8 Wasting resources

Challenges to implementing existing policies and tools for gender equality and sensitivity in climate change–related policy

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Introduction

Climate change policy-making has a broad reach into a range of scales and sectors. It is, therefore, too limiting to discuss climate change policy-making in isolation from decision-making in the sectors which produce greenhouse gas emissions. Waste management is one such sector which contributes to greenhouse gas emissions and, consequently, has the potential to make a significant impact on their reduction. Waste management can be considered as including waste prevention actions, waste collection, sorting, material separation, recycling and final disposal. Other than waste prevention, all other waste management activities produce greenhouse gas emissions. The European Union's commitment to the circular economy emphasises the need for discarded materials to be treated in ways that mean they can be reused in products which are both long-lasting and can be dismantled for future recycling. This will eliminate the need for final disposal to landfill or incineration (European Commission, 2020b).

As a profession and an activity, waste management is highly gendered, with unpaid waste work in the household mostly done by women, while paid work – particularly operative and senior decision-making – is mainly undertaken by men. Professionally, waste management is dominated by an engineering tradition, which determines how decisions are made. The resulting path dependency resembles the privileging of the climate debate as 'scientific, elitist, technical and masculinised' – referred to in Chapter 1 of this volume. Recognising what structures the production, management and minimisation of waste is a critical step to achieving the drastic reduction of greenhouse gas emissions necessary to avoid a climate catastrophe; greenhouse gas emissions from the management of waste contribute almost 3% of the EU's total. The EU's dual commitment to both reducing greenhouse gas emissions and increasing gender equality has informed its environmental research programme Horizon 2020, which funded the Innovations project *Urban Waste*. This chapter uses *Urban Waste* as a case study to examine how open waste management organisations are to developing waste reduction innovations in a gender-sensitive way.¹ Amongst other things, *Urban Waste* promoted and investigated the role of gender in developing waste reduction innovations by applying gender mainstreaming throughout the life of the project. Table 8.1 sets out the stages at which this took place. From the

proposal design stage, I was involved as a gender specialist to ensure that sensitivity to gender was embedded throughout the project, which involved 11 pilot cities in eight European countries.² The cities all depended on a tourist-based economy, which presents particular waste management challenges that the waste reduction innovations were designed to address. However, they were diverse in terms of geographical distinctiveness, size, and, of particular importance for the gender dimension of the project, social and economic profile, which included differences in the degree of gender equality.

My involvement in the *Urban Waste* project emerged from my work on gender and waste management in 2002, when I led a research project to explore the role of gender mainstreaming in waste management. This small-scale pilot of gender mainstreaming was initiated by the EU's Environment Directorate to explore how the EU's gender mainstreaming commitment could be introduced into environmental policy. The study focused on three member states (Ireland, Portugal, and the United Kingdom), and broadly established that waste management

Table 8.1 Gender considerations at each stage of the project, following EIGE methodology

STAGE OF PROJECT (EIGE STAGE)	GENDER INITIATIVES
Proposal design (DEFINE)	Gender dimensions embedded throughout proposal; gender specialist involved.
Organisation of project (PLAN)	Gender strategy developed
Preparation/benchmarking (PLAN)	Survey of pilot organisations to collect gendered employment data.
Surveys of waste managers, tourism employees, and tourists (PLAN)	Stakeholder groups assessed for gender balance. By gender as well as by age, ethnicity, education, and place of residence to assess socio-economic dimensions of waste attitudes and behaviour.
Focus groups with waste managers, tourism employees, and tourists (PLAN)	Specifically on gender to explore attitudes and behaviour towards waste and waste management.
Training and mutual learning (ACT)	First mutual learning (ML) event was devoted to gender mainstreaming training; subsequent short sessions at various ML events.
Measures (ACT)	Three gender webinars on communication; budgeting; reporting.
Final evaluation (CHECK)	Training on how measures will have gendered impacts; measure evaluation forms gender proofed.
Final report and deliverable	Changes to gender balance of stakeholders; gendered changes to organisational structures; gender impact of measures; identifying good practices in and barriers to gender mainstreaming.
	Changes to the gender balance of stakeholders; informs future proposals and projects.

teams which were gender (and professionally) diverse were more likely to develop broader strategies for waste management which led to diversions from waste disposal to recycling (Buckingham et al., 2005).

The scale of change needed to address what has now escalated to a climate emergency requires policy transformation rather than incrementalism. A feminist gender analysis can inform and motivate transformative action in ways that a more co-opted form of gender mainstreaming may not. I open the argument which informs this chapter with a critique of gender mainstreaming as it has mostly been applied, and with a consideration of its transformative potential. In reflecting on the role of gender mainstreaming in the *Urban Waste* project, I explain how gender was, or was not, recognised and included in case study programmes and their home organisations to explore ways in which this was variously used to ‘add on’, ‘gender-wash’, or, occasionally, to more fundamentally restructure waste reduction. I reflect on the main challenges to including gender in waste reduction policy-making and propose how these challenges can be understood and conceptualised. By considering the synergies between the available gender-mainstreaming tools and waste reduction programmes, I question where the challenges lie – the tools themselves and their transformative potential; their promotion; and/or resistance to their adoption. I propose that these lessons may well be transferable between sectors and institutions responsible for creating and needing to reduce greenhouse gas emissions.

Specifically, my aim in this chapter is to reflect on the conditions under which gender mainstreaming can become a transformative process. The questions this process of reflection asks are:

- What conditions are necessary for gender mainstreaming to become transformative?
- What work is necessary to encourage these conditions to be achieved?
- What are the challenges that gender mainstreaming confronts at different stages of its implementation?
- What can we reasonably expect gender mainstreaming to achieve in environment – specifically waste reduction – policy-making?

Accordingly, this chapter will explain what is distinctive about waste management as a sector, including how it is gendered, and why it should be considered as an integral part of climate change-related policy. It will then review what gender mainstreaming provides as a principle, process, and set of practical tools, and how effective these have been to date. Following these context-setting sections, the chapter will reflect on how gender mainstreaming was applied and accepted (or not) in the *Urban Waste* project.

Managing waste as a contribution to climate change policy

A consumer society, in which most Europeans play a significant part, is a wasteful society. For example, over 80% of discarded textiles are sent to landfill and

incineration (Labfresh, 2019) and only 46% of electrical and electronic equipment waste, one of the fastest-growing waste streams in the EU, is recycled (Eurostat, 2020). It is also an unfair consumer society. While the 88 million tonnes of food waste in EU member states represent around 20% of all food produced in Europe, 43 million Europeans (around 8 %) are estimated to be in food poverty (European Commission, n.d.). And while consumption is determined by household income and related factors such as age, it is also important to note that consumption is a gendered activity (Buckingham, 2020).

While reducing overall consumption requires legislation and behavioural changes beyond the scope of waste management policy, managing waste locally and encouraging residents to remove items from the waste stream are important contributors to climate change policy.

In 2017, waste managed within the EU (not all that is produced, because of the global trade in waste) contributed approximately 2.7% of the emissions in EU countries,³ a drop of 42% in Kt CO₂e since 1990, when waste represented approximately 4% of the EU's greenhouse gas emissions. Waste features in the European Green Deal, which is committed to making a 'just and inclusive transition for all', although the terms 'women' and 'gender' are not found in a search of the document (EU, 2019b). Waste, like all the other sectors recorded as being the main Kt CO₂e emitters, is generally a highly masculinised and male-dominated industry, as this chapter will later demonstrate.

Being the gender advisor on the EU waste reduction innovation project *Urban Waste* has given me access to data on gender in waste management organisations (mostly municipalities) not otherwise generally available, because it is not normally counted. This has enabled me to assess the role, uses, and limitations of gender mainstreaming across the 11 participating case study cities. As the chapter will later discuss, the eight countries in which the pilot cities are located have very different gender profiles including that for paid work, and these different experiences appear to have an impact on their recognition and understanding of gender difference. The project facilitated and evaluated the identification and introduction of locally determined waste reduction innovations in tourist cities across Europe. While this included research with and into tourists and tourism businesses, the reflections in this chapter focus on the research with waste management institutions and staff.

Gender mainstreaming critiqued

Gender mainstreaming was adopted by the European Union (EU) in 1996 as a consequence of the Fourth United Nations World Conference on Women in 1995, which proclaimed the Beijing Declaration and Platform for Equality, Development and Peace as an agenda for women's empowerment. This and the UN Conference on Environment and Development in 1992 argued that to address environmental damage, gender (and other social) inequality must also be tackled. Gender mainstreaming requires that policies take gender equality into account at all stages, from development through to enactment and assessing impact. This

becomes a cyclical process when the impact assessment informs the adjustment of future policies, and represents a significant departure from existing environmental decision-making, with the potential, and hope, to be transformative.

However, in practice, the embedded or 'sticky' institutional structures which dominate environmental decision-making in Europe, as elsewhere, have been hard to penetrate and existing path dependencies have dominated (see Chapter 1 in this volume). EIGE has reported that 'gender mainstreaming is strikingly weak within the EU's environmental policies' (EIGE, 2020, p. 18). In EIGE's 25th anniversary review of the platform, it found that:

Currently, women remain under-represented in environmental policymaking, planning and implementation (European Parliament, 2017d). Women are also substantially under-represented in key sectors such as energy; transport; water and waste; and agriculture, forestry and fishery. The low level of gender diversity in the energy sector is considered to affect innovation and restrict efforts to address climate change.

(EIGE, 2020, p. 128)

Not only are women underrepresented in environmental decision-making, but environmental policy areas are found to lack gender sensitivity or any kind of gender perspective. (EIGE, 2020b).

Accordingly, gender mainstreaming has been variously welcomed and criticised, and often both where it is valued as a tool to achieve gender equality but observed to have been used instrumentally to bolster policies which are inherently unequal. For example, Grosser and Moon have argued that gender mainstreaming benefits the corporate social responsibility agenda, 'simultaneously good for both business and wider society' (in Walby, 2005, p. 457). This sees a dual role for gender mainstreaming which, if effectively implemented, requires that women should have equal rights to men (for example, to participate in careers and civic engagement), and that operational benefits accrue to organisations which strive to achieve gender balance in decision-making. Mieke Verloo was positive about the aims of gender mainstreaming to prioritise the lives and experiences of individuals; in its potential to lead to better government, to involve women as well as men; in acknowledging the diversity amongst men and women; and to make gender equality issues visible 'in the mainstream of society' (1999, p. 8). However, applying the tool that is gender mainstreaming is likely to reflect the values which underpin the organisation implementing it, thereby reinforcing existing path dependencies in a 'logic of appropriateness' as introduced in Chapter 1 of this book. The EU has been observed to strategically frame the concept of gender mainstreaming within a discourse of competitiveness and employment policies (Vida, 2017), and this may have contributed to criticisms of the EU's practical application of gender mainstreaming, including its reliance on 'soft' strategies such as training, for implementing gender sensitivity, although this may change with the Gender Equality Strategy proposed for 2020 to 2025 (EC, 2020). Moreover, those expected to implement and 'police' gender mainstreaming are

not always well equipped to do so (Mergaert and Lombardo, 2014). Verloo has also been sceptical that sufficient expertise existed amongst professionals to challenge prevailing discourses, and to align the necessary interests from those ‘at the top’ with those ‘down under’ (1999, p. 8).

While Verloo’s observation is now 20 years old, the same observations continue to be registered, which is interesting considering that a substantial body of expertise provided by feminists, consultants and trainers informs development policy and practice (Prugl, 2013). For example, while senior policy-makers and politicians have championed gender mainstreaming as a principle, and specialist organisations such as EIGE have developed mechanisms to encourage its application, there has been a failure to do more than tinker with the design of major research policy structures – themselves embedded in institutions through path dependencies, as I discovered when invited to address the (mainly male) first Horizon 2020 policy development team in 2013. Later, in the *Urban Waste* project, our European Commission liaison officer admitted that support and evaluation teams lacked the expertise to assess the role of gender in research or to advise (EC, pers com, 2016), which was certainly evident in our experience of project evaluation. Minto and Mergaert (2018) remain unconvinced about the institutional embeddedness of gender mainstreaming within the EU, observing a lack of resources for comprehensive gender-mainstreaming training and a lack of gender mainstreaming in evaluation at an institutional level. These technical challenges associated with gender mainstreaming can be overcome but are compounded by ideological difficulties.

As global institutions have utilised ‘gender mainstreaming’ and employed higher numbers of women, a liberal version of feminism – individualised and femocratic – appears to have been co-opted as, in Nancy Fraser’s words, capitalism’s ‘handmaidens’ (2013). Penny Griffin examines ‘the promotion of co-opted, governance-friendly, “feminist knowledge” which can be applied to international political, as well as economic, activity. She specifically refers to how a ‘crisis governance feminism’ is ‘a form of feminist strategy friendly to existing neo-liberal governance and supportive of the resuscitation of neo-liberal global finance’ (Griffin, 2015, p. 51). In the development context, Bernadette Resurreccion and Rebecca Elmhirst note how gender mainstreaming is ‘streamed away’ as it is framed ‘through a neoliberal discourse with a vocabulary of effectiveness, efficiency, impact assessment and “smart” economics [which] diminishes any power to address feminist agendas’ (Resurreccion and Elmhirst, 2020, p. 2). They explore the tensions that gender experts face ‘as they seek transformative social change whilst working in technical-environmental contexts that demand simplifications and technical fixes’ (Resurreccion and Elmhirst, 2020, p. 4). Nowhere is this more apparent than in the need to address climate change both at the global scale and in local and sectoral organisations, where the transformative potential of feminism offers at least the possibility to make real and lasting change. For this to happen, however, institutional structures need to be receptive to the need for and scope of change, and alive to the necessity to include all women and not just white women who are disproportionately dominating promotions in academia

(Bhopal, 2020) or environmental organisations (Taylor, 2014). As Kalwant Bhopal suggests, it is politically easier to concentrate on what will enable more women to achieve equality in the workplace than to address institutional barriers to Black and minority ethnic women (Bhopal, 2020). For gender mainstreaming to be transformative, both the principles on which it is founded, and the practical ways in which it is applied, need to be intersectional. This means being attuned to the needs of Black and minority ethnic women, disabled women, women of different ages, religions, cultures, care responsibilities, sexualities and sexual orientation. In my own experience of working with *Urban Waste* city partners, acknowledging intersectionality has been particularly difficult, especially when, as is generally the case, decision- and policy-makers are just adjusting to the need to address gender (in)equalities. Exclusively, the women managers who represented the pilot cities were 'white European' (as were the men). And as some of the women were the main carers of young children, this sometimes caused them difficulties in travelling to partner cities for quarterly meetings, and reduced the amount of time they were able to interact.

That gender mainstreaming has not been transformative is found in the persistence of gender inequality, and the disproportionate impact on women of the global financial crisis (Griffin, 2015) and more recently the COVID-19 pandemic (UN, 2020). Griffin quotes Otto as arguing that 'crises everywhere are a particularly dangerous time for feminism, and indeed for all progressive ways of thinking' (2015, p. 58). Beth Bee's analysis of REDD+⁴ in Mexico illustrates how the appointment of urban senior professional women to the national programme ENAREDD+ has done little to promote the needs and interests of rural women who do not own land. She also reports that women are appointed as legal representatives in order to score the points now needed for successful forestry applications but that while they can participate as agents of change, they can just as likely be included instrumentally, as signers of forms under the guidance of male figures of authority (Bee, 2017). Bee's work shows clearly how an emphasis on numerical parity does not, in itself, secure social equality.

Griffin characterises a form of influential international decision-making through groupings of individual states (G7, G20), supra-national bureaucracies (European Union), intergovernmental organisations (World Bank and IMF) and UN agencies as 'neo-liberal global governance' (Griffin, 2015, p. 53). She particularly focuses on recent global financial crises, and the international financial sector which, for centuries has been 'dominated not just by men but by dominant models of behaviour... [that have concentrated] historical privilege in the hands of white men' (ibid., p. 55). The persistence of such 'masculine subjectivities' encouraged Virginia Held to cite Carol Gilligan's argument that women who 'advance occupationally learn to think like men' (Held, 2006, p. 27), implying the existence of a dominant masculinity in occupational structures. A similar observation has also been made by Magnúsdóttir and Kronsell (2015) in their exploration of whether a numerical balance between women and men makes a difference to climate change planning policy; and it informs my own investigation into the gendering of waste management, itself a highly masculinised

profession through its most common training routes as well as its professional organisations and workplaces. The EU refers to descriptive and substantive equal representation, which recognises that while equal numbers are important to achieve a critical mass to provide a decision-making environment in which both women and men have the confidence to make effective interventions that are respectfully received, it is not in itself sufficient (EIGE, 2015).

Gender mainstreaming and waste management in the EU

As the gender advisor on *Urban Waste*, my responsibility was to ensure attention to gender and see that gender equality was achieved at all stages of the project, for which an EIGE gender-mainstreaming methodology was used (see Table 8.1).⁵ This enabled any correspondence between greater gender sensitivity of waste management departments and higher CO₂ equivalent savings to be observed. This relationship was also noted in an earlier European project which examined the potential for gender mainstreaming waste management. This identified that municipalities where there were women in decision-making positions (and, interestingly, women who were not from the engineering backgrounds which normally dominate), were those that were recycling more and through gender-sensitive activities. Notable amongst these was a project in southern England which was providing reusable nappies and nappy-cleaning services free of charge to low-income families (Buckingham et al., 2005).

That waste management in the European Union is dominated by men is evident from Table 8.2 which provides the gender balance of jobs in ‘water supply, sewerage, waste management and remediation’ calculated by the OECD. Despite sex-disaggregated data being necessary for effective gender mainstreaming, gendered employment data at the sector level is still not comprehensive (if available at all), and there is no cross-EU comparison of gendered employment in waste management.⁶ The OECD data is only available for five of *Urban Waste*’s eight case study countries, and it does not breakdown jobs by seniority, although from data elsewhere it is probably safe to assume that senior decision-making and technical jobs are more likely to be held by men (see also Buckingham et al., 2005; EY, 2015), just as they are across science- and research-related jobs (European Commission, 2019a) and in the energy sector (Catalyst, 2018; IRENA, 2019).

Table 8.2 Employment by gender in water supply, sewerage, waste management and remediation activities, 2017. Source: OECD, 2017

COUNTRY	MALE (%)	FEMALE (%)
Denmark	96,000 (72.2)	37,000 (27.8)
Greece	212,000 (77.4)	62,000 (22.6)
Italy	2,015,000 (87.5)	287,000 (12.5)
Portugal	286,000 (78.4)	79,000 (21.6)
Spain	1,128,000 (84.2)	244,000 (17.8)

Table 8.3 Gendered attitudes and behaviour towards avoiding waste. Sources: European Commission, 2014; 2017

GENDER	% reduce or separate waste	% reduce consumption	Avoids food waste	Avoids over- packaged goods	Drinks tap rather than bottled water	Thinks reducing waste is not important
Female	73	59	85	65	70	12
Male	68	52	81	59	63	20

The EU's own Eco-Management and Audit Scheme (EMAS) for the environment (which includes waste management) makes no reference to gender (Dri et al., 2018), although studies and reports, including those from the sector itself, have stated the importance of a gender-sensitive perspective (Charrington, 2017; EY, 2019). This also contrasts strongly with waste management attitudes and behaviour in the household, shown in Table 8.3.

These gendered proportions have remained strikingly consistent across times and places (see, for example, Brough and Wilkie, 2017, for data beyond Europe, as well as earlier Eurobarometer surveys) and indicate the value of a waste management policy which is gender-sensitive and draws on the expertise and concerns of women and men equally. This point is reinforced by the gendered waste behaviour that was noted amongst those *Urban Waste* survey respondents working in waste management. Three of women employees' top-four priorities related to behavioural change (behaviour change, awareness-raising and waste prevention), compared to three of men's top four being to improve operations, but without necessarily reducing the amount of waste produced (improving waste collection, optimising recycling, reducing landfill). This suggests a benefit of gender-balanced teams to have the potential to deliver a broader mix of policies, and proposes that women working in waste management may not be socialised into thinking the same way as men. This contradicts some of the literature reviewed earlier on the institutionalisation of women working in male-dominated fields, but concurs with findings from the earlier gender-mainstreaming waste management project conducted for the EU, and which will be returned to in this chapter's conclusion (Buckingham et al., 2005).

Gender mainstreaming the Urban Waste project

In addition to using the EIGE methodology for gender mainstreaming, the *Urban Waste* project adopted a participatory action research methodology. First, the gender expert was both actively participating in the project as well as researching the application and influence of gender mainstreaming. Secondly, participating representatives from each of the 11 case study cities contributed to identifying the issues to be addressed, the design of online questionnaires, focus group discussions and identification and evaluation of measures. The city partners, who were

self-selected participants in the design of the initial project, each established a stakeholder group for their city, with the guideline to achieve gender balance. City partners also recruited for local focus group discussions, adapting the topic discussion guide to local conditions. With their stakeholders, partners identified waste reduction innovation measures to be piloted by stakeholders, which they then evaluated together. The project ran a ‘mutual learning’ programme in which city partners learned from each other. Bringing these actors together in a participatory research action, the gender expert conducted qualitative surveys of the partners at the beginning and end of the project to assess what had changed in terms of commitment to gender equality, and how this might have affected local practices.

The countries that participated in the *Urban Waste* project (Croatia, Cyprus, Denmark, France, Greece, Italy, Portugal, Spain), had different profiles of women in paid work, and experience of overall gender equality (see Table 8.4). This may have had a material impact on their enthusiasm to acknowledge and address gender inequality. Within the project, the intersection of country of residence and gender appeared to signify differences in waste behaviour.

Each pilot city was required to invite a (gender-balanced) group of stakeholders to jointly identify, develop and implement a number of waste minimisation measures, innovative for its own city. This emphasis on a participative process created scope for gender-balanced stakeholder groups, or where there were male-dominant staff teams in the municipal office, to recruit more women stakeholders to counterbalance male dominance. In this chapter, I focus my reflections on the data generated by surveys and focus groups, and qualitative surveys of city partners conducted at the beginning and end of the three-year project.⁷ In addition, observations were made through a continuous programme of training and mutual learning for city partners, in which gender played a key part, particularly to ensure that the context for identifying and implementing measures was gender-aware.

The departments in which the pilot city partner representatives worked displayed a slightly more complex gender profile than that revealed in the survey of waste managers across each of the pilot cities (Buckingham et al., 2020). In the participating waste management departments, men were marginally more likely to

Table 8.4 EIGE Gender Equality Index ranking of participating countries (2019)

<i>Participating Countries (case studies)</i>	<i>EIGE Gender equality ranking in the EU</i>	<i>Participation in paid workforce ranking in the EU</i>
Denmark (Copenhagen)	2	6
France (Nice)	3	17
Spain (Santander, Tenerife)	9	22
Italy (Florence, Syracuse)	14	28
Portugal (Lisbon, Azores)	16	7
Cyprus (Nicosia)	20	9
Croatia (Dubrovnik)	22	24
Greece (Kavala)	28	27

be dominant in the most senior posts, but not necessarily in professional, associate professional and technical jobs. It was quickly apparent that the level of knowledge about gender amongst most project participants was low, and there were many misconceptions (including overestimations) about the extent of gender equality in participants' own countries and organisations. In some cases, there was an initial indifference. For example, at the beginning of the project, only two partners collected gender-disaggregated data, only one partner could (tentatively) respond to the question about providing good practice of involving gender sensitivity in waste management, and only three could provide me with the name of a woman on the waste management team who might be able to talk to me about her experiences. Three partner cities acknowledged that they had, or were about to launch, gender equality training. These attitudes indicated that the pathways and power structures already well embedded in institutions would not be easy to redirect.

Using the outcomes of baseline data, cities could be categorised as (a) already or almost immediately gender-aware, which to a large extent informed processes and outcomes; (b) developed gender-awareness which impacted positively on the process; (c) developed direct gender-awareness amongst partners but had limited or no impact on the process; (d) insistently gender-denying, with no impact on outcomes. How the case study cities performed in terms of gender-awareness can be compared with their carbon emission savings. Although it is not possible to establish a causal relationship between the two, some correspondence can be noted which serves as instrumental encouragement for adopting gender mainstreaming, and this observation will be returned to later in this chapter.

Gender-proofing waste reduction measures

From the outset, gender mainstreaming was signalled as a key dimension of the project which all partners were expected to incorporate. Indeed, it was a feature of the initial proposal and commended by the European Commission representative assigned to the project, aware of a lack of gender expertise in the Innovations programme (EC, pers comm, 2016). Recognising the low level of gender awareness and gender expertise amongst most participants, the first mutual learning event focused on building gender-awareness, with specific training on how to run gender-sensitive focus groups. The Danish partner also provided input into this training as the City of Copenhagen had commissioned a survey of gendered waste behaviour. Copenhagen's degree of gender-awareness was significantly different to other partners, and they were in the process of trying to engage more men in waste management both at citizen level and in their waste management office, which was dominated by women. This session was followed by other mutual learning events, and three gender webinars on gender-sensitive communication, gender budgeting and gender reporting.

Each of the pilot cities was required to identify, through participatory stakeholder decision-making, a number of potential waste minimisation practices which would be innovative to their area. They were asked to monitor how these measures were gendered in decision-making, the extra work involved and

in communication. It transpired that women were marginally more likely to incur extra work compared to men. Mindful that ICT use is gendered (EIGE, 2016), much attention was devoted to ensuring that the ‘wasteapp’, designed to locate recycling facilities and cafes, restaurants and hotels participating in waste reduction, was developed in a gender-sensitive way. Notwithstanding, the ‘wasteapp’ proved more popular among male tourists (Figure 8.1). However, given the lower recycling and waste minimisation practices of men referred to earlier, a tool which engages more with men could also be seen as a positive achievement. Just as Danish waste managers reported they had found, one US/Chinese study also concluded that men are more resistant to environmentally aware/sensitive behaviour, seeing it as too ‘feminine’ (Brough and Wilkie, 2017).

Correspondence between gender-awareness and sustainable environmental practices

The extent to which observations about gendered work have led to changes in practices was identified by the end-of-project survey. Eight pilot cities were identified as introducing changes to ensure more gender-sensitive practice or greater gender equality in employment in the longer-term. One pilot region, Tuscany, reported no further changes from an employment practice they already claimed to be ‘family-friendly’ and supporting women, but reported that they had been prompted by the project to consider introducing a gender strategy in regional waste planning. The remaining two pilot cities did not complete this element of the survey, from which we conclude that no longer-term gender-sensitive measures have been established.

Figure 8.1 Gendered use of ‘wasteapp’ (More details of the evaluation of all innovations can be found in Buckingham et al., 2020.)

Table 8.5 Case studies' environmental performance relative to gender equality and sensitivity

CASE STUDY	Ranked by performance (average/measure)	T CO ₂ e prevented/recycled (number of measures)*	% female stakeholders (= remains same/ + increased)	Gender of senior staff	Gender sensitive changes to practice
Copenhagen	\$, 5 (3)	*(1) 2.17 (1)	62 (=)	Retains female majority	✓
Dubrovnik	nd	nd	47 (nd, 2016)	nd	None reported
Kavala	7 (7)	0.57 (3)	20 (+)	Retains male majority	✓
Lisbon	3 (5)	7.147 (4)	68 (+)	Retains female majority	✓
Nice	6 (6)	2.11 (2)	40 (nd, 2016)	Incomplete data	None reported
Nicosia	8 (9)	0.32 (1)	47 (+)	Retains male majority	✓
Ponta Delgada	9 (8)	0.051 (1)	62 (+)	Retains female majority	✓
Santander	4 (4)	4.228 (2)	44 (+)	New female head	✓
Siracusa	10 (10)	0.025 (1)	46 (+)	Retains male majority	✓
Tenerife	1 (2)	13.161 (4)	31 (=)	Retains male majority	✓
Tuscany	2 (1)	13.12 (3)	53 (+)	Retains female majority	✓

*Obersteiner et al. (2019)

To explore the impact of gender balance on waste reduction strategies, an analysis was made of any correspondence between pilot cities which appear to be more gender-aware (through reporting changes to practice, ensuring stakeholder and/or employee gender balance), and those which have achieved the greatest gross carbon dioxide equivalent (CO₂e) reductions. It is clear from Table 8.5, that those case studies which started the project with the greatest gender-awareness, and where women had the strongest presence (Tuscany, Copenhagen and Lisbon), were amongst the greatest CO₂e savers (ranked by CO₂e savings per measure they rank first, third and fifth, respectively; by total savings, second, fifth and third).

Of the three cities which showed the greatest gender-awareness, Lisbon seems to have learned more from the emphasis on gender in *Urban Waste*, evident from the qualitative end-of-project survey. She also volunteered that other forms of discrimination needed to be tackled simultaneously:

In my opinion, it's important to keep addressing and raising this subject to ensure equal treatment, opportunities and respect regardless of gender but also race and religion. Also, and regarding the Stakeholders, since the UW

Project takes gender in consideration this might raise awareness in establishments that don't yet provide equal opportunities for all.

(Female Waste Manager, Lisbon)

Those cities which showed the least amount of gender-awareness, judged by the lowest percentage of female stakeholders, and retaining male-dominated senior waste management (Kavala, Nicosia, Siracusa), achieved some of the lowest CO₂e savings (seventh, ninth and tenth gross savings; seventh, ninth and tenth per measure). The exceptions to this pattern were Tenerife and Ponta Delgada. Tenerife made the highest gross CO₂e reductions overall and second-highest average per measure. One possible explanation for this is that Tenerife is located in the Canary Islands, the government of which led the project; it, therefore, may have had a particular interest in performing highly. Tenerife also instigated the highest number of measures. On the other hand, Ponta Delgada showed a strong commitment to gender equality but ranks low in both gross and average CO₂e reductions (ninth and eighth, respectively). Ponta Delgada introduced one of the most radical employment changes during the course of the project that requires all external waste collection and street cleaning contracts to have a minimum percentage of jobs to be held by women (the lead in Ponta Delgada was female). This suggests caution in using arguments of efficiency whereby gender equality is claimed as synonymous with better environmental performance, although it is also likely that such a move is likely to manifest environmental improvements in the longer term. Regardless, such a move towards gender equality in a heavily male-dominated sector should be seen as a positive achievement in its own right.

The most interesting cities, as far as embedding gender mainstreaming is concerned, are those which increased their number of female stakeholders and changed the gender composition of their waste management team during the project, in the course of which they developed a strong commitment to gender equality. Santander, in particular, which ranks fourth by both gross savings and average by measure, found *Urban Waste's* focus on gender helpful, stating that: 'the simple fact of taking into account gender equality in *Urban Waste* project-related activities is a way of influencing the organisation and the stakeholders'. The city is also recommending to:

Follow the general strategy maintained throughout the project, bearing in mind gender equality in all tasks. For example, in convening stakeholders, in focus groups, in Communities of Practice, in communication campaigns, in data collection, statistics, surveys and surveys.

(Female Waste Manager, Santander)

It was also possible to detect positive shifts in cities whose statistics belied their enthusiasm. For example, while Nicosia is at an early stage of developing a gender-awareness, they also identified the utility of the gender approach for them:

We found it very useful. Men and women must be able and have equal opportunities to participate and successfully fulfil the different tasks assigned to them

in the workplace. Therefore, the manager of each department must remember this issue/term. Even if we consider gender equality in our organisation/department, the *Urban Waste* project through webinars, examples and via the implementation of the measures helped us to become more familiar with this factor.

(Male Waste Manager, Nicosia)

Five of the case study cities (two of which, Copenhagen and Tuscany, had already provided evidence of high gender-awareness) claimed that their city/country was already attending to gender equality. Three of these, however, had not provided evidence of commitment to gender equality requested at the start of the project, nor demonstrated particular enthusiasm for gender equality during its course. These responses could, therefore, be interpreted as ‘blocking’ mechanisms for change, especially as their employment and stakeholder data reflected gender inequality. An example of this likely overclaiming of attention to gender can be found from the waste manager in Tenerife who, despite not increasing the 31% of women in its stakeholder group nor changing the gender balance of a male dominant waste management team, claimed that (emboldened by the author for emphasis): ‘*Urban Waste*[’s] **gender focus has been consistent with the strategy concerning gender equality** developed by the Cabildo de Tenerife from its cross-cutting approach’.

One pilot city (Nice, with a male lead) failed to respond to the question about how a focus on gender had influenced their project, and another case study (Dubrovnik, with a female lead) did not find the emphasis on gender at all helpful other than instrumentally to help secure grants in the future: ‘It is not very useful. It is useful only in terms of future Horizon 2020 project where we can use experiences from this project’. Dubrovnik’s persistent resistance to acknowledging gender inequality is despite, and perhaps reflects, Croatia being one of the lowest (24th of 28) performing countries in the EU on gender equality (EIGE, 2017).

Conclusion

The aim of this chapter was to explore the conditions under which gender mainstreaming can become a transformative process within the context of a climate change-related policy area, and asked a number of questions. The first question was what conditions are necessary for gender mainstreaming to become transformative. It was clear from the experience of advising on gender for *Urban Waste* that a prior awareness of and commitment to gender equality made a difference to performance on both gender-awareness and carbon emission reductions. One condition, then, for gender mainstreaming as a transformative process would seem to be a prior and evident commitment to gender equality. It is also clear that the more women who were involved as waste management decision-makers in the individual pilots, the better gender-sensitivity was achieved. This suggests the importance of descriptive equality, and challenges some of the gender mainstreaming analyses reviewed earlier in the chapter which argue that women in occupations dominated by men overall tend to mimic male behaviours. It also challenges, to some extent, the notion that path dependency in waste

management institutions and the ‘stickiness’ of their masculine environments are universally resistant to change. Critical mass, however, can also be seen to be important as the pilot cities with larger numbers of women in decision-making positions were those more likely to support gender equality actions and climate-critical acts. Descriptive equality would, therefore, seem to be a necessary condition for transformative change, but not in itself sufficient.

The second question concerned the work necessary to encourage these conditions to be achieved. One reason proffered for the failure of gender mainstreaming is a lack of resources for training (Minto and Mergaert, 2018). However, given the resources available to the *Urban Waste* project over an extended period of three years, and given the patchy success of achieving gender equality, let alone mainstreaming gender concerns across the pilots, resources alone cannot be seen as a pre-condition for transformation. Even in this three-year project, with many interventions to raise the issue of gender equality, and which was commended in the final evaluation for its work on gender, the success rate was limited. The responses which emerged during the life of the project spanned ‘embracing gender equality’ to outright resistance. In between lay examples of compliance without enthusiasm, and box-ticking. Certainly, Mergaert and Lombardo’s (2014) identification of resistances at the individual and institutional level resonates with some cases in the project, where either individuals resistant to the idea of promoting gender equality, or institutions which are not receptive, are able to block gender mainstreaming. This was certainly the case in Dubrovnik, but experience elsewhere was equivocal. These findings support one of the concepts underpinning this book: that embedded and ‘sticky’ institutional structures can prevent transformative action regarding gender equality. This, then, is one of the challenges facing gender mainstreaming at different stages of its implementation, the third question posed by this chapter. Perhaps one of the problems is when gender mainstreaming is viewed as something which is added on to an existing workload which people feel ill-equipped and poorly resourced to manage, rather than an opportunity to re-envision how an organisation or part of an organisation might work. For example, Tuscany had provided the example of introducing family-friendly policies, such as flexi-time and working from home, which benefited women and improved the workplace culture for all employees.

The chapter’s last question relates to how gender mainstreaming can be expected to achieve change in climate change-related policy-making. The project does provide some evidence that better gender-awareness and gender equality practices are linked with better waste reduction and environmental performance. This reflects research at the global scale, where countries which perform highly on gender equality also do so on environmental measures (Ergas and York, 2012). Although the relationship between the two is not necessarily straightforward, there are indications that greater attention to gender balance and gender equality amongst stakeholders and employees could lead to improved waste reduction, which makes it all the more critical that policies such as the European Union’s Circular Economy Action Plan, or EMAS, do actually refer to gender and indicate its importance, which is not yet the case.

Notes

- 1 The *Urban Waste* project was funded by EU Horizon 2020: Grant Agreement Number: WASTE-6a 2015 690452.
- 2 The participating cities/countries were: Dubrovnik in Croatia; Nicosia in Cyprus; Copenhagen in Denmark; Nice in France; Kavala in Greece; Florence/Tuscany and Syracuse in Italy; Lisbon and Ponta Delgada (Azores) in Portugal; Santander and Tenerife (Canary Islands) in Spain.
- 3 The European Union combines sectors to compile annual greenhouse gas emission statistics; there are nine combined sectors, of which waste is currently the lowest emitter of greenhouse gases (EU, 2019a).
- 4 REDD+ refers to the United Nations 'reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries'. ENAREDD+ is the related strategic policy of Mexico.
- 5 In this role, I ensured that the *Urban Waste* project was gender mainstreamed, and supported pilot cities to adopt gender mainstreaming as a principle and practice, at least for the waste innovations they developed.
- 6 Although the EU considers sex-disaggregated data to be a decisive factor for the effective implementation of gender mainstreaming, the availability of sex-disaggregated data by employment sector is not yet mandatory and varies by country. It will be required by the Gender Equality Strategy 2020–2025, although this had not been ratified at the time of writing (European Commission, 2020).
- 7 Specifically, this comprises baseline data on staff in the 11 case study waste management offices; a survey of waste management staff in the 11 cities, and follow up focus groups; evaluations of gender, and tonnes of CO₂ equivalent emissions prevented, in the waste reduction innovation measures adopted by each case study city; an end-of-project evaluation which assessed gender impact in each of the case study cities.

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