

**Title:** Ecological modernization today: a policy makers' perspective

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### **Abstract**

Focusing on 25 deputies social representations of the environment, this article offers to better understand the way policy makers apprehend the environmental crisis in relationship with economic growth and to assess the actual processes of ecological modernization. We argue that 1) the interviewed politicians see the environment as an objective issue (and is therefore not seen as an environmentalist's monopoly anymore); 2) the environment has reached the core of their social representations, but is still subordinate to other central concerns of economic nature; and 3) they consider that relationships between economic growth and environmental protection are strained and argue for increased State intervention in the economic sphere. We conclude that such a study brings new light on the understanding of the implementation of green economy, especially regarding the paradigm shift it sets forth.

**Keywords:** policy-maker; ecological modernisation; environmental protection; economic growth; social representation.

## 1. Introduction

The concept of green economy (UNEP, 2012) offers a new perspective on the role economy has to play to lead our societies towards sustainable development. Not only this concept embodies the necessary reconciliation of the economic, social and environmental dimensions of sustainable development, but it also insists on the transition economy has to operate in order to make this reconciliation happen. For this purpose, the concept appeals to a new involvement from governments and the public sector for investing two per cent of global GDP in greening central sectors of the economy in order to shift development and unleash public and private capital flows onto a low-carbon, resource-efficient path (UNEP, 2011: 6).

The role of governments in the implementation of public policies has been discussed for many years through political science models such as incrementalism (Braybrooke, 1970), public choice theory (Buchanan and Tullock, 1962; Ogus, 1994), and governmental politics (Allison, 1971), and through different schools of thought including notably socio-constructionism and agenda-setting (Cobb and Elder, 1983; Hilgartner and Bosk, 1988; Best, 1995). Scholars in this latest tradition suggest that “problem definition” - namely the result of conflicting issues for legitimacy - influences policy-making, and is not separable from the operation of public institutions, or more broadly, institutional processes (Rocheftort and Cobb, 1994). As Petracca (1992: 1) puts it: “how an issue is defined or redefined, as the case may be, influences: (1) the type of politicking which will ensue around it; (2) Its chances of reaching the agenda of a particular political institution; and (3) The probability of a policy outcome favorable to advocates of the issue”.

Following this logic, authors interested in the concept of social representations have transposed the idea of “problem definition” to that of “problem definition” by individuals such as decision makers. According to Jodelet (1989), social representations can be defined as - both “a form of knowledge, socially elaborated and shared with a practical goal and aiming at the construction of a common reality to a social whole” (Jodelet, 1989:36, our translation) and “interpretation systems leading our relation to the world and to others and guiding and organizing conducts and social communications” (idem).

For instance, Mérand (2006) explains the understanding of the social representations enacted by the actors responsible for the making of a specific policy helps to apprehend the content of the policy and its development. Jodelet and Scipion (1992), for whom the influence of social representations on knowledge development, stands and decision making has been demonstrated, one can expect the social representations related to the environment of actors who have to make decisions in environmental policy to play a role in the way to integrate guidelines and act accordingly. Finally, Gendron (2001; 2006) shows that the gathering of the economic elite of Quebec' social representations contributes to describe the processes of ecological modernization that operate for now a decade, that is the processes that contribute to enhance the shared idea of the compatibility between environmental and economic questions.

These processes of ecological modernization have been the subject of many studies in the 1980s and in the 1990s (Hajer, 1995; Young, 2000; Mol, 2003, 2009). However, it seems that none has yet focused on policy-makers social representations of the environment to assess the actual processes of ecological modernization. We argue such a study could reveal the way these actors see the relation between economic growth and environmental protection, help to understand the way this relation has evolved through the years and to apprehend the degree of applicability of the changes suggested by the concept of green economy.

The objective of this article is precisely to give an account of the results of such a study in focusing on the way politicians do foresee the environmental crisis and its resolution in relationship with economic growth. Not only politicians are supposed to carry society's social and environmental concerns, they are also in charge of the economic security of the nation and of environmental governance by voting laws that ensure environmental protection. Thus, with the emergence of the green economy's discourse, it appears that politicians will have a crucial role to play in the greening of our societies.

In so doing, we hope first to point at similarities and discrepancies between visions politicians have of the environmental issue and how they conceive economy as a tool for change, and second to get a better understanding of the actual ecological modernization processes. Relying on interviews conducted in Canada with 25 provincial deputies from the same party and the same province, we argue that if politicians see now the environment as an objective issue, and if it has reached the core of their social representations, it is still subordinated to other central concerns of economic nature. To the interviewed political elite, relationships between environmental protection and economic growth are strained and call for actions from the State to be solved. However, it seems also that they recognize the necessity of the paradigm shift green economy proposes.

The analysis is presented according to the following outline: section 2 discusses more in details the idea of ecological modernization in order to contextualize the relationship between environmental protection and economic growth, and the necessary paradigm shift posed by UNEP with the concept of green economy. Section 3 presents the methodology we have opted for and the data on which relies our analysis. We then expose our results in section 4 to discuss them in section 5. We finally present our conclusions, the limits of our study and suggestions for future research.

## **2. Understandings of the environmental issue through ecological modernization**

Since the publication of the Brundtland report in 1987, the number of organizations and publications dedicated to the environment has increased and new initiatives in favor of environmental protection from the public and the private sector have taken form. A growing literature has emerged on the necessary integration of the social, environmental and economic dimensions of development and more recently on the greening of economy to give rise in the academic field to the emergence of renewed reflections on the role that different members of society have to play to enhance a more sustainable development. The 2011

UNEP's report and its synthesis addressed to policy-makers represent a good example of the incursion of social and environmental concerns in economy. This report also demonstrates that efforts to integrate these concerns in practice have been made. Indeed, it offers many insightful conclusions on the way economy could be redefined to favor society and the environment on a long-term basis, as well as solutions aiming at change in the policy-making sphere.

Globally, it sets that green economy is key to poverty alleviation; it can contribute to the creation of jobs and to the enhancement of social equity; it favors renewable energy and low-carbon technologies rather than fossil fuels; it promotes enhanced resource and energy efficiency; it delivers more sustainable urban living and low-carbon mobility; and it grows faster than a brown economy on a long term basis, while maintaining and restoring natural capital (2011: i). On the issue of the actions that can foster green economy, the report poses the necessity of an economic paradigm shift "in which material wealth is not delivered perforce at the expense of growing environmental risks, ecological scarcities and social disparities" (2011: 1). More specifically, it poses that a green economy could be achieved in establishing proper regulatory frameworks; in prioritizing government investment and in spending in areas that stimulate the greening of economic sectors; in limiting government spending in areas that deplete natural capital; in using taxes and market-based instruments to promote green investment and innovation; in investing in capacity building, training and education; and in strengthening international governance (2011: i).

Until the 2011 UNEP's report and the new concept of green economy, it seems nevertheless that economic growth had never been fully questioned and that the idea of shifting the dominant economic paradigm made no consensus. Development was still correlated to the idea of economic growth, making environmental protection and social well-being subordinate to the imperative of economic prosperity. As Young (2000) explains, the conventional analysis that emerged in the wake of the Club of Rome report (1972) and the Stockholm conference (1972) posed indeed that environmental protection and economic

growth were not compatible and that a choice had to be made between both. It is only in the 1980s and the early 1990s that a new analysis that made possible the conciliation of economic growth and environmental protection - and that will later be referred to as ecological modernization - emerged to dominate as a way of approaching environmental policy (Young, 2000).

As assessed by Jodelet and Scipion (1992), it is both these two analyses - the conventional analysis and ecological modernization - that are reflected through the discourse of forty employees of the French public administration at the end of the 1980s and the beginning of the 1990s. At this time, the environment was a concern for employees of the five different ministries in charge of environmental questions because it was part of their work and because it appealed to personal sensibilities that relied mainly in the objectivity of the planetary and social future or in the objectivity of public opinion. To the forty employees interviewed by Jodelet and Scipion, the environment was nonetheless a concern since they spontaneously evoked more than thirty environmental issues, the most frequent ones being water pollution (n=37), industrial pollution (n=36), landscape and site degradation (n=34), greenhouse effects (n=32), chemical pollution (n=31), car pollution (n=30), loss of animal species (n=30), nuclear (n=28), air pollution (n=27), urban living degradation (n=27), deforestation (n=25) and industrial waste (n=23). However, as the authors of this study explain, every ministry described a fundamental opposition between the needs for production and the needs for environmental protection, emphasizing that environmental protection represented a risk of economic and social stagnation. There, on the issue of suggestions to reverse these oppositions, two main options stand out from the employees' discourse: 1) the idea to shift our development scheme to favor environmental protection at the expense of economic growth, and 2) the idea to balance economic growth and environmental protection through State regulation. The authors do not make reference to the 1970s analysis according to which there is a choice to make between economic prosperity and environmental protection, or to the 1980s analysis according to which economy and environment can go hand in hand. It appears however that both these analyses are part of the 1990s French public administration' social representations.

It has been argued, especially in Europe, that the latest, that is the 1980s analysis devoted to the compatibility of economic growth and environmental protection was responsible for the failure of ecological concerns to fully reach the political agenda. On this issue, the work of Hajer (1995) relying on the study of the discourse on ecological modernization that prevailed in Europe from the late 1970s to the beginning of the 1990s is particularly interesting. Hajer has shown that the idea of marrying economic growth and environmental protection under the influence of a lasting neo-liberal political discourse had canceled out the development of an environmental policy that recognizes free markets and no State intervention as the main drivers of environmental degradation. In the Netherlands, where a part of Hajer's research has been conducted, rather than giving rise to innovative environmental policy, the adoption of ecological modernization as a dominant discourse have been translated in moderate environmental policies and further environmental degradation. Put differently, Hajer (1995) argues that if the 1980s analysis proposed to reconcile environmental protection and economic growth, environmental protection was still subordinated to economic growth because of the neo-liberal political ideology that prevailed at this time. In fact, to the author, ecological modernization offered a technical answer to environmental degradation, because it recognized the structural character of the environmental issue and put social and economic institutions as efficient tools able to internalize environmental protection. It failed however as a structural solution in refusing to question the actual development processes and the idea of modernity to form a political strategy able to appease radical environmentalist critiques (Hajer, 1995).

With the work of Hajer (1995), many authors have been interested in the idea of ecological modernization to develop scenarios in which environmental growth and environmental protection could be conciliated. It seems this is the reason why Mol (1996) explains that in the 1990s, in contrast to the early 1970s, the environmental issue seemed to have entered the economic agenda to impose itself as a crucial factor in the transformation of modernity. Confirming Mol's predictions, the institutionalization of the environmental issue and its incursion in the economic sphere accelerated until today. One question remains however

unanswered: if the environmental issue has been institutionalized, how does this institutionalization translate into policy making and what does it say about the actual processes of ecological modernization? Considering the recent and long-lasting prevalence of the ecological modernization analysis and of the neo-liberal political discourse in Europe, but also in other continents, one can indeed question the degree of governmental acceptance of the green economy concept and of the economic paradigm shift proposed.

With Gendron (2001; 2006), we argue that ecological modernization today reflects an understanding of the environmental issue and of the challenges it imposes that differs from that developed in the 1970s. Along with Eder (1993), Gendron (2001; 2006) has shown that the environmental issue was no longer the monopoly of environmentalists, as it was the case in the 1970s, to be today defined through a shared world vision that results from social conflicts and that can be seized through an analysis of social representations (Jodelet, 1989). To Gendron (2001; 2006), even though the environmental issue does not appear as a central concern for economic leaders of Québec, it is nevertheless presented as a concern that does reflect an understanding of the environmental issue and of its challenges that differs from that expressed by Jodelet and Scipion's employees of the French public administration. As demonstrated in the author's study indeed, economic leaders do not spontaneously evoke the environmental crisis when asked about the most important problems of our time. However, when asked to name environmental problems, they mention water, air, overpopulation, resources, risks, car, ozone, CCC, oceans, landscaping, diseases, gas fumes, forests and deforestation. To these actors, the causes of environmental crisis are 1) overpopulation (demography and consumption), 2) governance (financial markets power, businesses' concentration and public management deficiencies) and 3) the fact that consumers do not consider the environment as a priority. Finally, these actors reject the contradiction between economic growth and environmental protection, not because they consider production and consumption can still be the same than in the 1980s, but because they see economic opportunities in environmental protection, mainly through technological innovation, regulation and education (Gendron, 2006)

As Gendron suggests, ecological modernization was still evolving in 2000 around the idea of the conciliation of economic growth and environmental protection. Can we then conclude the hegemonic discourse of ecological modernization Hajer pointed at still prevails today? Or, since it reflected different understandings of the environmental issue in the 1990s and in 2000, could 2010 ecological modernization carry new possibilities regarding how economy could benefit environmental protection? Most importantly, could it rest on a new questioning of our development scheme and a changing economic ideology, more prone to support 2011 UNEP's recommendations for a greener economy? That is what we will try to understand in revealing visions political leaders in Canada have of the compatibility between economic growth and environmental protection.

### **3. Method**

The results presented in this article draw on the conduct, the coding and the analysis of semi-structured interviews about one hour long led with 25 provincial Canadian deputies from the same party and the same province. With the objective to identify these actors' social representations, that is the way they see the world, including the way they see the environmental crisis and its solutions, all interviews have been conducted according to the same scheme that involves four main themes: 1. the State, its role in society and in economy; 2. Economy, its functioning and developments through time, businesses, their role to society and their relationship to the State; 3. The environment, the challenges it imposes and its relationships to economy and sustainable development; 4. Pressure groups and their role in society. The interview questions we addressed to politicians were mostly open questions that favored the most immediate ideas they had in mind at the time of the interview, and did not carry any bias towards one kind of answer more than another. Let us note however that all politicians did not spontaneously evoke the environmental crisis, its determinants and its solutions. Thus, to identify our sample's social representations of the environment, we first asked them to name the general problems (in Canada and in the world) that they considered the most urgent. Some of them mentioned the environment as one of these problems. Those who did not were then asked if they saw a problem with the environment. Here, all

politicians reported there was indeed a problem. It is only after these two questions that they were asked to name subjectively the most important environmental problems and to describe how, in their opinion they could be resolved. This way, if some politicians named environmental problems as being part of the most important general problems of our time, we considered they saw the environmental issue as a major problem. Otherwise, in the case politicians did not spontaneously name environmental problems but expressed worries for the environment after being directly asked, we considered the environment was to them an important concern, but not a main one.

On the issue of data processing and analysis, these interviews have been recorded, transcribed and then coded with the Atlas-Ti software. During the coding process, we attributed codes to every theme and idea brought by each politician. For instance the code “environment” has been attached to every meaning unity (short paragraphs that stand alone as a unity of meaning) linked to the concept of environment (in the ecological sense). The code “economy” has been used to reflect our interviewees’ definition of economy, its role toward society and the way it works. More than 200 codes belonging to different themes emerged from our coding process. The 15 most frequent and relevant codes we attributed to our corpus are presented in table 1. We then chose to analyze the fifteen most relevant and frequent codes attributed to every transcription. For each of these codes in every transcription, we analyzed the codes that were the most frequent and relevant to our analysis. Our aim was then to determine 1) the linkages every politician made of the selected codes from each of the four dimensions of our interview scheme and 2) what importance they gave to each of them. For every transcribed interview, we wrote a detailed report including a description of the interviewee’s social representations - descriptions we illustrated with figures - and conclusions relative to our research questions. We also compiled data from every interview in one document in order to compare our interviewees’ social representations and develop our conclusions. To our opinion, this final document constitutes a heavy source of data and results since it addresses the relationships interviewed politicians make between the State, economy, businesses, environment, society and pressure groups.

**Table 1: the most frequent and relevant codes used in the coding process**

However, for the purpose of this article, we are only presenting here the results of the detailed review of every occurrence of the code “environment” contained in every deputy’s social representation. These results are displayed below in three steps. First, we show in what way interviewed politicians are concerned with the environmental issue, namely what importance they attribute to the environmental crisis and what are the most frequent environmental problems and causes they mention. Second, we show in what way they apprehend the relationships between economy and the environment, and between economic growth and environmental protection. Third, we present the way they envisage the resolution of environmental conflicts in focusing on the role they attribute to the State.

## **4. Results**

### **4.1. Considerations on the environmental crisis**

As regards the way our sample is concerned with the environmental crisis, it is possible to state that the environmental issue has reached the core of the studied sample’s social representations and represents a concern of importance. Indeed, out of the 25 interviewed politicians, 7 consider the environmental crisis is the most important issue of our time, whereas 18 consider it is one of the most important issues of our time, or at least an important issue.

Concerning now the understandings politicians have of the environmental crisis, two trends take shape. First, among the environmental problems that our interviewees understand as being serious, pollution (water: 14 and air: 11) appears first, followed by climate change (11), deforestation (8), natural resources loss (5), waste management (4), biodiversity loss (3) and natural disasters (2).

**Figure 1: The most important environmental problems according to 25 Canadian deputies from the same party and the same province**

Second, regarding the most important causes politicians attribute to the environmental crisis, the use and search for non-renewable resources such as oil appear first (12), followed by consumption and industrial production methods (8), industrial activity and globalization (8), businesses only motivated by the search for profits (6), transportation (5), not enough constraining environmental laws (5), weak citizen environmental consciousness (2), political short vision (2), lack of harmony between provinces at the political level (2), absence of international referees regarding the environmental issue (2), lack of political will (2), lack of consensus on the reality of climate change (1).

**Figure 2: The most important causes of environmental problems according to 25 Canadian deputies from the same party and the same province**

To sum up, politicians consider the environmental crisis to be a serious one and are preoccupied not only by pollution, as it was the case in the 1970s, but also by deforestation and climate change among other problems. Let us note that most of them consider the environmental crisis to be a complex one that is made up of different factors and results in different symptoms and that can be described beyond its mere ecological dimension. For example, four of them consider themselves concerned with the climatic refugees issue, four of them explained that the hunger issue as linked to the environmental issue and two of them view natural disasters as a consequence of the environmental crisis.

#### **4.2. Relationships between the environmental crisis and economic growth**

Considering now the way politicians apprehend the relationships between the environment and economy as well as between the environmental crisis and economic growth, two main trends take shape: 1) deputies who see a tension between the environment and economy, but no contradiction, at least on a long term

basis, between environmental protection and economic growth; and 2) deputies who see a tension between the environment and economy, and a contradiction between environmental protection and economic growth. Only two deputies do not see any tension between the environment and economy.

**Table 2: Understandings of the relationships between the environment and economy for 25 deputies from the same party and the same province**

Our results show indeed that a first trend emerges from the discourse of 17 deputies out of 25 who consider there is a tension between the environment and economy but who do not see any contradiction, at least on the long term, between economic growth and environmental protection. Among them, two observe changes in environmental consciousness from States and businesses, through the adoption of new environmental laws, norms and certifications. 3 deputies consider economic development is not always justified, especially when based on the search for non-renewable energies and resources. In this first category, they are 6 to suggest a paradigm shift towards greater environmental considerations (including one who argues for a slower growth) and they are 15 to see environmental protection as a way to stimulate economy, both because it would generate jobs and because it would allow its survival.

A second trend emerges from the discourse of 6 deputies out of 25 who consider there is a tension between the environment and economy, and who see a contradiction between economic growth and environmental protection. To them, economic markets have been open for too long with not enough external control, what resulted in a change inside the economic system: instead of being balanced and generated through consumer choices, the offer now creates the demand, leaving consumers and the environment subjects to short sight businesses only interested in profits. In this second category, all deputies suggest the necessity of an economic paradigm shift towards more sustainability. One of them argues in favor of de-growth, another considers growth needs to slow down for the sake of the environment, whereas others explain there should not be any contradiction on the long term between economic growth and environmental protection, provided that environmental protection is taken into

account in economic activity, through new methods of production, the use of renewable resources instead of non-renewable ones and green technologies. Here, out of the 6 deputies belonging to this category, two consider environmental protection could generate economic opportunities.

Two deputies did not belong to these two categories. In fact, one deputy considers there is no tension between the environment and economy (because economy can function in respecting the environment, through the use of environmentally friendly products and production methods) but sees a contradiction between economic growth and economic protection (since actual economic growth does not take into account the environment). Finally, another deputy considers there is no tension between the environment and economy, and no contradiction between economic growth and economic protection. According to this deputy, the environmental crisis is real and linked to human activity, but since there are means for economy to internalize environmental considerations, the crisis will eventually fade, letting no contradiction between environmental protection and economic growth.

To sum up, all deputies but one consider there is a tension between environmental protection and economic growth, because economy, through short-sighted businesses does not show enough concern for the environment. Almost half of them (12 out of 25) understand the necessity of an economic paradigm shift towards greater environmental consideration and spontaneously mention it. Most of them consider also that the environmental crisis will generate jobs, stimulate economy, and allow growth maintenance through the development of new economic fields that could benefit to environmental protection. To these deputies, the use of green technologies and environmentally friendly products and production methods will then make the necessary shift happen. This way, the shift suggested does not imply a radical move towards increased environmental protection at the expense of economic growth. Rather, economic growth and environmental protection could go hand in hand at the condition the economic sphere takes the environment into consideration and uses it to maintain itself.

#### **4.3. Avenues for environmental conflicts resolution**

Finally, regarding the environmental crisis resolution, all our interviews have pointed at the State at the national level, and states, at the global level as the main actors potentially able to drive the necessary changes towards greater sustainability, notably through the creation of proper regulatory frameworks (such as more efficient referees, laws, organizations and structures that would constrain businesses to act in a greater respect of the environment). Here, three categories have stood out from our analysis: in a first case, deputies consider it is up to the State to control the economic system in order to assure greater environmental protection (12 out of 25); in a second case, they explain the State should in the meantime accompany businesses to stimulate the economic system, set more severe environmental rules, and intervene when businesses show disrespect towards the environment (9 out of 25); and in a third case, they pose the State should let the markets self-regulate in intervening only when necessary (4 out of 25).

**Figure 3: The roles the State(s) should play in economic activities according to 25 deputies from the same province and the same party**

The 12 deputies belonging to the first category explain it is up to the State to favor a more sustainable development scheme, to impose a consciousness to businesses and society, and to civilize the economic system in imposing strict sanctions and a structured frame in which businesses will have to respect the environment. To these deputies, neo-liberal economics are at the source of the environmental crisis since markets have never been constrained enough regarding the environment. To do so, our interviewees are many (6) to suggest the State should engage in a dialogue with society and businesses, and advance environmental programs and initiatives. Many recognize the State should demonstrate more bravery. Here, according to the deputies belonging to this first category, the State should be in control of economic activities.

The 9 deputies belonging to the second category consider the State should supervise the economic system because businesses do not take the environment into account in their activities. However, if to them the

State should impose rules to businesses, they argue it should also guide them in giving them incentives to protect the environment. Here, the State should be both a referee and a guide in economic activities.

The 4 deputies belonging to the third category pose the State should supervise the economic system in imposing businesses a minimum of rules that would ensure environmental protection and intervene only when confronted to abuses from businesses. However they consider the State should leave businesses free to pursue their activities because they consider the economic system is able to self-regulate. In other terms, according to the deputies belonging to this second category, the State should be a stimulant for the economic system.

Finally, let us note that 9 deputies from all categories taken together consider states should supervise the economic system at the national and at the international level. To them, resolving environmental conflicts is a task nations should face together through efficient global organizations. To these deputies, what is needed now is a real referee and efficient measures and structures such as emissions trading in order to motivate businesses to be more involved in environmental protection.

## **5. Discussion: ecological modernization today**

According to the results presented above, the environmental issue has reached the core of our 25 deputies' social representations. These actors are concerned with the environmental crisis and especially with pollution, climate change and deforestation. Not only they seem more concerned by the environmental issue than the 1990s French administration employees (Jodelet and Scipion) and the 2000 economic leaders (Gendron, 2001; 2006), but their concerns and the way they are expressed also differ. Indeed, the deputies we have interviewed seem to have a broader vision of the environmental crisis attributing for instance to our mode of development, through industrialization, the responsibility for climate change, climate refugees, natural disasters, poverty and hunger. Similarly, the causes our interviewees attribute to the environmental crisis differ from the causes listed in previous studies. Thereby, our obsession for non-

renewable resources, our destructive consumption habits, intensive industrialization and the lack of adequate regulation and surveillance that characterizes today's global economic regime are now widely recognized as such. However, in the 1970s and the 1990s, if public opinion realized the influence of these causes on the environment, they were then not seen as potentially modifiable and rare were the actors - except environmentalists - to question economic growth and to pretend to a paradigm shift, what is not the case anymore today.

In fact, the deputies we have interviewed do not argue for a paradigm shift that would cancel out the economic system to benefit the environment, as some radical environmentalists in the 1970s could have suggested. Nor they view economic growth as a given, as suggests the ecological modernization discourse from the 1980s and the 1990s. Indeed, the deputies we have interviewed assume unleashed economic activities have negative effects on the social and environmental spheres that consequently influence society through actual and future economic exchanges. In order to insure economic security on a long term basis, they put as crucial the respect of environmental parameters in economic activities through the adoption of firmer rules and proper structures, and in investing in new sectors such as renewable energies and green technologies. Thus, if half of them evoke the necessity of an economic paradigm shift, they mostly propose to question economic growth foundations to find ways to better balance economic growth and environmental protection in a new and more harmonious relation.

Deputies consider there is a tension between economic growth and environmental protection, but they do not view this relation as paradoxical. Rather, it appears complementary: economy can foster new or more developed environmental markets that would call for jobs and contribute to stimulate it, and environmental protection can benefit from more concerned economic tools. Then, if they explain that the environmental crisis is linked to human activity through a lack of regulation in the economic sphere, it is also through economy, along with adequate regulation and careful industrialization (by State and international organizations' intervention first and then by businesses and consumers intervention) that they

consider the issue can be resolved and help the economic system to be maintained at a level that would benefit society without being detrimental to the environment.

Overall, our interviewees realize that actions must be taken for the sake of the environment and then for economic survival, and that economic tools could be appropriate to do so, but few are those to clearly picture the necessary green economy they pretend to be in favor of. Similarly, few deputies could pretend with no ambiguity to be ready to support drastic measures to build a new economy according to new standards. In addition, many of them still envisage economic growth as a priority. Thereby, we argue that if our interviewees consider themselves concerned with environmental protection and advocate for an economic paradigm shift, they still subordinate it to economic considerations. However, contrary to what has been observed as consequences of ecological modernization, this subordination would not necessarily imply economic growth to be at the expense of environmental protection. Deputies' discourse on the relationship between economy and the environment seems to have gone past the ecological modernization argument according to which economic survival is necessary to enhance environmental protection. Here, environmental protection appears mandatory to economic survival.

Thus, the way our interviewees see the environmental crisis and the way it could be solved seems to support the 2011 UNEP recommendations for policy makers in favor of a green economy. Indeed, many of them recognize the value of natural capital and realize economy should invest in it. Some of them have linked the environmental crisis to poverty, what supports, the UNEP vision according to which a green economy is key to poverty alleviation. Many of them have explained an economy concerned with the environmental issue could benefit society and create jobs; finally, many if not all of them have suggested the use of renewable energies as well as low carbon technologies rather than non-renewable ones, resource conservation and energy efficiency, more adequate transportation, that is proper public transportation. The only conclusion of the UNEP report our interviewees have not referred themselves to is about the contribution of green economy to sustainable urban living. Also, our interviewees have not been specific

about the contribution of green economy to the enhancement of social equity, but since they explained in the interviews social equity was one of the issues they favored and also one of the achievements of sustainable development, we consider they establish some link between the two concepts. Finally, since they never mentioned the term “green economy”, they never specified that green economy could grow faster than brown economy over time, while maintaining and restoring natural capital (2011). However, they were many to explain that if economy was more engaged in environmental protection, it could be at least maintained and even stimulated through the development of new environmentally friendly economic sectors.

On the issue of solutions to the environmental crisis, along with the UNEP report (2011), our interviewees have also mentioned the need to establish proper regulatory frameworks (such as more efficient referees, laws, organizations and structures that would constrain businesses to act in a greater respect of the environment); to prioritize government investments and spending in areas that stimulate the greening of economic sectors; to limit government spending in areas that deplete natural capital and to use market based instruments to promote green investment and innovation (deputies mentioned market based instruments such as emission trading, but not taxes); to invest in capacity building, training and education (most of all focused on education and did not mention capacity building); and to strengthen international governance (nine of them referred to the necessity of reinforcing international governance).

In putting forward these alternatives, most of our interviewees gave a strong role to the State. Indeed, for nine of them, the state should set more severe environmental rules but also accompany businesses to integrate environmental considerations into their activities in order to stimulate the economic system and intervene only when confronted to environmental conflicts. But twelve of our interviewees argue the State should not limit itself to guide businesses and play a role of referee in the economic sphere. They argued the State should control the economic system to assure more environmental protection and impose a consciousness on businesses and society. Beyond the 2011 UNEP recommendations, the interviewed

politicians argue then for a greater intervention from the State in local and global environmental affairs. This conclusion does not only emphasize governmental concern for environmental protection, it also underlines political understanding of the need for action and political frustrations towards actual structures and governance modes. That is what one interviewee expressed when referring to the lack of harmony between the provincial and the federal levels. To this politician indeed, if at the provincial level politicians were ready to engage themselves towards more constructive environmental actions, the lack of involvement from the federal level, more prone to support neo-liberal economics countered many potentially innovative actions. Structures, governments and economic ideologies constitute then without any doubt limits to the acceptance and the application of recommendations supporting a paradigm shift such as UNEP's. Other studies on the question would however be necessary to address properly this matter. On this subject, we sense agenda-setting literature would be an interesting direction to follow.

## **6. Conclusion and suggestions for future research**

Policy-makers, in the public and in the private sectors are key to the greening of our societies. However, the way they apprehend the environmental crisis and its solutions has not yet been the subject of many studies. Through this article, we aimed precisely at presenting the results from such a research, focusing on 25 Canadian deputies' social representations. As a conclusion, along with Eder (1993) and Gendron (2001; 2006), we have to agree that the environmental crisis is no longer an environmentalist monopoly. The issue is now part of economic and political leaders social representations, what leads us to think that the issue resolution is in process. Our results show politicians tend to support many if not all 2011 UNEP's conclusions and recommendations. Thereby, we suggest the green economy concept could reach the political agenda despite of the neo-liberal political ideology for which a sustained economic growth is compatible with environmental protection (Hajer, 1995). Ecological considerations certainly failed to reach the political agenda in the 1980s and the early 1990s because of the hegemony of ecological modernization that was at the time inspired by the neo-liberal political discourse. Today however, ecological concerns have reached the political agenda because of a shift in this discourse. Today's

ecological modernization is still inspired by the neo-liberal political discourse for which a sustained economic growth is compatible with environmental protection, but it goes beyond.

Today's ecological modernization first of all recognizes there are tensions between economy and the environment, but no contradictions between economic growth and environmental protection on a long-term basis. Second of all, ecological modernization presents an understanding of the environmental issue that goes past the mere ecological dimension to encompass the social and economics dynamics of a global world. As we have seen, the deputies we have interviewed know the causes and the consequences of the environmental crisis and are able to link it to others issues and different actors. Third, today's ecological modernization questions the foundations of economic growth and emphasizes the complementary relation of the economy and of the environment. Not only environmental protection is seen as a way to maintain economy's survival, but economic growth, as long as it is tamed through regulation and corporation's good will could foster environmental protection. Thus, today's ecological modernization emphasizes environmental institutionalization.

Thereby, given the discourse of the politicians we have interviewed, we assume that UNEP's recommendations for policy-makers should be well accepted in the political world and seen as realistic. Their application relies however on structural, ideological and institutional conjunctures as well as on businesses good will to comply. That is the reason why the State has to be considered as one of the essential actors able to bring a change towards greater environmental considerations through adequate regulation and incentives, along with businesses, civil society and international organizations.

As a last remark, let us add there are some limits to this research. First, it has been conducted with members of only one political party in one province of Canada. If our results are revealing some aspects of today's ecological modernization, they cannot be generalized to the whole political community of Canada or North America. Thus we consider it would be necessary to identify every political level' social

representations (municipal, provincial and federal) in different parties in different provinces of the country to get an accurate picture of Canada's politicians social representations. We have also interviewed 17 mayors from the same province and coded the transcriptions we got from their recordings, but we have not analyzed them all yet. We also aimed at interviewing federal deputies, but the frequent change of power between parties during the last two years forced us to limit our investigation. Describing processes of today's ecological modernization would similarly require to identify other politicians social representations from other countries, as well as other actors' social representations such as economic leaders and pressure groups leaders.

Second, it is important to recall that the objective of this article was to describe the perception 25 deputies from one political party in one Canadian province have of the environmental issue. Thus, if our results clearly indicate these actors care about the environmental crisis and consider it for many of them as one of the most important issues of our time, let us recall that they globally also consider social issues such as education, unemployment, terrorism and poverty to be crucial issues. In addition, they are concerned with issues that are typical of their province, especially of political nature. Then, the politicians we have interviewed are not only driven by environmental and economic considerations but are also concerned with other issues of social and political nature. Finally, we consider it would be necessary to conduct the same kind of study in other countries in order to better understand how the environmental crisis is perceived and thought to be resolved, and to suggest adequate tools to do so.

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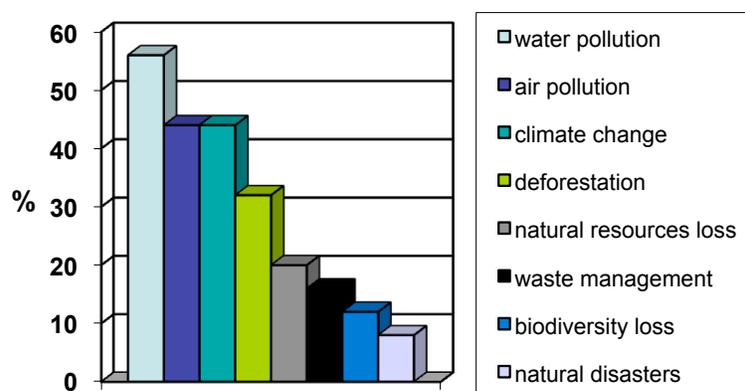
## Tables and figures

**Table 1: The 15 most frequent and relevant codes used in the coding process**

<b>Codes</b>	<b>Frequency</b>
State	433
Environment	373
Businesses	300
Province	238
Economy	216
Citizens	177
Regulation (rules)	162
Development	147
Deputies	132
Society	127
Pressure groups	125
Market	125
Regulation (control)	119
Sustainable development	102
Globalization	100

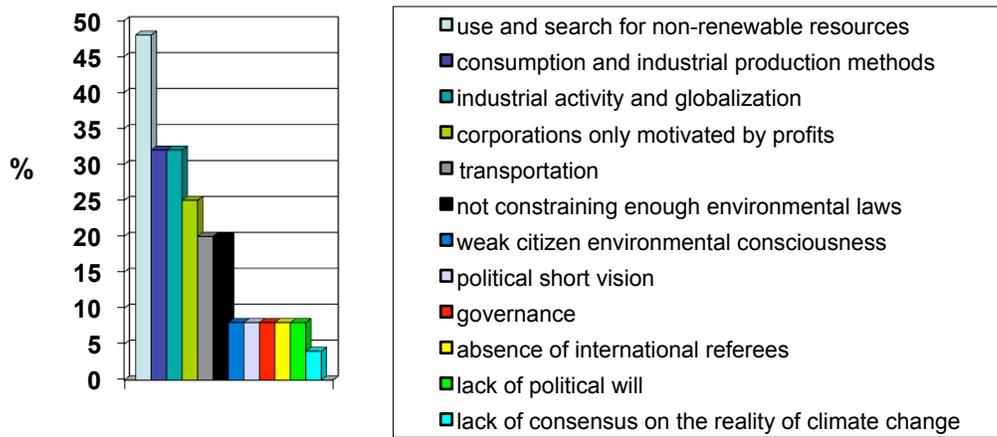
**Table 2: Understandings of the relationships between the environment and economy for 25 deputies from the same party and the same province**

	Tension between the environment and economy	No tension between the environment and economy
No contradiction between economic growth and environmental protection	$17/25 = 68\%$	$1/25 = 4\%$
Contradiction between economic growth and environmental protection	$6/25 = 24\%$	$1/25 = 4\%$

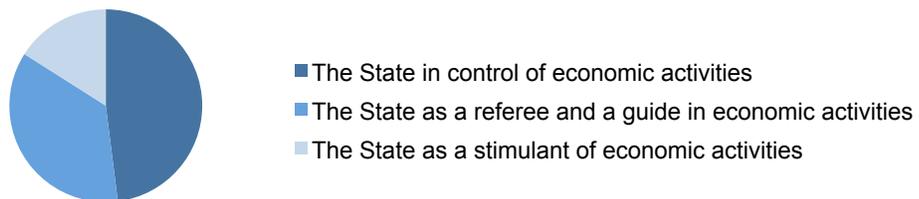


**Figure 1: The most important environmental problems according to 25 Canadian deputies from the same party and the same province**





**Figure 2: The most important causes of environmental problems according to 25 Canadian deputies from the same party and the same province**



**Figure 1: The roles the State(s) should play in economic activities according to 25 deputies  
from the same province and the same party**