

Nitrogen-neutrality fosters more sustainable meetings

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Abstract

UN Climate Conference COP24 in 2018 (Katowice, Poland) has been criticized for its meat (and emissions) heavy menu as the scientists are expected to act in accordance with their understanding of the science. N-neutrality has been proposed and applied when organizing research meetings to reduce reactive nitrogen losses from the related activities (e.g. flight, transport, food supply and energy use etc.) and offset the rest Nr losses elsewhere (e.g. afforestation programs, food waste reduction projects etc.). N-neutrality provides an opportunity for more sustainable meetings and can be further incorporated with other environmental measures to improve overall sustainability of events.

Keywords: Reactive nitrogen loss, neutrality, sustainability

1. The Nitrogen-neutrality story for research meetings

The concept of nitrogen (N)-neutrality was first developed by Leip et al. (2014) at the occasion of the INI 2013 conference (Kampala, Uganda). The idea was to extend the concept of carbon (C)-neutrality to other environmental threats related to human activities, and to increase awareness about the consequences of unintentional releases of reactive nitrogen (Nr) to the environment. N-neutrality for research meetings is composed of two quantified elements: Nr released by meetings and Nr reduction from management and offset projects (Fig. 1).

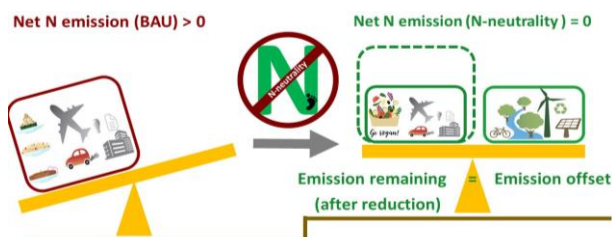


Fig. 1: Graphical representation of the N-neutrality to achieve zero net Nr emission via N-reduction and N-offset.

Since its first implementation, the concept of N-neutrality was implemented in the following INI2016 conference in Melbourne (Australia) and in all meetings for the Expert Panel on N and Food, and a number of other conferences (e.g. N workshop, RAMIRAN conference, and the Icon5 conference), and will be implemented in INI2020 in Berlin (Germany).

2. Challenges to the implementation of N-neutrality

The challenges experienced during the implementation of N-neutrality has been used to progressively fine tune the concept, improve the data collection process, and promote its communication to the rest of the research community. The impacts of Nr releases to the environment are manifold, and the impact profile of one unit of Nr release depends strongly on the compound released and the regional susceptibility to Nr.

3. Lessons learned and plans for the future

For a nascent concept, engagement effort pre-, during, and post- conference are necessary to improve awareness,

generate acceptance, and ultimately translate all that into an observable increase in compensation contributions. Our future foci are the suitability of N-neutrality for engaging the broader public, and the technical, economic and social feasibility of compensation projects.

References

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