



Environmental history for the Anthropocene: perspectives on environment and development in the locality

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Introduction

Scientists today are being described as the historians of the future. There is an emerging consensus among earth system scientists to designate the last several hundred years, particularly since the industrial revolution as the Anthropocene in view of anthropogenic climate and environmental change. By ceding the terrain of history to scientists in this debate on the Anthropocene and foregrounding planetary narratives on the fate of humanity, we note that locality, class, gender and race risk being glossed over. Historians, particularly environmental historians need to reclaim their turf. This commentary emphasises the significance of looking the impact of the Anthropocene in the locality by developing a more pointillist approach to the impact of climate and environmental change and responses in particular locales and on specific communities and calls for targeted historical research that enables this. It draws on environmental history research in Eastern India.

With progressive liberalisation and trade links with world economies India is being transformed at an unprecedented rate. Landscapes and livelihoods of indigenous communities are being significantly impacted on by this pace of change. One such area is the predominantly tribal area of Eastern India (Odisha, Chhattisgarh and Jharkhand) which is undergoing extensive mining development, particularly since 1991 and consequently rapid industrial pollution including by companies that are listed on the London Stock exchange. The region is highly vulnerable to climate change and an investigation into the dual vulnerabilities posed by climate change and globalisation has not adequately been attempted. The region and the ecological traditions of its tribal inhabitants need to be viewed in the light of recent debates on Sustainable Development goals in the Anthropocene.

The term Sustainable Development, first used in policy circles after the publication of the Bruntland commission's report in 1987 was seen as an oxymoron. The Bruntland commission defined Sustainable Development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' The important question that is often raised is, how needs are defined in different cultures. It is this kind of reasoning, that is used by developing countries who see the gains from accelerated economic growth as an immediate reward while environmental mitigation seems to benefit the rich world. One can argue, that mainstream economics with its emphasis on wealth creation undermines sustainability. Sustainable Development discourses also disguise the ways in which environmental costs are passed from the North to the South in the form of toxic wastes. Furthermore, the technological solutions and the means to overcome resource scarcity including the substitution of some natural resources and cleaner environmental products and services may have contributed to the next generation of environment problems. As, M. Redclift notes, 'we cannot ignore the centrality of environment and sustainability in a radical programme for bringing about substantial changes in late capitalism' (Redclift, 2005).

How do we then revisit the idea of Sustainable Development in the Anthropocene? In a recent article, this idea is redefined as 'development that meets the needs of the present whilst safeguarding earth's life support system on which the welfare of current and future generations depends'. (Griggs, et.al, *Nature*, 21st March, 2013). It has been argued that discounting the future and valuing the present is much easier to do in materially poor societies in the global south where

survival itself is at stake but, this argument is certainly not true for indigenous societies, for example, in Eastern India whose attitudes towards the environment are intergenerational and conservationist. These sustainability debates are at the heart of traditions in India's tribal heartland. These are communities whose values and ways of co-existing with nature in the past help us learn useful lessons. Research that explores the environmental history and anthropology of particular communities and localities will help uncover what Hulme calls 'alternative ways of living on this earth', detail the impact of the Anthropocene in the locality and allow us to re-imagine how we live on this earth.

Eastern India; the Anthropocene in the Locality

Travelling through the mining town of Noamundi, in Jharkhand in 2013, I was struck by the presence of red oxide dust everywhere. On my clothes, on houses, on people, on the once brightly painted advertisement for Tatas noting that it was a company that valued its CSR. Noamundi has a long history as one of the centres of the mining industry in Eastern India since the early part of the twentieth century. Above the local town with its withered trees and red oxide dust was the officers colony with its bungalows and its tennis courts and its magnificent views of the reserved *sal* (*shorea robusta*) forest of Saranda whose proportion set in the colonial period were rapidly eroding under the pressure of development following the cleansing of Maoists in the region. This was a forest which is extremely important in bio-diversity and cultural terms both for local communities and the Indian imaginary. Local communities had long preserved their forest and ritual traditions of the sacred grove had clearly defined prohibitions for cutting down trees. Colonial legislation following the tribal rebellions of the nineteenth century had sought to protect what they regarded as 'tribal natural heritage'. In 2005, Saranda forest which is part of the core elephant reserve was in a bid for world heritage status by the ministry of forest. It later became a Maoist stronghold in the long fight between disaffected intellectuals, local communities and the state over right to resources and the growing poverty and inequality in the region. Following the purging of the Maoists in the region the Saranda development plan sought to hasten the carving up of the reserve into mining leases ('Deathknell for Saranda', 2014). The story of Saranda forest replicates the story of many protected and reserved forest areas in India today under threat from development.

The most mineral rich areas of Eastern India are also the areas of greatest forest diversity and tribal populations. Tropical forests are rich in bio-diversity and play a far greater role in carbon sequestration than temperate forests. About 25% of the population in the region is tribal amounting to 23,406,716 people in an area of 370, 728 km. As tribal communities are displaced, their land and resources taken over for mining and metal factories, their lives are changed at every level. From a livelihood based largely on self-sufficient subsistence agriculture, supplemented by hunting and gathering in the forest, they are forced to become industrial labourers, living in resettlement colonies in swiftly industrialising areas, where poverty takes a radically different form. Tribal people, officially termed as India's Scheduled Tribes (ST) are known as *Adivasis*, meaning original inhabitants or indigenous people. The Fifth schedule of India's constitution guarantees the non-alienability of ST land-except in projects involving 'public purpose' and the national interest: a loophole that has involved mass dispossession using the draconian Land Acquisition Act of 1894. Over 10 million *Adivasis* are estimated to have been displaced by 'development

projects' since independence (Fernandes, April and December, 2006) part of the historic injustice in the way in which tribal people have been treated in independent India according to a recent Supreme Court judgement.

In recent decades, the energy-intensive and resource consuming aluminium, steel and coal industries have come in for high profile debate concerning environmental and climate change issues. Critics of the mining industry accuse it of monopolising the natural resources of remote populations in tropical countries condemning them to the fate of a 'resource curse' (Auty,1993,Watts, 2004). Whilst it has been recognised that the industry has helped in alleviating poverty, attracting Foreign Direct Investment, offering well paid jobs and stimulating industrialisation, it has also been criticised for wreaking environmental damage, depleting non-renewable resources, bringing about pollution, displacing populations, depleting ground water sources and annihilating tribal culture. Scholars have been slow in addressing these issues. Indeed, even though the industry has been one of the first activities to encounter environmental restraints and lawsuits, most of its history has been written through economic or technological hard science perspectives and little on its social and environmental impacts (Ballard and Banks, 2003).

Resistance to the extraction and selling off of iron ore in particular, and of numerous mining and metal factory projects, and the related infrastructure has multiplied locally as well as internationally, in various arenas from grassroots struggles to transnational campaigns by non-governmental organisations (Moody, 1992, 2007; Padel and Das, 2010). International norms and regulations on environment and displacement as well as the discourse on human rights and the rights of indigenous people have given a new source of political leverage to transnational actors and empowerment to local populations. (Khagram, 2004). In many largely under-researched cases local communities who come to a deadlock with the mining companies over huge inequalities of access to their local resources are able to tap into these discourses. Drawing on indigenous traditions of sustainability, the main cause for tension between the state, mining companies and local communities can be seen to be displacement, the redistribution of resources without proper consultation, pollution and ecological change resulting in a range of conflicts from non-violent protests to armed insurgency. The nature of these conflicts is relevant to the fate and resilience of traditional societies faced with the monopolising of natural resources and the inflow of industries, capital and the global market (Guha, 1989, Alier, *EJA Atlas*).

Targeted Research

This commentary highlights the importance of inter-disciplinary and targeted research that aims to combine environmental history with social anthropology to offer fresh models to analyse the complex changes facing these communities in the Anthropocene. The impact of mining on local climates, landscape and livelihoods in Eastern India and the links between globalisation and environmental vulnerability and the locality needs to be studied in the *longue duree*. For India, the approach to environmental history developed by Damodaran and Grove (1998) make use of archives and oral history to gain a clear understanding of ecological traditions and landscape changes from pre-colonial and colonial times to modern independent India. Crucial turning points include the colonial interventions of the East India Company and the massive environmental changes introduced from 1800 until 1947, the first five year plans and the first big dams during the

1950s and the new economic and mineral policies of 1991 that opened the door to a huge increase in foreign investment in mining. This approach assumes an intimate knowledge of the history of industrialisation and its impact on nature, society and climate at the level of the locality. We draw on the overall environmental history of South Asia, worldwide studies of extractive industries like aluminium (Graham, 1982, Barham et.al 1995, Bunker et al 2005, Padel and Das, 2010) and studies of mining in India (Damodaran, 2008, Kalshian, 2007). The anthropological approach developed in publications by Padel and Das consists in the application of the concept of social structure, both to communities of indigenous cultivators and also to the overall power structure, to understand the core system of ecological values and beliefs that drives the process of responding to change.

The significance and originality of such research cannot be doubted. Firstly, combining environmental history with social anthropology offers fresh models for analysing the complex challenges facing Eastern India's inhabitants and attempts to address the key question of ways of re-imagining how we live on this earth. If India and China continues to strive for the same modes and levels of production and consumption that have historically prevailed in the West, our planet and all forms of life will be severely threatened. We need to draw on our indigenous traditions of sustainability and alternative ways of living on our planet.

Conclusions

It appears that only such micro level research at the level of the locality and the histories of local communities and its interactions with the environment will improve the regulatory processes related to big business with better outcomes for peoples, livelihoods and the environment. Such an approach will foreground the locality, its communities and articulate the connections between global capital and local processes. Based on such research one can make the case that national policies in India should place a value on natural capital and a cost on unsustainable activities. The current pressure to deforest reserved forest areas in the interest of development and at the behest of global mining companies and to reduce India's inviolate area in terms of forest reserves from 5% to 3% needs to be resisted in the long term interest of future generations. We could do well to learn from local traditions of sustainability. Sustainable Development goals in the Anthropocene must be revisited to include local ecological traditions, communities and the planet.

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