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Submission to the Rio + 20 conference on sustainable development
Food security and sustainable agriculture

The Pacific Institute of Resource Management (PIRM), founded in Wellington in 1984, is a national organisation, dedicated to sustainable use of the earth's resources. We publish a journal, *Pacific Ecologist* to help educate on various issues on ecology, equity and justice. PIRM also makes submissions to government on various issues. We are concerned about deterioration of global ecosystems, rapid depletion of natural resources and degradation of the environment, examples being climate change, loss of biodiversity, soil erosion, pollution of water systems and natural habitats. Our objectives are to advocate respect for natural processes; conservation of physical resources and integrity of all life forms. We contribute to the establishment of New Zealand as a strong, independent active authority advocating implementation of a world conservation strategy. We work for the improvement of human communities worldwide living in harmony with each other and the natural world.

"Everyone has the right to a standard of living adequate for the health and well-being of himself [sic] and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control." (*Universal Declaration of Human Rights,* 1948, Article 25)

The above quote from the **1948** Declaration of Human Rights and the Right to Food is salient in considering the matter of food security and sustainable agriculture for the Rio+20 conference this year in 2012. Aotearoa/New Zealand played a very supportive role we understand in establishing the Human Rights Declaration and is a signatory to a number of international conventions affirming the right to food. These include the United Nations' International Covenant of Economic, Social and Cultural Rights (1996), and the Convention of the Rights of the Child (1989), recognising the right of people to an adequate standard of living, and the right to food. NZ has also committed to the aims of the World Declaration on Nutrition (Rome, 1992) and the Declaration and Programme of Action World Summit (Copenhagen, 1995) which invite states to draft national programmes of action to defeat poverty and improve nutrition.

Yet over 60 years after establishing the original Human Rights Declaration, here in our country, children are going to school hungry [1] and we have significant poverty levels. [2]. New Zealand governments from various points of the political spectrum have so far not established policy or resourcing to indicate real

commitment to achieving this fundamental human right to food. [3] Several commentators, including noted economist, Dr Gareth Morgan in his book *The Big Kahuna*, [4] and academics from the University of Waikato, Dr Michael Goldsmith and Dr Kellie McNeill, recommend the Universal Basic Income as a practical means for achieving this in both developing and developed countries, which also addresses equality, justice and sustainability concerns. [3] Since this is the wealthiest period in human history, the UBI seems to be a fine way to bring greater balance and equity in the world in a time of enormous disparities in wealth and poverty.

Considering that this is the wealthiest period in human history it's strange that poverty statistics are so shocking. Over half the world is hungry with 1.4 billion living on less than $US1.25 daily, and 700 million more since the 2008 food crisis, and another 3 billion people live on less than $US2 daily, [5] according to a revision of a 2007 World Bank report. The Millennium Development goals to halve poverty by 2015 will clearly not be achieved.

There is also the ongoing global food crisis, which began in 2007 and continues. Global food prices increased by 8% from December 2011 to March 2012 due to higher oil prices, adverse weather conditions, and Asia's strong demand for food imports, according to the World Bank Group's latest *Food Price Watch.* [6] Maize prices increased by 9%, soybean oil by 7%, wheat by 6%, and sugar by 5%. Crude oil prices rose by 13%. Domestic food prices remain high, especially in Africa as the result of large food imports and local factors, like civil unrest, high fuel transport costs and bad weather conditions. Industrial agriculture is heavily dependent on oil products, used in chemical fertilisers and also pesticides and for long-distance transport of food.

The food security/hunger crisis is related to the oil depletion crisis and also the financial crisis and the climate crisis. Food prices rise, causing hunger worldwide as oil prices rise, also because of the unstable, speculation-driven financial system which is now gambling on food crops. "People die from hunger while the banks make a killing betting on food," said Deborah Doane of the World Development Movement in January 2011.

Food security hostage to WTO

In a statement on 16/11/2011, from Geneva the UN Special Rapporteur on Right to Food, commented: "The world is in the midst of a food crisis which requires a rapid policy response. But the World Trade Organisation (WTO) agenda has failed to adapt. Developing countries are rightly concerned their hands will be tied by trade rules," warned Olivier De Schutter, UN Special Rapporteur on the Right to Food. [7] "*Food security is the elephant in the room which the WTO must address. Trade did not feed the hungry when food was cheap and abundant, and is less able to do so now prices are sky-high. Global food imports were worth $US1.3 trillion in 2011, and the food import bills of the least developed countries have soared by over a third in the past year. The G20 has acknowledged that excessive reliance on food imports has left people in developing countries increasingly vulnerable to price shocks and food shortages,*" De Schutter said, adding: "*The WTO must now do the same. We must avoid face-saving, short-term solutions…Higher tariffs, temporary import restrictions, state purchase from small-holders, active marketing boards, safety net insurance schemes, and targeted farm subsidies are increasingly acknowledged as* ***vital measures to rehabilitate local food production capacity in developing countries***. But WTO rules leave little space for developing countries to put these measures in place…*Current efforts to build humanitarian food reserves in Africa must tip-toe around the WTO rulebook. This is the world turned upside down. WTO rules should revolve around the human right to adequate food, not the other way around***."**

A major factor contributing directly to the food/hunger crisis is the free-market, export-driven policies promulgated forcefully to the third world, by the World Bank, World Trade Organisation and IMF. These policies have destroyed food self-sufficiency throughout Africa, Latin America and Asia, where most of the world's people live, turning countries that were formerly food exporters into food importers. As Walden Bello comments in a 2008 article, Destroying African Agriculture: "*Whether in Latin America, Asia,*

or Africa, the story has been the same: the destabilization of peasant producers by a one-two punch of IMF-World Bank structural adjustment programs that gutted government investment in the countryside followed by the massive influx of subsidized U.S. and European Union agricultural imports after the WTO's Agreement on Agriculture pried open markets." [8] These policies not only destroyed food security, the unfair trade practices of the EU and US, legitimised by the WTO, allowed heavily subsidised, low-priced goods to enter countries and drove many third world farmers to ruin. **Through destroying national agriculture in third world countries**, **the resulting reliance on food imports now leaves the poorest third world people, who are the majority, increasingly vulnerable to price increases and food shortages as oil prices rise.**

Sustainable agriculture & food security

Industrial agriculture is in crisis, as it relies heavily on depleting fossil fuels in its pesticides and chemical fertilisers and long distance transport of goods. We also now know that the costs to nature over 50 years of the Green Revolution experiment are high. These include poisoning the web of life, e.g bees, with use of toxic pesticides (which have caused more pests to proliferate), soil erosion through using chemical fertilisers, destruction of biodiverse forests and gardens with all their resilience and their replacement by disease-susceptible monocrop plantations, destruction of water resources through logging biodiverse forests and creation of large dams, etc. Worldwide 1.9 billion hectares of land are now significantly degraded, soils are less fertile, erosion has greatly increased, and the degradation has brought poor crop yields, abandoned land and deforestation, according to the important International Assessment of Agricultural Knowledge, Science & Technology report in 2008. [9]

Because of its reliance on finite fossil fuels and monocultures, industrial agriculture contributes significantly to climate change and this reliance also makes its products prone to increasing costs as finite fossil fuels are depleted.

Fortunately there is an excellent answer to the litany of problems. A UN report, *Agroecology and the right to food*, [10] in a comprehensive review of recent scientific literature, calls for a fundamental shift to agroecology to boost food production and improve millions of the poorest people's livelihoods. "*Industrial farming on large plantations will not solve hunger or stop climate change. The solution lies in supporting small-scale farmers' knowledge and in raising their incomes so as to contribute to rural development. To feed 9 billion people in 2050, we urgently need to adopt the most efficient farming techniques available,"* says Olivier De Schutter, UN Special Rapporteur on the Right to Food and author of the report presented to the Human Rights Council of the UN in January 2011. Agroecology, which mimics natural processes, has had remarkable successes in the past decade, improving incomes and livelihoods for many millions of the world's poorest, small-scale farmers and has improved the resilience of food systems.

The report shows that agroecological methods out-perform chemical fertilizers, boosting food production in difficult environments**. Hunger today is caused by poverty rather than lack of global food supplies**. After the food price crisis of 2008, the report says, it's necessary to reorient agriculture to highly productive methods that preserve ecosystems and invest in those who need it most, poor, small-scale farmers. Higher incomes for smallholders increase demand for goods and services from local traders, whereas large estates spend more on imported inputs and machinery. Support for small producers, breaks the vicious cycle of rural poverty and expanded urban slums where poverty breeds poverty. [11-17]

"Climate change with more frequent and extreme drought and floods and less predictable rainfall is already affecting the capacity of some communities to feed themselves, and is destabilising markets. Agricultural production is threatened in entire regions, particularly those dependent on rain-fed agriculture. By 2080, 600 million additional people could be at risk of hunger, as a direct result of climate change. In Sub-Saharan Africa, arid and semi-arid areas are projected to increase by 60 million to 90 million hectares, and in Southern Africa, it's estimated that yields from rain-fed agriculture could be halved between 2000 and 2020." [18]

“Agroecology puts agriculture on the sustainable path, freeing food production from reliance on fossil energy. It mitigates climate change by increasing carbon sinks of soil organic matter and above-ground biomass, and avoids carbon dioxide emissions by reducing direct and indirect energy use on farms. The Intergovernmental Panel on Climate Change (IPCC) has estimated the global mitigation potential for agriculture at 5.5 to 6 Gt of CO_2-equivalent yearly by 2030. Most of this (89%), is from increased carbon sequestration in soil organic matter (humus), as occurs with agroecology.” [19]

“Agroecology improves resilience to climate change, and more extreme weather events. After Hurricane Mitch in 1998, a study of 180 communities of smallholders in Nicaragua demonstrated that farming plots cropped with simple agroecological methods - rock bunds and terracing, green manure, crop rotation, mulch, legumes, trees, plowing parallel to the slope, noburn, live fences, and zero-tillage - had on average 40% more topsoil, higher field moisture, less erosion and lower economic losses than conventional farms. On average, agroecological plots lost 18% less arable land to landslides and had 69% less gully erosion than conventional farms.” [20-21]

“More frequent and severe droughts can be expected in the future. The agroforestry programme developed in Malawi has protected farmers from crop failure after droughts. [22] On-farm experiments in Ethiopia, India, and the Netherlands have demonstrated that soils on organic farms improve the drought resistance of crops. [23] Diversity of species and farm activities involved in agroecology also helps mitigate risks from new pests, weeds and diseases. The agroecological practice of cultivar mixture bets on genetic diversity in fields to improve disease resistance. In Yunnan Province in China, after disease-susceptible rice varieties were planted mixed with resistant varieties, yields improved by 89% and rice blast disease was 94% less severe than when they were grown in monocultures.” [24]

In order to achieve the Right to Food responsibilities taken on by countries, Olivier de Schutter, the Special Rapporteur to the UN on the Right to Food reports it is urgent to invest maximum available resources in sustainable agriculture. [10] Investments in agroecological research should be prioritized, because of the considerable potential of such practices. States need long-term policies to adopt agroecological practices and should refer to agroecology and sustainable agriculture in national strategies to realise the right to food and in national plans to mitigate climate change. Public spending in agriculture needs to be redirected from private goods to providing public goods such as extension services, rural infrastructure and research on agroecological methods. “It’s urgent to facilitate the transition to agroecology, a low-carbon, resource preserving, resilient agriculture that can combat hunger, malnutrition and climate change and benefit many millions of the world’s poorest farmers. “

PIRM supports these measures of Olivier de Schutter, the Special Rapporteur to the UN on the Right to Food as of vital importance for basic human rights to be achieved for many millions of people, particularly in third world countries. It’s urgent to bring about this transition to sustainable agriculture in view of the dangers which climate change presents to food security and particularly third world countries like Africa.

Yours sincerely

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