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UNDERSTANDING THE INTERCONNECTEDNESS BETWEEN THE ONGOING DESERT LOCUST CRISIS 2019-2021+AND THE CLIMATE CRISIS

FRONTIERS OF CHANGE

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WHITE PAPER

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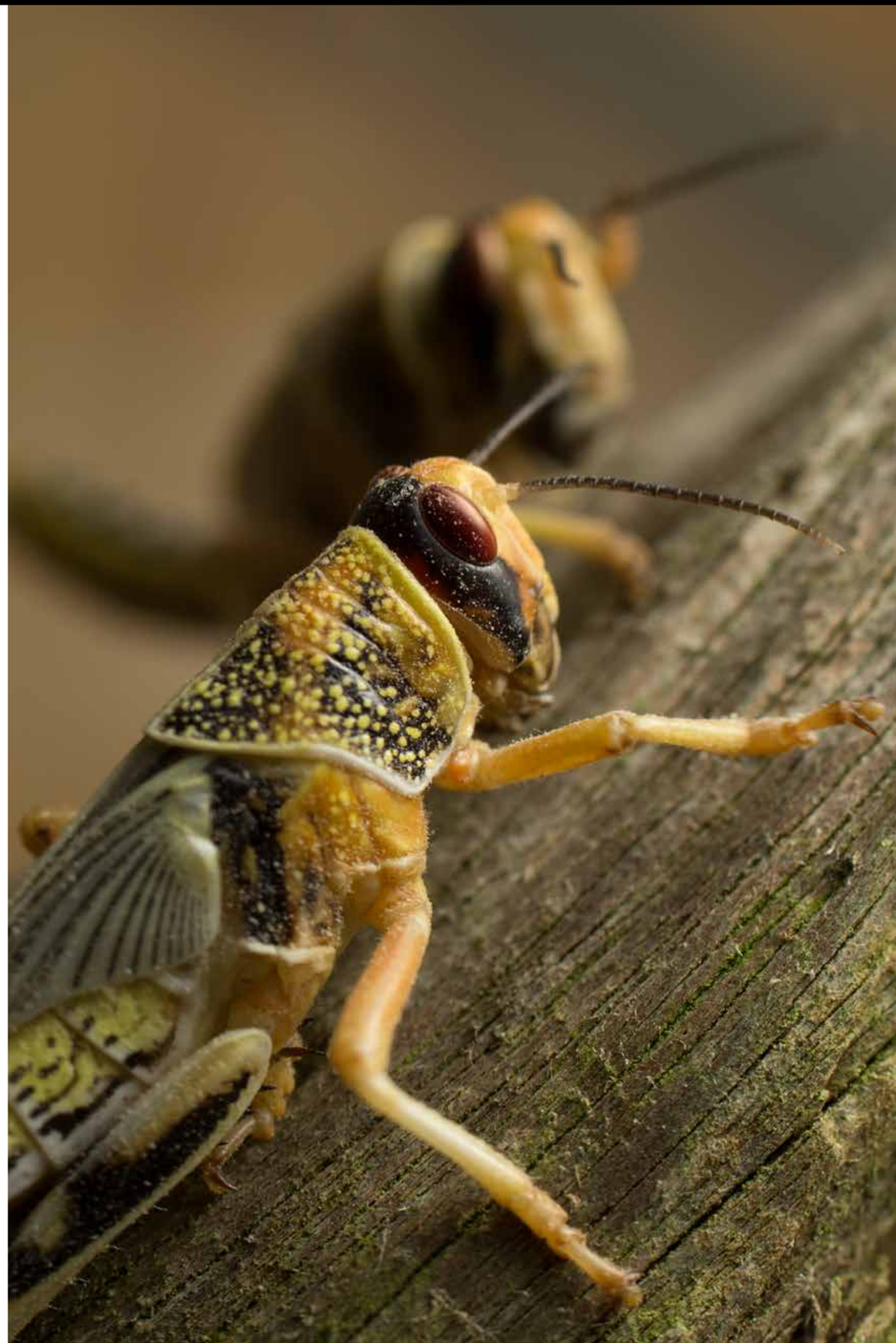
"The Horn of Africa is facing the worst desert locust crisis in over 25 years, and the most serious in 70 years for Kenya. The current situation – is set to become a regional plague.... which represents an unprecedented threat to food security and livelihoods in the region and could lead to further suffering, displacement and potential conflict."

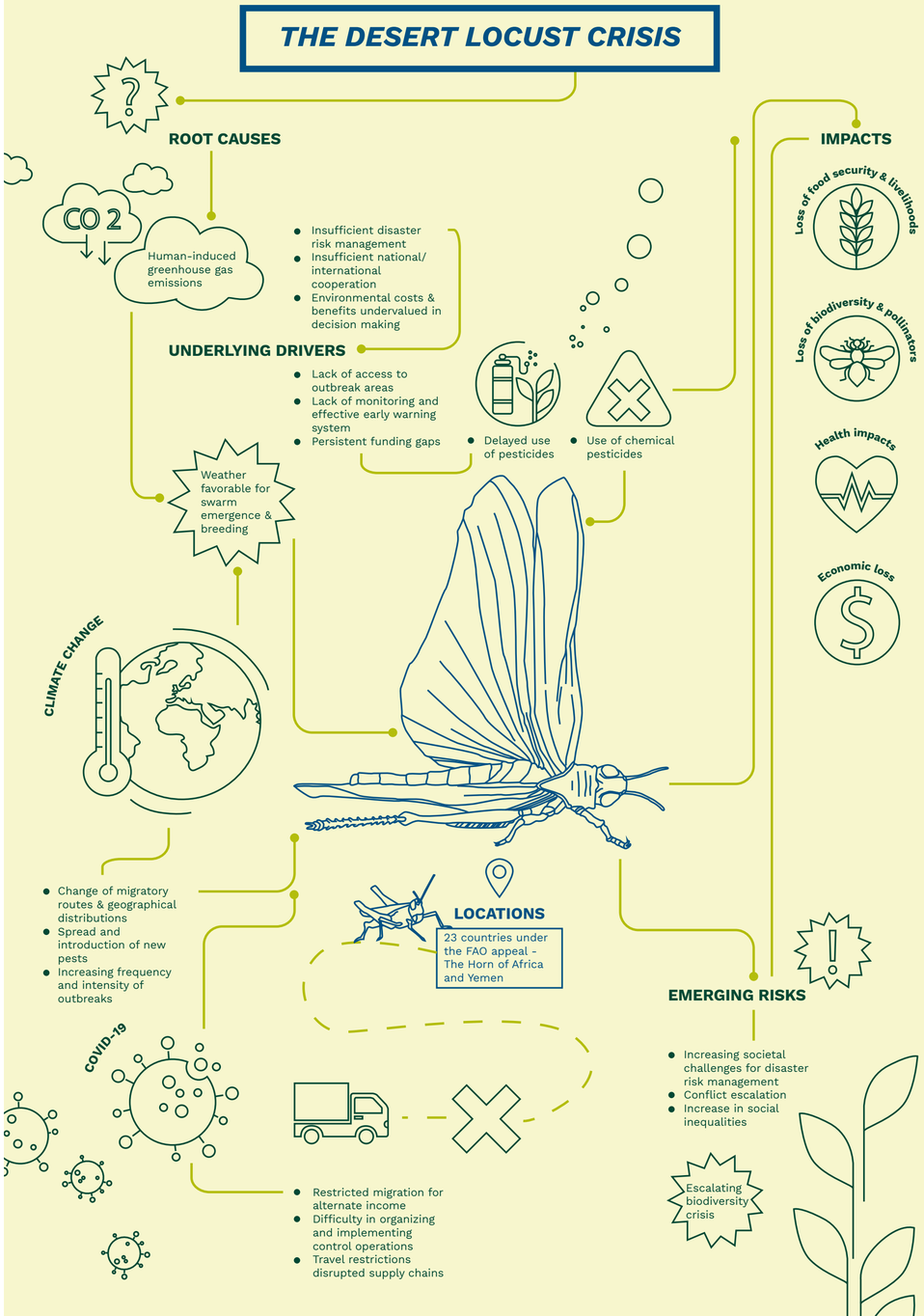
FAO (2021)[1]

The locust crisis warrants scrutiny on many grounds. Firstly, against all expectations the campaign is still ongoing. These upsurges have and continue to threaten vast regions, especially the Horn of Africa and Western Asia profoundly, with livelihoods and food security at peril. The locust crisis is negatively impacting the substantial investments made by many development organizations in the afflicted regions (e.g., the World Bank estimates that damages and losses could amount to USD 8.5 billion in East Africa and Yemen **in 2020 alone**).[2] And the upsurges are happening at a time when Covid-19 and climate change as a novel root cause put continued unprecedented pressure on the affected countries.

While providing an overview of the main features of this crisis, we place **special emphasis** on:

1. **Climate feedback loops**:[3] There is increasing evidence that **weather changes (higher temperatures in the Indian Ocean) due to climate change** have played an important role, and are responsible for the magnitude of the outbreak.





2. **Governance and a paradigm shift**: A call for **better and more rapid coordination** of all actors on the ground, between neighbouring countries, as well as international bodies, to avoid reacting in silos when time is of the essence to intervene before transboundary crises ensue. A **new mindset** for our handling of future locust crises and a new "business model" for all actors. If the scope of necessary transformation requires establishing novel ways to not only manage threats before they escalate to full-blown crises, but also to build resilience for communities as well as nature's defence mechanisms, the new multilateral system will need the active initiative and support of the Member States **and be based on credible multi-stakeholder processes**.
3. **"True costs" of the responses**: TMG estimates that the fiscal or operational costs of the current campaign could amount to over USD 1 billion. However, emergency control measures (as a last line of defence) are exerting significant external costs on the environment and human health owing to extensive toxic chemical pesticide use (by March 2021, 1.8 million litres have been used, which could conceivably rise to well over 2 million litres by the year end).[4] Understanding the "true cost" of the campaign, not just the fiscal costs, but by **factoring in the cost to the environment and human health**, should provide transparency and lay the foundation towards a possible and necessary new paradigm and early warning system for locust management. Formally measuring true costs would build on existing work, but delve deeper into biodiversity, especially the impact on pollinators, which necessarily translates into market losses for farmers.[4] In other words, True Cost Accounting (TCA) will make currently invisible but real costs visible!

4. **Innovation in pesticides and biocontrol**: There is a need to harness the general substantive progress in the use of pesticides, especially biological control, and to bridge research and commercial gaps. Therefore, the necessary biological data need to be provided to create a new business case for the private sector for less- or non-toxic control measures. The toxicity and detrimental impact on environmental and human health must and can be diminished.
5. **Early Warning systems**: There is a **need for innovation in preventing future outbreaks, including** the use of satellites, precision drones, robotics, and modern management tools for protecting livelihoods and the environment. In other words: pioneering and harnessing existing technologies to predict and intervene in the path of transboundary pests to make preventive and early action possible and more effective; and **setting up an innovative early warning system** that is based on harvesting available data from multiple sources (improved satellite data, weather intelligence systems), and employs **machine learning** algorithms **to predict breeding grounds**, with the goal of early action and avoiding the use of **highly toxic pesticides**.

With the precursory work done so far, we have gained an insight into what might await us in the near future, and with climate change likely spurring and intensifying the frequency of weather changes and therefore future outbreaks, **the status quo is no longer tenable**. Ignoring the prospect of recurrent plagues would imperil the livelihoods of the many, especially in, but not limited to, East Africa, where populations are already highly vulnerable to a host of economic, agricultural and climatic risks. We therefore call for a joint effort to learn from the ongoing crisis and work together towards a **future paradigm geared to building resilience in the environment and society**.

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