

# Presentation to the Irish joint Committee on Climate Action.

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## **Introduction:**

By way of an introduction, I would say that I will focus on the agricultural sector for two reasons: this is my main area of expertise (!); and it represents a key sector for this discussion as (i) it represents roughly a third of all Irish emissions; (ii) it is an important economic sector for the country, especially since the 2008 crisis after which many efforts were put on the ag sector and in particular the livestock one (roughly 7 % of the global value added of the country is generated within the agri-food sector); (iii) it will be massively affected by climate change in the coming decades (but Sonia will elaborate on that after me).

I will also quickly recall the three main options retained by the Citizens assembly: (i) putting a tax on GHG emission from the ag sector and rewarding agricultural practices that sequester carbon; (ii) making measurement and reporting on food wastes mandatory at every level of food chains; (iii) support land use diversification, with a specific emphasis on afforestation and organic farming.

While those recommendations are right to the point, I will try to put them in the broader perspective of (i) the main conclusions of the 1.5 SR and (ii) the current state of play of the Irish agricultural sector (keeping in mind how it has evolved over the last 15 years).

## **Main results of the 1.5 SR**

One of the key conclusions (probably put forth by Valérie Masson Delmotte as well in her introductory speech) is that reaching net-0 emission by 2055, and even earlier, by 2040, will be needed to retain global warming below 2°C, respectively below 1.5°C. While the report envisions four contrasted “pathways” to get there, in which different levers play contrasting role (in particular demand and technology), the land sector is key in all four pathways. There are three main contributions expected from the agricultural / land sector to climate mitigation – in a context where it is itself impacted by climate change, rendering everything more complicated:

1. Reducing emissions from the agricultural sector
2. Increasing removal capacity / sequestration potential – meaning that large areas of pasture and non pasture agricultural areas should be devoted to afforestation (or BECCS).
3. Supporting other sectors through biomass production

Pursuing those objectives will greatly affect the overall land use at all levels, which in turn has implications for at least three other aspects: (i) biodiversity and ecosystem services; (ii) food production, food security and more generally food system organization; (iii) adaptation potential of the agricultural sector.

### **The Irish ag sector in light of the 1.5 SR main conclusions**

Over the last decades or so, the Irish agricultural sector has followed a path similar to that of the rest of European agriculture: that of an intensification, concentration, and specialization of farms and territory. After the 2008 crisis and with the fall of the so called “Celtic tiger”, a specific emphasis was put on the agricultural sector as an important economic sector for the whole Irish economy. The “Food Harvest 2020” report gave ambitious targets to the sector, for instance to raise the total milk production by 50 % in volume between 2010 and 2020, and by 20 % in value over the same period. The whole plan is also massively export oriented (roughly 80 % of the milk produced in Ireland is exported), with agricultural exports representing 10 % of export value of the country in 2017.

Following the Food Harvest 2020 plan – and it has been pretty much followed with important investments in the whole livestock sector – would lead the country to a slight increase in its ruminant herd by 2030. This, in turn, could lead to corresponding increase in GHG emission of the sector by 2030 (emissions from enteric fermentation represents more than half of the total emission of the ag sector in 2017, and have been increasing over the last few years following the end of the quotas).

While a Teagasc report (2013) considers that there could be options for the sector to reach carbon neutrality, mostly by offsetting its own emission through carbon sequestration, such a path would hardly be compatible with that envisioned in the 1.5SR, in which the agricultural sector has to reduce its emission *and* to provide carbon removal potential for other sectors *and* to produce biomass for energy and other purposes to contribute to the substitution of fossil C by renewable C.

### **Taking the 1.5 SR into account: potential implications for the Irish agricultural sector and beyond**

Given the above, no need to say that a transformative pathway of the Irish ag sector compatible with the 1.5SR should differ in several respects from the one envisioned in the Food Harvest 2020. What could it look like, and with which implications?

It is first unlikely that increasing the overall size of the Irish ruminant herd could be a viable option, even though it goes hand with hand with efficiency increases, making Irish dairy products amongst the most carbon efficient. Improving efficiency has a role to play (and technological improvement could help in that respect, e.g. changing feed composition and modifying methanogenesis), but not if accompanied by an overall increase in the number of LU.

Reorienting the sector towards more diversified and less intensive livestock farming systems could be an option. It will be at some costs but could also generate opportunities in terms of rural employment (there are evidences that in certain contexts, diversified farms generate more employment / ha than highly specialized ones). This could also be seen as a way to decrease the risks associated to the growing export-dependency of the Irish agricultural sector. The economic viability of such a shift will eventually depend upon evolutions in both the domestic and the world demand. At the domestic level, it will require a greater willingness to pay for food products; and at the international level, a slight decrease in the global demand for dairy products. At the moment, this demand is still rising (even though at a lower pace, cf IFCN, 2018), while there is a consensus on the fact that cutting animal products consumption will be a key lever to keep the food system within climate boundaries.

It has finally to be mentioned that carbon neutrality is not an objective that should be set and reached at the country level, but rather at the global level. As such, a country like Ireland has not only to reach carbon neutrality, but given its large land sector, will have to provide possibilities for offsetting residual emissions from other areas in the world, more densely populated and so on. This raises the ambition / targets even further.