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The scandal of Europe's 'tomato slaves'

A special report by Andrew Wasley



Tainted tomatoes: who is to blame for the 'slavery' blighting our dinner plates?

Andrew Wasley, editor

An essential in pasta sauces, soups, stews and pizza toppings – as well as a hundred other recipes – tinned tomatoes are one of our most popular and versatile foods. But this seemingly innocent store cupboard favourite harbours a nasty secret that ought to make us think twice next time we reach for a can in the supermarket or delicatessen.

As part of a major Ecologist investigation into the horticulture sector – focussing in particular on the often-unreported stories of those picking the fruit and vegetables we eat – I've just returned from southern Italy where a good deal of our tinned tomatoes (and other processed tomato products) originate.

Whilst there I was secretly taken to one of numerous slums hidden deep in Basilicata's arid countryside (similar places are dotted across Puglia and Campania too). The grim collection of shacks I visited are home to some of Europe's so-called 'tomato slaves' – mostly migrants from impoverished west African nations, a few from Eastern Europe – trying to scratch a living harvesting the region's abundant tomato crop.

I discovered that life for these men (from places such as Ghana, Burkina Faso and Ivory Coast), and as many as 50,000 others like them, is blighted by shocking levels of exploitation and abuse. Many workers – some of them illegal immigrants – are forced to toil for up to 14 hours a day picking tomatoes in harsh conditions (the heat can reach 40C) for poverty wages (sometimes as little as 17 pounds a day), frequently under the control of (sometimes brutal) gangmasters.

The workers live in appalling squalor. Home is often a derelict building – such as those I visited – many without power or any form of effective sanitation. As many as thirty people can be crammed into a single, filthy, one floor house. Some workers described how, at the height of the annual harvest season, people simply sleep outdoors, perhaps on a scavenged mattress or blanket.

What's shocking is that this is happening inside Europe. We're (unfortunately) all-too-used to horror stories blighting our food supply chains in less developed parts of the world (not that such cases are any more acceptable whether they are in Honduras or Kenya or Thailand, particularly where UK companies sell the goods in question) but most people will be particularly alarmed that this is happening on our own doorstep.

What's equally shocking is that the tomatoes being picked will be processed and shipped across Europe – including to Britain – to be sold in tins, as pastes, purees and passata, or for use in pizza toppings, ready meals or other everyday food products. This means that virtually every household in the UK could have, at one point or another, unwittingly consumed a tomato harvested in such disturbing conditions.

Culture of impunity

Perhaps most shocking of all however is the apparent culture of impunity around the issue: some Italian farmers and industry insiders acknowledge the use of migrant labour in the tomato sector yet choose to ignore the exploitation and squalor. The current economic climate being what it is, they argue there's little choice but to keep overheads to an absolute minimum – and migrant labour is cheap labour.

All of the large processors and retailers I spoke to denied they were linked to the scandal and insisted strict codes of conduct and ethical audits are in place to prevent such abuses on their patch. One supermarket – Waitrose – announced an inquiry into the issue following our revelations (we don't yet know what they've found, if anything), the others said they were satisfied their products were not tainted by the problem.

Who is to blame then? The trade is dominated by just a handful of large companies who in turn sell to supermarkets, bulk wholesalers and specialist shops. But, in common with many consumer goods, the complex nature of the supply chain (more than 200 companies are apparently involved in processing Italy's tomato crop) and the scale of the problem make it difficult to establish for certain whether specific tomato products are tainted by exploitation. At least that's what campaigners say.

Unions and welfare groups are attempting to tackle the problem by getting all of the major players involved to sign up to an industry wide protocol, akin to a certification scheme, in order to agree minimum standards and an ethical code.

Although in theory this should help tackle the worst abuses, a stamp of approval from a certification scheme does not necessarily guarantee an ethical purchase: only in April an Ecologist investigation uncovered allegations of sexual abuse and poor conditions for workers at a Rainforest Alliance-certified tea plantation in Kenya supplying Unilever's PG Tips and Lipton brands.

Campaigners say they are expecting resistance to the mooted industry protocol from at least some of those involved in the tomato business. But genuine progress will only be made when all parties – producers, processors and retailers – start acknowledging there's a serious problem connected to the sector, regardless of who specifically is to blame, rather than pretending it doesn't exist.

Until that happens the 'tomato slaves' I met, and all the others like them, will continue to toil, almost invisible to the outside world, and consumers will continue to have little idea of what really lies behind the food on their plates.



Polar bears face decimation because of the warming planet

Endgame for polar bears as Arctic habitat melts away

The recent polar bear attack in Norway is the latest reminder that time is running out for these iconic mammals, with runaway climate change and habitat loss. **Gavin Haines reports**

I was awoken suddenly by what sounded like firecrackers going off. They were coming from outside, but as I peered through the curtains of my hotel room, the streets of Churchill, Canada appeared calm and quiet; I went back to sleep questioning whether it was a dream.

Later, over breakfast, I'm told that my ears weren't mistaken; a marauding polar bear had ventured into town at dawn, forcing locals to set off firecrackers in a bid to scare it off. Residents were on high alert; the day before another bear had chased a man through the coastal town, which sits on the edge of the Hudson Bay, and very nearly caught him.

'A guy was taking photographs on the beach when this polar bear appeared and started chasing him,' explains Hayley Shephard, my tour guide in Churchill.

'Fortunately the rangers were nearby so they drove their vehicle between the bear and the man but the bear became aggressive and smashed the hood – they ended up shooting it.'

As I listened to tales of close encounters in Canada, over in Norway a group of British students were embarking on an ill-fated trip into the Arctic.

It was, tragically, an adventure they didn't all return from; in the night a polar bear crept into their camp and attacked the young explorers in their tents, killing

17-year-old Horatio Chapple and leaving several others seriously injured. The bear was shot dead and a post-mortem revealed it was eight stone underweight, just like the malnourished bear that was shot in Churchill.

Going hungry

It's an all too familiar story; as temperatures in the Arctic rise, the ice, which bears use as hunting platforms, is melting sooner every year. This leaves them with less time to build up their fat reserves before an increasingly long and hungry summer.

'A compressed feeding schedule is the biggest threat to them,' explains Duane Collins, a guide for Parks Canada, who I meet later that day. 'Without ice they can't hunt'

According to Duane, the Hudson Bay has lost about three weeks of ice coverage in recent decades. 'Every week the bears aren't on ice they lose about 10kg of fat,' he says. 'And bears that aren't fat enough

can't conceive; the fertilised eggs hang in suspended animation until the bear is fat enough and if that doesn't happen she will self-abort.'

As Duane guides me around Churchill's heritage centre, he shares his worst fears with me. 'Polar bears in West Hudson Bay are in decline; numbers have decreased by 25 per cent in the last 20 years' he says. 'Scientists think that soon the area could stop being a habitat for the bears.'

One of those scientists is Dr. Steven Amstrup, who works for Polar Bears International; a non-profit organisation dedicated to protecting the world's 25,000 odd polar bears. 'Some of this disappearance will be due to starvation and some due to the migration of bears to higher latitudes and cooler conditions,' says the US based scientist. 'The sea ice there is not persistent for long enough to support them anymore.'

Researchers for the US Geological Survey agree. They've been studying populations in Alaska, which are also shrinking and believe diminishing sea ice is forcing bears to swim greater distances, which burns precious calories and frequently claims the lives of their cubs.

One female bear they tracked swam an incredible 426 miles in nine days, without any ice to rest on. And that's not all; she then walked and swam a further 1,118 miles, an epic odyssey that took her just two months to complete. However, it didn't come without a price; she lost her cub along the way and when scientists recaptured the bear she'd lost nearly a quarter of her body weight.

While some bears embark on mammoth journeys in search of food, others, as recent events have highlighted, are drawn to human settlements. So can we make any links between recent attacks in Norway and Canada with global warming? 'We cannot link any one particular incident to global warming,' explains Dr. Amstrup.

'However, we have long predicted that negative interactions between bears and people can only increase as the bears are stressed nutritionally; one consequence of that will be more attacks by bears on people and domestic animals.'

Bear spotting

Despite the gloomy predictions, Churchill

still proudly claims to be the 'polar bear capital of the world.' It has to; the town's economy relies on tourists coming to see them. Most visitors come in March, which is the beginning of bear season. 'In December, mother bears make an underground den and give birth inside,' says Duane. 'The insulated peat and snow keeps the temperature inside the den at -1 degrees compared to around -40 degrees outside.'

When the worst of the winter is over, in March, the mother and her cubs break out the den and go hunting. And the father? He disappeared long ago, leaving mum to raise the cubs. 'March is the most important time of the year for bears because that's when the baby ring seals are born,' explains Duane. 'They are the polar bear's primary prey source.'

Although it was now summer in Churchill, and the ice and snow had melted away, I still had a fairly high chance of seeing polar bears; some were still completing the swim from their now-melted ice platforms to the coast, while others were conserving energy on land. Eager to spot one of these magnificent beasts, I arrange a boat trip into the

Hudson Bay. As Hayley drives me to the town's small, industrial port, she tells me what to do if ever I get chased by a polar bear. 'Take off your clothes while you're running away,' she says. 'It buys you time because the bears stop to sniff them. And when you arrive at someone's house stark naked, knocking at the door, they won't ask any questions, they'll let you in because they'll know a polar bear is after you.'

At the port we meet a local legend called Mike Macri, who operates boat trips in the Churchill Estuary, which is where the River Churchill meets the Hudson Bay. Mike had been described to me as a true bushman, a title borne out of the fact he has been known to disappear into the Arctic, mid winter, for weeks on end to live in igloos and take photographs of bears. He's pleasant chap of few words and he doesn't want to hang around.

'We need to go,' he says, gesturing towards the boat. 'There were some bears at Eskimo Point this morning - let's go and see if we can find them.' It's a short and relatively calm journey to Eskimo Point and when we get there, sure

enough, there's a bear relaxing on the rocks. To me it's a magnificent spectacle but Mike isn't happy. 'That one looks kind of skinny,' he says, shaking his head. 'That's not a healthy polar bear.'

Protected status

Coincidentally, as Mike and I looked for polar bears, the Canadian government were announcing plans to list them as a species at risk. For many it's an overdue acknowledgement that this iconic mammal is under threat, but not everyone welcomed the news; the Inuit (first nation) populations are worried this will impact on their rights to hunt polar bears, which they have done since their ancestors first stepped foot on the chilly land.

Furthermore, many Inuit claim bear numbers in northern regions are actually increasing and disagree that the species should be added to the list. While Dr. Steven Amstrup doesn't have sufficient evidence to confirm whether or not bear numbers in the north Arctic have increased, he warns it is likely to be a short term trend.

'At the northern extremes of the polar bear's current range, where sea ice historically has been too heavy for too long, polar bears may benefit from a somewhat milder climate,' he says. 'However, any improving trend will be transitory.' In other words, while northern bears might benefit from a warming climate initially, eventually they will become a victim of it.

A happy ending?

As Mike and I cruise back to the port, we spot another bear lumbering over the rocks. We get close enough for a good look, but keep our distance to avoid aggravating it. 'That's more like it,' says Mike, peering through binoculars. 'He's got a good gut on him.'

It was my last day in Churchill and seeing this fat, healthy bear it felt as though my trip had a happy ending. But, sadly, that isn't the end of the story for the world's polar bears, because unless climate change is halted or reversed, the species' days are numbered. 'The only way to save the bears and their sea ice habitats is to control temperature rise through greenhouse gas mitigation,' explains Dr. Amstrup.

Without such mitigation, polar bears will be expected to occur only in increasingly northerly climes until they ultimately wink out. When the last vestiges of ice are gone, so will be the polar bears.

Are we about to witness the last gasp of the iconic red squirrel?



Red squirrels under siege as conservation groups suffer financial squeeze

In the second of our 'wildlife at risk' series, **Sam Campbell** reports how habitat loss, disease and funding cuts leave the iconic red squirrel facing a bleak future

Iconic and beloved, for many the red squirrel (*Sciurus vulgaris*) is the most quintessentially British of wildlife. But assailed by habitat loss and disease, the species could soon become a forgotten footnote in natural history.

A study recently released by Eden TV suggests the red squirrel could become extinct in England in the next few years

and in the UK in 20 years. The species is currently 'almost extinct' in England with only a few thousand remaining in Wales.

Prince Charles succinctly expressed the disbelief many British people likely share. 'Our squirrels are facing a battle for survival. It seems almost incomprehensible to me that we have allowed this situation to happen.'

The squirrels' decline has been precipitous – 95 per cent of the original population in England has been lost over the last 50 years, according to the Eden study. The most recent estimates of red squirrel population size compiled by Harris et al in 1995 put total red squirrel numbers in Britain at 161,000, with approximately 30,000 in England, 10,000

in Wales (although recent estimates are significantly lower), and a population of 121,000 in Scotland, representing 70-75 per cent of the GB population, according to the UK Red Squirrel Group.

The fragmented population in England is dotted around the country, from islands in Poole Harbour, to the Isle of Wight, in Thetford forest, East Anglia (although this population may already have disappeared) and across the north of England.

These hard-pressed isolated pockets of red squirrels battle with grey squirrels (*Sciurus carolinensis*) to survive.

Greys were introduced to approximately 30 different sites in the UK between 1876 and 1929, and contributed to the decline in red squirrel populations since 1920, the UK Red Squirrel Group explains. Grey squirrels have now replaced red squirrel populations throughout much of their former range.

Experts think that, once grey squirrels arrive in a wood populated by red squirrels, the two species can co-exist for about 20 years before red squirrels disappear.

Sick and crowded out

While experts disagree over the details, it is clear that greys threaten red squirrels in two main ways: By some estimates, greys eat seven times more food per hectare, aggressively competing and crowding reds out until eventually only greys are left. Greys also eat food before it is ripe enough for reds to eat.

Greys also carry disease – an estimated 60 per cent of grey squirrels in England and Wales carry the squirrel parapoxvirus, commonly shortened to SPPV or referred to as squirrel pox. Greys very rarely die from this disease as their population has developed immunity over many years. However, they are still carriers of the infection and can spread the disease to red squirrels.

In sharp contrast, no red squirrels are known to have developed immunity to the disease, and the mortality rate for untreated infected squirrels in the wild

appears to be total, most dying within two weeks of being infected. Whole populations can be rapidly wiped out.

Red squirrels in Lancashire, one of the few designated national strongholds, are currently falling victim to an onslaught of the disease. The Lancashire Wildlife Trust (LWT) is urging the public to be vigilant after the deadly virus returned to the Sefton coast.

Local red squirrel conservation experts alerted the public in August after the body of a red squirrel was found in Ainsdale, Merseyside, which is part of the north Merseyside and west Lancashire red squirrel stronghold. Expert analysis at the University of Liverpool confirmed the animal died of squirrel pox, a worst case scenario for conservationists. The

LWT Conservation Officer for north Merseyside, Fiona Whitfield, said the discovery is a heavy blow to recovering populations of red squirrels in Ainsdale and Formby previously ravaged

by the pox.

That last bout of squirrel pox decimated the population, which has clung on in a large area of woods and gardens in the area – numbers crashed by 80 per cent. But the squirrels had since staged a remarkable recovery. Densities of reds looked set to approach their pre-epidemic values within a year, and there had been encouraging reports of reds spreading into the surrounding woods and countryside.

Fiona Whitfield told the Ecologist that the new pox case was particularly concerning due to its close proximity to the first outbreak. 'Our red squirrel population had started to recover from the two devastating outbreaks in 2006 and 2008 and we were feeling positive about their future, so this finding is a setback,' she said. 'We have had more reports of sick squirrels and we want people to report any more sightings to us so we can act quickly to contain this.'

'Squirrel pox virus is a huge problem as there is no obvious way of stopping an outbreak and once it is in the red population it speeds through,' she said, adding that the area is fortunate to have

a Liverpool University PhD project looking at squirrel pox and a full time LWT field officer to carry out proactive trapping.

Out of control?

Dr Craig Shuttleworth is one of the leading red squirrel experts in the UK and works with the Red Squirrel Survival Trust (RSST) and other organisations. He told the Ecologist that grey control is 'the central foundation of red squirrel conservation strategy,' noting that grey squirrels are a major timber pest, bark stripping oak, sycamore, birch and beech particularly, so are controlled even in areas where there are no red squirrels. He also pointed to growing evidence that grey squirrels have an adverse effect upon the productivity of some woodland songbirds.

While 'control' of grey squirrels is widely agreed upon as the best strategy to ensure the long term survival of red squirrels, many conservationists are reluctant to discuss it, wary that relocation or extermination of grey squirrels may be perceived poorly by the animal-loving public that are a significant source of funding.

'As far as I am aware, all projects, including Anglesey and Scotland, have grey control as their primary conservation effort,' said Fiona Whitfield. She called grey control 'only strategy we have at present,' as without a contraceptive or vaccine 'there is no other method of maintaining red squirrel populations.'

Funding shortfall

But as the downturn takes hold, these labour intensive control methods may no longer be possible. Already sparse funding is in increasingly short supply, said the LWT's Fiona Whitfield. 'We are currently two years into a three year project which we are carrying on with a deficit. We are hopeful we can get the funding for the rest of this year and have bids in for a further three year project.'

The shortfall has left doubts over staffing at the worst possible time, she said, calling resourcing 'the major issue.' 'Our People and Wildlife Officer had recently been made redundant, which has a knock on effect to the work of the Field Officer and the Conservation Officer,' Fiona Whitfield said. 'We need public awareness to keep people on board and to keep funders interested but we

'Though saving our native red squirrel is a real challenge, I firmly believe it is achievable. Red squirrels are facing their own Everest.'

have limited time to respond to peoples' requests.'

The LWT, like other organisations, is forced to send frontline staff to campaign and appeal for donations at local events, a poor use of their time, especially given the current problems.

'Red squirrel conservation has always demanded the creative use of financial and voluntary resources, and the economic downturn has meant that this ethos has become even more important,' said Dr. Shuttleworth. 'The traditional sources of such funds are charitable trusts and foundations whose income has been severely affected by the current economic downturn – as have all income streams.'

Uncertain future

Despite funding issues, most are cautiously confident about the future of red squirrels, provided conservationists get the support they need. Dr. Shuttleworth said safeguarding the remaining populations is the first step. 'We should aim to maintain species with as wide a UK distribution as possible particularly given the uncertainties regarding climate change,' he said.

Strangely, the mono-culture tree plantations that have attracted criticism may actually help red squirrels. Reds do better in areas with coniferous species where greys cannot out compete them, leading conservationists to plant pines such as the European Black Pine (*Pinus nigra*) in red squirrel habitats.

A more coordinated approach is beginning to become evident, LWT's Fiona Whitfield said. 'The government can help – at the moment grants can be claimed via the England Woodland Grant Scheme, and the Forestry Commission and Natural England are funding some work through Red Squirrels Northern England (RSNE).'

The LWT, who have put resources into red squirrel conservation for over 20 years, are now partners in wider projects including the National Trust, Red Alert, Save Our Squirrels and Red Alert North England, and have the backing of the Forestry Commission and Natural England.

RSST have been instrumental in galvanising community support and facilitating wider partnership in red squirrel conservation, particularly in the

north of England. Here the emphasis is upon landscape scale conservation of red squirrels whilst recognising the red reserves centred around coniferous plantations.

'These large areas – Kielder forest is one – form part of a wider woodland matrix and these landscapes have been modelled by Newcastle University so that we have spatial predictions about the likely dispersal routes used by grey squirrels,' said Dr. Shuttleworth. 'As a result, trapping can focus upon pinch points and areas where effort will deliver the maximum benefit to red squirrel populations.'

But more is needed, Fiona Whitfield stressed. 'Landowners can help by allowing access to their land, claiming grants and doing grey control themselves, members of the public can report sightings, support their local wildlife trust, support grey control, in an area with reds everyone has to be on board if there is a route for greys to move through they will take it.'

Dr. Shuttleworth agreed that both support for existing efforts and the evolution of new local efforts to conserve red squirrels is needed. 'Community driven initiatives capture local desires and are often independent of grant and other statutory funding streams. They are robust and sustainable as a result, the long term legacy is practical conservation that is long-term.'

'Everyone can help with red squirrel conservation – reporting sightings of red or grey squirrels, getting involved in local volunteer groups, or even just learning about the subject and making other people aware of the issues,' he added.

The public can aid red squirrels' fortunes by helping the Merseyside Red Squirrel Survivors Project, led by the University of Liverpool, with the National Trust and the Lancashire Wildlife Trust as partners. The project could yield vital information in ensuring the survival of red squirrels, not just at Sefton, but also nationally. Vet Tim Dale and his team are taking blood samples from captured red and grey squirrels and microchipping them.

Tim Dale explained that samples are analysed for the presence of antibodies and virus DNA, a high tech approach that may offer the best hope for a

squirrel pox vaccine. 'Common factors that are associated with disease can then be identified and help contribute to a preventative control programme to stop such an epidemic occurring in red squirrels again.'

Dr. Shuttleworth stressed the need for timely action. 'The decisions that we take today are a legacy that we leave for our children; for example my children in North Wales are lucky enough that in 1997 an 87-year-old lady decided that something had to be done to safeguard the few remaining red squirrels on Anglesey. As a result of her efforts, today red squirrels are widespread on the island.'

Reintroduction

Eric Robson, presenter of Gardeners' Question Time and Great Railway Journeys of the World, said that the reintroduction of red squirrels could have significant benefits. Robson, who has lived in Cumbria all his life, has a sheep farm and has penned books relating to rural matters. 'The red squirrel sits at the very centre of tourism in Cumbria,' he said. 'If we can re-establish it in its traditional habitats in Cumbria it will not only be an environmental triumph but will also provide a measurable boost to the county's biggest industry. Together we'll get Squirrel Nutkin back where he belongs!'

Reintroduction has been successful in Anglesey in Wales, but this is an isolated island habitat where greys have been eradicated. Without a nationwide effort to completely eliminate all grey squirrels from the UK, replicating even this minor victory will be difficult.

As Sir Chris Bonington, the world-renowned mountaineer, writer and photographer, has said: 'Though saving our native red squirrel is a real challenge, I firmly believe it is achievable. Red squirrels are facing their own Everest.'

Native Penan people in Sarawak's last wilderness. Photo: Alex Joseph

Activists challenge 'corrupt' government in the battle for Sarawak's rainforests

Land seizures, rampant logging and oil palm expansion have decimated Sarawak's forests. But now an invigorated reform movement is fighting back - accusing the government and its chief minister Abdul Taib Mahmud of duplicity.

Alex Joseph reports

In July 1946, Charles Vyner Brooke abdicated his position as the White Rajah of Sarawak, bringing a century of dynastic rule to an end. Yet sixty years later, despite its independence as part of Malaysia, Sarawakians are battling to unseat a new, thoroughly post-colonial type of Rajah: the Chief Minister-for-life Abdul Taib Mahmud.

On a modest public salary of £35,000 per annum, Taib cuts a larger than life figure. His shock of white hair is often accompanied by dapper double-breasted blazers, sunglasses and a prominent diamond ring. He is chauffeured around in a cream Rolls-Royce and resides in a palatial mansion in the capital Kuching which, among other trophies, reportedly boasts a \$2 million piano of the late Las Vegas showman Liberace. Whilst tracing his roots back to the Brunei Sultanate, his informal paternal nickname, Pak Uban ('White-haired uncle') has been adapted

by his critics to 'Last White Rajah'.

Situated on the island of Borneo, 1000km from Malaysia's capital Kuala Lumpur, Sarawak's political relationship with central government had been contentious since Malaysia's formation in 1963. The desire of Sarawak's nascent political establishment to assert its autonomy was continually trumped by the central government, who wished to maintain tight control over Sarawak's substantial oil reserves and quell any latent separatism in this, largely non-Muslim region. After seven years of battling, there eventually emerged a new political elite of Muslim natives whom Kuala Lumpur trusted, and to whom it granted a wide degree of latitude. This elite's domestic power rested on a simple formula: as gate-keeper of Sarawak's land and another of its natural bounties, tropical timber.

Taib was the second leader of this

political dynasty, taking over the role of Chief Minister from his uncle in 1981. In the subsequent power struggle, he escalated the formula of control established by his uncle, becoming the political patron of prominent Chinese timber barons (known as towkays or 'masters') and guaranteeing them vast logging concessions in exchange for their unwavering political and financial backing. To ensure quietism from his peers in the State Assembly, he also rewarded loyal politicians with shares in the beneficiary companies, typically valued between \$2-4 million.

As his clients cashed in on their concessions, a tropical timber boom ensued and Malaysia outpaced Indonesia as the world's biggest exporter of tropical timber. In 1990, the International Tropical Timber Organisation (ITTO) concluded that unless logging was stabilised at a lower level, the state's forests would be

exhausted within a decade. In fact, after just 8 years in power, Taib is believed to have licensed 8.8 million hectares, almost the entirety of Sarawak's forest for logging.

Indigenous land

The irk for Taib, activists believe, was that much of the land he took the liberty of dispensing as political currency was inhabited by indigenous Dayak communities who had lived and cultivated their land for generations, mostly pre-dating the creation of the modern Sarawakian state. Thus, when bulldozers and pickup trucks arrived brandishing permits for the land, clashes ensued which often turned violent. During the height of the confrontations in the 1980s and 90s, the army and police were deployed to back up the companies; the clashes were linked to several deaths and hundreds of arrests under Malaysia's draconian internal security laws, according to activists.

This rapid escalation of land seizures was justified in terms of economic development; ensuring Sarawak was part of Vision

2020 (the goal set by Prime Minister Mahathir Mohammad of Malaysia becoming a 'fully developed' nation by 2020). Native land was designated as 'idle' or 'unproductive', an impediment to commercialisation, and villagers who protested were patronised and belittled as backwards.

Yet contrary to this ethos of common good, it is plain to see whom the overwhelming beneficiaries have been. Most logging permits have been awarded at grossly undervalued rates to private companies with political connections, generating meagre amounts of government income. In the last three years, public revenues from logging permits has averaged just £1.5 million per annum. Conversely, export values in the same period of consistently topped £1.4 billion per annum, with the vast majority of these exports being unprocessed logs rather than finished wood products. This suggests a truly 'extractive' model that intensifies upstream harvesting and minimises downstream investment in infrastructure, jobs and skills. With such ludicrously low levels of private investment and extremely high profits from export, it is unsurprising that Sarawak's timber tycoons have become some of the richest men in Malaysia.

Forest loss

The effects of this system on Sarawak's environment and rural society have been transformative. Though Taib recently reiterated his claim that primary forest cover is at 70 per cent, satellite images or a flight over Sarawak's hinterland show this to be a massive over-estimate. Independent estimates put its primary forest cover at under 10 per cent, in line with the prescient warnings the ITTO gave Taib in 1990. Yet the depletion of forests did not put an end to land seizures, which were then aimed at conversion into vast oil palm plantations, owned and operated by the very same companies (now international conglomerates) who made their fortunes in the timber boom. With international demand continuing to rise, the government plans to convert a whopping 2 million hectares into oil palm estates by 2020, with much of it on 'idle' native land.

Taib's effective formula of political patronage has been extended to almost every aspect of Sarawak's economy, with his gilded family and allies being publicly listed shareholders on almost all lucrative

land development and public works contracts, from hydroelectric dams to hospitals, road networks to luxury tourist resorts. Such concentration of money and power has led to staggering inequality, with indicators suggesting a rich-poor divide worse than Nigeria.

Such dire poverty is evident in Sarawak's rural areas, where alienation of native land for logging and oil palm has stripped communities of their natural assets, their traditional self-sufficiency and independence. Some villages have been paid compensation but mostly on grossly unfavourable terms for land leases that would generate millions for the concessionaires. With little opportunities for cash income, most rural youngsters have migrated to the cities or outside Sarawak in search of work. Those villagers who have remained are dependent on poorly paid labour positions in companies operating on their former land, along with petty government handouts.

This economic disenfranchisement has left rural areas vulnerable to political manipulation and vote buying, which has, ironically, propped up the status-quo and allowed the land seizures to continue. 'The problem is that politicians are elected by buying votes and their constituencies see them as a giver of money and not

as a politician,' explains reformist lawyer and politician See Chee How, 'yet the representative needs to be close to the Chief Minister [Taib] in order to get logging or plantation schemes so that he can raise money to buy votes in the next election.'

Buying votes

Until recently, Taib's system of patronage ensured almost total control, land alienation continued apace and Sarawak's politics remained extraordinarily dull. In a land with isolated villages and little infrastructure, news travelled slowly, votes were bought, government promises never materialised and disaffected constituents lacked the means to challenge decisions.

It took the initiative of indigenous activists to educate themselves in state law and, alongside reformist barristers in the cities, file test cases on behalf of dispossessed villages against the state government and beneficiary companies. Much to the ire of the government, the judge ruled in favour of the villagers. These precedents prompted an avalanche of cases from affected communities, demanding compensation and official recognition of their native land rights, of which there are now over 180 pending in the high court. These legal battles, together with local NGO's work in educating villagers of their legal rights, broadened awareness among indigenous communities about the deeper political malaise they were embroiled in.

With the government swiftly moving to block communities' access to such legal recourse, there emerged a growing consensus amongst Sarawakian activists that their real hope rested in political change under the umbrella reformasi movement that was rapidly gaining strength in West Malaysia. This awareness was boosted by a flourishing new media network.

Two of Sarawak's most influential outlets have been Radio Free Sarawak and Sarawak Report, founded by Peter John Jaban, a former employee from the Sarawak Land and Surveys Department, and British investigative journalist Claire Rewcastle Brown. Based in London, far away from Malaysia's stifling sedition and media laws, these outfits began investigating Taib's empire and broadcasting its reports into Sarawak, exposing not only the magnitude of Taib's vested interests but also where his illicit funds were ending up: not in Sarawak's developing economy, but in a convoluted offshore portfolio estimated to top \$1 billion stretching from London to Monaco, Ottawa to Sydney.

The tension deepened even further

when a prominent whistleblower, a former Taib aide named Ross Boyert was found dead in an L.A. motel room with bag taped over his head in a rare form of suspected suicide. Members of the opposition have rightly pointed out that, since Malaysia has one of the world's highest rates of illicit capital outflows, totalling \$291 billion between 2000-2008, Taib is an obvious place to begin the clean-up of Malaysia's politics and economy.

Money laundering

Following pressure from Swiss NGOs, the Swiss President Micheline Calmy-Rey forwarded the Taib's suspected deposits in the Swiss bank UBS to the national money-laundering authority, a move which can only increase pressure on their counterparts in countries such as UK, Canada, and the USA to follow suit.

Taib himself has strongly denied allegations that he holds a secret Swiss bank account containing money obtained through corrupt timber deals.

All this agitation climaxed in the state elections on 18th April 2011, where despite widespread reports of gerrymandering, vote buying and electoral fraud by the ruling coalition, the opposition gained 15 seats in the state assembly, denying the ruling coalition control over the major cities. From the public response, it is clear that many see these elections as the high tide mark for Taib's rule. Sarawakians are now relishing the challenge of political reform ahead of them, illustrated by the 40,000 people who took to the streets in the small capital Kuching in support of reform, one of the biggest rallies in Malaysian history.

With an effective opposition in the legislature, an emboldened civil society, international money laundering investigations and court cases piling up against members of Taib's network, the existing system could well begin to unravel. The most inevitable factor weighing in against them is Taib's own mortality. At 75, he is a political veteran who has spent thirty years cultivating his supremacy over Sarawak's politics and economy, controlling 50 per cent of the Sarawak's state budget through his additional roles as Minister of Finance and Minister of Planning and Resource Management. This has led to a system that is inefficient and top-heavy, not only in the public sphere but also in the private. Of the conglomerates which dominate Sarawak's economy, which number less than ten, all have long-standing personal connections to the Chief Minister's inner circle and rely on his political predominance for lucrative leases and contracts. In a society where

Oil Palm Development on NCR Photo: Alex Joseph



political engagement and access to independent news is on the rise, the ruling government finds itself in an impossible situation: increasingly difficult to defend the duplicity of status quo, yet unable to undertake significant reform for fear of losing power.

New politics

Malaysia's federal elections are expected to be called in 2012, and Malaysians are already heaping pressure on the ruling coalition to undertake electoral reform prior to the polls, to ensure that the results are, unlike previous occasions, free and fair. In July 2011, tens of thousands of protestors, including many Sarawakians, flooded Kuala Lumpur demanding these basic reforms, resulting in a brutal crackdown by the police. The opposition are confident that the public want to begin a new political chapter for the first time since independence, and that electoral malpractice is the final obstacle to overcome.

In Sarawak, opposition parties have clearly articulated the basic structural changes necessary for a more efficient and just economy. Their policies have a strong emphasis on cleaning up land tenure and development practices. For example, in forestry, they have pledged to step up reforestation, reduce the size of logging concessions and encourage downstream timber processing whilst adopting tougher regulations on extraction that would make Sarawak's timber more valued on the international market; all moves that would strengthen the sustainability of the sector in the long run. Whilst rather than focusing

on vast oil palm estates on alienated land, they advocate granting indigenous communities titles and encouraging cultivation in small holdings and more favourable joint ventures. In addition, ensuring open tender processes for land development or public works contracts would raise more public revenue, allowing for greater investment in services, human capital and infrastructure, diversifying the economy away from its reliance on the primary sector.

Given that most of local opposition leaders have fought tooth and nail against Taib's rule and have officially represented indigenous communities in their legal battles, there is considerable reason to believe they possess the political will to follow through with these sweeping reforms. Such moves would represent a huge step forward for the empowerment of Sarawak's indigenous population, and for the conservation of its rainforests.

Yet Taib remains in power, and despite his tenuous grip, will surely continue to use his leverage over Sarawak's natural resource to this end. In the meantime, the giant logging and oil palm companies spawned under Taib's rule have already moved to pastures new: Papua New Guinea, Guyana and West Africa. As such, international civil society must learn from the case of Taib in understanding the crucial links between weak governance and destructive social and environmental policy, with the aim of exposing and disrupting such odious ties, wherever they appear.

Alex Joseph is a cover-name for a journalist operating in SE Asia

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The struggle to save Alaska's 'illness-busting' wild berries

Academics are worried the health properties of Alaska's berries could be lost

Despite being used to treat diabetes and infections, knowledge of Alaska's wild berries is in danger of being lost as young indigenous people embrace western lifestyles. **Jessica Wapner** reports

Despite being used to treat diabetes and infections, knowledge of Alaska's wild berries is in danger of being lost as young indigenous people embrace western lifestyles. Jessica Wapner reports

In the remote whaling village of Point Hope, Alaska, the tundra is carpeted with wild berries during the brief but potent summer. For centuries, berry picking has been a galvanising event for this 850-person community. Family members will drop everything, pack a picnic lunch and head out in their all-terrain vehicles to the gently sloping hillsides, where the tiny berries sweeten an otherwise vacant landscape. The berries, which include blueberries, salmon berries and mossberries, are used to treat diabetes and infections.

But in recent years a rift has been growing between the generations. The elders of the native Inupiaq tribe are holding fast to their traditions, while the younger set gravitates toward modern culture. As the elders die without passing

on vital knowledge about their history and their land to the next generation, that next generation is increasingly experiencing the ills of western culture, with diabetes and cancer both on the rise - paradoxically the extraordinary health benefits of the berries are in danger of being lost.

A unique science education program is aiming to change all this; the venture is teaching the younger Inupiaqs the value of this precious, natural, commodity.

Like so many radically new endeavours, the program began with a conversation—on this occasion, between a scientist and a sociologist. The scientist is Mary Ann Lila, a world-renowned berry researcher who now directs the Plants for Human Health Institute at North Carolina State University, but was formerly a professor of nutrition at the University of Illinois, where Courtney Flint, a rural sociologist, holds a professorship.

Lila, whose work has revealed the mechanisms behind the extraordinary health benefits of wild berries in several

locations worldwide, was interested in exploring Alaska's bounty. Flint, who had spent time in Alaska as a child, was intrigued by the rural community's relationship to this prized resource. 'We seemed an odd fit,' says Flint, 'but the more we talked, the more we realised the opportunity to look at the human dimensions as well as the science.' The two became a team, funded by a grant from the Environmental Protection Agency. They made their first trip to Point Hope in 2007.

Consultation

In an unexpected move for rigorous scientists, the team spent hours talking with the locals before stepping foot into the bush. 'They didn't want to be one more group of people coming through to take the money and run,' says Marlene Beam, assistant principal at Point Hope's public school, of the research team. Lila, Flint, and their accompanying researchers held town meeting after townmeeting,

always including children, a directive from community leaders stemming from the wish to 'connect children with traditional knowledge,' says Flint, '[and their] recognition that students need to understand science.'

The introduction became the starting point for a powerful educational experience, and the work continued to be laced with learning. Local students eight years and older were dispatched to conduct interviews with their elders about the wild berries, a task that not only helped break the ice for the scientists but also turned the young people into researchers overnight. Workshops at the local school gave young and old locals a crash-course in 'screens-to-nature' (STN) field research using hand-held devices to collect and analyse berry samples.

Josh Kellogg, a researcher with Lila's lab at the University of Illinois, taught tribal members how to do the assays and how to collect plants using a GPS unit so that their exact location could be recorded and revisited. Against the backdrop of a horizon combed with the arches of whale-rib funerary shrines and shaded with the occasional dip of an ancient Inupiaq underground house, scientists and locals then worked together to collect and test the berries.

Heritage

For native Alaskans, the importance of wild berries extends far beyond physical sustenance. 'It's part of their heritage and traditional values,' says Flint. An integral part of the cultural practice of sharing and experiencing the outdoors, the berries have come to represent the best aspects of native, rural life. 'When the berries are ripe, everything comes to a stop,' says Flint, who recalls the challenge of even finding anyone to interview during their first visit, which took place smack in the middle of berry-picking season.

Traditional knowledge about the health benefits of the local berries—which include blueberries, the pinkish-colored salmonberries, and the blackberry-like mossberries—is also deeply seated. Virtually the only edible land plants in Point Hope, a desolate place located north of the Arctic Circle, berries have been used to treat diabetes and infections, and to promote general good health.

But the younger generation has grown increasingly skeptical of traditional knowledge about the nutritional value of

wild berries. 'The people who have thrived in this environment [for thousands of years] have had their own educational system,' says Gary Ferguson, an Anchorage-based medical doctor focused on naturopathy. 'At the same time, we're in a new world of information, and just because grandpa or grandma said it isn't enough for some young people.'

So it made sense to focus the Point Hope STNs on diabetes and metabolic syndrome, a precursor to diabetes, both of which are on the rise in the area.

'There are low rates of prevalence [for diabetes] but the increase over the past 10 years has been huge,' says Ferguson, who sees the incidence rate to be directly tied to the increased presence of processed foods. 'With embracing a Western diet come changes in chronic disease,' he says. Accompanying psychological ills have also been on the rise. 'Diabetes and pre-diabetes have marked depression that goes along with them,' says Ferguson, an Aleutian Islands native.

Still, Lila and her team found it hard to pique the interest of the local teens and twenty-somethings. Initially, their attention span for learning about field-deployable assays was no different than that for reading a textbook. That is, until the results came in.

Bioactive

To test berries for their bioactive component in the field, samples are crushed with a portable drill and mixed with ethanol. Because they're so juicy, a wealth of information can be obtained from just 2 grams of berries. With just a few minutes of steeping, the alcohol draws out the bioactive components. Later, gathered in a circle in the schoolhouse, everyone watches as drops fall from pipettes onto the testing screens. With deepening shades of color correlating with increased levels of a given chemical—in this case antioxidants—the litmus-like assays reveal whether science can confirm traditional knowledge.

And it was in that moment—the colorimetric assay growing increasingly dark, indicating high levels of powerful antioxidants—that the local youth became enraptured with the science. 'As the plants that their grandmothers have always used are getting all these positive hits, the teenagers are drawing closer and closer to the center of the circle,' says Lila. 'That was the a-ha moment for me: it's not just a science tool, it's a teaching

tool.'

The science itself has yielded stunning results. 'All the berries we screened had medium to high levels of antioxidants,' says Kellogg. By inhibiting oxidation—a process that sets off a chain reaction that can damage or kill otherwise healthy cells—antioxidants may help prevent or treat a wide range of diseases, including stroke and cancer. The assays also showed that the berries contained compounds that inhibit glucosidase, an enzyme that breaks down starch to sugar. 'If you can slow down [glucosidase activity], that could possibly delay the onset of diabetes,' says Kellogg.

The bridge created by the STN program has enabled the younger generation to cross back over to their native roots. Such 'place-based education,' as Marlene Beam explains, has had a deep impact on the students, both academically and personally. Beam recalls one student, struggling at home and at school, whose life was transformed by the STN program. 'In a life full of negativity, you could see her becoming a better person because of the research,' says Beam.

Cultivating youth

The work has likewise changed the researchers. 'The potential for youth to contribute to science and knowledge is fundamental,' says Flint, who was given an Inupiaq name (Akpiq, meaning salmonberry) by a tribal elder in recognition of her dedication to the community. 'I don't think I ever appreciated that before.' Flint now plans to incorporate youth into all future research projects.

The repercussions of this mutual transformation, among the local youth and the scientists, could extend far beyond the funded research. As Lila explains, the high antioxidant levels are the berry's way of coping with environmental stresses, such as the long stretches of direct sunlight present during the growing season. Climate change threatens to diminish that stress, a shift that could—later, if not sooner—result in reduced bioactivity.

Despite the substantial research findings, the purpose of the initial EPA grant was only for methods development, and additional money has been hard to come by. As the elders holding the traditional knowledge pass away, it will be up to the young people to fight for the preservation of their land, an effort that will only happen if they stay connected to their roots. And in this most surprising turn of events, modern science appears to have done just that.

Revealed: scandal of Europe's 'tomato slaves'

Across southern Italy as many as 50,000 migrant workers are believed to be harvesting the region's tomato crop. Photo: Piet Den Blanken / Flai-Cgil



Across Italy an invisible army of migrant workers harvests tomatoes destined for UK dinner plates. Paid poverty wages and living in squalor, medical charities have described conditions as 'hell'. Andrew Wasley reports from Basilicata, southern Italy

In the parched countryside outside the town of Venosa, in Basilicata, southern Italy, along a rough track fifteen minutes' drive from the nearest road, you come to a series of ruined farmhouses. Overgrown and run down, the brickwork crumbling, and surrounded by the detritus of poverty – rubbish, abandoned water butts, washing draped out of windows, dogs roaming – at first glance it's difficult to believe anyone lives here.

The slums are in fact home to several hundred migrant workers about to harvest the region's abundant tomato crop. Every August, thousands of itinerants, mostly from Africa, some from Eastern Europe, descend on southern Italy to scratch a living picking tomatoes that will eventually be processed and exported across Europe – including to the UK – to be sold in tins, or as pastes, purees or passatas, or used as an ingredient in other food products.

But an Ecologist investigation has revealed how the lucrative trade is blighted by exploitation and abuse: workers – some of them illegal immigrants – are forced to toil for up to 14 hours a day picking tomatoes in harsh conditions for meagre wages, frequently under the control of a network of gangmasters who make excessive deductions or charge inflated rates for transport, accommodation, food and other 'services'. Those complaining can face violence and intimidation.

Workers frequently live in appalling squalor: home is often a derelict building without power or any form of effective sanitation. As many as thirty people can be crammed into a single, filthy, one floor house. Healthcare is virtually non-existent and contact with the outside world minimal.

So bad are the living and working conditions endured by the migrants that

campaigners have dubbed them 'Europe's tomato slaves'.

Most seek out the precarious employment in order to send money to family back home, but find themselves caught up in a brutal spiral of poverty and exploitation. Unable to save sufficiently to transfer any money – or pay for a flight out of Europe – the workers become trapped and are forced to seek out similarly low paid and back-breaking work harvesting oranges, lemons, olives or strawberries in order to survive.

Human rights groups and unions say as many 50,000 migrant workers could be affected, toiling in the agricultural regions of Puglia, Basilicata and Campania, amongst others. The figure could be much higher as many migrants are thought to be in the country illegally.

Conditions are so poor that the charity Médecins Sans Frontières (MSF) – more usually associated with providing

Housing conditions for migrant workers in Puglia, Basilicata and beyond are primitive. Here a worker sits outside a makeshift shelter. Photo: Piet Den Blanken / Flai-Cgil



medical aid in conflict zones – has in recent years sent mobile clinics to treat migrants in some areas, and issued a scathing report describing the workers' experiences as 'hell'.

Suffering and squalor

Those living in the first house the Ecologist visited didn't want to talk. There had been rumours of television cameras coming, and – in a clear sign many were in Italy without visas – fears that the 'authorities' could be conducting inspections. One man refuses to look up from gutting the carcass of an unknown animal that's hanging from the shack's roof.

Further down the track there is another, almost identical, building. A dozen young African men are gathered around; some smoking, some lounging in the stifling Italian heat. These guys are happier to talk: this house is 'home' to fifteen migrants at present, mostly from West Africa – countries such as Ivory Coast, Burkina Faso and Ghana.

There's no running water or electricity. The men appear to sleep communally on mattresses spread out across the stone floor. The workers cook, wash and shit outdoors (there's no toilets here; as we left one worker was squatting just yards from the house). The tomato harvest begins in late August in Basilicata; when it does, these men will be joined in the house by up to fifteen more workers. They say it will be so overcrowded that some will have to sleep outside.

The men tell us they are here for one

thing: to work. Some had been in Italy for several months, some for several years. Most had no idea of when – or how – they'll return home. When not harvesting tomatoes they might be picking oranges or other fruit, or might go back to Naples, where much of Italy's itinerant workforce dwells when not actively harvesting. Some migrants beg on the city's streets.

Asked whether this was what he expected to find when he set out for Italy, one worker, Joseph, from Ghana, tells us: 'It's not what we expected to find that matters, but what we found,' gesturing at the surroundings.

Another migrant, Armel, from Birkin Fasa, says 'It's not better here [than Africa], we're not used to this type of work.' He says it's not easy to send money home as prices [paid for work] are very low – and they have to buy food and other items for everyday living. 'Every harvest is the same, the orange harvest is even worse... there's too many people for the work [available]'.

Daniel, also from Birkin Fasa, tells us that once the harvest gets underway in the coming days, he expects to spend between ten and twelve hours a day in the exposed tomato fields, picking by hand; bending, plucking and carrying the filled crates. The work is arduous, repetitive and hot. The temperature can reach 40C degrees.

Contracts are non-existent for most tomato pickers. The migrants are paid on a piece-rate system based on the amount of tomatoes successfully harvested.

Although it can vary from location to location, Daniel, Armel and Joseph can expect to earn between 20 -30 Euros (£17 - £26) per day – the current going 'rate' – depending on the number of crates picked. The crates are heavy, holding as many as 350 kg of tomatoes when full.

'But there's only enough work for three days [per week]', Daniel says. 'The other days are spent here.' This means, in practice, that some workers here could earn no more than 51 Euros (£45) per week. And that's before a gangmaster has taken his cut or workers have paid for essential items.

Strict hierarchy

In common with seasonal horticultural operations across Europe – and the US – gangmasters are central to Italy's tomato harvest. They broker deals with farmers and producers, and supply the workforce, as well as providing transport, organising accommodation, food, water and other essentials for the workers.

The relationship between gangmasters and producers in Italy is complex with a strict hierarchy governing those involved in the supply of seasonal labour. In many cases an Italian gangmaster, known as a capo bianco (white chief), will approach a tomato farmer, or collection of farmers, to establish a business relationship. They will then agree the quantity of land to be harvested, and negotiate an overall price and the number of workers needed.

The capo bianco will then typically instruct one of a number of other gangmasters he manages – usually a foreign national from a country that is home to migrant workers; these are known as capo neros (black chiefs) – to physically recruit and manage the required workforce.

The capo nero usually lives alongside workers, but doesn't actively take part in the harvest, instead ensuring the correct number of migrants are delivered to the fields, providing their transport, accommodation, food and water, and paying the wages.

Some deduct money from wages upfront for workers' food, accommodation and transport. Others charge for these essentials after they've been paid. Other 'services' and supplies must also be paid for – charging a mobile phone, organising clean drinking water, supplying a bike – with many enterprising gangmasters ensuring they take a cut on each sale. Often, a capo nero will take the first crate of tomatoes picked in a day as additional payment for his services.

A capo nero is present when the Ecologist visits. He's unrecognisable apart from being marginally better dressed than his peers, and being one of few who say they've managed to return home – in his case Ivory Coast – since arriving in Italy. His presence means these workers are nervous about openly discussing financial details, although one young migrant complains that 'too much money' is sometimes charged for basic items.

Intimidation and violence

Relations between gangmasters and workers frequently break down as resentment over exploitative practices spills over; in recent years there have been regular reports of intimidation and violent attacks on workers who have spoken out, according to campaigners.

Union officials told the Ecologist they are currently concerned about the whereabouts of one African migrant who had been living in the Venosa area after it became known he had written a letter complaining about poor conditions. And in the Lecce region of Puglia (another hotspot for migrant labour) seasonal workers have recently complained about poor treatment by gangmasters and are currently 'striking' in protest.

In a groundbreaking investigation for 'L'Espresso' in 2006, Italian journalist Fabrizio Gatti first revealed how African and Eastern European migrant workers harvesting tomatoes in Puglia were frequently threatened, beaten up and racially abused by gangmasters and farm owners.

In one disturbing incident, a Romanian worker was allegedly savagely beaten by a gangmaster before being left to die – he was later secretly fed by fellow workers and eventually taken to hospital where, after a major operation, he was handed over to police for deportation.

He was lucky to have received treatment at all. MSF has reported that many immigrant workers employed in southern Italy's tomato and citrus fruit harvests have been turned away from hospitals whilst seeking treatment, and that others, without permission to be in Italy, have been too afraid to access medical attention for fear of being reported.

The organisation, which has documented disturbing patterns of poor health amongst migrant workers, including skin, respiratory and gastrointestinal illnesses, became so alarmed by conditions that it provided mobile health clinics and other humanitarian assistance to workers in several regions, including Basilicata.

Although the situation in Basilicata is poor, campaigners says conditions are worse – and the scale of the problem even greater – in Puglia, in the Foggia and Lecce regions in particular. It's estimated that there are as many as 15,000 migrant workers in Foggia, around 2,000 in Lecce. When the Ecologist visited Basilicata the figures were much lower, less than a 1,000, although that number is expected to swell as the harvest begins in earnest.

Gervasio Ungolo, from the advocacy group Osservatorio Migranti, which

works to improve conditions for migrant communities, says that although many of the tomato workers are in Italy legally – he estimates around 80 per cent, with the remainder in the country illegally – conditions are so poor and the future so bleak that many migrants simply despair. 'They reach the bottom of the scale, the bottom of the barrel,' he says 'they lose all self respect.'

Workers interviewed near Venosa concur: 'The situation in Africa is not so good, but the basis is still respect; not here... here there is no respect', says Armel. Another migrant, Raul, tells us: 'We want to go back to Africa, we need people to help us go home. Life should be better... this is not life.'

As we leave, two of the younger migrants approach discreetly. Despite insisting that they are in Italy, and thus Europe, legally, they want to know whether it's possible to reach the UK and work unofficially: 'how do you get there? do you need paperwork? is it possible to work without a passport? is the work better than here?'

Keeping costs down

Few Italian tomato farmers will freely admit to employing migrant workers despite it being an 'open secret' within the industry. One grower interviewed by the Ecologist acknowledged however that the practice was common, particularly when weather conditions are poor and machines (increasingly being used by larger farms to mechanically harvest) cannot operate.

The farmer, Giovanni Lagana, based near the Basilicata town of Lavello – a major hub for tomato growing – says that foreign workers have been employed during the Basilicata tomato harvest for years. 'Twenty years ago, in the beginning, they were from North Africa, now it's Central or Western Africa,' he says. 'Tunisian students came to train and learn the harvest.'

He says the migrant workers he uses are 80 per cent African, 20 per cent Eastern European – Italians apparently don't want to do the work – and that all are supplied by a gangmaster. 'It's necessary [to use gangmasters] so I don't have to talk to forty people, just one, to arrange the work. They say "how many workers do you need?", we negotiate the price for a box, it's a guarantee for the workers and farmers – they take care of everything.'

Lagana, who cultivates up to 900 tonnes of tomatoes each season, some of which are supplied to major processing



Conditions during the tomato harvest are often harsh, with workers such as these in Puglia enduring heats of up to 40C. Photo: Piet Den Blanken / Flai-Cgil



Many migrant workers have little access to running water, sanitation or electricity. Photo: Piet Den Blanken / Flai-Cgil

companies for export and sale as tinned tomatoes overseas, says there is an economic imperative to keep costs, including labour costs, down: 'The price we have now in 2011 [for tomatoes] is the same as 30 years ago, but the [production] costs have risen.'

The farmer says tomato growers are under acute pressure as plants, irrigation systems, fertilisers, pesticides, and the harvest, all have to be paid upfront, and that the prices paid by the food industry are too low. Each year, the price for a tonne of tomatoes is fixed by Italian

food industry representatives and local producers organisations, he says. These regional organisations, or co-operatives, of which most growers are members, then meet with processing companies to set up a deal and agree prices for the season.

'It's a bad life, tomato production with this system is destined to disappear. Prices are too low; maybe they are going to lower them more and more because of Chinese production,' says Lagana. Although still one of the world's leading suppliers of tomatoes – and tomato products – Italy is facing stiff competition from other growing nations, including China, to keep prices competitive and this pressure trickles down to individual farmers.

There's no running water or electricity. The men appear to sleep communally on mattresses spread out across the stone floor.

A representative from one regional producers' organisation told the Ecologist that the 'wider market' is to blame, and that if a major retailer says it is going to pay a certain amount per tin, 'the industry has to follow this price'. He made no correlation between the need to keep costs low and the apparently widespread use of migrant workers however; in fact,

he denied that foreign workers were used in Basilicata to harvest tomatoes at all.

Culture of impunity

Although acknowledging that tomato farmers

face increasing pressures, human rights groups and unions argue that many growers simply turn a blind eye to exploitation: 'Farmers? They don't care, they know about the inhumane conditions,' Vincenzo Esposito, from the Flai-Cgil union, says. The union is behind a major campaign Oro Rosso – Red Gold – to raise awareness of the problem in Basilicata, Puglia and elsewhere.

Esposito says there are two principal problems – the number of workers, and the payment system: 'There's too many workers, too many people, immigrants from elsewhere coming here, yet they cannot always get work here,' he says. 'Every year the Basilicata region deals with an emergency situation with the

arrival of hundreds of workers. The situation in Puglia is worse, and the gangmasters are more aggressive.'

Flai-Cgil is calling for an industry wide protocol, akin to a certification scheme, to be adopted by national tomato producers, in order to agree minimum standards and an ethical code. On September 28th they are planning a national day of action to promote the scheme.

Gervasio Ungolo, from Osservatorio Migranti, says there's a culture of impunity around the issue: 'It's like in World War Two, when you had the trains [carrying Jews to the death camps]; everyone knew but didn't act because of fear, it's exactly the same with the tomato slaves.'

Ungolo used to cultivate tomatoes but left the sector after witnessing abuses: 'I used to see workers in the fields, slavery among workers, and bags of money [changing hands] – and decided to get out of this game,' he says.

Mechanical harvest

Tomatoes – and processed tomatoes in particular – are big business in Italy: the country produces up to 4 million tonnes each year with as many as 90 per cent destined for processing. Italian tinned tomato exports were estimated to be worth more than \$900 million in 2008. The country is responsible for around 75 per cent of the world's canned tomato exports. Britain is the largest importer of tinned tomatoes in the world – with more than 80 per cent of its processed tomato products coming from Italy.

The trade is dominated by a handful of large companies. Leading suppliers deny any involvement in the migrant workers scandal.

Conserve Italia, manufacturer of the popular Cirio brand, processes approximately 300,000 tonnes of tomatoes annually, including some cultivated in Puglia and Basilicata. The company sells to Sainsbury's, Waitrose and Morrison's, as well as supplying cash and carry outlets and specialist Italian delicatessens.

Conserve Italia admitted that some of its tomato suppliers use migrant labour but said they are employed by farmers and not directly associated with the company. The company also stated that a strict code of conduct prevents abuses in their supply chain.

'Conserve Italia has an associated cooperative in Apulia [Puglia] that provides 50 per cent of the total amount of fresh tomato processed in our factory in Apulia. This cooperative associated to Conserve Italia guarantees that all the production



These workers in Puglia have little more than cardboard for shelter. Photo: Piet Den Blanken / Flai-Cgil

is made in compliance with our code of ethics, which prescribes to the associated farmers to produce and harvest the tomato without exploitation of illegal labour,' a statement said.

'Moreover of the total quality processed in Mesagne [in Puglia] factory, 80 per cent is harvested by machines and only 20 per cent is harvested by hand, with workers that are legally employed by the farmers not associated to Conserve Italia. The suppliers subscribe a commitment with Conserve Italia that engages them to respect all regulations in terms of use of labour. Most of the workers employed by our suppliers are Romanians and Bulgarians,' the statement continued

La Doria, which through its subsidiary LDH Ltd, supplies many of the large UK supermarkets – including Sainsbury's, Tesco and Waitrose – with tinned tomatoes and other tomato products for 'own brand' items, has a major processing plant situated in Lavello, Basilicata, but denied using any migrant labour for its harvest.

The company said: '100 per cent of the tomatoes processed by La Doria are mechanically harvested where prices and contracts have been agreed, with approved growers in March this year prior to the planting of the crop. In the La Doria factories 100 per cent of seasonal workers are Italian and contracted to La Doria. La Doria have an ethical code which is not only followed throughout the group but also given to the contracted growers for them to respect. In addition a team of

La Doria agronomists work closely with the growers to monitor closely all aspects of the cultivation and harvesting of the crop.'

A spokeswoman for Waitrose told the Ecologist: 'We take very seriously the welfare of all workers in our supply chain. Our expectations on labour standards and working conditions are outlined in our Responsible Sourcing Code of Practice, which all suppliers are expected to comply with – this includes branded suppliers such as Cirio.

'La Doria supplies us with canned tomatoes, and as a Waitrose supplier is engaged in our ethical compliance programme and expected to comply with our Responsible Sourcing Code... in addition, the tomatoes grown for Waitrose are mechanically harvested, which is much less labour intensive than manual harvesting, therefore bypassing the need for a large workforce.

'We build our supplier relationships on honesty, fairness and mutual respect and expect all our suppliers to respect the rights and well-being of their employees. As such we have immediately begun a thorough investigation to make sure our code of practice is being adhered to.'

Sainsbury's said: 'Sainsbury's was a founder member of the Ethical Trading Initiative and expects all suppliers to follow our Code of Conduct for Ethical Trade, which incorporates the ETI Base Code... Sainsbury's has a clear approach to corporate responsibility to ensure that we do business in an ethical and sustainable way.'

A spokesperson for Tesco said: 'We work in partnership with our suppliers to ensure our products are sourced responsibly and will work to resolve any problems we find without delay. We have investigated these reports and do not believe our supplier is affected.'

Back in Basilicata, driving past the arid tomato fields around Venosa, Vincenzo Esposito is hoping their efforts to establish some sort of certification scheme will prove successful – soon: 'We've got immigrants living without water, without electricity... they are treated like animals.'

In the main square at the centre of Venosa, we take a break, waiting for contacts to come back to us with news. We order a coffee and a cheese and salad sandwich from one of few cafes open at this – scorching – time of day. The owner's very sorry, our translator says, however, 'he's run out of tomatoes.'

Additional reporting and translation: Gianluca Martelliano

***The names of all workers and farmers have been changed to protect their identity**

Useful links

<http://www.osservatoriomigrantibasilicata.it/>

<http://www.flai.it/>

<http://www.stopcaporalato.it/>

Below: Southern Italy's tomato fields are blighted by exploitation of migrant workers. Photo: Beatrice Crippa Muti / Flai-Cgil

