



Does Gender Matter in the Political Economy of Work and Climate Justice?

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Abstract

In recent years, as a result of women's concerted efforts, more attention has been paid to gendered distinctions related to climate change. Most of this literature focuses on the implications for women in developing nations. These studies have been most fruitful in understanding the consequences for labour and the impact of climate change policies by gender. In contrast, the gendered discussion that is focused on developed countries tends to be more concentrated on the distinctions in attitudes toward climate change and the implications this has for public policy initiatives. This is an important step toward understanding the gendered distinctions at the household level, although still relatively unexplored are the implications of paid labour by gender. This paper will focus on gendered distinctions relating to climate change for both paid and unpaid labour issues in developed nations. It will build on the methods used to analyze labour/climate/gender issues in developing nations to focus on three main aspects. These are 1) the impact of women's work on climate change; 2) the impact of climate change on women's work; and 3) how different types of strategies to mitigate climate change have gendered implications.

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Introduction

It is fairly clear that both climate disasters and incremental climate changes have an enormous impact on the way people live and work and these physical changes are not confined to the most marginal areas of the world's surface, but impinge upon the developed world as well. It is also fairly clear that public policy to deal with climate change in too many places is something of a mess and is woefully inadequate to deal with the magnitude of the problem (Victor 2011).¹

Despite the relative ineffectiveness of climate change policy in many countries the knowledge about the impact of climate change on people expands. So too does government and private enterprise initiatives on climate change remedies, policy approaches that have differential effects on people. Feminists have not ignored the gendered effects of climate change but, unsurprisingly, gender issues have a fairly low profile in policy discussions. At the international level there is discussion of procedural justice, as more recognition is given to the need for a variety of interests to be part of the discussion and decision making process (IPCC 2007, Agarwal, B. 2001). But also, unsurprisingly, any formal way to facilitate procedural justice has been absent from most concrete policy making (Klinsky and Dowlatabadi, 2009; Dankelman 2002). Even popular sector movements that recognize the need for inclusivity in the discussion of alternatives tend to ignore women and the distinctions by gender (Riddell 2011; Stahl, Rees, Byers 2011).

This void is explained by some as a result of several things: one relates to the need to focus on “universal” issues, given limited resources, and the other stresses the prominence of technology and science solutions in policy discussions, as opposed to the ‘soft’ policies that look at social differences, particularly as they relate to incomes and opportunities (Lambrou and Piana 2006). These are the kinds of factors that frequently inhibit a gender analysis of any social issues, but climate change has a specific disadvantage that contributes to the gender blindness that occurs in research and policy, particularly in developed nations. This is the lack of visibility of gendered environmental injustices and a lack of imagination about how a gender analysis could be applied in research.²

The issue of invisibility of gender issues for such a long time in the climate-justice literature and action is also explained by some as a result of the dominance of males in the environmental movement's senior posts and the general gender blindness of the movement (Buckingham and Kulcar 2009, p. 673). The actions of the state on

¹ Canada has reduced its GHG emissions in the past two years, but this is largely a result of decreased production associated with the economic recession, although the shift away from using coal from electricity production in some provinces also contributed to the improvement. But, the long-term trajectory shows the pattern of reduction is not expected to continue to decline. Environment Canada 2011.

² Gender issues are more visible in developing countries or among aboriginal societies and the literature about the effects of climate change and gender related to these areas constitutes the bulk of the information available on gender and climate change. Because of the less developed nature of the economies, and the close proximity women have to agriculture and the resource sectors, climate change's effect on women's work is visible and dramatic (See, for example, Brownhill 2007; Agarwal 2001; Beaumier and Ford 2010; Nelson and Stathers 2009).

environmental issues are conditioned by the ways it is contested by activist organizations and the kinds of issues they highlight. The fact that these organizations usually are male dominant means that gendered issues are not explored in either identifying environmental justice issues, or in seeking policy solutions.

As most groups dealing with inequality know, identifying the injustice itself is crucial for being included in policy discussions. But when the differential experiences are less visible through being diffuse as a community or income group, unpacking the implications is not straightforward.

While academics are increasingly interested in environmental injustices, they tend to focus on inequalities in income and/or race and neglect gender (Buckingham and Kulcur 2009). The most common understanding of environmental justice as it applies to individuals is exemplified in the definition used by the US Environmental Protection Agency: "Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."³ For the most part gender (and age and disability) issues have been subsumed under class or income issues with the assumption that women's issues will be covered under the treatment of low-income groups and relative issues of poverty.

Many of the methods that have been used to talk about gender and climate change tend to conflate the material related to developing nations with those in developed nations. While some studies are careful with regard to how examples are being used in specific references, there is an assumption (based primarily on experiences in developing regions) that in general, women are more vulnerable to climate change than men, have fewer resources to deal with it, and have greater work burdens as a result (Haight and Valley 2010; Johnsson-Latham 2007). The primary method that is used to span the national divides is the assumption that since everywhere women on average are poorer than men in general, they will, as a result, be disproportionately disadvantaged by climate change.⁴ While it is true that women in developed nations have lower incomes on average than men, gender distinctions are not confined to income distribution alone, but also relate to the entire gendered experiences of our societies. One particular dearth in knowledge is the relationship between climate change and gendered labour.

The intention in this study is to try to understand how gender issues fit into accepted concepts of 'climate justice' with reference to work in developed nations. It will specifically examine the gendered nature of paid work-related contributions to climate

³ This is the definition also posted on the Wikipedia website, although in the Wikipedia version 'sex' has been included as a category as well.

⁴ The assumption that women dominate among the poor cannot be taken for granted as universal, particularly in more wealthy jurisdictions. For example, in Canada the differences in poverty rates between males and females have tended to converge in the 21st century and have varied by between 0.4% to 1.1% since 2004. [Statistics Canada. *Income in Canada 2008* [Tables 202-0802 and 202-0804. Cat. No. 75-202-X] It should be noted, however, that distinct groups experience poverty at different rates, most specifically dramatic are the gendered differences in the poverty rates of youth, where males are over-represented and among lone parents, those with disabilities, and the elderly, where females are over-represented.

change by quantifying emissions associated with major GHG emitters in Canada. It will also discuss the gendered nature of consumption as it relates to work with a particular focus on the problems of unpacking gendered work/consumption within the household. One area of consumption that is easily quantifiable by gender is consumption related to vehicle transportation, one of the major sources of GHG emissions in Canada. In addition to trying to quantify gendered contributions to climate change this paper will also explore some of the issues related to the gendered impact of public policy on labour and climate change.

Climate Justice

Academic discussions of climate change and issues of ethics focus almost exclusively on distributive and procedural justices as they pertain to climate reduction policy related to nations (e.g. Klinsky and Dowlatabadi, Posner and Sunstein, Adger).⁵ Some international groups have posited principles for climate justice that go beyond ethical issues between nations and recognize the significance of identifying certain groups of people as crucial for consideration in public policy issues. The Environmental Justice movement in the US, for example, cites ten principles for climate justice policies in the US and specifically mentions “low-income workers, people of color, Indigenous Peoples,” and future generations. It also calls for community participation in decisions related to climate change (Environmental Justice Movement). The Bali Principles of Climate Justice has a more extensive list of 20 principles and includes various types of justices that include all people, the poor, women, rural, and indigenous peoples (International Climate Justice Network 2002).

One academic study that is useful for dealing with the applied ethics involved in climate policy is by Sonja Klinsky and Hadi Dowlatabadi (2009). This is a review of the literature on climate change justice and finds that five basic principles emerge as a guide to the ethics of climate change policy. These are as follows:

- Causal responsibility (polluter pays)
- Preferential treatment based on need (related to both the ability to pay for emission reductions and to recover from climate change impacts with a focus on the most vulnerable)
- Equal entitlements (to protection from climate impacts)
- Equal burdens (to climate policy costs). The assumption is that all people have equal moral responsibility and there is no reason why some should have a heavier burden than others.
- Procedural justice (i.e., representation by all who have a stake in the outcomes of climate policy)

Clearly, some of these principles can be at odds with others: causal responsibility is at odds with the equal burden principle and equal entitlements can be at odds with

⁵ Distributive justice refers to the ways that both the burden of climate change and its solutions are ethically part of public policy. Procedural justice refers to the inclusion of all who are affected by climate change in designing public policy to deal with it.

preferential treatment. These are the types of ethical issues that are common in discussions about crafting public policy and have been addressed in various types of human rights legislation.

In this presentation I will focus on causal responsibility and what this might mean for certain kinds of policy initiatives. The main point of causal responsibility is that “the mismatch between beneficiaries of fossil energy and victims of climate impacts gives the beneficiaries special obligations” (Klinsky and Dowlatabadi, p. 90). This means that it is not justifiable that those who have benefited and those who have not benefited bear equal obligations. As will be discussed later, the idea of identifying who is responsible for climate change is problematic, particularly when people individually benefit from increased GHG emissions in different ways, either through their work, consumption, or profits. In an attempt to find out who benefits more from this, I will focus particularly on work and the highly gendered dimensions of work in developed societies. My data will be taken from Canada.

Paid Labour

Effects of Work on Climate Change

Almost nothing has been written about the impact of work in developed nations on climate change with distinctions made by the gendered nature of paid work. Most of the interest in work has been on “green jobs,” as a positive way of ensuring that government programs to reduce GHG emissions do not result in actions that increase unemployment rates. The assumption is that with correctly designed policy, jobs can be created that have a low impact on the environment and that are well paid (Lee and Carlaw 2010). This argument has been advanced to counteract the slow move of many developed nations to enact effective legislation to reduce GHG emissions. The assumption by many governments that is either explicitly stated, or at least implied, is that unless all countries in the world adopt similar climate change policies, those countries that do so will be punished with poorer economic performance and rising unemployment rates as corporations readjust their production process to those jurisdictions that have no or few restrictions on emissions. This is the argument that Canada uses, for example, for not highly regulating the emissions from the tar sands in Alberta (Clarke 2008) and why the US government did not sign on to the Kyoto Agreement (Biermann and Brohm 2005).

In broad terms some jobs are dirty jobs that add a great deal to GHG emissions, while others have a more benign effect on the economy. This can be calculated in a variety of ways, with the different types of measures of damage. While studies that look at these measures tend to talk in very broad terms, and not with reference to who does what types of jobs, it is possible to get an idea of where gender distinctions occur.

Employment in Dirty Industries

While there are methodological (and justice) problems associated with attributing GHG emissions to specific groups of labour, counting something seems to be the primary way that gender issues get noticed. In virtually anything related to distributional impacts

(wage inequality, occupational distribution, etc.) calculating gender differences is the major way to have an issue recognized as significant. In the case of labour and GHG emission policies, bringing the gendered dimension into the discussion necessitates showing both the unequal contributions and the gendered nature of mitigation or adaptation policies.

The energy sector is the biggest source of GHG emissions, accounting for 82% of the total in Canada.⁶ Energy production itself (from electricity, and oil and gas) accounts for 37% of the total. While electricity production in Canada is largely hydro based and accounts for only 16% of total GHG emissions, this country is the source of a particularly dirty form of oil that is derived from the Tar Sands in Alberta. Production in the oil and gas sector alone accounts for 21% of total GHG emissions. Below is an example of the gender dimensions in energy production in Canada.

Table I.
Labour Characteristics of the Energy Sector – Canada
(% of total employed)

	Labour Force	Oil & Gas	Electricity
Men	52%	72%	75%
Women	48%	28%	25%

(Source: Statistics Canada, *Labour Force Survey*, 2007).

In every sector that contributes to GHG emissions in any substantial way, male employment dominates. This includes the energy sector, but also industrial processes that contribute most to GHG emissions (i.e., for mineral production, chemical industry, metal production, agriculture, waste and forestry (Environment Canada 2011, Table S-1).

The table in Appendix I shows the major sources of GHG emissions in Canada. The major source that is omitted from this table is transportation, the largest single sector contributing to GHG emissions (This will be dealt with in another section because the method used there for calculating the gender share is slightly different from that used below). Table II shows female and male shares of emissions by major sector.

Female share of GHG emissions from major industrial emitters (GHGfmi) is calculated as follows: $GHGfmi = I_1(f_1) + I_2(f_2) + I_{3-7}(f_{3-10})$. I_1 = GHG emissions from electricity and heat generation; I_2 = GHG emissions from fossil fuel production and refining; I_3 = mining and oil and gas extraction; I_{4-8} = manufacturing heavy emitters (iron, steel, and non-ferrous metals; chemical; paper and pulp; cement; other manufacturing); I_9 = agriculture; I_{10} = waste. F_{1-10} = % of women working in these industrial sectors.

These major emitters in Canada account for 421 MT of GHG gas emissions, or 61% of the total. Of the major emitters, female labour contributes 80 MT of the 421 MT or 19% of the total from major emitters.

⁶ This includes all energy and heat generation and use in households, business, and transportation (Environment Canada 2011).

Hours of Work

Another possible way to look at gendered differences in paid work is by labour force participation intensity. The relationship between hours of paid work and the ecological footprint of nations is one measure to understand the relationship between work and harm to the environment. It is a line of reasoning often pursued by those who advocate a production/consumption system based on 'sufficiency,' with the idea that the constant quest for more, as is inherent in the focus on economic growth, is unnecessary.⁷ According to a recent study, hours of paid work are positively related to the ecological and carbon footprint (Hayden & Shandra 2009). This appears to work in two different ways: 1) longer hours of paid work increases the impact on the environment via the contribution to GDP growth, and 2) even after the contribution to economic output is accounted for long hours of paid work lead to a more environmentally damaging mix of consumption and life-style practices because of higher incomes and time pressures (Hayden and Shandra 2009, p. 591). The contention is that shorter hours of work not only represent a form of sufficiency, but also indicate greater ecological efficiency.

When these types of studies are done, normally hours of work between nations are made with nations having the shortest work hours having a small per capita environmental footprint (EF).⁸ It would be very easy, of course, to do this for distinctions between groups of people.

In Canada, for example, women have, on average, fewer hours of paid work than men, with men working on average about 39 hours a week and women working 32.7 hours a week (Statistics Canada, 2010, Table 028). This means that on average women have about 17% fewer hours of paid work than men and would, therefore, by this measure contribute that much less through their paid work to environmental degradation. There are no figures specifically associated with GHG emissions and hours of work. If this were calculated, it would need to be done by the GHG emissions from each industry and associating that industry with hours of work by gender in that industry. My intent in raising this issue is to show that there are different ways that the gendered contributions to work contributions can be calculated.

Household Gender/Work-related issues

One major difficulty in discussing the gendered distinctions in the impact of work on the climate is the problem of separating the act of consumption from activities that constitute work. Consumption is integral to concepts of work (such as gasoline consumption) and is especially relevant in places like the household. Dealing with what constitutes work

⁷ In the words of one analyst, sufficiency is the sense that, as one does more and more of an activity, there can be enough and there can be too much. It is an approach that understands that while eco-efficiency gains can be made through technological and productivity gains, these gains are often overwhelmed by steady production and consumption growth. (Hayden and Shandra 2009, p. 580).

⁸ High-income nations with the shortest hours of work have a small per capita EF, e.g., the Netherlands, Germany and France, while Canada and the US have the longest hours of work and the biggest footprints per person (Hayden and Shandra 2009, p. 588.)

within the household is a conceptual problem that separates it from work that is marketized. Certain kinds of household related consumption have gendered patterns that relate to the work roles within or for the household. In this paper I am primarily concerned with the gendered division of labour within the household because it has important implications for public policy responses to climate change.

Within nations, consumption usually is correlated with income levels, which in turn can be associated with marital status and paid employment by gender (McKenzie, Messinger, Smith 2008). However, information on this varies from country to country. A Netherlands study shows that two-income families, or families where women have paying jobs, tend to have higher consumption levels as a result of higher incomes and the increased time pressures from having both paid and unpaid work. The two-income household uses more energy than a household where either the female partner did not work or a woman was living alone (Clancy and Roehi 2003). A UK study showed somewhat different results. As elsewhere, energy and transport are the biggest contributors to the 'footprint' of households. Rural and adult households with few members had significantly larger energy use than did urban/suburban households and households with many members. The direct household energy use relates to heating, cooking, fueling cars, but also considered was the indirect energy use in consumption associated with production, processing, and distribution of food. This study also found that a higher household income affects energy use, most notably for travel (Caird and Roy 2006). In Canada evidence shows that the ecological footprint of high-income households is substantially greater than other households and that with the exception of expenditures on food, consumption in every category increases steadily as incomes increase (Mackenzie, Messinger, Smith, 2008).

At least one study in the US, however, finds little evidence to indicate differences between male and female-headed households, and in countries where more equal economic conditions exist, women tend to adopt male-type lifestyles and consumption patterns (Lambrou and Piana 2006).

Transportation

Generally when issues of consumption are examined the main focus tends to be on gender differences with regard to transportation, primarily because this form of consumption looms so large in GHG emissions. In Canada transportation accounts for about 28% of total GHG emissions, the single largest category and road transportation accounts for 69% of total emissions for all transportation (or 19% of total GHG emission).⁹

In the US men are more likely than women to drive long distances to work: about 3.5 million people have a travel time of four hours per day and two-thirds of these are men. In Sweden it is estimated that that men account for at least about 75 per cent of all car driving, expressed as person kilometers. About 6.9 million cars are registered in the country, of which only 1.7, or 25%, are owned by women and women represent about

⁹ Calculated from Environment Canada 2011, Table S-1.

two-thirds of all households where no one has a driving license (Johnsson-Latham, 2007 p. 53).

My calculations for Canada show clearly that males dominate in the number of miles driven and account for most of the vehicle emissions. As can be seen from the tables in Appendix I, females account for about 29% of the miles driven and almost all of these occur in passenger vehicles. Passenger vehicles emit fewer GHGs than do trucks, especially very big trucks, which are almost exclusively driven by males. Calculating women's proportion of the driving by vehicle type, as seen in Table III, and applying that to the emissions by vehicle type (Table IV), it is possible to show that women as a group contribute less than 10% of GHG emissions from driving vehicles. I have calculated this in the following way.

$$\text{GHG}_{\text{f}} = V_1(f_1) + V_2(f_2) + V_3(f_3).$$

GHG_{f} = GHG emissions for female vehicle owners; V_1 = GHG emissions from vehicles up to 4.5 tonnes; V_2 = Trucks 4.5 – 14.9 tonnes; V_3 = Trucks over 15 tonnes. $F_{1,2,3}$ = % of women driving each class of vehicle.

Discussion: Issues of Shared Responsibility

Because the household is shared space, assigning gendered weight for consumption intensity is problematic. So while males may have a larger carbon footprint because they drive more and further, with more gas-guzzling machines, the social gendered nature of the division of labour, rather than consumption decisions, largely conditions these work-related aspects of consumption. All consumption practices are imbedded in a social context and households are collective entities where some consumption practices do relate to individual preference, but most household consumption decisions relate to collective use and are subject to the usual processes of organizing household behaviour. The structural nature of the economy greatly affects how closely households shape their consumption patterns according to income distribution, employment levels, and the gendered division of labour (Schultz and Steib, 2009).

The important point to be taken from this is that gendered consumption intensity may in some respects reflect individual choices, but for the most part is shaped by larger economic and social issues. This does not, however, mean that the impact on public policy decisions relating to household consumption will not have significant gendered impacts. So, for example, time-of-use electricity metering may well have an increased impact on work that is typically associated with females in the household, while carbon-taxes on gasoline may have a differential impact on males.

Discussion of Policy Issues – Examples

Smart Meters & Time-of-use Electricity Pricing

Time of use electricity metering is gaining popularity, particularly in jurisdictions that rely on fossil fuel for electricity generation. In order to save the electricity company

expensive building for new generation, several different types of strategies are used to reduce energy use. One important one that would smooth out energy use (to avoid building for peak periods) is to encourage people to reduce their household concentration of energy use at specific times (i.e., from 7-9 a.m. and from 5-10 p.m.) to other times of the day. Usually this is done by having reduced rates for off-peak periods. The impact this could have on certain types of household labour could be substantial. The most often cited example of this is that household's could reduce their electricity bill by shifting activities like laundry to late-night hours.

Many new daily housework and caring responsibilities are incurred through public policy on climate change without any understanding of what this means for work within the household. As one analyst has noted, "with the rise of public campaigns for environmental awareness, those who manage households...are expected to be more diligent in adopting time consuming green practices like recycling and precycling" (MacGregor 2006, p.69). All of these issues become even more significant in a neo-liberal climate where appropriate public services are being reduced and new ones are not created to meet the additional needs of families at a time when two incomes are the norm.

This is not to imply that government environmental policy should not apply to the realm of the household, but that there be an increased understanding of the work burdens these changes imply. The method to be used here would be time/use studies of gendered work within the household. With knowledge of these gendered impacts different kinds of public policy initiatives might be considered. What I have in mind are policies related to paid work that affect the gendered division of labour within the home. It has long been recognized that the higher demands of male work-force participation by hours worked have contributed to a negative effect on contributions to household labour. The policy implications, then, would not only have environmental, but also market oriented as well as social implications. Reducing hours of work, hourly productivity and the employment to population ratio is thought to be a solution to the environmental problem posed by long hours of work (Hayden and Standra 2009, p. 592). Reduction of hours of work through productivity gains would shift remuneration to 'time affluence' and could have a marked impact on household workloads by gender.

So far, the examination of household behaviour seems to be of interest to climate change researchers less because of the justice issues involved than because of the ways different consumer behaviours can be affected by public policy. Public policy makers or analysts are interested in knowing what affects people's attitudes and decisions and how households respond to environmental policies (OECD 2008). So, while certain kinds of policies can be identified as being regressive, such as user charges for waste disposal with poorer households assuming a greater proportional impact of the policy, little is known about the increase in household work and who does it when policy initiatives result in more work intensive processes.

Carbon taxes

The literature on the effects of carbon taxes tends to focus on differential impacts based on class. Carbon tax is a tax on the purchase of fuels, including gasoline, diesel, natural

gas, and coal – all fuels emitting carbon. In the body of literature on this subject households are treated as undifferentiated units and gender distinctions are not usually considered (Metcalf 2008). The usual interest is whether the poor are unjustly treated through a disproportional tax burden. When this is understood, then there are attempts to encourage the government to design the tax incidence so that it can correct its regressive nature (Lee and Carlaw 2010).

One exception in the approach in the academic literature is the work done by Nathalie Chalifour. Her study examines the carbon taxes as they were instituted in two provinces in Canada, British Columbia and Quebec. The introduction by the government B.C. sought popular approval by making it ‘revenue neutral,’ meaning that it was not going to be instituted as a mighty tax gatherer, but rather, was designed to change consumer behaviour. This meant that many tax reductions and rebates were a feature of the design as was the promise of using any surplus revenues. Chalifour uses the causal responsibility principle of social justice as her framework for understanding gender distinctions: “just as it would be inequitable to expect the same level of emissions reductions from countries that have contributed little to creating the climate change problem, it would be inequitable to design policy responses to climate change that place a greater burden on women than on men” (Chalifour, p. 186). She also makes the important point that any analysis of environmental tax policy must include an examination of not only the tax but also of any complementary policies (that is, income tax deductions) and decisions pertaining to the use of the revenue generated by the tax. The “purpose of this goal is to ensure, at a minimum, that inequality between women and men is not perpetuated by the policy and, ideally, to seek out carbon tax policies that are capable of promoting gender equality” (Chalifour, p. 191). Chalifour’s conclusion is that women are disproportionately affected because they are, on average, poorer than men and, therefore, pay a great proportion of their income on the tax than would men. This may well be the case and is an important contribution to the understanding of the complexities of climate change policy that goes beyond distinctions by class.

My intention is to build on this approach by urging greater research into the gendered distinctions in both the contribution to climate change and the impact of public policy to either mitigate or adapt to climate change. So, for example, if we assume that the household is shared space with equal responsibilities for climate change, the major distinct impact of a carbon tax on individuals by gender may be on vehicle drivers. If this is true (and it is by no means certain), the heaviest impact would be on males who drive considerably more than females. Figuring out who, in this case, would be most affected by gender is complex and new ways of looking at disparities beside income distribution need to be considered. So, for example, information about the incidence of the tax would also benefit from clear understandings of the kinds of households (male headed or female headed, age of person within the household, etc.) and energy use.

Conclusions

There are gendered differences in the work associated with climate change. Men, as a group, are more involved with work that contributes to GHG emissions than are women. This is evident by their direct work in industries that are identified as the major sources of GHG emissions in Canada. It is also evident by the much greater contribution of males to GHG emissions through vehicle use. Understanding gendered contributions to GHG emissions will lead to a better recognition of which groups bear the cost burdens of public policy initiatives.

Less clear is the division of responsibility for GHG emissions from labour within the household. The conclusion of this paper is that until significant time/use studies within the household associated with GHG emissions is undertaken, the assumption of shared responsibility for this source of emissions needs to be taken. This does not mean, however, that labour within the household is unaffected by public policy related to GHG emissions. Public policies frequently impose increased labour burdens on households, without appropriate offsets, that could have significant impacts by gender.

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