TOWARDS SUSTAINABILITY BY NEGOTIATED AGREEMENTS BETWEEN INDUSTRIAL SECTORS AND GOVERNMENT: THE MEXICAN CASE

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Abstract

In this paper we first describe Mexican environmental policy and the present role of voluntary approaches therein. In despite of different kind of efforts at this regard, it seems that still ISO 14000 remains the most commonly used format for voluntary efforts by companies in Mexico, there is also a national scheme “Industria Limpia”, or Clean Industry, that has more and more participation, especially among the bigger companies. Though voluntary, participation is by no means non-committal. An elaborate auditing program belongs to the scheme. This shows that there is some openness in Mexico regarding the options for non-regulatory environmental policy.

In the second part of the paper we report on the basis of a survey among 16 Mexican business leaders that have responsibilities in the environmental management of their companies. None of them evaluated Mexican environmental policy as sufficient. Implementation is insufficient and several also think instrumentation is inapt. In those cases especially economic policy instruments are seen as a necessary addition, while also negotiated agreements are positively viewed. To improve implementation negotiated agreements as a framework to guide implementation is widely supported. Expectations regarding ambition, efficiency gains and positive side effects of the respondents look quite realistic giving the practical results as assessed in a study on the Dutch experience with negotiated agreements. The feasibility and success of negotiated agreements is in theoretical and empirical literature explained by four factors. The respondents assess these factors as quite favorable in the situation of their sectors of industry in Mexico. More research is necessary to gain further insight into the options and conditions for applying negotiated agreements in the Mexican context.

1. Introduction

The Mexican environmental situation has improved in the last decade thanks to the implementation of several regulatory instruments and also of some economical incentives for those companies certified as “clean industry”, mostly those considered “big size”. It is also important to mention that the “big” ones have mostly already a good quality environmental system implemented for a long time whit environmental and social goals that originate from their international corporation’s head offices. From this point of view the enterprise culture and financial situation seem to be key factors for environmental success, because those big companies are able to invest in environment control and pollution prevention systems. This was also reported by Medina in 2003 for the chemical companies in the context of Corporate Voluntary Environmental Initiatives (VEI) in Mexico.

On the other hand, an important number of small and medium size enterprises remain without this recognition, because they can not comply with the legal requirements established by the environmental authorities. Some of their problems involve the perception of the complex environmental regulation and the unclear distribution of responsibilities among the different governmental levels. As a consequence the enterprise does not know directly its rights and obligations facing the local, state and federal governments in terms of environment regulation.

Therefore, the implementation and verification of environmental quality standards misses transparency. From different studies, it has been shown that trust and communication have an important impact on the transparency of the process (Bressers and de Bruijn, 2005a). Those factors might be positively influenced by a voluntary program as “clean industry” that might have a “snow ball effect” in the industrial sector.

The research in this paper will focus on the evaluation of such voluntary approaches in the Mexican context. Voluntary approaches get more and more attention, also outside the European framework where they are most widely spread (e.g. De Bruijn and Norberg-Bohm 2003). Recently in two subsequent issues *Policy Studies Journal* devoted no less than ten articles to this subject, in symposia edited by DeLeon and Rivera (2007, 2008). Among the policy instruments classified as voluntary ones, “negotiated agreements” have a special place, since they are what the name suggests: not entirely voluntary, but the result of real negotiations. The negotiations often concentrate on the share a certain sector of industry will take in realizing the countries’ environmental objectives. Negotiated agreements between governments and industrial sectors have had a very important role in the Dutch environmental policy and European environmental policy in general (e.g. Carraro and Lévêque 1999, Croci 2005, De Clercq 2002, Delmas and Ter Laak 2001, EEA 1997, Glasbergen 1998, Jordan, Wurzel and Zito 2003, Mol a/o. 2000, OECD 2003, Orts and Deketelaere 2001, Rennings et. al. 1997, Ten Brink 2002). In this paper we will also review their feasibility in the Mexican context, based on interviews and survey methods.

In this paper the following section 2 will deal with the context of environmental management in Mexico, both by government and industry. Section 3 examines the present experience with voluntary instruments in Mexico, like the “Industria Limpia” (Clean Industry) program. Section 4 presents an assessment of the attitudes of a number

of Mexican business leaders with environmental responsibilities regarding the use of negotiated agreements. The last section 5 contains a short summary and conclusions.

2. Environmental management in Mexico

2.1 Environmental policy

SEMARNAT, the Ministry of the Environment and Natural Resources, has the main role regarding designing and implementation of environment protection rules. PROFEPA (Federal Attorney General for Environmental Protection) is the enforcement branch of SEMARNAT, charged with the supervision of the implementation of environmental law. Actually, with the creation in 1992 of PROFEPA the modern environmental policy taking place. PROFEPA's first focus seeks to solve the problem of a lack of regulation for highly risky activities in Mexico. The accident in Guadalajara brought a higher awareness to the authorities. At the beginning, auditing was handled as a "voluntary-obligatory" initiative with a PROFEPA "punisher role" against the business sector. In the same year but in a broader framework, the summits of Rio de Janeiro brought an important influence and impact to Mexican environment policy. In 1994, some other international organisations offered support for enhancement of the environmental policy, such as the consultancy initiative GEMI. Further more, the Environmental Cooperation Commission (Canada-USA-Mexico) (CCA) was created in the same year to face the environmental regional situation.

As one of the results of the international pressure inside the business sector, in 1995 the environmental policy switched from the command-control strategies to a more preventive approach. In terms of regulatory instruments, the coercive ones has been replaced or complemented with instruments of environmental management where the use of voluntary instruments has been enhanced, as well. Along this voluntary approach, more suitable economical instruments, information transparency and a growing social participation have been part of the preventive approach.

The modernization of the regulatory scheme relies in one hand on the modernization of the environmental regulation and in the other hand in a new scheme of direct regulation which was organised in the so called Industrial Integrated System of Regulation and Environmental Management (SIRG in Spanish version).

The Mexican environmental regulatory scheme has a history of barely two decades, in spite that in the article 27 of the Constitution of 1917, the bases for the environmental law were already described. This article defined the utilization of the natural resources only on purposes related to the interest of the nation. Nevertheless, the environmental matters became clearer expressed from the 70's years through the "Environmental Protection Office" which reported directly to the "Secretaria de Salubridad y Asistencia" (Health Ministry). This political structure was legally framed in 1971 under the Federal Law to Prevent and Control the Environmental Pollution. (http://www.ine.gob.mx/ueajei/publicaciones/libros/5/marcoregu.html)

In January 28th of 1988, the first publication of the "general law of ecological equilibrium and environmental protection" (Ley General del Equilibrio Ecológico y Protección al Ambiente - LGEEPA – in Spanish) was issued (1). In fact, the LGEEPA

has been submitted in different periods to a revision process by a Mexican federal regulatory commission. The LGEEPA contains the regulations for the main environmental issues: water, air, soil, noise, waste management among others. The implementation of LGEEPA needs other supporting legal instruments like more specific laws, regulations and official standards. In 19 of 32 Mexican states, also state environmental laws were published, adding to the regional regulative framework. It has been also observed during the environmental protection implementation, that in case of lack of normative for a specific topic, the LGEEPA allows the application of international standards and procedures.

In comparison among the regional, national and international environmental regulations, it has been shown by different voluntary strategies that the international ones represents the most well accepted by the industrial sector. Acceptance by industry, by the way, is one of the highest problems reported during auditing activities, because their representatives seek always the win-win strategy (Porter and Van Der Linde, 1995) by which companies are able simultaneously to improve their environmental record while reducing costs and/or increasing productivity and competitiveness. This is not very often likely to be the case for the medium and small companies because they face economic difficulties and clearly they get a quick return from the implementation of voluntary environmental programmes.

In another hand, the marketing demands for the international competitiveness associate the environmental protection policy to the “sustainable development” aspects, and gradually sustainability matters have been, by consequence, incorporated in the legal frame. In some countries sustainability concerns are related to self-regulatory systems in which prevention is very strongly recommended and undertaken. Therefore e consider necessary to discuss in the next paragraph the Mexican circumstances at this regard.

2.2 Mexican industry and sustainability

Nowadays sustainable development is a rising issue in the Mexican debate, but its proponents are still perceived to have a weak empowerment. Some sectors do not even realize the benefits and the need of adopting a sustainable development approach as an umbrella concept for decision making. Besides that, it is clear that partnerships are a key factor to achieve the sustainability goals. At present in Mexico, the interaction between non governmental organizations, governments and/or businesses has been improved but without the proper tools and scopes to achieve sustainability. Some initiatives are based on the good will of the participants, while others have a monetary basis. Some partnerships lack a comprehensive framework to maximize each partner’s knowledge and value return. Some other partnerships fail because they do not meet the needs and perspectives of each partner involved. Therefore, many partnerships need to be reoriented and better organized. This situation is related to the internal communication strategy of the enterprise, but also to the relation of their public relationship office with the authorities. Enterprise groups, like industrial chambers, might influence the cooperation by reducing the number of actors participating during the negotiations.

A Mexican industrial chamber called COPARMEX has classified the Mexican industry with different labels according to some indicators of sustainability orientation, as shown in table 1.

Table 1: Types of enterprises according to their level of sustainability orientation

CORPORATIVE	UNDER ACCOMPLISHMENT	ACCOMPLISHMENT	ABOVE ACCOMPLISHMENT	SUSTAINABILITY
Corporate spirit Environment interaction	**Inactive**	**Reactive**	**Responsibility**	**Proactive**
INDICATORS	**GENERAL** •Dictatorial administration •Weak consumer interaction •Destructive behaviour •Low moral •"No matter" attitude **ENVIRONMENTAL** •Poor disposition •Quality standards exceeded •Problems ignored	**GENERAL** •Hierarchical administration •Unconnected departments **ENVIRONMENTAL** • Legal and continuously accomplishment •Negotiation efforts and presence in decision maker groups •Other departments not involved	**GENERAL** •Administrative participation •Consumer feedback **ENVIRONMENTAL** • No constant efforts •Environmental management •Marketing department •Communication with concerned ecological organizations	**GENERAL** •Institutional Ethics •Responsibility corporative and authority •Organization in function of the consumer •Costumer and employer feedback •Leadership in multidisciplinary organizations **ENVIRONMENTAL** •Strategically long term planning •All departments involved •Strong communication program

The industrial chambers have a crucial role in the interaction process needed for sustainability. Even more so, if one takes into consideration that at the beginning of the 21st century there were 361,000 manufacturing businesses registered in Mexico, of which 99.2% are corresponding to micro, small and medium industries (table 2). At the moment, one confronts many difficulties when negotiating individually, as one industrial representative, with all the government levels. The environmental accomplishments are also hard to verify. At the present pace, even for the big companies there would be 10 years required to carry out the environmental audits, considering the capacity of the competent authorities. The chance of a small company to get an audit is 1:700.

Table 2: Distribution of the Mexican enterprise size (COPARMEX, 2005)

Denomination According the industry size	Number of employees	Distribution enterprise size in %	(National Environmental Audit program) Record of enterprises 2004
Micro	0 - 15	92,8	483
Small	16 - 100	5,4	169
Medium	101 - 250	1,0	196
Big	> 250	0,8	285
	Total number of enterprises	361000	1133

In order to encourage the businesses to take care for the environment, the Ministry of the Environment has developed a series of programs, such as that of "self regulation" and that of "clean industry" (Industria Limpia), in which the industry participates together with the academic and government sectors for the benefit of the local environment. Nevertheless, the number of industries recorded in the "self regulation" program has shown a very slow progress of 183 businesses per year in the period of 2000-2004. Therefore, according to COPARMEX sources, it would require about 180 years to have completed the "self regulation" system, if the participation rate remains the same. Another kind of strategies should be added to this kind of voluntary programs.

The industrial chambers, understanding this problematic, promote sustainability efforts in industries where competitive advantages are observed. Those advantages arise as consumers seek the brands of products which have a green image, while, at the same time, those products improve significantly their "aggregate value" themselves. Strategies like this have been supported by defining guidelines helping to make the decisions on environmental management. Those fit and support the features of international system quality systems, such as ISO 14000, and concepts like business social responsibility, among others.

An integral way to evaluate the degree of sustainability in Mexico is through the "Dow Jones Sustainability Index", which initiated in September 1999 and whose objective is to monitor the performance of the company leaders in terms of corporate sustainability. As a consequence 200 businesses were selected (10% of the firms' leaders in 73 industrial groups in the 33 countries covered by the index). Subsequently they mention some of the advantages of sustainable development, which can be measured with the sustainability indicators:

- Today the environment is a strategic issue
- Continuity of the business
- Competitiveness
- Creation, participation and expansion of markets
- Technological innovation
- Strengthening of the brand image
- Shareholders prefer sustainable businesses
- The sustainability problem possesses economic and social repercussions (efficient use and sustainable of resources)
- Better positioning given the taste of the consumer.

To summarize, the sustainability issue in the Mexican industry is finding an opportunity moment, specially now, when the natural resources are not yet constraining development, but is seen inhibited by economic, political, and social factors. In December 2007, three interviews were held with government decision makers and representatives of industrial chambers. Their remarks match perfectly with this vision of sustainability. They highlighted the need to include more economical instruments in the environmental protection policies. Another suggestion was to involve stakeholders with "champion enterprises" in the corporate environmental policies. One of the results expected might be the reduction of environmental protection costs in the small companies, because they can exchange expertise all along the supply chain. This kind of mutual support could be part of "negotiated agreements" (covenant) between industry and government.

3. Existing voluntary programs stressing on “Clean Industry program”

This section is based on a combination of different sources of information, including from industrial groups like IGEMI (Global Environmental Management Initiative) and some official organizations.

There has already been some history in the use of voluntary and negotiated measures in Mexican environmental policy. Already in 1995 the covenant of “Environmental Protection and Business Competitiveness” was signed among the confederation of industrial chambers (Concamin), the Ministry of the Environment and Natural Resources SEMARNAT and the Ministry of Economy and Finance (Secofi). The first covenant on environmental self-regulation was also signed that year. A year later 14 covenants on environmental self-regulation were signed. The same year saw the arising of the “Integrated System of Regulation and Environmental Management” for the Industry (SIRG) with three fundamental components:

- Unique Environmental license (LAU);
- Register of Annual Operation (COA);
- Voluntary Programs of Management (PGV’s).

At present, the LAU fails to consolidate entirely due to the slowness in the changes required. The COA does not bring reliable information. The PVG's failed when the government distrusted the companies.

After in 1996 the ISO 14001 standard was born, the same year the first certification of an industrial process inside a Mexican business was announced (“Altos Hornos de Mexico”, a metal-mechanical industry). In resolution 97/02 the federal agency PROFEPA tried to utilize the Environmental Cooperation Commission (Canada-USA-Mexico) (CCA) as an international shield to impose its 10 elements for "environmental management" over those of ISO 14001. In 1999 PROFEPA proposed the National System of Compliance Indicators for Environmental regulations (SICNA). The application of this system was considered pseudo-voluntary, but the industry reverted the tendency.

From 2000 onwards IGEMI (Global Environmental Management Initiative) is the first business organization in delivering voluntarily the RETC (Record of emissions of toxic pollutants). This is an obligatory procedure for the industry. It also signs the first covenant on environmental self-supervising. IGEMI launches its first tool of self-supervising. A year later IGEMI started its first project with suppliers. The next year 2002 IGEMI proposed the creation of recognition for the “Environmental excellence”. PROFEPA took the idea and landed it. This would become the “Industria Limpia” program. In 2004 the first recognition to “environmental excellence” is delivered by the Mexican president, carrying it to an upper level.

In 2005 CCA, IGEMI, PROFEPA, SEMARNAT, CONCAMIN and the government of Queretaro all together launched a project of “Green Competitive Chains” with suppliers. At present, the project is on its third generation in the pilot phase. The following industries have participated: Bristol-Myers Squibb (2 times); you Hang you Palmolive (2 times); Janssen-Cilag (1 time); Jumex (2 times); Model Group (1 time); Henkel (1 time); Nestlé (1 time); Factory of Soap the Crown (1 time). Three of them even received fiscal incentives in Mexico City (Colgate-Palmolive and Bristol-Myers Squibb, and

somewhat later the Model Group). The issue of adding fiscal or other economic incentives to voluntary schemes is still a "hot topic" for the industry.

The "Industria Limpia" (Clean Industry) program is an interesting voluntary scheme that invites industry to enroll and accept high standards of environmental responsibility. This program is based on different elements:

- International quality environmental standards;
- Good engineered practices;
- Regulation ad hoc by sector;
- Eco-efficiency.

As result of the application of this program, most of the industries regulated by the federal authorities benefit the economic incentives. The percentage covered in 2007 for the industrial sector under 'federal' supervision is shown here below.

100% AUTOMOBILE SECTOR
100% CEMENT INDUSTRY
100% BEER PRODUCTION
100% GLASS INDUSTRY
97% CAR BATERIES PRODUCTION
90% DETERGENTS PRODUCTION
95% STILL PRODUTION
60% PHARMACEUTIC PRODUCTION
95% PRIVATE ADMINISTRATION OF AIRPORTS

Despite of this important progress, there are still a very large number of industries without "clean industry" recognition. In table 3, it is possible to observe how the "iso14000 certificate" remains the prime choice of the Mexican industry in comparison with the federal program of "clean industry".

Table 3 Number of industries with Mexican and International certifications (both voluntary)

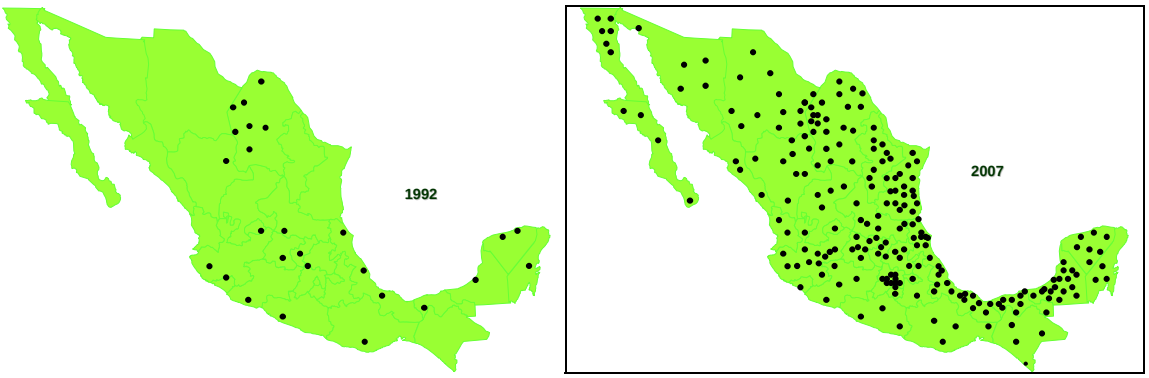
Year	No. of industries with "Clean Industry" Certification	No. of industries with "Iso14000" Certification
1997	11	886
1999	63	1345
2002	369	2212

Even though the number of enterprises subscribed to the "Environmental Audits National Programme" (PNAA), in 2006 has increased much since 2000 (including "Clean industry" and "Tourist Environmental Quality" certifications), the proportion of industries certified is still small compared with the total number of industries registered under the COPARMEX index.

But from the PROFEPA's point of view, the PNAA has become more successful in the last years than ever since its creation in 1992. Figure 1 shows the locations of

enterprises subscribed to the PNAA in 1992 and 2007 respectively. These images were presented during the 2007 GIN conference in Mexico by Raul Tornel, Director of the National Environmental Audits Office.

Figure 1: Locations of enterprises in PNAA (PROFEPA) in 1992 and 2007



In order to increase the industrial participation, firstly PROFEPA analysed the factors that restrain acceptance. Some of those factors are mentioned here:

- Wake legal framework to offer enough guaranties;
- Mistrust between industry and government sectors;
- The advantages of the program are not so evident for the users;
- Long procedure for the certification.

As a second step PROFEPA authorities take measurements to deal with those factors. For instance a new "environmental auditory regulation" and new "official standards" were recently published in 2007. PROFEPA also changed the way of verification of the environmental control inside the industry. Since 2007 PROFEPA uses different approaches in accordance with the type of collaboration promoted. These are named "geographical", "integral" and "sectoral". The general goal with these different approaches is to enhance the confidence in the PNAA in the users' opinion, creating a "domino effect". In such way, trust between industry and government might be improved.

In the *geographical* approach, PROFEPA's goal is to incorporate 80% of the industries located on industrial parks or industrial areas. Certified industries should involve other industries located in the same physical area.
The *integral* approach consists of including all the industries involved (suppliers, distributors and costumers) in a "production chain" from one industry already certified.
The *sectoral* approach intends to attract all the industries producing a specific product like cement, cars, or beers.

A larger communication campaign regarding PNAA has been started with the purpose to communicate its accompanying incentives in a simpler way. Some of those advantages are mentioned here:

- Special rate of depreciation for the new equipment;
- Better value of the company in the "index market";

- Receiving Bank Credits easier due to the environmental accomplishments;
- The industry can declare the inexistence of environmental passives, like areas with polluted soil. This excludes the industry from paying the cleaning of this kind of pollution during the first period of its declaration. But they have to include its cleaning up as a part of the "action plan".

Besides those advantages, the direct benefits for the industry gained are:

- Improvement of its public image;
- Clean Industry Certificate can be used within the marketing strategies;
- The industry can participate on the Clean Development Mechanisms programs;
- Obtaining cheaper risks insurance;
- Reduction on the inspection costs.

Those are the main benefits for the industry when they subscribe to the Clean Industry program (PNAA).

As mentioned, one of the low participation elements in the PNAA is the perception that it is a complex procedure to receive the "Clean industry certification". Therefore we will describe this procedure in this document.

Procedure of the auditing program (PNAA - "Clean Industry")
The auditing program procedure consists of three stages[1]:
A) Planning the auditory
Three activities comprise this point: selection of an environmental auditor (from an official list); deliverance to PROFEPA of the auditing plan; official registration to the PNAA.
B) Executing the auditory
This phase is divided on 3 elements as well: start of auditing; report of auditing; preparation of the action plan for those aspects to improve in the industry.
C) Post auditory
This is the most important period in terms of negotiation and commitments. It is described in 4 aspects: accord on the action plan with formal signing of "accomplishment agreement"; monitoring of the action plan; ending of the action plan; official certification.

The "guide to environmental self-assessment" has been published in order to be useful for those who desire to self-assess and to know the general state of their installations with regard to the legal obligations in environmental matters. This guide includes the legal requirements to comply with on drinking water, waste water, atmospheric emissions, solid waste (municipal waste), hazardous waste, soil and subsoil pollution, environmental risk, environmental impact, noise and Environmental System Administration. It includes a format guide (Program of Corrective Activities) to define the actions to carry out in case of normative breaches and to monitor them until they are solved. The guide of self-assessment is useful for its simplicity and for the fast results obtained. Also it is important to mention that it aims to change the attitude of personnel inside the organization.

[1] Further details about the application to the PNAA and a guideline for self assessment can be downloaded from PROFEPA's website.

As consequences of the establishment of the Good Practices, the following results are expected:
* Collaboration among the stakeholders, including trust and good communication
* Reduction of energy resources;
* Reduction on the consumption of drinking water;
* Decrease of waste generation and increase its recycling;
* Minimize the environmental effect of the atmospheric emissions, the noises and the waste water;
* Improving the competitiveness of the business through the following benefits:
    a) Rationalization of raw materials and saving of natural resources;
    b) Improvement of industrial processes and increase of efficiency;
    c) Continuous improvement of the environment protection;
    d) Improvement of the corporate image, users and workers;
    e) Good integration of the personnel.

The auditing procedure involves 3 actors: industry, government and an external auditor. This last one must be accredited by the national entity of accreditation ("Entidad Mexicana de Accreditation" EMA). This corresponds to the first step in the process, the choice of auditor from a list published by PROFEPA. In Mexico there are 334 official auditors and 95 units of verification. The fact that a third party is included during the auditing activities makes the process more transparent in the authority's eyes. In the elaboration of the action plan, the external auditor can express an opinion and reject the plan when he considers it insufficient or not possible to realize it with the resources (time, technology, budget) described.

The "Clean Industry certification" is assigned for 2 years, during that period they will have some supervising visits according to the action plan. If the industry complies with the plan, then it can renew the certification.

PROFEPA has extended the voluntary programs to other sectors, like "municipality clean", "tourist destination clean" and "basin clean". In consequence the legal framework is specific for each sector and also the approach to involve more participants. During the Raul Tornel's presentation at the GIN conference of 2007 in Mexico, he showed an impressing list of industries, municipalities and tourist destinations that have already subscribed to PNAA. His message was very encouraging and made clear that people in PROFEPA have high expectations for such kinds of voluntary agreements.

With all successes of this program there remains the observation that it attracts mostly the bigger companies that are often not lagging in environmental performance to begin with. The inclusion of the much larger number of medium and smaller companies is a real challenge, as is the stimulation of environmental improvement on a medium and longer tern, much beyond two years. For this reason we also did some explorative research on to what extent the Dutch good experience with a specific kind of voluntary approach (negotiated agreements with sectors of industry) would fit the present situation in Mexico.

4. Explorative survey of attitudes towards the application of negotiated agreements in the Mexican framework

In the spring of 2008 a survey has been send to Mexican business leaders that are involved in environmental matters. The response was 16, until the beginning of June. The respondents represent a wide array of Mexican industries. They include the sectors of food industry, chemicals (3), metals, non-metal products (2), concrete, pharmaceutics (3), construction, glass, car parts and environmental consultancies (2). Of the 16, 9 have a predominantly administrative function, like general management, 6 a predominantly technical function, like environmental management, and 1 a predominantly external relations function. Most are quite senior also in terms of number of years with the company. Four work 3 years or less with the company, four up to 6 years and eight more than 6 years. Most of them (13) are members of an environmental board or committee of their company. Six are members of an environmental committee of their sector of industry. Only one is none of those. In addition two are members of government environmental committees and three are active members of NGOs.

Questions were asked about the evaluation of the present state of Mexican environmental policy, the options to improve the set of policy instruments or their implementation, the importance of several possible characteristics of negotiated agreements and about some conditions that impact on their success. These questions were inspired by the ex post evaluation study on the Dutch system of environmental negotiated agreement that has been concluded a few years ago (De Bruijn, Bressers & Lulofs 2003, Bressers and De Bruijn 2005a, 2005b, Bressers, De Bruijn & Lulofs 2008).

Because we could not be sure that all respondents had a clear and a similar idea of what negotiated agreements are all about, we introduced the questionnaire with the following text:
"Negotiated agreements are defined as the “commitments undertaken by firms and sector associations, which are the result of negotiations with public authorities and/or explicitly recognized by the authorities”. They can be regarded as a subspecies of ‘voluntary approaches’. Unilateral commitments and public voluntary programs, like “Industria Limpia”, are other forms of such approaches. But compared to real voluntary approaches, it is much more oriented towards mid and long term improvements in environmental performance. It is not uncommon in Europe that industry itself takes the initiative to start negotiations. This makes sense, especially in cases when it seems inevitable that government will push one way or another for substantial environmental improvements. Negotiating and agreeing on a 5 or even 10 year schedule that fits normal business investment schemes might then be preferred over awaiting regularly changing top-down regulations. The advantage for government can be that environmental considerations start paying a role earlier in business’ decision making processes and the advantage for business is that environmental requirements come less as a disruption of normal business processes. The negotiated agreement is often concluded at a higher scale level than individual companies, for instance a sector of industry in a certain state, and its progress followed by joint committees, in which mutual trust can be build over time. Licensing on a company level is then guided by the agreement, serving as a framework enabling companies to know where policy is heading for, also on the longer term."

All respondents thus got a similar stimulus clarifying what the basic idea of negotiated agreements is all about.

In the next section we will present the data from this survey in connection with the data from the evaluation study on the Dutch negotiated agreements (this is the study on environmental negotiated agreements, for a study on energy efficiency negotiated agreements, see Bressers, de Bruijn and Dinica 2007). This way the attitudes of the Mexican business leaders can be compared with the results obtained from Dutch practice.

5. Results and discussion of data

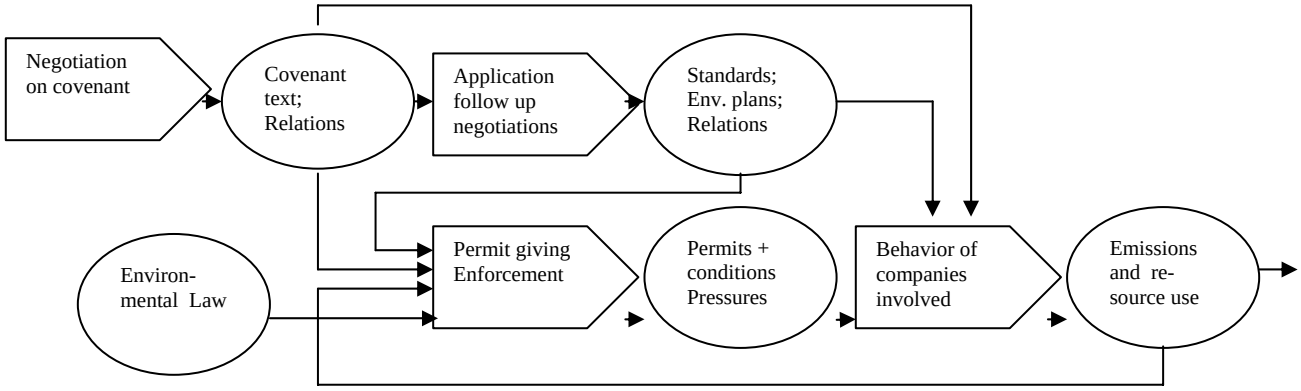
5.1 Evaluating Mexican environmental policy and options for improvement

When asked the question “What is your opinion about the Mexican environmental policy instruments for improving the environmental performance of companies?” no one answered that the existing environmental policy instruments are sufficient and reasonably well implemented. That “the existing environmental policy instruments are as such sufficient, but not consistently enough implemented to get an equal competition situation”, was adhered to by 11 respondents, while 5 even think that “the existing environmental policy instruments are not sufficient or are inapt to be implemented well in the Mexican situation”. All five are members of company committees. The two that are members of government advisory boards both hold the last opinion.

Better instrumentation
We asked them to consequently choose one or more options (or add themselves more) to improve implementation or instrumentation. Of the five that think instrumentation is lacking all want addition economic instruments, three want more or different regulative instruments, two more information instruments and three (plus one that sees implementation is lacking) more negotiated agreements. One respondent added the importance of social responsibility. Another respondent remarks that: “The "agreements" are an excellent option. The majority of the productive sectors should be included and especially the small and medium industry should be aligned to the "agreements" since this is the type of industry that normally is not considered in the projects of environmental politics and also produces more damage or do not accomplish the norms. On the other hand there should be other economic instruments that help that the projects to be viable.”

In the Dutch situation, negotiated agreements are not replacing permitting and enforcement, but create a framework for them (apart from giving guidance for further developments) (Bressers and de Bruijn 2005b). In the figure below this relationship is elaborated.

Figure 2, Input-process-output model of environmental policy implementation combining individual regulation and sectoral negotiated agreements



Improving implementation

Thirteen people filled in the questions on how to improve implementation, also two of the five that blamed instrumentation in the first place. Of these all but one saw an important role for negotiated agreements as a framework for implementation guidance. Using a combination of grants and requirements to local authorities (the way the efforts to improve implementation started in the Netherlands before the negotiated agreements and continued all through the nineties) was also mentioned often. One respondent remarks: "There should be a higher diffusion of support programs from the federal government and demanding of development for Environmental Politics programs to municipal and state level; continuity of support programs, it means that those programs remain in despite of change of governors."

The issue of political support is carried especially by those who work relatively short in this field in their companies (Spearman's Rho is .727, p=.002, n=13).

Table 4, Relation between length of employment and assessment of need for more political support

Employment * More political support needed Crosstabulation

Count

		More political support needed		
		yes	no	Total
Employment	1-3 years	3	0	3
	3-6 years	2	1	3
	more than 6 years	1	6	7
Total		6	7	13

Not surprisingly the need for more political support often coincides with feeling the need for more local capacity building (Rho .415, p=.079, n=13).

Table 5, Relation between assessments of need for more local capacity building and more political support

More local capacity needed * More political support needed Crosstabulation

Count

		More political support needed		
		yes	no	Total
More local capacity needed	yes	5	3	8
	no	1	4	5
Total		6	7	13

Here an overview of the questions and the answers is given:
"If you consider only the present implementation of policy instruments lacking, please indicate what policy changes could improve this situation (you may tick more than one)":

- 8x More grants for local authorities to hire good staff, combined with obligatory reporting on implementation to higher authorities
- 2x More obligatory public transparency of business concerning resource use and emissions
- 6x Clearer political support from higher authorities to take environmental law seriously
- 12x Creating a negotiated agreement per state and / or sector of industry that specifies priorities and creates an agreed framework for implementation
- 3x Other, please describe …

The "other" ideas often were connected to the functioning of the political system. One wrote: "More coordination among the different levels of government (authorities)". Another: "Better distribution of responsibilities and attributions in the government across the different levels (federal, state and municipal). Also, a higher efficiency in the transversal coordination (inter ministries); creation of visible environmental incentives for the best environmental performance." A third one: "Elimination of corruption within the authorities" and "The application of the Environmental Law to all size of industries (large, medium and small). In the current situation only the large and some medium industries are inspected."

All in all, 14 of 16 favour the use of negotiated agreements for one of those two purposes, mostly to support implementation and not as a 'stand alone' instrument. This is very interesting, since most Dutch examples of environmental negotiated agreements are also not stand alone instruments.

5.2 Expectations to be met by negotiated agreements

Ambition of negotiated agreements
One could wonder whether the respondents only see the negotiated agreements approach as a "soft" and business friendly way of environmental policy, in fact a way to avoid and postpone real environmental improvements. Therefore we asked them how serious the agreements should be in their visions.

Table 6, "When government would conclude a multi-year negotiated agreement with your sector of industry what would be necessary objectives to make this worthwhile?"

	Entirely agree	***Agree***	***Neutral***	***Disagree***	***Entirely disagree***
Ambition: the objectives should be beyond existing regulation	10	4	1		1
Ambition: the objectives should be beyond "business as usual"	7	8			1
Ambition: the objectives should imply real ecological innovation	4	8	3		1
Compliance: the agreements should be guarded against "free riders" that spoil the joint effort	10	5		1	

Only one of the respondents did clearly want to avoid high ambitions, except for guarding against free-riders. This last subject was deemed unimportant by one other respondent. All others hold the opinion that negotiated agreements only make sense when they really further environmental improvements.

The interviewees with a more technical function rather than a administrative one seem to be more restrictive (or pessimistic) on striving for real ecological innovations (Rho .378, p=.073, n=16).

Table 7, relation between function and ambition

Function * Ambition real innovation Crosstabulation

Count

		Ambition real innovation				
		entirely agree	agree	neutral	entirely disagree	Total
Function	Administrative	3	6	1	0	10
	Technical	1	2	2	1	6
Total		4	8	3	1	16

Indicated by the answers and by separate cross tabulations (not shown) it is clear that the respondents see the Mexican existing regulation as the weakest ambition, even weaker than 'business-pas-usual'. This is unlike the Netherlands' study, where the ambition of regulation was seen as beyond business-as-usual.

In the Netherlands, respondents in the evaluation study on the practice of negotiated agreements (Bressers, de Bruijn and Lulofs, 2008 forthcoming) assessed that the negotiated agreements were indeed beyond existing regulation (75% agreed), beyond business as usual (86% agreed), implied real ecological innovation (68% agreed), and were guarded against free riders (72% agreed).

Efficiency of negotiated agreements
Apart from the results for the environment, also the efficiency of the effort is a core goal of the negotiated agreement approach. We also asked how important several efficiency aspects are in their visions.

Table 8, "When government would conclude a multi-year negotiated agreement with your sector of industry what would be necessary efficiency gains to make this worthwhile?"

	Entirely agree	***Agree***	***Neutral***	***Disagree***	***Entirely disagree***
General efficiency: minimisation of total costs	7	6	2	1	
1. Better allocation of efforts among companies to lower costs	6	5	5		
2. Better phasing of objectives and measures in time	4	10	1	1	
3. Decrease bureaucratic and administrative costs	7	5	2	2	
4. Support development of new methods and technologies	10	4	1	1	

Of course it is not surprising that the efficiency gains of the negotiated agreements are generally seen as important. Interesting though is that this is clearly less outspoken when redistribution of efforts among companies is involved or when decreasing administrative costs is considered. Strongest is the hope that new methods and technologies will be supported this way.

That allocative efficiency is needed has the strongest support among the technically oriented respondents (Rho .727, p=.001, n=16). Respondents that work longer than six years in the company are somewhat more relaxed than the others in assessing the need for efficiency in general, and in administrative efficiency in particular. (Rho .533, p=.017, n=16).

Table 9, Relation between length of employment and administrative efficiency need assessment

Administrative efficiency needed * Employment Crosstabulation

Count

		Employment			
		1-3 years	3-6 years	more than 6 years	Total
Administrative efficiency needed	entirely agree	3	3	1	7
	agree	0	1	4	5
	neutral	1	0	1	2
	disagree	0	0	2	2
Total		4	4	8	16

Administrative efficiency is also stressed by people that see more political support as a solution for implementation problems (Rho .570, p=.021, n=13).

Table 10, Relation between more political support as solution to implementation problems and administrative efficiency need assessment

Administrative efficiency needed * More political support needed Crosstabulation

Count

		More political support needed		
		yes	no	Total
Administrative efficiency needed	entirely agree	5	2	7
	agree	1	3	4
	neutral	0	1	1
	disagree	0	1	1
Total		6	7	13

There is a relation between the evaluation of Mexican environmental policy and the assessment of the need that negotiated agreements should contribute to efficiency (Rho .739, p=.001, n=16). The respondents that see more fundamental problems with the policy than implementation problems alone think less strongly about efficiency gains.

Table 11, Relation between evaluation of environmental policy and efficiency need assessment

Efficiency needed * Evaluation environmental policy Crosstabulation

Count

		Evaluation environmental policy		
		implementation is insufficient	instruments insufficient or not implementable	Total
Efficiency needed	entirely agree	7	0	7
	agree	4	2	6
	neutral	0	2	2
	disagree	0	1	1
Total		11	5	16

In the Dutch evaluation study on the practice of negotiated agreements it was assessed that the negotiated agreements were minimizing total costs (55% agreed), especially by creating improvements in phasing flexibility (75% agreed) and allocation of efforts (96% disagreed with the proposition that better allocation could have lowered costs).

There was less support that they led to lessen administrative costs (48% agreed) and that new methods and technologies were developed (44% agreed). While the latter two are less encouraging, by and large one could claim that the Dutch performance makes the desired efficiency gains look realistic goals. This is however somewhat less true than was the case with the ambition of the agreements.

Positive side-effects of negotiated agreements
The Dutch study also revealed the large impact of the use of negotiated agreements on "the policy resource base" (De Clercq a/o. 2002: 57-59). All kinds of positive side effects can contribute to the feasibility of further steps in the future. To what degree the surveyed Mexican business leaders deem those important?

Table 12, "When government would conclude a multi-year negotiated agreement with your sector of industry what would be desirable side effects to make it extra worthwhile?"

	Entirely agree	***Agree***	***Neutral***	***Disagree***	***Agreeing in Dutch study (%)***
Improved target group attitude on the environment	8	7	1		74%
More mutual understanding between partners	4	9	3		78%
Improved collaboration between government and business	9	7			80%
More knowledge on options for environmental improvements	8	7	1		69%
Contributions to future env. policy development	8	8			64%
Product or process innovations	8	5	2	1	55%
New methods & technologies	8	8			44%
More coherence in environmental policies regarding industry	10	5	1		77%
More harmonisation between environmental and other policies regarding industry	11	4		1	64%

Again it is not surprising that large majorities find a list of nice side effects worthwhile. Issues that regard the coherence of policies seem to have the largest support: among all industry policies, among environmental policies and in general the cooperation between government and business.

When correlated with the characteristics of the business leaders there seems to be some relation between experience (the length of the employment) and the importance attached to more mutual understanding (Rho .317, p=.115, n=16).

Table 13, Relation between length of employment and importance contribution to mutual understanding

Mutual understanding * Employment Crosstabulation

Count

		Employment			
		1-3 years	3-6 years	more than 6 years	Total
Mutual understanding	entirely agree	0	1	3	4
	agree	3	2	4	9
	neutral	1	1	1	3
Total		4	4	8	16

That these kinds of expectations from a negotiated agreement approach could be realistic is shown by the results of the Dutch study. In the table the total of 'entirely agree' and 'agree' (in percentages) is listed in the last column (the 'entirely disagree' column was empty). From the Dutch results it is clear that not only the 'new product and process innovations' that were the least strongly wanted among Mexican business leaders, but also the 'new methods and technologies' have a relatively weak performance. In all other cases Dutch practice was however quite encouraging towards the wishes of the Mexican business leaders.

5.3 Feasibility of negotiated agreements in Mexico

We compared Mexican wishes regarding the negotiated agreement approach with Dutch practice. But how realistic is that? Their feasibility and success are not only a matter of support among business leaders, but also a matter of favorable conditions. In both the European Neapol study and the Dutch evaluation four explanatory factors for negotiated agreement success were theoretically derived and empirically assessed. This analysis supported the value of these factors to explain the negotiated agreements success (Bressers and De Bruijn 2005a). These factors are listed in the table below. In their analysis of the feasibility of negotiated agreements in China, Bressers and Xue (2007) also included two additional factors and the wider economical, cultural etceteras contexts, something that we cannot repeat here in the setting of this paper.

Table 14, "To what degree do you think that the following favourable conditions for the successful application of negotiated agreements are met in the case of your sector of industry?"

	Entirely agree	***Agree***	***Neutral***	***Disagree***	***Entirely disagree***
There is already a basic level of respect and trust in "fair play" between the sector and government	5	7	3	1	
The sector is homogeneous or has a small number of companies or has a sector organisation that is well respected by the companies	5	8	2	1	
The sector is directly or indirectly producing for consumers and thus concerned about its public image	8	8			
The authorities seem to be prepared to use other instruments than negotiation to get the sector improving its environmental performance	4	3	5	3	1

The respondents are quite optimistic about the situation regarding the four conditions that are important for negotiated agreements success as studied and confirmed in previous studies. This is least true for the willingness of the authorities to exert pressure by new alternative instruments when cooperation fails. There the respondents obviously doubt whether that would be so in their case. For all, their public image is regarded as economically important and worth protecting. Almost all see their sector as well enough represented to be able to negotiate. Even the issue of a basic level of trust between government and industry – that some doubt to be part of the Mexican societal and political culture – is regarded by the respondents as quite favourable in the cases of their industries. This is also related to the experience of the respondents. The longer the respondent works for the company the more favourable the level of trust between industry and government in their sector is assessed (Rho .436, p=.036, n=16).

Table 15, Relation between length of employment and assessment of level of trust between government and industry in the own sector of industry

Basic level respect and trust * Employment Crosstabulation

Count

		Employment			
		1-3 years	3-6 years	more than 6 years	Total
Basic level respect and trust	entirely agree	1	1	3	5
	agree	0	2	5	7
	neutral	2	1	0	3
	disagree	1	0	0	1
Total		4	4	8	16

People that are more positive about the level of trust are significantly less inclined to see more political support as the solution to implementation problems (Rho -.780, p=.001, n=13).

Table 16, Relation between more political support as solution to implementation problems and assessment of level of trust between government and industry in the own sector of industry

Basic level respect and trust * More political support needed Crosstabulation

Count

		More political support needed		
		yes	no	Total
Basic level respect and trust	entirely agree	0	4	4
	agree	2	3	5
	neutral	3	0	3
	disagree	1	0	1
Total		6	7	13

People that assess the preparedness of government to use alternative instruments as a thread if necessary attach more importance to improving mutual cooperation as a side effect of negotiated agreements (Rho .464, p=.036, n=16).

Table 17, Relation between preparedness of government to use alternative instruments as a thread if necessary and importance of improving mutual cooperation

Alternative thread * Mutual cooperation Crosstabulation

Count

		Mutual cooperation		
		entirely agree	agree	Total
Alternative thread	entirely agree	4	0	4
	agree	2	1	3
	neutral	1	4	5
	disagree	2	1	3
	entirely disagree	0	1	1
Total		9	7	16

The table below shows some more or less comparable answers in the Dutch study. Note that the phrasing of the questions here deviates from the one we used in our survey under Mexican business leaders.

Table 18, Conditions for negotiated agreements' success in the Netherlands

In %	***Entirely agree***	***Agree***	***Neutral***	***Disagree***	***Entirely disagree***
Before the negotiation there was already trust between the sector and government	2	47	6	37	8
The representative sector organisation could negotiate on behalf of the member companies	31	39	2	26	2
The public image of the sector or its product is sensitive to environmental aspects	28	55		18	
The authorities saw it as a realistic option to use other instruments when negotiations would fail	16	47		37	

The figures do not indicate that the Dutch circumstances were dramatically more favourable than the Mexican respondents are estimated in our survey. There is however one exception. That is not the "cultural" factor of trust, but the "political" one, on the preparedness to use a "stick behind the door" in case the negotiations fail. This is regarded with some doubt among our Mexican respondents.

6. Summary and conclusions

In this paper we first described Mexican environmental policy and the present role of voluntary approaches therein. While ISO 14000 remains the most commonly used format for voluntary efforts by companies in Mexico, there is also a national scheme "Industria Limpia", or Clean Industry, that has more and more participation, especially among the bigger companies. Though voluntary, participation is by no means non-committal. An elaborate auditing program belongs to the scheme. This shows that there is some openness in Mexico regarding the options for non-regulatory environmental policy.

In the second part of the paper we report on the basis of a survey among 16 Mexican business leaders that have responsibilities in the environmental management of their companies. None of them evaluated Mexican environmental policy as sufficient. Implementation is insufficient and several also think instrumentation is inapt. In those cases especially economic policy instruments are seen as a necessary addition, while also negotiated agreements are positively viewed. To improve implementation negotiated agreements as a framework to guide implementation is widely supported. Expectations regarding ambition, efficiency gains and positive side effects of the respondents look quite realistic giving the practical results as assessed in a study on the Dutch experience with negotiated agreements. The feasibility and success of negotiated agreements is in theoretical and empirical literature explained by four factors. The respondents assess these factors as quite favorable in the situation of their sectors of industry in Mexico. More research is necessary to gain further insight into the options and conditions for applying negotiated agreements in the Mexican context.

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