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Chemical hazards: state of play 6 years into REACH

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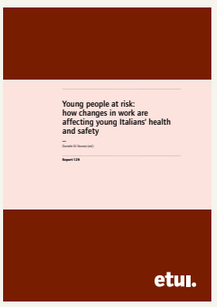
New publications



Young people at risk: how changes in work are affecting young Italians' health and safety

Daniele Di Nunzio (ed.)
(Istituto di Ricerche Economiche e Sociali - IRES)

This report looks at the problems young people have getting a job in Italy, and the particularly poor employment and working conditions of those who do manage to get one. It is not a recent problem in Italy, but the crisis has made matters worse according to the figures collected by the report authors, researchers at the Italian Institute of Economic and Social Research (IRES).

ETUI, 2013
978-2-87452-295-6
68 p.
Also available in French

Transfer

European youth in the age of austerity

The August issue of *Transfer* – The European Review of Labour and Research –brings together an unprecedented collection of articles shedding light on the economic, social and labour market challenges facing young people during the current recession. A crucial concern in this respect is how trade unions have responded to these issues in terms of organizing strategy, agenda and action. The article by ETUI researcher Kurt Vandaele thus explores youth structures in five trade union confederations – in Ireland, the Netherlands and Sweden – arguing that the struggle waged by European young people during the Great Recession may have resulted in youth structures impacting trade union agendas.

Sage, 2013
More information:
http://www.etui.org/Publications2/Periodicals/Transfer

Public funding for green energy in a context of crisis

Mike Scott

This report looks at how the financial and economic crisis has affected financial support by public authorities for renewable energy in Germany, Spain, Italy, UK, Sweden and Bulgaria. It examines the policy and regulatory framework, the current situation for renewable energy in Europe and the jobs impact the sector has had and could have in future.

ETUI, 2013
978-2-87452-301-4
32 p.

ETUI events

The art of preventive health and safety in Europe

The ETUI is staging two free themed events on advocacy for health and safety at work in Brussels this autumn - screenings of three documentaries coupled to a poster exhibition illustrating how the graphic arts have been used to promote health and safety in the workplace in twelve European countries from the 1920s to the present day.

The exhibition is open Monday to Friday from 10:00 to 16:00 until 18 December in the ETUI Documentation Centre, 5 bd du Roi Albert II, 1210 Brussels.
More information: www.etui.org > Events

ETUI conference

Jobs take their toll: understanding the impact of ageing, gender and occupational hazards on workers

10-11 December 2013, Brussels

Simultaneous interpretation will be provided in French and English.
To consult the programme and to register: www.etui.org > Events

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Newsflash...

European Commission puts health and safety at work on ice

The European Commission released a Communication on its deregulatory policy on 2 October 2013 announcing that all health and safety at work measures currently under discussion will be shelved until a new Commission takes office in 2014.

But these are big issues that affect the lives and health of millions of workers in Europe, like bringing in a directive on musculoskeletal disorders and improving EU laws to prevent work-induced cancers. The current Commission has also pressed the pause button on a draft directive to protect workers against tobacco smoke. It will be doing nothing to address trade union and employers' organisations' demands to implement the European Agreement on occupational health and safety in the hairdressing sector.

"The internal market is only acceptable if implemented with strong social rules. The Commission's refit programme is blocking all progress in that direction. We need social rights across the board for all EU workers. The social dimension of the EU with its indicators is not meeting this objective", said ETUC General Secretary Bernadette Ségol.

Health & Safety in 2025: heaven or hell?

The ETUI annual strategic meeting on health and safety at work, held on 12 and 13 September 2013 in Cavtat (Croatia), brought together some 40 trade unionists from across Europe.

This year the ETUI organized discussion around three possible scenarios on the future of the EU and possible long-term (2025) impacts on occupational health and safety. This scenario framework was not aimed at predicting the future, being intended rather as a tool for thinking, from a trade union perspective, about the implications of a range of possible futures.

The scenarios present three potential outcomes for Europe in 2025 according to economic growth level and the priority accorded to OSH: "Growth is everything", "Safe and sustainable together", "Everyone for themselves".

A consensus was found on the need for the European TU movement to cooperate on the following challenges or actions: better pan-European communication on OHS hazards, organizing unions and systematically building awareness, targeted monitoring of working conditions and data collection, dissemination of good practices across countries and branches, prioritizing issues of ageing and longer working life, reinforcing trade union influence and impact on OSH, increasing TU pressure regarding enforcement and drafting new legislation and building the links between OHS and climate change.

10% of French workers still exposed to cancer-causing chemicals

The share of French workers exposed to carcinogens fell from 13% to 10% between 2003 and 2010, reports the SUMER survey. Multiple exposures are common and mainly found among maintenance, building and civil engineering workers. The incidence of exposure is higher among men than women. Manual labourers account for two-thirds of the exposed workers although making up only 29% of the total workforce. The highest incidence rates are found in building (about 32% of workers are exposed), followed by manufacturing (17.2%), agriculture (13.5%) and the service sector (6. 4%).

The decrease probably reflects the effects of tighter laws and a health and safety drive that is starting to pay off after the asbestos scandal which rocked France. The carcinogens that workers are most exposed to are diesel exhaust, mineral oils, wood dust, crystalline silica and formaldehyde. Much bigger progress has been made in big firms (a 6% reduction in exposed workers) than in firms with fewer than 10 employees where progress is on the low side (1% reduction).

New directive on workers' exposure to electromagnetic fields

The new directive on the exposure of workers to electromagnetic fields, which replaces a never applied directive from 2004, was published in the *Official Journal of the EU* on June 29, 2013. The Member States have until July 1, 2016 to transpose the new provisions.

The new text takes account of the recommendations published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) in 2009 and 2010. It introduces a system of exposure limit values (ELVs) "on the basis of biophysical and biological considerations, in particular on the basis of scientifically well-established short-term and acute direct effects, i.e. thermal effects and electrical stimulation of tissues."

The text does not address the long-term effects, as it is considered that there is currently not enough scientific evidence. But it provides that the Commission will take into account new scientific knowledge arising from the data in this area.

The Directive also allows for exceptions in medical applications using magnetic resonance imaging (MRI), for some special sectors subject to the Member State's decision, but only if the circumstances duly justify exceeding the ELVs, and this on a temporary basis.

Endocrine disruptors: calls for a paradigm shift

Endocrine disruptors – chemicals that interfere with the hormone system – are the focus of growing concern in Europe. Istas, the research arm of the Spanish trade union CC.OO, sounded the alarm in a report, while European NGOs launched the "EDC Free – Stop Hormone Disrupting Chemical" campaign at the end of March.

Both Istas and the NGOs want Member States and the EU to rethink their approach based on the old precept that "the dose makes the poison". Research has found that endocrine disruptors can have harmful effects at very low doses, especially in young people.

France's National Institute for Health and Medical Research (INSERM) has published in June an alarming collective survey report on pesticides showing that insecticides, herbicides and fungicides contain many disruptors that are endangering the health of workers, their children and the wider community even when used at low doses.

In February 2013, the United Nations put out a report establishing a link between exposure to endocrine disruptors and the increase in certain cancers (breast, testicular, prostate, thyroid, etc.), premature births, diabetes and obesity.

Job insecurity and restructuring top causes of work-related stress

Job insecurity and job reorganisation (72%) are seen as the most common causes of work-related stress across Europe, followed by hours worked or workload (66%) and unacceptable behaviours such as bullying or harassment (59%). These are the main findings of a pan-European opinion poll conducted on behalf of the European Agency for Safety and Health at Work (EU-OSHA).

Ipsos MORI carried out surveys in 31 European countries, conducting 16 622 interviews between November 2012 and early February this year. Around half of those surveyed (51%) perceived work-related stress to be common in their workplace.

Female workers (54%) are more likely than male workers (49%) to say that work-related stress is common.

Perceptions of workplace stress also vary by sector, with those in health or care work being the most likely to say cases of work-related stress are common (61%).

Four in ten workers don't think stress is handled well in their workplace.

EU report reveals green jobs health risks

"Are green jobs safe?" queries the European Agency for Safety and Health at Work in a report published in April 2013. The hefty tome reviews old and new risks from the recent growth in the green economy.

The green energy craze, for example, puts a growing number of workers at risk of falls when erecting and servicing wind turbines. Less visible is the danger to workers from the chemicals used in manufacturing them – their blades are made using allergy-inducing epoxy resins.

Waste management and recycling workers have to handle products that may be energy efficient but still harbour highly toxic substances: lithium in electric car batteries, or mercury in low-energy light bulbs. Not to mention the hazards of recycling nanotechnology products, where workers are left completely in the dark.

"There is already evidence that the 'greening' of the economy in the EU has resulted in workers being put at greater risk", observes the European agency.

Austerity policies are undermining Europeans' health

Suicides, outbreaks of HIV infections, malaria and other diseases are becoming more common. In an article published in *The Lancet* on 27 March, a group of experts review the early impacts of austerity measures on health in Europe.

The authors have detected a decline in the health of populations in some countries where austerity is harshest. In Greece, the troika (European Commission, IMF and ECB) has demanded that public spending on health be capped at 6% of GDP. That has translated into a 50% cut in central social security fund administrative staff, a reduction in public hospital beds from 35 000 to 33 000, and the elimination or merging of 370 specialist units.

The proportion of people who felt that they needed but did not access medical care rose significantly, the researchers found. This clearly plays into the resurgence of malaria and dengue fever outbreaks in Greece. Stopping needle exchange programmes has led to a huge rise in new cases of HIV infection among injecting drug users. There is also evidence of worsening mental health, with a 40% rise in suicides between January and May 2011.

Psychosocial risks: new European trade union network

The European Trade Union Institute (ETUI) staged the first European trade union seminar on psychosocial risks in Bilbao on 19, 20 and 21 June. The 19 union reps attending took a comparative EU-wide look at the problem and discussed a suitable trade union strategy for tackling what has grown to be a huge issue for workers.

Psychosocial risks have been a health and safety at work priority for two decades in some European countries, but are just now coming onto the agenda in others.

The seminar ended with a discussion on the direction and priorities for the newly-created trade union network. While the exchange of experiences had been particularly productive, the participants agreed that the network needed more concrete objectives, such as developing and putting out risk assessment tools and tools to help stewards take hold of the issue and deliver solutions at the point of need.

Editorial

Be happy – you've been consulted

Laurent Vogel
ETUI

Despite pressing calls from Parliament, unions, the Luxembourg Advisory Committee and other stakeholders the Commission has not budged. As of late September, there is no sign of any firm plans for a European health and safety at work strategy. This delay will leave a dark legacy. National strategising in many countries of the European Union is done on the basis of a common European framework. The message sent out is that workers' health is not on the priority list.

The European Commission's resolute inertia comes despite Parliament's calls for a new strategy. All political groups in the EP voiced their dissatisfaction on 12 September after calling Social Affairs Commissioner László Andor to account. A series of calls to order were voted through unanimously by governments, employers' organizations and trade unions in the tripartite committee that keeps these matters under review. Sadly, occupational health is not the only area where the Commission treats Parliament in such a cavalier fashion. The EP's call for Community legislation on corporate restructurings met with a point blank refusal from the Commission without even bothering to give reasons.

Instead of policy-making, the Commission has gone with a communication exercise, setting up a website to run a summer-long wide-ranging public consultation. It reportedly received some 500 responses, 70% of them apparently supporting a new strategy. The bald figures mean little – they could be individuals or organizations with memberships in the millions.

The now-faddish Internet consultations allow views on many things to be collected in no time. The issue is not with the means used. What is questionable is using consultations to put matters off, water down political responsibilities, turn a deaf ear to pressing demands from the European Parliament, the EU's only directly elected institution. There was no reason why the Commission could not have run an Internet consultation in 2011 when it was meant to be framing the strategy.

As its term of office peters out, the Commission is stepping up e-consultations. The highest-profile one is that run by Enterprise Commissioner Antonio Tajani with the snappy title "Top Ten" asking bosses – but not their workers, obviously – of SMEs to point the finger at laws they disliked.

Out of the 20 million-plus SMEs in Europe, just 628 wrote in to the "Top Ten". Adding in firms from elsewhere in the world and some employers' lobbies brought the total submissions up to 1 000. Most countries could not even raise a score of responses. For a three-month consultation available in 21 languages with a hefty advertising budget, that ranks as a total shambles.

The questions were slanted, too, in that most could only be answered in the negative.

Unsurprisingly, taxation was the top gripe of some SMEs who took part in this farce. They also dislike having to process waste and inform consumers by labelling products. The obligation to ensure that chemicals are safe ranked seventh on the "hate-list" just ahead of health and safety at work. Among specific laws, REACH is the greatest evil, while for occupational health, "public enemy number one" is the directive limiting the working week to 48 hours.

Any serious polling organisation would have scrapped these results due to leading questions, too few replies to constitute a representative sample, etc. Not the Commission, which has turned them into irrefutable evidence. A raft of official documents now carry its claims to have identified the most vexing laws. The "Top Ten" has become a gospel truth propounded in one document after another with never a mention of its iffy origin.

It is like the mirror in the fairytale of *Snow White* which the wicked Queen asks: "Who is the fairest of them all?" clearly expecting the reply, "My Queen, you are the fairest in the land". When the mirror replies that Snow White is more beautiful, the consultation ends and the evil begins. The "Top Ten" survey is used to proclaim "Mr Barroso, small employers in these 28 countries love your deregulation agenda". A shame that no-one considered consulting the populations of the countries subject to the diktats of the troika, a body that has no legitimacy within which the Commission is contributing to a roll-back in employment standards of the utmost savagery with a complete lack of accountability.

> How can you have an active say in public life if all you are entitled to is a vanishingly small share of what the privileged few monopolise?

Rising social inequalities do not square with a meaningful democracy. How can the average European have an active say in public life if in every aspect of their lives all they are entitled to is a vanishingly small share of what the privileged few monopolise? That is something you might care to ask the candidates asking for your vote in the upcoming elections for the European Parliament. What plans have they got to reduce inequalities, to build a social Europe, and to improve working conditions? ●

Croatia: painful lessons in market economics

Croatia joined the European Union in July to indifference among EU citizens and Croats alike. The reason - the economic crisis. The twenty years since the transition to a market economy began have introduced the population to unemployment and job insecurity. Workers who remember the "Socialist economy" era alternate between resignation, nostalgia and hopes for an economic reboot. A state enterprise in the throes of privatisation paints a telling picture.

Barbara Matejčić
Freelance journalist

It's that or nothing. After 30 years in finance, Marjia Vrgoc ends up behind a sales counter.
Image: © Danko Stjepanovic (p. 6, 9, 11)

"If workers in Western Europe had it like us, the hospitals would be overflowing."

The scent of fennel permeates the boiling hot industrial suburb of Split, the biggest city in the Adriatic coastal region of Dalmatia. It's late July and the temperature is topping 30°C. Lorry tyres pound the parched earth to dust. But no fennel grows here. The panorama takes in Croatia's hitherto densest and dirtiest industrial area – Kaštela bay whose prime sea and rail links made it a magnet for industrial development in the 1960s.

In the bay lies the Vranjic peninsula, formerly known as Little Venice for its beauty and home to Croatia's highest concentration of people suffering asbestos-induced diseases, far and away the main cause of occupational sickness. Their illnesses can be traced to working and living for more than half a century alongside factories and shipyards where asbestos was used. The Salonit factory alone handled up to 25 000 tons of asbestos each year between 1970 and 1990.

Today, that factory like many others in Kaštela bay is no more. The house roofs in Vranjic are no longer grey, but the traditional red of Dalmatia. The sea is a different colour, too. Formerly a muddy green like any city river, it is once again a deep blue hue – Adriatic blue. Twenty years on from the change of political system in Croatia – from communism with a human face, as Yugoslav communism was known, to multiparty democracy — Kaštela bay is unrecognisable. Plant closures meant thousands of job losses. Cleaned-up surroundings have enabled the industrial suburb of Split to branch out into tourism, now the country's main money-spinner. The 2012 National Bank figures reported tourism revenues as amounting to €6.8 billion, accounting for 15% of GDP.

With 5 835 kilometres of coastline and 1 185 islands, Croatia has a lot going for it. In Yugoslavia, tourism was a means of getting foreign exchange earnings, and the communist model of self-sufficiency meant it produced everything it needed, from TVs to locomotives. Workers had a job for life, and not uncommonly lived in company-owned housing. They were looked after and had job security. With the political changes of the early 1990s, that security went. Public enterprises were privatised, the labour market was liberalised and many have found themselves unable to get work. Many more fear losing the job they have. The global economic crisis has only made the job situation worse and Croatian unemployment now stands at around 19%.

Who'll come through and who'll fail

Dalmatia is Croatia's biggest tourist region. Once a mere transit town on the road to the islands, Split has become a tourist destination since its historic old town acquired UNESCO World Cultural Heritage status. But although Split, with its population of 178000, welcomed up to 30000 visitors each weekend in July, you won't find them in the district that is redolent of fennel. And yet they all have a connection with it through taste. For this is home to Dalmacijavino – Croatia's oldest producer of wines, spirits and soft drinks and it is to "travarica" – traditional Croat brandy – that the fennel is added.

Marija Vrgoč's family – like most Dalmatian families – has been drinking Dalmacijavino beverages for generations. Her tipple is "pelinkovac", a traditional liqueur; her husband is a wine man; and the whole family drinks Dalmacijavino's best known product – the orangeade sold under the brand name "Pipi". Marija greets us in a canary yellow t-shirt printed with the face of a freckled blond girl not unlike Pippi Longstocking, the face of the drink "Pipi". She wears the t-shirt all day, she says, as free advertising for the business. She works in one of Dalmacijavino's 15 tied outlets.

Marija was born in 1959 and started work for Dalmacijavino right out of secondary school, pleased to have found a job with an established, good company. She worked in the Finance Department for 34 years. "We were a big community. There were 1 300 of us and we went through it all together - marriages, children, divorces and deaths. We had secure jobs and steady incomes; I liked going to work", she says. With the break-up of Yugoslavia and the war, Dalmacijavino lost its huge market. But it kept going while other big public companies closed around them. Things got worse with the shambolic transition to a market economy and management failures. Dalmacijavino was unable to get paid for the products sold by its distributors,

while being landed with paying high costs to the state. By the mid-1990s, the debts were starting to pile up.

There was no telling who would come through and who would fail. They tried to pull through with loans, but sank further into debt. Interest payments rose and by the end Dalmacijavino had racked up debts of 1.2 billion kuna (about 157 million euros), 75 million (10 million euros) of it in unpaid wages. Suppliers were refusing to supply them with raw materials and essential bottling equipment and by 2009, production was at a virtual halt. The workforce was down to 550 employees, wages were paid late from the end of 2008 on, and not at all by February 2012.

"It was awful going in to work for three years and having nothing to do. And for months we didn't get paid either. People had debts; their bank accounts were frozen; their electricity was cut off; they started withdrawing into themselves and stopped helping one another", says Marija. After several days of strikes and protests in the streets, it declared bankruptcy in May 2012. Under Croatian law, managers have to file for bankruptcy 60 days after the company's accounts have been frozen, yet Dalmacijavino – a state-owned concern – did not file for bankruptcy until ten years after its accounts were frozen.

"It's the same in many other companies. Some had their bank accounts frozen 15 years ago but haven't filed for bankruptcy. That's how you buy industrial harmony", says official receiver Perica Mitrović. When the bankruptcy petition was filed, all the employees were laid off, but when the official receiver re-started production, they knew that some of them would keep their jobs.

"That's when it really got awful. Working alongside people that you've known for decades and not knowing which of you was for the chop. It was a really horrible struggle for survival", said Marija. She came in to work one morning and saw on the notice board that the 232 names of those who would be kept on did not include hers.

"It hit me really hard, physically. For a year, I couldn't get out of my chair. I was in a severe depression. I couldn't move, I avoided people, I felt to blame for losing my job. My husband tried to get me to go for psychological counselling, but I thought the only thing that could help me was to get my job back". Marija started work again this summer when Dalmacijavino opened a new shop and called her. Although previously an office worker, she doesn't mind working in a shop as a sales assistant, she says. "I'd even clean the floors for Dalmacijavino if I had to so long as I was working," she says with a smile.

Dalmacijavino's plight typifies the economic transition ongoing since the 1990s. Big state-owned enterprises have built up debts; they have eked out an existence for years, not paying employees' wages, only to be privatised or simply closed down. The new owners have slashed the workforce or just "shut up shop", being more interested in stripping assets than in production. Protecting workers' health was not a concern. What is unusual for a former state enterprise, by contrast, is Dalmacijavino's resurgence. The company's output is now covering its costs and it is looking for new owners. Two public auctions in August and September failed to produce a buyer willing to pay the asking price of 276 million kunas (37 million euros). The workers may be happy at present, but their fate rests in the new owner's hands.

80 000 unpaid workers

Trade unions estimate that from 70 000 to 80 000 people in Croatia are working without getting paid. Finance Minister Slavko Linić has claimed that some 14 000 enterprises are not paying their employees' wages, 2 000 of which are more than six months in arrears. But no psychosocial support has been provided.

This situation has led to a rise in psychological problems among employees caused by job loss, uncertainty, stress, unpaid work, etc. Stress-related neuroses and emotional disorders are the fifth most-frequent illness with 2 844 cases compensated by Croatia's National Institute for Health Insurance last year, according to the 2012 report on sick leave[1]. Added to this are another 8 537 people on sick leave for psychosocial and socio-economic reasons. There are no data on the causes of

1. The other main causes of illness-related absenteeism are intervertebral disc disorders, backache, fractures, acute respiratory infections and musculoskeletal system disorders

"Working alongside people that you've known for decades and not knowing which of you was for the chop."

The market economy sounded the death knell for the Yugoslav social model. The works doctors have gone.

these illnesses, nor any significant research on the psychosocial health of workers in Croatia. Despite all the negative indicators, these problems are the no man's land of occupational health.

"The State has not recognised the need to create teams to provide workers with social and psychological support, even though one illness in four is work-related – in most cases, depression, anxiety, cardiovascular system diseases, Type II diabetes, high blood pressure, duodenal ulcer, obesity, alcohol and other addictions", says Marija Zavalić, Director of the Institute for Health and Safety at Work.

Data from the National Institute for Health Insurance and the National Institute of Public Health suggest that mental and behavioural disorders are widespread among workers in the 20-59 age group. The share of hospital admissions for the total population of Croatia is 7.9%, compared to 12.9% in this group. In terms of total days' in-patient treatment, psychological disorders occupy first place with a share of 24.9%. "These are worrying figures that point to a need for effective prevention of psychosocial disorders in the workforce," concludes Marija Zavalić.

"Lack of resources, but also employee unwillingness to cooperate for fear of the sack, mean that no major research has ever been done on workers' psychosocial health," she laments.

What research has been done for particular job types, however, shows that employees in all groups questioned show signs of work-related stress, have a higher prevalence of mental problems, behavioural disorders and fatigue, and that most respondents link work accidents to concentration failures caused by fatigue, lack of sleep and depression. Employees' most common complaints are fear of being made unemployed, poor work organisation, inability to influence the production process, but also a weakening of social ties.

No doctor or social worker

Croatia ranks above the European average for the number of workplace fatalities and working days lost due to work accidents, prompting Labour and Pensions Minister Mirando Mrsić to insist that health and safety at work must be oriented towards prevention (see interview p. 11). The aim is to bring down the work accident rate by 5% a year, the occupational disease rate by 10% a year, and the number of employees taking early retirement on disability benefit by 10% a year up to 2016.

There is nothing in these measures for the prevention of psychosocial risks at work. The Minister's reply to my question on this, sent from his press office, was that such assistance is necessary and "should be provided through the company's human resources department". He also stressed that workers at risk of redundancy could get appropriate assistance from the National Employment Agency's outreach units. The Agency advises employees on how to write a CV and conduct themselves in a job interview, but not how to get over being thrown out of work.

Marija Zavalić argues for setting up hospital centres for psychosocial support to workers modelled on the post-traumatic

stress syndrome centres created after the wars of the 1990s.

But these are all proposals and solutions for the future, whereas what thousands of people are worrying about today is losing their job or not getting paid at month-end, and no-one is concerned to find out how they are coping. Under socialism, all big firms had company occupational medicine specialists and social workers who were also responsible for workers' mental health. There were also company doctors working in medical centres attached to specific firms.

Since the changes towards democracy, spending cuts mean that companies no longer have a works doctor or in-house social worker. The doctors we talked to reported seeing many workers complaining of chest pain, tremors, general unwellness, headache, and heart flutters. They are unaware that these are all symptoms of anxiety. Likewise, psychiatrists say that psychiatric hospitals fill up with workers whenever a large company goes bust.But that's a taboo subject. Every worker, like every citizen with health insurance, can seek psychological counselling as part of general health care. Most such consultations end after 10 minutes with a prescription for tranquilisers. It is very hard to get free therapy because psychiatrists and psychologists in the public health system are overwhelmed and a consultation with a private therapist costs from 250 to 400 kunas (33 to 53 euros) an hour, which cash-strapped workers cannot afford.

Then there is the specific problem that long before they stop paying wages employers have also often stopped paying social security contributions. Dalmacijavino paid no social security contributions for its workers for seven years, despite being a publicly-owned company. Official receiver Perica Mitrović argues that unions share some responsibility for agreeing to the payment of net wages. Dalmacijavino trade union official Lukica Bucat's answer is they would never have got the money for employee social security contributions in negotiations with the state and the workers needed something to live on.

Steeped in debt as it was, Dalmacijavino had a health insurance contract with the costly Sunce polyclinic. Franjo Ivčević, a manual worker born in 1956, doesn't care whether the money handed over was, as rumoured, in bribes or commissions because the insurance saved his life. Wages were in arrears. He and his wife both worked at Dalmacijavino. They lived with their two unemployed adult sons and his wife's father, whose pension they were living off. He was unable to sleep at night for worrying about the future. In early 2012, he went for his annual health check at the Sunce polyclinic where he was diagnosed with a malignant kidney tumour.

"If I hadn't had that check-up, I wouldn't have found out I was ill. Employees whose employers don't pay their social security contributions sometimes get turned away by public hospital doctors but they have no money to see a private doctor", he said during our talk in the boiler house, which like the rest of the plant is run-down but well-ventilated and clean. Franjo was operated on successfully and returned to work. He said he and his colleagues would certainly have needed psychological counselling.

"If workers in Western Europe had it like us, the hospitals would be overflowing. Just think about working and not getting paid, which is situation normal for a lot of people. First we went through the war, then privatisation, then production tailed off; it hardens you. People get used to expecting the worst, which is why they don't ask for psychological counselling. They aren't used to anyone asking them how they're doing", says Franjo.

As we talk, 1 500 people are laid off from Brodosplit, Croatia's largest shipyard, a kilometre and a half down the road. In the late 1980s, the shipyard employed 7 500 people. Today, it has 3 500. All the shipyards had to be privatised to qualify for joining the EU. The new owner has promised the state to keep 2 000 employees on until 2018. On Friday, 26 July, they learned who would be going and who would keep their jobs. Brodosplit's independent trade union official Pavle Matošić says people are at the end of their tether, in tears and not knowing what to do with themselves. "I hope it doesn't end up in tragedy. Obviously, people in this state would need counselling", says Matošić.

Franjo Ivčević gazes towards Kaštela bay. He says that as recently as 15 years ago, the factory smoke rising above the bay hid the view of the hills that overlook it. Now you can clearly see the quarried slopes and silent chimneys. And beneath the surface of the pellucid-looking sea lurks a high concentration of mercury and untreated hazardous industrial waste.

"Workers' main concern is to survive and get paid"

Mladen Novosel has headed the Federation of Independent Trade Unions of Croatia (SSSH), the country's most influential trade union, since 2010. Founded in 1990, the SSSH brings together 17 industry unions and has 110 000 members. It sits on the National Council for Health and Safety at Work, a government advisory body that monitors and analyzes implementation of health and safety at work policy. Mladen Novosel takes a hard look at his country's record in the field.

Interview done in Zagreb, July 2013

What's your general opinion of the level of protection of health and safety at work in Croatia?

MN – There's no way you can call it satisfactory. Between 1997 and 2011 there were 317 774 recorded work accidents, 2 112 cases of recognised occupational diseases and 734 work-related deaths, costing a total of 12 billion kuna [1.6 billion euros]. These figures show that the level of workplace protection is not up to scratch. The Health and Safety at Work Act is a good law, but is going ignored because employers are not being punished. The national inspection service is not effective, and even when it does file a complaint against an employer, no prosecution follows in more than 50% of cases because it is out of time. No Croatian employer has yet been imprisoned for the death of an employee. Workers' main concern is to survive and get paid, which makes them unwilling to talk about their working conditions for fear of losing their job.

What are the biggest consequences for health and safety at work of the transition from the socialist system to capitalism?

MN – The level of safety and protection at work went down in the transition period. The new employers started by investing less in safety at work, be it in safety training for workers, machinery maintenance, providing quality protection equipment, doing risk assessments, medical surveillance of employees ... Their aim is to make money and health and safety comes last. One difference between the socialist system and now is that before, all big companies had a works doctor, but after 1990 that was thought to be too costly and occupational medicine was squeezed out of companies (see p. 9-10). Even the prevention system no longer works and few employers have understood that investing in workplace protection not only improves employees' health and safety but also helps save money. Where losses due to occupational diseases and work accidents exceed 2% of GDP – which is the case in Croatia – experts consider that the prevention system is under-performing and needs improving.

Amendments to the Health and Safety at Work Act are in the pipeline. What can we expect?

MN – The new Health and Safety at Work Act contains provisions that implement the EU's 1989 Framework Directive on health and safety at work into national law. This will be publicly discussed in parliament during July 2013* and should promote the reintroduction of works doctors, help us to focus on prevention rather than punishment and give health and safety inspectors more powers if they discover contraventions in workplaces. The Health and Safety at Work Act has been amended a dozen times since 1997, but for no reduction in the number of work accidents. Labour Minister Mirando Mrsić has set an aim of a 5% reduction in work accidents by 2016, so I am still expecting changes for the better after the new law comes onto the books.

Will Croatia joining the European Union influence changes in health and safety at work?

MN – If you walk through factories in Croatia and Germany, you will see big differences in working conditions. Just joining the European Union or changing laws isn't enough to improve them. It's down to employers, legislators, trade unions, but also the employees themselves to work on it. On the other hand, foreign employers who would rather not apply health and safety legislation in Germany, for example, adapt very quickly to our way of working when they set up Croatia, rather than passing on their country of origin's culture of respect for the rules.

How much do trade unions do to actively promote health and safety at work?

MN – Health and safety at work may be a cornerstone of union action, but unfortunately this is the area that unions are least active in. Every union's first aim is to ensure that employees have a job and wages by means of a collective agreement. This makes them more concerned with substantive rights than health and safety. Every company with at least twenty workers should have a health and safety committee that is meant to do a workplace survey and propose measures to improve working conditions. But often, these committees hold only purely formal regulation meetings with no impact on working conditions.

*The debates were postponed and should now be held in autumn 2013, with a view to bringing the new legislation into force in January 2014.

Chemical hazards: state of play 6 years into REACH

This special report was coordinated by Tony Musu, ETUI.

Voices of doom presaged devastation for Europe's chemical industry. Six years since the REACH Regulation on the trade and use of chemicals in the European Union (EU) came onto the books, Europe's chemical industry is still thriving. After a slight dip due to the crisis between 2007 and 2009, both production and exports are back on the up.

Most ironic of all, some of the EU's main rival countries are following suit by introducing draft laws modelled to varying degrees on REACH.

But what about the non-commercial objectives of the reform? Is Europe's chemicals market now kinder to health and the environment? *HesaMag* lets various involved professionals – mainly from the trade unions, NGOs and labour inspectorates – have their say. Knowing that the benefits of REACH to workers' health cannot be gauged for years – not to say decades – they mostly give it a cautious but critical thumbs up.

One thing seems already certain, however: REACH is gradually changing attitudes, including among the most traditional industrial sectors.

Image: © Martine Zunini

REACH: halfway there or half-baked?

How is REACH doing five years after the Regulation went live? The European Commission and ECHA, the European Chemicals Agency, think things are going well. The trade unions are less enthused, and point to a string of failings in the new system that must be addressed in short order for the expected health benefits for workers, consumers and the environment to happen.

Tony Musu
ETUI

"Hurricane" REACH has not after all laid the European chemical industry to waste.
Image: © ImageGlobe

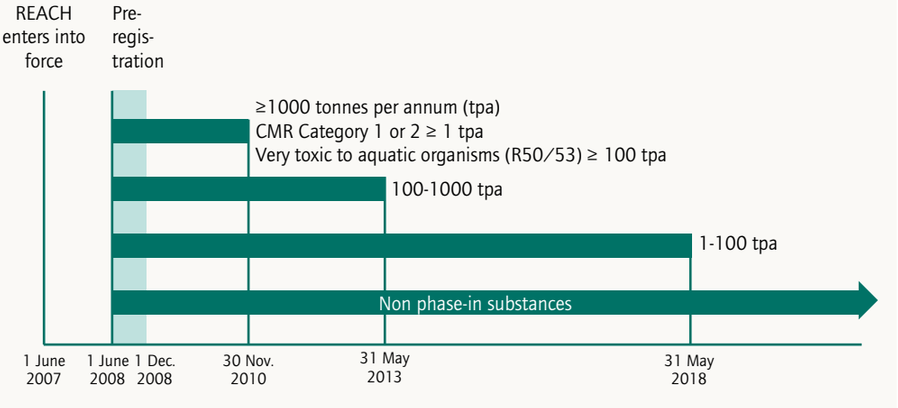
The European Union (EU) chemicals market is worth nearly 540 billion euros a year – around about the public debt of Greece and Portugal combined. No wonder, then, that it took nearly ten years of acrimonious negotiations to get REACH onto the books. The regulation lays down the rules on the marketing and use of chemicals in Europe based on the precautionary principle. It is hugely complex and replaces up to 40 old directives and regulations with a single, more efficient system for the registration, evaluation, authorisation and restriction of chemicals on the EU market[1].

Central to the system is the reversed burden of proof: pre-REACH, the public authorities had to assess the risks of a chemical before they could ban it from sale if needed; now, manufacturers have to provide information before they can place their products on the market. More specifically, if they want a registration number, without which they cannot put their chemicals on the market, manufacturers and importers must provide ECHA, the European agency responsible for supporting the implementation of REACH, with data to show that they are safe to use throughout their life cycle. These data are provided in a registration dossier which is required to get market access (the "no data, no market" rule). The reform's main aims are to ensure a high level of protection for human health and the environment, but also to ensure the proper functioning of the internal market and foster innovation and competitiveness in the European chemical industry.

The new rules came into force in the European Economic Area in June 2007, but it took another year for operations to register the 30 000 chemicals concerned to get started, when the Helsinki-based ECHA had geared itself up for the technical and administrative management of the Regulation.

The timetable for registration of chemicals already on the EU market runs up to May 2018 (see chart), so halfway there seems a reasonable point to take stock of the reform's rollout. The European Commission was also meant to publish a general report on the experience acquired from the operation of REACH by 1 June 2012. It was actually published several months later in February 2013[2].

Figure 1 REACH registration timeline



1. REACH is the acronym for Registration, Evaluation, Authorisation and restriction of Chemicals. Regulation No 1907/2006.
2. General Report on REACH, COM (2013) 49 final, European Commission, Brussels, 5 February 2013. Available at: http://ec.europa.eu/enterprise/sectors/chemicals/documents/reach/review2012

Commission awards itself a pat on the back

The European Commission has concluded that REACH is functioning well and delivering on all the objectives that can be assessed at present. Some adjustments may well be needed to certain provisions of the regulation, but to ensure stability and predictability for industry, no changes are being considered. Nevertheless, the Commission considers that the regulation's impact on small and medium-sized enterprises (SMEs) ought to be reduced, and therefore proposes to cut the amount of registration fees they have to pay and provide practical guidance to help them fulfil their obligations.

While the Commission acknowledges that it is still too early to quantify the benefits to human health and the environment, it does note that the additional data supplied by the registration dossiers has helped to identify and classify more chemicals as hazardous, improve safety data sheets[3] and pass on more appropriate risk management measures throughout the production chain. The inclusion of some substances of very high concern on the candidate list for authorisation has also encouraged switching to safer alternatives. All these indicators show that progress towards meeting the human health and environmental objectives of REACH is materialising.

The European trade union movement accepts that registration has gone well in technical terms, and probably better than might have been feared.

Industrial operators have prepared their registration dossiers on time and ECHA has processed them promptly to allocate registration numbers and enable the European internal market to function properly. By the end of November 2010 — the first deadline for existing substances produced in quantities of more than 1 000 tonnes per year — more than 3 600 substances had been registered with ECHA. By the second deadline of the end of May 2013 for existing substances produced in quantities of 100 to 1 000 tonnes per year, nearly 3 000 further chemicals had been registered. That adds up to 6 600 chemicals already on the European market for which ECHA should now have information on their properties, uses, risks and how to manage them in order to avoid adverse effects to human health and the environment.

The European Trade Union Confederation thinks ECHA is using too much carrot and not enough stick to get registrants to up the quality of their registration dossiers.

3. The person responsible for placing on the market a substance or a preparation classified as hazardous must provide the professional user with a safety data sheet that details the information supplied on the label and supplements it with information on handling, storage, disposal and transport.

4. Evaluation under REACH, Progress report 2012, ECHA. Available at: http://echa.europa.eu/documents/10162/13628/evaluation_report_2012_en.pdf

Data quality is an issue

The unions are more critical of other parts of the reform.

Evaluation

The Agency uses dossier evaluation firstly to examine testing proposals submitted by registrants in case of missing data, and secondly to check whether the dossiers actually contain the information required for registration. The latter, known as a 'compliance check' is done on only 5% of dossiers and can be used as an indicator of the quality of data provided by the industry. Apparently, however, a third of the dossiers examined in 2012 were significantly deficient in quality[4]. This includes, for example, inadequate or incomplete information on substance identity, its intrinsic dangers, uses and/or estimated exposure levels. This therefore makes it impossible to ensure that the risks for the substances concerned are properly identified and controlled in order to protect workers and the public at large.

What this means is that workers who use these chemicals are being provided through manufacturers' safety data sheets with risk management measures and conditions of use that are in practice not fit for purpose. This is why in just such cases ECHA calls for additional information from registrants, who must produce it within a specified period. Unfortunately, the Agency's powers stop there and if additional data are not supplied, only the – chronically understaffed – national policing and enforcement authorities have power to take action against offenders.

The quality of data provided by industry is recognised as a problem by ECHA, which has made it a key strategic objective of its work programme for the years ahead[5]. Arguably, the solutions are not far-reaching enough. The European Trade Union Confederation thinks ECHA is using too much carrot and not enough stick to get registrants to up the quality of their registration dossiers. The ETUC wants two key measures brought in. First, the outright withdrawal of the

registration number (and therefore the right to be on the European market) for a virtually empty or very poor quality dossier. And second, an increase in the number of dossiers compliance-checked by the Helsinki Agency.

Authorisation

The authorisation strand of the Regulation aims to foster innovation by having the most hazardous chemicals on the EU market gradually replaced by ones that are less dangerous to human health and the environment. So, if firms persist in using substances identified as of very high concern (e.g., carcinogens, mutagens or reprotoxins – CMRs), they will have to get authorisation from the European Commission. Such authorisations are granted on a case-by-case basis for a limited time. Since REACH came into force, only 22 substances have been subject to authorisation and 144 identified as candidates for authorisation. The full authorisation procedure can take up to seven years and the first application files were received by ECHA only in August 2013.

The trade union complaint is that with an estimated 1 500 or so substances of very high concern currently on the European market, the system is too sluggish. At this rate it will take over a century to get manufacturers to replace their substances of the highest concern with safer alternatives. That said, they do still fully support the objectives of the authorisation system. In fact, they have drawn up their own list of widely-used hazardous chemicals that need to be eliminated from workplaces at the earliest opportunity[6]. In response to criticisms about the slow-moving system from NGOs and trade unions, and the choice of candidate substances by industry, the Commission and Member States have recently adopted a roadmap for identification of substances of very high concern (SVHC)[7] which aims "to have all relevant currently known Substances of Very High Concern (SVHCs) included in the candidate list by 2020". This unquantified target brings little cheer to the unions because it will not necessarily speed up the slow-moving procedures and gives too little incitement to substitution and switching to safer chemicals.

At this rate it will take over a century to get manufacturers to replace their substances of the highest concern with safer alternatives.

Restriction

The Regulation also enables the Commission to restrict the manufacture, use or placing on the market of certain chemicals in case of unacceptable risks for human health and the environment. The ability to impose restrictions has been part of EU law since 1976 (e.g., the banning of asbestos or certain heavy metals in batteries) and was kept in REACH. Comparing the number of substances (or groups of substances) covered by a restriction pre- and post-2009 – the start of restriction procedures under REACH - it is disheartening to see that the rate at which new prohibitions are adopted in the EU has halved. Under the old system, about two prohibitions were made a year on average compared to about one a year under REACH[8].

One possible reason is the long and complex procedure (two to three years between a proposal being made and adopted – if it is) involving two ECHA scientific committees tasked with preparing an opinion for the Commission. The Member State proposing the Community-level restriction has to convince the committees of its merits, both in terms of the unacceptable risk and the proportionality between the costs of the restriction to businesses and the expected benefits to society. While the public consultations and presence of observers throughout the restriction process are clear improvements over the old system, it is reasonable to wonder whether the same applies to the socio-economic analysis. Equating the costs to business with the benefits to human health and the environment is surely comparing apples and oranges?

5. Multi-Annual Work Programme 2014-2018, Draft for public consultation (MB/06/2013), ECHA, 2013. Available at: http://echa.europa.eu/documents/10162/13608/mb_06_2013_mawp_2014_2018_draft_for_public_consultation_en.pdf

6. Trade Union Priority List for REACH Authorisation - Version 2.0, ETUC-ETUI-Istas, June 2010. Available at: http://www.etui.org/Publications2/Guides/Trade-Union-Priority-List-for-REACH-Authorisation

7. Roadmap on Substances of Very High Concern, Council of the European Union, 6 February 2013. Available at: http://register.consilium.europa.eu/pdf/en/13/st05/st05867.en13.pdf

8. Under the old system, 59 entries were added to the EU list of prohibitions in 33 years compared to four new entries in four years with REACH. Notable among these recent prohibitions was one on the use of an anti-mould substance used to protect shoes or clothing during transport and storage which caused allergic reactions in exposed workers and consumers.

ECHA under fire from NGOs

3 questions to Vito Buonsante, lawyer with NGO ClientEarth's Health and Environment programme

Interview by Denis Grégoire, Brussels, 2 October 2013

In May 2011, ClientEarth filed a complaint against the European Chemicals Agency with the Court of Justice of the European Union. What has ECHA done wrong?

Vito Buonsante — Our complaint aims to get the principle of public access to information generated by implementation of the REACH Regulation applied in practice. We found that the data put out by ECHA did not give the identity of a lot of the producers of chemicals on the SIN list, the list of carcinogens, mutagens, reprotoxins and endocrine disruptors drawn up by the Swedish NGO ChemSec. It was unacceptable for ECHA not to show transparency on a matter so important to European consumers. A year after our complaint was filed, ECHA decided to publish the identity of most of these producers. It's a first victory, but we decided to maintain our complaint because there is still no way of knowing what exact quantities these highly toxic substances are produced in.

You have also complained about the quality of ECHA registration dossiers. ClientEarth thinks the dossier checks are not up to scratch...

VB — ECHA checks registration dossiers using an automated computer system that does not check the data supplied in the Chemical Safety Report. As a result, the agency is giving registration numbers, and therefore access to the European market, to chemicals with a poor or near empty dossiers - so-called "google dossiers" that look as though they've been cobbled together in a couple of minutes from web searches. This is an unacceptable practice which undermines REACH's basic principle of "no data, no market". It is estimated that in practice, only one in twenty dossiers undergoes thorough scrutiny by ECHA. Registrants soon realized that there was little chance of their dossier getting a detailed compliance check, and that even if it did, there is no sanction - the agency just sets them a new deadline to improve it. In July, we published a report analysing the dossiers submitted by the producers of five endocrine disruptors. Most did not even mention some toxicological studies that are readily available in the scientific literature. ECHA is aware of the problem but has told us that it has no plans to review its automated checking system. It has, however, promised us that it would require more detailed information from 2015.

You paint a fairly gloomy picture of the early years of REACH. Any reasons to be cheerful?

VB — Yes, of course. REACH has already made a lot of improvements. Around 700 carcinogens, mutagens and reprotoxins have not been registered. Looking on the bright side, you could assume that users of these chemicals have simply given up on them (see also article p. 20). We have also found that whenever a chemical is put on the list of "substances of very high concern", its production decreases rapidly. Obviously, this list contains only 144 substances at present as opposed to the 1 500 or so it should do. The biggest benefit of REACH so far may be to have caused a real "cultural revolution". Consumers are no longer willing to accept products being put on the market that pose serious threats to their health or the environment. The circle of those who think substitution is the best option has widened compared to those who argue that "chemical risk management" is enough to protect people, although that idea is still very much the thinking among some national governments and trade unions.

Further reading

The ClientEarth reports on REACH implementation are downloadable from http://www.clientearth.org/health-environment/publications

9. See: http://echa.europa.eu/information-on-chemicals

10. Musu T. (2011) What role can the unions play in Europe's industrial policy? REACH shows the way, Policy Brief 5/2011, Brussels, ETUI. Available at: http://www.etui.org/Publications2/Policy-Briefs

11. Ponce A. (2010) The EU approach to regulating nanotechnology, Brussels, ETUI. Available at: http://www.etui.org/fr/Publications2/Working-Papers/The-EU-approach-to-regulating-nanotechnology

Availability of data

To fill the big gap in public information on chemicals on the European market, ECHA has to publish on its website[9] much of the information it collects through the different REACH procedures. Data like the classification and labelling of substances, the levels of exposure to the substance above which humans should not be exposed – Derived No-Effect Levels, DNELs –, and risk management measures recommended by registrants must always be publicly available. The regulation also requires other information like the identity of the manufacturer and production volumes to be made public except where the firm makes a justified request for confidentiality.

ECHA has been extremely concerned to preserve the commercial interests of registrants at the expense of the transparency required by the Regulation. Trade unions and NGOs have fought long and hard to get the Agency to publish this vital information for consumers and workers[10] (see box p. 18). Having the identity of registrants made public allows us to know who is manufacturing or importing the chemicals that we are exposed to, but even more, encourages registrants to provide good quality data in their registration dossiers.

One area where the Regulation falls badly down on improving public information about exposure to potentially hazardous substances around us is nanomaterials. The REACH registration criteria are unfitted to this kind of substance and the "no data, no market" principle is being flouted for many nanomaterials manufactured and marketed in Europe[11].

The upside for workers

The timetable for REACH implementation runs up to 2018, and halfway there it has to be said that the benefits to workers' health are not easy to put figures on. With more than 100 000 deaths a year, chemicals remain the leading cause of workplace deaths in Europe. The best indicator that the reform is working would be to see that number, and the number of chemical-induced occupational diseases, go down. Unfortunately, it is too early to see any such changes. Less than a quarter of the 30 000 substances that should be registered under REACH have been, and it will take time for the new knowledge on chemical hazards and risks to filter down to workplaces. The new safety data sheets containing more information on prevention and risk management are starting to trickle into workplaces. Employers and workers need to learn to use them better, and they are still on a learning curve. Many firms do not even know about the reform, which is why unions are developing workplace information campaigns (see box).

However, there are signs that REACH is starting to influence how firms act, including SMEs. Replacing carcinogens with safer alternatives (a legal requirement since the 1990s in worker protection legislation) has always been a complex process that firms are reluctant to get into. Since the regulation came in, some sectors that use carcinogens on the list of substances subject to authorisation have developed less hazardous substitutes in record time to avoid the high costs of getting an authorisation granted (see report p. 31). Proof that this system designed to encourage businesses to innovate is doing its job.

Then, too, the many university training programmes in REACH appearing across Europe driven by strong demand from firms in all sectors looking for knowledgeable employees evidences the growing number of businesses concerned with the reform across Europe.

Industry claims that the REACH reform was impractical, unrealistic and bad for the European economy are belied by the clear fact that the system is working. The doom forecast to befall the European chemical industry has not happened – it is still thriving.

The Commission's evaluation report bears out that although its relative share in the global chemicals market has declined, the European chemical industry is still the world's biggest exporter with a turnover that

Trade unions reaching out on REACH

Too many European firms, especially small and medium-sized ones (SMEs), are still paying scant regard to their obligations under REACH. If they are not in order in time, they risk being penalised by the national enforcement authorities. To prevent that happening, the ETUC and IndustriAll Europe have run a series of workplace campaigns based on the network comprised by their member organisations in all EU countries, especially shop stewards.

Fact sheets for employers have been written in collaboration with the European Chemicals Agency (ECHA) and the European Agency for Health and Safety at Work (EU-OSHA) and distributed through the union networks. Produced in all official EU languages, they provide a simple list of actions that firms who import or produce chemicals must take to comply with REACH or the steps to be taken by companies that use hazardous substances to ensure they are being used safely.

These information campaigns show that the REACH Regulation cannot succeed without the trade unions which are the only organisations able to reach the maximum number of firms of all sizes in Europe through their many thousand workers' reps.

Further reading

More information on the information campaigns on the ETUC (http://www.etuc.org/r/831) and IndustriAll (http://www.industriall-europe.eu/news / list2.asp? stid = 71) websites)

Equating the costs to business with the benefits to human health and the environment is surely comparing apples and oranges?

has risen steadily in absolute terms since the reform came in. The new rules have led to further harmonisation of the internal market, which has been good for the European chemical industry. Where innovation is concerned, the Commission notes that the reporting obligations between suppliers and users under REACH have given producers a better understanding of their customers' uses and needs, thereby helping to bring innovative substances to market. The annual number of new substance registrations has actually gone up since the Regulation came in.

Interestingly, other non-EU countries have actually taken a cue from REACH to reform their own legislation (see article p. 37). Obviously, not everything is working to best effect at this mid-point. SMEs are still complaining about the burden and cost of the system. The European trade unions have pointed to failings in the Regulation and ECHA's operation which are holding back the expected benefits to human health and the environment.

The massive industry lobbying that overshadowed the entire negotiation phase of the Regulation continues to beleaguer its implementation. ECHA must make efforts to find a better balance between the defence of corporate interests and those of society at large.

Given the difficulties in getting this reform brought into existence and adopted, the Commission's reluctance to reopen the Pandora's Box halfway through is understandable. Even so, it would be well advised to make good some defects, like the failure to cover the risks of nanomaterials, the inadequate provisions for ensuring data quality, and the slow-moving authorisation and restriction procedures.

If the benefits of REACH to workers' health and the environment are to materialise, therefore, the labour movement must not only continue to support the reform, but also prepare for its future developments. ●

Illegal CMRs on the EU market?

All substances that are proved or assumed to be carcinogenic, mutagenic or toxic for reproduction (CMRs) in humans and are produced in quantities greater than one tonne per year in Europe are supposed to have been registered with ECHA by 30 November 2010. However, comparing the official list of the 1100 or so CMRs with a harmonised classification at European level against the list of 406 CMRs registered in REACH, the question is: what happened to the missing 700 CMRs?

In a May 2012 report on CMRs, ECHA says that the main reason why so many CMRs are unregistered is because they have been replaced with safer alternatives and so are no longer being marketed on the Community market. It claims this as evidence that REACH is working very well and encouraging companies to use substances that are less dangerous for human health and the environment.

It would be nice to take as rosy a view as the ECHA, but what the Agency's report sadly does not mention is that some CMRs may still be present on the market without having been registered, and so be being sold illegally. Some unscrupulous companies may be wagering that the chronic understaffing of national enforcement authorities means the odds are against them being caught and punished. The European Trade Union Institute has commissioned a survey on this which is due to be published soon.

Revision of the Carcinogens Directive: anything happening?

The key law that protects workers against carcinogens in the workplace has been under revision for close on a decade. The process has long been stymied by disagreements over extending occupational exposure limits and the scope of the law to substances harmful to reproductive health. Latterly, there has been some movement on exposure limits.

Tony Musu
ETUI

When will workers see the health benefits of REACH? Not yet awhile!
Image: © ImageGlobe

An estimated 1 300 000 people will die of cancer in the European Union in 2013. A significant percentage of these deaths will be the direct result of workers being exposed to carcinogens in the workplace. The available data suggest that at least 8% of cancer deaths are work-related[1]. For some cancers, like lung and bladder cancer, the figure is even well above 10%. Cancer is now unquestionably the leading cause of working conditions-induced mortality in Europe.

The 1990 Carcinogens Directive spells out rules for protecting workers against the risks of exposure to "known or presumed" carcinogens or mutagens in the workplace[2]. It has been implemented into national law in all Member States, and lays down an order of priority for employers' obligations to minimise and control the use of workplace carcinogens (see box).

The Directive also provides for occupational exposure limit values (OELVs) to be set. Unlike those adopted under the Chemicals Directive (98/24/EC), which are indicative and so leave individual EU countries free to set the value to be introduced into national law, the limits adopted under the Carcinogens Directive are binding. This means that EU countries have no choice but to require firms to apply at least the minimum value set at EU level.

Since the Carcinogens Directive was adopted 23 years ago, binding OELVs have only been set for three substances (benzene, vinyl chloride monomer and hardwood dusts), while indicative OELVs have been adopted for 122 substances under the Chemicals Directive. In practice, each EU Member State has both (indicative or binding) OELVs set at EU level and carried over into its national laws, and national OELVs for many other substances (including carcinogens) brought in under its own specific rules.

Business vs. Workers' interests

The European Commission first proposed revising the Carcinogens Directive to bring it into line with advances in scientific knowledge, technical progress and the world of work in the early 2000s when it wrote the aim into the EU Strategy on Health and Safety at Work 2002-2006. Ten years on, it is still in the Commission's pending tray. The shilly-shallying bespeaks the interests involved. The two big stumbling blocks are extending the Directive's scope to reprotoxins, and setting occupational exposure limit values (OELVs) for a bigger number of carcinogens.

The workers' voice in the EU, the European Trade Union Confederation (ETUC), wants the Directive extended to reprotoxins, and for new OELVs to be set. The EU employers' lobby, Business Europe, is dead set against. Both agendas were extensively argued during the two phases of social partner consultations organised by the Commission as required by the EU treaties where laws affecting worker protection are to be brought in or changed.

The unions point to the type, severity and irreversibility of the health effects for workers of both sexes (especially pregnant women) from exposure to reprotoxins and want the stricter prevention rules for carcinogens and mutagens already in the Directive to be extended to them. They also want a more rational link to the REACH Regulation which groups together carcinogens, mutagens and reprotoxins (category 1A or 1B) under the category of "substances of very high concern". The unions also want to minimise the exposure of workers to the hundreds of carcinogens and mutagens still being used in European workplaces by having binding OELVs adopted for additional substances, including carcinogens like crystalline silica generated during industrial processes.

The employers' organisations, by contrast, see no reason to extend the Directive's scope to reprotoxins since they are already covered by the Chemicals Directive, nor to adopt additional OELVs which they see as an added administrative burden on businesses.

Employers' main obligations under the Carcinogens Directive

The first duty is to eliminate or replace the carcinogen (or mutagen) by a substance that is not or is less dangerous. Where a safer alternative exists, the employer must replace regardless of the cost to the company. If replacement is "technically impossible", the employer must ensure that the carcinogen is manufactured or used in a closed system. If he cannot do that, he must ensure that the level of exposure of workers is "reduced to as low a level as is technically possible".

1. Estimate derived from the work of Finnish researchers.See: Nurminnen M., Karjalainen A. (2001) Epidemiologic estimate of the proportion of fatalities related to occupational factors in Finland, Scandinavian Journal of Work, Environment & Health, 27 (3), 161-213.
2. Category 1A or 1B (Directive 2004/37/EC, codified version).
3. One on 5 December 2012, a second on 30 May 2013, and a third set to be formally adopted in November 2013. See www.etui.org > Topics> Health and Safety> Occupational Cancer> News.
4. Germany, Austria, Finland, France, the Netherlands and the Czech Republic.
5. Final Report for the analysis at EU-level of health, socioeconomic and environmental impacts in connection with possible amendments to Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens and mutagens at work to extend the scope to include category 1A and 1B reprotoxic substances, February 2013, Risk & Policy Analysts Ltd. and Milieu Ltd. Available on www.labourline.org.

Without a big move forward on revising the Carcinogens Directive, László Andor will leave a meagre health and safety at work legacy.

Table 1 Carcinogens which the Advisory Committee on Safety and Health proposes adding to Annex III of the Carcinogens and Mutagens Directive

Substance name	Proposed binding OELV (8hr Time-Weighted Average)	Included in the REACH candidate list
Respirable crystalline silica	100 µg/m³	no
Refractory ceramic fibres	0,1-0,3 fibre/ml	yes
Chromium VI	25 µg/m³	no
Trichloroethylene	10 ppm	yes
Hydrazine	13 µg/m³	yes
Acrylamide	70-100 µg/m³	yes
Epichlorhydrin	1,9 mg/m³	no
1,2-dibromoethane	0,8 mg/m³	no
Methylenedianiline	80 µg/m³	yes
Hardwood dust*	3 mg/m³	no
Diesel engine exhaust emissions	100 µg/m³	no
Benzo(a)pyrene	2 µg/m³	no
Vinyl chloride monomer*	1 ppm	no
o-toluidine	0.1 ppm	yes
1,3-butadiene	1 ppm	no
Bromoethylene	1 ppm	no
4,4-mythylene bis 2-chloroaniline	definition available in near future	yes
Ethylene oxide	1 ppm	no
1,2-epoxypropane (propylene oxide)	1 ppm	yes
1,2-dichloroethane	2 ppm	yes

*updating an existing binding OELV

20 million workers safer

After several years in the doldrums, however, a major milestone was recently passed in the European Advisory Committee on Safety and Health at Work (ACSH), a tripartite committee of government, employer and worker representatives tasked with giving an opinion to the European Commission on any proposed changes in workplace health and safety law.

The ACSH has previously adopted two opinions[3] in favour of revising the Carcinogens Directive to add new OELVs.

If the Commission goes with the ACSH opinion, 20 new substances, including crystalline silica, refractory ceramic fibres, chromium VI and trichloroethylene, will soon be added to the list of occupational carcinogens for which a binding OELV will apply in all EU countries.

The tripartite opinions adopted at European level in December 2012 and May 2013 should therefore help jump-start the revision of the Directive, to keep an estimated 20 million European workers safer from the risks of exposure to workplace carcinogens.

Employers and workers are still split, however over bringing reprotoxins within the scope of the Directive (see ACSH opinion adopted on 30 May 2013). The Commission's decision on this aspect of the revision will probably be informed by two important factors. One is that six European countries[4] have already brought reprotoxins within the Directive when implementing it into their national laws. The other is the findings of the socio-economic impact study it commissioned showing that an integrated approach to prevention which also covers reprotoxins would raise the level of protection of exposed workers[5].

The employers' risky gamble

The looming May 2014 European elections mean that Employment and Social Affairs Commissioner László Andor's term of office is rapidly running out. Without a big move forward on revising the Carcinogens Directive,

László Andor will leave a meagre health and safety at work legacy, not least as for probably being the first EU Commissioner with the occupational health portfolio not to put up an EU strategy on it for close to 35 years[6].

Then, too, there is the influence of REACH, and the requirement for producers to get an authorisation from the European Commission for the use of Annex XIV carcinogens. The industry is hoping to use Article 58 (2) of REACH to get around this requirement. What this provides is that specific uses can be exempted from the authorisation requirement if the risks are properly controlled, on the basis of the existing specific Community legislation imposing minimum requirements relating to the protection of human health or the environment. The recent progress in the ACSH with regard to the adoption of binding limits for a series of carcinogens may in part be due to the benefits that manufacturers hope to draw from their obligations under the REACH Regulation. But it is a risky gamble because there is no saying that the Commission's legal services will put the same interpretation on Article 58 (2) when the first case comes up. The producers concerned could therefore find themselves having to comply with a binding OELV for a workplace carcinogen and having to get an authorisation for its use. Which would be a win-win for human health and the environment.

The Commission now needs to bring forward a proposal for a Directive without delay so the European Parliament and Council can do their job, because without a formal proposal from the Commission, the process will be stalled. Various stages still have to be gone through, not least the impact assessment, although the ability to prevent thousands of unnecessary deaths surely ought to be sufficient justification for revising the Directive. But even after that, it will have to be implemented into Member States' law, so the new binding exposure limits are unlikely come into force before 2015.

The Directive could then be revised again later on to extend its scope to reprotoxins and include a reform of the current process for setting binding OELVs at Community level. ●

6. Vogel L. (2013) Community health and safety strategy: going nowhere, HesaMag, 7, 6-11. Available on www.etui.org > Publications > Periodicals > HesaMag.

Our hormonal system under chemical attack

We are surrounded in and out of the workplace by more than 1 500 chemicals that can interfere with our hormonal system. They are called endocrine disruptors. The damage they can do to human health is well documented and policies to eliminate these chemicals are wanted.

Berta Chulvi
Journalist
Dolores Romano
Chemical hazards expert

Pesticides made Mari Carmen ill and unfit for work.
Image: © Javier Melian

Two workers even needed an oxygen tank at home to assist breathing, but that seemed to ring no alarm-bells.

The ability of some man-made chemicals to alter human hormonal systems has been known since the 1940s when diethylstilbestrol or DES first came into use for preventing spontaneous abortions[1]. The term "endocrine disruptor" – strictly "Endocrine- Disrupting Chemical (EDC)" – is much more recent, having been coined at a 1991 scientific conference in the United States to refer to chemical pollutants that interfere with the hormonal system and essentially alter people's reproductive health. A varied group of experts[2] meeting in Wingspread (Wisconsin) to consider the causes of the adverse effects found in epidemiological studies of humans and wildlife in the Northern Hemisphere zeroed in on damage to the reproductive and immune systems and cancers of hormone-dependent organs. They developed the hypothesis that the disruptions were due to impaired embryo and foetus development after exposure to chemical pollutants, which they dubbed endocrine disruptors.

The term "endocrine disruptor" therefore encompasses a wide variety of exogenous chemical compounds capable of modifying the functioning or elimination of natural hormones in the body. Their health impacts, modes of action and levels of exposure of the population and the environment have been the focus of European Union research programmes over the past sixteen years.

The effects on human health of exposure to endocrine disruptors include:

— **risks to the male reproductive system**: cryptorchidism (undescended testicle), hypospadia (malformation of the penis), and diminished sperm quality;
— **risks to the female reproductive system**: early puberty, reduced fertility, miscarriages, polycystic ovary syndrome, endometriosis and uterine fibroids, premature labour, low newborn birth weight and birth defects, among others;
— **cancers of hormone-dependent organs**: breast, prostate, testicular and thyroid cancer;
— **neurological risks**: attention deficit disorder, lowered iq;
— **metabolism**: metabolic disorders, diabetes and obesity;
— **neuro-immune system disorders**: chronic fatigue syndrome, fibromyalgia, and multiple sclerosis.

It is clear from observing these effects that endocrine disruptors are linked to the major societal diseases like cancer, reproductive problems, diabetes, obesity, neurological diseases, and so on, where the numbers affected have reached epidemic proportions. Furthermore, research findings show that endocrine disruptors have particular characteristics which call for new policies to protect human health and the environment (see Box).

The scale of exposure

More than 1 500 substances have been identified that may affect the hormonal system. They are found in everyday products like pesticides and biocides, products used in industry and environmental pollutants. Endocrine disruptors include conventional pollutants like Persistent Organic Pollutants (POPs) (PCBs, dioxins, hexachlorobenzene, organochlorine pesticides, perfluorooctane sulfonate, polybrominated diphenyl ethers, etc.), solvents (styrene, perchloroethylene, trichlorobenzene), metals (lead, cadmium, arsenic, nickel, mercury), pesticides (organochlorines, organophosphates, pyrethrins, pyrethroids, etc.), plastics and plastic compounds (phthalates, bisphenol A), ingredients in cosmetics and hygiene products (parabens, triclosan), UV filters, detergent ingredients (phenols), environmental pollutants (tobacco smoke, diesel exhaust), and the list goes on.

Environmental pollution exposes the entire population to EDCs. Occupational exposure to chemical pollutants is also widespread and easily detectable if a rigorous chemical risk assessment is done. Ridding workplaces of endocrine disruptors also has significant environmental benefits, making action on occupational health a priority. A recent project developed by ISTAS, the Institute of Work, Environment and Health linked to the Spanish trade union CC.OO, has documented cases of occupational exposure to endocrine disruptors and their health impacts. Risk elimination through substitution schemes have also been successfully implemented.

Among wind farm employees

Guascor, a subcontractor for one of the biggest world wind turbine manufacturers, the Spanish group Gamesa, hired 45 mostly female employees in the Palencia region (Castile and Leon) to work six days a week making fast-paced repairs to turbine blades. It was well-paid work (2 000 euros per month) but put their health at risk. Their job was to repair cracks in turbine blades by injecting special sealing resin, sanding them down and finally painting them. To do that, they used bisphenol A, epichlorohydrin, bisphenol diglycidyl ether, a range of resin hardeners, additives and various solvents.

At least seven of the workers soon noticed that their monthly periods had stopped and began to suffer from severe headaches, nosebleeds, nausea, irritation of the throat and nose. Two even needed an oxygen tank at home to assist breathing, but that seemed to ring no alarm-bells. Neither the company nor its prevention service noticed what was happening until the CC.OO became aware of the situation and took action.

Did the company know the dangers its employees were running? "They must definitely have known something because curiously, they didn't want to hire breastfeeding workers and insisted that they all work six-day weeks to get the job done as quickly as possible", said Roberto Garcia, the CC.OO official handling the matter. Some employees were cautioned by doctors not to get pregnant for at least two years, while others were warned of the possibility of having children with birth defects.

Sick of tending plants

Mari Carmen worked as a hotel gardener in Fuerteventura (Canary Islands) in charge of tending balcony plants until health problems forced her to stop work. For three years, she worked virtually exclusively every day from 7 am to 3 pm applying neurotoxin- and endocrine disrupter-containing pesticides completely unprotected. After three years working for the firm, Mari Carmen began to suffer menstrual cycle disorders (constant bleeding),

body-wide pain, persistent fatigue and steadily worsening chronic skin conditions (psoriasis). She consulted a gynaecologist and several GPs none of whom ever asked what job she did or if she was in regular contact with chemicals.

The hotel owners never told her what chemicals were in the products she used every day, nor provided her with a protective mask or personal protective equipment to stop her breathing in pesticide vapours. Mari Carmen was finding it increasingly hard to apply the products especially at the hottest times of the day and put two demands to the employer: to be supplied with appropriate masks, and to have her working hours reorganised so as to apply pesticides from 9 to 10.30 am and then not again until the following day. "I decided to tidy up the planters one day, and apply the pesticides the next. That way I managed to avoid treating the plants in the full glare of the sun, which I just couldn't take". "I noticed that it got worse in summer, and I now think that might be due to the heat causing the chemicals to give off more vapours", she explains.

At work, Mari Carmen was accused of being "a bit delicate": "When I asked for masks, they said I wasn't up to the job. My colleagues were all men, but they weren't applying respiratory insecticides like me, they were doing other things. They left the room balcony planters to me because they didn't want men going into the rooms. The assumption was that because I'm a woman, I'd be more careful and to be honest, I did love my job and I always made sure that there was no trace of me having been in the rooms", says Mari Carmen.

Oranges were treated with reprotoxic wax.
Image: © Juli Esteve

The chambermaids would sometimes complain about the pesticide smells lingering in the rooms that Mari Carmen was dealing with. What some found annoying she saw as a sign that she was running a risk. A sign that she could not interpret: "The first time anyone asked me about the chemicals I was handling was only a few months ago. I went on a hunger strike for 19 days outside the social security office and some victim support groups heard about my case. It was through them I met Dr. Sergio Sánchez Suárez of the Canarias biomedical medical centre". A quick check on the ISTAS Risctox chemical hazards database would have turned up the fact that many of the products Mari Carmen was using unprotected in her job are neurotoxins and endocrine disruptors.

After many set-tos with her employer, and not long before she fell well and truly ill and applied for sick leave, Mari Carmen finally got appropriate masks: "The firm was trying to get a quality label, and that's when they gave us appropriate masks and protective equipment and put up fact sheets on the products where all employees could see them". Too late for her. "I was no weakling, but by the time we got the masks, I couldn't even get up in the morning, and I was going to work zapped out on painkillers to ease the pain I felt everywhere in my body. But the painkillers turned me into a zombie, and I couldn't get to the end of the street without falling asleep". By dint of consulting doctors, trekking from one hospital to the next and after lengthy sick leave, Mari Carmen was fitted

1. Its use would cause the development of vaginal cancer among the daughters of some women to whom it had been administered during pregnancy. For more information: Mengeot M. (2008) Production and reproduction. Stealing the health of future generations, ETUI, p. 22. Downloadable: www.etui.org > Publications > Guides

2. Endocrinologists, reproductive biology and development specialists, toxicologists, marine biologists, specialists in ecology and psychiatrists.

Endocrine disruptors: unlike other chemicals

They act at very low doses. Very low dose exposure to endocrine disruptors can harm human health. The general public are exposed to them at these levels through air pollution in homes, food and consumer goods.

The age at which exposure occurs may be even more important than the level of exposure. Foetuses and young babies are especially sensitive to exposure to endocrine disruptors. Some developmental stages are particularly vulnerable to hormone disruption, resulting in life-changing health problems.

The dose-response relationship is not linear – so health damage can result at very low exposure or high exposure but not necessarily at intermediate exposure levels.

The cocktail effect: endocrine disruptors may act jointly and cumulatively or synergistically and exposure to low doses of a mix of EDCs can cause adverse effects at exposure levels considered safe for the individual ingredients in the mix. This is why EDCs have to be looked at in combination rather than each chemical in isolation.

Multi-generational effects: endocrine disruptors can affect several generations by altering the mechanisms of gene expression.

Latency: the damage done by endocrine disruptors may not show up for years after exposure; also, the consequences of *in utero* exposure mainly show up in adulthood, so any action taken today will also improve future public health.

Ubiquitous exposure: follow-up studies on endocrine disruptors in humans show contamination of the population at all ages. The presence of EDCs was detected in the umbilical cord blood, hair and urine of babies and children and in the blood and fatty tissue of adults. Analyses of food, consumer products, air, water, house dust, etc., show multiple exposure to EDCs – hence the need to eliminate the sources of exposure to them.

3. "Consumers want glossy citrus fruit", commented the journalist in a report on the many multiple chemical treatments that Spanish lemons and oranges undergo. Find it on http://www.rts.ch/emissions/abe/1374466-pesticides-oranges-ameres.html

"The firm was trying to get a quality label, and that's when they gave us appropriate masks and protective equipment."

with an IUD with daily medication to prevent bleeding, had to be operated on for breast cysts and was diagnosed with fibromyalgia, nerve root damage, osteoporosis, osteoarthritis and multiple degenerative herniated cervical and lumbar discs that meant she had to walk with a stick.

Making this ordeal worse, she had to put in multiple claims to get her rights recognized. The National Institute of Social Security (INSS) did not consider that her case qualified for recognition as an occupational disease. At the end of her tether, Mari Carmen went on a 19-day hunger strike outside the social security office in Fuerteventura. Finally, the High Court of Justice of the Canary Islands recognized her as being totally work disabled in December 2012. "I was declared unfit for the work I was doing but fit for other employment, so I get paid a monthly pension of 600 euros". She wonders what job she might be fit for, as she can't sit for more than an hour in front of a computer or talk for more than a quarter of an hour on the phone: "Sometimes I can smell a scent seven metres away and have to cross over the street; how can I find work in that state?", asks this woman who lives on her own and whose rent takes up half her pension.

The risk can be eliminated

The CC.OO (Workers' Committees) occupational health unit set up the Reprotox project coordinated by ISTAS some years back. They identified chemicals hazardous to reproduction, pregnancy and breastfeeding present in workplaces where endocrine disruptors were being used and put forward schemes for substitution showing it to be the best prevention policy.

One of these schemes was run in an orange storage facility in Valencia. The workers had no idea that the wax they were using to make the fruit shine[3] contained chemicals classified as endocrine disruptors and reprotoxins. Where they were found to be present, the CC.OO proposed non-EDC alternatives like organic fungicides, physical treatments, etc. After a dialogue and consultation process, the company finally agreed to replace one of the products – octamethylcyclotetrasiloxane, a wax that contains endocrine disruptors and is toxic for reproduction – by a different wax with lesser health risks. This substitution helped protect the health of employees - specifically pregnant women – and was easily done - all it took was the will: the alternative product was even supplied by the producer of the replaced product.

Similar action was taken in an old people's home in Cantabria (western Basque Region). The product to be replaced was a room disinfectant used in residents' rooms after a death. The chemical was dispersed by an automatic spray that released doses into the air at regular intervals programmed in the dispenser unit. When using it, the employees wore the same ordinary latex gloves as cleaning staff, not gloves appropriate to the job or respiratory protection equipment.

One employee complained of health problems including sore throats and breathing difficulties when using the product. The CC.OO union rep for the company and the Cantabria Department of Occupational Health took the matter up with the employer and started looking for alternatives. After looking at various options, the product was finally replaced with a didecyldimethylammonium chloride and alcohol ethoxylate-based disinfectant called Germosan-Ter which does not present a serious risk to health.

In Aragon, workers managed to get epoxy resins replaced in paint for vehicles. When a vehicle – a bus in this instance – is being assembled, the body may suffer slight knocks or scratches and has to be touched up afterwards. For this, the assembled body was painted outside the cabin in the company's repair shop by a worker with a compressed air paint gun, exposing him to dangerous toxic chemicals. To avoid this risk, it was proposed to change the manufacturing process to replace the resin-based primer (the undercoat for the coats of paint) by a water-based primer similar to that used in car garages. The replacement was cost-neutral for the company and improved manufacturing efficiency while protecting the employees' workplace health. ●

Down the generations

The effects of exposure to endocrine disruptors are handed down in the family. Dr Nicolás Olea and Dr Marieta Fernández of the University Hospital of Granada have for several years been documenting the link between maternal exposure to EDCs and birth defects: "There is a significant link between the chemical compounds we have identified in maternal placentas and the probability of childhood cryptorchidism (undescended testicles at birth). The take-away message is that it is not one single chemical that is responsible for the condition, but the combined action of all the chemicals".

The researchers are currently collecting evidence on the link between EDCs and other life-changing conditions beyond reproductive health: metabolic disorders like obesity or diabetes and cognitive development problems in children like attention deficit disorder or hyperactivity. "The question now is whether by altering the endocrine system, these disruptors are also causing the massive epidemic of diabetes and obesity that we are seeing", queries Dr. Nicolás Olea. Dr Marieta Fernández is seeing a rise in brain development problems related to learning difficulties and hyperactivity in children whose mothers had been exposed to these toxins.

More information

The Reprotox project: http://istas.net/web/abretexto.asp?idtexto=3450
Other examples of substitution: www.subsport.eu
List of endocrine disruptors: http://www.istas.net/risctox/en/

Labour inspectors have a REACH mountain to climb: "You can't pretend to know it all"

Giulio Andrea Tozzi is a qualified chemist who has worked since 1981 in Genoa's local health agency HSW Department, which carries out workplace inspections. He regularly gives trade unionists training in the prevention of occupational hazards and REACH. For three years in the 1990s he was a research officer with the Trade Union Technical Bureau, since subsumed into the ETUI. All this puts him in a particularly good position to assess how the EU Regulation has impacted on workplaces.

Interview by
Denis Grégoire
ETUI (July 2013, Brussels)

How can H&S inspectors enforce REACH when budgets are cut?
Image: © ImageGlobe

1. In Italy, public health and health and safety at work policies are mainly a regional government jurisdiction whose objectives are delivered by local health agencies tasked with a very wide spread of duties such as hospital management, animal health, food production safety and workplace health and safety inspection.
2. REACH Information Portal for Enforcement (RIPE).

The REACH Regulation has been in force for over six years now. How have the labour inspectors supported its implementation in Italy?

Giulio Andrea Tozzi — The obligations placed on the Italian State by having to implement the Regulation prompted the Health, Economic Development and Environment Ministries to make approaches to the regional authorities which, despite having no say in negotiating EU law, have to implement it. REACH activities in Italy were initiated by an agreement entered into in 2009 between the state, mainly through the Health Ministry, and the regional authorities who organise HSW through local health agencies (USLs)[1]. As far as health and safety inspection goes, the USLs have been tasked with enforcing guidelines set at EU level and adapted to national circumstances. Pre-REACH, the USLs already had enforcement powers over the classification, labelling and packaging of chemicals, and have now also acquired enforcement responsibility for REACH and the EU's CLP Regulation on the classification, labelling and packaging of chemicals.

What objectives were set at EU level exactly?

G.A.T. — The first objective set by ECHA (the European agency that oversees REACH implementation – ed.) for the competent national authorities was to oversee the registration and pre-registration procedures. For us, that mainly meant checking whether manufacturers had properly fulfilled their registration obligations and checking the quality of the safety data sheets they had drawn up.

The second was to ascertain whether "downstream users", i.e., the firms that buy chemicals for use "as is" or to make other chemical products to sell, had been given the right information by manufacturers and whether they were actually fulfilling their obligations to protect their workers' health and safety.

"It can be much more appealing to hire a REACH expert in the hope of finding a ready market for his output than to bother cleaning up a workshop."

The third is ongoing and focused on imports of chemicals from non-EU countries. We are working closely with customs to deliver on this one.

In practical terms, how do labour inspectors carry out their inspections in companies?

G.A.T. — Policing compliance with the law on chemicals is a hugely complex task. It is a fact that understanding the law, keeping up with often rapid changes in it, and grasping the technical reality that lies behind the formal aspects of trade in chemicals can be difficult. Mutual assistance between colleagues in different regions helps; we get strong support from the Ministry of Health; and there is an information portal for REACH enforcement[2] so we can connect to ECHA and Member States' authorities and inspectors. But new and unexpected things do crop up. You can't pretend to know it all.

What are the main chemical hazards issues you discover in inspections?

G.A.T. — The big number of deficient safety data sheets, beyond any doubt. That isn't a problem specific to Italy, it's one for all European countries. One big hope for the REACH regulation is that it will help improve SDS, but it will take time.

As to inspection, there's a big difference between REACH and chemical hazards inspections, although the outcomes of one will directly or indirectly influence the other. REACH inspections have a commercial aspect in addition to the social and environmental ones, and that's obviously what business owners are focused on: they've understood that it was in their interest to get on board with REACH to stay in the market. Unfortunately, some just tick the paper compliance boxes. It may be somewhat harsh, but it's fair to say that some business owners are more concerned to stay in the market than to protect workers. It can be much more appealing to hire a REACH expert in the hope of finding a ready market for his output than to bother cleaning up a dust-filled workshop or informing workers about the risks.

But doing business and risk prevention are aims that can hang together. The information feedback from professional users to downstream users and on to manufacturers can only help result in improved products that are safer for their users and meet market requirements. REACH is a means of achieving that because it provides for the exchange of information all along the supply chain.

How does a workplace inspection run in practice?

G.A.T. — We follow a nationally defined method: we start by choosing a sample of firms based on national and EU criteria that take into account the type of inspection, industry, etc. We send out a general questionnaire to the sample, then select individual firms on the basis of two main criteria: risk and company size. If the choice is between a small firm with few risks and a big one with high risks, we will obviously pick the latter. We also take action if specific alerts occur.

We may then contact the selected company to set an inspection date so they can prepare the paperwork they need to show us. Most of the inspection is a paper audit: we go through the documents that were submitted to ECHA and the firm's product information documents with its REACH compliance officer. The outcomes of all this are collected by the regions, reported to the Health Ministry and sent by it to the ECHA Forum for Exchange of Information on Enforcement.

We also carry out random spot checks in collaboration with the laboratories of the Italian network of regional environment agencies (ARPA) on the "restrictions" aspect of REACH. We might, for example, look at compliance with the provisions on hexavalent chromium in cement. Cement when mixed with water cannot contain more than 2 ppm hexavalent chromium. Above that, it can cause skin diseases, so manufacturing, labelling and packaging all have to be properly designed and controlled. We use a harmonised methodology established by CEN, the European Committee for Standardization, to measure the chromium content in cement samples. ●

Murano glass: Italy's pride plays the substitute card

Murano glass is part of Italy's world-famed cultural heritage. The dexterity of generations of families of master glassmakers have kept one of the most exquisite forms of artistic craftsmanship alive on this island of the Venetian lagoon. Some producers, however, are ringing the changes on this know-how by replacing arsenic with alternatives that are safer for their artisans' health. And that probably would never have happened without REACH.

Diego Alhaique
Scientific Officer, IRES-CGIL Health and Safety at Work Observatory

SMEs are not quite there with substitution yet.
Image: © Matteo Di Giovanni (p. 32-35)

"Arsenic has been used for centuries to endow glass with particularly fine clarity and as a refining and decolouring agent", says Sandro Hreglich, a chemist at the Stazione Sperimentale del Vetro (SSV), a Venice Chamber of Commerce agency whose job is to promote technical progress in the Italian glass industry.

The Ministry of Health tasked SSV to come up with replacements for the arsenic compounds used to make the celebrated Murano art glass. Traditionally, arsenic trioxide (As_2O_3) is used in the Venetian island's workshops, the problem being that: it is a recognized carcinogen by inhalation and ingestion, and toxic for any kind of exposure. It is these characteristics that have led the European Chemicals Agency (ECHA) to identify it as a "substance of very high concern" (see p. 17). Under REACH – the EU's chemicals regulation – arsenic trioxide will be banned from May 2015 for all uses except those specifically authorised by the European Commission.

It's a hard blow for a key sector of the local economy and major tourist attraction already suffering from Asian knock-offs. For in order to carry on using this carcinogen, Murano's glassmakers will have to engage a lengthy, complex and costly procedure for an authorisation which they will get only if they can show that there are no safer alternatives and that the socio-economic benefits of using it outweigh the risks.

To avoid this obstacle course, government-funded research was undertaken to replace arsenic trioxide by other raw materials less toxic to humans and the environment, leading to the identification in May 2012 of two alternatives: cerium dioxide and ground granulated blast furnace slag (GGBS)[1].

The research included a risk analysis for workers' health, which showed that, being non-carcinogenic, cerium oxide posed less of a health risk, while GGBS was found to be safe. Combining these two replacements is therefore a valid and safer alternative to arsenic compounds[2].

"This substitution project is unique in Europe", says Pietro Pistolese, the main representative of Italy's REACH authority, proudly. "The idea came to me at a meeting

"There are just 500 workers left working; the rest have been laid off."

of the ECHA Member State Committee, when the Irish government representative asked me how Murano would go on if arsenic was banned as it likely would be", he says from his Health Ministry office in Rome.

Back in Italy, Pietro Pistolese hooked up with the other competent ministries to rustle up the 40 000 euros needed to fund research and testing of possible substitutes for arsenic compounds. This shows that the EU rules are paying dividends and encouraging governments and businesses to run schemes aimed at replacing hazardous substances with safer alternatives.

No single recipe

Replacements were first tested out in laboratories and then in furnaces, and the results obtained with different mixtures were checked. Out of this, three possible substitutes were identified: sodium sulphate, GGBS and cerium oxide – the latter having only a marginal use as a refiner and especially as an oxidant.

"These substances work very well throughout the thermal cycle of continuous industrial melting at temperatures around 1 500°C", explains Sandro Hreglich. "However, in art glass production, the thermal cycle is different, with top temperatures between 1 300°C and 1 400°C. What this means is that in the craft cycle, substitutes work somewhat less efficiently, which requires a longer melt cycle and consumes more energy", concedes the chemist.

"The alternatives identified were then presented to firms. We held a series of information and training meetings while the project was running. Attendance was reasonable even though completely voluntary", adds his colleague Nicola Favaro.

So how does the score sheet look, just over a year since alternatives were identified? "Some firms are already using them, others are gearing up to, but will only give up arsenic if it is taken off the market", says Favaro bluntly.

"At any rate, I know many glassmakers are now using the substitutes, and others have tried them out with interesting results. But we have no data on the practical application of the replacement options that we tested out. And it would be really hard to carry out a survey into it", notes Sandro Hreglich. "The aim of the project was to do away with arsenic in as many production systems as possible. If arsenic is banned tomorrow Murano will not shut down because replacements are being used in a huge variety of formulations. The new technology is there and usable in practice", he adds.

"Murano is a highly complex world of widely-differing small-scale producers: the thing is, though, Murano glassmakers will often spend their Saturdays and Sundays trying to come up with new colours. For them, there is no single recipe...", acknowledges the SSV chemist.

"We have been working for some time on completely replacing arsenic", explains Alessandro Toso, the new technical director of Formia, a Murano business whose

1. Falcone R., Hreglich S., Profilo B. (2011) Sostituzione dell'arsenico nelle miscele vetrificabili per la produzione di vetro cristallo, Rivista della Stazione Sperimentale del Vetro, 6 (41). http://www.spevetro.it/ArchivioRSSV/RSSV%206%202011.pdf
Falcone R., Hreglich S., Profilo B. (2012) Sostituzione dell'arsenico nelle miscele vetrificabili per la produzione di vetri colorati, Rivista della Stazione Sperimentale del vetro, 3 (42). http://www.spevetro.it/ArchivioRSSV/RSSV%203%202012.pdf

2. Faggian V. *et al.* (2012) Valutazione comparativa del rischio occupazionale legato all'uso di triossido di arsenico e dei suoi sostituti nella produzione del vetro artistico muranese, Rivista della Stazione Sperimentale del Vetro, 4 (42). http://www.spevetro.it/ArchivioRSSV/RSSV%204%202012.pdf

3. The Cassa Integrazione Guadagni is an Italian statutory body; workers on short time or suspension for lack of work who are registered with it can claim a financial benefit paid by the INPS (National Social Security Institute).
4. In Italy, the joint shop stewards' committee (RSU) is a collective body that represents all workers regardless of union membership who are employed in the same public or private working environment.

50 employees and 26 furnaces generate 6 million euros in annual sales. "I was involved in testing replacements with the SSV from the start of the project, when I was working for the family firm, Cesare Toso, in 2009. I've been with Formia only for about a month, and the use of arsenic has gone down 70% in that time", says Toso with understandable pride.

"The main hurdle was changing mindsets, something I had already remarked on at meetings organized by the SSV. I suspect it is because change means laying out upfront costs, and that's especially hard today when all the resources are needed for production but it is necessary and even unavoidable. I want to completely do away with arsenic, but also other substances like cadmium, selenium, potassium dichromate and cobalt", exclaims the manager of Formia, a company that has developed partnerships with designer names like Armani and Roberto Cavalli.

"Company management has put its trust in me, and we are seeing the financial benefits of substitution, because the price of arsenic has risen out of all proportion recently: it now costs 150 to 200 euros per kilo. Before long, arsenic will be banned and continuing to use it will involve a massive amount of red tape which will bring huge costs", he says. "I wouldn't say that the idea of replacing arsenic has been universally well received, though" he admits.

And indeed, faced with a sluggish economy and "cheap" Chinese competition, other smaller producers are much less welcoming of the idea of replacement.

"We are ready to replace arsenic because we are concerned to protect the health and safety of our workers, but what we can't put up with is the red tape and the burden of the obligations to fulfil. They cost too much and the authorities that are foisting them on us have lost all credibility in our eyes because of all the waste and the cronyism they are guilty of", fumes Giorgio Giuma, master glassblower with Linea Arianna, a firm with close to a dozen workers specialising in sculpted portraits.

"Where raw materials are concerned, we have got rid of some colours in minerals and reduced the level of some hazardous components. We use less arsenic. We have gone from 1.5% to 1% by weight, which makes the glass slightly less pure and a bit greener. We still use about 50 kg of arsenic a year", says Alberto Dona who with his sons Andrea and Davide runs Componenti Dona, a family business specializing in parts for lamps and designer items which employs 16 people. Replacing arsenic by cerium oxide means having purification plants, says the businessman, and that requires big investments at a time when many of these SMEs are struggling to survive.

A closed circle

"Chinese products have cost the island 30% of its sales", frets Michele Pettenò, the local official of FILCTEM, the Italian Federation of Chemical, Textile, Energy and Manufacturing Workers. "Where there were thousands of workers in the Murano glass industry – i.e., forty-odd companies – a few years ago, there are now only about 1 100; and in fact no more than 500 of these are actually working; the rest have been laid off and are on the integration fund, the Cassa Integrazione Guadagni[3]", says the union official ruefully.

In these conditions, action on health or the environment is no easy matter.

"Some firms will only give up arsenic if it is taken off the market."

"As a union, we check on every firm to see if they have done a risk assessment and refer any issues to the local health agency's (ASL) health and safety at work and working environment department", says Pettenò.

But the union has little real clout in a sector dominated by very small firms: "You only get a joint shop stewards' committee[4] and workers' safety representatives in big companies like Venini, Cenedese and Formia that also have in-house prevention and protection services".

Arsenic: an unfashionable poison

"The risk of exposure to arsenic comes mainly through the composition of raw materials put together for melting, and then during cutting when sand and water are used to polish the item and cool it to prevent breakage", explains Dario Gambaro, chemical analyst at the Stazione Sperimentale del Vetro testing lab.

Venetian glassmakers have been using arsenic since the late 17th century. Arsenic oxide combined with lead oxide gave an opalescent or opaque glass depending on the relative proportions used.

"The situation has at any rate improved since 1999 when I started inspecting glassworks. At that time, for example, arsenic containers were still often left open. Since 2001, batching plants have been fitted with extraction systems, and masks and gloves are also worn. As far as environmental protection goes, cutting produces no water effluents because it is done in a closed cycle and the sludge is treated by specialized firms", notes the technician.

Another expert in Murano glass production, Lucio Moretti, a now-retired former technical director with upmarket companies like Venini and De Maio says that "all the hazardous substances are slowly being replaced by others that are not. Antimony has frequently been used instead of arsenic for some time".

As to the risks of arsenic exposure, Lucio Moretti considers it "a risk that is now under control, because where it is still used, the raw materials are mixed in tower sections so that operators don't inhale the dust; furnace filling is done by a purpose-developed semi-automatic system that prevents dust dispersal".

By his estimate, "80% of firms have made the substitution and, in many cases, cadmium sulphide, selenium and other hazardous colouring agents have also been reduced."

Michele Pettenò wants to see a stronger role for the SSV, not just in research but also in training and management of health and safety.

The union official singles out not just the business cycle but also the "mindset" of the handmade glass industry as a barrier to change.

Murano is essentially a microcosm of family-run micro-businesses in permanent competition and trapped in a mindset where the boundaries between art and craft are blurred. "This prevents them from seeing how it would be better to join up to solve issues ranging from energy costs to protection of the environment and promotion of the Murano brand across the world", laments Pettenò.

"When they had to set up a system for cutting pollutant emissions, they each went it alone when by working together they could have spent much less. The same goes for sourcing raw materials: each business jealously guards its formulas and so is reluctant to let others know how much of any particular component it uses", says the union official.

FILCTEM had a big hand in setting up the Consorzio Promovetro alliance to tackle counterfeiting and defend authentic Murano glass made according to traditional techniques and processes. The union is also campaigning against speculative hotel-building in former glass furnace plants, symbolised by the conversion of the largest furnace – the Conterie – into a hotel with outbuildings turned into apartments...

Even with these initiatives, Michele Pettenò takes a sombre view of the future of traditional Murano glass.

"Murano glassworks are in crisis because they have never developed an effective marketing policy. All the system is a small circle in which the glassmakers produce and showrooms sell items through agreements with hotels and tourism promotion organizations to attract customers. There are also firms that have moved to the mainland producing under the Murano brand and claiming that the art of production is what makes the difference. That way, Murano runs the risk of going under". ●

REACHing out to the world

The adoption of the Chemicals Regulation in December 2006 has forced the EU's main trading partners into action so that Europe's doors do not slam shut on their chemical industries. In very different ways from one world region to the next.

Laurent Vogel
ETUI

Bhopal survivors want the site cleaned up. Thirty years on from the disaster, the authorities are just starting to overhaul chemical laws.
Image: © ImageGlobe

In the run-up debates to its adoption, REACH was variously portrayed as the death-knell of the European chemical industry and a protectionist plot to give EU industry an edge. EU chemical industry bosses sang from both hymn sheets depending on their target audience.

The anti-REACH alliance was spearheaded by chemical industry multinationals with key backing from the United States government. US President George Bush and the President of the American Chemistry Council (ACC) lobbied actively from 2002 to 2006, including through covert actions revealed by an NGO – the Environmental Health Fund – from confidential records secured under the Freedom of Information Act[1].

The campaign culminated in June 2006 with a joint statement by diplomatic missions of different countries to the European Union, organised by the United States and backed by Australia, Brazil, Chile, South Korea, India, Israel, Japan, Malaysia, Mexico, Singapore, South Africa and Thailand, to influence the European Parliament's thinking. The US was prompted to go on the front foot by its perceived loss of leadership. Whereas in the past, US laws had often prompted new EU rules on chemical safety, REACH turned the situation around and the EU rules are now the benchmark in international debates[2].

A change of tone

Things have toned down over five years. The chemical industry's hired consultants had forecast doom and gloom but no-one now places credence in the scaremongering studies about the devastation REACH would wreak. Threats to haul the EU up before the World Trade Organization have given way to technical discussions in WTO committees on specific aspects of the new legislation.

There are two reasons for this about-turn. The final version of REACH is less far-reaching than the Commission's original October 2003 proposal, and the chemical industry has won on some points. Especially, though, the need for a radical shake-up of national laws is now recognized in many countries.

The adoption in 2002 of a Globally Harmonized System (GHS) for the classification and labelling of chemicals prompted most countries to review their laws. Being a creature of the United Nations, the GHS is limited in scope: it deals neither with authorisation, restrictions or public checks and enforcement. What it mainly does is spell out the basic information that producers must supply in order to place hazardous chemicals on the market. The GHS has often been implemented beyond this minimum, however, giving rise to more far-reaching reforms.

> In the USA, industry is fighting a successful guerrilla war against new regulation through the courts.

Apart from the window of opportunity offered by this regulatory environment, a growing awareness of the dangers of under-regulated production of chemicals has also been a factor. Major disasters like Bhopal (see box) and a growing body of studies on the long-term effects of exposures that are hazardous to health and the environment are altering society's firm views about what the chemical industry should deliver. Blind faith in the benefits of progress is giving way to uncertainty. Then, too, Europe is a major importer. Foreign producers need to invest in REACH compliance to preserve their access to the market, so the costs of their own countries' reforms are already substantially covered.

What invariably happens first is that an inventory is made of chemicals placed on the market. There are two options here: collect information from public authorities or research bodies (as Mexico did with an initial inventory between 2009 and 2011), or ask manufacturers to register their chemicals (most usually).

An inventory is obviously only a first link in the chain. Its value depends on the information it gives on the hazards of chemicals, their conditions of use and preventive measures. The next step is to evaluate the risks of each and every chemical identified. Again, there are two ways (which can be combined): by the industry itself or by independent public agencies.

Finally, decisions have to be taken to eliminate the most hazardous chemicals and promote replacement. Here again, there are options: require pre-marketing authorisation (as in the EU for pesticides, food additives and medicines), or after-the-event action based on the risks or damage observed. The complex REACH authorisation system operates only ex post and only for listed substances, but is supplemented by the ability to prohibit or restrict marketing (also retrospectively).

The US is now behind the game

The main **United States** legislation is the Toxic Substances Control Act (TSCA) passed in 1976 after five years of fierce debate. Responsibility for enforcing it lies with a federal organisation, the Environmental Protection Agency (EPA). Thirty-five years on, its record is fairly dismal. Industry has successfully dodged bans on most of the most hazardous chemicals and much of the information submitted to the EPA is locked by confidentiality clauses. It is fighting a successful guerrilla war against new regulation through the courts, which is how it got the asbestos ban reversed in 1991. The TSCA Inventory lists 84 000 chemicals, but comprehensive exposure conditions and toxicity data are available for fewer than 200.

1. See: Waxman H. (2004) The chemical industry, the Bush administration, and European efforts to regulate chemicals, Washington, US House of Representatives; and Ackerman F., Stanton E., Massey R. (2006) European chemical policy and the United States: The impacts of REACH, Medford, Tufts University.
2. Shapiro M. (2007) Exposed: The toxic chemistry of everyday products and what's at stake for American power, White River Junction, Chelsea Green.
3. Schifano J., Tickner J., Torrie Y. (2009) State Leadership in Formulating and Reforming Chemicals Policy: Actions Taken and Lessons Learned, Lowell University.

TSCA reform has been on the agenda since a first bill sponsored in 2005 by Democratic Senator Frank Lautenberg. The current CSIA (Chemical Safety Improvement Act) bill is a compromise reached in May 2013 between Sen. Lautenberg and Republican Senator David Vitter. If this bipartisan text is passed, the reform will not be far-reaching. Some of its provisions have attracted a welter of criticism since they would limit states' powers to pass more progressive laws. At present, 29 states have enacted tougher rules than the federal legislation to restrict or ban the use of certain chemicals. These more enlightened laws have played greatly into the development of sustainable chemistry in some areas of activity[3].

The CSIA's general approach is to avoid "unreasonable risk of harm to human health or the environment" rather than eliminate risks that might be. That said, the CSIA does arguably represent some progress. The EPA could delay new substances coming to market if there were doubts about their safety. In 1976, the TSCA had foregone a thorough evaluation of the 62 000 substances already on the market at that time.

Using the CSIA, the EPA should be able to set programmes going to make up for lost time and evaluate some of these chemicals. The big unknown is how fast the work will go. Even more than essential changes in the law, it means overcoming central government reluctance to implement appropriately-resourced public controls on the chemical industry ... which, let it be said, is a generous donor of campaign funds. In February 2012, the EPA selected 83 chemicals (one thousandth of the inventory) for priority risk assessment. Even this limited programme is advancing at a snail's pace: 7 evaluations started in 2012, and the evaluation process for 18 more will get under way in 2013-2014.

Asia on the move

There are signs of movement in the law in **China**. Growing labour and social unrest is challenging official policies that sacrificed health and the environment to rapid, predatory industrialization. A raft of legislation was introduced between 2006 and 2009 to implement the GHS. In January 2010, more ambitious regulations were enacted, entering into force on 15 October 2010. These impose tighter rules on registration of new chemicals (compared to the 45 000 that had already been recorded since 2003).

There are some big differences from REACH. There is no quantity limit for the registration of new substances (but the information required for quantities less than one tonne is fairly basic). Some tests not provided for in REACH are required and some of them have to be done in China. There is a duty not to sell substances to downstream users who cannot implement risk management measures. To its discredit, China maintains relatively lax rules for chemicals already registered.

New rules on the safety of hazardous chemicals came into force in December 2011. They cover just over 3 700 substances and require the firms concerned to have official authorisation. The authorities have also announced a planned update of the catalogue of hazardous substances (which will probably include around 7 000 chemicals).

The Environment Ministry adopted a new chemical hazards prevention and control plan in January 2013 identifying 58 priority substances and seven industry sectors. Occupational health was only a marginal criterion in selecting these substances for official risk assessment. Any restrictions or prohibitions are unlikely to be adopted before late 2015. In August 2013, the Ministry of Industry and Information Technology announced plans to tighten up the rules on the use of toxic substances in the electronics industry.

The ruling and opposition parties in **Taiwan** have agreed legislative changes, but put off enacting them until 2014. Producers and importers will then have to notify the authorities about all chemicals in quantities above 10 kg per year. The information required will depend on the quantity and risk level. The Taiwanese legislation expressly refers to the inventories of chemicals created by six other regulatory systems (Australia, China, United States, European Union, Canada and Japan). Notification of any chemical already listed in two of these inventories must be accompanied by more detailed information. At the opposition's urging, government agencies will have new regulatory powers, in particular as regards nanomaterials and toxic chemicals contained in manufactured articles.

Among the most far-reaching reforms is that of **South Korea** whose new law, passed on 30 April 2013, has been dubbed K-REACH. It will come into force in 2015 and sets a time frame of eight years within which chemicals produced or imported in quantities of at least one tonne per year must be registered. Chemicals that are hazardous to the environment or human health and new substances must be registered regardless of the production volume. Annual reports will update the registry information. This reform is particularly important because the Korean chemical industry ranks seventh worldwide. That the legislation is so far-reaching is due to public opinion, galvanised by a very serious accident in the industrial city of Gumi in September 2012 and the publication of a Health Ministry report on lung cancer caused by chemicals commonly used to sterilize humidifiers.

India also announced a law reform review in April 2012. A muted beginning was made in 2013 by drawing up an inventory of chemicals. Health and environmental campaigners are critical of the partial reforms introduced in recent years focused mainly on pesticides and electronic waste. The situation regarding both remains dire and the Indian government has not resourced any systematic monitoring of the situation. The European chemical industry employers (CEFIC) was quick to step into the debate, calling on the government not to take its lead from REACH but trust in the chemical industry's voluntary initiatives – displaying some cynicism given the scale of the health problems caused by the lack of control over that industry in India.

Japan brought in a law reform in 2009. The government said it would be looking closely at banning the most hazardous chemicals. Producers or importers will have to provide an annual report on the quantities placed on the market and the use of different chemicals. A key aim of the reform is to make more information available to downstream users. The amended Chemical Substances Control Law requires a risk assessment to be done by public agencies by reference to priority criteria. Producers and importers must in principle notify all substances from quantities of one tonne per year.

A mixed score sheet

This brief overview is by no means comprehensive. **Turkey** enacted a new law not dissimilar to REACH at the end of 2008. In 2009, **Malaysia** decided to require registration of hazardous chemicals produced or imported

Industry defensive measures: self-regulation and good laboratory practice

In the night of 2-3 December 1984, a 40-tonne tank of methyl isocyanate exploded in Bhopal, India at a plant owned by Union Carbide (subsequently bought by Dow Chemical). The disaster killed an estimated 20 000 people and left some 200 000 seriously disabled. Union Carbide and Dow offered only paltry compensation and have not paid for site clean-up work.

In the months following the disaster, the Canadian chemical industry launched the Responsible Care initiative, purportedly to improve industry safety. The movement spread rapidly worldwide and now operates under the auspices of the ICCA (International Council of Chemical Associations). Its aim – industry-driven improvements in the management of chemical risks – is praiseworthy. A close reading of the charter reveals the limits of the initiative: it contains no commitment to replace substances of the highest concern.

Responsible care is also a public relations programme to promote self-regulation. Companies that join it link up in associations to lobby systematically to fend off major legal restrictions. As Canadian researchers observe, "One of the main objectives of Responsible Care was to foster a less adversarial relationship with government and to pre-empt or at least influence the content of additional regulation".*

Other partners (NGOs, trade unions) may be associated but remain subordinate to industry top management. A number of national studies have shown that companies that sport the Responsible Care label were not necessarily exemplary where risks to workers, the public and the environment are concerned. In 2006, one of them – the Czech company Draslovka – caused a disaster by discharging cyanide that poisoned an 80 kilometre stretch of the River Elbe.

The OECD's role is an ambiguous one here. This international organization now includes 34 countries and is gradually opening up to the emerging countries most receptive to the ultra free-market policies it propounds. The OECD has been worrying away at the issue of chemicals since the 1970s, on which it has adopted a score of recommendations and decisions. Its central focus is on simplifying the regulatory framework for the chemical industry, chiefly through urging all States to endorse a common set of benchmark rules on "good laboratory practices" for recognition in each country of the test results produced by a given country. EU laws refer to the OECD criteria. The main requirements relate to standardised procedures and detailed test documentation. That is not enough to resolve conflicts of interest stemming from industry-funded research done by private laboratories. Various studies suggest that referring to these GLPs alone lets through studies that seriously underestimate the risks.**

* Moffet J., Bregha F., Middelkoop M.J. (2004) Responsible Care: A case study of a voluntary environmental initiative, Webb K (Ed), Voluntary codes: private governance, the public interest and innovation, Ottawa, Carleton University.
** Myers J.P. *et al.* (2009) Why public health agencies cannot depend on good laboratory practices as a criterion for selecting data: the case of Bisphenol A. Environmental Health Perspectives, 117, 309-315.

REACH is now a benchmark for the rest of the world.

in quantities of 0.1 tonne per year. Major reforms have been announced in **Russia.** Other countries (e.g., Australia, Canada, Brazil and Vietnam) are more cautious and content for the moment to tweak specific aspects of their regulations.

The overall score sheet is mixed. REACH has been beneficial in breaking through some no-go areas: proscribing chemicals for which there is insufficient information (no data, no market); making the industry help to pay for the operation of regulatory agencies; asserting that chemical manufacturers have a responsibility to the entire production chain – these are undeniable plus points. It would have been unrealistic to wait for some unlikely global agreements to regulate these areas. The first step had to be taken. On the evidence, it was a gamble that paid off: REACH has become a benchmark for the rest of the world.

Major challenges still await answers: ensuring transparent information and seeing that industry does not abusively claim data confidentiality; developing public expertise in institutes of toxicology that are independent from industry to check the quality of the information provided; ensuring market controls to enforce the rules; strengthening the specific rules on worker protection in line with those on marketing (on which the EU's record is becoming worrying).

One basic inconsistency remains: the rules treat each individual chemical in isolation whereas in reality health and the environment are bombarded by multiple exposures that interact with one another. The only joined-up responses to these "risk cocktails" are: a ban on substances of the highest concern; innovation; voluntary production restraint; and research based on a precautionary principle. The example of asbestos alone – still authorised in countries where approximately 90% of the world population live – shows that much remains to be done. ●

Offloading the harm on China

China's share of the global chemicals market has more than tripled in ten years, rising to 27% in 2011. The growth has come with major health and environmental impacts. The big picture is hard to recreate as the information is still classed as state secrets.

Laurent Vogel
ETUI

20 years of double-digit growth have taken their toll on the "workshop of the world".
Image: © ImageGlobe

The chemical industry is run by a handful of multinational mega-corporations. Its geographical distribution has changed profoundly over the last thirty years. High value-added products were long the preserve of industrialized Europe and North America. Asia, Africa and Latin America were mainly sources of raw materials before gradually being endowed with basic chemicals plants and some specialized production channels focused on local markets for agricultural fertilizers and pesticides, synthetic fibres and dyes for textiles, polymers for the plastics industry, etc.

Most of the big chemical companies in these three continents were owned by European and North American multinationals, except in the few countries with state controlled industries. Two big factors shaped the global division of labour: the labour skill and infrastructure value-added components of production, and transport costs (higher production volumes can make it more cost-efficient to produce and process near raw materials sources or local markets).

From the 1960s, other factors came into play. In developed countries, pressure of public opinion to protect health and the environment led to the development of legal precautionary and public information obligations. Business was moved to areas where laws were less stringent or more laxly enforced. Over time, the most hazardous waste was legally or illegally exported to the poorest countries, where it caused serious problems.

The "Green Revolution" revolutionised agricultural production methods with the large-scale use of synthetic chemical inputs. The resulting loss of biodiversity had to be offset by the mass use of pesticides. Natural fertilizers gave way to industrial fertilizers. Local industrial development had a knock-on effect on the chemical sector. Urbanization increased the use of everyday chemicals.

China enters the top ten

Overall, Europe and North America have kept a substantial share of high value added chemical production. The aggregate value of European output has risen steadily over the last twenty years, but its market share fell from 36% in 1991 to 20% in 2011. These percentages are net of the pharmaceutical industry, where Europe retains leadership with close to 30% of world production.

Irrespective of where their production is located, the multinationals control huge swathes of the industry through a variety of mechanisms ranging from setting up subsidiaries to equity investments in other groups, not forgetting the exploitation of patents and intellectual property rights. Of the ten multinationals that dominate the global chemical industry, four are European and three American. The others entered the top ten only recently. China's Sinopec has risen from 26th place in 2001 to 3rd in 2011. In the same period, Formosa Plastics (Taiwan, with significant investments in both China and the United States) has jumped from 30th to 6th and SABIC (Saudi Arabia) from 18th to 5th.

Production is shifting to Asia (mainly China), especially for basic chemicals manufacturing – the large volume production of basic and intermediate compounds for other manufacturing processes. China is now the world's largest producer of methanol and toluene. It shares the top position with Korea for xylene (approximately 15% each), while other organic chemicals are still manufactured mainly in the United States (ethylene, propylene) and Europe (benzene and butadiene).

China ranks first both as a producer and consumer of inorganic chemicals (mostly for agriculture), and is also the foremost producer and consumer of halogen compounds used in a wide range of manufactures in a variety of sectors (plastic, steel, pesticides, etc.).

Despite annual growth above 25% between 2000 and 2010, China's consumption of both basic and fine chemicals far exceeds its output. China's trade balance deficit in this sector topped $50 billion in 2008. One objective of China's 12th Five Year Plan (2011-2015) is to achieve self-sufficiency in fine chemicals. As well as production plants, China is home to a growing number of research and development centres at which BASF, AkzoNobel, Bayer and Dow Chemical have developed major projects.

According to American Chemistry Council projections, chemical production is projected to grow by 66% in China between 2012 and 2020, followed closely by India (60%), then Russia, Brazil and Korea (35%), with Western Europe and North America (25%) bringing up the rear.

> A WHO report estimates that environmental pollution causes 2.4 million premature deaths a year in China.

Health and environmental impacts

The health and environmental impacts stem from a combination of the intrinsic hazards of the chemicals produced, the conditions of production and use throughout the product life cycle, and the social and political context.

The intrinsic hazards are much the same wherever production is located. Efforts to replace the most hazardous chemicals and develop a green chemicals industry are limited. For some of the most hazardous chemicals, however, the differences are significant. For instance, China is now the world's second largest producer and largest consumer of asbestos fibres. Just 158 chemicals are subject to import restrictions, and only a score of these are banned outright.

Conditions of production and use are concerning in both chemical manufacturing and the downstream chemical-using branches. Most of the obtainable information concerns the rising toll of major accidents. Official statistics from the Chinese Ministry of Environment report 542 such accidents in 2011, while the Chinese Academy for Environmental Planning estimated their cost at $220 billion in 2009.

This estimate takes no account of the long-term public health and environmental effects. The pollution of the Songhua River in northeast China when more than 130 different organic pollutants, including many carcinogens, were identified was a wake-up call. It was the result of an explosion at a chemical plant on 13 November 2005, when more than 100 tonnes of highly toxic chemicals were discharged into the river, forcing the authorities to cut off the drinking water supply to Harbin, a city of 4 million people.

Political and social conditions significantly increase the risks. There is an extreme concentration of power and wealth in the ruling establishment formed by the single party bureaucracy, the state apparatus and national resource owners. In July 2013, economists studied the link between a political career in the Communist Party and the environmental conservation efforts of local leaders. They came to the clear conclusion that higher city-level GDP growth is statistically and economically significantly correlated with better odds of the city's top cadres being promoted. In contrast, higher city-level environmental investment is statistically and economically significantly negatively correlated with the odds of the city's top cadres being promoted[1].

There are no independent trade unions, only a handful of constantly repressed small protest groups. There are all manner of local direct grassroots actions, but police enforcement is everywhere, so they remain uncoordinated and non-convergent.

Aggregated environmental impact data abound and tell a disastrous story. A 2009 World Health Organization report estimates that environmental pollution causes 2.4 million premature deaths a year in China[2].

By contrast, there is no overall research into the occupational health impacts. Specific studies are available on particular diseases or the risks in particular companies or sectors, but there are no obtainable overall data. The official figures on occupational diseases show only that the vast majority of victims are not compensated. In 2010, China recognized just 27 240 cases (over 80% of them pneumoconiosis), while in the same year, France recognized over 50 000 occupational diseases.

A broad brush picture painted from the obtainable data shows an alarming increase in work exposure-induced cancers and a rise in respiratory diseases. Future generations are being put at risk by industrial activities, with a dramatic increase in birth defects. The Ministry of Health publishes no systematic data on health inequalities, and the specific influence of working conditions on them remains a taboo subject. The copious administrative records kept on employment and health[3] could enable epidemiological studies to be done, but the political will is not there.

Most of the obtainable data relate to regional differences which in many respects correlate with the social disparities between the poor peasantry and urban populations. They also reveal a 13 year life expectancy at birth differential (65 to 78 years of age in 2000). Foreign analysts of Chinese health statistics point to growing social inequalities, but lack sufficient data to consider the specific role played by work-induced diseases or industrial pollution[4]. Other factors are better documented. The sharp rise in income inequalities over the last thirty years has made China one of the most unequal countries on Earth, overtaking the United States and approaching Nigeria and Brazil. Accessing health care is hard for non-privileged groups: in 2010, the social security system reimbursed just 23% of hospital expenses.

Cancer villages versus green cities

Community action groups have been campaigning for a decade against the existence of cancer villages – localities where industrial pollution-induced cancer mortality has reached alarming levels, as evidenced by numerous studies, especially in areas of high employment in electronics industry waste recycling, some of it imported and some from the domestic market.

The official press has long censored most of the information. This has now backfired, and many people now find the Internet more credible despite government censorship imposed with the help of big online companies (including Google, Yahoo and Microsoft). Activist journalist Deng Fei blogs mostly about pollution on Weibo (China's vast microblogging network), where he has three million followers. In 2009, Deng Fei published a first map identifying dozens of villages or village clusters where excess mortality from chemical pollution-induced cancer had been detected[5].

One response by the bureaucratic and financial elite is to increase the number of "green cities" – new towns built at a distance from major cities. Dongtan north of Shanghai was supposed to house half a million people by 2050. Launched with great fanfare in November 2005 by Tony Blair and Chinese President Hu Jintao, the project was shelved due to a corruption scandal and probably its grandiose nature. An eco-town is being built 40 km from Tianjin in the north. It could have a population of 350 000 by 2020 and 5 000 apartments had already been sold in February 2013. This project has attracted more than $4 billion in inward investment.

A car-free town of 80 000 inhabitants is planned near Chengdu, the capital of Sichuan province in south-western China. Such projects promote walking and cycling; green spaces abound; the buildings are constructed to the most advanced environmental standards, while the infrastructure is designed to minimise carbon emissions and prevent pollution. There is an organized recycling scheme. The high cost of housing makes these towns affordable only by the privileged classes. They are a combination of eco-towns for the wealthy and so-called "gated communities" – walled-in residential areas cut off from the public domain, with an entrance that may be guarded by private security guards and electronic surveillance systems.

> The Environment Ministry has published the first official map identifying over 400 "cancer villages".

1. Wu Jing *et al.* (2013) Incentives and outcomes: China's environmental policy, Finance Working Paper, 368, ECGI.
2. Junfeng Zhang *et al.* (2010) Environmental health in China: progress towards clean air and safe water, The Lancet, 375, 1110-1119, 27/03/2010.
3. Camp *et al.* (2003) Development of a cancer research study in the Shanghai textile industry, International Journal of Occupational and Environmental Health, 9, 347-356.
4. Feinian Chen, Yang Yang, Guangya Liu (2010) Social Change and Socioeconomic Disparities in Health over the Life Course in China. A Cohort Analysis, American Sociological Journal, 75 (1), 126-150.
5. The map can be viewed on http://chinadigitaltimes.net/2009/05/a-map-of-chinas-cancer-villages.

The World Bank published a lengthy report on "Sustainable low-carbon city development in China" in 2012 which extensively documents the technical and financial aspects of such development but glosses over its social implications[6]. Ultimately, while carving out separate living areas for the privileged few may reduce the impact of chemical pollution on their health, it will not roll back its consequences. The creation of green cities is probably more oriented to practical political and social goals: they create conditions conducive to the endogenous development of the new Chinese bourgeoisie, creating the illusion that they are safe from social unrest and contacts with the "dangerous classes".

The Mongolian navy

So great has the scale of chemical pollution become of late that the government is allowing limited press reporting of it. In January 2013, Beijing suffered three weeks of air pollution peaks which on 12 January hit the frightening level of nearly 1 000 micrograms/m^3 – a level of 300 micrograms/m^3 is considered a serious risk. In February 2013, the Environment Ministry published the first official map identifying over 400 "cancer villages".

Environmental concerns are increasingly featuring in the official rhetoric, but the problem tends to be spun as the inevitable consequence of a rapid transition towards industrialization. Challenging social inequalities or the monopoly of power are not on the agenda. The subtle blend of transparency and censorship wielded by the authorities can be unpredictable.

Beijing lawyer Dong Zhengwei asked for information on soil pollution 30 January 2013, but his request was refused because "the survey data on soil pollution are state secrets according to the provisions of Article 14 of the Open Government Information Regulations".

In July 2013, Environment Minister Zhou Shengxian publicly acknowledged his department's record as one of the four worst government agencies in the world. Bloggers had a field day picking out the other three, the wittiest suggestion being the Mongolian Navy (the country is landlocked and has had no fleet since the 13th century).

There is little hope of a "top down" reform initiated by the Chinese authorities, although some factors could work in its favour. Dwindling in-migration by poor peasants to industrial areas has brought home to the authorities that they no longer have an endless supply of troops for industry. There is increasing pressure from countries that import Chinese goods to reduce the risks from the toxic substances they may release. The pressure is particularly strong for toys, for which China is now the world's biggest producer, often subcontracting for major brands, but also increasingly so for other consumer goods. A 2012 Greenpeace study reported different toxic substances found in clothing sold by big international brands[7], some of which was made in China.

The obstacles to a comprehensive reform remain overwhelming: no independent unions, corruption, weak labour inspection and environmental standards enforcement bodies. Most of all, the question is how much the authorities can do. Demand for profits from national resource-owners and foreign investors, the monumental expenditure needed to develop a social security system to cope with an aging population, and the wage demands of workers arguably do not leave much scope for investment in bringing down chemical risks. ●

6. Baeumler A., Ijjasz-Vasquez E., Mehndiratta S. (2012) Sustainable low-carbon city development in China, World Bank, Washington.
7. Greenpeace International (2012) Toxic threads: the big fashion stitch-up, available at: http://www.greenpeace.org/international/Global/international/publications/toxics/Water%202012/ToxicThreads01.pdf.

An exponential rise in dollars and deaths

A recent report by the United Nations environmental protection agency* demonstrates the rapid growth of the chemical industry, whose global output valued at $171 billion in 1970 rose to $4 120 billion in 2010 (figures not inflation-adjusted), and could comfortably top $6 000 billion by 2020. The Chemical Abstracts Service (CAS), which manages the world's largest register of chemicals, estimates there to be some 250 000 substances on the world market. Factoring in mixtures of different substances takes the figure up into the tens of millions of products. The Organization for Economic Cooperation and Development (OECD) has compiled a list of over 5 000 substances produced in quantities greater than 1 000 tonnes per year.

Emissions of dust, fumes and toxic gases are fuelling the global ecological crisis through global warming, pollution, loss of biodiversity, etc. Ecosystems across the globe are heavily contaminated by synthetic chemicals including in areas far from all industrial activity such as Antarctica. Ninety percent of fish samples tested in the world are contaminated with pesticides. The chemical industry is energy-intensive and has a big carbon footprint. Electronics industry waste was estimated at 20 to 50 million tonnes per year in 2005, an alarming share of which was toxic chemicals.

Every human being is exposed from before birth to death to cocktails of chemicals whose known effects are concerning and most of whose long-term impacts are unknown. In 2010, World Health Organization researchers published a study to estimate the overall burden of disease due to chemicals. Based on the available scientific literature, they concluded that in 2004, 4.9 million deaths (8.3% of total deaths worldwide) were attributable to exposure to chemicals, while a total 86 million years were lost due to ill-health, disability or early death (5.7% of the total health problems measured by this indicator). These are conservative estimates based on previously analysed consequences of documented exposures.**

*UNEP (United Nations Environmental Programme) (2013) The global chemicals outlook. Towards sound management of chemicals, Geneva.
**Prüss-Ustün A. *et al.* (2011) Knowns and unknowns on burden of disease due to chemicals: a systematic review, Environmental Health, 10 (9), 1-15.

Renault drives change for the worse say employees

Malaise in the workplace is on the rise and coming under increasing media scrutiny. Reports often focus on "bullying petty dictators" and "victims" and ignore the work environment. The Renault CGT shop stewards have taken a different route – looking at work organisation to help explain the company's ills, not least the spate of suicides. We met Fabien Gâche, the man behind action-oriented research that gives workers back a voice.

As told in Paris on 2 September 2013 to
Denis Grégoire and Fabienne Scandella
ETUI

Production lines are physically and mentally wearing. The CGT has set out to restore an attachment to work at Renault.
Image: © ImageGlobe

When did it first become clear that things were not right at Renault?

Fabien Gâche — Complaints started rising in the mid-1990s, and things have got steadily worse since then.

The first redundancy schemes in 1984 let employees leave the company well before retirement age with pretty good severance packages. But a lot of workers had quite a hard time having to leave the company that early. Now, we have fifty-year-olds asking, "When is it my turn?" And some are even ready to take a big drop in income to go. It shows what a pass things have reached.

Renault started a pretty huge work organisation shake-up in the late 1980s. New working time arrangements were brought in which in practice meant doing away with meal breaks, cutting rest breaks and putting the production lines onto continuous operation. When I joined Renault in 1982, a whole shop would stop to eat together. There were times to discuss things and socialise. Losing break times created a big problem for union work, making it increasingly difficult to go out and meet with employees.

The problem got worse in the early 2000s when management did away with the union information time allowance, which was a legacy from the days when Renault was a state enterprise and as such entitled under the Public Sector Democratisation Act to hold workplace meetings for employees during working hours for up to three hours a year.

A second step came in 1992 with the roll-out of the personal rate wage including to manual workers, i.e., where part of the pay depends on meeting objectives set for each employee by supervisors. At the same time, chains of command were shortened. Most supervisors were no longer in-house appointments. They were not employees that had come up through the ranks with a legitimacy derived from their acquired skills and knowledge of the job – they're now just managers. They set us what are mainly financial goals because the whole thing is, "You have to cut costs, step up the pace, reduce the scrap rate", etc. It was just one change after another.

We also observed a sizeable sociological change. In 1985, manual workers made up close to 65% of the Renault workforce, managers 5%, and the rest were supervisors, technicians, etc. Now, the job categories are more less equally divided. Another important sociological aspect is that the factories, especially the machine plants, are recruiting people with formal qualifications (occupational A-levels, higher and lower vocational training certificates, and even technical higher national diplomas), whereas before the production sectors preferred to hire people who didn't have qualifications.

Alongside these changes, Renault developed a strategy aimed at covering up the worsening working conditions. From the mid 1990s, employees came under a lot of pressure not to down tools, arguing that it would reflect badly on the company's image and that the more work stoppages there were, the more their jobs would be on the line. That was the sledgehammer argument they kept coming out with: the fewer reported work accidents and occupational diseases there were, the more likely you were to keep your job.

The CGT was not long in making the link between these changes in the business and the rise in work-related distress. How did this idea for action-oriented research come about?

FG — The first initiative dates back to 1999, when we organised a big public debate in Le Mans on work-related distress which we called, "Speak out!", the idea being to let employees talk about their experiences at work. The debate was also open to other firms in the industrial zone where the Renault factory was located. We got 1400 employees attending on one night for over three hours. We thought at the time that the initiative would let employees get their unhappiness out in the open and identify problems in the firm. It took us some time to see that we had missed our goal of creating opportunities: people went back with a sense of helplessness, thinking it was the same everywhere.

So we then asked ourselves: has the trade union work we have been doing for all these years given employees a direct influence over their own situation? We had to admit that it hadn't. It brought home to us that what trade unionists do on their own cannot change things, and that they cannot speak for other people.

"Doing the job properly, being able to say what you want to do, it's all about recognition – it's key to it."

The idea of action-oriented research with a small number of workers came about in the early 2000s, really taking shape around 2004, when former CGT confederal adviser Serge Dufour put us in touch with two occupational health academics, Philippe Davezies and François Daniellou. Looking at this kind of voluntary submission, we thought "That can't be right, people don't go to work in order to harm themselves, they go because they find something else in the work". We thought about the impact of isolation on employees' health and asked ourselves – what does work mean for an individual?

What methodology did you use?

FG — What we did was to start from scratch. Rather than asking employees "What do you want us to do?" we went out to see them and ask them: "Can you explain to me what you do in your job?".

We realised that it is precisely when an employee realises what they do that they become aware of the scope of what they do. People were pleased that we were interested in them. And it would not be long before they were telling us "Strictly, I should do so-and-so but I can't because the inspection machine's broken down". "OK, so why hasn't it been repaired?" "It hasn't been repaired because there are no spare parts in stock due to having to make savings". Or "It hasn't been repaired because the maintenance engineer has retired and hasn't been replaced". So a temporary agency worker is brought in to inspect the parts all day one at a time. And 18-20% of the parts get scrapped every day. And the bloke tells me, "Before, it was so-and-so who did that, except that so-and-so who did that was a technician, I'm just an unskilled worker. He got paid so much, I'm paid 20% less than him," and so it goes. So, at the same time, you get a demand that touches on issues of qualifications, job recognition and skills.

The next thing is to restate what they said and put the result up for discussion with the workforce. "Have we understood the situation right as being this?" "Is this what you think needs doing?" etc. This will provide the basis for action by elected reps, whether in the health and safety committee or the works council. And we took it public, by which I mean that we went out to see the employees more generally, telling them: the CGT reps in this sector have asked the employees about facility X, this is the problem that employees have singled out. And that's what needs doing to get a significant improvement in things on the hurry-up. What we found is that the main issue is always job quality. You can clearly see that there is a double whammy: improving working conditions can't be separated from job quality.

Company management sell us things in the name of business efficiency. They tell us it will be more rational. The words they use are all to do with skills, performance, excellence. At the same time, there is a widening gap between their rhetoric and the reality experienced on the ground by workers. Here, the situation is reversed: company management are not the ones that guarantee efficiency or quality, the employees are the ones who want and demand quality. That's what will put company management on the spot, where they can't say "no way, I don't want to improve that" because quality is their article of faith.

Just under 100 workers took part in the "action-oriented research". That's not many, and some plants didn't participate ...

FG — It wasn't plain sailing: some didn't want to take part in the process, some didn't want to talk or didn't want to take the time for it. So, we went a different way. It's a long drawn-out process: we went out to employees, and they didn't necessarily have the time or inclination to talk. And you can't be a know-it-all, you have to go in saying, "Look, I know nothing about your job". This active listening isn't an ability you necessarily have as an elected rep wanting to get people onside. It's something you have to develop over time, and that complicates matters, because you don't have that long in office and organisations change very quickly. The thinking is ongoing because not everyone is yet won over to the approach, including in the CGT. Implementing it is still quite a complicated job.

What main lessons are you taking away from the project for your own union work?

FG — The main thing we identified from the action-oriented research is what work represents for all the individuals, by which I mean work as a building block of one's own individual health. It brought us to an understanding of why employees in physically gruelling jobs will agree to work overtime to try and mitigate problems of disorganisation in the company. They'll come into work on a Saturday despite already being shattered. Doing the job properly, being able to say what you want to do, it's all about recognition – it's key to it. We were able to bring to light the fact that malaise in the workplace is often to do with what I'd call the "objectification" of individuals that stems from new management methods and enforced competition between employees. The individual is unimportant because anyone else can do what they do. They are undermined; their skills, culture and job role are disregarded.

In terms of union activism, the project allowed the union to be seen not as a representative body but as a means to enable employees to discuss together. The direct relationship with employees raises questions about the very usefulness of trade unionism, because if it cannot organise with the employees something that helps to improve their daily lives, they will end up asking: "what good is it?" ●

RPS-Renault project: benchmarks

- **Duration: May 2008 - January 2010.**
- **Participants: approximately 100 employees (including 38 CGT reps) from 9 of Renault France 13 manufacturing sites and from its commercial subsidiary.**
- **Partners: The Emergences consultancy and the Institute of Economic and Social Research (IRES).**

Read more

Chassaing K., Daniellou F., Davezies P., Duraffourg J. (2011) Recherche-action "Prévenir les risques psychosociaux dans l'industrie automobile : élaboration d'une méthode d'action syndicale", Emergences, 358 p.
Downloadable from http://www2.emergences.fr/fr/wp-content/uploads/2011/01/emergences-rapportfinal.pdf

The contents of a DVD report on the action-oriented research with workers' testimonies can be found at http://www2.emergences.fr/fr/?p=1184

Farmwork in Central America: back to the bad old days

Time seems to have stood still in the plantations of Central America where trade unions are suppressed and near-slavery working conditions still offered by Chiquita, Dole and their suppliers. Workers are exposed to pesticide and afflicted by a mystery illness that damages their kidneys. The gruelling work conditions may be to blame.

Vicent Boix
Research Associate, Chair "Sustainable Earth" - Charles Léopold Mayer Foundation of the Polytechnic University of Valencia. Author of El parque de las hamacas *and* Piratas y pateras

Chichigalpa counts its dead. Two thirds of men in Nicaragua's sugar cane capital have kidney diseases.
Image: © Giovanni Galio

Agriculture is still the biggest employer in Central America[1], providing jobs for between 25 and 27%[2] of the workforce. But quantity does not mean quality, and farmwork here is about exploitation of workers and does nothing to develop rural communities. To the contrary, it is behind many problems, especially in the main crops: sugar cane, banana and palm nuts[3]. All three products are controlled by local large landowners and multinationals in the business of agricultural exports. The latter's aims to increase areas under crop, boost productivity and maximize profits have given rise to labour disputes and serious environmental and human health problems.

Land grabs still happen where whole communities are kicked off their farmsteads. In the Bajo Aguán region of Honduras, powerful groups backed by President Porfirio Lobo have a free hand to expand industrial monoculture of oil palms used especially in the production of biofuels. Guaranteed total impunity allows them to strongarm thousands of peasant farmers off their land. This is in a country where half of the rural population lives on less than a dollar a day and 300 000 peasant families have no access to land.

Giorgio Trucchi, a staff journalist with the International Union of Food Workers, says that 57 people who refused to leave their farmsteads have been murdered by hired killers or state law enforcement agencies over the last three years. "Not one person has been put on trial for these crimes, whereas over 3 000 farmers have been prosecuted for land theft and hundreds of families have been forced from their homes. Meanwhile, we are seeing unprecedented militarization and control of the area by what amounts to an army of private security guards in the pay of big landowners", claims the Italian journalist[4].

The banana companies are alleged to be behind these brutalities, perpetuating the history of Central America littered with over a century of land-related conflicts. A report by the Coordinating Body of Latin American Banana Plantation Workers' Unions (COLSIBA) catalogues a 10-year list of many reported cases of persecution and harassment of trade unionists, as well as discrimination and sexual harassment against women on some Chiquita-owned farms and those of some national farmers who sell their produce to it. Negotiations with unions have been deliberately impeded in order to usher in insecurity, deregulation and casualised working conditions, and force wages down.

> "What do you get when workers are paid a dollar for every tonne cut? They will work themselves to death on piece work."

Workers and trade unionists have been come down on heavily. Permanent workers have been sacked and replaced by seasonal or outside labour. These policies have taken a heavy toll, with eight unions having gone and more than 10 000 people sacked over the past ten years[5]. Similar abuses and complaints have also been reported on farms linked to Dole Fruit and Del Monte[6].

COLSIBA representative Iris Munguia argues that unionised workplaces are better off, hence the all-out union-busting effort by the multinationals and big landowners. This aggressive union-bashing strategy aims to cow union members by blacklisting them, filing private prosecutions, forcing down their working conditions, etc. This campaign of harassment is backed up by the development of "mutual self-interest organizations" or "company unions" to fill the void left by the savaging of traditional unions.

COLSIBA is also concerned with other farm enterprises in Central America, where things are worse still, and even child labour is used. "There are no unions on oil palm and coffee plantations or melon farms, which makes for depressing work conditions and environments. Ditto the pineapple sector, despite tentative efforts to organize workers in Costa Rica, and melon-growing in Honduras. Some unions in sugar cane production have very low membership rates because 95% of farm workers are outsourced, which makes organizing them harder", laments Iris Munguia[7].

Living in shacks

In the 1970s, thousands of banana workers in Panama, Costa Rica, Nicaragua, Honduras and Guatemala were exposed to the pesticide DBCP, commonly used in plantations linked with Chiquita, Del Monte and Dole. Today, thousands of former workers suffer infertility to varying degrees. They have said they did not know that the chemical was toxic, were

1. Costa Rica, Belize, El Salvador, Guatemala, Honduras, Nicaragua and Panama.
2. Evolución de los principales indicadores del mercado de trabajo en Centroamérica y República Dominicana, años 2006-2010 (2011), Observatorio Laboral Centroamerica-Republica Dominicana (OLACD) - ILO.
3. From which oils are extracted for use as biofuel, or in the manufacture of soap, food, etc.
4. Giorgio Trucchi – private email, 9 April 2013. See also Iglesias G. (2013) Monocultivos, concentración de la tierra y violencia en el Bajo Aguán Rel-IUF, Brasilia, 20 February 2013.
5. Chiquita ... la otra cara, Boletín Informativo Especial COLSIBA, April 2011.
6. Dole: detrás de la cortina de humo.Investigaciones en las plantaciones bananeras de América Latina (2006).
7. Iris Munguia – private email, 11 April 2013.

not told about its toxicity or given protective equipment. They worked barefoot and in ordinary clothes for poverty pay, living in hutments on the banana plantations with no sanitation, and using water from wells likely to have been contaminated by pesticides.

Little seems to have changed in this regard today. A study by the Central American Institute for Studies on Toxic Substances of the University of Costa Rica found several toxic agrochemicals in use on Costa Rican banana plantations. The study notes that "the pesticides dispersed in banana plantations are one of the biggest threats to the men and women who work in them"[8].

Things are no better where other crops are concerned. COLSIBA found that in most cases, no proper procedures exist for handling pesticides. The union also condemned the aerial spraying of plantations done while workers are labouring in the fields and in disregard of local communities. It is even more dangerous where basic precautions like information, training and the use of protective equipment are ignored.

Other risk factors stem from the extreme insecurity of agricultural work in the region where human factors, weather conditions, the risk of injury from work tools and equipment and hygiene standards in some jobs are widely disregarded.

Instead of improving working conditions, some producers pare spending on work health to the bone and harass those who demand it. Unions have reported threats to sack workers certified as medically unfit to work and workers who claimed medical care branded as malingerers. Some employers are reportedly not paying their social security contributions while deducting contributions from workers' wages. Outsourcing of clinics and medical services to private firms has meant that medicines are now in short supply on some farms.

A 2005 study in a number of Costa Rican coffee plantations found "some 1 100 shacks in just over 500 farms with inadequate sanitation and unfit for habitation: only 38% of farms had drinking water; over 50% of the shacks were dilapidated and overcrowded with more than three people to a bedroom; 79% had no solid waste treatment system". These appalling housing conditions increase the risk of disease but are the daily bill of fare for the casual labourers and migrant workers who flock to the large farms when there is work. In some farm enterprises, such as banana plantations, the shacks are on or near the plantation, but others may be up to two hours' drive away. In some cases, day labourers are carted to work in cattle trucks[9].

3 000 deaths in sugar cane plantations

Casual labour and outsourcing have become commonplace practices the immediate consequences of which are insecurity and a poverty risk. They also allow employers to abdicate various work and health responsibilities. Furthermore, many of these jobs are paid not by a fixed wage, but as piece work. A combination of very low pay and a very poor workforce means that sugar cane harvesters have to work at a fast pace even in harsh weather conditions.

These sugar cane plantation working conditions may well be behind one of the worst tragedies to affect Central America's workers in recent years – the deaths of over 3 000 people from chronic kidney disease (CKD). Figures from the Nicaraguan association of CKD victims are even more alarming – 3 600 deaths in that country alone[10]. Reported cases stretch across a swathe of 1 000 km spanning the Pacific coast from southern Mexico to Panama, although Nicaragua, El Salvador and less so Costa Rica, are the worst affected countries.

The aetiology of this variant of CKD, already considered of epidemic proportions, is unknown. Although found among other types of farm and occupation, and even the unemployed, it is mainly prevalent among sugar cane plantation workers. Some groups and experts suggest it may be linked to exposure to agrochemicals. Research is now moving in another direction, however, albeit a role for these chemicals is not ruled out.

Thinking at the present time suggests that CKD may be linked to a combination of working conditions, heat and dehydration. So suggest Boston University epidemiologist Daniel Brooks[11] and reports such as those written by the SALTRA Programme on Work and Health in Central America.

This high frequency of CKD could be caused by severe dehydration affecting the kidneys produced by the conflation of two factors. One is the high temperatures reached in some sugar cane plantations. A study by the SALTRA programme in Costa Rica[12] found that these temperatures can range from 32° and 36°C, topping 40°C in some areas[13]. This is not only due to the heat or the stifling humidity of the region, but also the fact that the cane has to be burned before being cut, forcing farmworkers to toil alongside still glowing ashes.

8. Wesseling C., Barraza D. & Partanen T. (2011) Efectos por plaguicidas en la salud en los trabajadores bananeros.
9. Lorío R. & Partanen T. (2012) La recolección del café, una labor por visibilizar.
10. Trucchi G. (2010) Como si fuera el primer día, Rel-UITA, Managua, Nicaragua, 5 January 2010.
11. Meléndez J. (2011) Una epidemia azota a los braceros de la caña en Centroamérica, El País.
12. Wesseling C. *et al.* (2011) Trabajadores de la caña de azúcar.
13. Storr W. (2012) What is killing sugar-cane workers across Central America?, The Guardian.

Aerial spraying of plantations goes on while workers are labouring in the fields and in disregard of the local community.

The other factor is the extremely precarious workplace conditions, meaning that rules to avoid dehydration and overheating are not enforced. A report by The Center For Public Integrity revealed that "the average temperature in the fields was 35.5°C", noting that the U.S. Occupational Safety and Health Agency (OSHA) "requires a 45 minute break after 15 minutes' working in such high temperatures"[14].

Enforcing such a rule in Central America is outside the realms of possibility. One CKD sufferer in Nicaragua reported having to work 12 hours straight to cut up to 8 tonnes of sugar cane for less than one dollar per tonne. The situation has now worsened with more use of labour outsourcing[15].

Dr. Cecilia Torres, onetime researcher at the National Autonomous University of Nicaragua, has also made a link between CKD and job insecurity, couched in the following terms: "What do you get when workers are paid 20 cordobas (one dollar) for every tonne cut? They will work themselves to death on piece work to earn a month's pay. That's where the bad consequences kick in: low pay, very insecure conditions, a workplace where temperatures can be up to 50°C, constant dehydration and drinking water that is often contaminated[16]."

Slash-and-burn cultivation provides food manufacturers with clean plants that are easy to process.
Image: © Oswaldo Rivas

And as if all that were not enough, the SALTRA Programme found that while workers take up to eight litres of water with them, they do not drink enough because the water gets too warm in the heat and as work progresses, it takes the workers away from their water bottles[17]. This is further compounded by health care restrictions which make the problem worse in rural areas which are often far from health centres.

Meanwhile, in the cloistered luxury of their villas, the big landowners remain untouched by this tragedy and denying all responsibility. Nicaragua Sugar Estates Ltd (NSEL), the company owned by the millionaire Pellas family which has sugar cane plantations in several countries, has gone so far as to claim that the victims were looking at "obtaining unjustified monetary compensation", arguing that ex-workers of the San Antonio Sugar Mill had contracted the disease while working for another company[18].

They continue to pile up the wealth today through exports of sugar cane products (sugar, rum, biofuels, etc.) to the United States and Europe. Some have amassed huge fortunes but cannot give their workers a decent life, while the political class stands silently by, doing nothing to tackle this serious problem.

COLSIBA reported that the same conditions are being found in some farms overseen by private organizations like the Rainforest Alliance, which specializes in certifying fair working conditions to international standards and corporate social responsibility requirements. But this activity in fact conceals a propaganda exercise designed to artificially improve corporate images so that consumers in the North will believe that they are working for progress and the well-being of communities in the South.

The divide between an entrepreneurial class seeking to maximise profitability, and an impoverished and downtrodden working class is widening. A United Nations Development Programme study done in Costa Rica concluded that the banana-growing regions were the country's poorest and least developed[19]. This contrasts sharply with the cosseted comfort in which local aristocrats and fruit company shareholders live. Clearly, in the century or so since the United Fruit Company[20] arrived in the region, the situation is as parlous as before. Today, history is stuck on repeat. ●

14. Greene R. et Chavkin S (2012) Miles de trabajadores de caña de azúcar mueren ante escasez de acción oficial, The Center For Public Integrity.
15. Trucchi G. (2009) Nicaragua: Grupo Pellas, una vergonzosa insensibilidad, Biodiversidadla.
16. Dr. Torres – private email, March 2009.
17. Wesseling, *op. cit.*
18. http://www.laverdadnsel.com.
19. Atlas del desarrollo humano cantonal de Costa Rica 2011, UNDP.
20. United Fruit Company was a banana company founded in the United States in 1899, renamed Chiquita Brands International in 1989. To it we owe the term "banana republic" for its ability to sway the governments of Latin America into limiting the redistribution of land to local farmers.

Collective action to transform work

Working conditions are getting worse and worse. The harm they are doing to employees makes health and safety at work critical. But rather than just tackling the work-related factors of particular diseases, what is needed is to act on the work relations that are behind the decline in working conditions. Taking ownership of knowledge and modes of action is decisive here. The book *(Se) Former pour transformer le travail* (Learning from each other to transform work) is a valuable tool for doing that. It describes a collection of schemes run over the past fifty years in different regions (Europe, Latin America and Canada). It brings together researchers, trade unionists, health and safety advisors, etc. who as members of an international, interdisciplinary network, have developed a process of mutual education through which trainers and trainees aim to develop a critical understanding of work and test out practical ways of changing it. This process creates the conditions in which to specifically challenge work organization, which, as Laurent Vogel writes in the foreword, "is the prerequisite for any blueprint for social well-being".

The book holds a wealth of interest:
— it explores different practices for transforming and critically assessing work, with many contributions describing schemes for training trade unionists to negotiate changes to working conditions;
— it takes a detached look at the conditions for developing knowledge that can build the capacities for collective action, especially that of union representatives;
— the assessment of schemes argues against compliance with external standards which it looks at in relation to the political issues which it underlies;
— it outlines new policy directions for training the various players in health and safety at work.

The book is not only of vital assistance to anyone trying to develop processes for transforming working conditions, it also stands out for the training methodology described which borrows from workers' education practices. Trade union education is a testing bed for other relations where the roles of trainer and trainee are not immutably fixed. What is needed to develop a body of collective knowledge are teaching/learning methods that validate the skills and knowledge of all participants in training. Such a methodology results from a shift in the subject areas involved in the transformation of work. It makes knowledge production the result of a conjoined scientific and political commitment, not least through the status and legitimacy it confers on the voice of the stakeholders in work and working conditions. That shift in fact is the book's basic premise.

That is why much of what it has to say is directed chiefly at ergonomics and occupational psychology educators wanting to start up such schemes, for which it propounds the ethical and epistemological foundations.

The book comes with a DVD giving access to documents, tools and video clips produced by the authors. It is a proper work tool for trade union reps as much as for other stakeholders trying out schemes for transforming work. The range of schemes chronicled helps to broaden the prospects for collective action for all those who see transforming work as a key aspect of any blueprint for social well-being.

The authors' approach once again shows how the fight for health and safety cannot be divorced from collective action to improve working conditions. Advances in medical knowledge and technical progress cannot bring it about of their own accord.

Action for health and safety at work is therefore not predominantly technical in nature. It is a political issue to do with the balance of power in stakeholders' practices and strategies to impose legitimate definitions of issues and procedures.

The processes recounted in this book unquestionably inform an approach to the collective development of knowledge and know-how through which to build the capacities of workers and their representatives to act on matters that go to their interests

— *Nicolas Latteur,*
instructor, André Genot workers – education centre (Belgium). Author of *Le travail, une question politique,* ed. Aden, 2013

(Se) Former pour transformer le travail. Dynamiques de constructions d'une analyse critique du travail
by Catherine Teiger & Marianne Lacomblez (eds.), ETUI-PUL, Québec, 2013, 764 p.
In French

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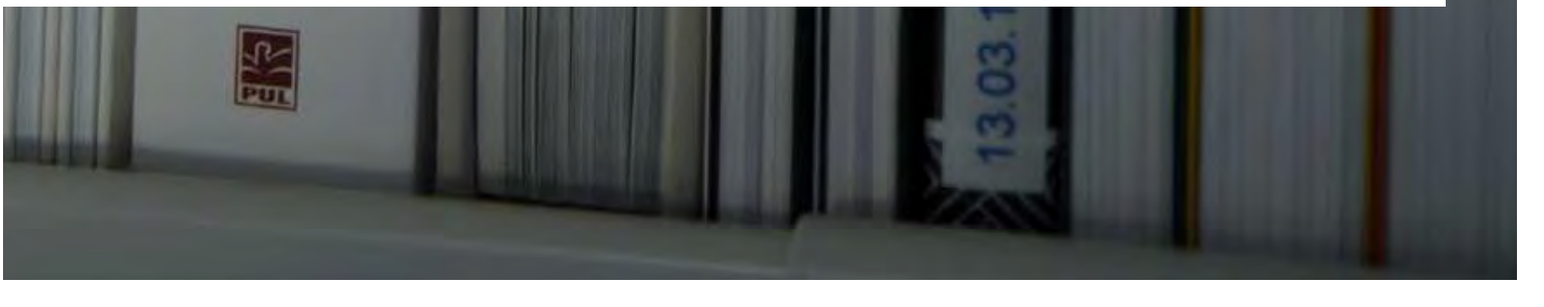

Class, gender and ethnic relations on London's building sites

How do you get into the building trades? It requires a high level of skill, mostly acquired informally. It is learned not so much in the classroom as through experience, from knowledge passed on by other workers, from the actual content of work kept at a discreet remove from what bosses think it is. It is an industry where job identities are nigh-inseparable from the gender and ethnic divisions of labour. Women building workers are few and far between in Western Europe. There are sharp ethnic divisions, too, although varying greatly between countries. Darren Thiel's book looks at how class, gender and ethnicity play into one another in the construction industry.

The author worked for seven years more or less continually as a painter and decorator before going on to study for a PhD in sociology and ethnography. Many of his family worked in the construction industry. He spent a year doing participant observation on a big central London construction site refurbishing three huge run-down National Health Service buildings. At the same time as working, Darren Thiel recorded 31 detailed interviews. Many workers interviewed were not overly forthcoming.

Where this book really wins out is in the author's keen sense of observation and exceptional ability to describe working conditions in the workers' own language. The interplay between the workers' own words and the language of scholarly description itself becomes a rich source of knowledge. It paints a picture of a culture marked by a powerful sense of identification with the trade and its dignity as well as fight-back strategies both through language and practices: they describe the world, forge ties of complicity and solidarity. They speak of ways of tackling exploitation that are often belittled and disparaged (like acts of time banditry). The perpetuation of these practices relies on mutual trust, resulting in strong pressure from the workforce to get rid of "grasses" from sites.

The main scope of study focuses on the contrast between managing "in the office" and physical work "on the tools", the relationship between work, recreation and their respective timeframes, the relationship between job identity and masculinity, the materiality of long subcontracting chains and the informal organization of this sector of the economy. The backdrop to all aspect of the research is provided by a ubiquitous ethnic division of labour.

The author does not look in detail at site safety and health. He points up the huge gap between worksite and office, where the health and safety officer's main concern is to write up documents to cover the firm against prosecution for serious accidents. The book includes a picture that speaks volumes: a Health and Safety Executive poster plastered with lewd pictures.

The book offers much food for thought about the part played by force and cultural adhesive in the exploitation of workers. The singular characteristics of building work offer many ways of fighting back. There is much less scope for controlling workers' activity through overseers or by computerized systems than in factory work. To restore a balance of power in their favour, employers have developed extreme forms of contingency. Long subcontracting chains create a division of labour by specialised trade. Each trade has the hallmarks of an ethnic niche with sub-bosses from the same community and members living in ethnically-bound geographical areas of London. They are often paid cash in hand.

The ethnic division of labour generates complex control mechanisms based both on elements of common culture (same origin, religion and language), forms of solidarity and situations of brutality and violence. It is a breeding ground for distrust and even racism between groups in a climate of increased competition. The construction of masculinity is also analyzed by the author, who notes that masculine bodies are both sources of labour power sold by builders in the marketplace and also sources of power in interpersonal relationships.

The bibliography is limited to literature published in English. The author nevertheless emphasises the paucity of sociological study of the building industry both in Britain and the United States. A comparison of his observations with sociological studies published in other countries could have been highly instructive[1]. Sadly, this is a common limitation of English language scientific output.

— Laurent Vogel

Builders: Class, gender and ethnicity in the construction industry
by Darren Thiel, London, Routledge, 2012, 186 p.

1. Jounin N. (2007) Chantier interdit au public: enquête parmi les travailleurs du bâtiment, Paris, La Découverte. Colectivo IOE (2005) La inmigración extranjera en el sector de la construcción de Madrid. Su situación desde la perspectiva de la salud y seguridad laboral, Madrid. Ibañez M. & Narocki C. (2012) Occupational Risks and Masculinity: the Case of the Construction Industry in Spain, Journal of Workplace Rights, 16, 195-217.

These books are available in the ETUI' s Documentation Centre. www.labourline.org

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