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Gender Equality and Environmental Sustainability in the Age of Crisis

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* The views expressed in this paper are those of the authors and do not necessarily represent those of the United Nations.

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Abstract: Gender and environment are mutually constitutive. In the last 25+ years, activists and scholars have identified, revealed, puzzled over and analysed the multiple dimensions of these relationships. But the uptake of gender-environment knowledge into official analytical and policy frameworks -- including, notably, the SDGs -- has been tentative, light, and often resisted.

I) First Principles

The 1995 Beijing Platform identified 12 areas of concern in which gender inequities needed remedy in order to achieve gender equality. "Women and environment" is on the list. There are two remarkable aspects to this:

• The very inclusion of "the environment" in a "women's" document: in the 1990s, although there was a well-defined emerging domain of 'women and environment' analysis, (largely as a subset of development studies and of women's peace activism), this was a field that garnered little official recognition or respect. In academia, in policy settings, and in mainstream environmental assessments, "women" and "environment" were separate solitudes, largely existing in structured mutual ignorance.

• Its radical heft and scope: The platform document was radical in its environmental reach. It was one of the few multilateral 'official' documents to identify militarism as an environmental threat, to spotlight the accountability of industrialized countries' consumption and production as a primary driver of planetary unsustainability, and to argue that environmental degradation caused by drivers such as these produced intersectionally-differentiated impacts. By 1995, feminist environmental analysis, intertwined with radical activism, was organized, loud and sophisticated – exemplified perhaps by the 1991 "Global Assembly of Women and Environment"– but seldom taken up in the policy mainstream. The imprimatur of the Beijing Platform was significant.

Despite the heft of that imprimatur, progress in meeting the mandates and expectations laid out in the Platform has been halting. In many aspects, there is no discernable progress at all.

Environmental Crisis

The gravity of environmental crisis has not diminished since 1995; arguably, it has worsened. The Beijing Platform, in necessarily abbreviated fashion, summarized the state of the environment in 1995:

> *(246) Awareness of resource depletion, the degradation of natural systems and the dangers of polluting substances has [sic] increased markedly in the past decade. These worsening conditions are destroying fragile ecosystems and displacing communities, especially women, from productive activities and are an increasing threat to a safe and healthy environment. Poverty and environmental degradation are closely interrelated. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances. Rising sea levels as a result of global warming cause a grave and immediate threat to people living in island countries and coastal areas. The use of ozone-depleting substances, such as products with chlorofluorocarbons, halons and methyl bromides (from which plastics and foams are made), are severely affecting the atmosphere, thus allowing excessive levels of harmful ultraviolet rays to reach the Earth's surface. This has severe effects on people's health such as higher rates of skin cancer, eye damage and weakened immune systems. It also has severe effects on the environment, including harm to crops and ocean life... (247) Hurricanes, typhoons and other natural disasters and, in addition, the destruction of resources, violence, displacements and other effects associated with war, armed and other conflicts, the use and testing of nuclear weaponry, and foreign occupation can also contribute to environmental degradation.*

It should be shocking that today, in 2019, these same – and additional -- environmental stresses are multiplying and accelerating. All of the recent key global environmental assessments, including UNEP's *Global Environmental Assessment-6* (2019b), the IPCC's report on climate change (2014), the Millennium Ecosystem's Assessment (2005), and the IPBES's report on biodiversity and ecosystems (2019), establish that from the local to the global, natural and human environments are increasingly in crisis and many may already be past sustainability tipping points – due in considerable measure to pressures from industrialized countries' unsustainable production and consumption, as the Beijing Platform rightly identified.

The first global synthetic report on *gender* and the environment was produced in 2016 by UNEP to fulfill a mandate from the Network of Women Ministers of the Environment. The *Global Gender and Environment Outlook* (GGEO) (UNEP 2016), while providing a sophisticated and comprehensive overview of information on the gender-environment nexus, pressed many of the same points as the Beijing Platform decades earlier:

- That the drivers and impacts of environmental change are differentiated by gender, and that gender inequalities are intersectional and magnified by other social positions.

- That the evidentiary and analytical basis for understanding these intersections is still largely incomplete, including in aspects such as: analysing different dimensions of relationships between

gender and the environment across geographic scales; establishing how environmental conditions shape the lives of people in different ways as a result of gender and other differentiators; developing frameworks and perspectives that allow an understanding that women and men are not only affected by, but also have important roles to play in, enabling environmental sustainability; that ignoring gender issues in environmental and climate policies and programmes is a recipe for failure.

- That gender equality is a environmental sustainability multiplier, and vice-versa.

- That women are still grievously under-represented in environmental policy-and decision-making positions.

- And that there is considerable resistance, some overt, mostly covert, to bringing gender fully into the domains of environmental analysis and assessment. Ignorance about the value of gendered environmental analysis is widespread; it is an artifact that is constructed by both gender and environmental discourses.

With very few updates, a 2020 version of the Beijing Platform could essentially cut and paste its environmental section from 1995. If we accept the Platform's basis premise the environment is an essential ingredient in the constitutive basis of gender equality, then forward progress in this realm is more pressing than ever. How we doing on this? (Spoiler alert: not very well at all).

In the last section of this paper I identify four primary obstacles to progress: Environment as science: Privileged knowledge and favored interlocutors; Politics of urgency; Privileging quantitative information; Talking about gendered drivers upsets people (mostly men).

II) Differentiated impacts

One of the successes in gendered environmental analysis, a desideratum highlighted in the Beijing Platform, is the efflorescence of knowledge and information about the nature of gender-differentiated *impacts* of environmental change. The environmental section of the Platform started with an assertion of environmental differences, and called for research on impact differences:

> *The continuing environmental degradation that affects all human lives has often a more direct impact on women. Women's health and their livelihood are threatened by pollution and toxic wastes, large-scale deforestation, desertification, drought and depletion of the soil and of coastal and marine resources, with a rising incidence of environmentally related health problems and even death reported among women and girls. Those most affected are rural and indigenous women, whose livelihood and daily subsistence depends directly on sustainable ecosystems. (34)... The impact on women of environmental and natural resource degradation, deriving from, inter alia, unsustainable production and consumption patterns, drought, poor quality water, global warming, desertification, sea level rise, hazardous waste, natural disasters, toxic chemicals and pesticide residues, radioactive waste, armed conflicts and its consequences. (258.b.ii)*

There is now an enormous corpus of knowledge, including literally thousands of case studies and field reports, on the socially-differentiated impacts of environmental change. There is now substantial work on the gendered (and intersectionally-differentiated) impacts of disasters, air pollution, water pollution,

indoor chemicals, armed conflict, droughts, farming systems, agricultural practices, food security, the gendered domains of livestock-keeping or seed-collecting, gender differences in uses of public transportation, housing in informal settlements, violence in built environments, sanitation access and quality, among many others. The list is virtually endless. Of course, this is not to say that our knowledge is complete, and in an iterative way new interpretations and analyses of the evidence are ongoing. However, on impacts and positionality relationships, the gendered record is good.

This is an essential knowledge foundation. And it has taken decades of sometimes heroic efforts to build the capacity (including securing funding) for these assessments to be conducted and taken seriously. However, "impact" narratives often suffer from being primarily descriptive, and they often fall into a passive narrative that "women *are* disadvantaged..." or "girls *have* less access..". The gendered power dynamics in environmental relations are often unexamined or lightly elaborated in much of the impact literature. Information about differentiated impacts has in some cases made significant programmatic changes ("sanitary supplies" are now routinely included in emergency post-disaster relief supplies, for example) but by themselves don't necessarily perturb or even reveal environmentally mediated power disjunctures.

III) Low hanging fruit spurned: constructing willful ignorance

Policy follows data. What is counted is assumed to count. What's not counted doesn't count.

These aphorisms are both shallow and deep. We all know them by heart. We've probably all said them, more or less. In the field of gender and environment, these are constant refrains. There is virtually no feminist environmental publication that doesn't include a plea for more information, more data, more systematic and sustained efforts to assemble gender-informed environmental information and evidence.

In 1995, the Beijing Platform called for the development of "gender-sensitive databases, information and monitoring systems and participatory action-oriented research, methodologies and policy analyses, with the collaboration of academic institutions and local women researchers, on ... Knowledge and experience on the part of women concerning the management and conservation of natural resources... The impact on women of environmental and natural resource degradation... Analysis of the structural links between gender relations, environment and development... Measures to develop and include environmental, economic, cultural, social and gender-sensitive analyses"

Almost 25 years later, *GGEO* similarly included extended calls for more and better information:

> "Environmental-related gender-disaggregated data are crucial for gender and environment analysis. However, in all of the assessed environmental areas, there are very limited environment-related gender-disaggregated data that can show direct links between gender inequality and environmental changes. Gender-disaggregated data, where available, are often fragmented at the level of a country or group of countries, making it almost impossible to aggregate and compare some issues among different regions...The lack of sufficient long-term ("longitudinal") data is a further impediment to gendered environmental assessment. Correlations between gender and the environment may only become evident over long time intervals. In several cases, although there appear to be causal

relationships between gender and the environment, available evidence and data are insufficient to demonstrate that these relationships exist. ... in some areas progress on [gender- environment] data collection has actually been reversed. (UNEP 2016: 24)."

In the SDG era, a proudly target and indicator-driven process, this should be low-hanging fruit.

Gender & environment in the SDGs

Success in attaining the SDGs depends on *measuring* progress. The SDGs include ~ 232 total indicators, of which 54 are classified as gender indicators (by UNWomen) and 93 as environment indicators (by UNEP).

Casting the widest interpretive net possible, there are only 8 targets and indicators that can be defined as attempting to measure the interactions of environment and gender.

SDG targets or indicators that integrate gender-disaggregated *and* environment components

• **1.4** By 2030, **ensure that all men and women**, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over **land** and other forms of property, inheritance, natural resources, appropriate new technology and financial services including microfinance

supported by indicator: 1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognised documentation and who perceive their rights to land as secure, **by sex** and by type of tenure

note: *more or less a duplicate of 5.a*

• **2.2** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of **adolescent girls, pregnant and lactating women** and older persons

• **2.3** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular **women,** indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

supported by indicator: **2.3.2** Average income of small-scale food producers, **by sex** and indigenous status

• **4.A** Build and upgrade education facilities that are child, disability and **gender sensitive** and provide safe, non-violent, inclusive and effective learning environments for all.

supported by indicator: Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) **single-sex** basic sanitation facilities; and (g) basic handwashing facilities

• **4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to **promote sustainable development**, including, among others, through education for sustainable development and sustainable lifestyles, human rights, **gender equality**, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

supported by indicator: 4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including **gender equality** and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment

• **5.a** Undertake reforms to give women equal rights to economic resources, as well as **access to ownership and control over land** and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

supported by indicator: 5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, **by sex**; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure

more or less a duplicate of 1.4

• **11.2** By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, **women**, children, persons with disabilities and older persons

supported by indicator: 11.2.1 Proportion of population that has convenient access to public transport**, by sex**, age and persons with disabilities

• **11.7** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

supported by indicator :11.7.1 Average share of the built-up area of cities that is open space for public use for all, **by sex**, age and persons with disabilities

• **13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on **women,** youth and local and marginalised communities

supported by indicator:13.b.1 Number of least developed countries and small island developing States that are receiving specialised support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including on **women**, youth and local and marginalised communities

Inside the SDG environmental topics, there is **no** provision for gender-disaggregated data collection on issues such as: • 11: disasters: deaths/people missing/economic losses/ DRR; • 6: drinking water or sanitation supply/ safety; • 13: climate change, except 13.b planning; • 3: mortality rates due to pollution, including household pollution, or chemicals exposures.

Concomitantly, the official SDG "gender indicators" list has NO targets or indicators for environmental goals, including those for: • 6: sustainable management of water and sanitation ("supplemental indicators" proposed); •7: energy ("supplemental indicators" proposed); • 9: resilient infrastructure; • 12: sustainable consumption & production;

• 14: oceans & marine resources; • 15: terrestrial ecosystems.

The SDG platform is not the only multilateral effort to encourage/ mandate/provide guidance to governments and policymakers on systematic data collection. Guidance tools are well developed both for gender statistics and for the environment, among other domains. To what extent do these make visible and take into account the gender-environment nexus? (Spoiler alert: almost not at all.)

Two prominent examples illustrate the gap:

Guidance to governments on collecting gender information (mostly quantitative):

The Minimum Set of Gender Indicators (2013) is an agreed list intended to be used across countries and regions for the national production and international compilation of gender statistics. The Minimum Indicators represents high-level guidance to governments on developing capacity for gender statistics. As the name suggests, this list is intended to be a floor not a ceiling. The set consists of 52 quantitative indicators, and 11 qualitative.

Only two of these include 'environmental' concerns fairly directly, and, with generous interpretation, a further 2 might be considered relevant:

- Percentage distribution of employed population by sector, including agriculture sector (8a)
- Proportion of (a) total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agric land (12)
- Share of female science, technology, engineering and mathematics graduates at tertiary level (25)
- Whether or not inheritance rights discriminate against women and girls (one of the qualitative indicators)

Guidance to governments on collecting environmental information (mostly quantitative):

The most recent **Framework for the Development of Environment Statistics** (FDES) prepared by the UN Statistics Division in 2013 to provide guidance for nationally based environment statistical systems recommends 60 broad topics on which governments should collect environmental data. Much of the recommended data are purely biophysical – surface water extent, land cover characteristics, species census counts and the like. However, a portion of the recommended environmental information gathering has a social component: for example, the FDES recommends data collection on topics such as environmental perception and awareness, preparedness for disasters, deaths in natural and technological disasters, and access to basic human settlement services (including water, sanitation and electricity).

Recommendations on gender disaggregation are **not** included for any of these. In fact, FDES recommends to governments only **five** information points that should be gender-disaggregated: rates of incidence, mortality and morbidity of airborne diseases, waterborne diseases and vector-borne diseases; health

problems associated with excessive UV radiation exposure; and, diseases related to exposure to toxic substances and radiation.

Of course, not everything in the world can be counted. Capacity limits and financial constraints mean that every domain will have less than full coverage -- in the SDGs and complementary data efforts. But many of the gender-environment knowledge gaps are inexplicable. For example, if governments are going to collect information on the number of deaths caused by 'natural' disasters, it seems willfully obstinate to *not* tally the body count by sex. Adding a gendered dimension to environmental data collection only in some cases would require specialized knowledge or additional capacity. In many cases, it primarily requires intentionality.

Despite the low availability of global-level differentiated data and analysis, there are sufficient data that demonstrate *prima facie* that spatial, income, racial, and other inequities and gender inequality characterizes or shapes the drivers of environmental degradation and pressures on global and local environments (Gupta et al 2019). But *prima facie* evidence is seldom accepted as a basis for policy action, let alone structural change.

IV) Four obstacles

Prologue, Nairobi 2005: Deck chairs on the Titanic

> *The author is in Nairobi, serving as a "gender mainstreaming" consultant to one of UNEP's divisions; the Division had no gender 'desk' and no staff gender experts. While I was received warmly and respectfully, mostly my presence was a curiosity. And perhaps a slight irritant. One day I found myself chatting informally in a hallway with one of the high-ranking satellite/ GIS experts – the alpha office in the division.*
>
> *JS: "Can you imagine that gender analysis might be useful to your work?" (not 'could YOU bring gender analysis into your own work if you were forced to,' just 'would you find it of added value if gender expertise were available').*
>
> *Techno specialist, looking down at me from his 6-foot-ish height, clearly struggling to not just say 'no, go away': "Well, I don't know. Perhaps. But isn't that like rearranging the deck chairs on the Titanic?"*

Over the last 25+ years, activists and scholars have identified, revealed, puzzled over and analysed the multiple dimensions of relationships between gender and environment. It is ontologically apparent that gender and environment are mutually constitutive. However, uptake of gender-environment knowledge into mainstream analytical and policy frameworks has been tentative, light, and often resisted.

Four ideological and operational constructs actively block the integration of gendered and environmental analysis.

i) Environment as science: privileged knowledge and favored interlocutors: Across popular, policy and specialist spheres "the environment" is normatively framed in its bio/geo-physical form. Most environmental assessments conceptualize the environment within a physical sciences systems framework. Most environment-related funding, whether from private or public sources, goes to the physical sciences. If environmental problems are physical, then 'solutions' are either technological or involve further human manipulation of physical systems.

It follows then that the expert structures that policymakers, news media, and the public rely on to interpret the state of the environment are mostly male – and masculinist. Geophysics, atmospheric chemistry, oceanography, civil engineering, chemostratigraphy, glaciology: these are the disciplines that produce the experts that occupy the place of privilege in making sense of what's going on in the environment. Other disciplines, including the social sciences and particularly the humanities, are seldom seen as producing environmental expertise. Sometimes they are accessories, sitting along the walls of the room as it were, but seldom at the main table.

In a classic patriarchal synergy, the physical-sciences-first approach to environment sidelines women as peers and participants, while at the same time marginalizing social and gender analyses (Castree *et al.* 2014; Gupta et al 2019; Seager 2014). Political ecology, social equity or gender frameworks that treat the environment as socially constructed and perceived are not valued nor seriously incorporated in environmental problem-identification or analysis (Beuchler and Hanson 2015; Forsyth 2004; Gupta et al 2019; Rocheleau 1996). At a superficial level these heterodox perspectives are now routinely acknowledged – for example, most environmental assessments now will include an obligatory note to the effect that environmental policies need to address gender inequities, or that women are important managers of local resources – but the acknowledgement is typically rhetoric-deep only.

In 'serious' environmental policy circles, environmental problems are seldom discussed as problems of ideologies and economies of domination, inequity, exploitation and colonialism – all of which represent credible approaches to understanding environmental drivers and impacts (Dankelman 2002; Gaard 2015; Gupta et al 2019; Seager 2014, 2015). The first conceptual 'flip' that is required for gendered environmental analysis is to redefine environmental relationships through the lens of social relationships, and in the context of human economic activities, rather than defining the environment primarily in its physical forms. Prospects for this are dim.

ii) Politics of urgency: In realms that are already masculinised, the politics of urgency harden and heighten masculinist privilege (Cohn & Enloe, 2003). When it is literally the planet at risk, or is seen to be, tolerance for non-normative approaches diminishes – and when it comes to 'saving the planet,' non-physical-science knowledge can be easily rendered as a distraction. Rather like rearranging deck chairs on the Titanic. Despite considerable evidence that environmental challenges and policy responses are not gender-neutral, social justice or equity analyses are seen as secondary or trivial to identifying and solving environmental problems (Gupta et al 2019).

In the 21st century, as environmental degradation accelerates, planetary boundaries crossed and urgency heightened, there may be *less* space for non-quantitative, non-physical sciences-based approaches to environmental knowledge. The urgency of environmental challenges can be seen as reducing the time available for addressing justice issues (Gupta et al, 2019). Garret Hardin's 1968 essay on the 'tragedy of the commons' is out of favor in environmental circles, but many might agree with him "injustice is

preferable to total ruin" (Hardin 1968: 1247).

For women, this is a particularly bitter reprise; struggles for women's rights are often shunted to the side of progressive movements in the name of strategic prioritization. "After the revolution" is a classic failed promise (Enloe, 2013). Women's empowerment is often considered to be a "later" priority when in the midst of crisis or revolutionary struggle or 'big' problem-solving endeavors.

iii) Privileging quantitative and technical information: Privileging the physical sciences also privileges quantitative and technical information. In conventional environmental analysis, the primary interlocutors of environmental knowledge are male scientists who produce "facts" about physical environments. Feminist geographers have demonstrated that quantitative and technical tools such as GIS *can* effectively further feminist and critical analyses, and that these approaches may not be inherently positivist (Kwan 2002, 2006; Lawson 1995; Thatcher 2016). However, in practice, in mainstream environmental analysis the use of these tools privileges the production of knowledge that is largely normative and unconcerned with social equity dimensions of the environment.

Gender analysis – in the environmental field as others -- methodologically recognizes the value of *both* quantitative data and qualitative information, and foregrounds the role of perceptions, experiences and interpretations. The environment is a lived place. Environments both structure social relations, and are structured by them. Equity relationships are social, framed within environmental realities that include biophysical states but are not a totality of those. Quantitative information is necessary but not sufficient. It doesn't capture "experience," nor can it capture most aspects of "empowerment." Given the lack of gender-specific quantitative data in environmental assessments, qualitative understanding looms even larger.

Shifting the boundaries of environmental assessment to include qualitative and quantitative information, "measurable" as well as "lived-world" knowledge, would widen the circle of presumed expertise. The inclusion of different 'ways of knowing' is increasingly given a nod in environmental assessments, primarily through recognition of indigenous perspectives and traditional knowledge -- but often in a *pro forma* way. The rhetorical frameworks have become more open, but are not matched by substantive uptake.

One of the specific data-related impediments to effective intersectional environmental analysis is that virtually all data are aggregated at the household level. In reality, there is no "household" food security, water access, car ownership, income, literacy, or mobile phone access; in data registers, that's pretty much all there is. Evidence from everyday life makes clear that within a mixed-sex household, resources use, priorities, and decisions are negotiated (or imposed) across gender divides. "Household"-based environmentally- relevant decisions and behaviors are negotiated, often unequally, between men and women inside households – whether on matters such as water use, divisions of labour, energy-source choices, or financial allocations for agricultural adaptation. Intra-household dynamics are critically important in terms of resources, resources use, conservation, consumption, and the ways in which men and women (may) act as agents of change. All environmentally-consequential decisions that are made within households are filtered through gender norms and roles.

"Lifting the roof off the household" is an essential prerequisite for realistic environmental knowledge

(Seager 2014). But both the capacity and tolerance for qualitative analysis, for micro-analysis, and for data that lifts the roof off household in environmental realms are in short supply. Household-level surveys are cheaper, easier, and less fraught to conduct. They also yield inadequate, and often frankly wrong, information.

iv) Talking about gendered drivers upsets people (mostly men): Bringing gendered analysis into environmental assessment through understanding gender-differentiated impacts can be seen as "safe." Impact analysis describes outcomes of environmental change that are apparent on the surface and that, by virtue of being noticed, don't necessarily challenge prevailing social orders. Yes, women are often more vulnerable to cataclysm and change. Yes, they often suffer more. Yes, they have fewer resources for recovery or resilience. Yes, women often show tremendous capacity for innovation, resilience and pluck (ask me sometime about the plucky ducks).

One step beyond "impacts" is recognition of the mutually constitutive nature of gender and environment. Socially-constructed gender roles often create differences in the ways men and women act in relation to the environment, and in the ways men and women are enabled or prevented from acting as agents of environmental change. Simple gender-based divisions of labour can affect how women and men experience and know different elements of the environment: if only men fish in the open sea and only women fish in the coastal mangroves, if only men herd livestock in the highlands and only women grow root crops in the valleys, if most men drive to work in a personal car and most women take public transportation, they will inevitably have different sets of environmental knowledge and experiences. They will have different vantage points (perhaps literally) from which they see the environment and changes in the environment. They will have different notions of problems and solutions.

Identifying the instrumentality of gender roles brings us one step closer to interrogating the role of gender formations in *creating* environmental outcomes – with this, we are on the doorstep of recognizing that gender identities are *drivers* of environmental change. Impact analysis measures effects; driver analysis measures causality. This analytical approach puts the construction of masculinity and femininity on the environmental agenda. Or would do so. It makes people, especially men, very nervous.

It is easiest to examine gender identity formations as drivers of environmental change when considering daily behaviors. Meat-eating is increasingly identified as an environmental threat, and "we" are exhorted to reduce meat consumption. But "we" don't eat meat, or not in the same degree. In every country where data are available, meat-eating is a particular and often highly privileged male prerogative. It's not just that men eat more meat than women, but as feminist analyses reveal, meat-eating is actually deeply implicated in defining manliness and masculinity (Adams 2010; Kubberød 2002; Seager 2019). Car owning and driving, especially the largest least fuel-efficient cars, are in mutual formation with masculinity. The production of globalized norms of femininity linked to cosmetics production and consumption brings toxic chemicals into the home in proliferating numbers. Unsustainable consumption is driven by gratuitously-gendered goods and marketing, a cycle that reflects and creates goods-based notions of femininity and masculinity. Particularly in developed economies, pens, guns, candy, children's toys, shampoo, among hundreds of other products, are 'gendered' – a practice that is intended to create duplicative production and consumption.

But structural analysis can't rest solely with the personal. The large economic structures and practices that are breaching planetary boundaries are also gendered. 'Big' structures that are wrecking environmental futures are gendered: globalized industrial production practices, unsustainable wealth accumulation, fossil fuel industries, militarism. These are highly gendered forces and processes.

Environmental analysis in these realms is weak; or vice versa, gender analysis of the environmental causality of gender identity formation is weak. Foregrounding the role of gendered identity formation as a driver of environmental degradation points to new opportunities for policy innovation. It also makes people very nervous and often quite angry. Talking about "impacts" and sending sanitary pads to women in post-disaster settings is now a safe topic in 'serious' environmental settings. Talking about the performance and creation of masculinity and femininity as highly instrumental processes that produce catastrophic environmental outcomes makes people angry. Or dismissive. Or both.

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