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**Strategic Paper, Draft**

Dear Prof. von Braun,

Thank you for the opportunity to provide comments on the Strategic Paper, draft July 5, 2021 “Science and Innovations for Food Systems Change: Opportunities for the UN Food Systems Summit”.

The paper is very carefully written and thoroughly reviews the current state of the science. It is as such a highly useful resource, not only for the UN Food Systems Summit decision making but also for academic purposes. Thank you for this excellent work!

I fully agree that “how we produce and consume food has profound implications for the health of people, animals, plants, and the planet itself” (p.7). In this context, I would like to point out an important issue which in my opinion deserves mentioning in the strategic paper—the issue of plastic pollution.

Recent research has shown that environmental plastic pollution largely consists of single-use food packaging (Morales-Caselles and others 2021). The drivers for the continued use of single-use plastic food packaging have been identified as three main interlinked subsystems--the globalisation, the expansion of supermarkets and the constraints on households' time (Chakori and others 2021). In other words, in order to systemically affect plastic pollution, these three drivers require addressing.

In my mind, food packaging is a symptom of how society produces and consumes food today, and the problems associated with food packaging can only be addressed by tackling food systems as a whole – which is the aim of the UN Food Systems Summit. As has been pointed out, “To avoid a massive build-up of plastic in the environment, coordinated global action is urgently needed to reduce plastic consumption” (Lau and others 2020) and this requires a fundamental rethinking of how plastic packaging (and its potentially equally harmful) alternatives are being used to preserve and transport foods.


Food preservation is a critical aspect of our society's current food system, therefore I strongly encourage you to include this critical issue of (plastic) food packaging in the Strategic Paper, to ensure that this important topic is addressed adequately and systemically.

In addition, as our own work has shown, food contact materials and articles which include food packaging, but also food processing equipment, storage containers, filling lines, etc. are known sources of food contact chemicals which often are synthetic chemicals that have not sufficiently been assessed for

their human health impacts (Muncke and others 2017, Groh and others 2019, Groh and others 2020), and regulatory approaches have been deemed insufficient (European Parliament 2016). As such, we estimate that food contact materials and articles contribute significantly to human exposures with synthetic chemicals, some of which are known carcinogens and endocrine disrupting chemicals (Muncke and others 2020, Muncke 2021). The impacts of food contact chemicals on human health have also been considered as reason for the adverse effects of ultra-processed foods (Fiolet and others 2018), as these chemicals migrate during food processing, and it is well-known that more processed foods contain higher levels of food contact chemicals (Nerín and others 2016).

Again, thank you for the opportunity to provide comment and thank you for considering these facts. I would be delighted to discuss these issues further with you. In any case, I am very grateful for your careful and important work which will benefit society, and which hopefully will lead to a change in how humanity interacts with our Planet.

Sincerely,



Jane Muncke

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