

Understanding social equity and sustainability interactions in the Sustainable Development Goals: Gender differences in food security

The world has made tremendous progress in food production in the last few decades, lifting people out of poverty and greatly reducing hunger and malnutrition. However, women and girls are still likelier than their male counterparts to go hungry or eat poorly.¹

Gender differences in food security have several causes. Women heads of households are poorer than male heads because they have fewer assets and fewer economic opportunities, and women farmers generally have less access to fertilizers and other inputs, farm gear and extension services. Within families, mothers often are the first to forgo food when resources are scarce, and cultural norms often give men and boys priority at the table.

The Sustainable Development Goals (SDGs), which will guide the global development agenda from now until 2030, provide an opportunity to address these inequities, building on SDG 5 – “Achieve gender equality and empower all women and girls” – and SDG 2 – “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”.

This discussion brief, an output of SEI’s Gender and Social Equity Programme, aims to lay a foundation for research on how to bridge those two goals by identifying key interactions between them, including potential synergies and tensions or trade-offs. The analysis, based on a literature review, also identifies knowledge gaps and questions to prioritize in future research.

Gender, natural resources and food security

Environmental and gender issues are often inextricably linked. Research shows that women are disproportionately affected by economic, social and environmental stresses or disruptions – and indeed, those stresses may exacerbate gender inequality.²

At the same time, discriminatory social and legal norms often restrict women’s participation in decision-making about natural resources and food production – even though women are the ones who prepare food in most households, and in many cases, they are also growing the crops that feed the family.

Social and cultural norms also limit women’s access to education, training and income-earning opportunities, while imposing significant care burdens: not only child-rearing, but also caring for the sick and the elderly. In many countries, women also face discrimination in land ownership and inheritance laws and engrained social practices, such as dowries. The effects are exacerbated by broader power imbalances and the intersection of inequalities based on race and ethnicity, class, age and other factors.³

The relationship between gender and food security and their wider environmental and social context has been the subject of some research already, and has resulted in concrete policy



Members of a women’s self-help group in Timor-Leste who work together to grow crops, raise livestock and improve gender relations in their community.

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recommendations. For instance, *Gender Equality and Food Security*, a 2013 report by the Asian Development Bank (ADB), argues for empowering women as a key strategy for fighting hunger.⁴ The report contends that expanding opportunities for women, in employment and otherwise, is essential for women and girls to fully claim their right to food – and for society to benefit from women’s contributions.

Indeed, the ADB report argues that gender equality is the single most important determinant of food security. In the context of the Asia-Pacific region, it discusses the challenge of ecological crises, pointing out that the impacts will be especially severe on women and girls, both because of the increased proportion of women among small-scale food producers, and because of their unequal bargaining power within households. This is just one of several examples of how researchers are exploring gender and food security linkages, especially in rural parts of sub-Saharan Africa and Asia.

Bridging the science-policy divide in gender and food security

In the preamble to the Sustainable Development Goals, also known as Agenda 2030, world leaders explicitly pledge that “no one will be left behind”.⁵ They also note that the SDGs are “integrated and indivisible”, and that they “seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls”.

These are strong policy commitments, and they build on a long-standing recognition within the UN that there are profound inequalities in the world, and that development must help correct them. For example, the UN Women’s 2014 survey report on the status of women and development noted that “causes and underlying drivers of unsustainability and of gender inequality are deeply interlocked”. Thus, the report argued, it will be crucial to integrate the pursuit of the stand-alone SDG on gender with actions to achieve the other SDGs.

Integration is not the norm in policy-making, however. Indeed, decisions are often taken without consideration of how different policy realms interact, resulting in incoherence. As a recent analysis for the International Council for Science (ICSU) put it, “certain jurisdiction will put in place different legal frameworks, investment frameworks, capacity development mechanisms and policy instruments that may or may not pull in the same direction”.⁶ As an example, the ICSU paper notes inconsistencies in how the EU has dealt with food production and bioenergy.

Agenda 2030 provides a new framework for cooperation, bringing the multiple policy dimensions into sharper focus, and calling for a closer look at interactions across different areas of policy. The goal is to ensure that efforts to advance the different SDGs work in tandem, supporting one another instead of leaving gaps or even creating conflicts.

Closely related to this goal is the need to ensure that monitoring and evaluation of actions to achieve the SDGs measure and track the right things. In the context of gender and food security, that means ensuring not only that overall, rates of hunger and malnutrition are going down, for instance, but also that women and girls are making as much progress as men and boys (or more, since they have more ground to make up). This is not only a matter of metrics, but also of participation. It is crucial that women and marginalized groups – actual representatives of the affected populations – be included in monitoring efforts across different sectors and jurisdictions.

The analysis we present here aims to identify key interactions between SDG 2 and SDG 5, both to inform ongoing policy discussions, and to lay the groundwork for further research needed to explore crucial questions and help fill knowledge gaps. Policy-makers ultimately need guidance that directly addresses issues they may face, and explains and quantifies the potential impacts of policies that they might pursue to achieve one or both of these SDGs.

Research for monitoring of interacting sustainability policies.

The literature review that forms the basis of this brief examined how interactions between gender and food security have been documented in studies around the world, aiming to identify patterns, areas in which policy lags behind scientific knowledge, and gaps in the knowledge.



A woman in Kulna, Bangladesh, tends to her vegetable field.



Women farmers in Nyando, Kenya, receive training on climate-smart agriculture, microfinance and crop insurance.

The first step of our analysis was to try to unpack the intricate links between ending hunger and malnutrition, as envisaged in SDG 2, and achieving gender equality and empowering women and girls, the aim of SDG 5. Where are there synergies? Where are there tensions or trade-offs? Then we examined the scientific evidence supporting our understanding of those interactions, and identified knowledge gaps that research needs to fill to inform policy-making on these issues.

The literature review started with a search of journal articles on the Web of Science,⁷ using a selection of terms derived from the SDG goals and targets. Table 1 shows the terms used for each goal. In order to be included, a journal article had to use terms in the first row below the column headings “Food security” and “women or gender”. In addition, at least one other term within the lower rows under SDG 2 and one other term from the lower rows under SDG 5 needed to be included. For example, “food security” and “Women” or “gender” and “nutrition” and “participation” would produce a match.

The review was based on post-1975, peer-reviewed journal articles in the Social Sciences Citation Index (SSCI), of which 240 matched the keywords. We then screened all abstracts for relevance specifically to interactions between any aspect of SDG 5, and Target 2.1 of SDG 2, “By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round”.

We focused only on Target 2.1 to narrow the scope of the analysis, which allowed us to develop some general findings about gender and food security; the full range of issues relating to SDG 2 would have been harder to communicate in a discussion brief. Here we analyse 27 articles, four of which detailed two interactions each, resulting in a total of 31 interactions examined.

The literature analysis builds on the ICSU framework discussed above,⁸ adapting and applying the approach to gender and food security to illustrate the importance of integrating the SDGs. Figure 1 summarizes the results in quantitative terms.

One of the ways in which ICSU paper characterizes interactions is in terms of “directionality”. We found that it was possible to identify unidirectional interactions between areas where “A affects B, but B does not affect A,” and this information is

Table 1: Search terms used to identify literature relevant to SDG 2 and SDG 5 and related targets.

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture		SDG 5: Achieve gender equality and empower all women and girls	
Food security		Women or gender	
Hunger	Nutrition	Discrimination	Rights
Subsistence	Farming	Leadership	Domestic work
Markets	Resilience	Empowerment	Social protection
Productivity	Adaptation	Land	Finance
Sustainability	Extension services	Inheritance	Development cooperation
Agriculture	Investment	Natural resources	Participation

also included in Figure 1 by indicating the interaction source. In more than 75% of cases, the gender dimension or gender policy area acted on food security aspects.

The ICSU framework lays out a seven-point scale for characterizing the nature of interactions, from the most negative, “cancelling” (–3), to “counteracting” (–2), “constraining” (–1), “consistent” (0), “enabling” (1), “reinforcing” (2) and, at the positive end of the scale, “indivisible” (3). Because of the limited scope of our analysis, as well as the subjectivity involved and difficulty characterizing the nature of interactions with precision, we recorded only whether each was broadly positive or negative.

We found roughly twice as many positive interactions as negative interactions in the literature, regardless of which of the two goals triggered the interaction. However, because the findings

are based on a small number of examples, this approach could be subject to biases. At the same time, the 27 articles provide sufficient evidence that interactions often occur, and that they need to be carefully considered and monitored.

Looking within the four categories shown in Figure 1, we note that most SDG 5-sourced influences related to ensuring women’s rights to agricultural inputs, and to equality in law and empowerment. SDG 2-related interactions were negative (constraining) when related to the improvement of women’s position in the family, and positive (enabling) when related to ending violence to women, and to ensuring equality in law and empowerment. The analysis recalls the findings of the 2013 ADB report discussed above,⁹ which makes it clear that gender discrimination is so ingrained in social and cultural norms that if those norms are not addressed at the same time as food security-related interventions are made, the benefits for women and girls may be limited significantly.

Our review suggests that most research thus far has focused on how gender equality and women’s empowerment affect food security outcomes. This finding suggests that more research is needed on how different dimensions (availability, access and use) of food security (SDG 2.1) impact on women’s roles and positions in society. The review also highlights potential problem areas where interactions deserve more attention from policy-makers, such as possible impacts on women’s position in the family.

Qualitative analysis shows the strong relevance of climate change and climate resilience. With the ongoing changes in climate, household food insecurity is believed to be widespread in most rural parts of sub-Saharan Africa and Asia. However, evidence regarding the existence and extent of gender-related household food security is fragmented at best, and would benefit from study and analysis.

In addition, most studies point out knowledge gaps that remain regarding gender norms and their impacts on agricultural sustainability – topics that merit urgent attention and systematic integration into mainstream research on sustainability.

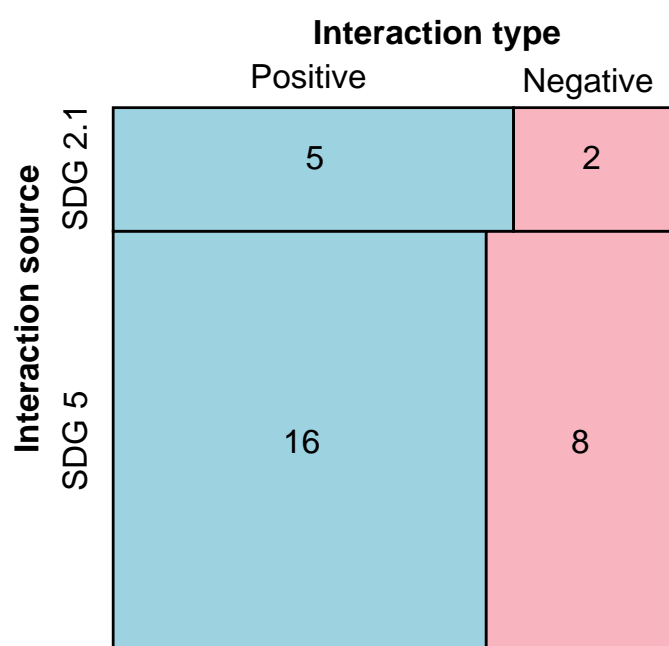


Figure 1: Number of reviewed articles in which interactions occurred, by interaction source and positive or negative nature.

The size of the areas is proportional to the number of articles in each category.



Children at a primary school in India receive their lunch. Ensuring that girls eat as well as boys, particularly when food is scarce, requires recognizing cultural norms that often favour boys.

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Some additional findings from the review are:

Women and households headed by women are more likely to experience food insecurity. For example, studies in Kenya and in rural South Africa show that women depend more on agriculture to increase household food levels and food security; men, by contrast, have more access to other sources of income.¹⁰ Gender-related differences in expenditures may also play a role. Evidence from Vietnam, for instance, suggests that men's earnings are more likely to be used for leisure activities than for household needs.¹¹

Gender bias in food security can start early in life cycles. A socio-cultural study in Ethiopia suggested that the relationship between household-level food insecurity and adolescent food insecurity varied by gender.¹² Girls were likelier than boys to report being food-insecure themselves, and the gap between the two genders was largest in severely food-insecure households, suggesting that households strive to protect boys from the ill effects of food shortages.

Multiple constraints limit women's participation in decision-making. For example, one study in Kenya showed that almost no attempts were made to incorporate women fish traders and processors into policy-making and governance issues, even though women are highly knowledgeable on fisheries management issues.¹³ The research pointed to highly imbalanced gender-power relationships, and a lack of assets among women in the industry, as some of the causes. A further example in Ghana showed that intra-

household decision-making about land use often excluded women and young people.¹⁴

Inequality spans countries worldwide, wherever women's occupational burdens add to domestic chores. One example comes from the experiences of food security programmes managed by NGOs and government in a sub-Himalayan community in India.¹⁵ While these programmes provided women with new skills and new opportunities outside the home, they exacerbated their existing workloads at home, unless they led to a renegotiation of the division of labour within the home. Such programmes would benefit from shifting the focus from "women only" to a more holistic approach to gender and power relationships.

Globalization may play a role in exacerbating women's food insecurity. Access to global markets can bring improved technology and information that help low-income women producers and improve household food security.¹⁶ However, many studies have found declining levels of food self-sufficiency, nutrition, livelihood losses and widening inequalities in the wake of globalization. For example, in Ghana, a shift from the production of food crops toward cash crop cultivation, where incomes tend to be controlled by men, led to negative consequences for women and girls.¹⁷ Examples also suggest that globalization-related economic and trade policies are associated with shifts in women's roles (they are often absorbed into labour-intensive, low-wage work), leading to poor nutritional outcomes.

Women's empowerment plays an important role in households' food security. A study in the Philippines showed community-based peri-urban initiatives advancing women's empowerment helped improve their food security.¹⁸ Another study in South Africa showed that households were likelier to be food-secure when they were headed by women with higher levels of economic agency, psychological empowerment, and financial management skills.¹⁹

While these research findings suggest the challenges associated with interacting sustainability policies for gendered household food security, developing good indicators and setting up monitoring processes remain key tasks. Opinions differ on the matter of how and what to measure and evaluate. Gender-differentiated data on the impacts are vital, and multidimensional data, in particular, are needed to capture different facets of interactions.²⁰ Another need is for open data. One such initiative, Data2X, is catalysing the processes of data mining and collection to address data gaps. This includes, for example, gender-differentiated data on people who miss at least one meal a day, who have low levels of calorific consumption, etc., showing that levels of food insecurity, malnutrition and hunger currently differ by gender, among other factors.

Knowledge gaps and further research needs

This literature review has helped to unpack some of the main interactions, synergies and conflicts between the goals of gender equality and agricultural sustainability, but much more remains to be explored to better understand the issues. Further research should examine, test and explore in greater detail several important, additional questions, such as:

- Can sharing of unpaid/domestic work (such as caring) by both women and men also lead to both goals of enhancing women's empowerment and creating food-secure households?
- What can we learn about the role of men in ensuring women's empowerment, gender equality, and food security?
- Can policies to alleviate poverty eliminate household food insecurity, while also dealing with the need to empower women, and to face the changes in women's lives as the result of increasing globalization?

The analysis suggests two main targets for intervention: 1) social/cultural norms that give strong priority to males in some societies, and 2) economic and legal structures that discriminate against women. Governance tools are needed to promote the synergies and reduce tensions and trade-offs among the various goals and targets of SDG 2 and SDG 5. Monitoring data and monitoring systems are equally important. Further key questions are:

- What monitoring tools could be employed by public bodies at national levels, and by civil society organizations at local levels, to enhance synergies and reduce conflicts?
- What principles should be used for constructing suitable new indicators derived from challenges identified in SDG 2 and SDG 5?

Our research suggests that a potentially useful contribution to support critical engagement with SDG 5 would be to develop tools for tracking the success of SDG 2.1 through a gender and women's empowerment lens. Moreover, this type of analysis (following the ICSU framework) could be applied not only to food security or to other main parts of SDG 2, such as sustainable agriculture, but also to other SDGs. In our view, analysis of interacting dimensions of gender equity and other development goals is fundamental to the implementation and monitoring of sustainability policies.

Our review shows that, despite general awareness, little in-depth research has addressed the ways in which different dimensions (availability, access and use) of food security (SDG 2.1) and policy-making in this area affect gender roles and women's empowerment. Indeed, one insight from our research is the need to draw attention to poorly understood or counterintuitive relationships. For example, one might find surprising linkages between some SDG targets that, on the face of it, have nothing much to do with each other, or seem only tangentially connected.

Establishing links between qualitative research and other methods, including system models, is also necessary. Integrated assessment models can couple environmental dynamics with social system models and representations of policy options. Agent-based models can represent behavioural responses of individual actors, and are useful at smaller spatial and temporal scales, and for working with stakeholders. Case studies may be designed to illustrate the range and nature of interactions in different contexts, and to provide recommendations on the management of trade-offs and synergies. The 2030 Hive Mind interactive policy simulation, a game specifically designed to reveal interdependencies, trigger collaborations and trade-offs, offers a good example of stakeholder engagement.²¹

Finally, we invite gender, food security and agricultural development practitioners working on the ground, particularly in high gender-inequality areas, to tell us what they think of these examples, with a particular focus on a) best-practice interventions, and b) the role of governance in driving and supporting change toward equality. Our analysis is only a first step in what we expect to be a lively and fruitful conversation.



Women in Guatemala chop vegetables to be sold in Walmart stores in the United States.

Endnotes

- 1 These disparities are widely acknowledged. For two brief overviews, see this briefing from the World Food Programme (WFP): <https://www.wfp.org/our-work/preventing-hunger/focus-women/women-hunger-facts> and this one from the UN Food and Agriculture Organization (FAO): <http://www.fao.org/gender/gender-home/gender-programme/gender-food/en/>.
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- 5 For the text of the SDGs, see <https://sustainabledevelopment.un.org/post2015/transformingourworld>. The idea of "leaving no one behind" is further emphasized on a dedicated web page on SDGs-related statistics, where the SDGs are characterized as endeavouring to "reach first those who are furthest behind": <https://unstats.un.org/sdgs/report/2016/leaving-no-one-behind>.
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- 20 See <http://data2x.org>.
- 21 See <https://sdgactioncampaign.org/2017/03/29/first-ever-global-festival-of-ideas-for-sustainable-development-highlights-facts-figures/>.

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