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Why we need agroecology not GM...

PATRICK MULVANY

At the start of 2012 we should be energised by the news that BASF, the German chemical and seeds giant, has decided to pull out of genetically modified plant development in Europe. This is testament to the effectiveness of public pressure and ‘another nail in the coffin for genetically modified foods in Europe,’ as Adrian Bebb of Friends of the Earth said. But beyond successes in GM skirmishes, we should remind ourselves why we should be optimistic about the defence of the food system which feeds most people in the world, and thus be clearer about the research policies and practices needed to enhance it.

The dominant food systems in the world are local, small-scale and organic food webs, not giant supermarkets chained to industrial commodity production that is destroying livelihoods, local markets and the environment. 70 per cent of the global population eats local food grown and harvested mainly by small-scale farmers, gardeners, livestock keepers and artisanal fishers – and they do this mostly without recourse to proprietary chemicals and seeds.

There is a rising tide of support, backed by the International Agriculture Assessment (IAASTD), for more ecological, environmentally-friendly and health-enhancing approaches to food production that will enhance agricultural biodiversity, soils, water and climate. It's matched by an equally strong rejection of corporate control over, and speculation in, food, production and landgrabs. European and international debates on the food system are raising awareness and increasing pressure for political accountability in: changing Europe's CAP (Common Agriculture Policy); enforcing global environmental governance at Rio+20 and the climate change and biodiversity conventions; defining a Global Strategic Framework for securing future food by the renewed UN Committee for World Food Security; and resetting priorities for global agricultural research at GCARD 2012 (Global Conference on Agricultural Research for Development).

The International Peasant Farmers' Movement, La Vía Campesina, and related social movements, which represent the views of the world's small-scale food providers, have a well-developed policy framework, Food Sovereignty. This would secure future food if their production systems can be supported and protected and if they are decisively involved in setting priorities for resource use, investment, markets and agricultural research, development and production.

They know what needs doing and how to do it. Yet, it seems the research establishment, in hock to Big Agriculture, is blind to these needs and opportunities. The Financial Times reporting on the BASF decision to relocate its GM research to the USA quoted a senior researcher in biosciences, Professor Jonathan Jones from the Sainsbury Lab in Norwich as saying: ‘The psychological damage is that it will tell the next young people who might want to go into plant science that they can't bring anything exciting to market... and it also discourages government support if [GM technology] is not going to be deployed in Europe.’ He may be correct with his second point if UK government priorities are still wedded to promoting GM technologies – perhaps some neo-colonial dream in which the UK fixes a new world order that will secure commodity supplies from other countries using their cheaper labour and our (proprietary) technologies and knowledge. But ‘psychological damage of young people’? Isn't this more likely to be the result of the ‘cognitive dissonance’ caused by such an extreme mis-match between what is needed to feed the world and what they are being asked to do by Big Science?

Today, there can be no greater scientific challenge in the food system than how to shift it towards a more ecological and healthier form of production and consumption that can be controlled locally. These systems are more productive per area of land or drop of water – and more sustainable, carbon neutral, biodiverse, resilient and locally determined – than industrial commodity production. Science should embrace the challenge. A new generation of agricultural scientists could be encouraged, building on the example of many pioneers, to work with knowledgeable small-scale food providers to enable that shift to take place.

Using improved tools for analysing biological, economic, legal and social systems they could enrich understanding, enhance local knowledge and practice and strengthen local communities' and social movements' control over the use of their common resources for securing localised food systems. Big Agriculture and Big Science won't like this – it won't enrich corporate coffers – but the majority will. We should build on the energy generated by the food sovereignty movement that calls for public support and better governance to transform the food system. Now, as the sun shines, it's time to turn the hay, to keep up the momentum and to gather enthusiastic young people into democratically controlled agricultural research, development and production systems fit to realise food sovereignty.

Patrick Mulvany is a senior policy adviser at Practical Action & chair of The UK Food Group

HS2: can the UK fast-track a better rail system?

Are the UK's new high speed rail plans part of a sustainable future for public transport in the UK or a big statement that only benefits a minority?

By **Bethany Hubbard**



High speed rail in the UK is proving controversial

When Secretary of State for Transport Justine Greening announced approval of plans for a high speed rail network, known as High Speed 2, public opinion was immediately split. HS2, scheduled to be completed by 2033, will cut across the countryside at speeds of up to 400kph, shortening trips from London to the north.

Some criticised its proposed budget of £32.7bn, costing taxpayers roughly £1,000 per family. Others were thrilled by the prospect of saving about an hour on their commutes. The one thing everyone can seem to agree upon is that the public transport system needs to change. Whether it's high ticket prices, increased carbon emissions, slow travel times, or crowded cars, a solution is needed.

It's nearly impossible to predict the economic and environmental impacts HS2 will have on the countryside and destination cities of Birmingham, Manchester, Leeds and Edinburgh. The Department for Transport recognises that intercity rail lines are congested and in need of relief. But critics say HS2 should be part of a long-term plan, not a short-term solution to a problem that needs immediate attention.

'One of the concerns we have is it's almost like the government is developing high speed rail as a proxy for having a long-term transport strategy,' says Richard Hebditch, from Campaign for Better Transport. HS2 needs to be part of a larger scheme aimed at reducing carbon emissions and shouldn't be viewed as the sole

solution. 'When high speed rail comes along we need to make sure that doesn't mean we're making cuts to services elsewhere across the country, where we need those services to improve in order to encourage people to use the railways and not drive so much,' he says.

The government's current plan is to channel money being used for the Crossrail engineering project, which will connect 37 rail stations across Greater London, into High Speed 2 when Crossrail is completed. The argument is that this will ensure money isn't taken away from other infrastructure projects, when scheduled construction begins in 2017.

'If they stick to their word then we're broadly happy with that,' Hebditch says. 'But if the economic climate remains difficult for some time, it will be a bit of a challenge for government to maintain that level of expenditure.'

Like Hebditch, Rupert Fausset, from Forum for

the Future, believes High Speed 2 could be a success if it is approached in the right way.

'I'd like to see High Speed 2 as part of a strategy for low-carbon transport,' he says. 'So don't think about just one rail line. Don't even think about just the rail system. Think about, and plan, the whole system together, and we don't really have a great tradition of doing that.'

Thinking about the whole system includes encouraging people to choose rail over car for short-term trips as well, not just journeys from London to northern cities.

If more people choose cycling or walking over driving the impact could

be immense. Car journeys of between 2-5 miles account for 1.4 million tonnes of carbon dioxide emissions, according to figures from the DfT.

Trips within this range are typical of a daily commute to work within a city and could be significantly reduced if people swapped personal vehicles for bicycle or rail. If HS2 alleviates congestion within hubs, such as Manchester, some suggest there could be more room for commuters within the city on rail lines. But it's hard to tell what the impact will be.

More, more, more
High Speed 2 is indicative of the culture we live in, Fausset says. Bigger is seen as better, and growth is always the solution.

'If there is anything that doesn't work about this, it's that it's about the culture of more,' he says. 'It's more travel; it's faster travel. More, more, more. When the direction we really need to be going in for true sustainability across the overall global system is, in the developed countries, to be levelling off and not grabbing for more, and not trying to move further and faster.'

The Government cites Britain's Victorian railway boom as proof that expansion is necessary and good. 'The time has come again to seize the moment, to be ambitious and to show the world that this is a can-do country,' Greening said in a statement on January 10th.

HS2 is being heavily championed as a greener substitute for air travel, with advocates saying faster rail service will cut down on short flights to northern cities like Manchester and Edinburgh. This, in turn, will reduce carbon emissions. But opponents say discontinued local flights will simply be replaced by intercontinental flights.

'You could end up with flights that are 10 times more carbon generating than the ones you succeed in getting removed,' says Peter Delow, a

'When high speed rail comes along we need to make sure that doesn't mean we're making cuts to services elsewhere across the country'

resident in the Warwickshire village of Cubbington and chair of the local opposition group.

What's more while the government is pushing rail as a green option, it is also drawing up plans for a controversial international airport on the Thames Estuary.

Mayor Boris Johnson reiterated the need for an alternative to Heathrow this month. 'Passenger demand for London's airports is forecast to increase from 140 million passengers a year in 2010 to 400 million passengers a year by 2050,' he says. 'Yet the UK lacks a clear long term vision for how to respond.'

The Government is due to publish its plan for the UK's airports and potential new ones this March. But opposition has already emerged, with some calling the project 'Boris Island.'

A for 'London' project?

The Government has gone out of its way to make HS2 as palatable as possible, offering extra incentives for affected homeowners, while extending tunnels and cuttings to minimise effects on Areas of Outstanding Natural Beauty, such as the Chilterns. But for many, high speed rail will never be appealing.

Opponents say HS2 is not worth the amount of time saved for commuters, about an hour on journeys to Birmingham, Manchester and Leeds, according to the DfT. Action group STOP HS2, says the rail line will have devastating impacts on rural villages and the environment, will increase carbon emissions and will mostly benefit London.

Action group member Rae Sloan has lived in the Berkshire village of Twyford for about 30 years. HS2 will cut through the countryside near her village. 'The volume of it will be horrendous,' she says. 'One train every 2-4 minutes is equally obscene. When you look at the larger picture it is just absolutely ridiculous.'

Action group member Mike Geddes,

from the Warwickshire village of Offchurch, says money could be better spent improving the Main Line and inter-regional transport links.

'We should spread the money that would be spent on HS2 around the country, dealing with the multitude of transport problems we already have,' he says, adding that HS2 is 'is not part of a serious integrated transport strategy.' Though even if it were, Geddes says he still would not support it because there are much quicker and cheaper ways of dealing with anticipated transport demand. And despite Greening's approval of the proposal, he's optimistic something can still be done.

'Everytime HS2 is referred to in the media it's referred to as the "controversial HS2". So we think we've made a lot of progress in pointing out how controversial it is, and we aim to carry on.'

Labour and Prescott's big plans

The hype surrounding HS2 is reminiscent of John Prescott's White Paper of 1998, the basis for a 10-year transport plan aimed at better integrating public transportation services within rural communities. Though Prescott helped usher in an era of optimism surrounding transport, 14 years later many people are asking whether or not his paper actually brought about the changes it promised.

'He was so focused on the overarching strategies and the grand statements about what they would do for transport that the detail wasn't worked through enough, and then they failed to deliver on it,' Hebditch says. 'And they reverted to the old ways of approaching transport, which is building lots of roads. I think you need both.'

Both a long-term transport plan, and list of individual goals, will ensure that investment in HS2 does not detract from investments in existing rail lines.

Individual repairs won't be sustainable in the long run, with new lines providing

the relief needed, said Greening in her January 10th statement. 'When it came to HS2, I could have made the easy choice,' she says. 'I could have gone for the short-term option, relying on a patch-and-mend approach and leaving our rail networks overstretched, overburdened and less resilient.'

It is true that simply fiddling with existing lines isn't enough, Hebditch says. New lines are needed to truly alleviate congestion and increase capacity. This will not only allow more room for commuters, but also for freight.

'You do need that mixture of an overall framework but then putting in place the concrete measures you need and making sure they get delivered,' he says.

Ralph Smyth, from Campaign to Protect Rural England, supports the principle of a new high speed rail line. But says he worries the polarised debate has turned the focus towards whether high speed rail is right or wrong, when attention should really be paid to the policy and design choices that determine how sustainable it is.

'If you think where we need to be in 50 years and try to work backwards, for example working out how our transport system needs to change if we are to move beyond oil, then it's difficult to argue that a new high capacity railway line should not be part of the solution,' he says. 'The question is would the Government's proposals fit with that?'

Smyth says HS2 needs to be 'futures-proofed', and 'radical cuts to carbon emissions and greater protection of the natural environment are more credible than futures where very high speeds are useful.'

But with the government set to move forward, and action groups ready to stand their ground, the battle is far from over. Still, Fausset says nothing is set in stone yet. 'Until you've poured a certain amount of concrete, things can change.'

Retrofits: is it possible to make 'greening your home' sexy?

Green refurbishments save money and reduce CO2 emissions, helping combat climate change. The challenge is getting people to do them.

Carl Frankel reports



Is the recession and an image problem slowing the growth of 'green homes'?

A more comfortable home, a slimmer energy bill, more jobs for your community, less oil to import from the volatile Middle East... But in spite of these attractions, people aren't swarming to green their living space.

Paul King, Chief Executive of the UK Green Building Council, reels off the reasons: 'There's an upfront capital cost barrier for many people, for a start. And the economic environment is getting more challenging, which means people are even less inclined to spend money. Then there's the fact that people don't know who to trust and where to go for reliable advice. It doesn't help that it's not a sexy topic, not something people feel excited about. They might be excited about putting a panel on their roof, but solid wall insulation is a bit of a turn-off for lots of people.' And that's before they get into the practicalities of actually making the change...

This brings us to the intimidation factor. Green retrofits are a challenging process, involving a host of complex and often interrelated decisions. The person in charge has to decide which technologies to use, how to optimise system synergies, what the best financing mechanism is, and who to hire to get the job done right. That's asking a lot of a person with no expertise, especially when they're inundated with information and uncertain where to turn for reliable advice. The result is predictable: people switch off and go back to watching the telly.

It's a problem, even if you leave stretching carbon targets out of the equation. Energy costs are claiming an ever larger chunk of people's budgets. 'Fuel prices in the UK increased by 15-18 per cent in the past year alone, and people's incomes aren't keeping pace', warns Rik Kendall of construction and support services company Carillion PLC. 'We also have an aging housing stock in the UK that's much less energy efficient than the housing

stock in much of Europe.' About half of UK homes do not have even basic insulation installed, according to the Department of Energy and Climate Change [DECC]. In Kendall's words, the 'three-legged stool' of low incomes, rising energy costs and leaky buildings has led to sharp increases in the national fuel poverty level, defined as households that spend 10 per cent or more of their income on home heating. According to data from DECC and the Centre for Sustainable Energy, close to 20 per cent of households now live in fuel poverty.

The US faces similar problems. Energy costs are also rising sharply, along with levels of fuel poverty. While the housing stock tends to be newer than in the UK, this positive is offset by the fact that many Americans live in hot climates and treat air conditioning as a bit of a 'right' – alongside life, liberty and the pursuit of happiness... The challenge of inspiring individuals to take action is arguably even greater in the US, where energy wastefulness is the norm and the return on investment numbers unfavourable.

Social enterprise

One way around this dilemma is by engaging people at the community rather than individual level. This approach has much to recommend it, including lower prices through collective buying power and a level of scale that attracts subsidies and the combined talents of powerful players. The UK's Community Energy Savings Programme (CESP) is an example of a multi-partner approach that engages people at the broader community level. The Government requires major energy suppliers and power generators

to drive reductions in CO2 emissions. CESP makes this possible through what is essentially a matching fund programme. The big energy companies put up half the money for house-by-house, street-by-street energy efficiency improvements in low-income communities through the UK. These funds, which will total £350 million over a three-year period, are matched at the community level, typically by the local authority. The result: big chunks of leaky housing get an energy efficiency upgrade.

Working under the CESP umbrella, Carillion recently partnered with power

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company InterGen UK, pipeline provider Northern Gas Networks, local community interest group Community Energy Solutions (CES) and social housing provider Fabrick Housing Group. The purpose of this impressive

alliance was to replace old, inefficient electric heaters with energy efficient A-rated gas central heating systems in over 200 social housing households in Teeside in the north of England. All the partners had an essential role to play. The Government drove the initiative. InterGen contributed CESP funding. Northern Gas and CES provided additional financing and access to mains gas. Carillion facilitated the financing arrangements and installed high-efficiency heaters. And, 'because it's [housing provider] Fabrick that's going to their tenants, they're far more inclined to say, "Let's have it"', Kendall explains.

In the US, where a hotchpotch of renewable energy financing mechanisms create opportunity and befuddlement in roughly equal measure, a new social enterprise is trying to cut through the clutter. San Francisco-

based 1 Block off the Grid provides one-stop shopping for prospective solar customers in 40 states around the country. It works with them to pinpoint their payback period, provides financing guidance, and then connects them with a skilled local installer. This installer offers a sizeable group discount, because 1 Block off the Grid is doing the difficult and time-consuming work of herding customers their way. The smart start-up is also making use of satellite photography to do much of the analysis remotely.

Its business model works rather like Groupon, the popular web-based coupon company. Groupon finds service providers (in anything from facials to fitness classes) that are willing to give customers a big one-time discount, and then sends battalions of customers their way. 1 Block off the Grid proposes to do the same for solar. In fact, the company received its initial round of funding from New Enterprise Associates, which also funded Groupon. Since its launch in 2008, the company has closed on about 1,800 installations. While not a huge number, 'sales are

It's important that people come in and say 'Wow!'

increasing exponentially each month', says Shannon Coulter, Vice-President of marketing. 'We expect to be at about 2,200 by year's end.'

1 Block off the Grid will have to demonstrate that the Groupon model can persuade people to make over their homes as well as their personal

appearance. And of course, it's only one player. Thousands of others around the world will have to contribute, too.

But innovative financing and delivery models are only part of the puzzle. Another big part of it is communication. Consumers need to be aware of the available opportunities, and inspired to pursue them.

'We have to help people understand how important this is', says David Adams, a Director in the wonderfully named Re-Thinking department of construction and support services company Willmott Dixon. Adams sees much potential in the Green Deal, currently wending its way through the UK Parliament [see 'The Green Deal: 'We won't get another chance!']. This scheme directly addresses the heavy upfront burden of green retrofits by adding the cost of the retrofit to the home's energy bill over a 25-year period. 'But the savings aren't huge', admits Adams. 'They're unlikely to inspire mass engagement.'

Dream homes

So what will? Back to that telly... TV presenter Oliver Heath has brought more than a touch of class to retrofit with his popular programme, 'Dream Homes'. In the first episode, Jon and Jane restore a medieval barn in East Sussex; in the second, a run-down Georgian house is revived using local builders and traditional skills... They may not be tales of your average low-income householder, but the point is they're

aspirational.

It's important that people come in and say 'Wow!'

'One of the big problems with sustainability', Heath argues, 'is that it appeals to a particular side of the mind – the pragmatic side: the efficiencies, the cuts. But this practical way of thinking doesn't make people excited. Sustainability has a duty to become more appealing.' Heath cut emissions by 62 per cent in his own home, a 1960s semi in Brighton, thanks to full insulation, a heat recovery system, solar water heating panels, double glazing and low-energy lighting.

But what he's most proud of is its looks. It's now part of Britain's Old Home SuperHome Network, which means he gets to show it off to visitors at least three times a year. 'It's important that people come in and say "Wow! I love it!"', he asserts. 'We have to integrate aesthetics: it's not secondary to the sustainable design movement. Without good design that makes you think "I want that", how are we going to sell it? If the windows are tiny, we won't get the right levels of take-up.'

But, King warns, 'We mustn't assume a one-size-fits-all message when it comes to engaging householders. Some think it's smart and attractive to green their home; some are motivated by future-proofing themselves against energy price rises; others won't find it very interesting at all. Trying to cater for all those people will take clever communications.'

Still, where the magnitude of the stakes and the potential savings have failed to pull in the crowds, it's possible that the old combination of good looks on TV will do the trick.

* A version of this article originally appeared in Green Futures, the leading magazine on environmental solutions and sustainable futures published by Forum for the Future.



Europe's empty houses drive new wave of squatting activism

As the recession continues, squatting across Europe has enjoyed a renaissance. Although controversial, occupying vacant buildings has become a form of activism, promoting alternative lifestyles and challenging the mainstream. **Almudena Serpis** reports



Spanish squatters being evicted from the 'Kukutza' social centre in Bilbao by armed police

Just around the corner from the centre of Madrid the windows of what used to be an abandoned hotel are covered with banners which announced that the hotel was in the hands of the people.

Inside, as the Ecologist walked up some dark stairs full of rubble, with just a small torch to guide us, a woman with her baby in one arm and a huge torch in the other passed by and disappeared downstairs into the darkness.

This Madrid hotel was squatted after a world wide demonstration in October against the economic crisis. It was destined to accommodate around 100 people of all ages and backgrounds who had been evicted. 'We need to start taking matters into our own hands,' said a man who helped run the place.

Since our visit the hotel had been brutally evicted by police, who at 7am stormed into the building and threw everyone out onto the street. Now the winter is here and those who were evicted will have to face the courts.

As the current recession continues to bite, with increasing numbers of people losing their homes, unemployment and poverty on the rise, mortgages remaining difficult to secure and traditional social security networks breaking down, squatting across Europe, particularly in large cities with an abundance of empty homes, is undergoing something on a renaissance.

Although highly controversial - with sections of the tabloid media delighting in whipping up (frequently inaccurate) scare stories - squatting has a long and colourful history and commentators point to the pastimes' often positive aspects including housing otherwise

homeless people and, as has been demonstrated in mainland Europe particularly, providing a hub for the creation of alternative, sustainable social communities.

Empty homes

According to statistics by the British independent charity Empty Homes, there are 720,000 empty homes in England, and this could sum up to around a million empty homes across the UK. In Spain a study by

the community of owners and property management entity LCD revealed that there are around 3.5 million empty homes - that amounts to a staggering 13.2 per cent of all Spanish houses. In Madrid alone there are 337, 212

houses out of use, according to the study.

In contrast, due to the crisis, it is harder and harder to afford a suitable home. On top of that, those who cannot pay their mortgages are increasingly being left without a roof over the heads. In Spain, banks are evicting 178 families a day, according to the Spanish platform of those affected by mortgages PAH.

'As long as there are not sufficient adequate housing solutions for homeless people, it is senseless to criminalise squatting,' said the director of FEANTSA, the European Federation of National Organisations Working with Homeless People. On the contrary though, he added that 'promoting squatting as a solution to homelessness is equally senseless.'

But whilst some squat solely out of need, others see squatting as a legitimate use of abandoned spaces, as well as making visible the power of ordinary people to rehabilitate

buildings and transforming them into houses and social centres. 'Squats are often used as a form of direct action against the system, as a way of self-sufficiency,' says one member of the squatting office of Madrid 'it is a way of denouncing owners who have neglected the use of their own property by abandoning it, and a way of saving your own bacon.'

Many squats are transformed into social centres in order to offer an alternative place to meet and socialise, plan and educate. Needless to say many such places quickly become hubs for activism and counter-culture. An old leper hospital in the outskirts of Barcelona which had been abandoned for 53 years is now the squatted social centre Can Masdeu, a place of culture exchange offering all sorts of DIY workshops.

Public opinion has long been against squatting, picturing young punks high on drugs in a dark living room, but as more buildings are squatted neighbours and owners are increasingly divided in their views. A home owner who has just signed a contract with a group of squatters who live in his building recently said that 'it is true that some squatters squat out of laziness, but more and more people are now doing it for need and for political reasons. It's the same with neighbours who rent, there are horrible ones and nice ones.'

Face to face with the law

Squatting laws vary a lot from country to country. In the UK and Italy, squatting is not a crime, it follows a civil procedure, unlike in France, Germany and Spain, where squatting can lead to a prison sentence.

On October 1st 2010 in Holland, a country with an extensive squatting tradition, squatting became outlawed. Before, it was legal if the property had been empty for a year, now this same act could lead to up to more than a year in jail. The Ecologist was present at demonstrations which took place in Amsterdam to protest against this new

Public opinion has long been against squatting, picturing young punks high on drugs in a dark living room, but as more buildings are squatted neighbours and owners are increasingly divided in their views.

law, witnessing little children who lived as squatters carrying banners that read 'I am a criminal.'

A lawyer who specialises in squatting (who preferred to remain anonymous for this article) explained that 'laws are implemented for the well being of all citizens... when it's those same citizens which start breaking those laws massively in order to reclaim something which they consider legitimate, then laws should change and adjust to the times to serve the greater good.'

He acknowledged that buildings are sometimes left in a bad shape after

being taken over by irresponsible squatters who end up putting the building at risk and disturbing the neighbourhood. But 'this is no longer the usual case', adds the lawyer. Most buildings are squatted after been

empty for some years. 'Squatters don't just burst in when someone is on holiday. They research buildings which seem to be abandoned and before squatting

it they make sure it has been out of use for some time,' says a member of the squatting office of Madrid.

Would-be squatters can seek advice from online manuals or from a number of advice centres usually situated in

alternative social centres. The squatting office of Barcelona, a squatting capital, which came into existence in 2006, receives all sorts of people from all over Europe. 'We advice people from all ages and backgrounds, some with lots of squatting experience and others who want to do it for the first time,' says one adviser.

In the UK the Brighton-based Justice? organisation sparked national headlines after setting up the now famous 'squatters estate agency' in the early 1990s in response to the then-government's policy on squatters and housing. The agency advertised empty properties and advised would-be residents of the individual property's characteristics and facilities.

'Whilst some squat solely out of need, others see squatting as a legitimate use of abandoned spaces'



Attempts to crackdown on squatting by various governments has led to protests

Tainted gold

A US-backed billion-dollar gold mine has attracted thousands of protestors in recent weeks. Many have the poor economic legacy of existing mines fresh in their minds, reports **Gervase Pouldon** in Cajamarca, Peru



Protests against the mining project have been supported by the regional governor for Cajamarca, Gregorio Santos

For Segundo Ortiz, a worker at the San Antonio Market in Cajamarca, a city in the north of Peru, the reasons for taking to the street in protest are clear: 'It's about protecting our water supply, nothing more.'

Ortiz feels that if his generation fails to act to stop the construction of the nearby Conga project, a \$4.8 billion venture to mine for gold, he will be forced to answer to future generations. 'Just as we ask our parents and grandparents, when there was a war, did you fight? Our children will ask, when Conga was first proposed, did you protest or did you accept it?'

Ortiz was marching with over 1,500 Cajamaricans last week in the latest in a series of protests and strikes, partly organised by the regional government, which aim to put a halt to what would be in financial terms the largest mining project in Peru's history. The protestors say the project would threaten local water supplies whilst Conga's proponents claim this is untrue and that the scheme would bring development to Peru - and the wider region.

The majority shareholders of the Conga project are the Peruvian company

Buenaventura and the US firm Newmont, the second largest gold mining company in the world. Both are no strangers to the region of Cajamarca; also owning the main stake in nearby Yanacocha gold

mine. Yanacocha has at times suffered a strained relationship with some of the surrounding populace.

'What has 20 years of Yanacocha brought...? Contamination and exploitation,' says Hugo Gongora, who works as a market administrator for

the municipality of Cajamarca, 'It's destroyed everything that was there, the land has been contaminated with cyanide and mercury, and the lakes have disappeared.'

Conga too could pose a threat to local lagoons and it is this issue which forms the basis of the protesters' opposition to the project. Conga would be located in a headwater basin area which provides the water supply for the surrounding area, including the city of Cajamarca. 'There has been an ecological study of these headwater basin territories which concluded that they are exceedingly fragile and they won't support mining activity', says Cesar Augusto Aliaga, Vice President of the Regional Government of Cajamarca.

The fact that the scheme will drain water from some of the area's natural lagoons is undisputed. However, Newmont has carried out an environmental impact report and say that they could substitute the four lagoons with 'four engineered reservoirs,' which they claim would provide the people in the surrounding area with a more reliable year-round supply of water.

'They are lying', says Dr. Roland Reategui, Regional Manager of Natural

Resources and Environmental Management for the Department of Cajamarca.

'There's no scientific or technical justification whatsoever in Newmont's report....they claim the reservoirs would be filled

by rainwater, but scientifically this just isn't possible.' Reategui explains that Conga would destroy the pasture lands which currently condense fog into water which feeds the subterranean water supply. Without this pasture, the reservoirs would never be full. He also

points out that all the lakes in the area are interconnected, 'if they drain four, all the others will come under threat.'

The US mining company Newmont says the Environmental Impact Assessment [EIA] was 'one of the most comprehensive ever conducted for a natural resources project ever conducted in Peru's history'.

'The water study has spanned 13 years, the EIA process went on for three years and was public open and transparent. If the regional government has data or statistics or figures which can counter what's in the EIA I would invite them to offer it to whomever they feel comfortable giving it to,' says spokesperson Omar Jabara.

Finding a sympathetic body might be difficult however. The central government has currently ordered that the construction of Conga be suspended whilst an independent international review of the EIA report is carried out. Gregorio Santos, the regional president of Cajamarca, claims, however, that this is all for show, and the government is intent on steamrolling any opposition. He rejects the idea that consultation will resolve the issue. 'Whenever we meet I am effectively asked the same question, are you ready to change your mind yet?' says Santos, 'that isn't dialogue.'

President Ollanta Humala has indeed already stated that he is unequivocally in favour of the project.

Humala came to power in July of last year having run a centre-left campaign in which he promised to protect the rights of local communities affected by mining projects. His candidature received almost universal backing from all the forces of the political left in Peru and in Cajamarca there was clearly an expectation that this support would be repaid by a rethink of Conga. 'We regret supporting Ollanta directly.

In government he has turned his back on the people of Cajamarca,' says Cesar Guevara Hoyos, President of an Urban Citizen's Patrol Group for Sector 16 de Cajamarca. There is a feeling that

The majority shareholders of the Conga project are the Peruvian company Buenaventura and the US firm Newmont, the second largest gold mining company in the world.

Humala has abandoned the principles of putting the environment and people before big business. 'It's sad for a citizen of any country, when his government shows itself to be more disposed to international companies than to its own citizens,' says Vice President Aliaga.

Humala and other supporters of Conga contend, however, that the project is not only vital for Peru's economic development but will also bring numerous benefits to Cajamarca. Newmont has highlighted that Conga would contribute \$2 billion in 'canon', the special tax on mining companies, half of which would go directly to the region of Cajamarca, and that the project would also bring employment 'tens of millions spent with local contractors to perform work and provide services, goods and materials.'

Gold mining has not brought **economic benefits**

Some of the protestors in Cajamarca are skeptical that working people will ever see any of these benefits. 'The project will bring benefits but not for Cajamaricans,' says furniture trader Carmi Uños. 'They will bring workers in from outside. What have mining taxes done for Cajamarca in the past? We're just the same now if not worse. There have been no advances. Mines just bring crime and contamination.' Peruvian economist Carlos Anderson says that facts support this interpretation, 'after eighteen years of having the second biggest goldmine in the world on their doorstep, Cajamarca still only ranks 153rd of districts in the human development index of Peru.'

Anderson argues, however, that

this is not necessarily the fault of the mining companies; often it is due to the corruption and inefficiency in local government itself. 'If you go to any area in the country where there's canon, you'll see that it's badly spent.' Rather than investing in infrastructure, Anderson claims that corruption and a lack of expertise leads to money being spent on short-term projects like sports stadiums. 'People should be out in the streets protesting against ineptitude and corruption of their own regional governments, not necessarily the mining companies,' says Anderson.

Vice president Aliaga admits that some money has been poorly spent in the past. He claims that it is the mine's social projects which are unsustainable and ad-hoc, and points to the regional government's own investment in a rural electrification program of over 800 villages as evidence of sensible use of Canon.

Yet this is not the only critique of the regional government and other organizers of the protest. Newmont alleges that those responsible for the protests are an isolated minority with a far-left political agenda. 'We believe that the communities surrounding the project support it and are eager to see it built,' says Omar Jabara. 'It's very easy to make a lot of noise with just a few hundred protestors. If you look generally at who's been leading these protests, it's primarily men that object to the concept of central government. We feel that they are using the Conga project as a way to advance their political agenda within Peru.'

This argument has been given legs by the language and actions of regional president Santos, who has maintained a strong public presence throughout

the crisis. On 28 December, Santos, who is a member of Patria Roja, Peru's Communist Party, issued a rallying cry to protestors preparing for the marches in the first week of January by declaring on his Twitter account 'Long live the Revolution of Cajamarca'.

Santos has defended his actions, claiming that he is not waging an anti-capitalist campaign against mining or international investment. 'We are not against mining per-se,' says Santos. 'There are already four other large mining projects in Cajamarca with which we have no objection. We are against unsustainable mining in headwater basins, which threatens the water supply of the people.'

Amongst the protestors themselves there is an almost universal affirmation that they are simply concerned with protecting their region's environment. 'We're not protesting against the government or for political reasons,' says Segundo Ortiz, 'we are taking to the streets in a peaceful, intelligent fashion, without recourse to violence, to protect our water. We're not against mining, there can be other types of mining, like the kind there is in the USA or Europe. The Incas mined for gold here for hundreds of years without contaminating the environment, so it is possible. That's all we want to see.'

Whether the protestors will get their wish remains to be seen. Either way, it is clear that Gregorio Santos is right when he says, 'all Peru is watching Cajamarca to see what happens'. Conga has come to represent a battle over the future nature of the country's economy and how it treats its natural resources.

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[Who are the Mashco-Piro tribe and can they still hope to stay 'uncontacted'?](#)

'Super vegetable garden' transforms life of Mauritanian refugees

An innovative gardening project along the river basin in Northern Senegal is helping hundreds of Mauritanian refugees address issues of food and economic insecurity and allowing them to integrate into Senegalese society. **Amanda Fortier** reports



The SVG approach allows refugees to become agrobusiness men or women, say its supporters. Photo: Amanda Fortier

Mariema Niang walks through her vegetable garden in Wendou Bosséabe, a refugee camp over 500 kilometers northeast of Senegal's capital city Dakar. It is late in the afternoon and the prickly midday heat is just started to subside. Niang crouches to the ground, adjusts a couple rocks that are holding down a thin white veil and pulls it taut around the long, narrow plot of soil.

'This veil protects our cucumber seeds,' she indicates in a broken French. She points up to the sun and then motions towards the adjacent rows. They are overflowing with tall, leafy green stalks. Ears of corn are peering from their sedgy stems, and delicate blossoms of red and white hibiscus are poking out from their spindly branches. At the end of each garden are colorful plastic bins. They are piled high with mounds of fresh and dried okra.

Niang is president of this 'super vegetable garden' (SVG), an agricultural project developed by the French organization Jardin Tropical Semences (JTS). The one-hectare area of land here at Wendou Bosséabe holds eighteen vegetable gardens, tended by 100 women – eighteen Senegalese and eighty-two Mauritanian refugees. Niang is from the latter group. Twenty-two years ago, she fled her home, like over 60,000 other black Mauritians, following ethnic classes with the Mauritanian Moors. Contrary to most, Niang came with her family. But like the vast majority, she arrived in Senegal's Fouta region with nothing else.

'We came at a time when the Senegalese themselves were having trouble making ends meet,' explains the 43-year old Niang in her native Pulaar. 'We were not getting enough to eat. We were not able to help ourselves when we got sick, and we could hardly afford to send our kids to school. But now, this is all history. We are beginning to integrate more and are getting by.'

In January 2008, the UN Refugee

Agency took its first steps in ending one of the world's most protracted refugee situations. It launched its voluntary repatriation program and an estimated 19,000 Mauritians returned home. For the remaining 21,000 refugees who have decided to stay in Senegal, the UNHCR is funding income-generating projects, like the SVG's, which can help them integrate as naturalized Senegalese citizens.

No longer just refugees

Moda Gueye is the director of JTS in Senegal. 'Our agricultural technique aims to feed the world,' says Gueye. 'But more than that, the SVG system allows a refugee to become an agri-businessperson. They move from being someone who required help to someone fully self-sufficient, who can feed themselves, manage a business and generate an income all at the same time.'

The SVG's were initially developed to help farmers in Sahelian areas, like Senegal where the growing season is very short – sometimes only three months of the year – and where they depend on staple crops, such as peanuts and millet.

'The main advantages of the JTS gardens are the amount and the variety of produce they can grow,' explains Gueye. 'And it is on a very small surface area – only 50 square meters are needed. You can also grow year round and save on water by using a drip irrigation system and underground tarps. Instead of 800 liters a day, you only use 200.'

According to Gueye, a well-functioning SVG can grow 700 kilograms of produce annually, and provide enough food for a family of ten with an extra 300 kilograms a year leftover to sell. When sold for a

minimum of fifty cents a kilogram at a local market in Senegal, this represents an annual sum of around \$250 – more than enough for Mariema to send her five kids to school.

The set-up of an SVG garden includes a growing kit that comes with a selection of one hundred seeds, soil conditioners, fertilizers, and growing equipment – such as the knit polypropylene veils and black underground tarps. There is also a growing instruction manual and a five-day training program. The overall cost of setting up one JTS garden, including the follow-up visits, is close to \$750. Since the projects started this past July, the UN Refugee Agency has funded fifty gardens around the Valley.

Pathé Gueye is a JTS trainer who supervises the three refugee camps where the SVG's are located. He has helped train 270 women gardeners, 252 of whom are refugees. The training involves an intensive five-day program that teaches everything from setting up the watering system, to tilling and plowing techniques, to using plastic tarps to stop water leaching, and adding pest control substances to fight off harmful insects.

'The most difficult part of the project was getting the women to take charge and to instill a sense of ownership in their gardens,' explains Pathé from inside the garden perimeter at

The SVG's were initially developed to help farmers in Sahelian areas, like Senegal where the growing season is very short – sometimes only three months of the year.

Hamady Ounaré refugee camp, another settlement a couple hundred kilometers from Wendou Bosséabe.

Typically in Senegal, it has been the young men, and mostly those living in the central, rural zones, who have adopted the SVG practice. It has been a way to encourage them into farming rather than moving to the big city centres.

‘Among the refugees,’ Moda Gueye says, ‘the men have not expressed the same level of interest. And generally speaking, women seem to be more diligent at taking care of their gardens.’

While the men are working in the fields or tending to their cattle, the women go out thing in the morning, and then once again just before dusk. Once set up, a single SVG should only require a couple hours work per day.

Forty-eight year old Habi Barro is president of the Hamady Ounaré garden. A former hairstylist back in Mauritania, Barro fled to Senegal with her seven-year old daughter. Since then she has had four more children, but two died of malaria.

‘In the beginning, it is true we were not really convinced this project would work. That is because previous gardening projects were starting to kill the land. And then when we first started, it was physically very hard for us,’ says Barro holding up the inside of her hand that still shows the calloused blisters from hauling well water. ‘We had not been working for awhile, but we soon got used to it. Then we had problems with some insects, which brought our spirits down some, but when Pathé came to help and support us it got better.’

Despite the invasion of termites in the soil at Hamady Ounaré, these fourteen gardens have been the most successful of the SVG’s so far, according to Moda Gueye. After their last harvest the women hauled in 200 kilogram of cucumbers and 300 kilogram of okra.

‘The women were not prepared for such massive quantities,’ explains Gueye. ‘The next step is to help the women commercialize and sell their extra produce.’

The UNHCR plans to cease financial support for all activities in the Valley at the end of 2012. But before that, they expect to add another 300 - 400 more SVG’s. This could potentially affect more than 2,000 people interested in adopting the gardening project.

‘There are important social and economic integration aspects involved in this project,’ says Gueye. ‘If the refugees are going to integrate into Senegal, many needs have to be taken care of, such as health and education. But the UNHCR cannot take care of everything. They can offer them activities though, like the gardens, that will help them earn money. We are here to give them training and to help for a maximum of one year,’ he continues, ‘but then we will back away and let them do it themselves.’

OFADEC is the Senegalese-based West African aid group that carries out all the UN Refugee Agency activities in the Valley. Ibrahima Thiandoum leads the team and has been working with the refugees for the last two decades.

‘It is important for the local Senegalese and Mauritanian communities to mix during this final integration phase,’ says Thiandoum. ‘When they live and work side-by-side there is less risk of building tensions between the two groups, because the whole community benefits from their projects.’

For women like Mariema Niang and Habi Barro they both say the garden makes them happy because they do not have to borrow money and it has improved her relations with the local community.

‘We have always been refugees,’ Niang says, ‘but before we did not have the same connection to the others. Now we have a common goal and this gives us a sense of pride in our gardening success.’

‘I have never had any problems integrating here,’ admits Barro. ‘Here there is peace. In the beginning, it was the Senegalese women who were always helping us find work, but now we can support and help each other.’



The ‘super vegetable garden’ is offering hope to refugees - and proving inspiring to others