

9 Sustainability and gender equality

A co-creation and Communities of Practice approach

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Introduction

Strategies for Sustainable Gender Equality (STRATEGIES) is one of the eight Communities of Practice (CoPs) supported by the ACT project, funded under the Horizon 2020 framework programme (see the introduction for an explanation of the project). STRATEGIES placed particular emphasis on the question of ‘gender equality’ and ‘sustainability’ in terms of project management. The ACT seed partner responsible for the coordination of the CoP is the French National Centre for Scientific Research (Centre National de la Recherche Scientifique) and the Republic of Knowledge research team – laboratory from the Ecole Normale Supérieure in Paris, France. The lab gathers philosophers, humanists and researchers on mathematics, biology, and computer science who share a common interest in epistemology as well as in history of science and technology. The dissemination of scientific knowledge provides another convergence point for the research carried out in the lab and within this scope the broader contextual, institutional and organisational learning around gender equality and Gender Equality Plans (GEPs) is of particular interest in the host research institution.

Much like all the other seven sister CoPs, STRATEGIES inception was founded upon a CoP approach. A CoP is ‘a group of people who share a concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise by interacting on an ongoing basis’ (Wenger, 2000). CoPs are often characterised by a ‘shared identity,’ as well as a collective intention around a problem. The introduction chapter provides a more in-depth presentation of the way the CoP theory shaped the goals and the ambitions of the ACT project and its supported CoPs. The shared domain for STRATEGIES is promoting gender equality from a sustainability perspective. The collective intention was to identify, share and leverage strategies for sustainable gender equality. The question of continuities and discontinuations in gender equality projects, initiatives and plans formed the core of the shared identity. The goal and hope were that by bringing together gender equality

practitioners from around Europe with an intense interest and preoccupation with sustainability, gender equality and GEP, best practices and lessons learned would be shared, inspiring new approaches that can guarantee sustainability in GEPs and policies in higher education (HE) research and innovation (R&I).

The text revisiting the life of STRATEGIES uses a reflective writing approach focusing on empirical and experiential reflections, ideas and findings from coordinating and facilitating the CoP: all three authors have acted as CoP facilitators and worked closely to enable knowledge exchange, events and activities of the life of the CoP. Reflective notes and a reflective diary were kept throughout the life cycle of the project. Reflective diaries are an interesting tool for facilitating and assessing reflection (Tang, 2020) as well as for assessing what has been learned (Wallin & Adawi, 2018). Particularly useful were also the blog entries of key moments in the life of the CoP available through the main ACT project website. Another resource we used was the ACT project evaluation reports (also available from the project website), which helped us gain an additional perspective through the eyes of ACT colleagues not directly involved in the life of the CoP. Within the framework of the ACT project, brainstorming and reflective, collaborative writing among different ACT CoP facilitators also laid the foundations for the writing of the ACT Policy Brief ‘How to support CoP for driving institutional change towards gender equality’ which was prepared by STRATEGIES in collaboration with Alt+G and LifeSciCop sister ACT CoPs (Mihajlović Trbovc et al., 2021).

Strategies for sustainable gender equality: Setting up the community of practice

STRATEGIES set itself the goal of addressing the complex, multifaceted topic of sustainability. This is reflected in the chosen name of the CoP ‘Strategies for Sustainable Gender Equality.’ The main angle from which we wanted to approach the topic concerns the knowledge, know-how, skills, competencies, policies and resources generated throughout various projects during their full life cycle, despite and beyond their end. A common example is this EU funded projects, however similar tendencies can be observed with projects funded by national bodies and authorities. What happens when projects end? What can we do to assure continuity? How can we avoid reinventing the wheel by making great use of available resources, tools and outcomes? Sharing experiences of continuity and discontinuity helps members of the CoP to better understand reasons for discontinuity and to share strategies or contingency plans to avoid this discontinuity.

In light of the above, the name we chose for our CoP suggests the three aims:

- ‘Strategies’ recall the fact that the strategy for gender equality has to be part of the overall strategy of the institution. If gender equality is

considered as a side policy or an outsider strategy, carried out by outsiders, there is a high probability the policy will disappear when the project ends and/or when the key person leaves. We wanted to share ideas to make gender equality part of the overall long-term strategy of our institutions.

- ‘Sustainable equality’ is an invitation to promote sustainable policies and to institutionalise gender equality in the day-to-day management of HE, R&I environments. An institutionalised policy is less subject to personnel turn-over or political change, and benefits of secure funding and staff. We wanted to share paths to transform gender policies from optional policies into institutionalised policies.
- ‘Sustainable equality’ also means cultural change towards gender equality, evaluation and the monitoring of GEPs. Evaluation, monitoring and impact assessment need to address bottom-up and top-down cultural change and address issues of how they can reinforce each other. It may be grass root initiatives of women scientists who promote a workshop to work on gender or students’ initiatives to create a new research seminar. It may be also executive level initiatives to promote new procedures in evaluating or recruiting, or considering the gender dimension in research as much as in academic teaching. Evaluation also needs to analyse how the different scales (micro, meso and macro) interact to produce sustainable progress and change.

Strategies for sustainable gender equality: Community

STRATEGIES was built around the former consortium of the GenderTime project (2013–2016) while new members were met and approached at a workshop, at the ACT first Synergy Conference in Brussels on 25 February 2019. The basis of these preliminary exchanges was provided by the notion of sustainability related to gender equality, and sustainability as outlined earlier. The main shared common goal and vision was to reflect on strategies ensuring sustainable gender equality policies, with a particular emphasis on HE and R&I environments. We were interested in figuring out how to improve gender equality for various stakeholders opening to research and academic staff, administrative staff and students. We also wanted to encourage a cross-border, cross-disciplinary collaboration which would encourage Strategies members to reflect, grounded on their own experiences, learning and know-how, what sustainability means for academic gender equality projects and initiatives and how a sustainable change towards a culture of gender equality may be achieved, developed and measured.

By the last months (October 2021) of the ACT project, STRATEGIES counted 14 members from France, Sweden, Serbia, Cyprus, Germany, Italy, Belgium and the United Kingdom, while a close collaboration with Eurodoc (the European Council for Doctoral Candidates and Junior Researchers) offers our CoP a fresh, Early Career Researcher and Investigator perspective.

It should be noted that among these 14 members, 6 members (including the coordinator) come from France and had already collaborated and worked together both in the context of other gender equality EU funded projects such as INTEGER, GenderTime, TRIGGER or EGERA. Sustained participation in both national and EU projects and initiatives created the will to work and join forces around gender equality and GEP while addressing the challenge of organisational settings and academic cultures characterised by modest resources and centralised management, as well as discontinuity in implementing GEP and related assessment and monitoring.

The 14 CoP members (including our own institution) had various profiles including universities (Deusto, Université de Strasbourg, Université Paris-Est Créteil, Oxford Brookes University, Università degli Studi di Padova, Örebro University, Wuppertal University and Frederick University), associations (Femmes et Mathématiques, Femmes et Sciences), networks (CPED, Eurodoc) and technological and research organisations (Mihalo Pupin Institute). The countries represented in the consortium were: Sweden, France, Italy, Spain, the United Kingdom, Germany, Cyprus and Belgium (for Eurodoc) with France counting five members.

A very important feature and element we believe sets our CoP apart, is the number of associations and networks we host ($n = 5$), acting themselves as CoPs: 1. Eurodoc, 2. CPED (Standing Conference for Equality and Diversity), 3. Femmes & Sciences (Women and Science), 4. Femmes & Mathématiques (Women and Mathematics). A fifth network is the French CNRS (French National Centre for Scientific Research) which also constitutes a network of labs, researchers and research units in France. STRATEGIES proudly has as a member Eurodoc, the European Council for Doctoral Candidates and Junior Researchers, a federation of 28 national associations of doctoral candidates and early career researchers (pre-doctoral or post-doctoral researchers employed on a temporary basis) of the European Union and the Council of Europe. This feature of STRATEGIES as a network of networks gave the potential and opportunity to reach out to multiple institutions in countries currently not present in the CoP. It gave us the opportunity to disseminate news, surveys, best practices, guidelines and practices with an extended network that reaches researchers and practitioners through various stages in their careers. It also allowed us to examine recurring challenges and themes under a regional, national and cross-border perspective.

The mix of networks and more traditional institutional members allowed both the identification of very specific case studies and the possibility to disseminate recommendations on a large scale. The interest of members and their reasons for participating stemmed from their desire to learn from others and share experiences, and also to disseminate their own good practices and recommendations. The participation of the four networks also allows an immediate dissemination and scaling up of activities and initiatives judged interesting and pertinent for the network members.

The domain: Sustainability and gender equality

Sustainability and project management

Seconding and complementing the CoPs approach (Wenger, 2011), the concept of sustainability was paramount to the identity and aspirations of all STRATEGIES members. Although the notion of sustainability can vary in terms of context, situation, scale, time and space, sustainable development in project management can be defined as a ‘continuity of economic, social, institutional and environmental aspects of the human society and the non-human environment in such a way that the needs of the present are met without compromising the needs of the future’ (Morfaw, 2014). In this sense, sustainability can be considered as a new form of humanism putting forward the notions of prosperity, peace, equality and well-being for all: individuals, communities, societies and institutions alike.

Gender equality and Sustainable Development Goals

Nowhere is this more apparent than in the 17 Sustainable Development Goals adopted by the United Nations in 2015. Gender equality is recognised as a key challenge (Goal 5: Gender Equality) crosscutting other goals and priorities. The Sustainable Development Agenda emphasises that ‘realizing gender equality and the empowerment of women and girls will make a crucial contribution to progress across all the Goals and targets’ and stresses out that work shall be carried out for ‘a significant increase in investments to close the gender gap and strengthen support for institutions in relation to gender equality and the empowerment of women at the global, regional and national levels.’ A prevision for the systematic mainstreaming of a gender perspective in the overall implementation of the agenda is also discussed, setting as a goal the elimination of any kind of gender-based discrimination. More broadly speaking it is also recognised that achieving gender equality will help progress across all sustainable development goals and targets (Blewitt, 2018). Of particular importance in terms of gender equality and GEPs are also Goals 10: Reduced Inequalities and Intersectionality, 11: Sustainable Cities and Communities, 16: Peace, Justice and Strong Institutions and 17: Partnerships for the Goals (Esquivel & Sweetman, 2016).

Sustainability in the previous experiences of STRATEGIES members

As already highlighted, almost all members of STRATEGIES had previous experience and involvement in gender equality projects, plans and initiatives at a national and/or European level. Common in these experiences was a larger preoccupation with regards to gender equality and project sustainability. More broadly speaking and within the project management literature, project sustainability is examined and discussed as an ‘integrated

process involving social, economic, cultural, legal, political, health, environmental, financial, and a host of other factors which can facilitate continuity and sustainability of an organisation, system, structure, or institution' (Morfaw, 2014).

This is particularly true for GEP and gender equality projects: STRATEGIES came as an attempt to provide some answers around a common concern of the CoP members from previous structural change projects and the question of the sustainability of gender equality policies: most STRATEGIES members had experienced a huge boost towards gender equality during an EU funded project followed by a clear slowdown after the end of the project due to the finalising of human and financial resources provided by the project funding. STRATEGIES was founded on the basis of the conviction that even if this outcome is not easy to manage, it is quite foreseeable while preventive measures, actions and initiatives can be imagined to deal with it, such as managing to anticipate the end of the project and obtain from the management of the institution the resources to continue the work, to which the European funding theoretically committed. Other contingencies are less predictable and can undermine gender policies, as changes in political teams, either at the institutional level (e.g., in France, university presidents are elected every 4 years), or at the national level, when anti-gender coalitions come to power. Another common contingency is the turnover of key persons to implement gender policies, and the subsequent lack of follow-up.

This structural and organisational challenge has been recently clearly recognised by the European Commission: 'Reviews of GEP projects have shown that the long-term impact of the structural changes initiated cannot be judged right after the end of a project, and that devising effective strategies to ensure the sustainability and institutionalisation of the GEPs are crucial to achieve lasting transformation.' (European Commission, 2020). The document 'Gender Equality, Achievements in Horizon 2020 and recommendations on the way forward' states that several projects report 'a major obstacle to institutional change due to a change in the top management of the implementing institution during the project. This can be a crucial issue if the newly appointed management does not consider gender equality as a priority. To mitigate this risk, the most effective long-term strategy is the early push for an institutional gender equality policy with defined and binding commitments and targets. An integrated, institutionalised, policy in management structures, and a GEP that is made publicly available, making successors likewise accountable for gender equality matters.'

Strategies for Sustainable Gender Equality as a CoP was formed around recurring challenges with regards to continuities, discontinuities and disruptions of gender equality projects and plans. What strategies can be developed to ensure continuity in gender equality policies? How can these consistently remain on the agenda for HE management at the regional, national and European level? Can we prevent new management teams from

undoing what has been done? What strategies can be developed to mitigate the consequences of such contingencies and ensure continuity?

Sustainability is not just a concern for GEP or gender equality projects. In fact, the ‘traditional’ notion of project sustainability so far is mostly related with what happens once a project or initiative is over. In too many projects, when the funding is over, or when the top management is replaced (for example because of the election of a new university president or dean), or when key people move to another place, or when the overall political context moves to another top priority, the project declines and the actions are not followed up. This echoes the three recommendations provided by Silvius and Schipper (2014) who argue that considering sustainability in project management implies: i. ‘a shift of scope in the management of projects: from managing time, budget and quality, to managing social, environmental, and economic impact.’ ii. ‘a shift of paradigm of project management: from an approach that can be characterised by predictability and controllability, to an approach that is characterised by flexibility, complexity and opportunity.’ iii. ‘a mind shift for the project manager: from delivering requested results, to taking responsibility for sustainable development in organisations and society.’

An additional concern common in our CoP was that many members had the feeling that the recommendations which existed at the time when the community was formed, were not always applicable in their own institutional context. For example, policies designed and implemented in countries in which universities are self-regulated, autonomous, self-financed and self-managed are probably not applicable the same way in HE environments which are regulated at a national level, with limited resources allocated. In such contexts, lobbying at parliamentary or governmental levels is essential to obtain gender equality inscribed in the laws and the national regulations.

Sustainable gender equality within the European research area

The fact that the sustainable project management concern experienced from STRATEGIES members is very timely is also reflected in several EU regulatory texts. The European Commission recently reaffirmed the need for both ‘sustainable cultural and institutional change’ (European Commission, 2020). Despite the fact that the implementation of GEP in research performing organisations (RPOs), including universities and research funding organisations (RFOs) was already supported in FP 7 (the European 7th Framework program, it lasted until 2013), new, additional provisions and mechanisms were put forward in Horizon 2020 in order to support institutional changes and address gender inequalities at all levels: a network of national representatives and resource centres on gender were established, potential gender biases in the allocation of grants were scrutinised, while training and capacity building in R&I was supported (European Commission, 2020).

Although much has been achieved for gender equality in R&I under the FP7 and Horizon 2020 programmes, inequalities still persist (see introduction to this volume). Strengthened provisions were decided within the new Horizon Europe programme, as a wider scale implementation was judged essential for reducing inequalities, among which some for the very first time: the most notable is the fact that, starting in 2022, public bodies, research organisations and higher education establishments will be required to have a GEP in place in order to ensure sustainable institutional change (European Commission, 2021). This sets a new basis and paradigm for gender equality in Europe with important consequences towards achieving sustainable gender equality as well as pertinent, related and sustainable institutional change. Furthermore, all provisions for gender equality in research and innovation under Horizon Europe will contribute directly to the United Nations' Sustainable Development Goal (SDG) 5 on Gender Equality and Women's Empowerment, and to all SDGs, as gender equality is a necessary foundation across SDGs (European Commission, 2020).

National initiatives and gender equality strategies are also headed towards the obligatory implementation of GEPs: for example, universities in France were invited to design and implement a GEP beginning from 2021. Ensuring that GEPs are in place will provide a new basis for discussing sustainability in ensuring gender equality and fighting discriminations. We believe that STRATEGIES has been a precursor of this movement towards achieving greater and more sustainable gender equality for all.

The practice: Leveraging sustainability for gender equality with co-creation

Capital to the life of the community was a co-creation approach nourished by the co-creation materials and methods that were provided by the core ACT project partners, particularly those who led the co-creation process (see [Chapter 4](#) in this volume). Practice in STRATEGIES was also nurtured by the various backgrounds and disciplines practiced by the participants: philosophers, historians of history and science and technology, literature, Science-Technology-Engineering and Mathematics (STEM) researchers, humanists, cultural communication specialists, sociologists, gender experts) with various degrees of expertise and experience from day-to-day practice in carrying out research, academic teaching and mentoring, administrative and governance responsibilities, in various environments (research, innovation, higher education, policy making) and cultural contexts. This gave us exciting challenges we were eventually able to cope with. Transnational, multi-institutional and interdisciplinary CoPs may face such challenges (Thomson et al., 2021).

The community functions mainly in English, although French is commonly privileged for communicating with all French partners. Within the measure of possible CoPs, members were encouraged to bring into the life

of the CoP their own experiences, lessons learned, needs, weaknesses, projects, initiatives, know-how while guests and invited speakers were often invited to present, teach and reflect on lessons learned highlighting challenges, gaps and potential steps forward. For this to occur, we tried to create a safe-as-much-as-flexible space and cater to each participant needs. Monthly meetings and get togethers were complemented by one-to-one meetings as needed.

Within the CoP, get togethers between members on topics of common interest identified by a co-creation, bottom-up approach. These meetings brought into the picture conceptualisations, theoretical, methodological and empirical approaches featured in flagship European and national projects and initiatives. In terms of who is representing the institutions mentioned above, the policies differ: some institutions are represented in all meetings and communications by the same representative, while others are represented by more than one member depending on the occasion or the topic treated.

For setting-up the CoP agenda and work-plan, we opted for a co-creation, bottom-up approach (Sanders and Simons, 2009), largely inspired by the spirit and techniques offered at the ACT Co-Creation toolkit (see [Chapter 4](#)).

We used the first/kick-off physical meeting in December 2019 for brainstorming, then co-constructing the main topics upon which we aimed to scaffold the CoP efforts and energy, among a variety of topics brought to the meeting by CoP members.

Two axes were identified by STRATEGIES members during the first, kick-off meeting: An Evaluation and Impact Assessment and B. Moving towards Structural Change regarding Training, Recruitment and Career Progression. Institutional and organisational learning was identified as a third axis, cross-cutting the two main topics identified.

Organisational learning has been defined as a continuous process of detecting and correcting errors (Argyris and Donald, 1978). According to the early organisational learning theory, open communication can hinder progress based on denial of real problems and denial for examining one's own contribution to a problem. More recent theories approach the question of institutional and organisational learning more as a process gained throughout the full life-cycle of a project rather than as a final, definitive outcome (Damala et al., 2021). With these in mind, we encouraged the CoP members who participated in the first, kick-off meeting to reflect on their own practices and challenges faced in implementing GEPs. Here are some of the core questions that emerged during the workshops which were organised on the occasion of the kick-off meeting: How can we define the notion of change (including institutional and organisational learning)? What constitutes a 'strategy'? How can we train and educate research, teaching, administrative staff on gender equality? What are the pitfalls of the current situation today in Europe and overseas? How do we move towards change integrating a micro, meso and macro level from grassroot initiatives to large

scale national and EU policies? How can we avoid discontinuities and better institutionalise gender equality policies?

To this cross-cutting topic, other questions were associated, pertinent with the two main axes:

- a Evaluation and Impact Assessment: How do we measure and evaluate gender equality practices in HE and R&I environments? How do we leverage and demonstrate the impact of the policies, measures and strategies adopted at a national and European or cross-border level? Should we share common indicators? The diversity of indicators is both a chance to get tailor-made tools and a challenge to build an overall picture of the situation. Experiences with existing awards and labels, existing monitoring and measurement tools were judged as important topics to share in the CoP. Other questions brought forward by the CoP members were the transferability of evaluation and impact assessment practices and indicators from one context to another and methodological issues such as the quality of data and collection and the challenges regarding privacy, confidentiality, the survey fatigue leading to poor answering rate, etc. Alternative strategies as participatory audits or formative evaluations were also flagged as important to reflect upon.
- b Moving towards structural change regarding training, recruitment and career progression: As already mentioned, Eurodoc was one of the CoP members that was welcomed in STRATEGIES. Other members, particularly those representing HE institutions were also aware of the challenges faced by Early Career Investigators and Researchers. An important group of open questions were identified in the kick-off meeting such as: What can be done to assist researchers throughout all stages of their careers (including early career researchers)? What are the current impediments and how can they be proved and demonstrated? What can be done to create mechanisms and conditions that guarantee hurdle-free progression with one's career at all levels and stages? The question also covers issues around the gender dimension of work-life balance. In line with the EU policies, beyond supporting and mentoring persons, beyond cultural change regarding gender regimes, our aim is to change the institutions and to stimulate a structural change. How can we change the institution if the institution produces discrimination? These challenges are especially important for Eurodoc and the early career researchers represented, also identified in the relevant literature (Bozzon et al., 2016; Murgia and Poggio, 2019).

With these in mind, we collaboratively decided to host the next meetings around these two topics, always under the lens of sustainability in gender equality as well as trying to address broader questions in institutional and organisational learning.

Gender equality, evaluation and impact assessment

After the question of Evaluation and Impact Assessment emerged as one of the most important questions, we decided to dedicate the second, consolidation workshop and get together on this topic. The second (and last physical) meeting of the CoP was equally organised in Paris in March 2020, just a few days before the large majority of European countries entered into COVID-19 lockdowns.

In order to cross-pollinate the reflections, collaboration and work of the members of our CoP, we devised a programme composed of presentations on national and European initiatives on the question of Evaluation and Impact Assessment. Three major European initiatives, that had set up important paradigms, were chosen for inclusion in the programme of the day: The ADVANCE UK Athena Swan initiative and the GEAM tool and the SUPERA and EFFORTI EU projects. All three had addressed – under a different perspective – the question of evaluation and impact assessment.

The ATHENA Swan accreditation scheme, which has grown to be recognised further than the United Kingdom for which it was initially conceived was presented by Kevin Guyan from ADVANCE HE, Edinburgh, United Kingdom with a presentation entitled ‘Evaluating gender equality – Advance HE research, surveys and accreditation.’ The UK 2010 Gender Equality Act was presented as well as the ways through which the UK legislation encourages and motivates UK institutions to work with gender equality. The question of staff retention and the development of the overall student experience was brought forward. The presentation also covered an overview of the UK 2010 Gender Equality Act ‘identity’ characteristics. Data gathered around identity characteristics such as gender, race, disability, religion, sexual orientation and others can be used to provide a demographic picture of an organisation, to provide insights around people’s lives and their real experiences or be used as a research tool for advancing equality, for example in order to evaluate the success/failure of initiatives and establish what works. Such data can also be used for encouraging diversity by establishing a diversity profile (a demographic picture of an organisation, used to identify gaps/absence and benchmark against comparators) and finally for promoting greater inclusion. The presentation to the CoP members also included an overview of the ASSET 2016 study ‘Experiences surrounding gender equality in STEM academia and the intersections with ethnicity, sexual orientation, disability and age’ (Aldercotte et al., 2017), which gathered rich data on gender equality in HE and Recruitment, Job and career, Perceived gender equality, Caring responsibilities, Training and leadership, Promotion and development.

The work carried out in ASSET fed into the development of the Gender Equality Audit and Monitoring (GEAM) tool which provides an integrated environment for carrying out survey-based gender equality audits in organisations. The availability of the GEAM survey in several languages might – in

the long term – assist in cross-border, comparative overviews of how the tool will be used across different cultural and linguistic contexts. This can be a major opportunity for promoting sustainable gender equality (for details on the development of the GEAM tool, see [Chapter 3](#) this volume).

Inspiring work carried out within the European SUPERA project provoked sparkling discussions within STRATEGIES (Forest and Lombardo, 2012). Maxime Forest from the Paris Institute of Political Studies, Paris, France presented the SUPERA EU Project approach to evaluation for gender equality which aimed at a structural understanding of gender inequalities, stereotypes and biases in research and academia as a cross-cutting issue. The main ambition was to propose a holistic set of measures to assist with building gender sensitive career management and workplaces, transform decision-making towards accountability, transparency and inclusiveness and achieve excellence through strengthening the gender dimension in research and knowledge transfer. Of particular interest is the position that one should bring into the picture the broader context (social, cultural, financial, regional, national), and the fact that innovative measures and initiatives should be disseminated and made known by various relevant stakeholders.

Based on the above, the SUPERA approach to evaluation was presented: This brings together a formative evaluation (which aims to reinforce the capacity of GEP actors and relevant stakeholders to design and set in place efficient changes), support for a strategic framework and thinking of the planned actions/interventions as well as tools supporting both the procedure of validation as well as the set-up and launch of relevant actions and activities around evaluation. The process can be supported by the participation of all involved parties and stakeholders, by raising the capacity of all agents of change to identify and understand windows of opportunity available at an institutional level as well as adopting, promoting and supporting proposed measures at an institutional level as a precaution and preventive measure encouraging sustainability.

A third important influence and contribution came from Susanne Buehrer and the EFFORTI project. The EFFORTI EU-funded project has the particularity of explicitly addressing the question of evaluation and impact assessment of gender equality in R&I in terms of research and hands-on practice. Its main goal was to develop an evaluation framework for establishing a link between Responsible R&I and gender equality based on the fact that more tangible evidence is needed for gender equality as a prerequisite for improved Research and Innovation outcomes (e.g., improved societal relevance of R&I, better contribution of R&I to societal challenges, innovations better suited to markets etc). The project proposed a framework for capturing the complexity of interventions and their impacts in complex systems, putting into the picture gender equality interventions and linking these to outputs, outcomes and impact (Palmén et al., 2020). Establishing appropriate frameworks that can guide evaluation and impact assessment was then recognised as a major opportunity by all STRATEGIES members.

Gender inequalities at the early career stage

As already highlighted, the CoP practice was greatly enriched through the active participation of Eurodoc, representatives. The extensive involvement of several of their core members enabled the integration of PhD and Postdoctoral researchers' challenges with a gender perspective. Eurodoc, and the topic of Early Career Researchers and Investigators (ECRIs), progressively gained an important space within our community. This was partly due to the sustained interaction that happened between Eurodoc's members and two CoP facilitators who were themselves at an early career stage within academia. Sharing the same social status (ECRIs) as well as gender (women) certainly fostered this learning partnership.

The lack of – even absence of – emphasis on early career researchers within gender equality initiatives in HE and R&I is another strong factor accounting for this peculiar dynamic within our CoP. Gender equality projects and plans are mostly designed by and for senior researchers. ECRIs, along with administrative and non-administrative staff as well as students, most of the time constitute a blind spot for gender equality policies. Their specific challenges are hardly monitored and addressed through those policies, because tracking them is a complicated task for institutions. Indeed, ECRIs are often funded by research projects or external stakeholders and do not appear in institutional data sets, since they frequently hold short term positions and are very mobile. Their variety of experiences and career paths is, therefore, invisible in policies tackling gender inequalities. However, the unstable working conditions they often face due to the growing casualisation of the academic workforce and the precariousness of the academic life is profoundly gendered and needs to be addressed (Murgia & Poggio, 2019).

Through various meetings and webinars within our CoP, a first goal was to provide a greater understanding of the gender inequalities at the early career stage and the specific challenges of ECRIs, especially in the aftermath of the COVID-19 crisis (Eurodoc, 2020). The challenges discussed, for instance, the issue of gender and academic mobilities in the context of the internationalisation of EU careers by exploring the career norm of geographical 'mobility' and its gendered assumptions and effects (Sautier, 2021). Simultaneously, a second objective was to share experiences and strategies aiming at establishing sustainable gender equality at an early career period. Several CoP webinars provided the opportunity to exchange information on both individual (mentoring programmes) and structural (implication of ECRIs in decision-making processes and science policy) measures implemented by CoP members in their institutions or by other researchers and academic staff participating as guest speakers.

At a more practical – empirical and experiential – level this close collaboration with Eurodoc acted as a confidence builder on tackling gender expertise with a focus on ECRIs both for Eurodoc representatives as well as for the CoP facilitators. The CoP's enriched practice is also observed in the

common vocabulary shared surrounding ECRIs. ‘PhD researchers’ came to replace the term ‘students’ as the perception of PhD researchers as part of the student body was progressively disrupted among the CoPs members.

Achievements and directions for future work

The work carried out within STRATEGIES in close collaboration with Eurodoc and many CoP members for whom the question of the challenges faced by ECRIs felt meaningful, culminated with the preparation and submission of a successful proposal for a new COST¹ – (European Cooperation in Science and Technology) action set to be launched in October 2021. The COST Action is entitled ‘VOICES: Making Early Career Investigators’ Voices Heard for Gender Equality.’

We hope that through this COST Action which will last for four years beginning from October 2021, more instances (both individuals and institutions) will gain a better understanding of the fact that, although ECRIs constitute an important and fast-growing workforce, their working conditions remain precarious and their careers uncertain. These inequalities can be reinforced by disparities within academia linked to other social determinants, such as origin, socioeconomic status, sexuality, or ability which have been magnified by the recent COVID-19 crisis. With the launch of the action, six workgroups will be formed. As shown in [Table 9.1](#), the Workgroups largely reflect the 5 thematic areas that are recommended for consideration in GEP according to Horizon Europe guidelines (European Commission, 2021).

The COST action will bring new life in the aftermath of STRATEGIES for Sustainable Gender Equality as a Community of Practice, albeit with a more specific topic, of the challenges faced by ECRIs. At the time of writing,

Table 9.1 Mapping between COST action CA 20137 workgroups and the content related building blocks of the Horizon Europe GEP eligibility criterion.

<i>Thematic areas and GEP (as provided and requested in Horizon Europe)</i>	<i>‘VOICES, Making Early Career Investigators’ Voices Heard for Gender Equality’ workgroups</i>
Work-life balance and organisational culture.	Workgroup 1. Employment, Career Development and Mobilities
Gender equality in recruitment and career progression.	
Gender balance in leadership and decision-making.	Workgroup 2. Leadership and Decision Making
Integration of the gender dimension into research and teaching content.	Workgroup 3. Gender as a Research Dimension
Measures against gender-based violence, including sexual harassment.	Workgroup 4. Sexual Harassment, Gender Based Violence and Institutional Culture
	Workgroup 5. Intersectionality
	Workgroup 6. Monitoring and Evaluation

22 countries have joined the network. As the set-up and launch is still in progress, we hope that more countries will follow. Among them so far, we have also welcomed eight colleagues and institutions from the ACT project and STRATEGIES. In the meantime, a dissemination event is planned for October 2021 in the form of an open panel for the annual conference of the Society for Social Studies of Science on the same topic. The panel will welcome 11 contributions on three subtopics focusing on ECRI: Institutional policies and initiatives, Intersectional discriminations in STEM and Precarity, Mobility, Work-Life Imbalances in Research Career Development.

Final reflections

The motivations and inner workings of STRATEGIES as a CoP reinforced our conviction that sustainability is a key concept for promoting gender equality and supporting institutional and organisational change at a national, European and international level. This chapter provided an overview of the theoretical and empirical underpinnings of the CoP.

In retrospect, we – as ACT CoP facilitators believe to have provided sufficient experiential evidence to demonstrate and argue that the strength of our CoP resided in the diverse knowledge and know-how acquired by the members of our CoP, the diverse experiences and needs manifested in different institutional and organisational contexts, the inclusive, bottom-up approach seeking to engage all perspectives from all CoP members and the common will to join forces and collaborate so as to create and make widely available the sharing of various resources, best practices and guidelines.

Despite the fact that our work has merely treated the tip of the iceberg ‘sustainability in gender equality’, we are very pleased that we were able to find a way to sustain the work that was initiated in our CoP. We believe that treating gender equality in a sustainable way will inevitably involve ruptures as much as (progressively more and more) continuities.

Note

1. COST is a funding organisation for research and innovation networks, funding actions which help connect research initiatives across Europe and beyond by enabling researchers and innovators to grow their ideas in any science and technology field by sharing them with their peers.

References

- Aldercotte, Amanda, Guyan, Kevin, Lawson, Jamie, Neave, Stephanie, & Altorjai, Sylvia. 2017. ASSET 2016: Experiences of gender equality in STEM academia and their intersections with ethnicity, sexual orientation, disability and age. Equality Challenge Unit. https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/ecu/ECUs-ASSET-report-November-2017_1579103163.pdf

- Argyris, Chris, & Schön, Donald. 1978. *Organizational learning*. Addison-Wesley Pub. Co.
- Blewitt, John. 2018. *Understanding sustainable development* (third edition). Routledge, Taylor & Francis Group.
- Bozzon, Rossella, Murgia, Annalisa, & Poggio, Barbara. 2016. *Supporting Early Career Researchers through Gender Action Plans: A Design and Methodological Toolkit* (Vol. 9). University of Trento.
- Damala, Areti, van der Vaart, Merel, Van Dijk, Dick and der Sterke, Pam. 2021. Evaluation and impact assessment of emerging technologies: Institutional and organisational learning. In: Stylianou-Lambert T. and Shehade M., *Emerging Technologies and the Digital Transformation of Heritage Sites*, Springer, p. 55.
- Esquivel, Valeria, & Sweetman, Caroline. 2016. Gender and the sustainable development goals. *Gender & Development*, 24(1), 1–8. <https://doi.org/10.1080/13552074.2016.1153318>
- Eurodoc. 2020. *The aftermath of the pandemic for early career researchers in Europe*. (2020, July 6). Eurodoc. <http://eurodoc.net/news/2020/the-aftermath-of-the-pandemic-for-early-career-researchers-in-europe>
- European Commission. 2012. *Communication from the commission to the European Parliament, the council, the European economic and social Committee and the committee of the regions. A Reinforced European Research Area Partnership for Excellence and Growth*. Retrieved from http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-partnership-excellence-growth_en.pdf
- European Commission. 2020. *Gender equality: Achievements in horizon 2020 and recommendations on the way forward*. Brussels, European Commission.
- European Commission. 2021. *Horizon Europe guidance on gender equality plans*. Publications Office of the European Union. <https://data.europa.eu/doi/10.2777/876509>
- Forest, Maxime & Lombardo, Emanuela. 2012. The Europeanization of gender equality policies: A discursive-sociological approach. In E. Lombardo & M. Forest (Eds.), *The Europeanization of Gender Equality Policies: A Discursive-Sociological Approach* (pp. 1–27). Palgrave Macmillan UK. https://doi.org/10.1057/9780230355378_1
- Mihajlović Trbovc, Jovana, Reiland, Sonja, Reidl, Sybille and Damala, Areti. 2021. How to support Communities of Practice for driving institutional change towards gender equality. Policy brief, available at https://www.act-ongender.eu/sites/default/files/actongender_policy_brief_how_to_support_communities_of_practice_for_driving_institutional_change_towards.pdf#overlay-context=act-highlights
- Morfaw, John. 2014. Fundamentals of project sustainability. *Paper presented at PMI® Global Congress 2014 – North America*. Phoenix, AZ. Newtown Square, PA: Project Management Institute.
- Murgia, Annalisa & Poggio, Barbara. (Eds.). 2019. *Gender and precarious research careers: A comparative analysis*. Routledge.
- Palmén, Rachel., Arroyo, Lidia, Muller, Jörg, Reidl, Sibylle, Caprile, Maria, & Unger, Maximilian. 2020. Integrating the gender dimension in teaching, research content & knowledge and technology transfer: Validating the EFFORTI evaluation framework through three case studies in Europe. *Evaluation and Program Planning*, 79, 101751. <https://doi.org/10.1016/j.evalprogplan.2019.101751>

- Sanders, Liz & Simons, George. 2009. A social vision for value co-creation in design. *Technology Innovation Management Review*. <https://timreview.ca/article/310>
- Sautier, Marie. 2021. Move or perish? Sticky mobilities in the Swiss academic context. *Higher Education*, 81(5). <https://doi.org/10.1007/s10734-021-00722-7>
- Silvius, A.J. Gilbert & Schipper, Ron P.J. 2014. Sustainability in project management: A literature review and impact analysis. *Social Business*, 4(1), 63–96. <https://doi.org/10.1362/204440814X13948909253866>
- Tang, Catherine. 2002. Reflective diaries as a means of facilitating and assessing reflection. In *Quality conversations: Proceedings of the 29th HERDSA Annual Conference Perth* (pp. 7–10).
- Thomson, Aleksandra, Rachel Palmén, Sybille Reidl, Sarah Barnard, Sarah Beranek, Andrew R. J. Dainty, and Tarek M. Hassan. 2021. Fostering collaborative approaches to gender equality interventions in higher education and research: the case of transnational and multi-institutional communities of practice. *Journal of Gender Studies*, 31(1), 1–19.
- Wallin, Patric, and Tom Adawi. 2018. The reflective diary as a method for the formative assessment of self-regulated learning. *European Journal of Engineering Education*, 43(4), 507–521.
- Wenger, Etienne. 2000. Communities of Practice and social learning systems. *Organization*, 7(2), 225–246. <https://doi.org/10.1177/135050840072002>
- Wenger, Etienne. 2011. *Communities of practice: A brief introduction*. <https://scholarsbank.uoregon.edu/xmlui/handle/1794/11736>