GENDER ACTION

Gender and Sustainability: An International Research Review

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Czech Academy of Sciences

Gender and Sustainability: An International Research Review

Kajsa Widegren & Jimmy Sand

The Swedish Secretariat for Gender Research,
University of Gothenburg

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Summary

Aiming to enhance knowledge and understanding on gender and the 2030 Agenda, this international research review published by GENDERACTION provides an overview and analysis of peer reviewed articles from the period of 2015-2021. The report is written by research coordinator Kajsa Widegren (PhD) and analyst Jimmy Sand at the Swedish Secretariat for Gender Research, University of Gothenburg. Sanna Hellgren, librarian at KvinnSam at the University of Gothenburg Library, have been enlisted for her expertise in literature searches. Together with five policy briefs and a benchmark of policy development on gender and SDGs, the report is the result of a GENDERACTION task with the purpose of strengthening the contribution to the Sustainable Development Goals (SDG) by European funds for R&I.

The European Commission's Strategic Plan 2021-2024 for the implementation of Horizon Europe is expected to strengthen the R&I contribution to the SDGs. Since the elimination of gender inequality and the integration of the gender dimension are prioritized crosscutting issues of Horizon Europe, it is crucial that the objectives of sustainability and gender do not function as competing goals but on the contrary can create synergies for increased scientific quality and social impact. However, R&I policy documents do not elaborate on how gender equality and the integration of the gender dimension as a cross-cutting priority on the one hand, and the ambitions for sustainability on the other, should be able to relate to each other in ways that are mutually promoting – handling trade-offs and maximizing co-benefits.

This report is a research review of research on sustainability and gender. It consists of 35 articles that were selected through a rapid review approach, with a search strategy that had its starting point in the concepts of gender, sustainable development goals and the 2030 Agenda. The results show that research on gender and sustainability point out knowledge gaps and need for improved theoretical perspectives as well as which capacities and obstacles for actual transformational work the SDGs offer. The interaction between different SDGs creates both synergies and contradictions.

A significant part of the articles is about the relations between gender equality and work, and the status of social reproductive work in a system of gendered labour division. A smaller, but interesting, part of the articles is about specific ecological problem that has particular gendered effects and articles that criticize hegemonic economic models that underlie the 2030 Agenda from an ecofeminist point of view.

Critical research is crucial for the unveiling of the discursive construction of gender as well as analysis of reproductions of inequalities at global, national or everyday life levels. This research review both show how recent international research has taken on the cross-cutting of the gender dimension as well as drafting the contours of a research field that still have a lot of missing perspectives. For example, the relation between gender and ecological sustainability or rather un-sustainable environmental effects that distribute unevenly and reproduce inequalities based on gender, race, class, age and geography is not represented in the systematized search that the review builds on.

Recommendations for EU funds and other RFOs

Based on analysis of the literature review, the following points can be emphasized:

- Research calls should promote an intersectional approach in analyses of inequalities and disadvantages that undermine the social dimension of sustainability. Sex-disaggregated data are not enough to gain knowledge about the causes and possible countermeasures to the differences in people's living conditions, but an understanding of how gender interacts with, for example, class, race, ethnicity, sexuality and functionality is required.
- Special efforts are needed to promote the inclusion of the gender dimension in certain research areas (mainly those that are oriented towards science, technology, engineering and mathematics, STEM) more than in others (with greater proximity to the social sciences and humanities), but also in the latter it remains of great importance to promote critical analyses of gender that can contextualise sex-disaggregated data.
- Research calls motivated by the transformative ambition of the 2030 Agenda may need to promote collaborative projects involving actors other than those traditionally involved in knowledge production and decision-making. This can be achieved by so-called citizen science, action-oriented research, or through the involvement of social movements in ways similar to how small and medium-sized enterprises (SMEs) have been partners in Horizon 2020 funded projects.
- Targeted calls are needed for so-called action-oriented research, where R&I projects are conducted collaboratively with researchers and the actors, whether it is government authorities, small and medium-sized enterprises (SMEs) or municipalities, that need to change their organisation and overcome siloed knowledge and policymaking.
- Based on the referenced studies, the following points can be emphasized: Special efforts are needed to promote critical research on gender dimensions of the regulated labour market to empirically investigate effects on the construction of gendered, but also racialized and other intersecting structures create specific positions within the labour market.
- Special efforts are needed to promote research on the regulated labour market and how and if it can actually live up to demands for economic, social and ecologic sustainability, taking especially the concept of social reproductive work into account.
- Special efforts are needed to promote research on gender dimensions of food production, including agriculture, land, water and forestry management and the introduction of ecologically sustainable technologies in socially sustainable ways, in order to make new technology socially relevant.
- Special efforts are needed to promote research that discuss, develop and apply economic models that does not take increased growth as prerequisite for functioning societies.
- Interdisciplinary research collaborations need to be encouraged by calls to integrate the social, economic and ecologic dimensions of sustainability, in order to gain more knowledge on how the three affect each other, rather than targeting calls for research on individual SDGs. This is particularly relevant for the four, practically gender-blind, so-called environment related goals (SDG 12, SDG 13, SDG 14 and SDG 15).

1 Introduction and aim

Since being set up and adopted by the United Nations General Assembly in 2015 (UN, 2015), the 2030 Agenda and its 17 interlinked and global Sustainable Development Goals (SDGs) have to an increasing extent been referred to in policies on many political levels, from local and regional authorities to national governments. It has found its way into corporate social responsibility (CSR) strategies of multinational companies such as Siemens and L'Oréal, as well as into Horizon Europe, the EU funding programme for research and innovation (R&I) 2021-2027. An early-identified sector of particular importance is that of education, research and innovation, not only to meet the targets by 2030 but also to shape the agenda beyond 2030 (UN Scientific Advisory Board, 2015; DG Research and Innovation, 2016).

These ambitions are reflected in the European Commission's (EC) Strategic Plan 2021-2024 for the implementation of Horizon Europe, which is expected to strengthen the R&I contribution to the SDGs (Directorate General for Research and Innovation, 2021). Since the elimination of gender inequality and the integration of the gender dimension are prioritized crosscutting issues of Horizon Europe, it is crucial that the objectives of sustainability and gender do not function as competing goals but on the contrary can create synergies for increased scientific quality and social impact. However, R&I policy documents such as the Strategic Plan do not elaborate on how gender equality and the integration of the gender dimension as a cross-cutting priority on the one hand, and the ambitions for sustainability on the other, should be able to relate to each other in ways that are mutually promoting – handling trade-offs and maximizing co-benefits (GENDERACTION, 2021). The following report, based on an international research review, has as its goal to enhance knowledge and understanding of gender and the 2030 Agenda/SDGs for policy development in European funds for R&I, strengthening the capacity of Horizon Europe to contribute to socially, economically and ecologically sustainable development.

The report has been produced within a Work Package 5 (WP 5) of GENDERACTION, a Horizon 2020 project funded in the SwafS-19-2016 call, to provide strategic advice on gender equality policies in R&I. Particularly, the WP 5 purpose has been to support the work of the ERAC Standing Working Group on Gender in Research and Innovation (SWG GRI) and relevant EU and member states stakeholders regarding the integration of gender in the implementation of Horizon 2020, as well as in the preparation of the next Framework Programme for R&I and the next European Structural Funds. The task on gender and sustainability, which has been carried out by the Swedish Secretariat for Gender Research, University of Gothenburg, focuses on mapping and disseminating recent research results, as well as benchmarking policy development, identifying promising concepts and tools for EU funds. Results – i.e., the following report, a policy benchmark and a series of five policy briefs – will be delivered to the SWG GRI and will be presented to the SwafS (Science with and for Society) Programme Committee representatives at the national level. These results can be further used by the SWG GRI and other stakeholders to be presented to the European Parliament and at public consultations from the EC.

The Swedish Secretariat for Gender Research, member of the GENDERACTION consortium, is working at the intersection of research and policy with sustainable conditions for education and research against gender and other, intersectional forms of inequality and has done so since 1998. Examples include studies on inclusion of the gender dimension in research funding at a global level (Young Håkansson & Sand, 2021). Drawing from international research on gender, power and sustainability, the secretariat uses and develops various scientific perspectives and methods in its operations.

The objective of this report is to provide an overview of research on gender and SDGs, 2015-2021, collected with a systematic, rapid search method. Although not organised as a research field as such the articles found with this method have some things in common. The report has as its aim to synthesize these perspectives and approaches to gender and sustainability, and to propose recommendations for policy development. It will point out research-based paths to contribute to the 2030 Agenda, which can be promoted through efforts by European Funds for R&I (Horizon Europe) and research funding organisations (RFO) in EU member states. The recommendations can be applied in future Horizon Europe work packages as well the next EC strategic plan.

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Thematic structure

We have structured the review using four different thematic derived from the content of the articles. The four themes are:

- *Knowledge Production, Measurements and Indicators*
- *Implementations, Interactions and Social Movements*
- *Regulated and Social Reproductive Work*
- *Gender, Ecosystems and Economy*

The thematic structure tries to capture the productive tensions of the two concepts gender and sustainability, synthesized to make the review clear, even though the search results point in many different directions. The search resulted in articles analysing gender in relation to a wide range of SDGs, from the goals for health (SDG 3) and education (SDG 4) to consumption and production (SDG 12). Their results are embedded in *Knowledge Production, Measurements and Indicators,* a chapter that also presents articles that explicitly point out knowledge gaps and call for improved theoretical perspectives on gender and sustainability.

We also touch on some of the different SDGs in the second chapter, called *Implementations, Interactions and Social Movements*. This chapter presents results from research on capacities and obstacles for actual transformational work, as well as studies that analyse how different SDGs interact with each other. Implementation is also about processes of change that rely on the knowledge of social movements.

The third chapter is called *Regulated and Social Reproductive Work* and presents critical feminist research on the unclear relations between two specific SDGs, namely SDG 5 and SDG 8, on gender equality and decent work respectively discussing the subordination of social reproductive work in a system of gendered labour division, and its effects on the 2030 Agenda's understanding of decent work.

Our last chapter is called *Gender, Ecosystems and Economy* and presents research that analyse ecological problems as well as interventionist technologies with particular gendered effects as well as articles that criticize hegemonic economic models that underlie the 2030 Agenda.

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Method

The following report is an overview and analysis of 35 peer reviewed articles on sustainability and gender, published in international journals 2015-2021. The articles were selected from the Scopus database, using a rapid review approach with a search strategy that had its starting point in the concepts of gender, sustainable development goals and the 2030 Agenda. The application of this search strategy generated 338 posts. To be able to find state-of-the-art articles on gender and sustainability we used a matrix for inclusion and exclusion of the first round of results, narrowing down the results from 338 to approximately 60 posts. These posts have then been read and examined with the guidance from a matrix of inclusion/exclusion-criteria where the most important principle of inclusion was to extract articles that use a theoretical account of gender as a historically specific system of social and economic stratification related to issues of sustainability and 2030 Agenda. Articles that have used gender as a merely empirical and statistic category have been excluded.

To enable reproducibility and reduce bias, the search strategy and the selection process were subject to methodological procedures that are described more in detail in the appendix.

4 >

Conceptual framework

In the report, we use a number of terms and concepts, which have emerged in development policy, sustainability research and/or gender research. To enable transparency and to help the reader, here is an account of our understanding of the most central concepts in the report: gender/sex and intersectionality.

4.1
Gender/sex

The use of the concept gender differs with different epistemological traditions but was developed to analytically differentiate between the biologically based category "sex" and "gender" as social and cultural constructions (Connell, 2002; Wallach Scott, 2010). Sex refers to biological differentiating that is medically and often legally regulated. Gender as a concept focuses on the reproduction of gender differences within systems, such as labour markets, civil societies, infrastructure, physical planning, societal institutions and discourses (Rubin, 1975). It is a perspective that dismiss essentialist and ahistorical views on women and men, trying to manage gender as a complex, sometimes contradictory process of hierarchization through, for example, the division of labour (Wallach Scott, 2010). However, gender – as a word – has come to be used empirically as a non-problematized, statistical categorization of men and women. Gender is also used in the 2030 Agenda as a policy concept aiming for specific forms of equality between the groups women and men. SDG 5 ended up specifying "gender equality" as political goal defined by three aspects: increased representation in parliament, girls' and women's access to education, and women's empowerment. Especially the latter concept (Rowland-Serdar & Schwartz-Shea, 1991) is both vague and individualistic, thus differ substantially from the analytical account of gender. The importance of keeping track of different understandings of gender cannot be stressed enough, especially in the context of recommendations for the design of European Funds for R&I (cf. Young Håkansson & Sand, 2021).

4.2
Intersectionality

While the concept of gender has found its way into policy in different ways over the last thirty years, intersectionality is not yet as common as a perspective for achieving equality. As a part of critical theory on societal, cultural and economic inequalities, intersectionality has its own theoretic and research-based genealogy of investigating interlinkages and intensifying of structures such as class, gender, sexual orientation, race, ethnicity and age (Collins & Bilge, 2020; Crenshaw, 1991). It was first developed as a critique of feminist theory using an implicitly normative account of "women" based on the socio-economic situation of white, middle class, Western women, and their specific historical situations and experiences. Thus, the call for intersectional analysis that differentiates between different groups of women, pointing out that not all women are equally underprivileged and not all men are always in superior positions vis-à-vis women. Which inequalities that productively intersect and have effects for peoples' lives are empirical questions hence the strong advocacy for more intersectional research in this report.

5 Background

The adoption of the 2030 Agenda, together with the Paris Agreement on climate change, is an ambitious commitment by the nations of the world to jointly meet global challenges and strive for sustainable future (UN, 2015). Although it is not the first attempt by the international community to meet global challenges such as poverty, inequality or climate change, the agenda is probably unique in its ambition to integrate the economic, social and ecologic dimensions, as the 17 Sustainable Development Goals (SDGs) and the 169 targets cover virtually every aspect of human development. With its origins in the 1992 Earth Summit in Rio de Janeiro, Brazil (formally named the UN Conference on Environment and Development, UNCED), the agenda is characterised by the efforts of the United Nations to get a number of development programs and agencies to converge under the same umbrella: United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization (UNESCO), UN Women, as well as others (cf. Kumar et al., 2016).

Furthermore, the agenda is an expression of both broader and more far-reaching ambitions than its predecessor, the Millennium Development Goals (MDGs), not least in terms of the inclusion of gender equality and the empowerment of women and girls as a cross-cutting issue with a stand-alone goal (SDG 5) as well as being integrated as gender-specific indicators in most of the 17 SDGs. (The exceptions are SDG 6: *Clean Water and Sanitation*; SDG 7: *Affordable and Clean Energy*; SDG 9: *Industry, Innovation and Infrastructure*; SDG 12: *Responsible Consumption and Production*; SDG 14: *Life below Water*; and SDG 15: *Life on Land*.) The latter is largely a result of persistent advocacy work by UN Women and women's rights activists both within and outside of the UN system, building on the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1979, and the Beijing Platform for Action (BPfA), 1995 (UN, 1979, 1995; UN Women, 2013; Goetz & Jenkins, 2016; Dhar, 2018; G. Sen, 2019). In this context, the 1992 Earth Summit should also be highlighted, as it not only perceived the ecological crisis and the social situation of people as interconnected, but also placed the issue of gender equality at the centre of discussion (Mölders, 2019). However, many analyses show that the MDGs failed in recognizing women's situation and roles in development (e.g., Fredman et al., 2016; Azcona & Bhatt, 2020), which gave rise to an intense mobilization prior to the process of setting the 2030 Agenda to make sure this would not happen again.

The concept of sustainable development has its origins in the so-called Second Development Decade of the 1970s, most prominently in the UN Conference on the Human Environment that was held in Stockholm 1972 (Handl, 2012; Koehler, 2015; Purvis et al., 2019). Compared to the previous decade, there was increasing emphasis on gender equality, and on the importance of "well-being and happiness not only of the present generation but also of the generations to come" (UN GA, 1970; Koehler, 2015). An example of the former is the Women in Development (WID) approach, established in the early 1970s, with its main argument for the economic benefits from investing in women (Miller & Razavi, 1995). The probably most common definition of sustainable development was soon to be established by the so-called *Brundtland Report* (1987), prepared by the World Commission on Environment and Development (WCED) appointed by the UN Secretary-General. According to this definition, based on an elaboration of positions in the 1970 Resolution on a Second Development Decade, sustainable is the "development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs" (WCED, 1987; Purvis et al., 2019).

Furthermore, the Brundtland report served to frame sustainable development within the three dimensions of economic, social and ecologic sustainability (Purvis et al., 2019), an understanding emphasized by the 2030 Agenda three decades later. However, these three dimensions are not, not even each by itself, free from contradictions, as can be exemplified by the incompatibility of positions on economic policy within the UN system. One of these, which has prevailed in the UN Secretariat and the UN agencies since the development work began in the early 1950s, was established when the Secretariat commissioned a study on 'Measures for the economic development of underdeveloped countries' (UN, 1951; Koehler, 2015). Characterized by the economic ideas of the post-World War II era, the study called for public finance to fund education, health and other public services, as well as increases in savings and capital formation to foster economic growth and technological progress. This conceptual framework was preeminent when the UN General Assembly in the 1960s and 1970s made its consequent proclamations of the first and second development decades (UN GA, 1960, 1970).

The 1980s, however, saw a shift in international economic policy, characterized by the so-called *Washington Consensus*, were influential organisations such as the IMF and the World Bank, as well as the United States and other UN member states in the Global North, took a quite opposite stance on public spending, compared to the 1951 UN study, with emphasis on trade liberalization, privatization and balancing government deficits (Williamson, 1990; Elson, 1994; Koehler, 2015). This market-oriented approach to economic development was still highly influential during the period of the preparation of the Millennium Development Goals (MDGs), while the UN Secretariat had a rather weak position (Fukuda-Parr, 2010; Koehler, 2015). It remains to be seen whether the departure of the IMF and the World Bank from the Washington Consensus after the 2008 financial crisis, with a greater focus than before on inequality and inclusive growth, could lead to the 2030 Agenda overcoming the contradictions in international economic development policy (Saad-Filho, 2010; Birdsall & Fukuyama, 2011; Lopes, 2012).

Compared to its predecessor, the MDGs, the 2030 Agenda and its SDGs are also an expression of the ambition of the UN and its member states to take a broader and more transformative approach to global development. This ambition can be summed up in the principles of *universality* and *indivisibility*, which in addition to the recognition of gender equality and the empowerment of women and girls as a cross-cutting issue are central guidelines for the implementation of the sustainability agenda. In this context, universality means that the SDGs require action by and in all countries of the world (Long, 2015). This is an attempt to strive beyond the North-South aid orientation of the MDGs, calling for a commitment to change for high-income countries as well as so-called 'developing countries' (Fukuda-Parr,

2016). However, the 2030 Agenda does not only consist of the various individual goals and targets, but, as often emphasized, should be considered as an indivisible whole. While each SDG in itself is quite straightforward, the process of implementation can be complicated by the interactions of the targets creating both trade-offs and co-benefits. Governments, companies and other organisations have different interests, sometimes in conflict with each other, and despite the principle of universality, the sustainability agenda leaves much room for national and local interpretations. Successful implementation requires an integrative approach, which can be a challenge for organisations characterised by siloed knowledge and policymaking (Weitz et al., 2018; Bennich et al., 2020). As cross-cutting dimensions, it is crucial that the objectives of sustainability and gender do not function as competing goals but on the contrary, can create synergies for increased quality – whether it concerns the performance of government organisations, higher education institutions, private enterprises or civil society organisations – and transformative social impact (cf. Lee & Pollitzer, 2016, 2020; Schiebinger & Klinge, 2020).

6 ›

Research review

6.1

Knowledge Production, Measurements and Indicators

Knowledge is an essential starting point for all endeavours for change, and the efforts to achieve the UN Sustainable Development Goals are no exception. In this section, we discuss studies of knowledge production; with special focus on how methods for measuring and evaluating sustainability and development work can be improved. Something that could have been an exclusively academic debate has very practical consequences, given that the data that is collected, channelled through indicators on which decisions rests, significantly affects the outcome of various initiatives. The gender dimension is of central importance in this context.

Gender has been a subject of interest in the field of development research for decades. Based on different theoretical understandings of gender, feminist scholars and professionals have over the years shed light on how development policy interacts with and sometimes challenges prevailing power structures in society. An early example is *Woman's Role in Economic Development* (1970), a work in which economist Ester Boserup demonstrated that opportunities created by the gender-blind development policies pursued were distributed according to prevailing social structures, such as class and gender, much to the disadvantage of women (Cochrane & Rao, 2019; Miller & Razavi, 1995). The so-called *Women in Development* (WID) movement that emerged as a response, advocating the idea that allocation of resources to women will prove productive to society, came to have a great impact on the views on women expressed in subsequent development policy (Miller & Razavi, 1995). However, the somewhat narrow, liberal feminist focus on women, largely neglecting the relational nature of their subordination, were soon to be questioned in the light of influential writings on the social construction of

gender (e.g., Rubin, 1975; Miller & Razavi, 1995). Arguing for analyses of the social organisation, and of how it assigns women and men different roles, responsibilities and expectations, the new critical approach was labelled *Gender and Development* (GAD) (Rathgeber, 1990; Miller & Razavi, 1995; True, 2003).

In response to the gender bias in development policies, the World Conference on Women, Mexico City, 1975 called for systematic collection of sex-disaggregated data – a method of acquiring knowledge that is today almost taken for granted (UN, 1975; Cochrane & Rao, 2019). However, while this was an important achievement, it is crucial not to let a one-dimensional understanding of gender, i.e., *sex*, characterize the production of knowledge. In their study, Cochrane & Rao (2019) demonstrate the risk of an all-too narrow understanding of inequality when making use of sex-disaggregated data on health (SDG 3), by analysing 16 infant and child health metrics from the World Health Organization's (WHO) data set on Ethiopia in 2000, 2005 and 2011. While there are disparities in health-care coverage and health statuses between boys and girls – in some regards, most notably infant mortality, to the disadvantage of boys – the study also explores four additional dimensions for analysing social differentiation in health: *rural-urban*, *economic status*, *educational attainment*, and *regional-state (geopolitical orientation)*. Altogether, the five dimensions raise questions about the reproduction and intensification of inequality. An all-too narrow focus on only one dimension, e.g., the gender dimension, may reduce our ability to understand the diverse causes, manifestations and impacts of the multiple layers of marginalization, discrimination and vulnerability that people experience.

As Cochrane & Rao (2019) argue, an intersectional understanding of gender and inequality (Crenshaw, 1989; Walby, 2007), i.e., an analysis based on how categories such as gender, race, sexual orientation, functionality, geography, class, etc., interact, is essential for achieving the SDGs and their 'Leave no one behind'-principle. This is also the starting point for another study, Khalikova et al. (2021), that examines the inclusion of gender and intersectionality in the knowledge production of sustainability research. In many ways similarly to gender studies, it can be described as disciplinary-based research *for* sustainability, as well as a transdisciplinary field of research *on* sustainability (Spangenberg, 2011; Pulkkinen, 2015). While the gender dimension remains marginal in some areas (e.g., industrial ecology), even in the areas where it has received increased attention (e.g., climate change, corporate social responsibility, resource management and education), "gender" tends to be equated with "women" in traditional gender roles. Significantly, the four so-called environment related goals (SDG 12, SDG 13, SDG 14 and SDG 15) make no reference to gender or to the status of women (Agarwal, 2018; Azcona & Bhatt, 2020). Proposing a three-step framework to evaluate gender inclusiveness in sustainability research, Khalikova et al. (2021) ask the questions of *sustainability by whom, sustainability of what,* and *sustainability for whom.* Research inattentive to gender, or other social categories, the authors argue, risks missing important aspects of "social footprints", i.e., social impacts on environment associated with production and consumption (McBain, 2015). As R&I can unintentionally perpetuate biases, thus deepening social disparities which marginalize people from specific racial, ethnic, gender and class backgrounds, incorporating intersectional analyses can enable social equality in scientific outcomes (Daily & Ehrlich, 1996; Tannenbaum et al., 2019).

While the studies referred above point to the importance of intersectional analyses to generate knowledge about sustainable development, others examine tools and guides for the inclusion of gender in measuring and evaluating progress (or setbacks). Stephens et al. (2018) present the key theoretical concepts behind the evaluation guide they developed on behalf of UN Women. With its origins in critical systems theory, shifting focus from linear cause and effect to the social and reflexive nature of knowledge production, the ISE4GEMs approach seek to integrate all the three dimensions of gender, environment and marginalized voices (GEM) in systemic evaluation methods. In a discussion of the previous research on which their model is based, the authors emphasize: 1) a feminist understanding of the power dynamics that underlie gender-based social inequalities (Espinosa, 2013); 2) a perception of nature as something that deserves respect and consideration, rather than just being an object of human manipulation (Kaijser & Kronsell, 2014); and 3) a recognition that sustainable development requires a broader involvement of actors beyond those who traditionally participate in knowledge production and policy-making (Lang et al., 2012). Rather than conducting evaluations primarily for accountability against specific results, the authors argue for an approach of continuous and collaborative learning, combining transdisciplinary methodology, intersectional analysis and practitioner refection. Similar conclusions are drawn by Brown et al. (2020), as they present a model, developed at an academic workshop on gender and climate change, to bring together: 1) human rights and related legal frameworks (Agyeman et al., 2003), 2) gender analysis and gender mainstreaming practice (Friedson-Ridenour et al., 2019), and 3) local and indigenous knowledge (Huambachano, 2018), and to integrate these three dimensions into the understanding of sustainable development. In an evaluation of their three-dimensional model through seven case studies from Guatemala, Sri Lanka, Malawi, Peru, Côte D'Ivoire, and Aotearoa (New Zealand), the authors point out that their model addresses people's lived experience to an extent that reaches beyond the scope of metrics that have failed to capture injustice and marginalisation.

On the topic of limitations of quantitative data, Connell et al. (2020) connect the 2030 Agenda to the Beijing Platform for Action, ratified by all the UN member states after the Fourth World Conference on Women in 1995, as the agenda is the first global framework for development that raises gender equality both as a standalone goal (SDG 5), and as a cross-cutting dimension of all the SDGs. Discussing the SDG Gender Index, a tool launched in 2019 to track 51 indicators critical to gender equality across 14 of the SDGs, the authors reflect on key questions about the current ecosystem of sex metrics and data-driven tools. While good data is important to show *what* is happening, they conclude, it cannot fully answer the question of *why*. Gender inequality is ingrained in social structures, and it is part of cultural and societal standards, laws, and tradition. Data can be useful in the hands of activists and professionals, but it needs to be paired with deep contextual understanding of the lived realities of girls and women. Therefore, as an example, women's rights organizations continue to play an important role in the work for sustainable development. In other words, this suggests that traditional forms of knowledge production should be challenged through the development of so-called *citizen science* (Kullenberg & Kasperowski, 2016), action-oriented research (Wooltorton et al., 2015; Bleijenbergh, 2018), or that the R&I triple helix model of academia, industry and government cooperation should be extended to a quadruple helix model involving civil society organisations or social movements (Etzkowitz & Leydesdorff, 2000; Leydesdorff, 2012; Lindberg et al., 2012).

Further elaborating on the limitations of indices and quantitative data, some scholars even problematize indicators and evaluations as such. In their study, Pérez Piñán & Vibert (2019) discuss the experiences of a women's cooperative vegetable farm in rural South Africa, with conclusions on the burdens of the so-called *audit society* (Power, 1997; Buss, 2015): The insistence on measurable objectives risks nullifying the transformative potential of the 2030 Agenda, as the quantification processes can distract human energy from meaningful action. In their case study, the authors demonstrate how measurement demands from the state and funding agencies drain the farmers' own visions of socially and ecologically sustainable development, thereby hindering the realization of their collective capabilities (Nussbaum, 2003; A. Sen, 2005). This 'measurement obsession' (Liebowitz & Zwingel, 2014), or 'measurability trap' (Wittbom & Häyrén, 2021), comes with the strategic model of management by objectives (MBO), in which overall objectives are broken down in specific targets. The 17 SDGs and their 169 targets are just another example of this. Farmers' achievements that should count towards the achievement of the SDGs appear to be invisible, Pérez Piñán & Vibert (2019) conclude, and they suggest a turn from top-down to bottom-up in the knowledge production for sustainability (Ibrahim, 2017; Kabeer, 1999).

In connection with feminist scholars' critique of the measurement regime of knowledge production, Rose Taylor (2020) discusses how UN Women have utilized quantitative data to build legitimacy for feminist engagement in the SDGs and their predecessors, the Millennium Development Goals (MDGs), while also taking advantage of the spaces

of contestation that open up during agenda formation. Applied within the regime of *governance by indicators*, as it is labelled (Davis et al., 2015), gender indicators tend to diminish feminist aspirations to fit into the prevailing, male-dominated framework of formal institutions, failing to account for women's activities in the informal sector and ignoring the ways in which their roles are socially constructed (Powell, 2016). While acknowledging and bringing attention to these limitations, UN Women does not reject the quantitative approach to knowledge production but repeatedly push back against the assumptions often embedded in its use. An example is from the SDG report *Turning Promises into Action*, where it is stated that "indicators by definition are designed to indicate and can never give a full picture of progress" (UN Women, 2018, p. 36). By speaking the language of numbers, Rose Taylor (2020) argues, the strategy is to contest current methods of knowledge production, proposing indicators that address structural discrimination to better support intersectional gender equality (Podems, 2010). This strategy, the author concludes, is in line with the definition by Acker et. al (1983) of a feminist approach to knowledge production: acknowledgement of women's oppression, commitment to improving conditions for women and critique of the dominant traditions that either ignore or justify women's oppression.

Recommendations for EU funds and other RFOs

Based on the referenced studies, the following points can be emphasized:

- Research calls should promote an intersectional approach in analyses of inequalities and disadvantages that undermine the social dimension of sustainability. Sex-disaggregated data are not enough to gain knowledge about the causes and possible countermeasures to the differences in people's living conditions, but an understanding of how gender interacts with, for example, class, race, ethnicity, sexuality and functionality is required.
- Special efforts are needed to promote the inclusion of the gender dimension in certain research areas (mainly those that are oriented towards science, technology, engineering and mathematics, STEM) more than in others (with greater proximity to the social sciences and humanities), but also in the latter it remains of great importance to promote critical analyses of gender that can contextualise sex-disaggregated data.
- Research calls motivated by the transformative ambition of the 2030 Agenda may need to promote collaborative projects involving actors other than those traditionally involved in knowledge production and decision-making. This can be achieved by so-called *citizen science*, action-oriented research, or through the involvement of social movements in ways similar to how small and medium-sized enterprises (SMEs) have been partners in Horizon 2020 funded projects.

6.2

Implementation, Interactions and Social Movements

In contrast to the Millennium Development Goals (MDGs), the UN framework for development policy for the period of 2000-2015, the 2030 Agenda and its Sustainable Development Goals (SDGs) is characterised by a transformative approach, as implied by the title of the UN resolution *Transforming Our World* (UN, 2015). A number of the studies in the review analyse and discuss how the ambitions of the sustainability agenda are put into practice when the commitment of the UN member states is to be implemented. In other words, this chapter present results from research on capacities and obstacles for actual transformational work, as well as studies that analyse how different SDGs interact with each other.

The failure of the MDGs in addressing gender equality and the empowerment of women and girls is a subject of interest for Fredman et al. (2016). In their study, the authors reflect on the narrow focus of the MDG 3 (*Promote Gender Equality and Empower Women*) indicators (cf. Powell, 2016), and they point out that although some targets have been achieved in some countries (e.g., women's participation in education), gender inequalities remain unchallenged. Prevailing gender norms in society reproduce disadvantages for women in terms of, for instance, greater responsibility for unpaid domestic work and limited access to economic resources. These gender stereotypes condemn women to a more precarious situation on the labour market and a more unequal role in both private and public decision-making (even when their presence in parliament has increased). Gender-based violence is alarmingly high, and women and girls lack control of their sexual and reproductive health. In sum, gender inequality is the result of a complexity of interacting factors that were inadequately recognized and integrated in MDG 3 and its targets. This is parallel to how the MDG programme has been run alongside and practically unaffected by the UN advocacy for human rights (Alston, 2005). To help prevent the SDGs from repeating these failures, Fredman et al. (2016) argue for a human rights-based approach to sustainable development and present a model for 'transformative equality', pursuing four overlapping aims: 1) to break the cycle of disadvantage; 2) to promote respect for dignity and worth; 3) to accommodate difference by achieving structural change; and 4) to promote political and social inclusion. From a similar point of view, Koehler (2016) considers the adoption of the 2030 Agenda by 193 very different governments a step forward (cf. Koehler, 2015), but emphasizes the necessity of the implementation being characterized by a truly holistic and systemic approach. As an example, the social goals (SDG 1, SDG 2, SDG 3, SDG 4 and SDG 5) could be assigned to ministries of social policy, labour, health, or education, while most countries today have ministries of environment that could take charge over the environment-related goals (SDG 12, SDG 13, SDG 14 and SDG 15). However, such an approach would not be as transformative as the sustainability agenda requires, as it does not integrate the economic, social and ecologic dimension, nor does it challenge the capitalist rationale oriented towards economic growth, profitability and narrow competitiveness. The author points to the need for shifting the normative hierarchy, making sustainable and just social and ecological outcomes the primary policy consideration. This requires, for instance, making the care economy visible, considering its central role in women's lives and value to humanity, and for making the health of the planet, the precondition for gender justice, and the very foundation to stand on (cf. Raworth, 2012).

Some studies (Zhang et al., 2016; McGowan et al., 2019; Sachs et al. 2019; Sebestyén et al., 2020) have specifically addressed the issue of interactions between the SDGs in the implementation of the 2030 Agenda. In a text-mining analysis of the Voluntary National Reviews (VNRs) of the UN member states' efforts to implement the 2030 Agenda, Sebestyén et al. (2020) find that SDG 5 (*Gender Equality*) and SDG 8 (*Decent Work*) are the most discussed goals, while SDG 1 (*End Poverty*) and SDG 10 (*Reduce Inequality*) are the least focused. In a discussion of the sustainability agenda's principle of indivisibility, McGowan et al. (2019) analyse the relations between the SDGs (and their targets and indicators), and they find that there is a strong network of interconnectedness but great variation in terms of degree, strength, closeness and between-ness. Surprisingly, given the rhetoric that gender equality and peace are central to achieving sustainability, the links between SDG 5 and SDG 16 on the one hand and other goals on the other are particularly weak. As possible explanations, the authors suggest, among other things, an ambiguity due to poorly defined terms, and that the content of goals and targets are politically determined and therefore an incomplete expression of the indivisibility and interconnectedness of the 2030 Agenda. Similarly, Zhang et al. (2016) analyse interactions between the SDGs, with Target 6.3 (*Water Quality and Wastewater*) as a starting point and find that SDG 4 (*Quality Education*) and SDG 5 (*Gender Equality*) can function as leverage points in improving the quality of life for many of the world's poor. The idea of gender equality as a kind of lever for human development also characterize Sachs et al. (2019), who in their study propose six transformations to help governments, engaging businesses and civil society organisations, address the SDGs with an integrative approach: 1) education, gender and inequality; 2) health, well-being and demography; 3) energy decarbonisation and sustainable industry; 4) sustainable food, land, water and oceans; 5) sustainable cities and communities; and 6) digital revolution for sustainable development (cf. Nakicenovic et

al., 2018; SDSN & IEEP, 2020). However, while the authors perceive gender equality as an important aspect of human capital and well-being, it is emphasized primarily as a goal to achieve – through initiatives for better education and sexual and reproductive health, for example. In contrast, the gender dimension could be applied in analyses for a greater understanding of *all* the six areas of transformation.

Research on social movements and civil societies impact on the negotiating process of the 2030 Agenda show that over time women's movements have learned to navigate the institutional structures of the UN as well as divert interests within different women's organisations (G. Sen, 2019; Dhar, 2018; Gabizon, 2016; Goetz & Jenkins, 2016). As G. Sen (2019) argues, the Non-Governmental Organisations (NGOs) and their success in raising their issues can be related to three aspects: 1) the socioeconomic and political context, 2) how institutions are run and 3) internal building of movement. Two studies, Dhar (2018) and Gabizon (2016), highlight that success with impact on the final SDGs must be followed up and followed through with implementation at national levels, only then can the general formulations of the 2030 Agenda actually make transformational and concrete changes at the level of structures that conditions everyday life. The critical and problematizing voices of women's movements have been raised also in regard to the issue of women's migration. Migration is not appointed in its own SDG but integrated as an issue in goals addressing security and peace (SDG 16). The findings from one study, Hennebry et al. (2019), are based on an examination of the Global Forum on Migration and Development (GFMD) as a site for gender mainstreaming migration and development. The authors argue that while the SDGs include some significant provisions for women in migration, it is crucial to include the critical voices of activists to address the effects of inequality that hit women in migration specifically. The formation of alliances is a topic for a study by Fourie & O'manique (2016), who has interviewed actors involved in developing the 2030 Agenda and the SDGs. Given that a perspective on gender as "add women and stir" characterizes the sustainability agenda, as the authors put it, it is crucial to identify potential allies across the Global South and North. Part of the problem is that the frameworks for development and human rights are still separate tracks within the UN system, according to the authors, where the former tend to conflate rights with "unleashing one's potential" as a productive worker and consumer (cf. Esquivel, 2016; Briant Carant, 2017). The key to change is that there is always agency. Policies, such as various UN declarations and ILO labour conventions, can be braided together to give full attention to both gender equality and climate justice. A cross-sectoral approach is also found in Medupin's work (Medupin, 2020), who through workshops with the Women in Environmental Sciences Network (United Kingdom) has studied implementation of the SDGs in various different organisations, governmental and non-governmental, higher education institutions as well as local communities. As a conclusion, the author stresses the importance of bringing together people of different academic and non-academic backgrounds, professionals and grassroots alike, for collaborative efforts in making transformational change.

Recommendations for EU funds and other RFOs

Based on the referenced studies, the following points can be emphasized:

- Targeted calls are needed for so-called action-oriented research, where R&I projects are conducted collaboratively with researchers and the actors, whether it is government authorities, small and medium-sized enterprises (SMEs) or municipalities, that need to change their organisation and overcome siloed knowledge and policymaking.
- Research calls motivated by the transformative ambition of the 2030 Agenda may need to promote collaborative projects involving actors other than those traditionally involved in knowledge production and decision-making. This can be achieved by the involvement of social movements in ways similar to how small and medium-sized enterprises (SMEs) have been partners in Horizon 2020 funded projects.

6.3

Regulated and Social Reproductive Work

Equal access to paid jobs at the open labour market has been a major feminist demand in addition to democratic rights such as suffrage or socially framed demands such as sexual and reproductive rights. As the abovementioned focus on women in development (WID) shows women's access to work has also been framed as a necessary economic strengthening of society as a whole, the so-called trickle-down effect (Rathgeber, 1990). Education, work and opportunities that a free-market offers are not just matters of possibilities for individual women, but also a question of economic growth. The other side of the coin is that the economic paradigm determines whether work at the labour market should be understood as freedom or another form of oppression (Walby, 1989; Fraser, 2009).

The neoliberal economic paradigm that came after the Keynesian focus on societal investments – a shift in economic views that we also refer to above – did not only stress the importance of individual success on the labour market but did also favor a slimmed government with low taxes and minimal public, tax-funded service (Koehler, 2015). In a society that sustain major differences between women and men when it comes to reproductive work, this neoliberal paradigm reproduces women's positions as exposed and under obligation of double work: regulated at a labour market and reproductive in the private sphere. Without tax-financed and socially organized daycare or care of the elderly, women have difficulties to attend the job market putting many women in great vulnerability within the family, without possibility to support themselves (Ulmanen & Szebehely, 2015; Fraser, 2016).

The search came up with articles that critically scrutinize the policy rhetoric of the SDGs of the 2030 Agenda from the point of view of feminist theory, gender studies or feminist economics. It is foremost SDG 5 (gender equality) and SDG 8 (decent work) that are analyzed in these articles. The relation between human labour and economic development has since at least the industrial revolution been divided along gendered lines, leading to a division of labour that cast some work productive and some reproductive (Federici, 2014). Social reproductive work, so-called *unpaid care work*, is all work that is needed in order to raise new human beings, to reproduce everyday life in households providing nutrition, refuge and possibility for recuperation for the human body (Beier, 2018). Feminist scholars have shown how gender equality when defined as women entering the productive labour market leads to commodification of care work and exploitation of women from the Global South (Hochschild, 2000).

While a common argument for gender equality and women's empowerment is that it leads to economic growth (cf. Klugman & Tyson, 2016; EIGE, 2017; IMF, 2018), there has often been an assumption – even to this day – that the causality can just as probably go in the other direction (cf. Miller & Razavi, 1995). However, Kim (2017) points out the wrongful assumption of causality between growth and gender equality using South Korea as a case:

> The SDGs appear to assume that poverty reduction and improved social and economic development will bring gender equality. As the case of South Korea has shown, gender inequality may not be reduced even when economic and social development has been achieved. Even political democratization may not be enough to bring about fundamental improvements in gender inequality (Kim, 2017).

In their study, Rai et al. (2019) analyse the deficiency of the goal of decent work (SDG 8) as a means to achieve gender equality. SDG 8 is an example of the blind spot of the concept of work in the 2030 Agenda. Besides the implicit assumption that all empowerment for women is attained through women's entrance at the formal labour market, the main critique is raised against its inability to include unpaid work into the very definition of work, something that cripples the efforts to account for women's subordination, as well the exploitation of unpaid social reproductive work. SDG 8 relies on the economic imperative of increased growth, measured in Gross Domestic

Product (GDP), which does not recognize social reproduction as work at all. The authors identify a neoliberal ideology as the foundation for this exclusion. This neoliberal paradigm cannot solve the fact that when women are used in labour force the social reproductive work still remains to be done, and that no human activity is actually possible without this reproductive work, which is also the main argument by O'manique & Fourie (2016).

In their study, Beier (2018) adds to the critique that Rai et al. (2019) raise about the exclusion of social reproductive work from the definition of labour in the 2030 Agenda. The article is a critique of SDG 5 (*Gender Equality*) and its appropriation of feminist Marxist conceptualization of social reproductive work. Target 5.4 aims to "recognize and value unpaid care and domestic work through the provision of public service, infrastructure and the promotion of shared responsibility within the households". Beier use a feminist-Marxist framework to show how the target formulation remains hollow rhetoric: Seen in the context of the whole of the 2030 Agenda it is women's participation in the regulated labour force that is promoted. That actually devalues the unpaid care work rather than values it. The devaluation is a part of the process where the social reproductive work is commodified at the global labour market, hiring women from the Global South for care work in the Global North. Beier (2018) thus stresses the need for intersectional analysis that takes both gendered positions as well as racialized into account. The 2030 Agenda represents major contradictions in relation to social, reproductive work, and the authors point out that the process where new groups are claimed for the labour market are fundamentally ambivalent: they produce forms of freedom and at the same time reproduce inequalities. Beier (2018) however claims that this ambivalence also opens up for contestation of the exploitation of social reproductive work, combining the independent organisation of the social reproductive work with demands that it should be properly valued and paid. The 2030 Agenda is seemingly affected by a lack of systemic understanding and the damage that inequality created through unequal infrastructures and other systems. In a study discussed in the previous chapter on *Knowledge, Measurements and Indicators*, Azcona & Bhatt (2020) criticize the lack of available data to analyse and keep track of gender equality progress. Flawed data leads to the failure of making a gendered analysis of economic processes at a systematic level. As an example, they take complex relations between issues of water management and women's and girls' increased workload when it comes to accessing water, food and how this effects girls' access to education. An analysis based exclusively on the notion of, for example, gendered norms would be focused on the inequality of assigning a specific, and no doubt very heavy workload on girls, but a systemic analysis also takes into consideration that the workload needs to be made by someone or be rationalized by technological interventions. Here it is the inability to co-analyse issues of infrastructures of water and food supply and issues of education that is taken as an example to illustrate how economic sustainability is not just about future generations but investments in equal opportunities here and now.

Another form of critique concerns the reduced notion of power as only economic power. Esquivel (2016) raises a critique of the implicit assumption that all development is driven by industrialization and growth. The word "power" is used only once in the whole of the 2030 Agenda. The author identifies "embedded liberalism" as the 2030 Agenda's ideological foundation, which does not only point at the economistic paradigm but also liberal ideology's inability to account for power relations (cf. Polanyi, 1944). When women's power is defined as predominantly economic power, it gets invested into an economistic ideology. On a similar theme, Bidegain Ponte & Enríquez (2016) put sustainability at the fore analysing the potential for new ways of conceptualizing different growth patterns. The authors actually include care work (social reproductive work) and also bring environmental sustainability – as in environmental constrains for unlimited growth – into its analytical framework. Instead of seeing women's economic subordination as a collateral effect of macro-economic policies and development patterns they analyse it as the logic outcome of an unequal gendered system that is also reproduced through unequal work conditions in a capitalist economy.

The theoretical choice of separating productive and reproductive work is not just evident in the formulation of the 2030 Agenda but also in much research on women's participation in the labour force or – as in a research review summarizing research on the relation between fertility and participation in the work force show (Finlay, 2021). This normative understanding of work and the making invisible of reproductive work can be seen as part of a dominant discourse on empowerment starting with productive labour, self-sufficiency when it comes to economic resources and a neoliberal ideology of individualism. From a feminist perspective it is understandable to make resistance against stereotyping notion of women as mothers and caregivers: that women's lives and purpose are to submit themselves to other's wellbeing, sacrificing one's own health, resources, and freedom for the benefit of others. However, it is important to take the critique against limitless exploitation of women's regulated work into consideration, not reproducing neoliberal economic arguments about growth in the name of gender equality.

Recommendations for EU funds and other RFOs

Based on the referenced studies, the following points can be emphasized:

- Special efforts are needed to promote critical research on gender dimensions of the regulated labour market to empirically investigate effects on the construction of gendered, but also racialized and other intersecting structures create specific positions within the labour market.
- Special efforts are needed to promote research on the regulated labour market and how and if it can actually live up to demands for economic, social and ecologic sustainability, taking especially the concept of social reproductive work into account.

6.4

Gender, Ecosystems and Economy

Ecological sustainability has been a part of the UN's formulation of our global challenges at least since the Rio Declaration on Environment and Development in 1992, which in its turn is a confirmation of the affirmations formulated in the Stockholm Declaration 1972. Both these declarations recognize the importance of including ecology and ecosystems into the understanding of development and especially sustainable development. However, in the Millennium Development Goals, Mironenko et al. (2015) argue, the environmental conditions were consistently downgraded. In response to this, the MDGs and the outcome of the Rio+20 UN Conference on Sustainable Development have merged into Sustainable Development Goals (SDGs), answering calls from earlier agendas to include ecological sustainability into the UN Development strategies. As Sen (2019) notes, the relation between women's issues and environmentalist issues has not been easily mainstreamed. Even if there have been feminist environmentalists engaging in, for example, Rio 20+, considerable resistance has been put up from more technocratic environmentalists with limited knowledge on women's rights or, for example, how hard climate change hit women in agriculture hard, as part of the femininization of poverty (Agarwal, 2018). This naturalized discourse on dichotomies between men/technology and women/nature is one of many reasons as to why feminist thinkers and researchers have engaged in research that takes ecology and ecological systems as starting points. A few articles with the overlapping focus of gender and ecology came up in the search, although not as many as we had expected from our pre-understanding of this strand of research (cf. MacGregor, 2017; Magnusdottir & Kronsell, 2021). Roughly, two types of inquiry characterize the articles: First, articles that start out in a specific ecological problem that has particular gendered effects. Second, articles that criticize hegemonic economic models that underlie the 2030 Agenda from an ecofeminist

point of view (cf. Parr, 2009; Mies & Shiva, 2014; Heidegger et al., 2021).

Women's situation in agriculture and what is called "femininization of poverty" are addressed by Agarwal (2018). The author cross-reads the goal for gender equality (SDG 5) with those goals that address food security and combat of poverty (SDG 1 and 2) and comes to the conclusion that the narrow definition of gender equality in the 2030 Agenda makes it unfit to be directly used to guarantee food security for women and girls. SDG 1 and 2 instead has its own integrated gender perspectives, directly related to the issues in question. Food security is inherently intertwined with the ecological sustainability in management of land, water and forests (SDGs 13, 14 and 15) but these goals do not mention gender at all.

Brown et al. (2020) connect to the question of which perspectives to include in the work towards ecologic sustainability. The study joins experiences from a range of projects supporting and strengthening women's possibilities to make a living in agriculture. It complements the account of sustainability with knowledges and insights from human rights discourse, gender equality interventions and indigenous knowledges. The results from the different case studies show that projects directed at poor women in agriculture often implicitly include one or more sustainability goals, although sometimes not explicitly, but as an effect of circumstances in the contexts of the projects. In a case study of the implementation of new, sustainable sanitation technologies, Andersson & Minola (2017) analyse local perceptions and attitudes toward implementation of different types of ecological sanitation solutions. The authors argue for an approach that intersects technology with related conditions, such as health education, cultural and environmental contexts, gender and ownership. As a conclusion, new sustainable technological systems need to be implemented in ways that do not reproduce existing inequalities, and at the same time take existing social and cultural contexts into consideration, in order to make the technology socially and culturally relevant. Sanitation projects cannot be reduced in terms of external environmental-engineered cycle connecting households but have to be valued for the way they involve people's bodies, ecosystems and livelihoods.

Mölders (2019) articulates a warning against associative links between women, nature and care that reproduce normative assumptions on women as a group. The SDGs risk reinforcing a women-oriented sustainability discourse, foremost as a danger of feminising environmental responsibility, as a part of social reproductive work. The author also raises the fact that feminist critiques of growth-oriented economic rationalities are often ignored, and she calls for recognition of feminist theories' often powerful and visionary alternatives to mainstream normalisation of economic growth-paradigms. Normalisation of neoliberal growth as means to reduce for example poverty or gender inequality is also the subject of a discourse analysis by Briant Carant (2017) of the influences of neoliberal perspectives on sustainability goals in the MDGs and SDGs respectively. The author notes that liberal feminist demands have easily been included in dominant economic frameworks, instead of being the visionary alternative that Mölders (2019) describe. Briant Carant (2017) also argues that SDGs represent contradictory goals when it promotes both environmental sustainability and constant economic growth:

> (…) there remains a fundamental contradiction within the SDGs between resource limits and economic growth, a discrepancy noted by critics who argue that 7% GDP growth annually will cause global production and consumption levels to soar above the current levels, which already exceed earth's bio-capacity by 50%.

As a theoretical enterprise into this contested area Kotzé & French (2018) offer valuable insights on International Environmental Legislation and how the 2030 Agenda of sustainability goals suffer from an anthropocentric bias. This, the authors argue, makes the environment inherently passive, only a resource to provide for human needs. They use well-known feminist theoretical approaches to scrutinize the exploitation of nature in a capitalist system. The capitalist system in its turn reproduces well-established patriarchal dichotomies such as object-subject, emotional-rational, woman-man, dichotomies that produce "othering" (cf. Plumwood, 1991). Their systemic perspective underscores how masculinity is constructed within systems (cf. Hultman & Pulé, 2018), such as, in this case, the legal system:

> To be sure, nature and disenfranchised 'others' will remain 'othered' by law for as long as the legal anthropos remains stubbornly quasi-disembodied, still possessing a covertly privileged morphology favouring … the construct of a white, property owning, acquisitive, broadly Eurocentric masculinity. (Kotzé & French, 2018)

The article skilfully avoids pinning "ecofriendliness" onto women as a group. Besides the mere stating that women and other vulnerable groups suffer more from the effects of eco-systematic failures, as well as gains less from the exploitation of natural recourses, than privileged groups, they refrain from stereotypical accounts of both women and nature.

Recommendations for EU funds and other RFOs

Based on the referenced studies, the following points can be emphasized:

- Special efforts are needed to promote research on gender dimensions of food production, including agriculture, land, water and forestry management and the introduction of ecologically sustainable technologies in socially sustainable ways, in order to make new technology socially relevant.
- Special efforts are needed to promote research that discuss, develop and apply economic models that does not take increased growth as prerequisite for functioning societies.
- Interdisciplinary research collaborations need to be encouraged by calls to integrate the social, economic and ecologic dimensions of sustainability, in order to gain more knowledge on how the three affect each other, rather than targeting calls for research on individual SDGs. This is particularly relevant for the four, practically gender-blind, so-called environment related goals (SDG 12, SDG 13, SDG 14 and SDG 15).

7 Discussion

The world is – literally – on fire. Despite ambitious goal setting we have not managed to steer development in the right, sustainable direction. This is not a controversial statement, but it is problematic. Critical, problematizing perspectives teaches us that "the world" is not one, that there is no "we" that collectively take responsibility, development is not "a direction", and sustainability is a lot of different things depending on if one points at its ecologic, economic or social aspects. And even when these three aspects of sustainability are properly separated at an analytical level, they will most likely contradict each other so that what is socially sustainable in one context will turn out to be ecologically or economically un-sustainable in another.

The world is on fire, but despite the literal, material aspect of that statement, fire is also used as a metaphor and metaphors are powerful. This one points at global warming and climate changes due to consumption of fossil fuel, or in the case of "Earth's lungs" – The Amazon – due to consumption of Brazilian meat, effects that are economic and social rather than ecological since the market for Brazilian meat is created by economic wealth and changed customs in China. To link these processes is important but it is equally important to stay critical since cause and effect-constructions easily look like naturalized links. But there is no natural, self-evident link between increased wealth and meat-eating.

Critical research is crucial for the unveiling of the discursive construction of a communal "we" and different forms of naturalizations of inequalities. It is also crucial for analysis of reproductions of inequalities at global, national or everyday life levels. In this report we have tried to keep two thoughts in our heads at the same time: it is urgent to accomplish sustainable societies, but it is also important to take time to scrutinize the discourses of sustainability and gender.

This research review both shows how recent international research has taken on the cross-cutting of the gender dimension as well as drafting the contours of a research field that still have a lot of missing perspectives. For example, the relation between gender and ecological sustainability or rather un-sustainable environmental effects that distribute unevenly and reproduce inequalities based on gender, race, class, age and geography is not represented in the systematized search that the review builds on. Especially since we have previous knowledge about, for example, feminist posthumanist research and ecofeminist critique, this raises questions about search strategies, keyword-practices, journals included in the large databases like Scopus and how "gender" is used in many articles, as a statistical category. In addition to these methodological aspects, we also note that research that takes on, for example, the SDGs on environmental issues does not seem to properly connect with and reference the existing research fields on gender, environment, and climate change. This is always a risk with interdisciplinary research, that it emphasizes some research traditions more than other. However, we still have faith in the critical, interdisciplinary research field on gender and sustainability that we hope this report can be part of building, much in the same way that we must have faith in possible sustainable and fair futures for all.

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Appendix. Description of searching strategy for the review

The searching strategy for the research review has been based on the method for a systematic review, with the aim to summarize the research that is available on a specific issue. The method is characterized by the fact that the course of action used to search, find and evaluate literature is transparent and reported in detail. Partly to make it reproducible, partly to reduce bias.[1] Given the assignment's time frames and limitations, we have proceeded from the methodology of what is usually called a rapid review. This can be described as "a type of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a short period of time" (Sutton et al., 2019).

1 Campbell Collaborations, 2020. What is a Systematic Review? https://www.campbellcollaboration.org/what-is-a-systematic-review.html Accessed 2021-02-03

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Scope, databases and queries

The search was limited to peer review articles published 2015-2021 and was performed on 28 January 2021. Given the interdisciplinary nature of the subject, the Scopus database was chosen, which is a large interdisciplinary database with references that have undergone peer review in subjects such as science, medicine, social sciences, art and humanities and technology.

Based on the purpose of the study, the key terms "gender" and "sustainable development goals" were identified. These terms each formed a block, which in turn was expanded with relevant terms combined with the Boolean operator OR. The gender block was supplemented with terms such as *feminism*, and the sustainability block with different variants of *2030 Agenda* and *SDG*.

To refine the search, we discussed where the search blocks should be directed. As a starting point, searches in the Scopus database are directed to the fields Title, Abstract and Keywords (prefix TITLE-ABS-KEY). This generated an unwanted number of posts where, for example, the 2030 Agenda or gender is mentioned in the article's abstract but does not constitute the article's focus. To prevent this, we chose to target the 2030 Agenda block only at TITLE and KEY but continue to target the gender block at TITLE-ABS-KEY, except for the keyword *women*, which targeted only TITLE.

At the beginning of the 2030 Agenda block, a proximity operator, W/5, was applied, indicating that the keywords/phrases on each side of the proximity operator (in this case "sustainab* develop*" and goal *) must be within five words proximity with each other, but not necessarily in any specific order.

The final search was as follows:

((TITLE (("Sustainab* develop*" W/5 goal*) OR sdg* OR "2030 Agenda" OR "Agenda 2030") OR KEY ("Sustainab* develop* goal*" OR sdg* OR "2030 Agenda" OR "Agenda 2030") AND (TITLE-ABS-KEY (gender* OR ecofeminis* OR feminis*) OR TITLE (women*)))) AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "re")) AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015))

10 ›

Selection

The search generated 338 posts. These were exported to the screening tool Rayyan QCRI,[2] where the 338 articles were screened at title and abstract level by two researchers, in blind mode. The inclusion and exclusion criteria established prior to the selection phase were as follows:

	To be included	To be excluded
Focus	Studies that include eco/feminist and/or problematizing gender studies perspectives on SDGs and the 2030 Agenda.	Studies that are mainly based on empirical data that use unproblematized gender conceptions and that reproduce the groups "men" and "women" as ahistorical categories. Studies that do not focus on SDGs and/or the 2030 Agenda.
Concepts	Studies that focus on trade-offs between the various SDGs or through other concepts and/or perspectives critically examine SDGs and/or the 2030 Agenda.	Studies that only use the SDGs and/or the 2030 Agenda in a descriptive way, only "box-checking" the SDGs.
Technical delimitations	Publications from 2015 onwards. Peer reviewed articles, dissertations and other types of scientific production.	Posters, working papers, symposium descriptions, reviews based on international research.

After going through all the posts, the selection conflicts that arose between the two reviewers were resolved. At this stage, 276 articles and other documents were excluded based on the selection criteria. In the next stage, 62 full text articles were read, of which 27 were excluded based on the selection criteria. The analysis of the research review included the remaining 35 articles.

2 Rayyan QCRI is a freely available web-based collaboration tool designed for the selection phase in a systematic review. https://rayyan.qcri.org/welcome

Gender and Sustainability:
An International Research Review

This document has been prepared as part of Work Package 5 led by Zulema Altamirano Argudo, Ministry of Science and Innovation, Spain, and task leader Fredrik Bondestam, The Swedish Secretariat for Gender Research, University of Gothenburg, Sweden.

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GENDER ACTION

Get in touch with us:

www.genderaction.eu
info@genderaction.eu
@GENDERACTION_EU

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