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What's really in your cuppa?

**A special investigation into the hidden costs of
tea, milk and sugar**

What's really in your cuppa..?

Each day, millions of us take a small bag, drop it into a cup, pour in boiling water, and add a dash of milk plus a spoonful of sugar. We start the day with it, we end the day with it, we serve it socially or in times of distress. The great British cuppa is an institution. But how many of us have actually wondered what goes into our favourite drink, or where the principal ingredients come from?

The issues that lie behind production and supply of most everyday food staples – from cocoa to coffee, beef to bacon, soya to salad, prawns to pineapples – have been investigated and documented (many of them here in the Ecologist) but it appeared that tea had slipped the net. Not entirely – a number of charities have researched conditions for tea pickers and factory staff, others have documented the environmental impacts of tea monocultures or looked at the issues of child labour or mechanisation – but no-one seemed to have taken the classic British drink as a whole, examining tea, milk and sugar simultaneously. The Ecologist commissioned this special report to do just that.

We sent Verity Largo to Kenya to investigate life for some of the thousands of estate workers who live on plantations supplying two of our favourite teas – PG Tips and Lipton. Owners of the Kericho plantation, Unilever, and the Dutch research outfit SOMO, paint two very different pictures of conditions at the Rainforest Alliance-certified estate: read our exclusive article to judge for yourself. Sam Campbell reports from Cambodia on the hidden side of the country's 'sugar boom'; Tom Levitt reports on why our love affair with milk may not be a good idea, Jim Wickens travels to the US to examine the rise of 'mega-dairies'; WSPA's Suzi Morris argues that the victory against the UK's own 'super-dairy' at Nocton is only the beginning; Will McLennan outlines the global costs of both tea and sugar; and Seb Klier from War On Want looks at ethical supply chains.

If all this leaves you wanting to do something we've also provided a useful guide to campaign groups tackling some of these issues, and offered our Green Living editor's pick of the best alternatives to cows milk and bog-standard tea.

If you have comments, feedback – or information or suggestions on issues you think we should be investigating – please get in touch at editorial@theecologist.org

Andrew Wasley, Ecologist Editor

CONTENTS

>> page 2 **EDITORIAL**

TEA:

>> page 3 What's really happening on PG Tips and Lipton tea plantations in Kenya?

>> page 9 Global tea trade linked to environmental and human rights abuses

>> page 11 Comment: the long road to ethical supply chains

SUGAR:

>> page 13 The hidden side of Cambodia's 'sugar boom'

>> page 18 Global sugar trade: why our favourite sweetener is not so sweet

MILK:

>> page 20 Why the UK's milk supply is tainted by animal welfare and ecological concerns

>> page 22 Undercover inside the US intensive milk industry

>> page 25 Comment: why the Nocton super-dairy victory is only the start

HOW TO MAKE A DIFFERENCE:

>> page 27 Top ten fairtrade and organic teas

>> page 30 Top ten cows' milk alternatives

>> page 33 Why palm sugar offers an ethical alternative

>> page 34 Take action: campaign round up

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PG Tips and Lipton tea estates hit by allegations of sexual harassment and poor conditions

Unilever denies that some female employees at its Kericho tea plantation in Kenya are subjected to sexual harassment. The company – and the Rainforest Alliance, which certifies the estate – also deny claims that working and living conditions for some estate employees are poor. Why then does the Dutch research outfit SOMO, and the Kenyan Human Rights Commission, paint a very different, and grim, picture of life for some working at the plantation? **Verity Largo** visits Kenya to investigate



Conditions for many tea pickers are poor, according to campaigners. IMAGE: GETTY

The Kenyan tea sector is riddled with exploitation, says War On Want IMAGE: John Spaul / War On Want



It is one of the flagship plantations of the world's biggest tea company, stretching across more than 30,000 acres of land and employing 16,000 people.

But the Kericho tea estate in Kenya, operated by Unilever – manufacturer of PG Tips and Lipton – is at the centre of controversy over allegations of sexual harassment and poor working and living conditions for some employees, the Ecologist can reveal.

Some female workers at the estate suffer sexual harassment at the hands of company supervisors, according to Dutch research body SOMO. The organisation, which monitors the operations of multinational companies, says it has also uncovered 'deplorable' housing conditions at the Kericho plantation, harassment of workers belonging to trade unions, and a number of problems relating to the increasing casualisation of the estate's workforce.

SOMO makes the claims about the plantation – which is certified by the Rainforest Alliance – in a report due to be published later this month. Previous reports by SOMO, and by the Kenyan Human Rights Commission (KHRC), alleged 'rampant' discrimination and sexual harassment of women at the Kericho estate, poor housing conditions, casualisation of labour, violations of employment regulations and low wages.

Unilever denies the allegations however, saying it is not aware of any current problems relating to sexual harassment at its Kericho plantation, and stating that it will act on any case where there is evidence of such behaviour taking place.

The company says working and living conditions at the estate are good and points towards its provision of schools, a hospital and four health centres for workers and their families. It also highlights that in order to retain its

Rainforest Alliance certification the plantation has to successfully meet nearly 100 social, environmental and economic criteria.

The certification body itself says that it carried out a regular audit of the Kericho estate in July 2010 – and another, unannounced, audit in November the same year – and found no evidence of problems.

But in a visit to the Kericho plantation in March 2011, the Ecologist heard further allegations of sexual harassment, with some women at the estate claiming they have no choice but to have sex with male supervisors in order to survive.

Sex is reportedly demanded by supervisors in return for allocating lighter duties, for help with securing better housing, organising repairs to property or – in some cases – for extra money for women desperate to supplement their wages. Some women have claimed that they feel coerced into

having intercourse in order to avoid being targeted by supervisors.

The Ecologist also found some accommodation to be in a state of disrepair, with some houses dirty, overcrowded and poorly ventilated, some having no electricity, with workers being forced to share communal toilets and bathrooms.

Workers also allege that some employees at the plantation are kept on a temporary basis for months – or even years – at a time, rather than be provided with contracts or the benefits promised to permanent workers. This leads, it is claimed, to job insecurity and the threat of eviction if work is not forthcoming.

This is not the first time that the tea sector in Kenya – which involves companies apart from Unilever – has been criticised over its practices and conditions. British charity War On Want claims that Kenya’s tea industry as a whole is riddled with exploitation, and says that it has collected separate evidence of poor working and living conditions endured by tea workers supplying British supermarkets.

‘Deplorable’ housing

Valerie stares at her hands as she talks, cut and gnarled from seventeen years of plucking tea by hand. She’s put on make up and foundation especially for the Ecologist’s visit. Still she looks haggard, far too thin for her 45 years: like she’s suffering from HIV.

‘My hair falls out, I cry a lot at stupid things, I can’t sleep properly and I get headaches and lose my appetite,’ the tea plucker at Unilever’s Kericho plantation says, stooped over in her neighbour’s ten foot by ten foot house. ‘It’s a miracle you’ve come. We’ve waited so long for someone from the outside: whenever management arranges visits we’re too frightened to talk about what’s going on.’

Raphael and Rachel, also tea pickers, are the neighbours. Both in their late forties, they have seven children to look after – they inherited three nieces and nephews when the parents died of HIV – all crammed into this space. The children sleep on a mat in one room, the parents on a single bed, nestled amongst heaps of dirty clothes, tea picking baskets, firewood and a lone cat, oblivious to all of this.

There’s no electric light in here, in fact no electricity at all; the only furniture is three hand made wooden chairs and a

small coffee table. The concrete floor is pitted and the walls bare and unpainted with cracks. The house’s water is one cold tap on the wall. Cooking is done on a hearth on the floor and a metal pot: the ventilation is bad. The communal drop toilet for these houses is simply a small corrugated iron shed; the washing facilities are a concrete block, also communal.

More than 12,500 households are maintained by the Kericho tea estate. According to SOMO, housing conditions for employees at the estate are deplorable. ‘The complaints include leaky roofs, cement floors with cracks and broken window panes that compelled workers to use cardboard boxes to cover the gaping holes to mitigate the cold evenings,’ the report says. ‘Other complaints received were that houses were only painted on the exterior, while inside walls were never painted.’

One worker told SOMO that in the village estate that she lives on ‘there was no clean water and there were no sanitary facilities forcing workers to use facilities from neighbouring villages.’ A previous SOMO report in 2009 made similar claims, alleging common cases of overcrowding – especially in the peak tea picking season – and repairs allegedly taking a ‘very long time’ to be completed.

In a 2008 report published by the KHRC a researcher reported: ‘X lives in a round hut-like house with an iron roof and painted white on the outside. From the outside one would be deceived to think that the neatly painted white exterior also applies to the interior. The house is unusually dark; the walls could have once in the past been white... the house is basically one roomed and X has separated the “kitchen” area and the “bedroom” area with a wade of old bed sheets. X has very little furniture... besides 3 old wooden chairs and a stool.’ The report also cited complaints of repairs not being completed within an adequate timeframe and of houses being left unpainted for a number of years.

‘Sex to survive’

‘I can’t show you my house,’ Esther tells the Ecologist. ‘I’m just too embarrassed. I tried to get a transfer, but my options are a bribe of about 500 Kenya Shillings [approximately three pounds fifty] or to sleep with the supervisor. But he won’t sleep with me. At 48 he thinks I am too

old’. Similar claims of village elders expecting sex in return for allocating accommodation at the Kericho plantation have been reported by both SOMO and KHRC.

SOMO stated in a report in 2008 that the allocation of houses is ‘riddled with allegations of corruption, tribalism and sexual harassment’. KHRC quoted a Unilever worker who alleged that village elders abused their power by asking single women for sex in exchange for housing: ‘All the village elders are men and so for a woman you have to face the reality if you want accommodation then you have to talk with them nicely and this would even mean going out – having sex – with them.’

Similar allegations are made in relation to women attempting to get lighter work or easier shifts at the Kericho plantation; tea plucking is considered one of the easier jobs, as is weeding or clearing; better shifts are seen as those that make it possible for women to work round children’s school days, and to run the house because as well as working 8 to 12 hour days the women have to clean and cook, and look after their children.

‘It’s completely normal here,’ says Valerie. ‘I’d say all of us, all the time, sleep with the supervisor, or agree to have regular sex, in order to get a lighter shift.’ According to SOMO’s 2008 report, ‘Women pluckers who refuse the sexual advances of their, always male, supervisors are sometimes given too much work or allocated lonely or dangerous plucking zones’.

The Ecologist asked the women it interviewed whether the situation could be perceived as amounting to prostitution: ‘No, this isn’t prostitution’ says Valerie. ‘I didn’t choose this. I have sex with supervisors to survive, to pay school fees, to keep my house or to get a repair done. I think of the money when I have sex, or what I am getting. Nothing





Unilever's Kericho estate supplies Lipton and PG Tips brands. PHOTO: Verity Largo

else. There's no pleasure, or choice.'

SOMO's forthcoming report features the testimony of worker Chanya, 26, who started work with Unilever in the summer of 2007. The single mother of two claims that following an interview for a job at the Kericho plantation a supervisor asked her for a bribe to secure employment. According to SOMO she informed the supervisor that she did not have the money. The supervisor then reportedly told her that to 'make her life easier' she should go to a house in the village to discuss the issue of her employment further.

The report states: 'In the house the supervisor told her that she should have sex so that she can get the job and he would ensure that she would continue to work. When she refused the advances of the supervisor, he returned

her documents and told her to look for employment somewhere else. Chanya left the house and went back to her home. The next day however Chanya returned to the tea estate and gave the supervisor [the requested money] but he refused to take the money and told her that they should go back to the house.'

The report continues: 'When they were in the house, the supervisor told her that if she had sex with him he would guarantee that she got a job as a general worker which was less strenuous than a tea picker. She agreed to have sex with him. Chanya said she had no choice but to agree to the supervisors advances because she had a child and dependents.'

'When she started working, the supervisor would always find fault with

her work, he would tell her that unless he had sex with her, he would deduct her wages. The supervisor would always find a reason to have sex with Chanya, if it rained and they were unable to work, he would approach her and tell her to go back to his friend's house. To retain her job at Unilever, Chanya had to have sex with her supervisor,' the report claims.

Too afraid to go public

'I grew up on that Unilever estate,' says Lavinia, 28. She lasted six months before she quit working at tea estates. She now has a different job. 'It is as bad as you see... sexual harassment and coercive sex [are] absolutely standard for all women under forty. You don't go to the toilet at night...'

Lavinia claims she watched both her sisters contract HIV. Both had been pressured into sex with tea supervisors, she claims. 'I suppose the experience of watching my sister die in hospital (this was reportedly before anti-retrovirals were available) was just so deep,' she says. 'Then I found out my mum, who's also a tea picker at Unilever, is positive. She's an old lady for god's sake. I just couldn't stay as a tea picker. I couldn't risk having unprotected sex just to keep my job.'

The Ecologist asked the women it interviewed why the alleged sexual harassment doesn't appear to be reported. They replied almost universally that they were fearful of losing their jobs, that the management couldn't be trusted to investigate properly and that the police were unlikely to take such claims seriously and would only take action in return for a bribe – which the women simply couldn't afford.

'I left. I complained, I went public, but no, I didn't report it. What would be the point? I'd have to pay the police to get my case heard, women are too afraid of management, of losing this job, however bad it is. It's all they've got,' says Lavinia.

Arthur, a peer educator with Unilever's HIV programme supports this view: 'I think the issue is one of shame, the women are encouraged to bear the shame and stigma... They find it almost impossible to insist on condoms. And they don't report it because what would be the point?'

What about the unions? Joshua Maywen, branch secretary of the Kenyan Agricultural and Plantation

Workers Union, acknowledged to the Ecologist that there is a problem at the tea estates.

KHRC says the union is too pre-occupied with other matters to effectively deal with the issue of sexual harassment however: 'The situation on the tea estates for women is very bad, similar to the flower farms, the Union isn't doing enough to either monitor it or research it, or change it... they're caught up in the mechanization issues. Whether hand pickers will lose their jobs to machines. We're a bit behind when it comes to main-streaming gender issues,' a spokeswoman says.

SOMO's forthcoming report claims that Kericho workers who are members of the union report facing harassment – including accusations of impropriety and moving workers to heavier tea picking duties – or even dismissal if they raise difficult issues with the management.

Casual labour

Valerie, Esther and Rachel – and other workers the Ecologist interviewed – claim that they are among the luckier employees on the tea estates because they are on permanent contracts. This means their houses are permanent and their jobs are secure. And despite the broken windows, the chipped floors and the lack of ventilation, they do not face the threat of eviction if work is not forthcoming.

In contrast, Evelyn, Rosalie, Oberon and Jospehat are casual workers for Unilever: all in their late twenties and thirties. They claim that they have been held in temporary employment because the tea plantation exploits a loophole in legislation that enables them to keep workers on a temporary basis for long periods of time; months or even years.

They claim they are supposed to be made permanent after three months, and get some associated benefits including better housing and health care. But the procedure, according to the casual workers, is that they are told three days before pay day at the end of the month that there's no more work. They then have three days to pack up, get a new place, and leave.

Commonly however, they are re-employed, it is claimed, again on a temporary basis. Although both casual and permanent workers are entitled to housing and health care at the Kericho plantation, according to SOMO, casual workers are not entitled to pensions or

free health care for their children.

Some casual workers live off-site. Evelyn is currently living in a shop front in town. 'It's cheap, that's all. I got evicted when they laid off us casuals in November. I am desperate for the rains... then there's work.' Her colleagues nod, they claim they have all been evicted too: 'There's so much uncertainty in this life, you focus on the essentials, school fees for the kids, and food...all the rest is irrelevant really.'

Tea plucking is difficult and sometimes hazardous work, and workers can be on their feet for hours, carrying tea-collecting baskets on their backs, with back problems common, according to campaigners. Additionally, outside for most of the day – shifts can be as long as 11 hours – workers can be exposed to harsh weather conditions, it is claimed.

'They give us one meal a day of uji (maize porridge) with salt. No sugar,' says Oberon. 'We've got twenty minutes to wolf it down. No other breaks. No tea, no water. Imagine... I work on the tea estate, I never drink tea, that's for you rich wazungu (white people)... I can't afford it.'

The Ecologist was unable to access the medical facilities at Unilever's Kericho estate to verify medical care arrangements, but both SOMO and the KHRC acknowledge that the company provides adequate facilities: Unilever operates a fully equipped hospital with a theatre for surgical procedures, maternity care facilities and a laboratory. The company also runs 4 health centres, more than 20 dispensaries, and has put in place a comprehensive HIV / AIDS programme for workers and their families.

The prevalence of HIV at the estate is unclear; one reason being that women in particular are reluctant to come forward because of the stigma attached to admitting that they might be HIV positive, or because they have been abused or used sex to survive, according to Arthur, the HIV peer worker.

No 'substantive evidence'

Unilever maintains that conditions at its Kericho plantation are good. In a statement the company said: 'Unilever is not aware of any current problems of this sort [relating to sexual harassment] at Kericho, and takes any allegation of sexual harassment at our tea plantation in Kericho very seriously. We will act upon any case where there is evidence

to prove that such behaviour has taken place.'

The company said it had only dealt with one instance of such problems in almost a decade: 'To put that in context, there has been only one report in the last nine years which was fully investigated and appropriate action taken.'

Unilever also said that it had put in place several measures to ensure that allegations of inappropriate behaviour can be reported by workers: 'These include regular rotations of our plantation unit leaders, a free telephone hotline for workers to register complaints anonymously, and a welfare committee with female representation to improve liaison between our workers and management on welfare issues.'

In relation to the living conditions reported by SOMO and KHRC – and observed by the Ecologist – the company said: 'The housing estates at Kericho are among the best you will find anywhere in the East African tea industry. While Western observers might think the facilities look basic, relative comparisons should be made to local conditions in Kenya where many rural based workers do not have the same access to houses which are linked to clean water. Our plantation workers are also provided with schools, a hospital and four health centres for them and their families.'

Unilever acknowledged it makes use of casual labour but denied any wrongdoing: 'Tea picking is an inherently seasonal business, and like many other agricultural organisations we rely on seasonal workers as part of our labour force. We fully adhere to Kenya's labour law that governs the employment of temporary workers.'

Following the publication of the earlier SOMO and KHRC reports, Unilever says it investigated all the claims made in relation to sexual harassment, working and living conditions at the Kericho plantation, and found nothing of concern.

The company accuses KHRC of failing to provide sufficient detail in relation to allegations of sexual harassment: 'No substantive evidence of sexual harassment has ever been tabled to us. During our meetings with KHRC, they did not give us any concrete examples of their findings, only references to one or two estates,' Unilever's response to KHRC findings, published in 2009, stated. 'These estates were fully investigated



by our General Management and nothing untoward was discovered.'

KHRC had reported in 2008 that the management at Unilever's Kericho plantation told their researchers they 'receive many allegations of sexual harassment... however after careful investigation it is determined that most allegations are "spurious malice."' The management also reported, according to KHRC, receiving anonymous complaints but said that they were unable to act on them because there was no complainant.

Unilever also said that it has asked SOMO for details of the allegations made in the organisations' reports, but that it too had not been willing to share information. The company said that it supported the right of its workers to join trade unions and that no problems relating to harassment of union members had been brought to its attention.

The Rainforest Alliance, which first certified Unilever's Kericho tea plantation in 2007, told the Ecologist that following receipt of a SOMO report, a two-day unannounced audit took place in November 2010 to investigate allegations made. The certification body says that despite extensive interviews with both permanent and seasonal workers – which took place in a free environment with no estate management present – no evidence of breaches of its certification requirements were found.

Under Rainforest Alliance rules the Unilever plantation has to meet almost 100 environmental, social and economic criteria, including fair treatment and good working and living conditions for workers, and occupational health & safety. The last scheduled audit of the plantation took place in July 2010.

In a statement to the Ecologist regarding the outfits' November

audit, Ria Stout, managing director of the Rainforest Alliance's Sustainable Agriculture Division, said: 'With regards to the allegation of sexual harassment, we found that the estate has a clear policy on sexual harassment. It was clear that the company has put in place positive measures to create both awareness and the empowerment of women – who are the victims mentioned in the SOMO report – but also that these measures are aimed at being able to identify the problem early enough if it occurs.'

Responding to allegations over the condition of housing, Stout said that: 'The estate maintains over 12,500 houses on the estate. All permanent workers are provided with housing and seasonal workers on a first come, first served basis. Houses have water and sanitary facilities commensurate with the number of people per village.'

Stout confirmed that the estate makes use of temporary workers, but said that certification required that these workers have the same access to health and education as permanent workers and that the estate is required to demonstrate that it is in compliance with the law: 'The audit in November 2010 found no systematic abuse of this standard.'

Tea sector: a vital source of employment

The Kericho plantation – and Kenya's tea sector as a whole – is a vital source of employment and income for the country. In 2006 more than 300,000 tonnes of tea was produced in the country, creating an estimated – both directly and indirectly – 3 million jobs. According to the Kenyan Tea Board the country has, in recent years, been responsible for some 20 per cent of all the tea exported in the world, making it the second biggest exporter globally. Pakistan, Egypt and the UK are among the biggest importers of Kenyan tea.

Much of the country's tea, after picking, is put through a fermentation process, then dried, graded and processed. It then it goes by road to the large auctions in Mombassa. Typically it is graded again, then blended, where tea from both large multinationals and small independent Kenya Farmers can be mixed together. Many of the large tea companies operate a system of vertical integration however, controlling each and every stage of the production process.

Unilever's Kericho estate supplies its PG Tips and Lipton brands, according to the Rainforest Alliance. The brands are two of the most well known tea names in the UK and beyond. In 2007 Unilever committed to sourcing all of its Lipton and PG Tips tea bags from Rainforest Alliance Certified farms by 2015. According to the company PG Tips tea is now fully certified.

It is not only Unilever that has found itself at the centre of controversy over its Kenyan tea operations. British charity War On Want claims that problems within the Kenyan tea industry as a whole are endemic, including in the small-scale tea picking sector. The group says that it found evidence, published in 2010, of poor working conditions and low wages being suffered by tea workers ultimately found to be supplying UK supermarkets.

'We found huge exploitation and appalling wages,' Simon McRae, senior campaigner, says. 'The casualisation of labour is part of a worrying trend of workers rights being eroded.' The group says that its research calculates that for each box of tea sold in the UK for £1.60, a tea picker – whether in Kenya or other tea cultivating countries such as India – could expect to receive as little as 1p.

Back at the plantation, the Ecologist drives past rows of neat, painted houses and hedges of tea, all the same length, growing thickly. We wonder how the tea pickers can actually access the bushes as there's no paths. The signs are pristine, with woodland owned by the tea estates clumped in the fields. From the outside it looks good.

The names of workers have been changed to protect their identity

Verity Largo is a pseudonym for a correspondent based in Africa

Environmental damage and human rights abuses blight global tea sector

By William McLennan



Loading tea in Indonesia.
PHOTO: Henri Ismail

Tea is grown in more than 45 countries worldwide, and while India and China are the biggest producers, Sri Lanka and Kenya lead the way in exporting tea to meet the global demand. Two main issues are associated with tea production: the vast amount of land required to grow it, and the intensive labour needed to harvest it. Human rights violations have been reported at plantations in virtually all major tea producing

countries, while the plantations themselves have a profound effect on the local environment.

Labour conditions

Tea production, in particular the labour required for harvesting the leaves by hand, has long been associated with the poor treatment of workers. In a labour-intensive industry such as tea production, reducing the cost of labour will increase profit margins and often leads to the inhumane treatment of

workers.

Plantation labourers are poorly paid. In Sri Lanka poverty levels on plantations exceed the national average, with 30 per cent living below the poverty line despite being employed. In India, where workers are expected to pick more than 20 kilograms per day, wages are as little as \$1-1.50 per day. Plantation work does not give labourers sufficient wages to pull themselves out of poverty, providing the multibillion dollar tea industry with

TEA

a ready supply of cheap labour.

Housing conditions are often poor and typically consist of barrack-style accommodation, where 6-11 people occupy one room, often without windows. Medical care provided on the estates is basic and there have been repeated cases of management failing to organise sufficient medical care, or emergency transport to hospital.

Women make up 75-85 per cent of the tea picking workforce and abuses of women's rights are commonplace. In the barrack-style accommodation, women are allowed very little privacy and are at a higher risk of sexual harassment. A survey conducted on a Sri Lankan plantation discovered that this lack of privacy has led women to commit suicide. Alcohol abuse is high among males on plantations and drunken violence against women is common, according to UNICEF.

The poor treatment of workers is not limited to adults. Reports of child labour have been made on tea plantations across the globe. In 2006 more than 40,000 children worked picking tea leaves in Uganda for as little as 30 US cents a day and in 2010 90 children were found to be working in one Indonesian tea-processing factory. However, the issue of child labour is complicated due to poverty-stricken parents who require their children to work to contribute towards the

household income.

In recent years labour unions have been established on plantations to campaign for fair pay and working conditions, but industrial action is frequently met with brutal suppression by police and plantation owners. In 2010, on an estate owned by Tetley's parent company, Tata Group, a worker who collapsed while spraying pesticides was reportedly refused medical treatment and later died. Protests in response to the death were quelled by local police, resulting in the deaths of two protesters and a further 15 injuries.

Land issues

Tea production has a negative impact on the environment. Natural habitats, rich in biodiversity, are converted into vast swathes of tea plant monocultures. This habitat loss leads to a reduction in the general number of species and threatens the survival of entire ecosystems.

Large areas of forest have been cleared to make way for tea plantations. In North East India, areas which used to be a combination of forest and grassland and were home to tigers and rhinos, have been converted to tea plantations. In East Africa, forests are still being cleared to make way for new plantations. Earlier this year a tract of Ethiopian rainforest was sold to grow tea, despite opposition from

Ethiopia's President and environmental authorities.

Converting forests into tea plant monocultures decreases the biodiversity of plant species, meaning many other species' habitats are lost. Habitat loss associated with tea plantations has led to the decline of the Lion Tailed Macaque in India and the Horton Plains Slender Loris in Sri Lanka, both of which are on IUCN's Red List of endangered species.

Tea plantations not only result in the direct loss of habitat but can impact the wider environment. Land clearance alters the natural flow of water and increases soil erosion leading to the loss of wetland habitats and the pollution of rivers and lakes. In the Tanzanian Usumbara mountains, a hotspot of unique species, streams near tea plantations have shown decreased biodiversity.

Grown in monoculture, tea plants provide ideal conditions for a number of pests, resulting in the widespread use of toxic pesticides. Recently four elephants were found dead in Kaziranga National Park, India, after they wandered into a tea plantation and ate grass which had been sprayed with pesticides.

William McLennan is a researcher at the Ecologist.



The tea sector is a vital source of employment. PHOTO: War On Want

The long road towards ethical supply chains

COMMENT: Can we ever ensure our weekly supermarket shop is ethical? It is time for the British government to act if we want to stamp out the ongoing abuses perpetrated by corporations, argues **Seb Klier** from anti-poverty charity War on Want



There are certain British favourites, like tea, which are available in houses across the UK at a moment's notice. It is a drink enjoyed at all times of the day and is part of our social history. But when we step into a supermarket and stock up for the home or the office, the products we buy tend to obscure their true origins. In the case of tea, it is likely that what is on sale in the aisle, often picked and packed on plantations in Kenya or India, comes at the expense of the workers who produce it.

The global tea industry is big business, producing 3.5 billion tonnes of tea a year, with much of that exported from the global South to countries in the West. After water, tea is the most popular drink in the world and in Britain alone we drink an incredible 60 billion cups a year. Yet despite this success, it is clear that workers on plantations and in factories are not sharing in the rewards.

As is common in global supply chains, workers who produce the tea we drink

are routinely exploited. Low wages, precarious employment and poor safety standards are the norm and barriers are placed in front of trade unions and other groups that try to organise workers and improve their terms and conditions.

Large multinational corporations on both the production and retail sides swallow up the vast majority of the profits. Research into the tea industry in India and Kenya found workers paid around one third to a half of a living wage – the figure needed to support themselves and their family, including costs for essentials, housing, education and healthcare. As a result, a large percentage of the workforce lives hand to mouth, in countries with high unemployment, rising food prices and without adequate social security.

Sadly, this situation is nothing new and certainly not unique to the tea industry. For years, campaigners have tried to ensure that the goods we source from overseas – from clothing to flowers to wine – are produced in safe conditions, with workers paid a living

wage and allowed the right to organise. We have all heard and seen the scandals of abuses in sweatshops, while at the same time watched the profits of high street clothing companies rocket and their shops expand across Britain.

Sustained lobbying of companies in the late twentieth century, alongside public demonstrations and shareholder actions, saw the rise of corporate social responsibility (CSR) in company strategies as business responded to criticisms of the continued abuse of people in their overseas supply chains. Despite this perceived change in emphasis, though, the key problems for those producing goods on the ground have remained unresolved.

CSR is secondary

The CSR initiatives of companies have been wide-ranging in recent years, and it is now standard practice to operate a company with some CSR direction and input. However, all of these schemes have proven to be fatally hamstrung by their voluntary nature. Codes of practice appear to be a constructive way of enhancing corporate behaviour and focusing their operations on the treatment of workers and their effects on the environment. But until these codes are made mandatory, CSR will remain secondary to commercial considerations.

As companies such as UK supermarkets compete in ongoing price wars to attract customers, while also trying to maximise their profits, it follows that CSR schemes will fall back in the priorities of the company. Ultimately, the ethical treatment of workers cannot be realised under voluntarism, because the nature of competing businesses means that they will undercut each other on price

- by paying low wages, for example - leading to financial reward for those who act least ethically.

Furthermore, companies are able to operate like this with little opposition from governments in the global South because of the threat of relocation of production to other low-cost countries in the developing world. In taking advantage of this situation and of the reliance of workers on jobs in these industries, companies create a race to the bottom, where labour standards are ignored in poor countries, keeping costs low in order to attract foreign investment.

To end this abuse, legislation is needed that would compel companies to ensure the workers in their supply chains are treated fairly. The legal obstacles around global regulation remain difficult to overcome, but other quasi-legal instruments have been proposed that need consideration. One example is the campaign for a commission on business, human rights and the environment. Such a body would be part of the British government and have the powers to investigate environmental and human rights abuses carried out by UK companies and provide remedies for their victims. Its role would also involve ethical guidance to companies and work with other commissions overseas to build capacity and joint learning.

Importantly, this proposal chimes with what has been happening at the UN-level around business and human rights. Professor John Ruggie, the UN special representative of the secretary general on human rights and transnational corporations, has developed a framework in the last decade around the three pillars, Protect, Respect and Remedy, with regards to human rights. This third pillar is particularly relevant to the commission, which as a body would seek to ensure access to justice to those who are currently denied it. The UN Human Rights Council has endorsed this framework and is looking at ways it can be practically implemented. A commission would be one way Britain could further this process and take a lead on the issue internationally.

Keeping the pressure on

How can we bring forward regulatory solutions? We can and should keep the pressure on companies, and expose their mistreatment of workers, wherever we can. This keeps this issue in the public gaze and tips business towards looking at better standards for workers, if only to avoid bad publicity.

At the same time, we need to be supporting the efforts of tea workers and others in fighting for their rights - and this type of action remains vital. Organised groups on the ground can make a real difference to day-to-day working life and help ensure that people in factories and plantations can build to defend their rights. They are even stronger when supported internationally by activists, trade

unions and the consumers of their products.

Ultimately though, decision makers must act. Overseas supply chains desperately need regulation and that can only come through government. A mechanism that really takes seriously the grievances of workers and supports them in calls for compensation would be a permanent step forward. Where we can, we need to build momentum behind calls for regulation, and keep this pressure on until we get a result. It is a long journey towards a fair cup of tea, but also eminently achievable. We should consider this the next time we boil the kettle.

Seb Klier is a campaigner at War on Want - www.waronwant.org.uk

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Revealed: the bitter taste of Cambodia's sugar boom

Sugar may seem innocuous enough, but sweet-toothed Western consumers could be fuelling conflict between poor farming communities and big business with every spoonful. **Sam Campbell** reports from Phnom Penh



Harvesting sugar cane in Cambodia.
PHOTO: GETTY.

Scrabbling to take advantage of the EU's Everything But Arms (EBA) treaty, which allows duty-free, quota-free access to Europe for Cambodian goods, Cambodia's agrobarrons are trampling human rights

underfoot, according to campaigners. Western companies are accused of being complicit, seeking out the cheapest sugar, whatever the consequences.

David Pred, executive director of rights organisation Bridges Across

Borders Cambodia, which has been investigating Cambodia's sugar industry, said the sugar boom is having serious consequences for rural Cambodians. 'We have documented widespread human rights abuses and environmental damage from all

Cambodia's sugar boom has led to violent protests (here, bottom)



the major sugarcane concessions, impacting more than 12,000 people in three provinces,' he said. 'The impact on local communities has been devastating. Families have been made landless and driven into destitution and severe food insecurity. Hundreds have been made homeless and haven't received any compensation.'

Bridges Across Borders Cambodia published a report in September 2010 into the situation, citing forced evictions, seizure and clearance of farmers' land and crops, destruction of forests, poisoning of local water resources and fisheries, arrests, and harassment of human rights defenders, all connected to the sugar sector.

One compelling example of the damage sugar can do are concessions linked to Ly Yong Phat, a Cambodian senator, agribusiness baron and casino-tycoon. The litany of allegations is staggering, even by Cambodian standards. Testimonials from villagers affected by a 9,400 hectare Ly Yong Phat concession in Koh Kong province's Sre Ambel district, held under a company named Koh Kong Sugar Co., speak of their desperation.

Chev Ean, 64, is one of the over 200 families from three villages now living with the consequences of the nearby sugar cultivation. She claimed that she had lived on her land since 1975, making it her legal property under Cambodian law. Nevertheless, she claims that she lost 11.5 hectares to Ly Yong Phat's concession without any compensation, encroachment that has seen her herd of around 40 cattle dwindle to five as she has been forced to sell livestock to make ends meet.

'When the companies owned by Ly Yong Phat arrived, we lost everything,' she said, lamenting that the meagre land she still farmed was insufficient to meet her family's needs. 'Sometimes, we can afford nothing to eat. We need to support five members of our family. ... I feel so depressed because I am getting older; I have no land; I don't know how to generate income to support our living; when I am sick, I don't have money for medication and our remaining land is so small that we cannot survive from farming it.'

Land grabbing

Many Cambodians are farmers and rely on their smallholdings for survival. Mostly poorly educated and often illiterate, villagers can be at the mercy of the authorities or powerful businessmen, especially if they have

never legally registered their land with the central administration. Local officials reportedly in cahoots with land grabbers can betray those they are supposed to represent, tricking the most vulnerable out of their land and leaving them with nothing, campaigners claim.

Chev Ean told a story that is all too familiar in rural Cambodia. 'Before the arrival of the companies who cleared and took our land, we tried to meet the [local] commune chief requesting for registration of our land,' she said. 'But, he said at the meeting that "It is not necessary to register it. No one will come to take your land. You must work hard on the land. Don't worry about it."'

Teng Kao, 48, says that he lost 14.5 hectares he had occupied for 20 years to the Koh Kong Sugar concession. He also claimed that residents' land had been recognised by local commune authorities, who issued documents. Instead of recognising villagers' ownership and compensating them however, the widower and father of six claimed that villagers' had been subjected to a campaign of intimidation, with cattle seized for ransom. He said that two of his cows had been shot and killed.

Complaints through official channels had been ignored, he said, leading villagers to protest as the company bulldozed their land. He claimed that 'police who work for the companies' carrying assault rifles reacted violently, shooting a local girl named Pet Nim in the leg. Appeals to the National Assembly, the Senate, Cabinet office of Prime Minister Hun Sen, Ministry





Critics say communities have been displaced by sugar plantations

of Interior, Ministry of Agriculture, Forestry and Fisheries, and the courts have reportedly come to nothing. 'I am hopeless now. Even though we are in a difficult situation, we will continue, [doing] whatever we can, to fight either locally or internationally,' Teng Kao said. 'Our land is our life. We have no job other than farming. If the land is not given back to us, we would have no choice but to die of hunger.'

Such repression of those standing in the way of the Koh Kong concession is one prong of attack in the battle for Cambodia's sugar. Another of Ly Yong Phat's sugar companies, Phnom Penh Sugar Co., uses a different tool of repression say campaigners - the law. In 2009, Phnom Penh Sugar was awarded around 8,500 hectares of land in Kampong Spue's Ormliang district. The concession is partially carved out of the ancestral farmlands of poor Cambodians: around 2,000 hectares of farmland, belonging to more than 1,000 families in Ormliang, is being cleared for planting with sugarcane.

Community members claim that many families have lived and farmed on land within the concession boundaries since the French protectorate, with the majority of residents living there for at least 20 years. Company claims that residents can take replacement land are hard to swallow, according to farmers. The new farmland is allegedly at the foot of a mountain, its rocky soil too poor to cultivate.

Protests

Clearance for the Phnom Penh Sugar concession sparked protests from farmers in Ormliang, who worried

that their only source of income and sustenance was about to be taken away. According to community representatives, clearance has already expanded beyond the concession boundaries. Once production commences in earnest, even the meagre land allocated to locals will be surrounded by sugar plantations, making further encroachment and movement restrictions likely. Registered community forests have also allegedly been cleared, although the Ecologist was unable to independently verify this.

The Phnom Penh Sugar dispute illustrates the other way Cambodian protestors are silenced—using Cambodia's partisan law courts. A standoff quietly simmered until March 2010, when around 1,000 villagers dumbfounded at the company offer of US\$200 compensation per hectare of rice farmland and just US\$100 per hectare of plantation land—far below even the lowest price for such land in Cambodia—travelled to the company offices to speak with company representatives.

One community member, who requested anonymity, claimed a company representative had told villagers that 'they would get air instead' if they declined the offer. When officials didn't show up at the meeting, frustrated villagers torched five temporary company buildings.

The Kampong Spue Provincial Governor, Kang Heang, alleged at the time that the community members had caused damage costing the company at least US\$20,000. He reportedly blamed human rights organisations and the political opposition for stoking the

unrest.

Like its sister company, rather than deal diplomatically with local communities, Phnom Penh Sugar has chosen, according to critics, to use the iron fist approach, this time intimidating through lawsuits. Since March last year, at least 16 community members have reportedly been summonsed to the Provincial Court for questioning and several have been charged.

'The company has caused many problems for the people in Ormliang,' said Seng Sokheng, a lawyer representing those affected by the Phnom Penh Sugar concession. He told the Ecologist that two people protesting the concession had been arrested, and while they had subsequently been released, community members live under the shadow of further legal action.

Since the March 2010 altercation, the area has been under military guard. Protests have quietly continued, the most recent a 200-strong demonstration outside the prime minister's home in the Cambodian capital on November 9, and hundreds of villagers staging a sit-in to stop bulldozers on December 24.

Corporate responsibility

The Ly Yong Phat group, which promises in its company brochure that it is 'harnessing and adopting internationally competitive business practices,' and is 'being an active party on corporate social responsibility,' did not respond to the Ecologist's requests for comment; a situation reported by other media outlets covering the issue.

Those affected are not completely without assistance; opposition Sam Rainsy Party (SRP) parliamentarians have called for an investigation. Ormliang community representatives have gathered over 1,300 thumbprints for a petition to be sent to the Prime Minister asking for his intervention in the case. Perhaps spooked by local media coverage of the case, the government promised to investigate. No solutions have been forthcoming at the time of writing however.

The Cambodian government has presided over a wider process of land grabbing, illegal logging and scores of evictions affecting tens of thousands, according to campaigners, so cannot be expected to investigate transparently a senator with close links to the highest echelons of government. Likewise,

the use of the police and courts to force residents off their land is unfortunately an increasingly popular tactic in Cambodia—over 300 villagers were charged in connection with land disputes last year, according to local human rights group Adhoc.

United Nations Human Rights Envoy Surya Subedi in late February said he was ‘deeply concerned about the plight of the people who are facing the threat of eviction or have been evicted from their land.’ However, some also lay blame at the door of the EU for not imposing stricter requirements of exporters wishing to take advantage of EBA duty-free EU access.

‘Cambodian sugar exports to the EU benefit from special status under the EBA preferential trade scheme, which permits goods produced in Cambodia and other least developed countries (LDCs) to be exported to the EU without import duties or quotas and, in the case of sugar, at a guaranteed minimum price,’ according to Bridges Across Borders’ David Pred. ‘EBA is clearly encouraging the rapid expansion of the Cambodian sugar industry. Ly Yong Phat’s business associates have all stated in the media and other forums that its EBA-status is what makes sugar production attractive in Cambodia.’

EU officials staunchly defended the EBA treaty as a much needed boost to underdeveloped Cambodia, saying that, as Cambodia is a sovereign country, there is little the EU can do about alleged abuses. EU Ambassador David Lipman told the Ecologist that the EU is working with Cambodian authorities to ensure that land rights, human rights and the rule of law are respected. He said that Cambodian authorities have promised ‘to look into these matters very, very carefully.’

A political issue

‘Essentially, this is a political issue,’ he said. ‘The rules do permit us to suspend [duty free access] in certain conditions, and we have done that, for example, in the case of Burma, for very, very serious human rights allegations such as child labour.’

Seth van Doorn, Political and Commercial Affairs Officer at the EC, said that the unilateral nature of the EBA means that tax-free exports could theoretically be cancelled, though he said it is a decision not to be taken lightly. ‘There is no obligation for us to offer these things so there is the

possibility that we would take into account all the repercussions. This is not something to make a quick political statement about, as obviously this would have massive implications.’

The EU has raised concerns over alleged abuses at a recent meeting with the Cambodian government. ‘During the joint committee, the Cambodian government indicated their great concern about these allegations, and that they themselves were initiating an investigation to check specifically what was happening on the ground,’ said Rafael Dochao Moreno, Chargé d’Affaires of the Delegation of the EU in Cambodia.

The Cambodian Government reportedly promised to inform the EU of the results of the investigation, although the findings of the probe have not yet been released. Cambodian Government officials declined to comment on the case.

Mr. Moreno underlined the role of the EU in the case. ‘It is the legitimate government of [Cambodia] that should initiate the investigation on any allegation of human rights abuses,’ he said.

‘They are working on it, so I can’t say whether we’re satisfied,’ said Ambassador Lipman when pressed. ‘They said they’d look into it and we’re waiting for them to inform us.’

David Pred responds: ‘A coalition of NGOs and affected communities has presented the EU with well-substantiated documentation that displays a pattern of human rights

abuses and illegal actions throughout the entire sugar industry,’ he said. ‘The EU regulations governing the EBA initiative call for an investigation when credible allegations of serious and systematic human rights abuses have been made. That would be the right thing for the EU to do, but it remains to be seen if EU Member States with economic interests in Cambodia will block the EU’s action to invoke EBA’s human rights safeguards.’

Concerned that little action on the part of the Cambodian authorities seems to be forthcoming, some campaigners talk of a boycott; European buyers refusing to deal with companies accused of such abuses.

The Western connections

In late 2009, Tate & Lyle signed a five-year contract to buy sugar from Ly Yong Phat’s concessions in Cambodia and Laos, via Thailand’s Khon Kaen Sugar Industry Plc (KSL), a company with close links to the Ly Yong Phat Group.

KSL’s CEO, Chamroon Chinthammit, has close ties to Ly Yong Phat, believed to be a dual nationality Thai citizen who also goes by the name Phat Suphapha. The two are reported to own 20,000 hectares of cane sugar concessions side-by-side in Cambodia’s eastern Koh Kong province. Ly Yong Phat reportedly holds 20 per cent in KSL’s joint venture.

After repeated requests for comment, Tate & Lyle PLC Group Vice President of Corporate Affairs, Rowan Adams would say only that Tate & Lyle had signed an agreement to sell its EU Sugar Refining



Some evictions and protests have seen shootings and violence

Powerful 'sugar barons' are blamed for controversial evictions



business (known as Tate & Lyle Sugars) to American Sugar Refining (ASR), which, according to news reports, has permission to sell the sugar under the Tate & Lyle brand name in perpetuity.

Mr. Adams did not clarify whether sugar from Phnom Penh Sugar Co. or Koh Kong Sugar Co. had been on sale in Europe, would not reveal the extent of Tate & Lyle's previous relationship with Ly Yong Phat or KSL, and did not answer queries relating to the company's code of conduct. 'Your questions relate to a business we do not own,' he stated. 'Not only would it be wholly inappropriate for us to comment on someone else's business, but also, from a practical point of view, we do not have access to this business' records or people, and so are simply not in a position to answer the questions you raise.'

ASR trades under Domino Sugar in the US. In reply to a long list of queries about Domino Sugar's business relationship with Cambodian sugar producers, a spokesman would say

only that 'Domino Sugar does not buy from or sell a single ounce of sugar to Cambodia.' Subsequent emails to Domino Sugar requesting clarification on whether the Tate & Lyle brand is used to retail Cambodian sugar in the UK were unanswered at time of press.

Whilst there is no suggestion of wrongdoing on the part of the western companies, campaigners are angry: 'There is plenty of blame to go around,' said David Pred. 'Ly Yong Phat is the primary culprit. His businesses have grabbed the land of thousands of poor people and made them poorer. The Cambodian Government is ultimately responsible for protecting the rights of its citizens, however in this case it has colluded with powerful business elites to permit and even facilitate this land-grabbing...'

He continued: 'The Koh Kong plantation illegally encroached on the land of hundreds of families, many of whom have been forcibly evicted, dispossessed and driven into

destitution during the last four years. The European Union, meanwhile, is subsidising these human rights abuses by allowing the perpetrators to get a good price for their goods on the European market.'

Outspoken Cambodian opposition politician Mu Sochua (herself the target of Cambodian government lawsuits) has appealed for EU companies to stop buying sugar produced by any company owned by Ly Yong Phat.

Teng Kao, one of those affected by the Koh Kong Sugar concession, made a similar plea. 'I hope that the ... company in England and the European Union would help finding resolution for me and the other 252 families who are almost dying of hunger,' he said. '[I] request the company in England put pressure on the companies owned by Ly Yong Phat or stop buying sugar from the companies owned by Ly Yong Phat if his companies do not find resolution for us.'

Sam Campbell is a journalist based in the UK and Cambodia

Sugar: why our favourite sweetener is not so sweet

Sugar can be produced from both sugar beet and sugarcane. But sugarcane production is of particular concern because of environmental degradation and human rights abuses, reports **William McLennan**



Environment

The cultivation of sugarcane negatively impacts the land on which it is grown, and the surrounding environment.

Soil quality

Sugar cultivation can decrease soil quality, leading to a decrease in productivity and increased soil erosion.

- Growing sugar in monoculture over repeated seasons reduces the soils ability to store water and nutrients, leading to increased water use and intensive application of fertilisers.
- Increased soil erosion results in sediment pollution of surrounding rivers, lakes and marine environments.

Habitat loss

The conversion of natural habitats for sugar cultivation is widespread and reduces biodiversity.

- In 15 sugar-producing countries 10 to 50 per cent of land is dedicated to sugar cultivation and in seven countries sugarcane covers more than 50 per cent of land.
- Sugar cultivation affects the wider environment, altering water flow rates, increasing soil erosion and changing nutrient cycles.
- Sugar cultivation requires a large volume of water and alters natural water flow resulting in the loss of wetland habitats, such as mangroves.
- In Australia, sugar cultivation; including the damming of rivers, increases in soil erosion and heavy fertiliser use, has reduced the quality of freshwater flow to the Great Barrier Reef.

Processing

The processing of sugarcane into refined sugar requires large quantities of water and chemicals, such as sulphur dioxide and phosphoric acid.

- Nutrient rich effluents from the sugar mills are constantly released into the environment. In tropical regions where the oxygen content of water is already low, this can lead to the suffocation of waterways.
- Annual cleaning of sugar mills can lead to the pollution of waterways with oil and chemicals. In 1995 in Bolivia the annual cleaning of sugar mills resulted in the deaths of millions of fish (WWF).

Child Labour

Children have been found to be working on sugar plantations across the globe, cases range from young children helping their parents to teenagers working fulltime harvesting cane.

SUGAR

Conditions

The sugarcane harvest involves dangerous, exhausting and filthy work making the meagre wages even more unacceptable.

- Labourers are paid as little as \$3 per ton of cane harvested.
- Sugarcane is harvested using machetes and often leads to injuries on hands and legs, leading labour inspectors to categorize it among the most dangerous types of agriculture.
- Harvesting sugarcane is labour intensive and workers cut as much as 500 kilograms per hour.
- Sugarcane fields are burnt immediately before harvesting meaning labourers work in dusty and sooty conditions.
- Living conditions are often poor with workers sharing basic huts or plastic tents with limited sanitation and little privacy.

Agro-chemicals

Large quantities of chemicals are applied to sugar plantations to control pests and supply inorganic nutrients such as phosphorus and nitrogen. These chemicals can be toxic to the environment and alter natural biochemical systems.

Fertilisers

- Application of fertilisers leads to acidification of soil making it unsuitable for many plants.
- Up to 30 per cent of fertilisers are washed off in to the surrounding environment leading to an increase in available nutrients.
- Increased nutrients lead to blooms of plants or microorganisms, which causes the depletion of oxygen in water.
- In Florida, fertiliser runoff from sugar plantations has increased the available nutrients in the Everglades allowing aggressive species to take over and reducing biodiversity.

Pesticides

- Pesticides are toxic to humans and the environment and can accumulate in sugarcane.
- 25 million cases of poisoning from pesticides occur in developing world each year, according to the World Health Organisation.
- Overuse of pesticides can lead to the development of resistance in pests and can release secondary pests due to the elimination of their natural enemies.

Forced Labour

Around the world inequality and poverty are used by rich landowners to secure cheap labour.

- In Bolivia and Brazil, indigenous people are recruited from remote areas and lead into a cycle of 'debt-bondage' where advances on wages are offered, these debts are then used to legitimise bondage over multiple seasons.
- In 2007, in just eight months, 3,400 workers were liberated from 'conditions analogous to slavery' on Brazilian farms. However these practices are thought to be on going; plantations are in the remote Western Amazonian frontier and there is a history of governmental corruption, according to Human Rights Watch.
- In South Asia cultural prejudices and traditions are used to exploit the most vulnerable groups. The majority of labourers working in debt bondage are Dalits or 'untouchables'- a group at the bottom of the Hindu caste system, historically associated with occupations regarded as unsuitable for other groups.

Human rights

In less industrialised countries, sugarcane is harvested by hand and is extremely labour intensive; violations of sugar plantation worker's human rights are frequently reported.

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Milk: why the white stuff leaves a bad taste in the mouth

Unlike tea and sugar, the fresh milk we drink with our cuppa is likely to come from farms in the UK. But as **Tom Levitt** reports, there are still serious environmental and animal welfare problems associated with the UK dairy sector

Animal welfare campaigners claimed it as a victory but in truth the recent defeat of plans to build a gigantic 8,100-cow dairy farm near the village of Nocton in Lincolnshire had nothing to do with the animals.

The main obstacles from the start had been the Environment Agency and Anglian Water who could not see how the farm could safely dispose of the tens of thousands of tonnes of slurry expected to be produced by the cows every year. As such, with a major aquifer nearby, they feared it posed an 'unacceptable risk to groundwater supplies'.

Although many feared the Nocton farm, if accepted, would lead to an influx of US-style mega dairy farms, the reality is the UK has been moving towards larger scale and zero-grazing units of the type seen in US states like California for some years. As a recent Ecologist investigation showed, the dairy farms there are so vast they spread over thousands of acres in enormous open air sheds, surrounded by mountains of feed and million-gallon pools of slurry.

In the UK, modern dairy farming has, in the past two generations, become increasingly removed from the traditional image of small dairy farms dotting the countryside. In fact around 60 per cent of the milk consumed in the UK now comes from farms with 150 or more cows and it's changing fast. As dairy farmer and activist David Handley told the Ecologist, 8,000 cow units today could well be 16,000 cow units in 10 years time. 'Everybody is now trying to cut costs and unless you can control costs and go big by scaling up with cows you won't last.'

Expansion

Unsurprisingly, this pressure to expand

has created a number of environmental and welfare problems, which even the industry itself admits are becoming critical. In the high-yielding breeds used to produce milk today, a cow produces more than ten times the milk she would need to feed her calf. The push to create higher and higher yielding breeds is leading to an increase in disease and illness amongst cows that simply cannot cope. The lifespan of a dairy cow is now often less than three lactations.

Industry analysts DairyCo say the pressure to keep yields high means farmers face a 'daily dilemma' about whether to maintain and treat, or cull a cow with health problems. Culling rates in UK herds are now between 18-35 per cent a year, according to DairyCo, with the proportion of cows culled increasing with herd size and milk yield. Likewise, cow mortality also increases with herd size.

'Long term genetic selection for high milk yield is the major factor causing poor welfare, in particular health problems, in dairy cows,' concluded a report from the European Food Safety Authority on the welfare of dairy cows. 'The milk yield of dairy cows has risen steadily over the last thirty years in Europe with approximately 50 per cent of this increase estimated to be attributable to genetic selection for milk production efficiency... the genetic component underlying milk yield has also been found to be positively correlated with the incidence of lameness, mastitis, reproductive disorders and metabolic disorders.'

As well as the welfare ethics this also has an environmental impact, as Tara Garnett from the Food Climate Research Network (FCRN) points out. 'If a cow goes to slaughter and you have to rear a new heifer in its place then that cow is going to be eating lots of protein and producing lots of methane for two years

before it produces any milk, which is in a sense a waste of methane.'

Waste and pollution

Perhaps, given this insight, it is less surprising to know that the dairy sector now accounts for 4 per cent of the world's total greenhouse gas emissions. The vast majority of those emissions, 93 per cent, take place on the farm from the cows themselves and from demand for animal feed, fertiliser and pesticides.

The high-yielding dairy cows require huge amounts of animal feed. Under its original plans, the Nocton farm was going to require 14 HGV deliveries a day for animal feed and milk collection. Increasingly, this animal feed, particularly the protein element of it required by high-yielding cows, is being imported as soya. More than a million tonnes of soya is being imported and fed to livestock in the UK every year and 98 per cent of this is coming from South America. Campaign groups say the expansion of soya production there is linked to deforestation in the Amazon and grassland regions of Brazil. The vast soya plantations in neighbouring Paraguay have been found responsible for a host of local social and ecological problems including the forced eviction of rural communities and excessive use of pesticides.

As the Environment Agency's objections to the Nocton proposal reveal, there are also a number of ecological problems surrounding modern dairy farming in the UK. In the main the problem is about the slurry waste and the problems dairy farms have in disposing of it, without it being washed off by rainfall into water sources. In 2002, Defra estimated that agriculture was responsible for about 50 per cent of phosphorus inputs to surface waters. Excess levels of phosphorus in water contributes to

Milk has increasingly found itself at the centre of controversy



the process known as eutrophication, whereby certain species, for example algae, thrive and rapidly begin to dominate the river at the expense of other species, including fish. Anglian Water admitted it spent £80 million between 2005-10 in treating nitrate-polluted water, with 60 per cent of this pollution attributed to agriculture.

In some cases the pollution has led to criminal prosecutions. The Environment Agency has estimated that the dairy sector accounts for half of all its recorded agricultural pollution incidents. Even one of the farmers behind the Nocton proposal had a previous conviction for polluting a stream with milk waste and killing fish.

Health issues

In the US, concerns have been raised from residents living near large-scale dairy farms of an influx of flies and higher levels of particulate pollution. Dairy counties in the US such as Tulare and Bakersfield have equal or sometimes higher rates of ozone

and fine particulate matter than the smog-infested city of Los Angeles. In its objections to the Nocton dairy, the Environment Agency said there were, 'significant uncertainties regarding the impacts and control of odour from the operation of the dairy, and associated land spreading, and its effects on residential amenity'.

The health problems of high-yielding dairy cows and use of antibiotics is now also being linked to antimicrobial resistance both in the UK and around the world. The Health Protection Agency (HPA) say the widespread use of antibiotics in animals is thought to have led to resistant strains of some bacteria being transmitted to humans through food. It has also said that a new type of antibiotic resistance in *E. coli* had spread to more than one in three dairy farms in England and Wales. 'The intensification of agriculture...and dairy cattle pushed harder and harder to produce more milk, has led farmers to rely on hugely important antibiotics to treat the diseases this is causing. We are

now getting the evidence that this has real implications for human health too,' says Compassion in World Farming CEO Philip Lymbery.

Dairy is not necessarily the healthy choice for humans either. Although the dairy industry has been very successful in lobbying on the nutritional benefits of milk and dairy products, there is a significant amount of research about its negative health effect, including links to diabetes and prostate cancer. Many nutritionists now argue that fish and green vegetables are a much better source of calcium than milk. Fearing the consequences of losing its 'healthy' tag, some of the world's biggest dairy companies joined forces in 2006 to form the Global Dairy Platform. Its objective continues to be to fight any attempts to question the health benefits of dairy and increase demand for milk and dairy around the world.

Tom Levitt is the Ecologist's news editor

Inside the US 'mega-dairy' industry

The Ecologist travelled to California to examine intensive milk production, and found factory farms, conflict, intimidation, pesticides, pollution and small-scale farmers driven out of business. Words and images: **Jim Wickens**



‘You better get out of here or your gonna get your ass kicked or worse,’ the leathery-faced farmer slurred, picking his words carefully as we pulled up outside his milking parlour. It was coming to the end of our first day in the US, and despite our best efforts to persuade the farmers otherwise, it was clear that journalists are not welcome in this part of the world.

Far from the glittering lights and well trodden-tourist paths that people normally associate with California, the vast udders of America’s dairy industry run through the Central Valley, a rarely-visited arid plain that stretches down the state, wedged in between the Sierra

foothills and the Californian coast.

This is the breadbasket of the USA, where almond farms, grapes and corn are carved out of the scrubby desert and grown on eye-wateringly large scales. It is also home to the largest dairies on the planet, a concentration of several hundred milk farms so vast, that in Tulare County alone, there are over 900,000 cows, producing in excess of a billion dollars worth of milk each year.

But as an Ecologist investigation carried out in conjunction with the World Society for the Protection of Animals (WSPA) has discovered, the Central Valley has also become a battleground for an unreported conflict, pitting community activists and family farmers against the might of mega dairy

farms that have taken root here.

Factory or farm?

For a first-time visitor, the sight and scale of a mega dairy is overwhelming; enormous open-air sheds, mountains of feed, million-gallon pools of slurry and thousands upon thousands of listless cows. Granted access by disgruntled dairy employees, we were able to observe a mega dairy in operation. More akin to a factory production line than a farm, long lines of cows could be seen stumbling over outstretched udders as they were driven back and forth to the robotic-like, rotary-milking parlours.

It is a continual daily cycle that stops only when the milk output begins to tail off, and the animals are either re-impregnated or sent off to slaughter; burnt out and discarded after only a few years of life on the factory floor. Animals in American mega dairies will never see a patch of grass in their life, and the only respite comes from shade in the dusty open-air lots where they wait between milking. Even here the animals will not get a chance to really rest; high-milk yielding cows suffer from chronic ‘negative energy balance’, where the cow uses more energy in making milk that she can physically take in by eating, losing body condition as a result.

The Holstein is the favoured breed of choice for most mega dairies, their towering bony frames contrasting wildly with bulging vein-filled udders swinging underneath them. Milk produced by them is of a lower quality with a higher pus content in the milk than that produced by other cow breeds, but what these freakishly-bred animals lack in quality, they make up for in quantity: milked three times a day, propped up with growth hormones to boost milk production, and antibiotics to stave off frequent infections, milk output in the Holstein has doubled in the last 40 years alone.

Flies and nitrates

It’s not just the animals that suffer. Tom Frantz is a retired schoolteacher and grew up in Shafter, a small town in Tulare County. ‘Until 1996, there weren’t any dairies near me, then we got the first mega dairy situated close to here, followed by several others. Within a couple of years at the local school we had two big problems that have never existed before... the school was invaded by hordes of flies, nasty biting flies, clogging the water coolers and forcing

the teachers to hang fly strips in the middle of each classroom. It changed things, changed the atmosphere of the school. Then nitrates in the water showed up. The school had always used water from its own well in the past, but suddenly the nitrate level doubled, then tripled, making it unsafe to drink,' he told *The Ecologist*.

Tom formed a community action group, one of a dozen that have sprung up in recent years, to try to stop more dairies from encroaching on communities. His group has sued two mega dairies to date and has successfully pressured both the school boards and the town council to put in place buffer zones, banning mega dairies from being built too close to the town. In the midst of costly legal battles however, Tom has been threatened and now lives with restraining orders in place against overly aggressive dairymen living nearby.

Mega dairies also bring an invisible threat to the Central Valley, producing high quantities of gases leading to smog and particulate pollution. According to the American Lung Association, pollution from industrial agriculture operations 'poses a significant health threat for some of the most vulnerable people in our community. Children, adolescents, seniors, people with asthma and chronic lung diseases, people with chronic heart disease and diabetics are most at risk.'

It is no coincidence that dairy counties such as Tulare or Bakersfield have some of the highest rates of ozone and fine particulate matter in the USA,

equaling and in some cases exceeding the smog-infested city of LA further South. A medical study, published in 2004, found that one in every four children in these counties has asthma. 'Mega dairies are effectively being subsidised by our lungs,' Tom says.

Pesticides

Teresa DeAnda is a mother of seven children and full-time Central Valley Representative of Californians for Pesticide Reform. She is, by her own admission, an unlikely activist: 'I didn't even know what that word meant for the first few years that I did this job,' she told *The Ecologist*. 'I was always interested in reading the news about air pollution and I knew air quality was getting worse. I knew that was all bad, then I read an article that they wanted to put in a dairy of 5,000 cows in Kings county nearby and I was so upset, and I said "oh my gosh I got to go over there".'

With the assistance of the Centre on Race, Poverty and the Environment, Teresa began to work full time on pesticide issues and air quality – fighting against pollution on behalf of the voiceless Hispanic populations living nearby. The more she looked into the problem, the more frustrated she became. 'There have been studies done looking at why polluting industries move to certain areas; these industries actually look for neighbors who are Hispanic, low income, poor, of colour and are catholic,' she says. 'And it makes me so angry, big dairies pollute until water boards crack down on them.'

Driving along the highway, Teresa waves at countless gangs of migrant

workers as they work in lines, silently packing grapes. A few miles out of town fruit fields give way to vast fields of corn and alfalfa, crops all grown to feed the cows in the mega dairies. We are en route to meet Jorge, a Salvadorian worker whose family have experienced the impact of pesticides used to grow crops for cattle. Teresa explains that Jorge is an exception to the rule; usually people here don't want to speak out as 'they could lose their jobs and their homes... they're scared.'

Threats and intimidation

Jorge is scared too, he talks but not on camera, and is quick to explain why. 'Those who are illegal immigrants are told that they are going to call immigration [officials] to get them; another threat is that they are going to send someone, if you don't leave they will kill you,' he says, 'and that is not good.'

He complains bitterly about the pesticides used to grow cattle feed: 'I used to have cows, but they all died... I had canaries they all died... I had goats, but I sold them because they were dying too; they had stomach problems and the babies were also dying...'

Jorge guides us around his smallholding. He has a few horses left, but for the most part the stables are empty, weeds sprouting from the dust. He points to the few remaining fruit trees his family planted, bare stems save for a few shriveled brown leaves at the end of each branch. 'When I came here my financial situation was good and I was comfortable... it [pesticide spraying] has had a very bad impact



Intensive factory farms characterise much of the US dairy industry

because the children became ill, the animals are dying, I am ill,' he says.

Not all Californian dairies are operating on such a large scale. Paul Bianci tends a small herd of Jersey cows, which spend much of the year grazing on pasture in the rolling hills of Northern California. In scale and sight, Paul's farm resembles a British farm, and is perhaps a decent barometer of what mega dairies might mean for British farmers if they come to Britain in the future. 'We just can't compete with them... they just put the little people out of business' he told us. We heard similar complaints from other small farmers we met; that economies of scale make it virtually impossible to compete with mega dairies which are milking herds of cows up to a hundred times bigger than smaller family farms, driving down milk prices and forcing family farmers to sell up.

Dairy declines

Albert Strauss, who runs a successful organic dairy, has pioneered an alternative system to provide California

with a more sustainable milk supply: 'We lose 55 of our dairies each year, and in the last 40 years in our district alone we have gone from 120 dairies to 23...so it's a bit drastic. Mega dairies are continuing the trend away from sustainable farming, and it's happening because mega dairies dominate because they are the biggest agricultural commodity in the USA, and when you have big dairies controlling most of the milk supply, you have a lot more political power.'

The problem isn't just confined to California; according to the USDA statistics, 33,000 dairies disappeared nationwide between 1997-2002.

Our last day in California is spent at Turlock County Fair, a mom and pop type family affair where dairy farmers from the Central valley help their children to show prize animals in front of the judges. Behind the showground, children are busy grooming the prize cows that will soon be led out into the arena, whilst parents sit and chat over beers nearby. It is a timeless scene from small-town America, but despite the

friendly feel of the place, few want to talk to the journalists asking questions about mega dairies; we are met with a wall of silence, people too scared to be seen talking about the problems they face.

Finally we meet Paul Clarent, a Stetson-wearing, unapologetic mega-dairy owner, who flatly rejects the concerns of smaller farmers we had spoken with during the week: 'You've got to expand to compete with the big guys.. that's just business and that's life, it's not fair all the time,' he said. As we are preparing to leave the fair an elderly farmer beckons us over away from the crowds and offers up a different reality. 'Listen, we run a dairy and you know we will probably go out of business in the next two or three years. We are simply not big enough to compete with the big dairies... my grandparents, my parents, my wife and I did this to pass on to our kids and now it's going to die with my daughter's generation. It's pretty sad,' he said.

Jim Wickens is director of Ecostorm



Why the victory over Nocton ‘super-dairy’ is only the beginning

COMMENT by **Suzi Morris**, WSPA UK

2010 saw a proposal advanced for an intensive 8,100-cow US-style ‘mega-dairy’ in Lincolnshire; on a scale unprecedented anywhere in western Europe, and which, by its very size, represented a tipping point for the future of Britain’s dairy industry. Our smaller-scale, predominantly pasture-based dairy farmers, under whose stewardship Britain’s dairy cows have grazed countryside pastures for generations, were already sliding out of business at an accelerating rate.

The Nocton mega-dairy, which threatened to flood the market with millions of litres of industrially produced milk every year, represented a nail in the coffin for struggling, pasture-based farmers. By allowing the Nocton dairy on such a watershed scale, all such industrial operations would become acceptable.

Britain is a world beacon for farm animal welfare. British people no longer tolerate battery cages for laying hens, and have rejected cruel farrowing crates for pregnant sows. So it is unthinkable that we should sleepwalk into the same trap as the United States – where the landscape is littered with gigantic ‘concentrated animal feeding operations’ that intensively confine dairy cows in their thousands; where consumers are utterly disconnected from the provenance of their food; and where thousands of rural communities have been destroyed.

Even before the Nocton Dairy developers catapulted the dairy question onto centre stage, the intensification by stealth of Britain’s dairy industry was a great concern to WSPA. As an international organisation, we were also alarmed by the rise in applications for gigantic dairy facilities

in the agricultural powerhouses of India and China, and even in fellow ‘beacon’ countries such as New Zealand. But, we also knew that these industrial systems were increasingly recognised as unsustainable environmentally and ethically in the United States – the birthplace of factory farming – and that American people were finally waking up to the horror of what their livestock industry had become.

So, although WSPA’s campaign was never just about the Nocton mega-dairy, Nocton was the catalyst - and the Not in My Cuppa campaign was born. Not In My Cuppa was conceived as an easily accessible vehicle for harnessing consumer voice and measurably demonstrating – to food business, to policy makers, to the planning authorities and to the pro-intensification farming lobby – British people’s concerns about dairy intensification and their rejection of ‘factory milk from battery cows’. The first wave of the campaign established that 61 per cent of British consumers would never knowingly buy ‘factory milk from battery cows’ (WSPA/MORI) and saw over 30,000 people use digital and social media to say ‘Not In My Cuppa!’, with a rolling programme of media-friendly initiatives, from a viral comedy film to celebrity tweeting,



designed to build momentum and numbers.

At the parliamentary level, some 200 MPs, peers, Ministers and shadow Ministers have engaged with or taken part in Not In My Cuppa. Some by attending campaign briefings and receptions at Westminster, some by signing Early Day Motion 942 ‘...opposing the establishment of intensive dairy units, which would take British dairy farming in the wrong direction...’, and others by tabling written or oral

Parliamentary Questions.

Working with industry

Within a highly diverse animal welfare movement, WSPA is a pro-farming organisation that works hard to engage positively with the agriculture sector globally, to promote humane and sustainable farming. So, while Not In My Cuppa found itself on the opposite side of the intensification divide from the NFU, the campaign was a platform for engaging with ‘conventional’ dairy farmers. These farmers share our belief that pasture is fundamental to welfare, sustainability and food security and they oppose the intensive confinement of dairy cows and the quest for ever-greater milk yields. For these men and women Nocton was a threat to their businesses, and the NFU, by supporting the Nocton proposals, was failing to represent their smaller-scale interests.

Bringing those farmers together with concerned parliamentarians and consumers via the vehicle of Not In My Cuppa has been a key success of the campaign, and fundamental to a number of leading supermarkets saying that they had ‘no plans’ to carry Nocton milk on their shelves.

Nocton Dairies’ controversial and divisive proposals were finally withdrawn several months ago, defeated by environmental, welfare and consumer concern. But this campaigning success is merely a milestone rather than a victory, since the future of British dairy farming still hangs in the balance. Smaller-scale, ‘conventional’ dairy-farmers are struggling to survive in an industry increasingly under pressure to embrace more intensive systems chasing ever-higher milk yields. These intensive systems are environmentally unsustainable, do not promote genuine food security, threaten the fabric of rural communities, burn out and discard their cows at an ever-young age, and certainly do not place true animal welfare at their heart.

As global demand for animal produce increases, it has never been more important for Britain to showcase sustainable, environmental and welfare-friendly ways forward for livestock farming. Not In My Cuppa recognises that the consumer is key. As one dairy farmer put it, on hearing of Nocton Dairies’ demise, ‘Our powerful consumer has spoken.’

Where next?

Not In My Cuppa is emphatically not about knocking down intensive applications one by one; but, rather, creating a nationwide climate of interest and concern where livestock industrialisation simply cannot gain ground. It is also building consumer knowledge and appetite for humane, sustainable, pasture-based dairy farming. So, in 2011 Not In My Cuppa will be supporting farmers in building farmer-led advocacy campaign in partnership with national consumer and community groups. It will be reach for 200,000 consumer sign-ups and bring that consumer and community pressure to bear on food business. Our message is clear: keep British dairy farming humane, sustainable and natural. So, why not sign up at notinmycuppa.com and be part of the story!

*Suzi Morris is the UK Director of WSPA
www.wspa.org.uk*



(pronounced chee)

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Top 10... fairtrade and organic teas

By **Laura Sevier**

Drinking tea is a national obsession, whether it's a builder's teabag dunked in a mug with three sugars or a delicately brewed loose-leaf green tea with honey. Without a daily cuppa (or three) many of us would feel dazed and disorientated. After the Republic of Ireland, Brits drink more tea per head than anywhere else in the world. According to the UK Tea Council, we brew around 165 million cups of tea a day. As well as its ability to console, uplift, relax and simultaneously give you a buzz, tea is a wonder plant containing high levels of anti-oxidants, which can help with a wide variety of ailments including cancer and heart disease.

Whatever the flavour or blend, black, green and white teas are all made with the leaves of the same plant, *camellia sinensis*, but have been processed differently. Black teas are the processed using fermentation, while green tea is steamed to prevent oxidisation, and as a result contains more anti-oxidants. White tea, the least processed of all, also contains a high level of anti-oxidants. Although there are plenty of good reasons to drink tea, not all brews are equal. Tea production can be labour intensive, with low wages and poor working conditions. Buying Fairtrade obviously helps. How the leaves are grown is another issue. Mass-market tea is sprayed with chemicals that affect waterways and wildlife and the finished product may also contain pesticide residues. Organically grown tea has less of an impact on the environment. And of course, there's far more to infusions than simple cups of *camellia sinensis*.



Qi Ginger Green Tea

Unless sweetened with honey, green tea can taste a little bitter. Adding a twist of ginger, mint or lemon is a simple way to sweeten it up and Qi's Ginger Green Tea, £1.60 for 25 bags, is particularly moreish. The company has a close relationship with a Fairtrade association of small independent farmers based in southern China and the range is 100 per cent organic. Also recommended is the White and Spicy Tea (white tea with added cinnamon, cloves, ginger and orange).

Steenbergs Organic Green Tea with Peppermint

This loose-leaf tea, £4.80 for 125g, was a favourite in the Ecologist office and quickly ran out due to popular demand. With no need for a teapot or even a strainer, one teaspoon in a glass with some hot water makes for a refreshing brew and gives you a gentle green-tea buzz. Steenbergs Organic is a Yorkshire-based, family-run firm best known for its extensive range of organic herbs and spices. Tea-wise, its speciality is tins or bulk bags of loose-leaf tea, including chai, black, green and white teas.





Clipper Fairtrade Everyday Tea

Clipper is the organic, Fairtrade range you're most likely to see on supermarket shelves. The flagship blend is the 'everyday tea', £1.49 for 40 bags, available as Fairtrade, organic or both. Started in 1984 by Mike and Lorraine Brehme with just two chests of Assam tea from a single tea estate, Clipper has grown to encompass a huge range of teas, both plain and exotic. Also recommended is Organic Nettle and Mint. www.clipper-teas.com

Tregothnan Earl Grey

Tea grown in Cornwall? It might sound unlikely but the Tregothnan estate near Truro uses tea grown in the grounds and blends it with imported leaves to create classics such as the Earl Grey, £8.31 for 50g, which is mixed with Assam and bergamot. Attractively packaged in a silver tin, the loose-leaf tea (also available in teabags) might be pricey, but the novelty factor makes it a good present. www.tregothnan.com



Lahloo Amber Oolong Tea

This range is all about loose-leaf tea from small, artisan tea gardens. Oolong tea falls halfway between green and black tea, partly oxidised. Amber Oolong Tea, £6 for 50g, comes from Ming Jian village in Nantou County, Taiwan, where the moist hills, cool weather and soils are perfect for tea-growing. Charcoal-roasted, it has a smokey, chocolatey, passionfruit flavour. Lahloo tea is fairly traded and organic. www.lahlootea.co.uk



Hampstead Biochai

Based on a traditional Indian recipe, this chai, £1.89 for 25 bags, is made with Fairtrade biodynamic black tea, root ginger, lemongrass, pepper, cardamom seeds and cloves. It hails from the Makaibari tea estate in India's Darjeeling province, the world's first certified biodynamic estate and the last owner-managed estate in the district. 66 per cent of the acreage is undisturbed rainforest. www.hampsteadtea.com

Heath & Heather Apple and Cinnamon Tea

Herbal and fruit tea fanatics will know this range well. Heath & Heather is ideal for those who want to venture beyond the usual chamomile and peppermint, and experiment with liquorice, pomegranate, rosehip, fennel and nettle. Herb specialist, Heath & Heather, has been around since 1920, established by brothers Samuel and James Ryder, who wrote specialist books on herbs and their benefits. There are no artificial flavours, preservatives or colouring in the teas and the Apple and Cinnamon, £1.39 for 20 bags, is a great way to get started.
www.heathandheather.co.uk



Wild Rooibos

Also known as 'bush tea', rooibos is a native South African herb, whose colour and deep, rich taste make it a good caffeine-free substitute for black tea – especially as you can enjoy it with milk and sugar. Unlike most rooibos, which is industrially farmed as a monocrop, Wild Rooibos, £6.50 for 50g, comes from a small farm in the Cederberg Mountains, and is grown without pesticides or herbicides, and harvested by hand. Leaving the mountains uncultivated and ungrazed encourages local endangered leopards to survive and thrive.
www.rareteacompany.com

Neal's Yard Remedies Lemon Balm and Rose tea

These medicinal teas are sold ready-to-go in paper packets or can be measured out from glass jars behind the counter of Neal's Yard stores. The extensive range includes Lemon Balm and Rose tea, £3.80 for 50g, a nerve tonic that helps to relieve the symptoms of tension and stress, Coltsfoot and Sage tea, to support the respiratory system, and Dandelion and Red Clover tea, to help detoxify the body.
www.nealsyardremedies.com



Pukka After Dinner Tea

This calming blend of fennel, chicory and cardamom, £2.09 for 20 bags, is designed to help soothe and support the digestive system. Pukka herbal teas are based on the ancient wisdom of ayurveda; the art of living wisely. Its organic teas pack a punch in the flavour department too, with the Three Ginger, Three Mint and Three Berry blends, coming highly recommended.
www.pukkaherbs.com

Top 10 ... alternatives to cows milk



High in fat and with a carbon footprint to match, cows milk is neither the greenest nor healthiest milk available. So what are the alternatives? Here are 10 of the best.

By **Ruth Styles**

From greenhouse gas emissions to antibiotics, the problems associated with cow's milk are legion. According to Tim Lang, Food Commissioner at the Sustainable Development Commission (SDC): 'The heavy footprint of the meat and dairy industry means it's right to prioritise exploring how, not just whether, over-consuming societies like the UK can reduce their meat and dairy consumption.' Then there are the health issues associated with the white stuff, which range from dairy intolerance through to high cholesterol. Loaded with calories and heavy on the saturated fat, cow's milk certainly isn't the diet conscious choice for putting in your cuppa. Milk does have some health benefits though – calcium for example – but that mineral aside, there are better choices that are both low in fat and good for the planet. **Here's our pick of the best.**

Almond Milk



Almond milk is a good source of magnesium, which helps to break down food and can help with the function of the parathyroid glands, thus helping improve the health of your bones. It's also loaded with manganese, selenium and Vitamin E. Vitamin E is an antioxidant that protects the cell membranes. Selenium is good for our immune system; it helps in reproduction, and in the metabolism of thyroid. It also prevents cell damage and tissue damage. Almond milk is also a good source of unsaturated fat, protein, flavonoids and potassium, and has less sugar than soya milk. Like soya milk though, it has a smaller carbon footprint by virtue of being derived from a plant source rather than a methane-producing animal one. However, it doesn't taste like cows milk by any stretch of the imagination, so it takes some getting used to if you're looking for a true milk substitute. It's also significantly more expensive as almonds, a hard-to-grow crop, are the main ingredient.

Goat Milk



It's not to everyone's taste and it's from an animal source, but goat's milk has much to recommend it as an alternative to cow's milk. Dan Buettner, the founder and author of The Blue Zones, reports that the people of Sardinia, one of four places in the world where people routinely live to be 100 years old or more, regularly drink goat's milk, and it's also reported to protect against Alzheimer's disease. It has 15 percent more calcium, and more vitamin A and D, potassium, copper and manganese than cow's milk. It is also a good source of phosphorous and riboflavin (vitamin B2). Goats are not treated with growth hormones either and they produce less methane than cows. Goat's milk does have less folic acid and vitamin B12 than cow's milk though, as well as a little less zinc. Some people are reluctant to try it, thinking it will taste 'goaty'. Actually, it's similar to cow's milk although it can taste a bit tangier depending on the animal's diet. Yogurt made with goat's milk tends to taste very tangy.

Rice Milk



Rice milk is the most hypoallergenic of all the milk substitutes and is extremely nutritious. It's also the least fattening of all the milk alternatives with only one gram of unsaturated fat per cup. There are also plenty of heart healthy nutrients in rice milk. The unsaturated fat comes from rice bran oil, which can help lower your blood cholesterol. Niacin and vitamin B6 are also good for this while the high magnesium content helps to control your blood pressure. Iron and copper increases your red blood cell production, giving you better oxygenated blood and more vitality. On the downside, since rice is highly starchy, so is rice milk. One cup of rice milk contains 33 grams of sugary carbohydrates, three to four times the amount in milk or soya milk. If you have diabetes, rice milk can cause a sudden sugar overload. It also has a very low protein count compared to cow's milk and soya, and the calcium content is also minimal, so choose the fortified product instead.

Hemp Milk



A good alternative for anyone with soya and nut allergies, hemp milk is also cholesterol and lactose free, low in saturated fats and rich in healthy omega fatty acids. It's also an excellent source of protein and tastes creamier and nuttier than soya milk or rice milk, and also tends to be a bit thicker than other plant-based milks. Like other plant milks though, it lacks calcium and isn't as widely available as soya, rice and goat's milk.

Cashew Nut Milk



According to the George Mateijan Foundation, a quarter of a cup of cashews supplies almost 38 percent of the recommended daily intake of copper, which is involved in many important bodily functions such as developing bone and connective tissue, producing melanin, and iron absorption. Cashews are a great source of magnesium like calcium, magnesium is also extremely important in keeping our bones strong and healthy, and, compared to other nuts, cashews have a lower overall fat content. As with the other nut-based milks you can also make cashew milk at home.

MAKE A DIFFERENCE



Sheep's Milk

Sheep are among the most useful of domesticated animals, producing a sustainable supply of milk, meat and wool. A hardy species, sheep thrive on hillsides unusable for agriculture, and, like goats, produce far less methane than cows. Their milk contains up to twice as many minerals (including calcium, phosphorous, zinc and the important B vitamins) as cow's milk. Like goat's milk, it has small fat globules that are easily digested and it's a rich source of iodine, which is useful for those with thyroid problems. Unfortunately, it's almost twice as fattening as whole cow's milk and has many more calories. It's also unsuitable for the lactose intolerant and babies. Although it contains higher levels of butterfat, it's actually lower in saturated fat than other types of milk. Taste-wise, it's richer and creamier than cow's milk but without the faint tanginess of goat's milk



Oat Milk

Like many plant milks, oat milk is cholesterol and lactose free, and also contains high levels of antioxidant vitamin E. It also contains folic acid, which is essential for most bodily functions and is needed to synthesise and repair DNA, produce healthy red blood cells and prevent anaemia. Thanks to its plant source, oat milk is usually tolerated by people with multiple allergies, and is also a good source of phytochemicals; naturally occurring chemicals in plants that help fight diseases such as cancer, heart disease and stroke. The main argument against oat milk is that it, like rice milk, is high in sugar and doesn't have the calcium and protein content of cow's milk. Since it's derived from a cereal crop, it's also not good for people who are allergic to gluten, and has a distinctive, oaty flavour, which doesn't appeal to everyone. It's also fairly difficult to source and is usually only available in health food shops.



Buffalo Milk

Buffalo milk might sound a bit gimmicky, but unlike the modern dairy cow, buffalo can thrive without the need for high levels of concentrated, hormone-infused feed. Grass, clover and hay make up the bulk of a buffalo's diet; with bone meal, fishmeal and genetically modified feed rarely making it into their troughs. In the case of organically raised buffalo, it never does. The seven percent fat content is similar to that of cow's milk, and the two milks share an almost indistinguishable nutritional profile. However, buffalo milk does have a lower cholesterol count and more protein, calcium, iron and phosphorous. Higher levels of immunoglobulins, lactoferrin, lysozyme and lactoperoxidase mean buffalo milk is suitable for many people with food allergies.



Coconut Milk

Coconut milk is a very creamy, dairy-free alternative for those who are lactose intolerant or allergic to animal milk. Those who subscribe to the low-carb lifestyle often prize coconut milk for its minimal starch content. A vegan-friendly drink, it is also soya-free, gluten-free, cholesterol-free and nut-free while its fat content is considered to be a 'good fat', easily metabolised by the body and quickly turned into energy rather than being stored as fat. Coconut milk is also rich in lauric acid, a substance also found in human milk, which researchers have shown has anti-viral and anti-bacterial properties. Unlike other nut or plant milks, the saturated fat content of coconut milk is significant at five grams per serving, so drink it in moderation. It can solidify and separate when refrigerated, depending on the brand, so if you like a cold glass of milk it's an inconvenient choice since you have to stir it and let it warm up to room temperature in order to drink it.



Soya milk

Packed with protein and fibre, the benefits of soya milk include the presence of cancer-fighting isoflavones, minimal saturated fat and the absence of galactose, which means that it can replace breast milk for galactosaemic children. It's also safe for the lactose intolerant and anyone with a milk allergy. Because it comes from plants, there are no animal welfare issues associated with it and the growing soya plants absorb rather than emit carbon – the direct opposite of dairy cows. There are some downsides though, chiefly that its sugar content can be high, particularly in the flavoured versions. Other issues include the increasing amount of land being used to farm it, which is leading to deforestation in some countries. However, its overall impact is still much less than that of cow's milk, particularly when you choose an organic version.

Palm sugar - the ethical alternative?

COMMENT by Sam Campbell



Palm sugar could offer a greener alternative to sugar cane monocultures. PHOTO: Richard.W.York

Stretching their spiky crowns far above the dusty plains of Cambodia, sugar palms (*Borassus flabellifer*) are a Cambodian national icon. Better utilisation of this most versatile of trees has the potential to bring the sweet taste of success to rural poverty reduction, though the trees have recently fallen out of favour, their 30-metre trunks felled for timber.

The importance of the sugar palm to the rural Cambodian economy is hard to overstate. Found throughout Cambodia, the tree provides a significant income source for poor Cambodians, also yielding material for a myriad of construction and domestic uses.

Cambodia is estimated to have 3 million palm trees, though only 2 million of those currently provide benefits to rural families. The most productive trees take between 70 and 100 years to reach their prime, meaning felled trees take generations to replace.

The biggest cash cow is sugar. Concentrating the tangy sap (toddy) into a crude sugar known in English as jaggery is a time-honoured way to produce a product that is durable and valuable, but still sustainable.

The rush to plant sugarcane has overlooked this traditional sugar source. In addition to potential EU duty-free, quota-free access, Kampong Speu province Palm Sugar was granted EU Geographical Indication (GI) status

on August 2, 2010 joining such well-known global brands as Gorgonzola cheese, Parmigiano-Reggiano ham and Champagne wine. Perversely, these very trees are being felled to be replaced with large industrial concessions that have limited benefit to smallholders, who make up the majority of Cambodia's population.

In Cambodia, palm sugar production is a family business and is mostly concentrated in Takeo, Kampong Speu and Kampong Chhnang provinces. Approximately 20,000 families make sugar, earning a gross income of about CR2-4 million (US\$500-1,000) in each production season which lasts about 7 months.

Best of all, Palm Sugar is pro-poor, its intricate extraction process difficult to industrialise and the palms' slow-growth impossible to accelerate, leaving rural homesteaders holding all the cards.

The Sugar Palm has many uses in Cambodia, including:

- Roots and male flowers used for traditional medicine to treat malaria, STDs and as an anaesthetic
- Dark, heavy hardwood from the trunk is prized in the construction of houses, boats and other structures
- Thick-ribbed, heavy leaves used to thatch roofs and walls of houses. Thinner sections used to braid mats, hats, fans and boxes. Leaves were once used as paper, especially by monks
- Palm tree fruits are popular and nutritious, eaten fresh or prepared as a sweet with sticky rice. The top part of immature fruit is also cooked as a vegetable. The fresh pulp around the kernels is rich in vitamins A and C
- Sap (toddy) can be drunk unrefined or concentrated into sugar (jageree) or distilled into a fiery spirit (arrack)

TAKE ACTION:

Campaigns to green your cuppa

Tea



War on Want has revealed the continuing failure of UK retailers to improve the conditions of workers employed by businesses in their supply chains, despite their repeated claims to be addressing the issue. With British supermarkets unwilling to clean up their act, War on Want and other organisations are campaigning for the government to set up a Commission for Business, Human Rights and the Environment. The commission would have the authority to investigate the abuse of workers overseas and allow them to seek redress in the UK when they suffer corporate abuse.

UK-based Womankind are involved in critical outreach, support and training for women and women's groups in Kenya, aiming to end violence against women; increase women's participation in decision-making and increase resources for women's rights and development.

Womankind depends entirely on the support of individuals and organisations. There are many different ways to get involved with Womankind – from donations to supporting campaigns. <http://www.womankind.org.uk/get-involved/>

Sugar



Bridges across Borders Cambodia (<http://babcbodia.org/index.htm>) is a grassroots organisation working to bring people together to overcome poverty, injustice and inequity in Cambodia. It raises global awareness of the pressing issues facing the most vulnerable people in Cambodia. It facilitates people-to-people exchanges, solidarity actions, and volunteer programs and teaches creative, non-violent methods of resolving conflict.

You can help by donating to the Bridges across Borders Cambodia legal internship to give legal interns the opportunity to make a real contribution to fighting the hardships and legal inequity throughout the region here <https://npo.networkforgood.org/Donate/Donate.aspx?npoSubscriptionId=6527>

Human Rights Watch is one of the world's leading independent organisations dedicated to defending and protecting human rights. By focusing international attention where human rights are violated, HRW give voice to the oppressed and hold oppressors accountable for their crimes. HRW works around the world with strategic, targeted advocacy to build pressure for action and raise the cost of human rights abuse. Get involved with Human Rights Watch (<http://www.hrw.org/en/get-involved>) and push for a cause that matters to you.

Milk



Would you drink factory milk from battery cows? If the idea is repulsive then sign up to (<http://notinmycuppa.com/takepart>) the 'Not in my cuppa' campaign led by The World Society for the Protection of Animals, the world's largest alliance of human societies and animal protection organisations. WSPA campaign to convince governments and key decision makers to change practices and introduce new laws to protect or improve the welfare of animals.

Compassion in World Farming believe that factory farming is the biggest cause of animal cruelty on the planet. If you agree, act now and join CIWF's campaign (http://www.ciwf.org.uk/donate/pages/cross_out_factory_farming.aspx) to wipe out factory farming.