Interested to dive deeper in the matter? Here we listed suggestions for further reading.

### Module 1: Introduction to trade-offs and synergies in Multifunctional Agriculture & Food Systems

- **Kanter et al., 2018**
- **Campbell et al., 2018**

### Module 2: Introduction to scales and levels of assessment

- **Kanter et al., 2018**
- **Caron et al., 2018**

### Module 3: Examples of Relevant Schemes, Trade-offs & Comparing Objectives

- **Cumming et al., 2006**

### Module 4: Tools for Assessing and Anticipating Synergies & Trade-offs

- **Groot et al., 2009**
- **Jager et al., 2007**
- **van Wilk et al., 2016**

### Module 5: Using Assessment Results

- **Iwanaga et al., 2021**

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**References**


- **Mickesh, J., Kartam, J., 2018.** Beyond the agroecological and sustainable agricultural intensification debate: Blended sustainability is the way forward? *Int. J. Agric. Sustain.* 16, 127–149.


- **Groot et al., 2009**

- **Jager et al., 2007**

- **van Wilk et al., 2016**

- **Iwanaga et al., 2021**
Module 6: Long-term Sustainability Issues

The Decision Analysis and Forecasting for Agricultural Development webpage offers an online learning environment that provides a set of approaches that are aimed at capturing what is known and applying this knowledge to generate forecasts of decision outcomes. This paper proposes a framework to operationalize ecosystem services and resilience-based interventions in agricultural landscapes and call for renewed efforts to apply resilience-based approaches to landscape management challenges and for reframing ecosystem service research on human well-being outcomes.


This paper links theory on ecosystem response to changes from the socioeconomic branches of science to analyse the mechanisms behind two widespread problems associated with such political solutions. The analysis suggests that the following three key ingredients are needed to correct the problems of bias and compromise: (a) clear insight into ecosystem dynamic responses to human use, (b) a broad inventory of credible measurements of ecosystem utility, (c) avoidance of bias due to differences in the organizational power of groups of stakeholders.

Mockshell et al., 2018

result shows that feeding the projected 2050 world population would generally imply higher levels of inter-regional trade and of environmental nitrogen contamination than the current levels, but that the scenarios with less recourse to inter-regional trade generally produce less losses to the environment.


This study employs a theoretical framework based on the economic, social, and ecological dimensions of sustainable agriculture within a policy and institutional space. Based on the sustainability dimensions, a discourse analytical technique is applied to unravel the debate.

Hilton et al., 2015

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International Science Council

https://council-sciences/publishations/a-guide-to-sdg-interactions-from-science-to-implementation/

The International Science Council examined the interactions between the various Sustainable Development Goals (SDGs) and targets, determining to what extent they reinforce or conflict with each other. It provides a blueprint to help countries implement and achieve the goals.

Food and Agricultural Organization


The aim of this report is to develop a systematic characterization of possible synergies and trade-offs in Climate-Smart Agriculture (CSA), as well as to provide a tool to guide CSA practitioners through the assessment of synergies and trade-offs during the design and planning of CSA strategies or interventions.

Course content on Decision Analysis


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Recommended websites

https://council-sciences/publishations/a-guide-to-sdg-interactions-from-science-to-implementation/

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This paper shows that the simplification and intensification of these systems and their growing connection to international markets has yielded a global production ecosystem that is homogenous, highly connected and characterized by weakened internal feedbacks. Steering the global production ecosystem towards a sustainable trajectory will require the redirection of finance, increased transparency and traceability in supply chains, and the participation of a multitude of players, including integrated ‘keystone actors’ such as multinational corporations.


This paper presents an overview of the research, policy and practical implications of the global agricultural ecosystems and their services. It proposes a framework to operationalize ecosystem services and resilience-based interventions in agricultural landscapes and call for renewed efforts to apply resilience-based approaches to landscape management challenges and for reframing ecosystem service research on human well-being outcomes.


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Hilton et al., 2015

The results show that feeding the projected 2050 world population would generally imply higher levels of inter-regional trade and of environmental nitrogen contamination than the current levels, but that the scenarios with less recourse to inter-regional trade generally produce less losses to the environment.


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