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Comments from EISA to the online consultation of FAO for developing the Code of Conduct for the Management of Fertilizers (CoCoFe)

The European Initiative for Sustainable Development in Agriculture (EISA) e.V. was founded with the common aim of developing and promoting Integrated Farm Management (IFM) throughout Europe. Integrated Farm Management is a sustainable system which helps farmers improve the way they farm for the profitability of their business, the benefit of the environment, and social responsibility. With National Members from six European Member States, and six Associate Members from the up- and downstream sectors of agriculture, EISA is the platform and voice for Integrated Farm Management (IFM) in Europe. EISA members are strongly committed to systems of agriculture that are economically viable, environmentally responsible and socially acceptable. They work in partnership with all stakeholders to achieve this goal through advocacy for and further development of Integrated Farm Management.

• Given the global scope of the CoCoFe, do you think the objectives are appropriate? If not, how would you add to them or modify them?

EISA recommends modifications to the objectives proposed by FAO as follows:

1. Increasing global food production

Maintaining current food production would not be sufficient. Food production will have to be significantly increased in order to achieve food security and reliable supply of high quality food worldwide.

2. Optimising efficient and effective use of plant nutrients to enhance sustainable agriculture

It is rather optimising than maximising, and efficiency as well as effectiveness of the use of plant nutrients both are crucial for development towards sustainable agriculture.

3. Preventing inappropriate use of fertilisers in order to minimise environmental impacts associated with nutrient losses to the environment whilst taking account of environmental benefits associated with the use of fertilisers

Fertilisers not only markedly contribute to food safety, organic matter production (for both industrial uses and soil organic matter) and hence efficient and sustainable land use but also allow to keep other areas such as forests, wildlife refuges, permanent grassland etc. out of arable production. This benefit should be clearly addressed as well.

4. Minimising environmental impacts by evaluating and properly managing potential risks associated with non-nutritive trace elements and organic contaminants in fertilisers

In addition to addressing environmental and human health issues related to non-nutritive trace elements, it should be kept in mind that there are growing efforts to recycle substances

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such as sewage sludge, where also organic contaminants may need efforts to limit their potential presence and impacts.

5. Maintaining and increasing food safety

This is an important issue which must be maintained either as separate objective or as issue jointly addressed in objective 4.

From EISA's point of view, however, it is essential to add one more objective:

6. Understanding and managing fertilisers to maintain and increase soil structure and fertility

Proper, site- and situation-specific nutrient management plays an important role in keeping soils fertile and productive. Nutrients enhance plant growth and root development, thus adding to soil structure, soil organic matter and fertility as well as soil protection against degradation and erosion.

General remark: EISA is neither in favour of a CoCoFe approach focussing on the discouragement of fertiliser over-use nor of a "second document" addressing scenarios with low or no fertiliser use under the topic of integrated soil fertility management.

Whilst overuse, where it occurs and could be avoided, should be addressed by proper management practices and site- and situation-specific approaches as characterised in Integrated Farm Management, under-use per se cannot be regarded as sustainable since it depletes the soil and leads to dwindling soil fertility. EISA strongly recommends looking at potential over-use and under-use in a holistic approach which takes account of the important role of fertilisers in maintaining, and improving, soil fertility – to achieve the goal of increasing food production, food security and food safety along with minimising environmental impacts as outlined above.

There is solid scientific evidence that nutrients exported via harvested goods need to be refurbished in order to maintain soil fertility and the soil's function as efficient carbon sink. Accordingly, EISA does by no means consider a "no fertiliser input" systems as sustainable.

• How should be the CoCoFe be structured to have the maximum positive impact?

Based on the understanding and approach of Integrated Farm Management, the CoCoFe should provide a sufficiently big tool box of general recommendations and principles which would need to be adapted to and used by national as well as regional authorities according to the specific local farming situations. A general structure of the CoCoFe could follow aspects such as

- Optimisation of fertiliser use with the objective of increasing global food production,
- Optimisation of efficiency and effectiveness of the use of nutrients to enhance sustainability of agriculture,

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- Definition of measures to prevent poor use of fertilisers in terms of over- and under-use in order to minimise negative environmental impacts (over-use) as well as depletion and degradation of soils (under-use), both to be based on scientific findings on dosage and time/mode of application in order to optimise use and desired effects.
- Further developing and communicating those options which maintain and increase soil fertility and productivity whilst allowing for the most rapid positive environmental effects at the same time.
- Who would be the best audience for the CoCoFe to meet our objectives and how could we broaden and diversify this audience to increase its influence?

EISA recommends following a multi-stakeholder approach building on existing expertise of renowned research facilities and crop nutritionists worldwide, farmers' organisations, and representatives of the fertiliser industry.

Farmers and growers as well as extension services, advisors and the relevant agricultural media, should be seen as key audiences.

 What should the scope of the CoCoFe be? Which nutrient input sources should be included; only synthetic fertilizers, or also manure, biosolids, compost, etc.?
 Should other products such as bio-stimulants, nitrification inhibitors, urease inhibitors, etc., be included as well?

From EISA's point of view, the scope should be to promote resource-efficient, productive and environmentally friendly farming methods which make the best use of all resources available on any given farm at any given location. Accordingly, this approach has to include all sources of nutrients such as farmyard manure, compost, sewage sludge and other recycling materials as well as all types and kinds of mineral fertilisers. As bio-stimulants, nitrification inhibitors, urease inhibitors and the like clearly affect nutrient transformation and uptake in the soil, they also have to be included in a targeted, holistic approach. We would like to highlight once again that only such a holistic approach, as covered by Integrated Farm Management as described in the EISA Integrated Farming Framework¹ allows for the optimum use – in terms of productivity, quality and environmental effects – of all resources available on a farm.

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¹ http://sustainable-agriculture.org/integrated-farming/

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 Will the CoCoFe assist in promoting responsible and judicious use of fertilizers?
 Why or why not? What other suggestions do you have to help the CoCoFe meet our objectives?

EISA expects the CoCoFe to deliver in terms of promoting responsible and efficient use of fertilisers, if audience, intention and scope are defined on a solid scientific base, agreed upon by the relevant target groups, and communicated to the target audiences accordingly. From our point of view, such a science-based approach is indispensible if sustainable development is to be achieved along with the objectives outlined for the CoCoFe.

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