



biowatch

SOUTH AFRICA

biodiversity | food sovereignty | agroecology | social justice

bulletin

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The industrialised food system takes centre stage in intersecting crises

Most people wouldn't connect the "rain bombs" that pounded KwaZulu-Natal in April, and again in May, with our food system. However, the increasingly industrialised global food system (including clearing natural ecosystems to make way for monocultures and livestock; destruction of soils through heavy tilling and the use of chemical fertilisers and pesticides; long global supply chains, processing and refrigeration; and methane from waste generated at every step) creates a whopping one-third of all climate changing emissions.

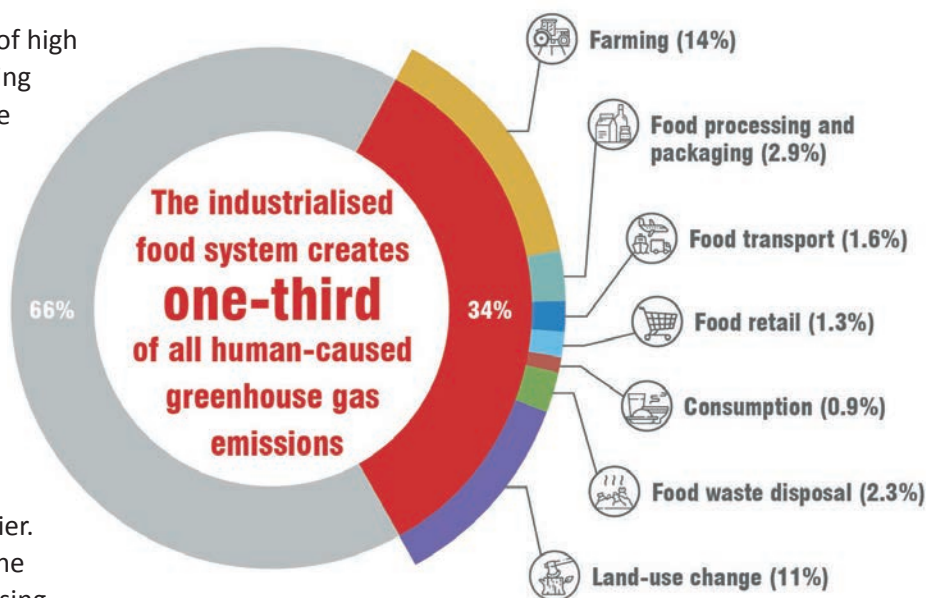
KwaZulu-Natal is where most of the farmers Biowatch works with have their homesteads, food gardens and fields.

Although the KZN coast has a long history of high rainfall events, extreme storms are becoming more frequent with climate change and are exacerbated by poor planning, increasing hard surfaces, the spread of shallow rooted alien vegetation, and large amounts of rubbish blocking stormwater infrastructure. The greatest proportion of plastic waste finding its way into the environment and washing out to sea is food packaging.

In addition to extreme weather, climate change is generally making South Africa drier. A lingering drought that intersected with the COVID-19 lockdown, job losses, and increasing

food prices resulted in the acute food insecurity experienced by one-in-five South Africans. No doubt this contributed to the unrest in July 2021 during which a warehouse stocked with pesticides belonging to United Phosphorus Limited (UPL) was burned, poisoning the surrounding communities and ecosystems. The April flash floods caused a UPL dam containing toxic waste from the incident to overflow, poisoning the river and estuary once again.

It has never been a more opportune time to tackle these intersecting crises through a transition to agroecology and a just and localised food system.



Biowatch Fact Sheet

Climate change and the industrialised food system

See page 2

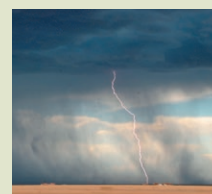
Biowatch and seven of our leading agroecology farmer demonstrators hosted the KZN



AE platform learning event on farmer-led seed systems.

See page 3

Despite its intentions, the Climate Change Bill lacks urgency and disappoints for not adequately



detailing South Africa's climate change response.

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From the director

The page 1 article in this issue of the *Biowatch Bulletin* focusses on the industrialised food system and its huge, but often not visible, contribution to climate change – the “elephant in the room”. Our *Fact Sheet: Climate change and the industrialised food system* speaks to this cumulative impact (see opposite), and we hope you find it helpful and informative. We will also be having a public seminar “Eating our way to climate chaos” on Friday, 12 August in Durban – do come and join the conversation about transforming the food system.

Important events are taking place in the policy and legal space. More detail on the Climate Change Bill is given in this Bulletin, but there are other interventions to be made in terms of the proposed regulations to both the Plant Improvement Act and the Plant Breeders’ Rights Act. It will be important to view these in the light of the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) as well as the International Treaty on Plant Genetic Resources for Food and Agriculture (“The Plant Treaty”). Also, the Department of Forestry, Fisheries and the Environment has published a draft White Paper “Conservation and sustainable use of biodiversity”. All the above are open for public comment July–August.

There has been such demand for our *AE Qalisa!* (agroecology now!) courses – we’ve been delighted to host three this year – and it’s been wonderful to see how they build on our one-day “Come and See” events and also link to the active KZN Agroecology platform. See page 3 for more detail.

With the many catastrophic events over the past two years – the global COVID-19 pandemic; on-going drought; floods in April and May; and the crisis facing the country of hunger, malnutrition and stunting – it has been both illuminating and affirming to have done in-depth interviews with 25 agroecology farmers from rural KwaZulu-Natal on their experiences of this time. We look forward to sharing these with you in the near future.

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Policy submissions

Competition Commission’s public market inquiry into the fresh produce market

Biowatch, the Pietermaritzburg Economic Justice and Dignity Group, and South African Civil Society for Women’s, Adolescents’, and Children’s Health (SACSoWACH) made a substantiated request to include the dry bean market in the inquiry due to the nutritional importance of dry beans, their storability without refrigeration, and suitability to diverse smallholder production and income generation systems.

Draft Framework for a Just Transition in South Africa published by the Presidential Climate Commission

Although the framework recognises agriculture as a key risk sector, Biowatch critiques the narrow focus on impacted agricultural value chains and the framing of the response in terms of Climate Smart Agriculture. A “Just Transition” of the whole food system is needed to tackle issues of water and nutrition insecurity, social inequity, and climate and environmental harm, of which agricultural production is one aspect.

Climate Change Bill [B9-2022]

The Bill (which we critique on Page 4) aims to provide an effective climate change response and a long-term, just transition to a low-carbon and climate-resilient economy and society for South Africa.

New publication

■ Biowatch Fact Sheet Climate change and the industrialised food system

Fact Sheet
Climate change and the industrialised food system
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What is feeding climate change?

The way we produce and distribute food is causing global ecological and social crises, including one of the greatest threats of our time – climate change. The increasingly industrialised food system that produces and distributes food from farm-to-plate-to-landfill is responsible for a whopping one-third (33-36%) of all human-induced (anthropogenic) greenhouse gas (GHG) emissions.

According to the latest report just released by the Intergovernmental Panel on Climate Change (IPCC), to have any chance of limiting the global temperature rise to around 1.5°C and avoid the most catastrophic effects of climate change, global human-caused emissions must be reduced by nearly half by the end of the decade.¹

In order to reduce emissions and transition to a just and low carbon society, it is critical to interrogate the industrialised food system. Not only is it destroying livelihoods, landscapes and ecosystems, while bankrupting our soils and foods of nutrients, but it's failing to meet human needs as hunger and malnutrition rates soar around the world.²

Fundamental transformation of the industrialised food system towards agroecology and food sovereignty is needed in order to urgently reduce emissions and ensure the right to healthy and nutritious food for all.

The industrialised food system

The industrialised food system has developed out of the capitalist logic of mass production. Although this began in the late 19th century, it was the war, many of these aspects were spread to much of the global south in the 1950-60s through the Green Revolution, which sought to structure small scale farming and food systems by the industrial logic. This was done through mechanising high yielding hybrid seed varieties coupled to chemical inputs, mechanisation and irrigation, all to increase production of a few grain crops to supply commodity markets.³

Food has been stripped of its social value and the web of intricate connections to local ecologies and cultures and instead has become a commodity, subject to a few and standardised processes to produce the most product for the least cost and effort. This “value chain” to deliver the inputs to production, transport, processing, manufacturing, marketing and consumption.⁴ As with other industrial value chains, waste is generated at every step – one-third of food produced would end up as waste.

Like a factory process designed for mass produced objects like cars, the industrialised food system seeks uniformity and standardisation across the chain so that identical products are produced across time and place, and on a mass scale. At the farm level it therefore depends on genetically uniform monoculture. This specialisation extends to

“From farm-to-plate-to-landfill, the way we produce and distribute our food is responsible for a whopping one-third of all human greenhouse gas emissions.”

It’s a fact – how we produce, distribute and waste food is causing global ecological and social crises, including one of the greatest threats of our time – climate change. From farm-to-plate-to-landfill, the way we produce and distribute food is responsible for a whopping one-third of all human greenhouse gas emissions. For more information and to download this fact sheet (and other Biowatch publications) please visit our website at <https://biowatch.org.za/download/factsheet-climate-change-and-food/>

KZN agroecology platform explores farmer-led seed systems

In March, it was the turn for Biowatch and seven of our leading agroecology farmer demonstrators to host the KZN agroecology platform learning event focused on farmer-led seed systems. About 25 participants from the 52-member strong network attended the event, which was supported by Environmental Monitoring Group (EMG) as part of AVACLIM community of practice processes.

We began our learning journey visiting the Zimele market garden and the homesteads of farmers Ntombithini Ndwandwe and Tholakele Mfekayi. A Bokashi pile at Ntombithini's garden needed turning, sparking interest in how it differed from compost. We then visited Tholakele's garden, where several participants who had previously attended Biowatch AE *Qalisa!* course, were jubilant to see how quickly the vegetables had grown in the new fertility bed they had made a month earlier during the training.

On the second day we visited Mirriam Siyaya, Mavis Nhleko, Phiwethandi Dlamini and Nomusa Ngwenya in the dry hills of Emagengeni above Pongola. Participants remarked on the farmers' consistency in applying agroecological practices to build soil fertility, capture water and incorporate a diversity of useful plants and the livestock that sustained families. The farmers were starting to harvest their summer crops, and we could also see the freshly prepared household vegetable gardens recently planted with seedlings for winter. In Nomusa's seed bank the maize hung blackened by fire smoke to ward off pests, while other seeds were stored in clay pots.

The group had the opportunity to share observations, thoughts, questions and learnings after the field trips. We also unpacked the differences between seed and grain, and open-pollinated, hybrid and GM seeds. Before final reflections on taking our learning forward the group engaged in a lively seed and produce exchange.



Field trips to the homesteads, food gardens and seed banks of Biowatch's agroecology demonstrators and farmers were followed by a produce and seed exchange.



(Left) Participants at the June hands-on AE Qalisa! (agroecology now!) course working together learning a number of agroecology practices.

This was the third AE Qalisa! course we've run this year. Follow ups after each training have shown that young farmers inspired by the training, and by the passionate agroecology demonstrators, quickly implement the learned practices at their homesteads. They are helping to spread agroecology through example and by encouraging neighbours and their communities to do the same.

SKI partners plan for Phase 3

After virtual meetings for several years, the Seed and Knowledge Initiative (SKI) face-to-face partners' meeting in February this year was so welcomed, inspiring and energising. The week-long meeting firmed up plans for the year and importantly started planning for the new phase of SKI (starting in 2023) that all partners unreservedly are committed to.

There was excellent representation with SKI staff and two representatives from each of the 15 SKI partner organisations. From **Malawi** came Biodiversity Conservation Initiative (BCI), Soils, Food and Healthy Communities (SFHC) and Strengthening Community Outcomes through Positive Engagement (SCOPE). From **South Africa** came Biowatch, EarthLore Foundation, Ukuvuna, and the South African Research Chairs Bio-economy Chair, School of Environmental and Geographical Sciences, University of Cape Town (UCT). From **Zambia** came Community Technology Development Trust (CTDT), Kasisi Agricultural Training Centre (KATC), Regional Schools and Colleges of Permaculture (ReSCOPE), and Zambia Alliance for Agroecology and Biodiversity (ZAAB). From **Zimbabwe** came Participatory Ecological Land Use Management (PELUM), Participatory Organic Research Extension and Training (PORET), Towards Sustainable Use of Resources Organisation (TSURO), and Zimbabwe Small Holder Organic Farmers' Forum (ZIMSOF).

A key topic for the week was farmers' rights and what they mean in practice for SKI. Action going forward, includes a SKI farmers' rights campaign later this year, starting in August in Zimbabwe, then to South Africa, Malawi and culminating in Zambia.

WHAT'S COMING UP?

- "Eating our way to climate chaos" – Biowatch public seminar on climate change and the industrialised food system: 12 August (09h30–13h00 | Durban Botanic Gardens)
- Biowatch Seed Seminar (online): 6 and 8 September
- Biowatch Agroecology Farmer Fair: 11–12 October

Biowatch Bulletin will keep you updated.

If you would like to join our mailing list, please sign up at www.biowatch.org.za or e-mail your details to info@biowatch.org.za



(Top) Representatives from the 15 SKI partners.
(Above) The current SKI Steering Committee (left to right): Frances Davies (ZAAB), Esther Lupafya (SFHC), Rose Williams (Biowatch), Nelson Mudzingwa (ZIMSOF), Method Gundidza (EarthLore), Juliet Nangamba (CTDT) and Gertrude Pswarayi-Jabson (PELUM Zimbabwe).
Not present: Chifundo Khokwa (SCOPE Malawi).

The Climate Change Bill

The Climate Change Bill provides the legislative framework to give effect to the 2018 National Climate Change Response White Paper. Despite its intentions, the Bill lacks the urgency that the climate crisis requires, and disappoints for not adequately detailing South Africa's climate change response – especially when it comes to critical national issues such as food and water security.

According to the Bill, the Minister of Environment, Forestry and Fisheries must develop and publish a National Adaptation Strategy and Plan within two years of the Bill becoming an Act. The Ministers from key sectors, including Agriculture, then have another two years to develop and publish sector adaptation strategies and plans. On the crucial issue of emissions reductions, the Minister will determine a National Greenhouse Gas Emissions Trajectory. No timeframe is given for this and in the meanwhile South Africa's Nationally Determined Contribution (NDC) under the Paris Agreement will be used. However, the NDC published in the Bill is an outdated 2015 version with inadequate emissions reduction targets that wouldn't limit global warming to 1.5°C. South Africa submitted an updated NDC in 2021, which should be included in the Bill, and this promises that we will reach our peak emissions by 2025 – only three years away.