

COMMENTARIES

This section contains short versions of papers that were presented at the Mining in a Sustainable World conference (UNE, 13 to 15 October 2013). The papers were submitted by authors for inclusion in the journal but not for peer review.

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Planning for social sustainability in natural resource regions: The Colombian case

Isabel Buitrago-Franco

Centre for Social Responsibility in Mining, Sustainable Minerals Institute, School of Geography, Planning and Environmental Management
The University of Queensland

Tathagata Chatterji

Faculty of Architecture, Planning and Design, Manipal University

Under the rubric of sustainable livelihood approach, the social sustainability of local communities has increasingly come to be recognised by international organisations as a crucial developmental objective. However implementation of such concepts, particularly in the context of mining and other forms of natural resource extracting economic activities from remote regions of the Global South, are problematic; social objectives frequently face counter narratives of economic growth and environmental conservation. To mitigate these conflicting demands, current development literature had emphasised reorienting the planning system by, firstly, devolving greater power from higher echelons of governance to local agencies and, secondly, making the planning process at the local level more participatory so as to accommodate the concerns of affected local communities. Our research, however, shows that devolution of planning responsibilities by themselves are inadequate to meet social sustainability objectives unless there is concurrent efforts to strengthen the capacity of the local agencies on planning matters. Our research is based on case studies of Antioquia and Risaralda, two mining districts of Colombia

In recent years, heightened global demand for natural resources is leading to an escalation of mining, oil and gas operations in Colombia. However, there is growing discontent among local communities who feel left out of this economic boom and remain stuck in poverty. Under these circumstances, the need for the corporate sector to be more involved in carrying out development works at the local level is recognised by higher levels of the Colombian government, local civil society activists and mining companies themselves. However, our research shows that social objectives are, to a large degree, handicapped due to capacity constraints in planning issues at the local agency level. Our findings draw attention to specific institutional deficiencies in political and technological terms that inhibit local agencies from playing stronger roles in multi-stakeholder scenarios concerned with planning for social sustainability in resource regions.

The weak institutional capacity of the Antioquia government has become an impediment for channelling gains from mining into sustainable livelihood opportunities. Due to poor planning practices and procedures, the compensation for natural resources extraction are being frittered away rather than being utilised to meet local development aspirations. In Risaralda, however, a stronger and better equipped local planning



agency had been able to forge together an effective developmental coalition, comprising of the mining corporate sector, and local civil society activists - which in turn contributed to greater employment generation and more focused infrastructure delivery. On the whole, the research highlights the crucial need for capacity building of the local planning agencies as a pre-requisite for achieving social sustainability objectives.



Mining for development - destructive and divisive: Eco-villages as an alternative form of development

Johanna Garnett
PhD Candidate
University of New England

In 2011 the Australian Federal Labor Government launched its 'Mining for Development Initiative' (MDI). The objectives of the MDI are to assist developing and poorer nations in developing a sustainable mining industry and to assist in the management of this mining industry once established. I believe, however, that the practices and processes of the MDI are unsustainable and environmentally, socially, economically and culturally destructive and divisive. Focusing on mineral extraction for state building is shortsighted and outdated because it ignores the long-term environmental, social, economic and cultural impacts. We should be considering alternatives for development.

To this end, I have been researching the growing 'localisation' movement and, in particular, the concepts of 'eco-villages' and 'permaculture'. Eco-villages are designed around the concept of local economies, community, self-sufficiency and more ecologically sound practices and processes. Eco-villages are models of alternative economic and social structures, practices and processes and, as such, offer an alternative paradigm to the dominant western world - one of unrestrained growth and materialism. Permaculture is a holistic practice aimed at integrating farming and living practices with local environments and eco-systems. It is gaining popularity as a sustainable design system in both rural and urban areas.

As part of my research, I spent a number of months earlier this year living on an 'eco-farm' in Myanmar (formerly known as Burma) for a local grass-roots organisation, the Network for Environment and Economic Development (NEED) (<http://www.need-burma.org/>). Myanmar, a nascent democracy, and one of the least developed nation states in the world, is one of the intended recipients of the MDI. Myanmar is rich in natural resources but is also home to complex and fragile eco-systems, diverse ethnicities and traditional cultural practices. Seventy per cent of the population rely on agriculture for their livelihoods and there is continuing conflict between the ruling military junta and agrarian communities over land use and management.

The members of NEED share my concerns about top-down, environmentally damaging, development initiatives, like the MDI, and established the demonstration farm and residential educational facility in February 2013 in an effort to educate and empower local communities. Based on the tenets of eco-villages and permaculture, the model farm will provide young Burmese people from rural communities with an environmental education that will enhance their local and traditional knowledge and skills with new practices, processes and technologies.

Implementation of the MDI in Myanmar will result in concentrations of power and wealth, social and economic inequities and environmental insecurity and injustice. Aid money should not be used to promote Australia's mining interests. Shifting the development focus to grass-roots initiatives, such as those mooted by NEED, will result in diversification and stronger, more resilient communities.



The viable socio-economic alternative: Who wants to know?

Ken Johnston
President
The Gloucester Project

The economic imperative has been offered as the justification for imposing significant socio-economic changes on regions where fossil fuel extraction is one of the *relative economic advantages*.

The Gloucester Project, a group of citizens with experience in the commercial, political, academic, legal etc worlds, together with members with comprehensive local knowledge, has produced a dual economic alternative to fossil fuel exploitation in the Gloucester region of NSW:

- A regional economic development model derived from overseas experience. Where used, this model has a reported economic multiplier effect that has resulted in a quadrupling of economic, employment and tax base growth. Being based on the analysis of economic decline in rural regions, this model converts negative economic trends into sustainable growth.
- A Food Future core industry based on food production, distribution and marketing. Because of the particular resource characteristics of Gloucester, combined with the regional development model, this industry is sustainable for as long as people need food.

The Gloucester Project has won significant support and awards. It has been in operation for more than four years and has received hundreds of thousands of dollars of government investment. The model has been seen as significant for regional growth in other regions.

Ironically, while numbers of government ministries and departments have supported and invested in The Gloucester Project's development, two state government departments have continued to prepare Gloucester for industrialisation based on fossil fuel extraction, using industrial methods which damage or destroy the region's resources of water, soil and land ownership.

At the level of land use decision-making, governments refuse to acknowledge that The Gloucester Project's (TPG) model offers better, more sustainable economic results and more appropriate product outcomes than fossil fuel extraction, in a region where mining and food production cannot coexist.

An information set of four papers can be downloaded from TGP's website <thegloucesterproject.org.au> to consider in more detail TGP's position.

A powerpoint presentation was offered for the UNE conference.



The perfect storm

Judy Lyford
On behalf of the community group:
Groundswell Gloucester

The social and psychological consequences of expanding extractive industries on our communities are profound. The 'storm' produces a progressive feeling of loss of power and faith in the system. We no longer believe that our place, environment, our livelihood or our children are safe. The stoic resistance to the uncertainty of nature, drought or flood, has been replaced by fear of a shadowy uncertain enemy.

The Gloucester-Stroud valley was first settled by Europeans in the early 19th Century. The railway arrived in 1913, which provided access to the region. The valley has gone through phases of timber getting and dairying. Today the main industries are beef cattle, tourism and a destination for 'tree-changers'.

Coal deposits were noted in the valley in 1855 but until the 1970s, exploration was very limited. Very small-



scale extraction of gold, lime and rubies exists on the valley fringes.

Large-scale coal extraction was commenced by Gloucester Coal in 1995. Since then, ownership has passed to the Chinese-owned Yancoal. Yancoal has extensive exploration leases in the valley and operates open cut mines at Stratford and Duralie. Yancoal claims to have minable resources running up the valley floor some 30 km between the two mines. Gloucester Resources, also with a majority of overseas owners, owns coal exploration leases near Gloucester. They propose an open cut mine at Mograni.

An exploration lease for Coal Seam Gas covering the whole valley was granted in 1992 and through the 1990s, Lucas Molopo (LM) explored this lease. LM was bought out by AGL who lodged a development application in 2009, which was approved in 2011. This approval covers a processing plant at Stratford, a pipeline from there to Hexham and 330 gas wells spread down the valley for approximately 25 km.

Current and proposed extraction of coal and CSG overlap. They cover the best agricultural land of the valley and affect the heritage vistas that are the basis of tourism and attracting new residents. The extractive industries and government refuse to consider the cumulative effects of their work and claim that there will be no long-term negative effects on land, water, other industries or the health of the residents.



Phasing out coal, oil and gas exploitation

Glen Klatovski
The Wilderness Society
Australia

Firstly, I would like to show my respect and acknowledge the traditional custodians of this land, of elders past and present, on which this event takes place. I would like to thank the University of New England, my *alma mater*, for inviting me to speak at this important conference and, in particular, I would like to thank both Marty Branagan, for supporting the involvement of the The Wilderness Society (TWS), and Emma Wasson from TWS for arranging for me to come.

TWS has been a champion of 'nature' throughout its existence and has come to acknowledge that the single biggest global threat to nature is climate change. We accept the global scientific consensus that climate change exists and is human induced. With this acknowledgement comes the need to address the primary causes of climate change - if we are to have any chance of achieving our Purpose, our reason for existence: the health of our natural world.

We have to address the threat of fossil fuel development. This is especially the case in Australia. Our continent holds some of the most extraordinary wild and natural places left on earth. We are home to many unique species. Our natural wealth is of global significance. Yet, our nation is also one of the biggest sources of fossil fuels for the world and thus carries extra responsibility.

What I will focus on with this talk is 'the tyranny of established infrastructure'. Basically, once a fossil fuel industry is established (be it mining or power generators) it becomes an enormous long-term legacy - an inertia created by the knowledge devolving that infrastructure will cause considerable social pain.

This reality helps to explain why our campaign focus is dominated by targeting places that do not yet have established fossil fuel developments. Not only are these core TWS areas of interest, but also once coal mines are opened, oil platforms built, and the gas wells operating, their presence remains for decades. And humans do not have decades to play with. The idea of opening up new fossil fuel zones is madness.



The demand side: China

We have all heard the China miracle story many times. We have heard about the market reforms started by Deng Xiaoping in 1981; the vast numbers of people who have moved from desperate rural poverty to urban hope; and 30 years of 10+ per cent economic growth which has delivered 680 million people out of abject poverty of \$1.80/day.¹

By 2020, estimates are that another 300 million Chinese will have shifted from rural areas to cities.² This means a lot of steel and cement - and power, to build the necessary infrastructure. China consumes between 40-50 per cent of the world's coal, copper, steel, nickel, aluminium and zinc, though they only produce 16 per cent of the world's tradable output.³

What facilitates this economic growth? It is the Western model of development: cheap and abundant energy.

Although developed countries are now beginning to decouple their energy consumption from economic growth (e.g. energy efficiency), there remains a strong direct relationship between energy consumption and economic development in developing countries.⁴

Over the last decade China has built somewhere between 500 and 700 new coal-fired power plants.⁵ They currently have 363 new plants in planning stages,⁶ which will add almost 558 000 mw capacity - noting that some of these new power plants will replace old infrastructure.⁷

In 2006, China surpassed the US in the amount of overall greenhouse gas emissions. Sometime in the next 18 months China will double the emissions of the US.⁸

In spite of these details, it is also true that China is the biggest investor in renewable energy, and been very impressive in decreasing the carbon intensity of their energy production. What this means is that China has successfully decreased the amount of coal needed to create industrial output. In 1990, China needed about 800 tonnes of carbon (tce) to produce \$1 million of output. Today it is 390 and continuing to drop. It is worth noting that Germany is at 173tce.⁹

But despite this worthy effort, the real equation for a global society trying to minimise the scale and impacts of climate change is that each new coal-fired power stations China builds will be chewing up vast amounts of coal for many decades.

This is the tyranny of infrastructure.

The supply side: The Hunter Valley

In 1797 John Shortland discovered the area that would become Newcastle. His first descriptions of the area spoke of the presence of coal seams. The name of the city, Newcastle, refers to the coal port of Newcastle on Tyne in England. Many of the suburbs of Newcastle also have names of coalmining areas in the northeast of England.

Within a decade the colony's first ever export was coal from Newcastle.

Mines in Newcastle were developed, fully exploited and closed. There is a massive network of old mining shafts under Newcastle and the adjoining areas of Lake Macquarie and Maitland.

There has been a continued development and expansion of mines up the Hunter feeding supply to the world's largest coal exporting port in Newcastle. And coalmines are springing up in the Liverpool Plains as well in a seemingly inexorable pattern of development.

¹ Ezra Vogel, *Deng Xiaoping and the Transformation of China* (Belknap Press, 2011), 23-4.

² Lin Boqiang, 'The Future of Energy' (Speech at the World Economic Forum, Tianjin, 2012).

³ 'The East is Grey' [2012] (August) *The Economist*.

⁴ UK Parliamentary Office of Science and Technology, 'Access to Energy in Developing Countries' (Report No 191, 2002).

⁵ Ailun Yang, *Can China's Air Pollution Action Plan slow Down New Coal Power Development*, (17 October 2013) World Resources Institute <<http://www.wri.org/blog/can-china's-air-pollution-action-plan-slow-down-new-coal-power-development>>.

⁶ World Resources Institute, *Global Coal Risk Assessment: Data Analysis and Market Research* (WRI, November 2012).

⁷ Ibid.

⁸ 'The East is Grey', above n 3.

⁹ Ibid.



As if the continued development of coal mines was the appropriate action from a nation that acknowledges the existence of climate change and the impact of fossil fuels!

But to imagine the Hunter Valley, Newcastle as a region with no coalmines, no coal exports, and no coal-fired power stations seems impossible.

But then it used to seem that Newcastle would always be a steel town.

I lived in Newcastle in the 90s and watched the final death throes of the steel mill on the Harbour. While the big job losses occurred in the 80s, it was the long last gasps that illustrated how difficult it is to get out of an industry once the infrastructure is there - because it is not only a matter of economics, it is also a major cultural issue and a difficult political one.

Steel had not been a major economic driver of the Newcastle economy for years, and was not in the top ten employers when it finally closed. Newcastle had become a services economy - the hospital, the University, law firms, financial services. But the pain that city went through as the steel mill closed was palpable; millions were spent by government and BHP to train the last remaining 1800 employees and find them job options.

Once built, once established, industrial infrastructure has a habit of staying way beyond its welcome. From a social, cultural and political perspective, shifting can be very difficult indeed.

The Wilderness Society agenda on fossil fuels

So now we come to the TWS priorities in challenging the continued rise of the fossil fuel industry in Australia.

For more than 30 years, TWS has focused on protecting some of the world's great last wild places - the Franklin River, Tasmania's forests, Kakadu, the Daintree, Cape York and the Kimberley.

Today the fossil fuel sector is looking to establish new coalmines, oil platforms and gas wells in some of our most iconic and pristine environments. In the Kimberley there is a proposal to build a first coal mine in the Fitzroy River catchment, just east of Broome. That region also holds one of the world's largest shale oil and gas assets. In the Painted Desert, about 150 km north of Coober Pedy, lies Arckaringa. Under the surface is a massive coal deposit that two companies are hoping to turn into diesel and jet fuel. Off Kangaroo Island, a company is conducting seismic testing to ascertain the potential for oil exploitation. BP is busy assessing the viability of turning the Great Australian Bight into a major oil basin. Meanwhile, Santos is pushing to exploit coal seam gas in and around the Pilliga Forest and to expand their activities in the Channel Country to include shale gas and ever-expanding CSG wells.

As well as noting all these proposals, TWS is looking to support the community around Leard State Forest not far from here, fighting a proposed new coal mine which would clear much of that forest and ensure the establishment of coal infrastructure opening up more and more mining opportunities.

We cannot allow the fossil fuel industry to establish themselves in new regions. The task of dismantling that infrastructure and its associated political and social inertia becomes insurmountable. Our task is big enough as it is.

Conclusion

We sit at a precipice. If you believe, as I do, that climate change is real and threatens human society then the time for acting is now. If you also believe that the health of nature is integral to the health of human society then be doubly motivated. Our actions over the next few years may make the difference between a healthy and an unhealthy society.



Mining in New South Wales

Scott MacDonald MLC
Liberal Party of Australia (NSW)
Guyra, NSW

New South Wales is a mining state. Coal was exported from the Colony within a decade of its foundation. Today, coal is our leading merchandise export with an expected value of A\$14 billion in this financial year. All minerals will be worth over A\$20 billion. Total value for mineral production in NSW was over A\$23 billion in 2011/12.

The sector employs more 35 000 people with the coal industry peaking at 25 000 before workforce reductions of several thousand over the past year. Indirect employment arising out of the resources industry is approximately 100 000. Of course, most of the jobs are located in regional NSW.

NSW has large proven, probable and possible deposits of coal, gold, copper, lead, silver, zinc and coal seam gas. These resources belong to the people of the state through the Crown and State Government.

The development and future of New South Wales was uncertain for the first 100 years and, especially, the first half-century. The discovery of gold, silver and other minerals in the middle of the nineteenth century 'saved' the Colony's treasury; enabled the rollout of infrastructure and stimulated immigration. From the start there were land use conflicts with some squatters discouraging the gold rushes. The response to these conflicts was a significant driver of democratisation of the Colonies of New South Wales and Victoria and led to minerals (and later petroleum) being vested in the Crown.

Land use conflict involving coal and minerals is inevitably portrayed in a winner-takes-all framework. While no resource extraction can be portrayed as 'sustainable', very few human activities are without impact on the environment. The challenge for government is to utilise its resources for the benefit of the community while ensuring ecological impacts are understood and contained.

Until Renewables become more efficient and commercial, NSW, Australia and the world will continue to be reliant on fossil fuels for domestic energy and export industry. The energy efficiency trend for wind and solar is improving, but EIA estimates world demand for energy will increase by over 50 per cent in the next 30 years. Most of that will be supplied by coal, gas and oil. Australian resource industries will respond to those market forces.

