

Environmental Policy Integration in Mexico:

The case of agricultural policy

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Resumen: Este artículo analiza los pasos que México ha dado hacia la integración de la política ambiental, con especial énfasis en la política agropecuaria. Hasta ahora, el país ha utilizado sobre todo instrumentos comunicativos para alcanzar este fin. Entrevistas semiestructuradas con funcionarios de alto nivel en las secretarías de Medio Ambiente y de Agricultura indican que, aunque estas medidas abren paso para aquellos servidores públicos con la voluntad de implementar el principio de IPA en la política hacia el campo, no logran hacer que las políticas sean obligatoriamente respetuosas del medio ambiente. Pese a ello, los recientes esfuerzos en este sentido han alcanzado cierto éxito. Queda por verse si serán reservadas y fortalecidas por las siguientes administraciones.

Abstract: This paper analyzes steps towards environmental policy integration in Mexico, with special emphasis in agricultural policy. So far, the country has mostly used communicative instruments to reach this aim. Semi-structured interviews with high-ranking officials from the ministries of Agriculture and of the Environment show that even though these measures break ground for public servants with the will to implement the principle of EPI in policy towards the countryside, they fail to make environmentally friendly policies mandatory. Yet, recent efforts to achieve this have attained some success. It remains to be seen if they are preserved and further enhanced by the next administrations.

Keywords: Mexico, agricultural policy, environmental policy, environmental policy integration, environmental mainstreaming, federal government, public policy

This is a translation of [the original piece](#), published in the Mexican journal *Gestión y política pública* of the Centro de Investigación y Docencia Económicas (CIDE). The original citation is:

Fernández Vázquez, Eugenio, (2014), *Integración de la política ambiental en México. El caso de la política agropecuaria*, *Gestión y Política Pública*, 23(2), pp. 465-505

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Acknowledgements: This paper would not have been possible without the support of the Ministry of Agriculture's then Chief Financial Office, particularly from the advisor coordinator, Pilar Vázquez Rubio, and the Chief Financial Official, José Levy García. In that ministry, the underdirector for Interlocution, Iris Adriana Jiménez, and Eloy Soberanis, advisor to the Chief Financial Official, were always available for clarifications. So was the ministry of the Environment's then director for Sectoral Policy Integration, Leticia Manzanera. I would also like to thank all the interviewees who generously agreed to talk to me.

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I. Introduction

A quarter of a century ago, the Brundtland Report noted that “the integrated and interdependent nature” of the challenge of sustainable development contrasted with the fragmentation and narrowness of government institutions and their mandates (WCED, 1987, p. 310). Since then, environmental policy integration (EPI), also called “environmental mainstreaming” (Nunan, F. et. al., 2012) has been considered one of the main tasks to correct this situation and organize government action in a better-suited fashion to attain this goal (Jordan, A. and Lenschow, A., 2010).

In the last fifteen years, Mexico has taken several steps in this sense. Measures to integrate environmental concerns into the overall action of the government go from changes to the Constitution that enshrine the right to an “adequate environment” and that mandate that development be sustainable, to the creation of the Ministry of the Environment (Secretaría de Medio Ambiente y Recursos Naturales, *Semarnat*) and the inclusion of environmental concerns in strategic plans at the highest level. This paper will review and analyse them with special emphasis on agricultural policy.

The focus on this particular sector is due to its growing relevance on the global scale and its importance at the national level. On the one hand, policies to enhance production and productivity in the countryside, as well as increases in demand due to population growth, will further intensify pressure from this sector on natural resources on a global scale in the following years (OECD, 2004). The urgency to reduce the impact of agriculture on the environment has been made even more pressing by the impending threat of climate change. According to the Fourth Assessment Report by the Intergovernmental Panel on Climate Change, “annual GHG emissions from agriculture are expected to increase in coming decades” (Smith, Martino et. al., 2007, p. 44). In view of this situation, the OECD has repeatedly called for “greater synergies between agricultural and environmental policies” since the early nineties (see, for example, OECD, 1993, 2010).

On the other hand, the agricultural sector is crucial for Mexico's economy and for the preservation of its environment: according to the OECD, a quarter of the country's population lives and works in rural areas, and agriculture accounts for 56% of land use and 80% of water consumption. The same report highlights that agriculture is one of the major threats to the preservation of forests and other terrestrial ecosystems (OECD, 2008).

In the last years, the Mexican Ministry of Agriculture (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, *Sagarpa*) introduced several changes in its programmes and policies, many of them referring to the environment. This provided a unique opportunity to detect reaches and obstacles for EPI in developing countries, in a sector with rough edges and heavy pressures from social, economic and political actors.

In order to do this, I conducted semi-structured interviews with high-ranking officials in both *Sagarpa* and *Semarnat*. This will shed more light on the review of instruments set in place and their effectiveness.

This paper will be organized as follows: The next section will define EPI, explain its importance and review the different normative perspectives on the subject. Section 3 will present overall progress towards EPI in Mexico, analyzing its impacts, reaches and limitations. Section 4 will focus on agricultural policy, reviewing specific steps towards EPI in the sector and presenting the conclusions from the qualitative research performed. Section 5 will discuss and offer some alternatives to achieve this integration.

II. Environmental Policy Integration: definition and normative perspectives

Underdal (1980) characterized an integrated policy as one "that recognizes its consequences as decision premises, aggregates them into an overall evaluation and penetrates all policy levels and all government agencies involved in its execution" (p. 162). In this line, environmental policy integration can be defined as the principle by which 'non-environmental' state entities adjust their policies when they damage the environment (Lenschow, 2002).

However, EPI must not only be understood as a 'corrective' of policies, put in place to minimize damage to the environment. It must also be regarded as a way to organize policies from sectorized entities to tackle environmental issues, which are, by nature, cross-sectoral (Jacob and Volkery, 2004).

Thus, EPI is mainly about coordinating policy and changing the core values of state agencies: It points to an end-state "in which the policies and programmes of government are characterized by minimal redundancy, incoherence and lacunae" (Peters, 1998, p. 296) with regards to the environment, and where environmental values are embedded in the normative system of 'non-environmental' agencies.

The literature presents two different understandings of the normative mandate of EPI, what Jordan and Lenschow (2008) and others have called 'weak' and 'strong' environmental integration. Put simply, these two positions towards EPI revolve around different views on what should be integrated into what.

On the one hand, Liberatore (1997) states that "the concept of integration assumes a form of reciprocity. It presupposes that the different components have similar importance and weight" (p. 119), hence granting environmental concerns the same importance as other aspects of development. This view can be associated to the goal of reaching what Collier (1994) compares to Pareto optimality, a state in which integration would lead to a point in which it is impossible to pursue sectoral "objectives without causing further environmental damage" while at the same time one could not pursue environmental objectives without compromising sectoral goals (p. 36).

In agricultural policy, this view has echoed many works. For example, Legg (2010) notes that "the challenge for society is to determine and move toward the level and mix of agricultural production and practices that are both economically and environmentally efficient. The risk is that production is economically efficient but does not deliver the "right" amount of environmental outputs (or vice versa)" (p. 46). As will be seen below, 'weak' EPI has also been the objective of the Mexican government in this issue: the aim is to make agriculture productive without hampering the environment, not to sacrifice agricultural productivity when natural capital is at risk.

On the other hand, William Lafferty and his co-authors propose that even in the Pareto-like state described by Collier, environmental considerations should have pre-eminence over other concerns. They advance that EPI is not just about balancing environmental concerns with social and economical issues, but that they must be granted “principled priority” (Lafferty, 2002; with Hovden, 2003; with Knudsen, 2007). Using a card game metaphor, they propose “designating environmental concerns as ‘trump’ in relation to critical trade-offs among competing policy objectives” (Lafferty and Knudsen, 2007, p. 22).

In practice, however, both views of the desirable ‘strength’ of EPI can be characterized not as discrete aims, but as part of a continuum in which environmental concerns gain or lose importance in policy formulation. In this sense, EPI can be understood as being “a matter of degree” (Nilsson and Persson, 2003). Arrangements in which environmental considerations are simply considered during policy formulation and implementation can be said to incur in ‘weak’ EPI, while ‘strong’ EPI occurs when there is a commitment to “minimize any contradictions between environmental and sectoral policies” and this commitment results in giving “priority to the former over the latter” (Jordan and Lenschow, 2008, pp. 11-12).

III. EPI in practice: implementation in Mexico

III. 1. Instruments for achieving EPI in practice

The literature has found and proposed many instruments to achieve EPI, and the categories and levels of aggregation in which different authors have grouped them vary. Persson (2004) finds two general approaches towards this goal: “first, the toolbox approach, which involves identifying concrete measures that can be implemented in the short- to medium-term, and second, the longer-term policy reform approach, which involves trying to change fundamental structures in policy-making” (p. 36).

Referring to this latter perspective, but writing about coordination and integration in general, not just environmental, Metcalfe (1994) established a

“policy coordination scale”, in which cumulative steps would lead to a state in which “the parts of a system work together more effectively, more smoothly and more harmoniously than if no coordination took place” (p. 278). He cites several instruments to achieve each step in the stairway, ranging from mere exchanges of information in the lower levels to the establishment of common priorities for the whole of government in the higher ones. Lenschow (2007) used this scale to show how, from certain perspectives, EPI and coordination of government agencies for the protection and restoration of the environment can be conceptualized as a matter of degree.

From the ‘toolbox’ approach, Jacob et. al. (2008) divided the contents of the chest into three categories: communicative, organizational and procedural. The first group sets out longer-term objectives to guide more detailed efforts, and includes environmental provisions in the constitution, national environmental plans and/or strategies, sustainable development strategies, requirements to develop sectoral environmental strategies, obligations to report on environmental performance; and external and independent reviews of environmental performance. The second group is meant to alter the context of policy-making, and includes the amalgamation of departments, green cabinets, and independent institutions. The third group seeks to tackle procedural aspects of decision-making, and includes granting more power to the environmental agency, green budgeting, strategic environmental assessment, and assessing the environmental impacts of policies (pp. 27-28).

Lafferty (2002; with Hovden, 2003) has proposed to differentiate between mechanisms for vertical (sectoral) and horizontal (cross-sectoral) EPI. The instruments he lists for horizontal EPI coincide with those mentioned by Jacob et. al. (2008), and fall under the “communicative instruments” category. Instruments for vertical EPI, however, refer to a dimension that fell beyond the scope of Jacob et. al. (2008), namely how to integrate environmental concerns not in overall government action, but within a specific agency. They include an initial mapping that identifies environmental impacts of actors and policies related to the governmental unit, establishing a forum of consultation, formulating a sectoral strategy and action plan for environmental protection,

integrating that plan into the budget, and developing a system for monitoring impacts, implementation processes and target results (Lafferty, 2002, p. 17).

I will use the list of instruments and categories listed in Jacob et. al. (2008) to analyze EPI in the whole of the federal government in Mexico, and those listed for vertical EPI in Lafferty (2002) to investigate efforts towards EPI in agricultural policy. This has the advantage of allowing for a comparison of the country with others, just as Jacob et. al. (2008) and Jacob and Volkery (2004) did, while also investigating the challenges of implementing EPI at the sectoral level.

III. 2. Overall outlook of EPI in Mexico

Our knowledge of progress towards EPI is practically limited to countries in the OECD and, particularly, in the European Union (Homeyer, 2007; Jordan and Lenschow, 2010). Even this dim light is obfuscated by certain inconsistencies between different analyses, some of which are out-of-date in some aspects. Jacob and Volkery (2004) and Volkery et. al. (2006), for example, report that Mexico had set in place “constitutional provisions” for EPI, but a later report by Jacob, Volkery and Lenschow (Jacob et. al., 2008) fails to report them, even though the Mexican Constitution suffered no changes in this sense during this period. On the other hand, they consider Mexico to have “reporting obligations” in place, but these obligations were lifted in 2006.

Nevertheless, Jacob et. al. (2008) provides a good point of departure to analyze EPI in the country. According to this work, measures in this sense in Mexico have been concentrated in what they call “communicative instruments”. Mexico has set in place national strategies for sustainable development, national environmental plans, sectoral strategies, and reporting obligations. The only organizational measures this review found are the establishment of interdepartmental working groups, and independent institutions.

Even though purely communicative strategies have been criticized for being too abstract and failing to address specific concerns, they denote some progress, and may have important repercussions (Meadowcroft, 2007). In the Mexican case, these measures seldom specify tasks for policy makers, and yet facilitate work towards EPI and break ground for public servants and political actors who seek a more integral and integrated policy. In this section, I will analyze these instruments, noting some of their achievements and shortcomings.

III. 2. 1. Constitutional provisions

Provisions for the preservation of the environment are mainly found in three articles of the Mexican Constitution. One of them, article 73, grants Congress the authority to pass legislation regarding the use of natural resources (fraction XXIX-2) and to establish the concurrence of federal, state and municipal governments “with regards to the defence of the environment and the preservation and restoration of ecological equilibrium” (fraction XXIX-G) (CDDHCU, 2010). The relevance of this article is that it allowed for the approval, in 1987, of the first environmental law in Mexico (Sunyer Martín and Peña del Valle Isla, 2008), and for further legislative work on the subject.

The other two, articles 4 and 25, have a more direct impact on environmental policy in Mexico and on EPI in particular. They became crucial in this matter after a decree published in June 1999 by which fundamental reforms to both articles entered into force. Article 4 was modified to include the “right to an adequate environment” as one of the fundamental rights of persons. This reform was the first step towards granting the preservation of the environment constitutional importance *per se*, for before that all provisions in the matter were linked to the right to health (García López, 2007). Article 25, on the other hand, was changed to obligate the state to “guarantee that development be sustainable”.

These provisions, however, may imply little more than saying that the environment is important (Nollkaemper, 2002). If they are not further developed, they may have little impact on policy and policy integration, since

they make no mention of specific obligations of public administrators (García López, 2007), and efforts to protect the environment will remain subject to political will.

III. 2. 2. The National Development Plan and the sectoral programmes: a national strategy for sustainable development and the different sectoral strategies

Article 26 of the Constitution and the Planning Law establish that the Mexican president must, in the first months of his or her administration, remit to Congress a National Development Plan (NDP), which will be the axis of the federal government's action during the six years of his or her term. The Planning Law is also the legal basis for the sectoral programmes each ministry publishes at the beginning of the presidential period, which must follow the lines set in the NDP.

The Planning Law was modified only a few years ago to mandate that planning ensure that development be "integral and sustainable" (CDDHCU, 2003). Yet, the notion of sustainable development has been present in the last three NDP, two of them issued before this reform.

In the NDP for 1995-2000, under Ernesto Zedillo's administration, the chapter on economic strategy included a heading titled "Environmental Policy for Sustainable Growth". In it, Zedillo's administration stated: "Our attention must focus on stopping trends of ecological deterioration and set the ground to transit to sustainable development". It also promised that "environmental and resource policy will go beyond a strictly regulatory attitude and will also constitute a process of promotion and induction of investment in environmental infrastructure, market creation and finance for sustainable development" (NDP 1995-2000, p. 133).

The following president, Vicente Fox (2000-2006), in his NDP, set as one of the guidelines for his government the aim of achieving "an harmonic social development that preserves the rule of law and the environment" (NDP 2001-2006, p. 34). "Sustainability" was also one of the "central criteria for the development of the nation" (p. 39), one of the tasks to achieve "economic

growth with economic quality” and one of the endeavours to achieve “human and social development”.

It was only in 2006, however, that environmental concerns were situated at the top of the priorities enlisted in the NDP, and that EPI first appeared in this strategic document. Former president Felipe Calderón stated in his six-year plan that he aimed to build “human sustainable development”, and “environmental sustainability” was listed as one of the five axis of action for his presidency (NDP 2007-2012). The NDP also stated that “for development to be sustainable, it is necessary that the country’s natural heritage be protected and to be committed with future generations”.

Calderón’s NDP was particularly adamant in its advancement of environmental policy integration: “This National Development Plan proposes that a first element of policy to preserve the environment is a cross-sectoral approach. It is indispensable to have effective interinstitutional coordination and true integration amongst sectors of government to allow for quantifiable results”. (NDP 2007-2012, p. 37)

Despite this clear commitment to sustainable development and EPI, many of the most important sectoral programmes fail to operationalize it. Sustainable development and the preservation of the environment are consistently mentioned in headings and prefaces, but the presence of specific environmental and EPI objectives is uneven. Analyzing each strategy in depth falls beyond the scope of this work, but some examples may help clarify the point.

The main focus of the Ministry of Energy’s sectoral programme, for instance, was placed on the extraction and use of fossil fuels, though this strategy will be carried out “considering the costs of social and environmental externalities it entails”. It offered no further specification of goals and indicators on the matter (Sener, 2007, p. 19). Still, the Energy Sectoral Programme did pay special attention to curtailing greenhouse gas emissions and to mitigation of climate change, be it through the use of renewable sources for electricity or the enhancement of more efficient consumption habits. It also set as one of its strategies the “development of the National Renewable Energy Programme”,

and highlighted the need for cooperation with *Semarnat* and *Sagarpa* on the issue of biofuels.

The opposite was true for the Ministry of Tourism's sectoral programme. Despite the growing threat of unsustainable tourism to the environment (Davenport and Davenport, 2006), provisions for sustainable development were persistently vague in the document. "Environmental sustainability" was repeatedly mentioned in it, as were calls for the enhancement of cross-sectoral agendas with other agencies, including *Semarnat*, and of the indicator system for *Agenda 21 for Tourism*. However, specific actions did not include environmental provisions. For example, the regional development programmes it promised to develop included "geographical, sociodemographic, economic and accessibility criteria", but no environmental indicators or measures (Sectur, 2007, p. 60).

Other than the requirements set out by the Planning Law, another environmental mandate for all government instances was set out by the *Ley General de Cambio Climático* (General Law on Climate Change). Approved in 2012, it mandates that, "in order to reduce emissions, agencies, states and municipalities shall, within the scope of their jurisdictions, promote the design and elaboration of mitigation policies and actions (CDDHCU, 2012).

III. 2. 3. Semarnat and its sectoral programme: an independent institution and the national environmental plan

Amongst the most relevant measures taken during Zedillo's administration was the creation of the Ministry of the Environment, Natural Resources and Fisheries. This ministry is the direct predecessor of the current *Semarnat*, modified after the Fisheries Department was transferred to *Sagarpa*.

Semarnat is, by law, in charge of "establishing and conducting the national policy on the subject of natural resources, as long as they haven't been mandated to another agency; and on the subject of ecology, environmental sanitation, water, environmental regulation of urban areas and of fisheries, with the participation that corresponds to other ministries" (CDDHCU, 2009).

Therefore, it corresponds to this agency to issue regulation on environmental matters, and to coordinate the work of different ministries and agencies in this area.

In line with this mandate, Mexico's national environmental plan is contained in *Semarnat's* sectoral programme. The strategy delineated in the last of these documents published, approved during former president Felipe Calderón's administration, was essentially cross-sectoral and multi-tiered and, to a certain extent, it constituted the 'road map' for achieving EPI in Mexico. It was centred on the need for "a coordinated and integrated strategy from sectoral policies and the different tiers of government".

It established ten objectives, each accompanied by indicators, goals and baselines. Amongst the most relevant were the preservation and sustainable exploitation of ecosystems; to achieve an adequate management of water resources; to further enhance regulatory capacity to prevent, reduce and control pollution; to generate technical and scientific information to help decision-making; and to coordinate action to mitigate climate change and advance measures of adaptation.

The most important achievement with regards to this last objective was to issue the Special Program on Climate Change (PECC). Published in August 2009, it presented an integral, cross-sectoral strategy both to mitigate emissions and to adapt to global warming. It included specific measures, goals and indicators, and was considered by officials both in *Sagarpa* and *Semarnat* an outstanding opportunity to achieve EPI and better coordination amongst different ministries and agencies.

III. 2. 4. Reporting obligations

Semarnat is charged with guaranteeing that both private and public works and activities are respectful to the environment. However, obligations for other agencies to report to *Semarnat* measures to improve environmental performance have always been very weak, if present at all.

During the Fox administration the *Presidential Goals* system included environmental obligations, and progress towards them had to be reported to the President's office, but even this mechanism was never fully institutionalized (interview with a high ranking official from *Semarnat's*). There are, still, mandatory obligations to perform environmental impact assessments for specific projects, such as hydraulic infrastructure works of a large scale, oil-related projects and activities on wetlands, amongst others.

Also, during the last administration *Semarnat* established a mechanism for monitoring public actions, the Cross-sectoral Agenda (*Agenda de Transversalidad*). It was a document that enlisted commitments by different ministries and agencies, agreed with *Semarnat*, to improve environmental performance. Goals and indicators were attached to the commitment, and progress towards them had to be reported to the environmental agency. Even though it was not a mandatory instrument, it achieved certain success (Semarnat, 2008, 2009).

III. 2. 5. Interdepartmental institutions

The Mexican congress and government have established tens of interdepartmental institutions for a wide variety of issues. Many of them relate in one way or another to the environment, and *Semarnat* is often part of them. The effectiveness of these institutions, the periodicity with which they meet and the rank and capacity of assistants to these meetings, however, vary widely.

Amongst the most important interdepartmental institutions to include *Semarnat* as a member are the *Comisión Intersecretarial de Bioseguridad de los Organismos Genéticamente Modificados* (Interministerial Commission for Biosafety of Genetically Modified Organisms, *Cibiogem*), charged with monitoring, evaluating and coordinating policy on GMOs; the *Comisión Intersecretarial para el Desarrollo Rural Sustentable* (Interministerial Commission for Sustainable Rural Development, *ICSRD*), charged with coordinating agricultural policy; the *Comisión Intersecretarial para el Desarrollo Social* (Interministerial Commission for Social Development),

charged with guaranteeing that social policy is integrated; the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (National Commission for the Knowledge and Use of Biodiversity, *Conabio*); and the *Comisión Ejecutiva de Turismo* (Executive Commission for Tourism), charged with dealing with cross-sectoral issues on the subject.

These commissions and organs, however, and despite legal provisions, may only meet sporadically. These meetings may only be held for symbolic purposes or to provide a forum for social and private actors to air their opinions, not to make decisions. For example, as we will see in the following section, the ICSRD didn't work to its full potential at least until 2010, and even with the full support of the Minister of Agriculture it failed to gather all the ministers that constitute it in each session.

III. 2. 6. Absent instruments

The rest of instruments in the list presented by Jacob et. al. (2008) are mostly absent in Mexico's policy environment. They include green cabinets, green budgeting, strategic environmental assessment, impact assessment of policies and the amalgamation of departments.

Moreover, in the present political conditions in the country, some of them would be counterproductive for the protection of the environment. As Liberatore (1997) warned, integration involves at least some reciprocity, and "if one of the components is much weaker, it is likely to be diluted into, rather than being integrated with, the others" (p. 119). This would be the case of *Semarnat* if it was to be amalgamated with other departments, judging from the importance granted to it in the budget. In 2006, for example, only 2.2% of the money destined to rural areas, consolidated in the Special Concurrent Program for Sustainable Rural Development, was labelled for environmental measures (Chapela and Álvarez López, 2007, 55). This fact also illustrates how far Mexico is from green budgeting.

The possibilities for establishing green cabinets are also quite limited. Priorities in Mexico nowadays are centred in security and fighting poverty through health and education programs.

IV. EPI in practice: steps in Mexican agricultural policy

IV. 1. The importance of agriculture and the difficulties to make it sustainable

Operationalizing and implementing EPI has proved to be a lengthy, complicated process, with many setbacks and a sluggish progress, not only in Mexico but wherever this has been tried. Integrating environmental concerns with agricultural policy appears to be an even harder task, and even the frontrunners on this matter struggle to achieve it.

In an analysis of the integration of environmental and agricultural policy in the European Union, for example, Buller (2002) found that “the adoption of environmental prerogatives and objectives within the EU’s Common Agricultural Policy (CAP) has proved to be one of the more difficult enterprises of environmental policy integration” (p. 103). Further, even when there was some advance in this sense was achieved in the 2003 reform of the CAP, progress is still fragile, and “landscape and environmental concerns have been moving down the agenda” (Feindt, 2010, p. 311).

Within Europe degrees of success vary, but even countries in which environmental conscience has permeated the most in society and the policymaking community are yet to fully integrate government action in both realms. In Sweden, for instance, a recent work concluded that only one strand of the agricultural sector, the one explicitly linked to the Environmental and Rural Development Plan, “allows for environmental policy goals to become integrated into policymaking”. The other one still remains a problem (Eckerberg et. al., 2007, p. 132).

Across the Atlantic the outlook is quite similar. A comparative study of agri-environmental policies in the EU and the United States (von Haaren and Bills, 2010) noted that there is a “fragmented policy environment” that is still missing “the broad view of the rural, working or ‘multifunctional’ landscape” (p. 52-53).

Yet, the importance of this sector makes tackling environmental issues of agricultural policy a critical endeavour, one that in Mexico is still to be fully carried out. Agriculture, livestock and fisheries are fundamental for the country’s economy and for the preservation of the global environment.

Despite this situation, until very recently there were very limited agri-environmental policies in place (OECD, 2008).

Even though the sector's contribution to the economy presented a declining trend for the last two decades, it was the only economic activity that continued to grow during the last global crisis (data provided by *Sagarpa*). Moreover, notwithstanding the reductions it has experienced with respect to national GDP, food production still employed 16% of the Mexican working force in 2003, and a quarter of the country's population lived in rural areas during that same year (OECD, 2008).

The sector is responsible for 8% of the country's greenhouse gas emissions, and it accounts for 56% of land use and 80% of water consumption (OECD, 2008). Expansion of livestock and agricultural activities will further increase pressure on the environment, reinforcing a trend of land use change that is already rapid and intense (Alix-García, 2007; Mas et. al., 2004; OECD, 2008).

Measures to achieve EPI in agricultural policy in Mexico fall both on the horizontal and the vertical dimensions described by Lafferty (2002). I will first analyze the impact of horizontal measures and then use the list of mechanisms presented by that work to analyze vertical mechanisms in place.

In order to investigate the results of these measures, the obstacles for cooperation between *Sagarpa* and *Semarnat*, and possibilities and opportunities to enhance it, other than reviewing the literature on the subject I conducted semi-structured interviews with 20 high-ranking officials in both ministries (see the appendix for the list). Interviewees were selected because of the intersection of their area of work and the mandates of their department with the other ministry in question. In order to find this intersections, I used FAO (2010), an analysis that maps programmes by *Sagarpa* and presents the duplicities, contradictions and complementarities they encounter within the ministry and with programmes from other ministries. The highest official responsible for each programme that duplicated, complemented or contradicted a programme from *Semarnat* was contacted and interviewed in person, as was his counterpart in the environmental agency. Further,

interviews were scheduled with officials in charge of establishing policy priorities in both ministries. The questions asked included:

- Are there duplicities or contradictions between *Sagarpa* and *Semarnat*?
- What are the main obstacles for coordination between these two agencies?
- What measures have been taken to solve this situation?
- What led to the implementation of these measures?
- Are institutions and organs in place efficient? Is this institutional framework enough to achieve coordination?
- What are the possibilities for enhancing coordination?

Interviewees will be cited by their names except when they requested not to.

IV. 2. Horizontal EPI in Mexican agricultural policy

On the horizontal dimension, the most important instruments and institutions are those established following the *Ley de Desarrollo Rural Sustentable* (Law for Sustainable Rural Development, LSRD). It entered into force in December 2001, and sought “to reach an integral and decentralized agricultural policy with the coordinated participation of ministries, and the direct and active involvement of private and social actors in the countryside” (Yúnez Naude, 2006, p. 62). The text of the law states that its dispositions seek to promote sustainable rural development and mandates that “sustainability be the guiding principle” of rural policy (CDDHCU, 2001).

It mandates the establishment of several cross-sectoral and interdepartmental organs, the most prominent being the ICSR, integrated by the ministers of *Semarnat* and *Sagarpa* and those of Economy, Education, Finance, Communications and Transport, Health, Social Development, Agrarian Reform, and Energy, considered the ones with more direct impact on the countryside.

The main task of the ICSR is to coordinate all policies towards the countryside, and following this work it must, according to the LSRD, propose

to the President a Special Concurrent Program for Sustainable Rural Development. This program shall, at least in theory, not only be a compendium of programmes from the ministries that form the ICSR, but an integrated and consistent set of policies to secure better quality of life for people living in rural areas, greater agricultural, livestock and fisheries productivity, and the preservation and restoration of the environment.

Other organs mandated by the LSRD and crucial for the implementation of its provisions are the Mexican, state and municipal councils for sustainable rural development. The Mexican Council is formed by the members of the ICSR, representatives of national agri-business organizations, NGOs, product systems (committees established according to specific products), and academic institutions. State councils are composed by representatives of state-level agencies signalled by the governor, of agencies that integrate the ICSR, of the rural development districts (an administrative unit established to manage rural development programs in municipalities in the same region), and of social and private organizations in the state. Municipal councils are integrated by municipal presidents, local representatives of agencies that integrate the ICSR, state officials designated by state governments, and representatives of local social and agri-business organizations.

Results of the LSRD and the institutions for coordination it established have been uneven, partly because of the incompleteness of the law itself, partly because its provisions have been fulfilled only symbolically. Chapela and Álvarez López (2007) calls it “a transitional hybrid”, because while it sets clear priorities for policy-making, it fails to further develop them and set measures to implement them (p. 45).

Other studies widely agree that the most important policy provision of the LSRD, the Special Concurrent Program, is still far from achieving its objective of presenting a coherent and consistent policy towards the countryside that enhances sustainable rural development and helps to the preservation and restoration of the environment. Until this year, budgets and programmes were negotiated independently by each ministry with the Ministry of Finance, and then presented in a common document as an aggregate (Chapela and Álvarez López, 2007; Herrera Tapia, 2009; Yúnez Naude, 2006).

Only one interviewee, a high ranking official from *Sagarpa*, considered that the Special Concurrent Programme was actually the result of coordination between ministries, claiming that “by law, there is coordination”. Even so, he acknowledged that “this coordination is deeper with some ministries than with others”. Another interviewee, also from *Sagarpa*, explained that in practice the Programme was used for political, and not policy, purposes: “What had been done until now was to add up all the money spent in the countryside so that the government could tell political, social and private actors: ‘Look at all the money we’re spending in rural areas!’”

All interviewees from *Sagarpa* noted that the ministry was doing an effort to achieve that the Special Concurrent Programme presented an integrated budget with no redundancies or contradictions. This task included coordinating actions with *Semarnat* by setting common priorities and searching for greater synergies. However, all interviewees from *Semarnat* remained sceptic of the possibilities of these efforts to effectively “green” agricultural and fishing policy. The Programme is still considered by officials in *Semarnat* as being “*Sagarpa*’s instrument”.

Councils for sustainable rural development in the three tiers of government have also failed to achieve coordination. Officials at *Sagarpa* explained that until 2010 meetings of the ICSR and the Mexican Council had been only symbolical, and officials present were of very low ranks.

The situation is equally dire in the Municipal Councils. Even though the law was approved almost ten years ago, only 80% of municipalities have established them. Case studies on the work of these councils show that they are still far from reaching their objectives. In the Los Altos region in the state of Chiapas, for example, Cartagena Ticona et. al. (2005) found that they are not truly representative, participation is very limited, and they are mostly inoperative and symbolic. This analysis also showed how effective work within this framework is hampered by corruption, corporatism and an authoritarian political culture.

Another relevant instrument for coordination between *Sagarpa* and *Semarnat* was, at least until the end of president Felipe Calderón’s administration, the

Cross-Sectoral Agenda (*Agenda de Transversalidad*). Established and advanced by *Semarnat*, it listed commitments by other ministries on environmental matters. It was not legally binding, thus the fulfilment of these commitments was achieved through political pressure and negotiation. It included goals, indicators, responsible department and official and actions to achieve each objective agreed upon.

Commitments by *Sagarpa* ranked from actions to mitigate climate change by helping to reduce deforestation, to promoting productive reconversion and enhancing sustainable farming (*Sagarpa*, 2010). Achievements gained through this instrument listed by *Semarnat* include the formulation of the Special Programme on Climate Change, reduction of the fishing fleet and joint actions to preserve forests, amongst many others (*Semarnat*, 2009). The reaches of this instrument, however, are limited and it was viewed by all but one of *Sagarpa's* officials interviewed as an instrument “by and for *Semarnat*”, and not part of a joint effort. An illustrative fact of this situation was that the most high-ranking officials at *Sagarpa* had never heard of it.

Further, *Semarnat's* decision to focus on the Cross-Sectoral Agenda, as opposed to working to achieve that the Special Concurrent Programme effectively be concurrent, may have undermined EPI. One of *Sagarpa's* officials with the most constant and intense contact with *Semarnat* noted that it had indeed been productive, but two other officials pointed that the use of this instrument had led to political misunderstandings and clashes. “On one occasion, we wanted to solve duplicities between *Sagarpa* and *Semarnat* on two issues”, reported one of them, “but people from *Semarnat* insisted on pushing the Cross-Sectoral Agenda on us, playing foul”. At the end, the officials from *Sagarpa* decided to postpone efforts that needed the participation of *Semarnat* and limited action to what could be achieved without help from that ministry.

Asked about why even when both ministries were seeking greater coordination each was using a different instrument, interviewees gave many different explanations. One of them argued that “the Cross-Sectoral Agenda is much wider” than the Special Concurrent Program. However, officials from *Semarnat* contended that “it is less ambitious than the Special Concurrent

Programme; it is only a list of commitments we have reached and seek to fulfil". Another official at *Sagarpa* was under the impression that it was a response to "the failure of the Special Concurrent Programme".

All officials involved in authorization and promotion of GMOs agreed that cooperation was better than ever on the subject, and far deeper than on any other issue. However, one of *Semarnat*'s viceministers and one of *Sagarpa*'s high-ranking officials agreed that there had been a high degree of information exchange, but very little coordination.

Overall, it can be said that both ministries are seeking coordination in an uncoordinated fashion, with different logics and on different scales. *Sagarpa*'s officials explained that they subscribe "the idea of cross-sectoral integration" and, to achieve it, chose to use "the mandatory instrument, the Special Concurrent Program", with a top-down approach. *Semarnat*, on the other side, chose to work with a bottom-up approach, seeking small commitments achievable through political work and the Cross-Sectoral Agenda.

With respect to water management, this issue falls in the realm of the National Commission for Water (*Conagua*). *De facto*, this organ acts as an independent entity, even when it is nominally part of *Semarnat*. One of *Sagarpa*'s viceministers in closest touch with *Conagua* explained that, until now, works to take water from dams and wells to croplands has been done under a political arrangement by which "*Conagua* deals with everything outside the plot, and we deal with everything inside it". An official from *Conagua* confirmed this.

This arrangement, however, still leaves room to ample mismatches in infrastructure. To correct this, an agreement was underway to ensure that resources for infrastructure from *Conagua* and *Sagarpa* be held in a trust with specific rules about how, when and where to start or maintain projects.

IV. 3. Vertical EPI in Mexican agricultural policy

Other than the new commitment to cross-sectoral integration related above, in the last years *Sagarpa* has undertaken a series of measures to ensure that

agricultural policy be environmentally friendly. These include asking for the advice of *Semarnat* in the evaluation of agricultural, livestock and fisheries programmes; seeking complementarities between programmes by the two agencies, and taking action to protect the environment independently.

One of the steps taken in the last two years to achieve vertical EPI was what Lafferty (2002, p. 17) called “an initial mapping and specification of sectoral activity which identifies major environmental impacts” associated with the government unit. An official charged with inter-sectoral dialogue at *Semarnat* explained that prior to the definition of the 2010 federal budget, then minister of Agriculture Alberto Cárdenas called officials from *Semarnat* who had intersecting areas of work with *Sagarpa* to participate in the programming of agricultural policy.

Another step taken recently is similar to the forum of dialogue and consultation Lafferty (2002) talks about. In this case, it is the Mexican Council for Sustainable Rural Development. As seen above, it is yet to reach its full potential, although there appears to be a clear commitment by *Sagarpa* to achieve this.

The sectoral strategy, green budget and action plan are contained in the Special Concurrent Programme for Sustainable Development, but this, as mentioned, is still far from being effective. It remains to be seen whether efforts by some officials in *Sagarpa* to turn it into an effective sustainable development strategy for rural areas are successful.

The great absentee, however, is a system of monitoring environmental damages or improvements from agriculture. The lack of an evaluation system common to *Sagarpa* and *Semarnat* was noted as one of the main constraints to achieve sound environmental work in rural areas by two officials at *Semarnat* who work closely with *Sagarpa*.

Despite these shortcomings, *Sagarpa* has taken other actions towards EPI. Officials in this ministry cited, as the most important, modifications to the Programme of Direct Support for the Countryside (*Procampo*) and the initiation of the Program for Sustainable Use of Natural Resources for Primary

Production (PSUNR). Together, in 2010 they accounted for a third of *Sagarpa's* budget (SHCP, 2009).

Changes to *Procampo* are of a very salient relevance. Established in 1993 as compensation for staple producers after the entry into force of the North American Free Trade Agreement, this programme provides subsidies to croppers conditional on them keeping agricultural land under production, with particular attention to staple crops. It has almost three million beneficiaries and covers 14 million hectares of land (Winters and Davis, 2009), and its 1.3 billion dollar budget accounts for over a fifth of *Sagarpa's* resources. At first, it was projected to last until 2008, but Calderón's administration decided to keep it in place.

Concerns about *Procampo's* consequences for the environment have been a constant since its implementation because of its negative impact on forest cover (see, for example, Key et. al., 1998, and Schmook and Vance, 2009). Attempts to tackle this situation were done after its implementation, allowing subsidies to continue if plots were reforested. However, these measures failed to correct other problems. An official from the National Forestry Commission explained that, even though the registry for the programme was closed in 1993, so that no new plots could be incorporated in it, it still fostered deforestation in areas of slash-and-burn agriculture. An official at *Sagarpa* involved in the administration of *Procampo* explained that work to correct this situation had started and that new provisions would be incorporated to the operating rules of the programme once the new registry was finished, which in principle happened in 2011. The official from the National Forestry Commission confirmed this.

The PSUNR, on the other hand, adds up many programs initiated by *Sagarpa* during the last decade to trigger a more sustainable agriculture. Its operating rules establish five components: conservation and sustainable use of soil and water, biogenetic and biodiversity resources, productive reconversion, aquaculture and fisheries, and livestock. This last component was spontaneously highlighted by half the interviewees in *Semarnat* as being a real breakthrough towards sustainable management of livestock. However,

modifications to its operating rules done after the interviews were held eliminated any environmental provisions in the livestock component.

Other measures include programmes like Clean Countryside (*Campo Limpio*), with which *Sagarpa* intends to reduce pollution from the disposal of agrochemical containers, discarded after their use with little order. Measures to recollect the growing number of plastic residues from plasticulture are also underway. An official from *Sagarpa* and another one from *Semarnat*, however, warned that both ministries were duplicating actions in this sense, but that coordination had been difficult due to political reasons.

Other actions of vertical EPI within *Sagarpa* include commitment to the goals established under the Special Programme of Climate Change. They sum over a hundred measures, and officials in both ministries confirmed that work is already underway to achieve them, even though many of the activities outlined in the programme are conditioned to the attainment of a global agreement on this issue and on the availability of resources from the Clean Development Mechanisms and other international funding initiatives.

IV. 4. Obstacles to achieving EPI in Mexican agricultural policy

There is wide agreement in the literature that the main obstacles to the achievement of EPI are lack of political will (Dalal-Clayton and Bass, 2009; Homeyer, 2007; Persson, 2004, and Lenschow, 2002) and the sectoral organization of government (Volkery et. al., 2006; Persson, 2004). The core organization of government implies the specialization of agencies, which increases efficiency (Jacob and Volkery, 2004), and has been the rule ever since the end of the *ancien régime* and the old systems of patronage (Steurer, 2007). This, however, has led to a system in which these agencies act with narrow perspectives that produce 'externalities' for other agencies (Underdal, 1980). In the case of environmental policy, this implies that if environmental concerns are not part of the agency's mandate or normative values, impacts on natural capital will be ignored during policy formulation and implementation or disregarded as being other agency's business.

A fundamental factor to overcome this obstacle is political will either of someone with authority over ministries with policies to be integrated, or of people in those agencies. As Jordan (2002) put it, political will is “the electricity which energizes the hardware and software of government to work in pursuit of sustainable development” (p. 36), and the energy that pushes policy makers to make that software and hardware more environmentally friendly.

Other factors that hamper the integration of environmental concerns and goals into sectoral policy include conflicts of interest (Lenschow, 2002; Liberatore, 1997; Steurer, 2006) and lack of capacity to plan, finance and implement EPI and coordination efforts (Dalal-Clayton and Bass, 2009; Homeyer, 2007; Liberatore, 1997; Persson, 2004). Liberatore (1997) pointed how the capacity need to implement EPI was not only in terms of administrative resources, but also institutional and technical and scientific. The latter two, however, also imply coordination in themselves to some extent: they can be provided by the environmental department, for instance, or have to be included in the list of indicators and research carried out by governments.

Learning about the risks of unsustainable practices and policies and about the possibilities of win-win solutions has also been considered by many as a major constraint to EPI (Feindt, 2010; Liberatore, 1997; Nilsson and Persson, 2003; Person, 2004). Nilsson and Persson (2003) warns about the difficulty of “across-frame learning”, that is, of learning something that challenges prevailing beliefs, norms and patterns of understanding (p. 340).

Further, studies of federal systems, as is Mexico, find that this organization tends to be conflictive for EPI. However, this may also be an opportunity, if lower tiers of government engage with the challenge of EPI (Jordan and Lenschow, 2010; Wurzel, 2008).

The case of agricultural policy in Mexico is no exception to these findings, and obstacles to coordination detected by officials in *Sagarpa* and *Semarnat* confirm the literature. In this section I will go over the obstacles to coordination mentioned by interviewees.

Sectoral policy

All interviewees mentioned the sectoral organization of governments and the fact that *Sagarpa* and *Semarnat* had different legal mandates as the main obstacle to achieve EPI. As one of the interviewees from *Sagarpa* put it, officials “tend to forget that peasants are the same person for both environmental and agricultural issues, and they do not change their needs and goals according to the ministry that works with them at that moment”.

The sectoral divide was quite evident in the bitter accusations officials in both ministries made of their counterparts. A constant in what interviewees from *Semarnat* said was that *Sagarpa* was overly “productivist”, while in the other direction *Semarnat* was blamed of wanting to see “the forest for the sake of the forest”. An official from *Sagarpa* succinctly summarized the view towards the environmental agency of many of his colleagues: “The only way in which *Semarnat* can justify its existence is by being an obstacle to development”. On the other side, a high-ranking official from *Semarnat* presented the opposite view: “*Sagarpa*’s officials are not doing their job and do not care about food security”, because “they are running down Mexico’s natural capacity” for food production.

Political will and political leverage

All interviewees agreed that political will is a crucial factor to achieve EPI. A problem detected by many was that the political environment in the federal government provided incentives for showing ownership of resources, and not for the pursuit of integral policies “that don’t stand out”. Another official in *Sagarpa* explained that “everybody wants the credit for handing out money”. Other officials also said that this situation was worsened by constant power struggles, in which different actors seek to control clientages. In this situation, to stick to Jordan’s metaphor, the hardware provided by the Law for Sustainable Rural Development has no power to run with and suffers constant peaks and lows in voltage.

Moreover, not only political will but also leverage to surpass pressures is needed. Lobbying by peasant organizations, agri-business or members of Congress linked to the countryside limit the margin of action for sustainable development at the planning stage. A high-ranking official at *Sagarpa* stated that this scenario and the constant bargaining with many actors leads to having an over-labelled budget, programmes with many restrictions and sacrificing some objectives (namely, environmental ones) in order to achieve legal mandates.

The same panorama is reproduced at the micro level when implementing policy. An high-ranking official from the *Comisión Nacional de Áreas Naturales Protegidas* (National Commission for Natural Reserves, *Conanp*) said that trade-offs to be considered in the field are not just between productivity and protection of natural capital, but also between pushing policies and losing support from producers.

Learning about coordination and about sustainable development

Also mentioned as an obstacle was lack of experience with coordination between pars. An official at *Sagarpa*'s that worked for both ministries pointed that the changes the Mexican political system has experienced in the last decade were a crucial factor: "After living for 70 years under a system in which policy was mandated and operated by the president's office, public servants and officials had to learn to coordinate by themselves, without any of them having political or legal authority over the other".

Learning about sustainable development and the importance of environmental provisions was quoted as important as well. An official deeply involved in the design of agricultural programmes at *Sagarpa* pointed that "just five or ten years ago, if you talked about sustainable development no one would understand what you were saying". Most officials in *Sagarpa* shared this perception. A high-ranking official at *Semarnat* considered that this learning process was triggered "by reality: desertification of rural areas, salinization of the water, exhaustion of fishing resources, all played a role in making public officials aware of the need" for more sustainable ways of production.

Other interviewees cited the high rotation of officials both at the federal and municipal tiers of government as another obstacle for the use of mechanisms and application of guidelines for sustainable agriculture. While this may be true for the state and municipal levels, where there is no reelection, the fact remains that many officials staid in office for the whole of Calderón's presidency and had already been at *Sagarpa* and *Semarnat* in Fox's administration.

Federalism

Federalism was considered by officials in *Sagarpa* as a major constraint in their work towards EPI. They highlighted the fact that most of the resources were co-managed with state governments, which more often than not grant the environment very little importance. The greater obstacle they found in the federal organization of government, however, was at the municipal level. A high-ranking official at *Sagarpa* pointed that, on the one hand, "municipal authorities have a greater contact with citizens and a greater knowledge of the territory than state or federal authorities will ever have". On the other, however, their competencies, capacities and work are "quite devaluated".

In the same line, an official in contact with *Sagarpa's* environmental and rural development programmes pointed that the fact that municipal governments last only three years in office, with no re-election, didn't help either. "During the first year they learn, during the second one they effectively govern, and during the last one they are preparing their succession".

Asymmetries and incompatibilities for implementation

Another factor hampering coordination comes at the implementation stage. This occurs on many dimensions, from the registries of beneficiaries of programmes to spatial planning. First, registries of beneficiaries of programs from both agencies are done with conflicting criteria and collating them is virtually impossible. Second, capacities to reach producers are very asymmetric. On the one hand, *Sagarpa's* infrastructure reaches almost every

municipality in the country through its vast network of *Centros de Apoyo al Desarrollo Rural* (Support Centres for Rural Development, *Cader*) and the offices of the Rural Development Districts, when *Semarnat*'s infrastructure is far more limited. On the other, *Semarnat* has a more direct contact than *Sagarpa* with producers in many environmentally sensitive and remote areas. Third, while *Sagarpa* has implemented a federalized system for the distribution of resources, involving state and municipal authorities, *Semarnat* has a very centralized way of working.

Officials from both ministries pointed that establishing common operative mechanisms and a common operative agent on the field would be a solution to this. A high-ranking official from the National Forestry Commission noted that in the Lacandona jungle, in southern Mexico, such an agent is already in place and has been highly effective. This agency is *Conabio's Coordinación General de Corredores Biológicos* (General Biological Corridors Coordination, *CGCB*, previously Mesoamerican Biological Corridor).

The *CGCB* is charged with preserving biological connectivity between several natural reserves through spatial planning and productive reconversion. It gets resources from *Sagarpa* and the National Forestry Commission, among other agencies, and according to its staff even when this agency started "as an experiment" it has won "legitimacy" and will be growing in the following years.

In recent years, a new agency that fulfils the same duties, but in Jalisco, in Western Mexico, was established. It is the *Junta Intermunicipal del Río Ayuquila* (Intermunicipal Board of the Ayuquila River, *JIRA*). This is a public entity with legal personality and resources, integrated by the ten municipalities in the upper Ayuquila River basin. It gets funding from the state government and from national and international donations, and coordinates environmental policies by the municipalities that constitute it, orchestrates the execution of environmental and rural federal, state and municipal programmes in its territory, and generates its own policies in the matter (Graf et. al. 2009).

V. Discussion

Mexico has taken several steps towards environmental policy integration, many of the most prominent in the agricultural sector. However, rather than alter the conception and procedure of policy making and goal-setting, they have only opened up space for public servants with the will to transform the way government acts in this area.

To stick to Jordan's (2002) metaphor, these measures have only provided an alternative electrical wiring and software, leaving the question of using it or not subject to political will. In this sense, EPI measures in Mexico do not alter the core functioning of government. Constitutional and other legal mandates to make development sustainable fail to include specific obligations of public officials. The inclusion of sustainability and of EPI as axes of government action in previous National Development Plans did not translate into an integral and overarching policy mandate. *Semarnat's* budget, leverage and capacity remain very limited, and the implementation of its sectoral programme remains subject to the disposition of other departments.

Many critical instruments for integrating environmental and sectoral policies are still absent, and judging by the current political environment, this will remain the case. For the last several years, the attention of the federal government and Congress has been concentrated in fighting crime and combating poverty through health and education programs, and sustainability concerns occupy a very low place in the list of priorities. In the 2010 budget, for example, 75% of resources destined for *Semarnat* were labeled for water management and infrastructure. This left the environmental agency with just over a billion dollars for conservation of forests, management of natural reserves, preservation of biodiversity, and actions for cross-sectoral integration. This amount is the equivalent of a quarter of what was destined in that same year for national defence, a twentieth of the money allocated for education, an eighth of resources labeled for social development, and a sixth of what was destined for agriculture, livestock and fisheries (SHCP, 2009).

The situation of EPI instruments in agricultural policy is similar. For instance, it took a decade to start working to fulfil the aims and mandates of the LSRD

and to start work to make the Special Concurrent Programme for Sustainable Rural Development effectively concurrent. However, several officials in *Sagarpa* appeared determined to change this situation. The impact of their efforts in environmental quality is yet to be seen, as is whether they succeed in transforming what they have started into a true state policy. How *Semarnat* decides to aid these efforts will prove crucial to successfully integrate policies by the two agencies.

Political timing and ability, as well as the choice of instruments for coordination, will also be fundamental. So far, mismatches in strategies and capacities, and an old mistrust between officials in both ministries, have hampered some efforts to achieve EPI. Gathering the will to surpass these obstacles and to work together towards the apparently common aim of sustainable development remains critical. If *Sagarpa* and *Semarnat* do not find better ways to work together in 'greening' agricultural policy, great windows of opportunity will be lost.

For example, up to this point EPI measures have only affected a few aspects of policy making, and not the overall process. As Persson (2007) points, "integration can take place at three different stages in the policy making process: integration of objectives in policy formulation, translation into policy measures, and implementation by government agencies and other actors" (pp. 28-29). In Mexico, and specifically in the agricultural sector, only the first two have been tackled, mainly through the application of the LSRD, cooperation between *Semarnat* and *Sagarpa* and the greening of some agricultural programmes. The implementation stage remains to be fully integrated, even when it might be easier to do this both politically and administratively.

Going past this point is not easy. As Lerda et. al. (2003) found, "cooperation for coordination is not a costless activity, even when motivation for it may be purely altruistic" (p. 31). Indeed, achieving an integrated policy and coordinated public intervention requires investments in time and resources, as well as new ways of doing things, new policy arrangements and new "core beliefs" to guide government action (see Feindt, 2010).

Up to now, efforts to achieve the integration of environmental policy integration in the agricultural realm have been done in a symbolic and disordered manner, or just at the field level, with some success. The *Agenda de Transversalidad* did achieve several of its goals, and there is a certain consensus about the possibilities of agents on the field that carry out spatial planning and implement policies from both *Sagarpa* and *Semarnat*. The *CGCB* and the *JIRA* have at the very least slowed the pace of deforestation, according to several accounts, while achieving productivity and welfare objectives set out by agricultural authorities.

This, however, is not enough to achieve an environmentally sound agricultural policy. Agents in the field may attain some success in ordering the implementation of policies generated by central or state governments, but they can do little if those policies are not right. Correcting programmes that foster unsustainable practices and setting out policies that incentivize ways of production that not only preserve, but also restore the environment, remains a crucial task. As Nunan et. al. (2012) point out, “a combination of pressure for compliance from the centre and support in the field may help build a coalition in favour of mainstreaming that would cut across vertical sectoral boundaries and horizontal hierarchical levels” (p. 274).

This can be achieved by the design of joint programmes from *Sagarpa* and *Semarnat* that can be implemented by a trust funded by both agencies, following rules previously agreed upon by them. Common operating rules, joint projects for environmentally sensitive areas or for the management of designated resources, and spatial planning performed in concurrence of both agencies are other ways to advance towards EPI.

All of this, however, can only be done if there is political will from both agencies to work together. The possibilities are vast, and the legal framework allows for great flexibility. Whether officials from both agencies decide to seek this integration and thus preserve the environment and maintain and improve productivity in the countryside, remains the most important question.

References

- Alix-García, J. (2007) *A spatial analysis of common property deforestation*, Journal of Environmental Economics and Management (53): 141-157
- Buller, H. (2010), *Integrating EU environmental and agricultural policy*, in Lenschow, A. (ed), *Environmental Policy Integration: greening sectoral policies in Europe*, Earthscan: London
- Cartagena-Ticona, R. P, M.R. Parra-Vázquez, A. Burguete-Cal y Mayor, y A. López-Meza (2005), *Participación social y toma de decisiones en los consejos municipales de desarrollo rural sustentable en Los Altos de Chiapas*, Gestión Regional y Local (14): 341-402, Mexico
- CDDHCU (2001), *Ley de desarrollo rural sustentable*, Cámara de Diputados del Honorable Congreso de la Unión, México
- CDDHCU (2003), *Ley de planeación*, Cámara de Diputados del Honorable Congreso de la Unión, México
- CDDHCU (2009), *Ley orgánica de la Administración Pública Federal*, Cámara de Diputados del Honorable Congreso de la Unión, México
- CDDHCU (2010), *Constitución Política de los Estados Unidos Mexicanos*, Cámara de Diputados del Honorable Congreso de la Unión, México
- CDDHCU (2012), *Ley general de cambio climático*, Cámara de Diputados del Honorable Congreso de la Unión, México
- Chapela, G. and Álvarez López, G. M. (2007), *Armonización de programas para el desarrollo rural y manejo sustentable de tierras*, Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria, México
- Collier, U. (1994), *Energy and environment in the European Union*, Avebury, Hants, UK, and Vermont, USA
- Dalal-Clayton, B. and Bass, S. (2009), *The challenges of environmental mainstreaming: experience of integrating environment into development institutions and decisions*, International Institute for Environment and Development: London
- Davenport, J. and Davenport, J. (2006), *The impact of tourism and personal leisure transport on coastal environments: a review*, Estuarine, Coastal and Shelf Science (67): 280-292
- Eckerberg, K., Nilsson, M., Gerger Swartling, Å. And Söderberg, C. (2007), *Institutional analysis of energy and agriculture*, in Nilsson, M. and Eckerberg, K., *Environmental policy integration in practice*, Earthscan: London
- FAO (2010), *Análisis de los instrumentos de política agropecuaria, rural y pesquera en México*, Organización de las Naciones Unidas para la Agricultura y la Alimentación, México
- Feindt, P. H. (2010), *Policy learning and environmental policy integration in the common agricultural policy, 1973-2003*, Public Administration (88-2): 296-314
- García López, T. (2007), *La Constitución Mexicana y los principios rectores del derecho ambiental*, in Rabasa, E. O., *La Constitución y el medio ambiente*, UNAM-IIJ, México
- Graf Montero, S., Santana Castellón, E., Pizano Portillo, A. y Zamora, A. (2009), *Gobernanza para el desarrollo territorial en el contexto de manejo de cuencas: el caso del río Ayuquila*, in Padilla López, J. T., Graf Montero, S. y Santana Castellón, E., *Alternativas para una nueva gobernanza ambiental: intermunicipalidad y desarrollo territorial*, Universidad de Guadalajara, México.
- Herrera-Tapia, F., et. al. (2009), *La política de desarrollo rural en México y el cambio institucional 2000-2006*, Economía, Sociedad y Territorio (9-29): 89-117, Mexico
- Homeyer, I. (2007), *Environmental policy integration at national level – a state-of-the-art report*, EPIGOV papers 15, Ecologic – Institute for International and European Environmental Policy: Berlin

- ICSRD (2007), *Nuevo programa especial concurrente para el desarrollo rural sustentable*, Comisión Intersecretarial para el Desarrollo Rural Sustentable, Mexico
- Jacob, K., and Volkery, A., (2004) *Institutions and instruments for government self-regulation: environmental policy integration in a cross-country perspective*, Journal of comparative policy analysis (6-3): 291-309
- Jacob, K., Volkery, A. and Lenschow, A. (2008), *Instruments for environmental integration in 30 OECD countries*, in Jordan, A. and Lenschow, *Innovation in environmental policy?*, Elgar: Cheltenham
- Jordan, A. (2002), *Efficient hardware and light green software: EPI in the United Kingdom*, in Lenschow, A. (ed), *Environmental Policy Integration: greening sectoral policies in Europe*, Earthscan: London
- Jordan, A. and Lenschow, A. (2008), *Integrating the environment for sustainable development*, in Jordan, A. and Lenschow, A. (eds.), *Innovation in environmental policy?*, Elgar: Cheltenham
- Jordan, A. and Lenschow, A. (2010), *Environmental policy integration: a state of the art review*, Environmental Policy and Governance (20): 147-158
- Key, N., Muñoz Piña, C., de Janvry, A. and Sadoulet, E. (1998), *Social and environmental consequences of the Mexican reforms: common pool resources in the ejido sector*, University of California – Berkeley, Department of Agricultural and Resource Economics, Berkeley
- Lafferty, W. (2002), *Adapting government practice to the goals of sustainable development*, expert report for OECD seminar *Improving Governance for Sustainable Development*, held 22–23 November 2001
- Lafferty, W. and Hovden, E., (2003), *Environmental Policy Integration: towards an analytical framework*, Environmental Politics (12-3): 1-22
- Lafferty, W. and Knudsen, J. (2007), *The issue of 'balance' and trade-offs in environmental policy integration: how will we know EPI when we see it?*, EPIGOV Paper No. 11, Ecologic – Institute for International and European Environmental Policy: Berlin
- Legg, W. (2010), *Payments for agri-environmental services: an OECD perspective*, in Goetz, S., and Brouwer, F., *New perspectives on agri-environmental policies: a multidisciplinary and transatlantic approach*, Routledge, Abingdon, UK, and New York, USA
- Lenschow, A. (2002), *Greening the European Union*, in Lenschow, A. (ed), *Environmental Policy Integration: greening sectoral policies in Europe*, Earthscan: London
- Lenschow, A. (2007), *The modes of EPI in theory and practice*, EPIGOV Paper 10, Ecologic-Institute for International and European Environmental Policy, Berlin
- Liberatore, A. (1997), *The integration of sustainable development objectives into EU policy making*, in Baker, S., et. al., *The politics of sustainable development*, Routledge: London
- Lerda, J. C., Acquatella, J. and Gómez, J. J. (2003), *Integración, coherencia y coordinación de políticas sectoriales (reflexiones para el caso de las políticas fiscal y ambiental)*, Conferencia Económica para América Latina, Serie Medio Ambiente y Desarrollo 56
- Mas, J. F., Velázquez, A., Reyes Díaz-Gallegos, J., Mayorga Saucedo, R., Alcántara, C., Bocco, G., Castro, R., Fernández, T. and Pérez Vega, A. (2004), *Assessing land use/cover changes: a nationwide multivariate spatial database for Mexico*, International Journal of Applied Earth Observation and Geoinformation (5): 249-261
- Meadowcroft, J. (2007), *National sustainable development strategies: features, challenges and reflexivity*, European Environment (17): 152-163
- Metcalfe, L. (1994), *International policy coordination and public management reform*, International Review of Administrative Studies (60-2): 271-290
- NDP 1995-2000, *Plan Nacional de Desarrollo*, Presidency of Ernesto Zedillo, Government of Mexico, Mexico

- NDP 2001-2006, *Plan Nacional de Desarrollo*, Presidency of Vicente Fox, Government of Mexico, Mexico
- NDP 2007-2012, *Plan Nacional de Desarrollo*, Presidency of Felipe Calderón, Government of Mexico, Mexico
- Nilsson, M., and Persson, Å. (2003), *Framework for analysing environmental policy integration*, *Journal of Environmental Policy and Planning* (5-4): 333-359
- Nollkaemper, A. (2002), *Three conceptions of the integration principle in international environmental law*, in Lenschow, A. (ed), *Environmental Policy Integration: greening sectoral policies in Europe*, Earthscan: London
- Nunan, F., Campbell, A. and Foster, E. (2012), *Environmental mainstreaming: the organisational challenges of policy integration*, *Public Administration and Development* (32): 262-277
- OECD (1993), *Agricultural and environmental policy integration: recent progress and new directions*, Organization for Economic Cooperation and Development, Paris
- OECD (2004), *Agriculture and the Environment: lessons learned from a decade of OECD work*, Organization for Economic Cooperation and Development, Paris
- OECD (2008), *Environmental performance of agriculture in OECD countries since 1990*, Organization for Economic Cooperation and Development, Paris
- OECD (2010), *Environmental cross compliance in agriculture*, Organization for Economic Cooperation and Development, Paris
- Persson, Å. (2004), *Environmental policy integration: an introduction*, PINTS Background Paper, SEI, Stockholm
- Persson, Å. (2007), *Different perspectives on EPI*, in Nilsson, M. and Eckerberg, K., *Environmental policy integration in practice*, Earthscan: London
- Peters, B. G. (1998), *Managing horizontal government: the politics of co-ordination*, *Public Administration* (76): 295-311
- Sagarpa (2007), *Programa sectorial de desarrollo agropecuario y pesquero 2007-2012*, Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, México
- Sagarpa (2009), *Reglas de operación*, *Diario Oficial de la Federación* (29/XII/2009), Mexico
- Sagarpa (2010), *Agenda de transversalidad de políticas públicas para el desarrollo rural sustentable*, Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, México
- Schmook, B. and Vance, C. (2009), *Agricultural policy, market barriers, and deforestation: the case of Mexico's southern Yucatán*, *World Development* (37-5): 1015-1025
- Sectur (2007), *Programa setorial de turismo 2007-2012*, Secretaría de Turismo, México
- Semarnat (2007), *Programa sectorial de medio ambiente y recursos naturales*, *Diario Oficial de la Federación* (28/I/2008), Mexico
- Semarnat (2008), *Logros de la instrumentación de la estrategia de transversalidad de políticas públicas para el desarrollo sustentable en la Administración Pública Federal en 2008*, Secretaría de Medio Ambiente y Recursos Naturales, Mexico
- Semarnat (2009), *Logros de la instrumentación de la estrategia de transversalidad de políticas públicas para el desarrollo sustentable en la Administración Pública Federal en 2009*, Secretaría de Medio Ambiente y Recursos Naturales, Mexico
- Sener (2007), *Programa sectorial de energía 2007-2012*, Secretaría de Energía, México
- SHCP (2009), *Presupuesto de egresos de la Federación*, *Diario Oficial de la Federación* (7/XII/2009), Mexico
- Smith, P., D. Martino, Z. Cai, D. Gwary, H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, B. Scholes, O. Sirotenko (2007), *Agriculture* In B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds), *Climate Change 2007: Mitigation. Contribution of Working Group*

III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK, and New York, USA

Steurer, R. (2007), *From government strategies to strategic public management: an exploratory outlook on the pursuit of cross-sectoral policy integration*, *European Environment* (17): 201-214

Sunyer Martín, P., and Peña del Valle Isla, A. E., (2008), *Quince años de desarrollo sustentable en México*, Diez años de cambios en el mundo, en la geografía y en las ciencias sociales, 1999-2008, Actas del X Coloquio Internacional de Geocrítica, Universitat de Barcelona, 26-30 de mayo de 2008

Underdal, A. (1980), *Integrated marine policy: What? Why? How?*, *Marine Policy* (July), 169-180

Volkery, A., Swanson, D., Jacob, K., Bregha, F. (2006), *Coordination, challenges and innovations in 19 sustainable development strategies*, *World Development* (34): 2047-2063

von Haaren, C. and Bills, N. (2010), *Comparing agri-environmental programs in the United States and the EU*, in Goetz, S., and Brouwer, F, *New perspectives on agri-environmental policies: a multidisciplinary and transatlantic approach*, Routledge, Abingdon, UK, and New York, USA

WCED (1987), *Our common future*, Oxford University Press, Oxford and New York

Winters, P. and Davis, B. (2009), *Designing a programme to support smallholder agriculture in Mexico: lessons from Procampo and Oportunidades*, *Development Policy Review* (27-5): 617-642

Wurzel, R. K. (2008), *Germany*, in Jordan, A. and Lenschow, *Innovation in environmental policy?*, Elgar: Cheltenham

Yúnez Naude, A., (2006), *Liberalización y reformas al agro: lecciones de México*, *Economía Agraria y Recursos Naturales* (6-12): 47-67