist states. (Holmes, 2004: 22)

economies had been structured according to Stalin's directives from the 1930s, and this meant the privileges of heavy industry over consumer goods sector. In this context, the differences between Eastern and Western consumers were evident. If we add to this the fact that communist economies sought the Central accumulation of resources, followed by redistribution on strictly political criteria, we have a better understanding of the results – the neglect of population's consumption needs (Polanyi, 1944). Perhaps the most eloquent proof that the planning and redistribution mechanisms cannot function are synthesized by Verdery's observation (1996:22) that „the Centre lacked both the logistic capacities of planning <everything> and the means of controlling the extent to which the plan was being developed.” This observation opens the discussion on **the impossibility of economical calculation in socialism** (Mises, 1949; Hayek, 1948). We shall not present the arguments of the two authors, for these are widely known, but we shall further present the logic of the functioning of communist economies as „ economies of shortage”¹. For ideological reasons, planners prefer to invest in the generation of production means rather than in the production of consumer goods. And this because the investment in consumer goods seems a form of waste. Moreover, the problem is linked to the way in which economic shortage is installed. In order to answer this question, Kornai focuses on the productive enterprise. He believes that any enterprise is permanently facing a large number of constraints (related to resources, demand or budget) (Kornai, 1979). Practically, depending on the presence or absence and on the nature of the constraints, we are able to distinguish between socialist and communist regimes. In this sense, capitalist regimes are characterizes by

¹ The term *Economics of Shortages* is attributed to Janos Kornai.

constraints of demand, while socialist ones are economies characterized by resource constraints. This represents the key for understanding the ways in which economic shortage appears and perpetuates. In the conditions of insufficient resources of socialist economies, we are practically discussing the impossibility of economic growth. In the conditions of buyers' uncertainty regarding supply, the tendency to save determines a growth of demand, therefore determining an increase of the probability of economic shortage. „Also, those who solicit certain budgets within economic planning exaggerate their needs, anticipating a period of economic shortage. These exaggerated demands also encourage economic shortage. These exaggerated demands also encourage economic shortage.” (Flonta, 2005). The practical consequences of the failure of planned economies appear in the 1980s governmental programs. In this sense, starting from 1981, Romania decided the rationalizing of bread, milk, sugar, meat and meat products. One year later, the household distribution of electrical energy was limited (this measure having been maintained until 1989). Practically, power-cuts were a daily routine. „Simultaneously, the citizens were urged to save electrical energy by unplugging freezers during winter, by avoiding utilizing elevators, washing machines or other household appliances. Also, heating energy was rationalized for households, a measure with dramatic, if not lethal, consequences for the health of the population.” (Tismaneanu, 2006: 443)

Links between communist and environmentalist ideologies

Close ties between communist and environmentalist ideologies can be traced as early as the 19th Century. Karl Marx's writings state that “Man *lives* from nature, i.e. nature is his *body*, and he must maintain a continuing dialogue with it if he is not to die. To say that man's physical and mental life is linked to nature simply means that nature is linked to itself, for

a man is a part of nature.”¹ Marxism is preoccupied with the impact of human activities on the environment and with the relations between man and nature that are determined by the stage of development of material life conditions. Regarding capitalism, Marx affirms that “Capitalism may have contributed to the overcoming of traditional and mythical perceptions of nature, but the alienation of people, starting from the development of the institution of private property and implying the dispossession of the means of production and the natural conditions of subsistence from the majority of direct producers, namely the disruption of the people-nature unity, reaches its apogee with the development of capitalism.”²

Being inspired by Marxism, environmentalist ideologist today firmly state the disastrous impact capitalism has on nature, evoking “its [the capital’s] ecologically and socially devastating core commitment to expansion, accumulation, and profit”³, which is “both disinclined and unsuited to pursue an ecological agenda”⁴. It is sustained not only that environmentalism and Marxism are presented with “a great field for collaboration, mutual interaction and common struggle”⁵, but also that environmentalist solutions are correctly and efficiently formulated only within a framework of analysis of class struggle: “where the private and the civic dimensions would merge would be in developing a full-scale class analysis of responsibility for the current crisis and, with it, a movement which could pose a systemic alternative”⁶ and “if the experience of environmental destruction should stimulate

¹ Foster, p. 2

² Liodakis, pp. 116-117

³ Wallis, p. 27

⁴ Wallis, p. 32

⁵ Liodakis, p. 137

⁶ Wallis, pp. 35-36

further development of Marxist theory, this should be in the direction of a more specific qualitative and class analysis of the productive forces, of science and technology”¹. In conclusion, “communism entails all those necessary conditions for the resolution of the ecological crisis and the reconciliation of people with nature²”, and, more bluntly, “the transition to socialism and the transition to an ecological society are one”³.

In the context of the existence of certain coherence between the two ideologies, the ease with which Ceaușescu’s politics and policies embraced green values is understandable. Anti-consumerism, re-usage, re-conditioning, recycling, environment protection, pacifism, anti-internationalist corporatism became common grounds for Romania and certain Western developments, and, therefore, a support for the cooperation between the two blocs. This aspect, in its turn, firmly sustained Romania’s interests as an international actor, interests described in the first part of this paper.

Another important advantage brought by Romania’s adherence to environmentalist values is to be regarded from the point of view of internal affairs. Considering that green ideology is politically configured on four pillars – ecology, social justice, participative democracy and non-violence –, the embracing of environmentalist principles proved that Romania was a genuine popular democracy, this becoming a source of legitimacy for a state that was facing the peril of losing popular support.

It is for these reasons that the 1970s and 1980s Romania pursued a number of policies of environmentalist nature that were to be found in almost all domains – recycling programs in schools, programs of technical equipment reconditioning in

¹ Liodakis, pp. 136-137

² Liodakis, p. 135

³ Foster, p. 11

factories, recycling centres, mass communication materials that entailed messages of forests and rivers protection, rational nutrition, rational energy consumption, examples of do-it-yourself practices etc.. Also, the promotion of these values has been made in a formal manner, by adopting the Law no. 9/20 June 1973 on Environment Protection (this being the sequel of June 1972 Declaration of the United Nation Conference on the Human Environment).

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7. State of a Rich Coast: Transforming and Representing Nature in Costa Rica

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Throughout this paper, I will present a concrete set of socio-politically-constructed examples of Costa Rica's nation-state influence on its population in the late nineteenth and twentieth century, during which specific state-triggered mechanisms and events transformed that society's ideas and relationships to its environment. First, the time period ranging from the country's independence in 1821 to the formation of its second Republic in 1948 will be discussed in the context of agriculture and citizens' relation to land. In parallel, several bouts with natural disasters will be presented, since they significantly shaped the state's organizational make-up and the mindset of the population towards nature. Second, the individuals and institutions with a prominent role in state-run institutions and circles in the late twentieth century will be shown to have exerted enormous political force in favor of the creation of natural parks. Finally, this paper will revisit the relevance of several laws and educational reforms as a form of State-generated if nature-based symbolism, all of which portray Costa Rica's affinity to its natural setting throughout the twentieth century.

The Early State and its Ties to Nature

The focus of this paper looks at the period after Costa Rica's independence in 1821, in particular by providing several cases of state-created views of nature after that point in time. Costa Rica's relation to its environment during the early post-colonial years and early modern period is a familiar tale of capitalism and

state-driven liberalism. However, its settlements and cities were founded relatively late, since many European colonizers considered the terrain and sheer wilderness too rough to cross or live in. The city of Cartago was founded in 1565 and served as its first capital until 1823, two years after Costa Rica's independence. In that year, the capital was transferred to San Jose, where it still remains. Later on, Costa Rica garnered interest from certain larger nation states in the post-colonial years as a possible site for an inter-oceanic canal but was ultimately displaced by Panama. The nation also endured several years of civil unrest (roughly from 1821 to 1841), during which the populace was torn between acquiescing to form part of the Mexican Empire or the Federal Republic of Central America, although both attempts finally failed.

During the mid-to-late nineteenth century, agriculture was the mainstay of the Costa Rican economy, with coffee and banana eventually gaining prominence as the two most important exports products through the first half of the twentieth century. As early as 1871, only 50 years after declaring its own independence, the central government of President Tomas Guardia (1870-1882) secured the financing from English creditors for rail transportation, having finalized 130 miles of railway construction by 1890 through the Soto-Keith agreement (Foscue 1941, Pflug 2010). In 1899, with the merging of Keith and the Boston Fruit Company into the United Fruit Company (UFC), an important agent of landscape transformation came into play. The trade agreements that followed over several decades ultimately created a railroad system stretching from coast to coast. Clearing forests to boost production for the agricultural and lumber industries and later, for rearing livestock was "the major thrust of agrarian policy" (Nygren 1995). The reactions of Costa Rican citizens to these agrarian and transportation systems were initially welcoming

and accepting but their attitude towards these state-mediated developments would later change. This gradual shift was due to the alarmingly passive role of the State during the early years of exploitation foisted by the UFC. This passive statesmanship is further evinced through the land concessions schemes for monoculture that the State adjudicated, mostly in exchange for labor and infrastructure. A case in point occurred in 1910, when the Costa Rican government supported the UFC's monopoly over land cultivation by sending 250 soldiers to the Caribbean coastal city of Limón in support of UFC's desire to suppress a strike. Guards were posted along the railway to prevent workers from leaving the plantations or marching towards the city in an act of rebellion against extremely poor working conditions. Even worse, the land and banana plants themselves came to represent a trap for many plantation workers and citizens in general. Their relation to nature was skewed for many years, as UFC was permitted to systematically eradicate subsistence farming anywhere on its lands. A case in point around the year 1909 saw the government allowing the UFC to charge "rent" from the indigenous population of the Talamanca Mountains to work the land, even though the company had abandoned the territory years before and needless to say, the indigenous population had been around long before (Fallas 2007). The State's capitalist-oriented stance did not readily change, but it was not always unfavorable to the average citizen as seen in the next example.

The late-nineteenth and early twentieth century history of coffee plantations stands in remarkable contrast to the banana industry, insofar as the State intervened to guarantee that Costa Rica's coffee bean quality was not compromised by international fluctuations in supply and demand (Peters 2004). More specifically, the crisis at the turn of the twentieth century and during the time of the First World War prompted the

emergence of a protectionist State as well as the creation of the Department of Agriculture in 1911 (Vega 2006, Naranjo 2007). Through its newly-founded Department of Agriculture and the subsequent creation of regional productive units, the State imparted tax concessions and economic incentives to small and medium-sized coffee producers. This period, in turn, invigorated the sense of connection to the landscape that many Costa Ricans may have already felt, especially through the imagery of the nation's coffee (and consequently its producers) as being the best kind of *Coffea Arabica* in the world. Other occurrences of state-induced mechanisms that favored a direct connection between land and the humans can be found in this period, such as the noteworthy State-mediated interventions to protect nature, including the law banning dynamite fishing in 1881, the watershed extraction law in 1884, the turtle hatcheries protection laws in 1906 and the Fire Law in 1909 (Evans 1999, Steinberg 2001). The Watershed Law of 1884 deserves a closer look for the purpose of State-induced perceptions. This law was revised in 1923, creating an incumbency for local Water Inspectors in each of the country's 81 municipalities (MINAET 2004). The legal text offers a description of Costa Rica's rivers that praises the hydrology of the land through an effervescent call to explore the natural frontier, written as it were by none other than the Founding Father and First President of the Republic, Jose Castro Madriz:

“Being of great importance to understand the mineral properties of our (abundant) waters through a chemical exam {...} all governors are to carefully collect two bottles of fresh water from all those special sources of origin known in their jurisdiction {...} to submit to the Secretary of External Relations and Europe {...}” (Archivo Nacional 1879)

I have found few other early legal sources in favor of nature preservation that demonstrate the connectivity between

humans and environment as explicitly as above. It is possible that other legal stipulations were not concerned with preservation or sustainability, nor did they presage the twentieth century problems of water source contamination, sewage and dumping. Their concern was extraction and use of natural resources. The predominant visions of nature upheld by the State in these periods, correspond broadly to the dream of limitless natural resources and huge agricultural schemes found in many other high-modernist nations around this time (cf. Scott 1998). Any enforcement of the written provisions, such as the "Conservation Law" of 1906, did little to actually preserve nature (Steinberg 2001). Even so, a few conscientious politicians, such as President Bernardo Soto who cautioned against excessive misuses of land in his presidential term as early as 1885 or Secretary of State Enrique Jimenez, who in 1912 beseeched the slash and burn agricultural practices that were still in practice, remain central to the realization of an environmental and societal juncture. Since agriculture would in turn remain the nation's strongest industry throughout most of the twentieth century, it serves to reason that the State would intervene in this sector early on. The State's initial management and regulation of this industry can afford relevant precedents for the strong nature-nation relation that would ensue. Following the foundation of the Second Republic and Constitution of 1948, the State's active creation and monitoring of regulatory processes pertaining to land use and natural resource extraction accelerated. This is in clear contrast to its previous role and can be ascertained through the growing number of laws and presidential decrees regulating the agricultural and land use sectors. According to the Department of Agriculture, (which changed its name to Ministry of Agriculture and Livestock (MAG) in 1948), before the Second Republic, only about 12 laws or decrees had affected their

jurisdictions, compared to more than 40 such legal policies in effect just a few years later.

It is interesting to observe the light in which farmers and agrarians were cast, as communicated by MAG's official annual report in 1951, in which it boasts its brightly illustrated "Suelo Tico" publication as a new agricultural educational tool, ideal for its "unread, simple audience" (MAG 1951:47). President Jose Figueres Ferrer's direct involvement in many issues related to agriculture and land use certainly motivated many official and civil figures of his time to follow suit. In 1950, his government successfully introduced the Natural Resources Conservation Week, "with the goal of inspiring reflection among every Costa Rican man, woman and child, in the countryside and in the cities, on how to live in harmony with Nature, to create a propitious climate for conservation planning, in which the citizen will understand that this patriotic work is not merely an obligation for the organs of the State, but a responsibility shared by all" (Suelo Tico 4 (21-22) in Steinberg 2001). Multilateral engagements also increased, with Costa Rica's official participation in and sponsoring of various international panels such as the Inter-American Conference on the Conservation of Renewable Resources held in Denver in 1948. However, the State's golden years of conservation and of seeing nature's intrinsic value still lay ahead.

National Parks, Protected Areas and Disaster Cultures

Costa Rica's adoption of sustainable development and nature preservation schemes increased enormously during the next decades and it is well established that Costa Rica's protected areas predate other regional conservation zones (The Nature Conservancy 2011, Evans 1999). In fact, "the capstone of Costa Rican conservation policy... most known to both Ticos and foreigners is the country's system of national parks and

other protected areas" (Evans 1999:72). This trend can be seen in the context of national parks creation, where the legal protections afforded to only a few protected areas in the system's first years grew to encompass over 25% of the entire territory by the end of the twentieth century (SINAC 2011). The current network includes national parks, national monuments, forest reserves, protected zones, biological reserves, national wildlife refuges and wetlands, covering approx. 28% of Costa Rica's national territory (Evans 1999, Goebel 2005, Pagiola 2006). To this end, the international transfer of ecological knowledge and awareness is key to contextualizing the country's accomplishments. The extant academic and scientific community in the nation's higher-education system and research organizations certainly played a major role. The conservation-oriented philosophy and actions of internationally-renown individuals such as Leslie Holdridge, Gerardo Budowski, Alexander Skutch, Archie Carr, Daniel Janzen, and Kenton Miller, for instance, helped assure the initial victories towards establishing Corcovado, Monteverde, Tortuguero and Guanacaste national parks. There were also many bilateral Costa Rican activists such Luis Fournier, Mario Boza, Rodrigo Gamez and Alvaro Ugalde, who contributed their knowledge and led the push for conservation policy at the national level, including the creation of several protected areas or reserves. Of course, these milestones would not have been reached without a strong political will or State sponsorship. In effect, aside from their work as scholars and scientists in their own fields, these influential individuals occupied top positions in the Legislative Assembly, the Board of Tourism, the MAG, the National Park System and the National Institute for Biodiversity (InBio) to name a few. For the decades spanning from the sixties to the nineties, Costa Rica's political spheres' underwent a "greening" process because of these figures'

placement into many institutions of national relevance. Their political clout was not only pivotal in shifting many of the State's most noticeable decisions to promote a vision of nature conservation under a favorable light, but in fact also created long-lasting trends of environmental protection in Costa Rica's socioeconomic policies. Ecotourism was an especially prominent motor for state-sponsored iconology (see Figures 2 - 3). The presence of such conservation-minded scholars not only provided Costa Rica with a scientific backbone for the future of its national parks system, but it also cemented Costa Rica's future reputation as an international leader in natural resources conservation, environmental services payment systems and clean energy, all a source of great pride for the nation (Landreau 2006, Pagiola 2006). More importantly, in 2004 it was estimated that only 54,480 hectares or 1.07% of Costa Rica's national parks and protected areas are still privately owned and protected (Godoy, 2004), in contrast to other moments that were highlighted through this paper.

On the morning of April, 10 1963, Irazu Volcano erupted after a long phase of dormancy. Over the next two years, it created thousands of tons of ash deposits in the surrounding areas, significantly disturbing agriculture in the central region of the country, where most of the coffee production originates. Adding to this event, that same year, widespread flooding of the Reventado Volcano and Reventado River basins occurred, prompting the government to create the Civil Defense Office (CDO) in 1964. Also in that year, the Executive branch declared the affected landscapes within a kilometer on either side of the river basin to be national reserves. The State re-acquired some land from the UFC and charged only 5% of the normal tax on all national coffee production for the next two years. In addition, it passed a law authorizing the National Treasury to deduct the equivalent of one day's salary for all willing state employees

wishing to donate to the "Irazu Emergency Fund" (Peraldo and Mora 2004, Gobierno de Costa Rica 1964). As nature would have it, the remaining part of the sixties and seventies decades went by with no major natural disasters, with the exception of a small eruption of Arenal Volcano in 1968. In any case, these events were reason enough to trigger the Legislative Assembly's passing of the National Law of Emergencies in 1969 and National Seismic Code in 1974, as well as the subsequent approval of permanent funding for the Commission for National Emergencies (CNE). Looking back, it seems that the CDO and other similar institutional branches have proven to be highly instrumental in the State's direct transformation of nature. A case in point is seen through the CDO's history of involvement with responses to various natural disasters through the years, which did more in the way of natural resource conservation than actual disaster mitigation. As mentioned before, the State presently handles crises, catastrophes or events through the CNE but after its creation, the central government used the CDO infrastructure to initiate a program of reforestation for disaster-affected zones that lasted two decades (Lavell 1996).

It is noteworthy to compare the state's reaction in earlier years, namely during two other volcanic disasters of great magnitude in 1723 and from 1917-1919. State's submission to nature is especially evident when looking at their condoning of the Catholic Church's reaction of humility. During the earthquakes and volcanic activity of 1723, national soldiers and other state officials united with the clergy in a litany of processions and prayers for the crisis to cease, which seemingly motivated the general population to follow suit (Peraldo and Mora 2004). In reference to the volcanic activity of Irazu in 1919, an interesting narration of a Costa Rican citizen who scaled the Irazu crater may shed light on the public's interpretations and relations towards nature:

"The lava flow invades nearby villages with undeniable cruelty, and the very nature we think of as prodigious and that so many times has made us proud, now from its fertile bowels exerts its passage, making us feel its agony amidst rivers of fire and sandy twisters" (Diario de Costa Rica 1919).

This narrative again shows the subversive power of nature rebelling against its people, as well as the average citizen's interpretation of a symbolic and fierce landscape, capable of swallowing entire villages in proximity to the abundant volcanoes or through seismic activity in the countryside (Peraldo 2003, Peraldo and Mora 2004). This culture of reverence towards the natural world can also be examined within a social context, in particular, by stressing the importance of national education and legal conduits to activism.

Environmental Education and State Symbolism in the Twentieth Century

The 1940's were certainly transformative in terms of social and political changes that occurring before and after the Revolution of 1948, as well as for Costa Rica's educational and legal structure. Incidentally, the Revolution also permitted Jose Figueres' government to abolish the army, gave women the right to vote and implemented the largest national public university project to date in the country, with the founding of University of Costa Rica. The remaining three public universities were not created until the 1970's, namely the Instituto Tecnológico de Costa Rica (1973), the Universidad Nacional (1973), and the Universidad Estatal a Distancia (1977). Ironically, the nation's most taxing agricultural and livestock expansions took grip in the decades after Figueres' government, despite the ongoing warnings sounded by agronomists', biologists' and even politicians in power after 1948. Unfortunately, deforestation and goes hand-in-hand with

the industrialization of agriculture and loss of habitat through exploitation of resources seems to agree with booming tourist industries. Nevertheless, these economic obstacles did not impede the emergence and strengthening of key educational institutions as mentioned above, eventually setting the stage for Jose Figueres Olsen (elected to the Presidency in 1994), son of the revolutionary statesman and president Jose Figueres Ferrer, to advocate for a sharp incorporation of sustainable development curricula into the nation's primary and secondary classrooms. Following in the footsteps of the first Figueres to be president, his government also reinstated laws and projects at the institutional level that had previously been left on paper. Two relevant examples of policies that the State thoroughly revisited during his administration are the Organic Law of the Environment in 1995 and the Forestry Law in 1996. Since the revaluation of these two key regulations, which intended to protect the primary forests and gave a legal footing to the park activists, the State and the people have successfully managed to provide protection to many ASPs. The legal pathways available to activists in Costa Rica today support citizen engagement in all matter of conservation issues, greatly in . A reading of certain objectives contained in Article 2 of the Organic Law of the Environment exemplify the strong tone that the State wishes to convey to its readers as regards nature:

"To regulate individual and collective human conduct, both in public and private enterprise as regards the environment, as well as the relations and actions emerging from the advantageous use and conservation of the environment."

Similarly, Article 4 alludes directly to human relations to the environment and the coevolution of environmental and social activities:

"The State will facilitate through its institutions, the implementation of an environmental indicators information,

created to measure the evolution and correlation of these to the country's other economic and social indicators."

In this light, Costa Rica's educational and legal systems can be seen as an important catalyst for molding public views of society and its relationship to nature. In particular, the universities facilitated a "transition of the State from a model dominated by a public, social democratic philosophy to a model based on (...) the problems of and transformation of the society of which it is an integral part" (Iglesias in Guardian 1993, p. 9). For instance, participating in a year of community service as a way to obtain college credits as well as several mandatory university courses about national and societal problems encouraged a new generation of students to reflect on an emerging identity based on a Costa Rican, rather than foreign reality (Twombly 1997). Even more, the Organic Law of the Environment actively engages students to take part in regional councils and the culture of environmentalism (Ley Organica, Art. 12). Additionally, the Organic Law of the Environment has attempted to actively involve every citizen in the decision-making processes, encouraging the protection of nature at the municipality level, for example, by limiting and controlling community waste. Similarly, the Organic Law of the Environment may be seen to have empowered the entire population to act as stewards of nature, by lawfully allowing and encouraging a culture of whistle blowing in opposition to environmentally unfriendly projects. In few words, Figueres' official stance and lasting contribution to State-mediated views of nature is the concept of sustainable development. This was his official campaign slogan and it has had a lasting effect on a young generation of Costa Ricans, as well as abroad, predominantly in an age when environmentalism is on the rise worldwide. In the two decades since he took Office, the nation has built on a strong legacy of state-led conservation, founding

an additional 50 or more national parks and protected areas (SINAC, 2010), re-enforcing criteria for conservationist agriculture, watershed protection, and especially social awareness through education, all of which changed society's relation to nature and cemented Costa Rica's reputation as the darling of conservation in Latin America. (Evans 1999, Steinberg 2001). The shift in the State's outlook strengthened the existing foundation vis-à-vis an environmental consciousness already underway for a nation in touch with its natural treasure. An interesting so-political challenge put forth in recent years by the State is the aim to make Costa Rica the first carbon-neutral free by 2021 (The Nature Conservancy 2011).

Through this paper, I have presented a brief historical analysis of several key periods during which a dynamic interaction flourished between nature and land on the one hand and State-based institutions (backed by academia and science) on the other. It is clear that the natural symbolism in Costa Rican State' response to socio-cultural transformations in the nineteenth and twentieth century is a central part of the population's identity and the government's work. The underpinnings of a new generation of politicians, statesmen, scientists and conservationists is certainly at work through the environmental milestones that have been reached on paper, although truly sustainable implementation mechanisms are still lacking. In short, the State can be said to have shaped the present and future cultural representations of Costa Ricans' realizations of perceived stewardship over nature by progressively guiding the social (both public and private), political and scientific domains linked to the environment.

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