Step-by-step guidance for Principles for Innovation in Sustainable Agrifood Systems

Pilot version - Please check the CoSAI website for updates.
Task Force on Principles and Metrics for Innovation in Sustainable Agri-food Systems - An initiative of the Commission on Sustainable Agriculture Intensification (CoSAI).

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The Expert Group assisting the task force was led by Dr. Monika Zurek (Environmental Change Institute, University of Oxford).

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This is a step-by-step guide on how to apply **Principles for Innovation in Sustainable Agri-Food Systems** (henceforth “the Principles”).

Further guidance materials (**FAQ, scoring template, project and scoring examples, metrics spreadsheet**) will be referenced and linked throughout this document. The definition of all words followed by an asterix (*) and more an be found in the **glossary**.

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Introduction

- What is the purpose of the Principles?
- What are the Principles?
- How do I use the Principles?
- What are the benefits for my organisation?
If you are a research or innovation manager or a funder of innovation in the agrifood sector, in the private or public sphere, these Principles are for you.

Investment in research and innovation today will shape the agrifood systems of the future.

The choices that you make during an innovation process will affect the future benefits and drawbacks of the innovations you help to create: for example, what types of people gain and lose, and what the effects are on the environment. Too often, these choices are not made consciously, and important issues are missed until too late.

The Principles will help you deliver better outcomes, by actively considering sustainable agrifood system* objectives at key stages of your innovation projects.
What are the Principles?

The eight main principles are listed below.
- The first four principles relate to *innovation process* and the second four to *outcomes*.
- Each principle has important sub-principles. The full list starts on page 20.

1. Set out a clear theory of change to intended impact based on food systems perspective and reflexive learning
2. Design transparent and evidence-based innovation processes
3. Conduct innovation processes in an inclusive and ethical manner, in compliance with human rights and other relevant international standards
4. Consider and make plans to address potential trade-offs and unintended effects across agri-food system outcomes
5. Contribute to improved food and nutrition security and health
6. Contribute to sustainable management and utilization of natural resources and combat climate change
7. Contribute to economic opportunities and livelihoods
8. Contribute to an ethical, equitable and adaptive agri-food system

Pilot version - Please check the CoSAI website for updates.
You score individual innovation or research projects against each of the eight Principles separately, using a simple checklist and scoring template provided.

You can also combine scores on different projects to get an overall score for your program. This will tell you whether you are making progress towards promoting sustainability goals.
What are the benefits for my organization?

For organizations committed to transforming the food system to deliver global goals (SDGs, Paris Agreement): the Principles will help you deliver more sustainable and socially-responsible outcomes from your research and innovation. They do this by acting as a checklist that all critical issues have been considered at key points, helping you to address issues that you may have missed.

Adoption of these internationally-harmonized Principles could gain you recognition as a responsible organization/company, especially in your research and innovation.

- This is important for international impact investors* and international philanthropic and development funders.
- International watchdog and benchmarking organizations are also paying increasing attention to investments in food and agriculture.

*Pilot version - Please check the CoSAI website for updates.
The following guidance assumes that you are a manager of an innovation or research program and that you will use the principles for self-assessment.

Funders or watchdog/benchmarking organisations can also use the guidance.

Applying the Principles in 5 Steps

1. **Choose an innovation/project to assess**
2. **Plan the Assessment**
3. **Carry out the Assessment**
4. **Aggregate scores from different projects**
5. **Communicate your results**
Select an agri-food research/innovation project or 'small cluster' (see next page)

- This could be a project at any stage, from idea stage for a new innovation to scaling up.
- Innovations can be for policy, finance, institutions, or business practices as well as scientific or technical.

Examples of innovation projects in agrifood systems:
- Development of a new financial product for incentivizing farmers to protect the environment
- Development of a novel urban planning policy that encourages circular agriculture
- Development of new high zinc / high yield rice varieties.
- Scenario analysis to support food systems transformation, through a multistakeholder consultation process
- Scaling up Smallholder Insurance through Innovative Partnerships
- Innovative risk management solutions for floods and drought to support national strategies for Disaster Risk Reduction
The Principles are best applied at the lowest level in the organization where project strategic decisions, in terms of intended agri-food system outcomes, are made. That level may be represented by a single project or a themed cluster of projects.

- **The level is too specific if** the project is very technical and does not deal directly with the issues in the principles (for example, a project that focuses on developing solar batteries and does not consider wider issues). In this case, move up a level, to score the relevant *cluster of projects* (in this example, this could be the cluster of projects developing solar irrigation in a certain geographical area).

- **The level is too broad if** there are too many included projects in the cluster chosen, that would give different answers if you scored them according to the principles. For example, avoid scoring an entire research program with clusters of projects that have different overall target audiences or geographic areas.

- There is no one-size-fits all answer to what level to choose. Examples of the right project level can be found [here](#). For this pilot, please contact the CoSAI Secretariat if in doubt about what level to assess: wle-cosaisecretariat@cgiar.org
2. Plan the project assessment

**WHEN:** Typically, a project (or cluster) should be scored at least at the following stages: Design, Mid-term Review, Final Review and Ex-Post Evaluation. Details and examples are in the [FAQ](#).

Ideally, the assessment of the Principles should be integrated into regular project planning and review meetings (e.g. annual or mid-term reviews). Each organization will have a different planning and review cycle. **For this pilot, see whether an opportunity exists to do this.**

**WHO:** The first step is a self assessment. Ideally, this needs at least two people with good insight into the project. That includes one person from the level of management that makes strategic decisions on the project’s intended agrifood system outcomes.

Impartial assessments are always preferable. So if you can incorporate the Principles into independent project appraisals, evaluations and reviews, that would be ideal. **For this pilot, self-assessment is fine.**

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3. Carry out the assessment

Apply each Principle to your chosen innovation project:

Go through the list of Principles and sub-principles. Check thoroughly and with a critical lens whether the issues in each Principle and sub-Principle have been considered in the selected project.

The issues will vary by project stage.
- For example, at idea/early design stage, you are mainly scoring good intentions and planning processes.
- At later project stages, you will need to check whether the issues raised in the principles have been included in project analyses and whether any action has been taken to address them.

Use the scoring framework and template (see next page) to record your scores and justifications for each score (with links to the evidence, if possible). Project proposals, reports, reviews, and evaluations are useful evidence.

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# HOW TO: Use the scoring framework to score each principle

When assessing each Principle and the relevant sub-principles (see next page), use this Scoring Framework. For the pilot, please fill in this scoring template.

<table>
<thead>
<tr>
<th>Score</th>
<th>Level of implementation of principle (including sub-principles)</th>
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<tbody>
<tr>
<td>0</td>
<td>No activities have been carried out in line with the Principle.</td>
</tr>
<tr>
<td>1</td>
<td>Some activities have been carried out in line with the Principle, but insufficient to justify a score of 2.</td>
</tr>
<tr>
<td>2</td>
<td>There is evidence that activities have been carried out in line with the Principle and its sub-Principles. Information on it has been regularly and systematically collected and analyzed.</td>
</tr>
<tr>
<td>3</td>
<td>There is evidence that activities have been carried out in line with the Principle and its sub-Principles. Information on the issues has been regularly and systematically collected and analyzed, and needed changes have been implemented.</td>
</tr>
</tbody>
</table>

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HOW TO: Use the sub-principles in scoring

Each Principle has one or more sub-principles (see details here). All need to be carefully considered during scoring: what is the evidence that the sub-Principle has been addressed?

- For **Principles 1 to 4** (innovation processes), the score for the Principle can only be 2 or 3 if all sub-Principles are considered and backed with evidence justifying the chosen score.

- For **Principles 5-8** (innovation outcomes), it is important that you assess and record whether each Principle has been considered. For these four principles, there may be some sub-principles that are not relevant to your specific innovation project context. If this is the case, you should provide an explanation in the justification section for the score for that principle. In this case, the score can still be 2 or 3 if all relevant sub-principles have been addressed.

Examples for scoring Principles and sub-principles are provided on the following pages.
The real benefit from the Principles arises when they are used to change innovation processes, not just carried out as a tick-box exercise.

The Principles provide a checklist for reviewing the strategic direction of the innovation process, identifying gaps and shortfalls, and addressing them.

Of course, there are trade-offs - so not every project is expected to achieve every outcome listed in the Principles. But making these checks ensures that the range of key outcomes are at least considered, and that any outcomes judged to be important are monitored, analysed, and actions taken to course-correct.

**Score 3 on a Principle should only be applied when you think that the needed changes have been implemented, not just discussed**

Improvements can be made over the life of an individual project, but also across a whole program, applying learning to new projects.
**SCORING EXAMPLE - Project "Multistakeholder scenario analysis to support food systems transformation"**

**Principle 1:** Set out a clear theory of change to intended impact based on food systems perspective and reflexive learning.

**Score allocated:** 1  (Some activities have been carried out in line with the Principle, but insufficient to justify a score of 2.)

**Evidence/justification:**
Sub-principle 1.1: NO - There was no clear theory of change in this project - it was an explorative analysis.

Sub-principle 1.2 YES - Systems thinking was applied - trade-off analysis is a key part of the methodology and findings (p. 9 / pp 29-34 of the linked report) including food and nutrition security, environmental impacts, economic growth & productivity, and social equity.

Sub-principle 1.3) NO - Reflexive monitoring and evaluations to adapt route to impact did not take place both due to the lack of a clear theory of change and the short project duration not making midterm or final evaluations feasible.

Please find more examples for other scores and type of projects here.
4. Aggregate scores from individual innovation projects to get an overall score for a program or organization

To calculate the overall score for a program or organization with a number of projects, you will need the budget (see note below) for each project. The aggregate score for the program weights the project score against each principle by the budget, giving more weight to more expensive projects.

- Score each project against each principle as described above.
- Then use this template (includes example) to aggregate scores for a program, or for a whole organization.
- You will end up with a table showing how the program (or organization) as a whole is doing against each Principle. (Important: Do not add up the scores of different principles.)

**Piloting:** It would be great if you could try this out - even for just 2-3 individual projects

Note: Project expenditure is more accurate than project budget for completed projects. But in many cases, it's not worth the extra work to get expenditure information.
5. Communicate the results of your assessment

Your need to consider how you will effectively communicate the results to relevant stakeholders (other management, staff, partners, etc.).

Depending on the organisational context, this could be done through a team meeting, workshop, or report.

In order to meet sub-principle 2.1 (transparency), results of the application and evaluation should be made public to allow transparency in the direction and focus of agri-food system innovations. **This does not apply to the pilot although we look forward to the shared results.**
Annex: List of Principles

Please see the official list of Principles and find definitions of all relevant terms in the Glossary.
1. Set out a clear theory of change to intended impact based on food systems perspective and reflexive learning

1.1. Clear and flexible theory of change to intended impact of proposed innovation
1.2. Applied systems thinking at different scales, including all impacted actors and activities
1.3. Reflexive monitoring and evaluation to adapt route to impact to changing conditions

2. Design transparent and evidence-based innovation processes

2.1. Information on innovation goals, key intended outcomes and budgets publicly available
2.2. Evidence-based processes including use of credible metrics (metrics table)
2.3. Sharing of knowledge/insights, as appropriate, with others (public or private entities)
3. Conduct innovation processes in an inclusive and ethical manner, in compliance with human rights and other relevant international standards

3.1. Inclusive, fair and transparent decision making within the innovation processes, ensuring all relevant stakeholders are included (for a specific innovation)
3.2. Fair and inclusive partnerships, including fair and ethical apportioning of benefits of innovation ownership
3.3. Considerations for all relevant types of knowledge
3.4. Ethically conducted innovation processes

4. Consider and make plans to address potential trade-offs and unintended effects across agri-food system outcomes

4.1. Transparent and systematic analysis of agri-food system outcomes (Principles 5 to 8)
4.2. Transparent monitoring of winners and losers in innovation pathways
5. Actively consider improved food and nutrition security and health

5.1. Food security
5.2. Adequate nutrition
5.3. OneHealth

6. Actively consider sustainable management and utilization of natural resources

6.1. Biodiversity and integrated habitats
6.2. Climate change mitigation
6.3. Clean water
6.4. Clean air
6.5. Soil health
7. Actively consider economic opportunities and livelihoods

7.1. Economic opportunities
7.2. Secure and stable income

8. Actively consider an ethical, equitable and adaptive agri-food system

8.1. Human rights and working conditions
8.2. Distribution of risks, benefits and decision-making power along the value chain
8.3. Inclusiveness
8.4. Animal welfare
8.5. Adaptation, including to climate and environmental change