

## A systems perspective on sustainable agriculture – the new ‘MAGIC’ approach

08:00, Thursday 30<sup>th</sup> January, European Parliament, Brussels

Host: Sheila Ritchie, MEP

This ‘MAGIC’ breakfast at the European Parliament in Brussels will show how the transdisciplinary approach of MAGIC can bring a new approach to understanding agriculture as part of an interconnected ‘nexus’ of complex, dynamic and contested social-ecological systems. The presenters will be Dr Keith Matthews and Dr Kerry Waylen from the James Hutton Institute, Scotland, and Professor Mario Giampietro from the Autonomous University of Barcelona.

### Agenda

- Sheila Ritchie, MEP: Welcome
- Dr Kerry Waylen: Setting the scene and explaining the method (10 mins)
- Prof Mario Giampietro: Examples and insights from MAGIC (10 mins)
- Dr Keith Matthews: Implications for sustainability policy and research (10 mins)
- Discussion

### Concept

Adopting a systems perspective is essential to help agriculture contribute to Europe’s own policy objectives and also international targets such as the UN Sustainable Development Goals. The complexity of this ‘nexus’ can challenge policy-making. We can therefore benefit from new, more holistic, analytical approaches to identify where change is needed, and to better anticipate the consequences of potential interventions.

Examples from MAGIC show how this can be done. Our Societal Metabolism approach can characterise system sustainability across scales and levels, and from ‘farm to fork’, i.e. production through to consumption. This can highlight potentially unexpected consequences, e.g. arising from a shift to healthier diets, and signals the need for closer integration of the CAP with initiatives for water, energy and the circular economy.

Our analysis shows how environmental pressures are linked to the consumption of agricultural products. Further pressures and impacts within Europe are avoided by using imported goods, but the footprints of imports can have serious negative environmental consequences outside of the EU. Therefore, this process of ‘externalisation’ has implications for both Europe’s food security and its contribution to other countries’ Sustainable Development.

The insights of MAGIC indicate transformative change may be needed to achieve EU policy goals and international commitments, yet any changes and innovations in the agri-food system must be carefully appraised in terms of multiple environmental consequences. At this event we are keen to discuss how projects such as MAGIC can inform metrics, methods, and monitoring and also provide spaces for reflection and reframing the debate.