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Green light to glyphosate, pesticides and NGTs: Backpedaling on the Green Deal?

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While pesticides are argued to be paramount to food security, their [pollution](#) poses serious threats to [biodiversity](#), [human health](#), and [medium to long-term food security](#). The alarm bells regarding these risks have been around since the sixties, most notably in Rachel Carson's *Silent Spring*. Yet, over the last decades, pesticide production has steadily contributed to exceeding the [planetary boundaries for chemical pollution](#) and increasing [toxicity for fish, plants and insects](#). Data on pesticide exposure is concerning: according to a 2019 study, [more than 80%](#) of EU soil contains pesticide residues. Pesticides, whose exposure has been [linked](#) to various types of cancers as well as neurological, cardiovascular, reproductive, and respiratory diseases and impairments, have also been [detected within human bodies](#) and found to be more [highly concentrated in children](#).

This begs the question: how does the European Union (EU) legal order, which rests on the precautionary principle and is committed to high-level health and environmental protections, respond to the challenges of pesticide pollution? According to many, including the [European Commission \(the Commission\)](#), the [Court of Auditors](#), and the [European Parliament](#) (EP), EU rules on pesticides are 'too weak'. The European Green Deal (EGD) partly addressed this weakness with a proposed Regulation on the Sustainable Use of Pesticides (SUR), the first piece of legislation setting targets to lower pesticides in the EU by 50% by 2030. As we write, at least three developments are putting the EGD's ambitions and, arguably, the sustainability of EU food systems, at risk. All three pivot around pesticide governance.

Brussels' triple U-turn on sustainable food systems

First, on 22 November 2023, the EP voted down the [SUR](#). Proposed in 2022, it mandated a sustained reduction in pesticides use and was saluted as a key development for EU pesticide law and policy. The reduction in pesticide use had long been advocated, including by two European Citizens Initiatives (ECI – [here](#) and [here](#)). The proposal was met with scepticism by the agri-business sector, lamenting, among other things, that reducing pesticides threatens food security. The argument has been debunked by [over 6000 scientists](#), stating that 'reducing risks from agrochemicals' is 'essential for maintaining long-term agricultural production and enhancing food security'. While the SUR had been [criticized](#) for not being ambitious enough, it would have represented an important step towards sustainability. The weaknesses of the SUR were exacerbated by [300+ proposed amendments](#), many arguably influenced by agri-business lobbying ([here](#), [here](#) and [here](#)). The result was a watered-down proposal, which was ultimately voted down by the EP.

Second, on 28 November 2023, the Commission reauthorized glyphosate for an additional 10 years. Glyphosate is the rock star of pesticides; the most widely used compound for herbicides worldwide. It was classified as '[probably carcinogenic to humans](#)' by the International Agency for the Research on Cancer (IARC) in 2015 and is considered a possible '[cause of Parkinson's disease](#)'. Its previous authorisation, fraught by scientific controversies and public contestation, including an [ECI](#) demanding its prohibition, expired in December 2023. Despite mushrooming [scientific literature](#) pointing to its environmental and public health risks, the European Food Safety Authority (EFSA) '[did not identify any critical areas of concern](#)', notwithstanding numerous 'data gaps'. Similarly, the European Chemicals Agency (ECHA) did not classify glyphosate as carcinogenic, despite acknowledging its [toxicity to aquatic environments](#).

Against this background, the Commission proposed a 10- (out of a maximum of 15-)year reauthorisation, on which Member States failed to reach the required majority (either in favour or against) in the standing committee on Plants, Animals, Food and Feed (COPAFF) and in the appeal committee. The Commission then [adopted its initial proposal](#) stating that it was "legally obliged to adopt *this* decision". According to the [Comitology regulation](#), however, in these cases the Commission is obliged to adopt an act, but enjoys discretion as to its content (i.e. it is not bound to its initial proposal). Faced with Member States' insufficient support for the proposed 10-year renewal, the remaining scientific uncertainty, and widespread public opposition, the Commission could as well have renewed the authorisation for a shorter period, or not renewed it at all.

Lastly, a vote on New Genomic Techniques (NGTs) is tentatively scheduled at EP's Environment Committee (ENVI) on 24 January 2024. NGT is an umbrella term for various gene-editing techniques (e.g. mutagenesis, cisgenesis, intragenesis). NGTs were introduced after the approval of the [GMO Directive](#) in 2001. Here, GMOs are defined as 'organisms in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination' (Article 2(2)). In its 2018 judgment in [Confédération Paysanne](#) the Court of Justice of the European Union (CJEU) clarified that 'organisms obtained by means of techniques/methods of mutagenesis constitute GMOs' within the meaning of Article 2(2) (para 38). The judgment's implications have been the subject of a lively discussion (e.g. [here](#) and [here](#)) but, for the time being, NGTs are treated as GMOs under EU law.

The proposed regulation revisits this classification, breaking NGTs down into two categories: some (NGT-2) remain subject to the current GMO regime, while others (NGT-1, which include genetic alterations that could *also* occur naturally or result from conventional breeding) are essentially deregulated. NGT-1 plants would only have to undergo a verification procedure to be treated as 'normal' plants, exempted from any risk assessment, traceability, or labelling requirement. The [innovation discourse](#) forcefully deployed by the agri-business, which presents NGTs as supporting the sustainability and resilience of the EU food system, has been well received by the Commission. Yet, numerous [scientists](#) and [NGOs](#) warn that the 'new generation GMOs' present strong similarities to their predecessors, especially regarding risks of adverse impacts on the ecosystem.

What, then, do NGTs (and GMOs) have to do with pesticides? We can address this question by looking at Monsanto's first glyphosate-based herbicide, Roundup. The discovery of glyphosate's [herbicidal properties allowed it to be commercially sold as Roundup](#). Due to its efficiency, glyphosate could only be used in areas where all vegetation was to be exterminated. In response to this limitation, 'Roundup ready' plants, the first genetically engineered, herbicide-tolerant crops were developed; under an agricultural model dependent on pesticides, whose etymological roots mean "killer", making unkillable crops becomes a lucrative business. Unsurprisingly, the use of Roundup has [increased significantly](#) over time alongside GMO crops. The connection between genetically engineered plants and pesticides has been clear to EU policymakers as well. In May 2023, in the context of the NGT debate, a [Commission official said](#): 'If the European Parliament says they reject the sustainable use of pesticides regulation, what is really the need to have this proposal on NGTs?'

Neither scientific nor democratic

Taking this context in, how science-based and democratic is this deregulatory turn on NGT (GMOs) and the related pesticide policy developments? Evidence abounds as to pesticides toxicity to [health](#) and the environment ([here](#) and [here](#)). Failing to adopt reduction targets can then be understood as anti-scientific. It could be counter-argued that a parliamentary vote is what democracy is about, and democracy and science may follow different [rationales](#). But democracy goes beyond mere voting. The EP vote against the SUR, rather than a manifestation of democracy, bears witness to the power of the agri-business and dangerously resonates with how climate action has been obstructed for years by the fossil fuel lobby. Over the past 4 years, during which the SUR was being drafted, agri-business spent [ca. 50 million euros on lobbying](#). On top of that, and much like the [fossil fuel and the tobacco](#) industry, agri-business proactively supports broader epistemic cultures that are dependent on its success ([here](#) and [here](#)), for example by forging cozy relations with advocacy groups like the [controversial Alliance for Science](#) and [ILSI](#) group, whose work eventually lends epistemic legitimacy to their extractive business model.

Besides the EP vote, several Member States expressed concerns about both glyphosate and NGTs. European citizens have been vocal in advocating a sustained reduction in pesticide use, with two ECIs, strong public contestation and multiple petitions to the EP and [letters to the Commission](#) signed by over 300 NGOs. In a system committed to participatory democracy in general (Article 11 TEU), and to [environmental democracy](#) in particular, these voices shouldn't have been ignored.

Citizen's skepticism should be read in light of the entwinement between risk and the political economy of technology. NGTs developed in a lab by independent scientists may pose different risks than those developed and commercialized on a large scale by big multinationals, whose main aim is to maximize profits. People are not afraid of technology as such, but of the context within which it is developed. As a 2023 [report by the Rathenau Institute](#) points out, '[a]ccording to [Dutch] citizens, NGTs should not be developed purely for commercial motives driven by the logic of the market' (p. 6). Interestingly, one of the scientists who develops NGTs, Professor Michel Haring shares [similar concerns](#): 'Chemical companies that want to sell new weed control products can use Crispr technology to market new, patented varieties that can withstand a certain type of agricultural poison, and thus stimulate the use of these toxic chemicals in agriculture' (our own translation). It should be a no-brainer that with a legislative framework oblivious to the total quantity of pesticides used, the economic model under which pesticides enter the market (and the planet) determines the risk we are collectively exposed to.

Legal and constitutional concerns

Besides signalling a U-turn on the EGD and the 'Farm to fork' strategy, the developments discussed above raise serious doubts as to the EU's compliance with its constitutional commitment to ensuring a high level of health (Article 168 TFEU) and environmental protection (Article 191(2) TFEU). Far from being confined to the Public Health and the Environment titles of the TFEU, these commitments are reflected in a multiplicity of Treaty provisions. Among these, Article 114(3) TFEU mandates the Commission to pursue a high level of protection when proposing internal market legislation. This is reflected also in the sectoral legislation governing [GMOs](#) and [pesticides](#). The CJEU itself has on multiple occasions stated that the protection of human health and of the environment should 'take precedence over economic interests' (see e.g. [Artegodan](#) para 186).

It is however the precautionary principle (Article 191(2) TFEU) to be most forcefully called into question in this context. Over 20 years from the [Commission communication](#), the precautionary principle is recognised as a [general principle of EU law](#), requiring EU institutions to take protective measures in cases of uncertainty as to risks for health and the environment. Whereas its reach and effectiveness have been much [debated](#), the principle is a powerful mechanism to cope with scientific uncertainty in the public interest. In the case of glyphosate, the Commission could have relied on the precautionary principle to deny or limit more meaningfully the pesticide's reauthorisation. To the contrary, a minimisation of the remaining data gaps and uncertainties over the substance's safety, as recently pointed out by a group of [scientists](#), characterised both EFSA's and ECHA's risk assessment and the Commission's risk management.

We argue that this minimisation is, at least partly, a consequence of the legal framework governing pesticides. By not requiring the risk assessor to consider pesticides' cocktail effects, for example, it follows a [politics of separation](#) whereby active substances are assessed in isolation, discounting both the great bulk of epidemiological studies that look at formulations and the synergistic effects with other substances on the environment. The dangers of this approach are evident in the case of glyphosate. Glyphosate is typically used [in synergy with other pesticides or insecticides](#), yet the effects of these synergies, in addition to the total amount of applied glyphosate as a potential stressor for the environment, remain invisible to EU regulators. The developments discussed above are therefore also the result of a sectoral legislation that ignores such synergies and fails to account for total pesticide use. Both are at a dissonance with EU primary law provisions and cast doubts as to whether the EU is living up to its own constitutional standards, requiring it to pursue a high level of protection and to take precautionary action.

Concluding thoughts

Food security is one of the narratives promoted by the industry and amplified by some (often dependent) experts to defend a pesticide-intensive agriculture. First, this narrative is dubiously oblivious to the harms inflicted on soils by heavy use of pesticides and fertilizers, which puts food security at risk in the medium and long term. Second, pesticides are not only used against pests, but also to ensure a certain appearance (particularly of fruits) dictated by big retailers. Food security has nothing to do with the aesthetic of fruit, vegetables and flowers. Yet, once an active substance is approved, there are no rules limiting what could be seen as frivolous use. Maybe the Snow White fable with its perfect, poisonous apple, was just prescient of our unsustainable food system.

In this blogpost, we focused on the scientific, democratic, and legal concerns raised by recent EU-level developments. We have not addressed the distributional implications of food system transformation. This would require an analysis of its own. Yet, it suffices here to mention that the multiple crises affecting the current agriculture system have been linked to the problem of [concentrations at multiple levels](#) (at field and country level). Food system transformation requires embracing 'a logic of diversity'. With the EU under pressure on many fronts, it would be myopic to ignore the risks coming from pesticides and the unregulated development of technologies that can increase their use. Rather than backtracking on the EGD, the EU should double its efforts in supporting farmers (particularly small-scale) to thrive in the sustainability transition. Regrettably, the SUR and glyphosate have been going in the opposite direction. The upcoming EP vote on the NGTs is a (last) chance that should not be missed.