# Global Warming and the Crisis of the World Food System: A Trade Union Response

Most trade union approaches to climate change focus on the push for “green jobs” and the need to secure rights for workers employed in industries/sectors which would be necessarily be phased out as well as rights for workers in the newly-created, climate-friendly jobs (“just transition”).

The shortcomings of this approach are two-fold. First, it can underestimate the extent to which current technologies are embedded in power relations which require more than rational arguments to transform. Technology is never socially neutral. Casual talk of a “Green New Deal” obscures the extent to which the Rooseveltian New Deal was a response to an unprecedented social collapse, financed through massive public investment. Market mechanisms won’t deliver what we need – global warming is the definitive “market failure”- and pressure from financial markets following the global financial meltdown has led governments to attack public expenditure, including various subsidies and supports for alternative energy. Second, it tends to overlook that rights are never granted, but always fought for.

A different approach to the global food system and its preeminent role in heating the planet indicates a path to a more climate-friendly system of food production through food workers’ own struggle for their rights. Approaching the issues in this way establishes workers’ struggles as a key vector for changing the food sector’s environmental footprint, rather than seeing workers as passive suppliants at the end of a hypothetical transition

in which they have played no role. From this perspective, the transition is embodied in and propelled by the struggle for trade union rights; the movement itself is a constituting element in the transition.

The global food system today is in permanent, deepening crisis, the matrix at the intersection of the global hunger, climate and water crises. Crisis is an overused word, and is used here in the strictly medical sense, as a condition threatening the survival of the organism. An estimated 1.2 billion people are malnourished and hungry. Subsidized overproduction feeds the destruction of local and national food producing systems. Our food system is addicted to diminishing sources of increasingly costly fossil fuels, depleting and destroying water and topsoil through production methods which contribute massively to global warming through greenhouse gas (GHG) emissions while failing its primary task, which is to satisfy the universal human right to affordable, safe and nutritious food.

While until recently much of the discussion on food and global warming focused on transport ("food miles"), the food system's largest contribution to GHG production occurs *before* food leaves the farm gate.

According to the Stern Review (and other studies report similar results), agriculture and land use (principally agriculture and forestry) jointly account for 32 per cent of GHG emissions – greater by far than any other single industry or sector (the Stern Review puts industry and transport at 14 percent each – and products for agriculture like fertilizers and pesticides fall under industry in this report). Factor in

processing, transport, packaging, waste etc. and the food system is responsible from 40 to as much as 57 percent of all GHG.

According to the Stern Review (*Annex 7.g Emissions from the agriculture sector)*, "Fertilisers are the largest single source (38%) of emissions from agriculture. Agricultural emissions are expected to rise almost 30% in the period to 2020…Around half of the projected growth in emissions is expected to come from the use of fertiliser on agricultural soils. Nitrous oxide is 296 times more potent a GHG than carbon dioxide."

Pesticide manufacture alone accounts for up to 16% of the energy input into arable crops. As agrochemicals become more complex and more toxic in response to diminishing returns, the energy input in their production rises. Moreover*, a full life-cycle analysis of their total contribution to greenhouse gas emissions has never been carried out.*

Claims that genetic modification (GM) technologies will lead to reduced agrochemical use are simply false. Increased acreage for GM corn, soybean, and cotton crops has increased the use of weed-killing herbicides - in the U.S, according to one estimate, by 383 million pounds from 1996 to 2008.

Not only have various formulations of the same agrochemicals (like Monsanto's glysophate, for example) become more toxic in response to diminishing returns. There has been a gradual substitution of more GHG emitting chemicals for lesser ones. Earlier this year, Dow AgroSciences applied for a permit to release large amounts of sulfuryl fluoride onto farm fields in four US states with the goal of "sterilizing" the soil. Originally used as an anti-termite pesticide in indoor fumigation, sulfuryl fluoride came into

widespread use as a food fumigant in response to the phasing out of ozone-depleting methyl bromide. *According* to Dr. Brian Hill, a scientist with the Pesticide Action Network, *sufluryl fluoride is 4,780 times more potent as a greenhouse gas than carbon dioxide.*

The force driving GHG emissions in agriculture is the expansion and intensification of high input, export-driven, fossil fuel-intensive monoculture production which externalizes costs, including the cost of climate change. Most of the deforestation which accounts for 18% of GHG emissions is linked to monoculture expansion, of which the growth of soya in the Amazon basin is but the best-known example.

In addition to high levels of greenhouse gasses, this method of production accelerates the already rapid loss of biodiversity, which is the foundation of life and of food. It promotes the destruction of soil organic matter (sterilizing soil?), leading to topsoil erosion, flooding and the exhaustion of ground water supplies. Runoff from nitrogen fertilizers is the main factor driving eutrophication; water death means still more GHGs. The more intensive monocuolture expands, the greater is the food system's vulnerability to climatic and biological shocks. These shocks have their greatest impact on the poor and the hungry – over half of whom are food producers.

Because we are literally eating oil, agriculture is trapped in the rising price curve of fossil fuel dependency. In 2007, for example, as oil went from USD 50 to 140 per barrel, the price of ammonia fertilizer for US farmers increased from USD 200 per ton to over 1,300. We see analogous developments in livestock and poultry production, which have similar driving forces and social/biological consequences. The increased concentration of animal production in fewer and larger high-input intensive production centers means

more fossil-fuel dependency leading to diminished biodiversity and unmanageable (in this case methane) GHG emissions.

The antidote to GHG-intensive monoclture is not an exotic or expensive technical fix or patent-protected remedy. It is well known: the proven, and necessary, alternative to monoculture is polyculture.

Sharp reductions in GHG emissions are immediately achievable through multicropping, mixed livestock/cereal production and rotational systems which use catch and cover crops to control pests, reducing GHG emissions with equivalent or higher yields. Sustainable low-intensity input techniques enrich soil organic matter, preserve biodiversity, conserve top soil and water - and with proper support can generate socially and environmentally sustainable rural employment.

According to the authoritative United Nations International Assessment of Agricultural Knowledge, Science and Technology for Sustainable Development (IAASTD) “Agroecosystems of even the poorest societies have the potential through ecological agriculture and IPM to meet or significantly exceed yields produced by conventional methods, reduce the demand for land conversion for agriculture, restore ecosystem services (particularly water), reduce the use of and need for synthetic fertilizers derived from fossil fuels, and the use of harsh insecticides and herbicides."

Precisely because of the power relations I spoke of a the outset, at the center of which is embedded a core group of transnational seed, agrochemical, primary processing and trading corporations, the experience and research brought together in this huge multi-year, multi-disciplinary study has been simply ignored. Its main conclusion,

unsurprisingly, has likewise been ignored: *"The food security challenge is likely to worsen if markets and market-driven agricultural production systems continue to grow in a 'business as usual mode.'* To this one might add that the "climate change challenge" is also worsening as a result of business as usual.

Business as usual underpins the system of trading in "offsets" which encourages the expansion of intensive, GHG-emitting agriculture. It underpins the World Bank's "New Deal for Agriculture", which offers increased funding for the expansion of monocultures through "integration" into global supply chains and the false promise of "market access. And it underpins the financially driven transformation of food production into a "strategic asset" generating super returns for investors profiting from the upsurge in land acquisitions for export monocultures.

The technical basis for a transition to environmentally sustainable food production with a reduced carbon footprint has long been known. It is available, accessible, and inexpensive (all factors which mitigate against its adoption in a world of patent-protected agribusiness giants!).The barriers.to change are social and political, not technology-based. These can be found in the power matrix I referred to at the beginning, and include: the power and reach of the global agrifood TNCs; a world trade regime which systematically reinforces their power through expanding control over global supply, processing and retail chains; an intellectual property regime which enforces dependency on high-intensity, high carbon, high GHG-producing inputs; unregulated global finance; the systematic destruction by the multilateral lending agencies (IFIs) of public interest

research, support and extension services for sustainable food and agriculture; and unequal access to land, water and other vital resources.

These factors have been extensively analyzed and highlighted by critics of the global food system . But there is an additional factor which reinforces "business and usual", yet is rarely articulated: the systematic violation of the rights of agricultural workers.

The world food system is usually discussed as if the only actors were "farmers" (or sometimes "peasants"), categories which obscure more then they enlighten, for many farmers are dependent on waged labour for survival, and farmers come in all sizes. Yet of the 1.3 billion people employed in agriculture (half the global labour force), there are some 450 million waged workers, over half of whom are women. Seventy percent of child labour globally takes place in agriculture – a sure index of endemic poverty – and agriculture produces over 170,000 work-related deaths annually. Agricultural workers are twice as likely to die at work than in any other sector. Between 3 to 4 *milllion* pesticide poisonings occur each year, some 40,000 of them fatal. Only five percent of the world's agricultural workers have access to any kind of labour inspection system or legal protection of their health and safety rights. Chronically high rates of malnutrition occur among agricultural workers: those who help feed the world among the most food insecure. And the lack of workplace rights means lack of access to adequate, safe supplies of water

The most fundamental demands of agricultural workers - for a living wage, for collective bargaining rights, for a safe living and working environment – already take us in the direction of sustainable agriculture - "green jobs" - yet workers remain excluded from

virtually all policy analysis of the crisis of the global food system. So we have World Food Summits in which workers are not represented or even invited; reports from the UN High Level Task Force on the Global Food Crisis which fail to mention low wages as a source of hunger but instead warn of the dangers of increasing wages; FAO “briefing papers” on world hunger which fail to mention workers or corporations. Even the IAASTD contains only one furtive reference to “agricultural labour”. The IAASTD highlights the central importance of equity and international human rights instruments, but because it overlooks the existence of 450 million workers it neglects completely the potentially transformative role of waged labour in agriculture and with it that body of international human rights law which defines the collective rights of those workers: the Conventions of the ILO.

The ILO’s Core Conventions establish the right of all workers to organize and bargain collectively. They deal with forced labour, child labour, non-discrimination, and equal remuneration – acute issues on farms, plantations, orchards etc. Convention 99 on minimum wages in agriculture should serve as the basis for a living wage for agricultural workers. Convention 184 on health and safety in agriculture sets out strict procedures for the use of pesticides and hazardous chemicals. Convention 141 on Rural Workers Organizations commits governments to promoting the “establishment and growth of strong and independent rural workers’ organisations” for economic and social development.

These conventions are all routinely breached – not only in poor countries, but in some of the richest countries of the world. Yet if they were implemented and enforced, not only

would the position of agricultural workers be radically different – agriculture itself would have to be substantially transformed in ways which are socially and environmentally truly sustainable. What government has committed itself to promoting “strong and independent rural workers’ organizations” for economic and social development? Health and safety for agricultural workers – for whom the working and living environments are identical – is simply incompatible with the massive application of chemical toxins. Justice for rural workers is not compatible with the strip mining of the soil promoted by high-input, industrialized, GHG-producing monocultures. The conquest of rights is ultimately inseparable from the transformation of production.

We are not simply talking about “green jobs”; it is also a question of defending rural employment as such, a key element in the conservation of water and soil resources. Our affiliates tell us that in Brazil, each 8 hectares cultivated by small farmers using mixed cropping generates one job. Large-scale mechanized monocultures generate 1 job per 67 hectares. As agriculture steps us its reliance on fossil fuels to produce growing quantities of greenhouse gasses, the countryside is being emptied, its residents thrust into urban hyperslums where work is scarce or non-existent.

Halting and reversing global warming is about rights. Food rights are not only about the right to food, but about rights for those who produce the world’s food. This implies an organizing agenda to achieve greater organizing and bargaining power for agricultural workers at all levels through full implementation of ILO Conventions, including those specific to agriculture. It also means a struggle to secure equal access to land, water and biological resources.

From this perspective, building trade union power for agricultural workers, and allying that power with the struggles of small rural producers, is an indispensable condition for transforming agriculture from a major source of GHG emissions to a carbon neutral, even carbon positive source of nutrition and resource conservation. Rights – and bargaining power through union organizing – for agricultural workers are crucial to this transition.

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*Notes (and an afterword)*

This text is essentially the transcription of a presentation made at a panel discussion in Copehnagen, Denmark on December 14, 2009 in connection with trade union meetings around the Climate Conference. The discussion was organized by the IUF, and titled "Low Carbon Diet: The trade union vision of sustainable food production and the right to food". This accounts for its condensed, schematic presentation and the absence of the usual scholarly apparatus of footnotes etc. The “Copenhagen Protocol” and subsequent events, in particular the renewed food price inflation of 2010-11 and associated spike in global hunger as well as the acceleration of “land grabbing” farmland for monoculture production and speculation, confirm the analysis. Readers interested in following up the references can consult the Stern Review at http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/stern_review_report.htm. The IAASTD can be consulted online at http://www.agassessment.org/. The figure for increased herbicide applications in North American agriculture linked to GM crops comes from the 2009 report of the Organic

Center and the Union of Concerned Scientists entitled Impacts of Genetically Engineered Crops on Pesticide Use: the First Thirteen Years, available at http://truefoodnow.files.wordpress.com/2009/11/13years2009-fullreport-11-16-09.pdf. The companies dispute the figures; their own sales figures, often buried in shareholder reports and regulatory filings, tell a different story.

Many of the issues discussed here are elaborated in the IUF's 2002 publication The WTO and the World Food System: A Trade Union Approach, available at http://www.iuf.org/cgi-bin/dbman/db.cgi?db=default&uid=default&ID=307&view_records=1&ww=1&en=1), and related articles on the IUF website: www.iuf.org. While it doesn't address climate change, there is an excellent discussion of food security and the rights of agricultural workers, in which ILO Conventions are viewed as a lever for transforming the food system, in the 2010 Report of the UN Special Rapporteur on the right to food, Olivier De Schutter, on Agribusiness and the right to food, presented to the UN Human Rights Council on December 22, 2009, available at http://www.srfood.org/images/stories/pdf/officialreports/20100305_a-hrc-13-33_agribusiness_en.pdf