

# Final Review and Analysis of EIA Screening Procedures within MARN with Recommendations

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**USAID Project: Policies and Regulatory Support for Economic Growth (PRS)  
in Guatemala**

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**Weidemann Associates Inc.**

**Consultation to Review and Proposed Upgrades to the Regulatory Framework for  
Screening and Classifying Activities requiring Environmental Impact Evaluations**

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## Executive Summary

Under the auspices of the U.S. Agency for International Development's (USAID) Policy and Regulatory Support for Economic Growth (PRS) Project in Guatemala, the objective of the consultancy was to: (i) analyze the current use of the "*Listado Taxativo*" to classify proposed projects according to the level of risk they pose; (ii) propose a series of recommendations, based on observations, interviews, and comparisons with other environmental assessment (EA) systems, of alternative pre-determined criteria and procedures, and (iii) improve the efficiency and effectiveness of the project screening and classification phase within the Ministry of Environment and Natural Resources' (MARN) environmental assessment (EA) system. The consultancy was conducted between January and April 2013.

The system adopted by MARN in 2003 to classify projects, works, industries, and economic activities according to their risks is based upon the Standard Industrial Classification of All Economic Activities (abbreviated as CIU in Spanish), maintained by the United Nations' Statistical Division. The CIU is arranged so that entities are classified according to similarities in the character of the goods and services they produce, the uses to which those goods and services are put, and the inputs, processes and technologies used in their production. However, because the **hazards** posed by firms within the same industry or sector are the same or similar, the CIU is more correctly seen as a hazard identification system than as a risk assessment tool. The *Listado Taxativo* was originally intended to "orient" projects proponents toward using the most appropriate "instrument" of environmental assessment to determine its corresponding categorization. Three criteria are used by the *Listado Taxativo* to classify projects with the principal criterion being the number of employees employed at the project site. In addition, two other criteria are considered in determining the appropriate risk category: (1) whether the proposed operation is located in an "environmentally fragile area" (such as a national park or other protected area), or in a geographic area with "special planning or territorial zoning" (such as now exists in the capital, Guatemala City); and (ii) whether there exists a "national or international law regarding the specific activity and its degree of automation."

While the size or scope of any operation will certainly have some effect upon the risks to the workers it employs, to nearby communities or individuals, the general public, and/or to the environment, the specific location of that operation or facility is another critical factor in estimating the degree of environmental risk that it poses. Likewise, the managerial controls put in place by companies to prevent or mitigate those risks are essential to know in order to estimate the level of "residual risk" that will be posed by the facility or activity.

MARN classifies projects into one of four categories of environmental risk: **Category A** for large-scale activities and "mega-projects" that pose "high" risks to people and the environment; **Category B1** for projects posing "medium-to-high" risks; **Category B2** for projects posing "low-to-medium" risks, and **Category C** projects for projects with "low or minimal" risks, including a recent innovation by MARN to review 39 different types of projects, works, industries and activities through an expedited (1-day) review and approval process ("*Ventanilla Agil*") for an environmental license. More than 900 such expedited licenses have been issued by MARN in the first seven months of the *Ventanilla Agil's* operation, but MARN has yet to carry out a single follow-up field inspection to verify if the conditions of the environmental licenses granted have been adhered to or not.

There are a number of other inconsistencies within the *Listado Taxativo*, including some CIU "classes" that encompass a wide range of activities posing very different risks, such as residential developments and industrial complexes, and other cases where the "cut-offs" between ranges in the *Listado Taxativo* are set arbitrarily, and do not take into consideration other factors that might dramatically alter or affect their degree of environmental (or social) impact. In addition, there has been a lack of adequate coordination by MARN with other Government entities, such as the National Council of Protected Areas (CONAP) or the Ministry of Energy and Mines (MEM), and the Municipality of Guatemala, which has passed a new Land-Zoning Plan (*Plan de Ordenamiento Territorial or POT*). MARN has not yet taken full advantage of other entities' expertise and knowledge in anticipating the environmental impacts of certain activities, or in preventing, reducing, mitigating, and/or compensating impacts that are unavoidable. Nor has MARN fully incorporated meaningful (vs. token) civil society and NGO participation in the licensing decision-making process.

In all fairness, MARN's staff and managers are overwhelmed by the work involved in processing approximately 2,500 – 3,000 environmental license applications received annually with its very small, poorly equipped, and under-resourced staff (just 62 staff in DIGARN are directly involved in handling this workload). On average, every year between 300 – 400 proposed project applications are received that fall within Category A, requiring a high level of review time, with a roughly equal number of Category B1 applications to be processed within 15 effective days from receipt by MARN. The largest proportion of license applications fall into Category B2 representing low-to-medium risks, including a substantial number of residential housing construction projects and minor repairs and upgrade civil works to existing infrastructure within the Municipality of Guatemala (estimated at between 30 – 40% of all applications received). Finally, there is a growing portion of Category C projects that are being processed by MARN through the expedited *Ventanilla Agil* process, ostensibly representing projects posing “no to minimal” risks to people or the environment.

The recommended adjustments to the *Listado Taxativo* encompass seven simple, straight-forward steps.

1. Revert the *Listado Taxativo* back to its original intended purpose of “orienting” project proponents toward selecting the right environmental assessment tool given the nature, size and location of an activity or facility instead of using the *Listado Taxativo* as the sole or primary basis for making the classification decision.
2. Revise the criteria used (e.g., the severity, extension, duration, reversibility, etc.) and the ranges of values associated with each one for different levels of potential impacts given the specific location of a facility or activity and its proximity to human populations or ecological areas or species to better reflect the true nature of risks posed by the facility or operation.
3. Redefine the list of 39 “no to minimal” impact projects, works, industries and activities (Category C projects) that are “categorically excluded” from the normal environmental licensing process and are being expedited through the *Ventanilla Agil* process to remove those posing physical or biological impacts. At the other end of the risk spectrum, MARN should create such a list of “automatically included activities,” which by their nature, would always require a full environmental impact assessment (Category A), bypassing the initial environmental assessment process. This list should be published officially.
4. Refer projects in or near protected areas or those posing potential risks to them to CONAP for their technical review and opinion, as well as the large number of applications received by MARN for residential properties, commercial operations, and public infrastructure works occurring within the boundaries of Guatemala City to the municipality's Planning Department for their technical review and input to MARN's licensing decisions.
5. Adapt and adopt existing practical guides on industry-specific best practices used in other countries to prevent, reduce or mitigate potential environmental and social impacts caused by commonly occurring, but similar kinds of facilities or activities, such as common prevention and mitigation measures in the residential housing and building construction, small commercial and retail shops, and light manufacturing sectors.
6. Focus its own resources and staff time on medium-risk (Category B) projects, not only in assessing the projects' impacts, but also later during the implementation of the construction and operation of the activity or facility with credible supervision and enforcement actions to ensure compliance with the conditions of the environmental license. It was estimated that between 500 - 600 of the nearly 2,400 applications submitted to MARN last year were Category B1 or B2 projects. This represents a reasonable and realistic number of cases for MARN staff to focus on in assessing the projects upfront and then later when conducting random or targeted spot-checks to provide a credible level of compliance enforcement.
7. Secure adequate funding mechanisms to conduct environmental impact studies (EslA) for the 64 classes of high-risk (Category A) projects presenting the highest potential risk of causing “significant” environmental impacts. Once MARN has classified a given project as Category A, then it is authorized to assemble a multi-disciplinary team of recognized technical experts to assess the project's “novelty, complexity, transcendence and/or scope or breadth.” In order to obtain the requisite funds required to pay for these types of extraordinary environmental assessments, MARN has the authority to generate the funds “derived from

providing services to users in order to carry out its substantive functions and activities” (Article 3 with fees set in Article 79 of AG 431-2007), including supplemental funds provided by Performance Bonds and Environmental Insurance policies to ensure the proponent’s compliance with the conditions of the environmental license granted by MARN. Instead of being fixed by legislation, these costs could be tied to some percentage of the total investment of the project (e.g., from 1 – 2 percent) to cover the costs of these highly technical and specialized assessments of environmental impact studies, which place an unreasonable burden upon MARN due to their technical complexity and sophistication. One-time only fees for such extraordinary reviews and assessments should be borne by the project proponent as a cost of obtaining an environmental license to operate in the country.

Going beyond the scope of this consultancy to analyze and evaluate the effectiveness and appropriateness of the *Listado Taxativo* as a tool to classify projects into one of these risk categories loom other larger, inescapable issues worth considering. First of all, the **design** of the environmental assessment system was found to be fundamentally sound and up-to-date with other comparable EA systems worldwide. The sequencing of steps beginning with the initial screening and scoping of projects, the tailored use of various types of assessment instruments reflecting the breadth and seriousness of anticipated environmental and social risks, the incorporation of relevant external technical input and public participation in the decision-making process, and the consideration of alternatives and follow-up mitigation measures taken on the basis of monitoring data and M&E programs that were all contained within the regulatory implementing framework of AG 431-2007 were judged to be more than adequate to achieve their purpose. What was found lacking was the **implementation** of the system as it was designed to be operated due to a lack of adequately trained and compensated staff, financial resources, and political support

Secondly, MARN’s EA system was designed upon the premise of “collaborative associations” existing between the public sector, the private sector, and civil society NGOs. However, as was pointed out in a 2010 Dutch study, this collaborative association was “asymmetrical” in that while project proponents and representatives from the private sector occupy important and influential spaces in policy- and decision-making processes, civil society and private citizen interests lack the resources and technical sophistication to adequately represent their concerns and interests. This asymmetry results in an atmosphere of social conflict and opposition rather than one of collaboration.

Thirdly, MARN needs to manage in a more strategic manner. This manifested itself in at least two ways during the consultancy: (i) not fully or actively managing (vs. passively maintaining) the registry of consultants to change the incentives they have to provide more unbiased analytic services to MARN and the public interest it serves, and (ii) fully leveraging external resources and the expertise of other governmental and non-governmental entities in carrying out its mandate. These issues are discussed in the main body of this paper.

Finally, there is an almost total absence of any discernible or tangible intent on the part of MARN to enforce the laws and regulations that currently exist, reflecting a lack of resources to support credible enforcement activities and the political will to act more assertively on behalf of larger, longer-term interests of society. More importantly there is a deeper failure to appreciate the economic and social consequences of continued environmental mismanagement and degradation on the part of narrowly-focused private sector interests that are either unwilling or uninterested in voluntarily complying with the letter and spirit of current laws. Nor on the part of society at large which does not demand stronger actions to stop destructive or unsustainable practices or activities that threaten the country’s continued economic growth and development. There is a widespread perception of collusion and corruption between the government and private sector economic interests held by the general public. This is especially prevalent among the rural poor who feel largely marginalized and disempowered by decisions mainly involving the energy sector and extractive industries that affect them most directly and adversely. This sense of powerlessness has resulted in increasingly violent confrontations between different socio-economic and ethnic groups within Guatemalan society. And it appears that no specific tool or analytical process will have any appreciable impact on this larger socio-political context until and unless the underlying **environmental governance** issues are also addressed to build greater public trust and social harmony than currently exists in Guatemala.

## I. Objectives and Methods of Consultancy

1. This report is one of the products resulting from a short-term consultancy between Weidemann Associates Inc. and the author that was conducted between January and March of 2013 as part of the Policy and Regulatory Support for Economic Growth (PRS) Project supported by the United States Agency for International Development (USAID) in Guatemala. The specific tasks of the consultancy were to:
  - Analyze and assess the Ministry of Environment and Natural Resources' (MARN) use of a classification system ("*Listado Taxativo*") to categorize proposed projects, works, and activities according to their level of potential environmental impacts (more precisely referred to as their level of environmental "risk");
  - Identify the strengths and weaknesses of the *Listado Taxativo* as a mechanism by which to identify the characteristics of proposed projects, works, and activities requiring an environmental assessment and thereby allow their appropriate classification into one of four categories of environmental risk; and
2. The objective of the consultancy was: to propose a series of recommendations, based on observations, interviews, and comparisons with other environmental assessment (EA) systems, of alternative pre-determined criteria and procedures to improve the efficiency and effectiveness of the project screening and classification phase within MARN's EA system.
3. The methods used to prepare this report included the following:
  - Reviewing MARN regulations and directives, as well as other relevant Government agency documents.
  - Investigating other national and bi-lateral and multi-lateral donors' EA systems. These included national EA systems, such as the National Environmental Policy Act (NEPA) process used in the United States, the class screening procedures used by the Canadian Environmental Assessment Agency to implement the Canadian Environmental Assessment Act, and Peru's Environmental Assessment process emphasizing the use of pollution prevention and mitigation guides for similar activities resulting in a limited range of predictable environmental effects). In addition, the EA systems used by bi-lateral and multi-lateral donors was reviewed, including USAID's Regulation 216 procedures, the British environmental screening procedures used by DFID, the World Bank's EA procedures under Operational Policy 4.01, the Inter-American Development Bank, and the Asian Development Bank.
  - Interviewing knowledgeable sources within Guatemalan governmental agencies (e.g., MARN and CONAP), relevant private-sector associations (AGEXPORT, CIG, and CACIF), environmental NGOs and civil society (e.g., The Nature Conservancy, World Wildlife Fund, and the *Fundación Defensores de la Naturaleza*) and registered environmental consultants.
  - Holding meetings and brain-storming sessions with RPS Project staff, Government officials, and private-sector and civil society representatives during which initial findings and conclusions were shared and vetted that formed the basis for the contents of this report.

## II. Background of the *Listado Taxativo* as a Classification Tool

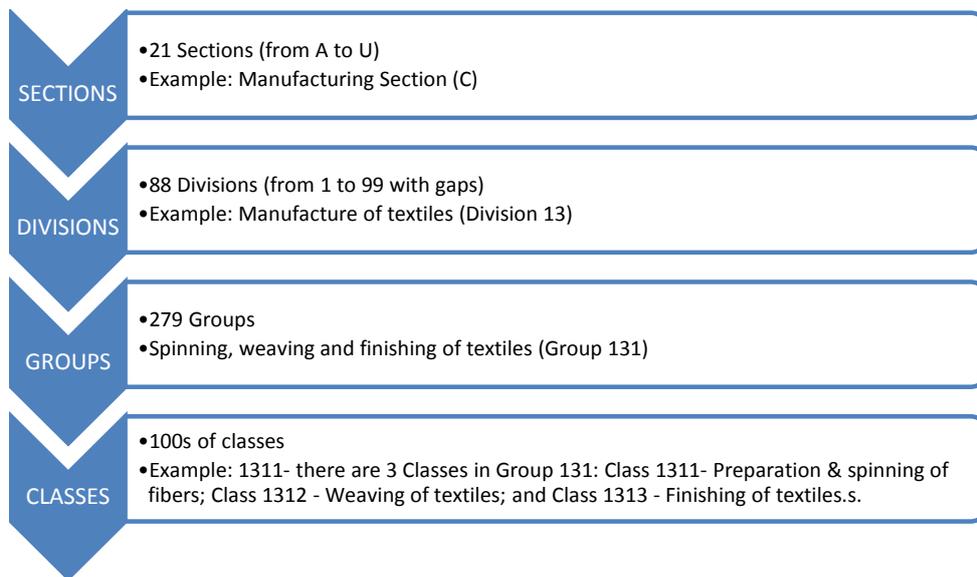
4. The classification system adopted by MARN is based upon the Standard Industrial Classification of All Economic Activities (abbreviated as CIU in Spanish) that was developed and is maintained by the United Nations' Statistical Division. The CIU was created in 1948 under the United Nation's charter and has since been revised four times since then. The 4<sup>th</sup> revision was completed in 2008 and renders all earlier versions void. The CIU is arranged so that entities are classified according to similarities in the character of the goods and services produced, the uses to which those goods and services are put, and the inputs, processes and technologies used in their production.<sup>1</sup>

<sup>1</sup> <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27d/iiss/International-Standard-Industrial-Classification-of-all-Economic-Activities-ISC.ashx>

While there are similarities in the **hazards** (whether those reflect the chemical toxicity of a substance or the physical impact of an activity such as clearing land to convert its use), the CIU is **not** organized based on the **risk** of environmental impacts caused by similar economic activities or processes, which must take into consideration other factors, such as the location of the activity and the exposure of people or animals, plants or ecosystems to its hazards, and the extent of mitigating actions taken to prevent or minimize those effects.

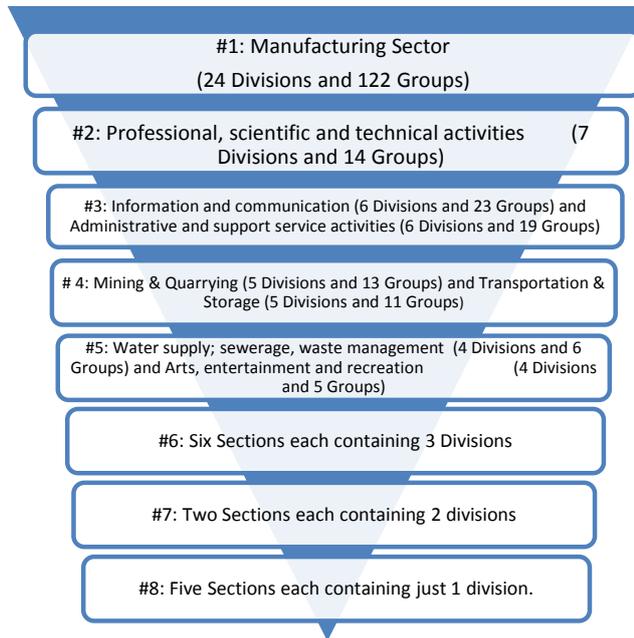
- The CIU is organized in a 4-tiered hierarchical structure ranging from “Sections” at the highest level of aggregation to “Divisions” and “Groups” and finally to “Classes” at successively more detailed levels of classification. As shown in Figure 1 below, there are:

*Figure 1: Hierarchical Structure of CIU*



- By far the largest section is “Manufacturing” with 24 divisions divided into 122 groups of varying sizes. Figure 2 below shows the rank order of ‘sections’ by the sheer number of divisions and groups within each section from those with the most to those with the least number of divisions and groups.

Figure 2: CIU: Ranking of Sectors from those with highest number of divisions and groups to least



7. However, in looking at the CIU from the perspective of which productive sections cause the greatest environmental impacts and engender the strongest resistance from civil society in Guatemala, manufacturing (Section C) is joined by these other important sections, such as:

- Section A: Agriculture, forestry and fishing;
- Section B: Mining and quarrying (including extraction of crude petroleum and natural gas);
- Section D: Electricity, gas, steam and air conditioning supply;
- Section E: Water supply; sewerage, waste management and remediation activities;
- Section F: Construction;
- Section G: Wholesale and retail trade; repair of motor vehicles and motorcycles; and
- Section H: Transportation and storage.

#### CCAD/UICN Proposal of the *Listado Taxativo*

8. In July of 2002, the Council of Ministers of the Central American Commission of the Environment and Development (CCAD in Spanish) with the assistance of the Mesoamerican Regional Office of the International Union for the Conservation of Nature (IUCN in Spanish) undertook a series of analyses and exercises to establish a more efficient and effective set of regionally harmonized environmental assessment (EA) tools and analytic procedures. The purpose of this body of work over the next several years was to promote the modernization and strengthening of EA systems in Nicaragua, Costa Rica and Guatemala as part of an agreement for that purpose financed by the Dutch Foreign Affairs Ministry.

9. In June of the following year, a report was published by CCAD and IUCN under this agreement presenting a proposal to the three countries that they adopt the CIU classification system as the basis for creating a standardized "*lista taxativo*."<sup>2</sup> The rationale for this proposal was the "fact that the CIU aggregates activities ...

<sup>2</sup>Astorga, A. MANUAL TÉCNICO DE EIA: Lineamientos Generales para Centroamérica; p. 6. CCAD and IUCN, June 2003.

according to their potential environmental impact and subsequently in function of their environmental risk.”<sup>3</sup> This in turn was predicated upon a “categorization established by the Economic Commission for Latin America and the Caribbean (CEPAL in Spanish) in 1999 regarding the different levels of environmental contamination associated with different CIU classes” (ibid).

10. However, when the original 1999 CEPAL document was examined, there was no rationale or formula provided to substantiate the relative “environmental impact” scores ascribed to 28 CIU classes by that study nor could the base reference document be located due to the inadequate reference provided (PADI e IPPS, no date). Five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) were analyzed by the CEPAL document and composite scores for the “intensity of contamination” were developed based on two inputs: “the scale of the effect” and the “composition of the effect.” However, no explanation regarding how these scores were generated, the definition used to describe what was meant by “composition of effect” or for that matter, the basis upon which the 28 CIU classes were selected (randomly, purposefully or arbitrarily), was provided in the document. Thus, the evidence-based link between the CIU and different categories of environmental risk found in the “*lista taxativo*” could not be verified or substantiated.

### Classification Criteria of the *Listado Taxativo*

11. The *Listado Taxativo* approach contained in the 2003 CCAD/UICN report proposed using three criteria to classify projects, works, industries and activities into different categories of risk:
  - number of employees involved;
  - physical size or “footprint” of the operation in terms of square meters; and
  - type of operation/activity as defined by its location within the CIU’s system.<sup>4</sup>
12. In Guatemala, the legal foundation requiring assessments of environment impacts for existing and proposed activities, works, industries and projects is contained in the Law for the Protection and Enhancement of the Environment (*Ley de Protección y Mejoramiento del Medio Ambiente, Decreto 68-86*) and its amendments, which established the legal obligation of proponents of planned projects or owners of existing facilities to prepare environmental assessments and present them to the relevant government authorities for authorization to proceed with the issuance of an environmental license (Art. 8).
13. The concept of using the *Listado Taxativo* to “orient” project proponents or owners select the correct EA instrument to use for purposes of assessing the potential environmental impacts of their activities, works, industries or projects was incorporated into the Government’s environmental assessment and enforcement system contained in a MARN regulation (*Acuerdo Ministerial 23-2003: Reglamento de Evaluación, Control y Seguimiento Ambiental*), which was approved on 27 January 2003. AM 23-2003 was subsequently modified by MARN’s Regulation 431 on the 17<sup>th</sup> of September 2007 (*AM 431-2007*), which laid out the general procedural requirements for a menu of seven EA instruments (see paragraph 19 for a description of these).
14. The three criteria mentioned in the CCAD/UICN report and adopted by Guatemala (number of employees, physical size of the operation, and type of operation) were then operationalized by MARN staff for individual classes of projects, works, industries and activities in order to place them within one of three categories of risk (high, moderate, and low). This was done through a Government Agreement (*Acuerdo Gubernativo 134-2005*) adopted by Guatemala, signed by the President and relevant Government ministers, and published in the official Government register (*Diario de Centro América*) on 20 April 2005 as a tool to “orient” proponents or owners of the level of environmental assessment required due to the nature of the operation (discussed below).
15. For instance, as a proxy to distinguish between the “size” of different projects or operations within the same CIU class in the *Listado Taxativo*, MARN adopted the “number of workers” who were estimated to work at a given site

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<sup>3</sup> Ibid; p. 13.

<sup>4</sup> Ibid, pp. 13-15.

or location. Thus, more than half of all the classes of operations in the *Listado Taxativo* that are defined as “small companies” have less than 25 workers while those with between 25 to 60 employees are defined as “medium-sized,” and those with over 60 employees are considered to be “large” companies.

16. In terms of the physical size of some classes of projects, works, industries and activities, ranges were set in terms of square meters (m<sup>2</sup>) to determine its placement within a risk category, such as for short-term accommodation and food service activities (CIU 5510). Tourist hotels and resorts up to 5,000 m<sup>2</sup> were considered to pose “low-to-medium” potential risks (Category B2) while those over 10,000 m<sup>2</sup> were classified as “medium-to-high” risks (Category B1). None were considered possible of causing more significant risks and qualifying as Category A projects, according to the *Listado Taxativo*. Under Section F for “Construction,” a number of very different types of buildings were all classified by the same measure of their physical footprint, even though they present very different types and magnitudes of environmental risk. This is demonstrated below in Table 1:

**Table 1: Comparison of Risk for Different Construction Projects within same CIU Code**

CIU Code	Description of Activity	Risk Category A: High Impact	Risk Category B1: Medium-to-High	Risk Category B2: Low-to-Medium	Risk Category C: Low Impact
4520	Design, construction and operation of hotels, country clubs, tourist complexes	N/A	More than 10,000 cubic meters of construction	Up to 5,000 cubic meters	N/A
4520	Design, construction and operation of condominiums	N/A	More than 10,000 cubic meters of construction	Up to 5,000 cubic meters	N/A
4520	Design, construction and operation of residential subdivisions	N/A	More than 10,000 cubic meters of construction	Up to 5,000 cubic meters	N/A
4520	Design, construction and operation of office buildings	N/A	More than 10,000 cubic meters of construction	Up to 5,000 cubic meters	N/A
4520	Design, construction and operation of medium-to-high density urban residential subdivisions	N/A	More than 5 hectares	Up to 5 hectares	Less than 1 hectare
4520	Design, construction and operation of industrial parks and complexes	N/A	More than 5 hectares	Up to 5 hectares	Less than 1 hectare

Source: January 16, 2013 MARN Excel file of Category B1 projects.

17. Similar ranges were established for other classes of animal husbandry operations, such as the number of chicken, pigs and cattle being raised for human consumption, as shown below in Table 2:

**Table 2: Comparison of Risk for Different Animal Husbandry Operations**

CIU Code	Description of Activity	Risk Category A: High Impact	Risk Category B1: Medium-to-High	Risk Category B2: Low-to-Medium	Risk Category C: Low Impact
0121	Construction & operation of chicken houses to hatch, reproduce and raise chickens for egg or meat production	More than 10,000 chickens raised for eggs or meat	Up to 5,000 chickens raised for eggs or meat	Up to 2,000 chickens raised for eggs or meat	Up to 50 chickens raised for family consumption
0121	Construction & operation of farms to raise pigs for human consumption	N/A	More than 100 pigs	Up to 100 pigs	Up to 50 pigs
0122	Construction & operation of cattle ranches to raise cattle for human consumption	N/A	More than 300 head of cattle	Up to 75 cattle*	Up to 50 cattle
0122	Construction & operation of sheep farms to raise sheep for human consumption	N/A	More than 500 sheep	Up to 400 sheep*	Up to 100 sheep

\*Obvious gaps exist between Category B1 and B2 ranges, but are reported here as they appear in MARN files.

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### III. Strengths and Weaknesses of Listado Taxativo within Current EA System

18. The *Listado Taxativo* was originally intended to take the UN's Standard Industrial Classification of All Economic Activities (CIIU) as its point of departure to define a given project, work, industry or activity in terms of the nature of its inputs, productive processes, and outputs (refer to paragraph 4). The *Listado Taxativo* then complemented this CIIU designation with a number of basic criteria (as described in paragraphs 11 - 17) intended to "orient" projects proponents toward the most appropriate "instrument" of environmental assessment they should use to determine its corresponding categorization. All of these instruments were intended to be prepared by project proponents and then reviewed by MARN staff, who reserve the authority to adjust the proposed risk category up or down based upon their review of the findings of the environmental assessment.

#### Types of Environmental Assessment Instruments

19. Seven instruments were first enumerated in AG 23-2003 and later defined in greater detail in AG 134-2007 (Title IV, Capital I, articles 12-20). They included:
  - Strategic Environmental Evaluations (EAE);
  - Initial and Self-Evaluated Environmental Evaluations (EAI);
  - Study of Environmental Impact Evaluations (EslA);
  - Evaluations of Environmental Risk;
  - Evaluations of Social Impact,
  - Environmental Diagnostics (DA for existing projects only); and
  - Evaluations of Cumulative Effects.
20. Of these instruments, only initial and self-evaluated environmental evaluations, studies of environmental impact, and environmental diagnostics (with or without environmental management plans) are regularly used. Strategic environmental evaluations have been attempted only rarely (in 2 or 3 cases), and as far as is known, evaluations of environmental risk, social impacts, and cumulative effects have not yet been used in Guatemala.

#### Strengths of the *Listado Taxativo*

21. One advantage of the *Listado Taxativo* is that because it is predicated upon the CIIU's classification system for all economic activities, it is recognized and used as a global standard by which different industries and economic activities are grouped in a logical manner. This also has the benefit of facilitating the compilation of national, regional, and global economic statistical databases.
22. Secondly, different classes in the CIIU classification system do reflect similar **hazards** among various industrial sectors or economic activities due to their similar natures, productive processes, inputs or materials. However, the CIIU categories do **not** reflect the true risks that similar industries or types of economic activities pose because their actual risks will vary depending on other managerial, locational and technological factors. The CIIU is more correctly seen as a hazard identification system, not a risk assessment tool. Risk couples the concept of *hazard* with the concept of **exposure** by human or environmental populations or receptors to determine the risk posed. In other words, risk is the product of the toxicity of a substance or its physical impact with the degree of exposure by human or environmental receptors to that substance or physical impact. As pointed out in paragraph 4, the CIIU was not designed or intended to be used to aggregate or group industries or economic activities in terms of their potential environmental (or social) impacts; the CIIU is simply a global classification system to organize industries or economic activities in terms of the goods and services produced, the uses to which those goods and services are put, and the inputs, processes and technologies used in producing those goods and services. Thus, defining the nature of the project, works, industry or activity is a necessary, but insufficient, input to the process of classifying projects according to the risks they pose to workers, nearby communities, the general public, or the environment.

## Weaknesses of the Listado Taxativo

- *Using Number of Employees as Proxy for Determining “Significance” of Risk*

23. According to interviews with MARN staff, the process for establishing the ranges for different environmental risk categories was unduly short (taking place over a “15 day period”) in 2005 when AG 134-2005 was promulgated. It supposedly relied upon only information that was readily available to staff at the time to define the parameters delineating those categories. The principal criterion used to classify projects, works, industries and activities was the number of employees employed at the project site. In addition, two “other criteria were to be considered” in determining the appropriate risk category: (1) whether the proposed operation was located in an “environmentally fragile area” (such as a national park or other protected area), or in a geographic area with “special planning or territorial zoning” (such as now exists in the capital, Guatemala City); and (ii) whether there existed a “national or international law regarding the specific activity and its degree of automation.”
24. Of the 339 different “classes”<sup>5</sup> of projects, more than half (180) were categorized according to their designation as a “small, medium, or large” operation. However, while that designation was not explicitly defined, it is implicitly related to the number of employees who would work there, taking into consideration the two “other criteria” mentioned in the previous paragraph. This focus on the number of employees is a very poor and incomplete criterion to use to establish a project’s environmental risk classification, as pointed out consistently by MARN technical staff who prepared their written opinions about the *Listado Taxativo* in an undated document. Some industries or economic activities employ many workers per unit of output due to their nature or low technological automation, but cause relatively minor or localized, short-term, and manageable impacts while other industries or economic activities with far fewer employees can cause much greater impacts.
25. While the size or scope of any operation will certainly have some effect upon the risks to the workers it employs, to nearby communities or individuals, the general public, and/or to the environment, the specific location of that operation or facility is another critical factor in estimating the degree of environmental risk that it poses. Two identical facilities or operations can have significantly different risk “profiles” depending on their location. This is why it is insufficient to know only the number of employees or type of hazard posed by an operation or activity (that is, the CIU classification) in assessing the actual risks posed, assigning the appropriate category of risk, and thus the level of environmental scrutiny required.

- *Lack of Supervision/Enforcement of Fast-tracked Activities (Ventanilla Agil)*

26. The *Listado Taxativo* contains a set of 35 “classes” of projects, works or activities poorly defined as “mega-projects,” which belong exclusively to Category A and require them to conduct a full environmental impact studies (EslA). Another 56 classes of projects, works, industries and activities are classified as exclusively pertaining to Category B1 projects (ostensibly posing medium to high potential environmental impacts) while 53 more are designated as exclusively Category B2 project (posing medium to low potential environmental impacts). Finally, only 15 classes of projects (several of which were broken down into multiple “sub-classes”) are classified as Category C projects, on the presumption that they pose very low or no environmental risks or impacts. Proposed projects within those 15 CIU classes are only required to prepare an Initial Environmental Assessment. The numbers of applications received in 2012 by MARN are below below in Table 3, according to their category of risk:

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<sup>5</sup> The exact number of classes is difficult to ascertain because some “classes” in the *Listado Taxativo* do not correspond to CIU codes while other codes for a single “class” are broken down into a variety of different projects, works, industries or activities. However, this is the author’s best estimate of the total number of different classes by which similar types of economic activities are defined.

**Table 3: Number of Project 'Classes' by Risk Category**

Category of Risk	Category A	Category B1	Category B2	Category C	Multiple Categories	Total Number
Number of Classes Exclusively Defined to One Risk Category	35	56	53	15	180	339

Source: MARN Listado Taxativo (as defined by Acuerdo Gobernativo 134-2005).

27. That list of Category C project classes was recently expanded to include 39 different types of projects, works, and activities that can be expeditiously granted an Environmental License by MARN through its rapid (1-day) approval process (“*Ventanilla Agil*”). Since the *Ventanilla Agil* began receiving applications (*expedientes*) in June 2012, it has processed over 800 as of December 31, 2012, and estimates that it will continue to ramp up operations to well over 2,000 applications this year alone (in 2013). This is shown in Table 4 on the following page:

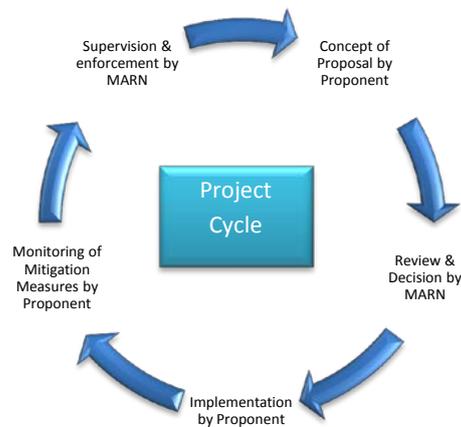
**Table 4: Number of Applications Submitted to Ventanilla Agil to date**

Time Period	Number of Applications Submitted	Cumulative Total
June 2012	72	72
July 2012	80	152
August 2012	77	229
September 2012	147	376
October 2012	216	592
November 2012	151	743
December 2012	67	810
<b>Extrapolated for entire first year</b>	Average of 116 applications monthly in first 7 months (116 x 12)	<b>1,392</b>
<b>Projected in 2013</b>		<b>&gt; 2,000</b>

Source: Modified from MARN Excel file provided to consultant on 26 January 2013.

28. However, MARN has yet to carry out a single follow-up field inspection to verify if the conditions of the environmental licenses granted are being adhered to or not. That represents a gaping hole in the proper functioning and credibility of the entire environmental management system (which also encompass the supervision/enforcement of implementation and evaluation phases following the initial environmental assessment phase of the EMS process). Below is a simple graphic (Figure 2) of the Project Environmental Management Cycle. The *Listado Taxativo* comes into play in the first (Concept of Proposal) and second phases (Review & Decision by MARN).

Figure 3: Project Cycle



- **Inconsistencies in Grouping CIU Classes Establishing Ranges for Categorization**

29. There are a number of other inconsistencies within the *Listado Taxativo*. First of all, some “classes” encompass a wide range of very different activities that should not be grouped together or which are currently categorized inappropriately. For instance, MARN has defined a number of different activities under CIU 9199 that no longer exists in the CIU classification system (4<sup>th</sup> version of 2008). In addition, several of these activities, such as “the reparation of infrastructure like schools, health clinics, highways and local roads, bridges, water supply and sewage systems, among others” and “building single-family houses within protected areas” do not have the characteristics that would generally be considered as only having “minimal impacts” in all cases. Nonetheless, they are classified as exclusively Category C activities, even though all of these activities pose potential environmental impacts.
30. In other cases, the same ranges are used to place very different types of projects within the same categories of risk. For example, the design, construction and operation of residential developments in medium to high density areas (MARN’s CIU 4520, which is now classified by the UN as Class: 4100 - *Construction of buildings*) are classified as ‘small’ if they are less than 1 hectare in size, as ‘medium’ if they are less than 5 hectares in size, and as ‘large’ if they are greater than 5 hectares in size. These are the same ranges given for non-residential buildings, such as industrial park complexes (also MARN’s CIU 4520, now classified separated from residential buildings by the UN as Class: 4290 - *Construction of other civil engineering projects*), which potentially present much greater levels of environmental contamination, physical impact, and human health and worker safety risks for the same given area or “footprint.” See Table 1 for exact details.

- **Arbitrarily set Ranges for Classifying Projects into Risk Categories**

31. The “cut-offs” between ranges in the *Listado Taxativo* are set arbitrarily, and do not take into consideration other factors that could dramatically alter or affect their degree of environmental (or social) impact. For example, MARN generated a series of arbitrary cut-off values for animal-husbandry activities, such as the number of heads of cattle, pigs, and chickens (called “poultry” in the CIU) being raised for human consumption in its CIU class 0121 (incorrectly labeled as a “Division” in AG 134-2005, which are three-digit designations in the CIU (not four) and which now correspond to three separate classes in the 4<sup>th</sup> version of the CIU (0141, 0145, and 0146, respectively). See Table 2 for exact details.

Con formato: Fuente: (Predeterminado) + Títulos (Cambria Negrita, Cursiva, Color de fuente: Enfasis 1, Inglés (Estados Unidos))

Con formato: Inglés (Estados Unidos)

32. In MARN's classification system, the construction and operation of poultry farms for the production of eggs and meat, the cut-off values given are as follows: Category C for poultry farms with fewer than 50 chickens for household consumption, Category B2 for operations of up to 2,000 chickens, Category B1 for up to 5,000 chickens, and Category A for operations with more than 10,000 chickens. Leaving aside the question of what happens to operations with between 5,000 and 10,000 chickens, the cut-off values are outdated by today's production levels (oftentimes orders-of-magnitude larger in modern poultry farms), and not based upon any stated scientific or technical grounds.

33. Even more importantly, merely knowing the number of chicken being raised in an operation (without questioning how that number will be verified by the Government) is not sufficient information to base an assessment of its potential environmental impacts on for purposes of classifying an operation. It fails to incorporate other pertinent and necessary information, most of which is already contained in MARN's Initial Environmental Assessment (EAI) and Studies of Environmental Impact (EsIA) formats, such as: situational factors related to the location of the operation, and managerial factors that can dramatically prevent, reduce, mitigate and compensate for any adverse impacts.

- *Locational Factors and Managerial Mitigation Responses are not Adequately Considered*

34. The environmental impacts for an operation of the same-size are not the same in different situations; they are dependent on the operation's location and waste management practices. For example, taking the case of poultry farms again -- those that are located near waterways or are concentrated in areas that recharge groundwater supplies (aquifers) can have far greater impacts than those that are "land-locked" or not overlying an aquifer recharge zone. From a managerial perspective, poultry farms have traditionally had to contend with significant waste problems (nitrate and phosphate contamination) created by the production of chicken "litter" (a mixture of manure and straw or other type of "bedding" used in chicken houses to capture urine). Many poultry farmers recycle their manure as crop fertilizer that they either use themselves or sell to other farmers. However, this litter can result in the release of airborne pathogens affecting human health and cause algae blooms that deprive waterways of oxygen for fish and other types of wildlife, if it is applied to croplands excessively and runs off into nearby waterways. Thus, proper waste management practices can either reduce or exacerbate the potential environmental impacts of a given operation. Therefore, it is unrealistic to expect that one poultry farm (or for that matter, a pig farm or cattle ranch) of 10,001 chickens will cause significantly greater environmental impacts than one of 9,999 chickens, if other situational factors of location and waste management practices of each operation are not taken into consideration.

35. This specific example was cited during interviews with private sector representatives in Guatemala as a case-in-point of what was perceived by them as the overly rigid application of the *Listado Taxativo*, whose original intention was simply to "orient" project proponents in selecting the most appropriate EA instrument, and not in placing projects into risk categories on the basis of the simple criteria contained in the *Listado Taxativo* alone. In addition, other examples were cited of overly "subjective" project categorizations by MARN that create the impression of a lack of clarity and transparency surrounding the EA licensing process, and lead to the perception of corrupt practices among project proponents, registered consultants, and Government authorities.

- *Inadequate Leveraging of Other Resources/Expertise in Assessing Project Risks*

36. In addition, there has been a lack of adequate coordination by MARN with other Government entities, such as the National Council of Protected Areas (CONAP) or the Ministry of Energy and Mines (MEM), and MARN has not yet taken full advantage of other entities' expertise and knowledge in anticipating the environmental impacts of certain activities, or in preventing, reducing, mitigating, and/or compensating impacts that are unavoidable. For example, Mexico's competent authority for its environmental assessment system has signed inter-agency agreements with the Federal commissions governing electricity generation/transmission and petroleum/natural gas production for the purpose of incorporating their assistance and collaboration in ensuring greater

understanding and compliance with Mexico’s environmental laws and regulations, including those for obtaining environmental licenses and adopting industry best practices (bench-marking).

37. For example, CONAP initiated a series of discussions with MARN back in 2011 to update and improve the *Listado Taxativo’s* classification of projects potentially affecting Guatemala’s protected areas within CONAP’s pervue. This review by CONAP of the *Listado Taxativo* identified 128 classes of projects, works, industries and activities that they believed required updating or adjustment. Of this total, 26 were resolved without need of discussion and another 30 were resolved after brief discussions between MARN and CONAP. Another 66 were under discussion (and reportedly close to reaching agreement, according to interviews with CONAP staff involved in the negotiations) and only six remained “highly discussed” and unresolved when there was a change in senior management at MARN in 2012.
38. Five of the six “highly discussed” classes of activities involved agroforestry operations (0200) and logging of natural forests, and cultivation of African palm plantations (CIU 9199) and the last one involved building single-family houses within protected areas (MARN classified as Category C projects in all cases). Issues involving delivery facilities for health clinics and schools within or near protected areas (43), construction activities (29), and logging operations (20) dominated the classes that CONAP raised with MARN. Since then, there have been no further discussions between MARN and CONAP about updating the *Listado Taxativo*, although CONAP staff and management expressed strong interest in taking up the subject again with MARN in the near future. The classes of projects, works and activities that were identified by CONAP according to the degree of agreement on re-defining their category of risk are shown below in Table 5:

*Table 5: Summary of CONAP’s Proposal to Revise Classification of Activities affecting Protected Areas*

Description of Activity	Agreed w/out discussion by MARN/CONAP	Discussed and Agreed by MARN/CONAP	Under Discussion, nearly resolved by MARN/CONAP	Highly discussed, still unresolved by MARN/CONAP	Totals
Construction of health clinics & schools w/in PAs	9	0	34	0	43
Construction of buildings w/in PAs	6	6	16	1	29
Agroforestry & Logging w/in PAs	0	15	0	5	20
Agriculture & Animal Husbandry	5	9	4	0	18
All other divisions (5)	6	0	12	0	
<b>TOTALS</b>	<b>26</b>	<b>30</b>	<b>66</b>	<b>6</b>	<b>128</b>

Source: Excel file (*Revision del Listado Taxativo 2011 MARN-CONAP*) provided to consultant by CONAP on 24 January 2013.

39. Another example of the under-utilized potential to leverage external sources of expertise is the Municipality of Guatemala, which has passed a new Land-Zoning Plan (*Plan de Ordenamiento Territorial or POT*) based in part on one of the first two strategic environmental assessments conducted in Guatemala to date. The POT for Guatemala City is “based on the simple principle that new growth has to be guided to where enough transportation capacities are located, and reduced in high-risk or environmentally valuable areas.”<sup>6</sup> The POT estimates that by 2030 more than 88 percent of residents within the municipality will live within walking distance to a TransMetro station when

<sup>6</sup> Planning Department, Municipality of Guatemala. *Guatemala City’s New Territorial Ordinance (POT): The reasons behind it*; paragraph 22 (no page numbers); English version, April 2010.

the construction of Guatemala City's 100-kilometer dedicated bus rapid transit system is finished.<sup>7</sup> It has been in operation since 2010. In addition, 38 percent of the municipality's land area is reserved for "environmental conservation" or defined as being medium-to-high risk areas for human occupation, areas which are mainly located in urban ravines that bisect the city and provide important air quality and recreational benefits to the city's residents as well. Future development is being oriented away from these areas. Again, the comparison with Mexico is instructive. Mexico has realized the inherent efficiency/synergy of purpose between land-use planning (*Proyectos de Ordenamiento Ecológico del Territorio (POET)*) and environmental assessment. MARN has not taken advantage of the Municipality of Guatemala City's *Plan de Ordenamiento Territorial (POT)* to know whether a given proposed project should be rejected "*prima facie*" due to its incompatibility with the rational and sustainable use of its proposed location. Even better yet, knowledge of the existence of such a plan offers the advantage that project proponents would first consult with the Municipality's POT to determine *a priori* the appropriateness of the proposed site for a given activity or facility, and then act to make the required change of location or incorporate measures of mitigation to prevent or reduce negative environmental or social impacts.

40. A substantial proportion of environmental license applications to MARN (estimated at between 30 – 40%) involve residential housing construction and minor repairs and upgrade works to existing infrastructure within the Municipality of Guatemala. These applications should be reviewed by the Municipality's Planning Department to determine their compatibility and compliance with its new POT since this planning tool has already identified and located environmentally sensitive or risk-prone areas within its geographic boundaries that are not compatible with certain kinds of housing intensity or other types of development. The Municipality could then send its recommendation on the technical merits of the proposal to MARN, which would then make the final decision on whether to grant an environmental license or not. Such consultant with other relevant Government entities is encouraged by AG 431-2007 and is obligatory for all activities related to the Ministry of Energy and Mines and/or within protected areas (Article 41).
41. Meanwhile, other centers of environmental management expertise in preventing, reducing, mitigating, and/or compensating unavoidable impacts exist in Guatemala, such as the Cleaner Production Center (CPL+) or affected business sector associations, such as the environmental committees of the agricultural export sector (AGEXPORT), the Guatemalan Chamber of Industry (CIG), or the Coordinating Committee of the Guatemalan Agricultural, Commercial, Industrial, and Financial Associations (CACIF)), which are not being utilized to their full potential by MARN to harness their considerable knowledge and resources to serve both the public and private sector interests. Nor has MARN incorporated meaningful (vs. token) civil society and environmental NGO participation in the licensing process.

- *Use of Listado Taxativo has not been adopted in other countries as planned*

42. Finally, in no other country (the United States, Canada, Brazil, Peru, Columbia) or large international development assistance organization (e.g., the World Bank, the Inter-American Development Bank, the United Nations' Environment or Development Programmes, the European Union, the US Agency for International Development (USAID's Regulation 216) , or Britain's Department for International Development or DFID ) that was examined as part of this consultancy has taken such an approach as part of its environmental assessment system. Follow-up queries are underway now with Mexico and should be started soon with the other two countries (Costa Rica and Nicaragua) that participated in the initial analytical work sponsored by the Dutch Department of External Affairs<sup>8</sup> back in the early 2000s that resulted in the original proposal by CCAD/UICN to develop a *Listado Taxativo* as an important component of those countries' environmental assessment systems to ascertain whether Costa Rica or Nicaragua are using the CIU for the purpose of screening projects as part of their EA review processes. Different aspects of various country, donor, or other multi-lateral international institutions are described in the next section.

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<sup>7</sup> Ibid, paragraph 24.

<sup>8</sup> *El Acuerdo para el Fortalecimiento de los Sistemas de Evaluación de Impacto Ambiental en Centroamérica.*

## IV. EA System Approaches Used by Other Countries & Organizations

43. There are a number of other international and national systems for assessing and managing the environmental (and in many systems, the social) impacts or risks of proposed projects or modified existing facilities or operations.

- **The World Bank's Environmental Assessment Safeguard Policy (OP 4.01)**

44. For example, in placing projects into one of four different categories of risk for purposes of determining the level of environmental and social assessment required and the most appropriate choice of assessment tool,<sup>9</sup> the World Bank “examines the type, location, sensitivity [related to the reversibility of impacts], and scale of the proposed project, as well as the nature and magnitude of its potential impacts [within the project’s “area of influence]”,<sup>10</sup> in the first of its 10 Operational or “Safeguard” Policies on environmental assessment (OP 4.01). In addition to the natural environment (air, water, and land), the EA takes into account human health and safety, social impacts, and trans-boundary and global environmental aspects in screening and classifying projects according to their environmental risks.

- **International Finance Corporation's Sustainability Framework and Performance Standard 1**

45. The International Finance Corporation (IFC), the private sector “arm” of the World Bank Group, goes even further in assessing IFC-supported companies’ compliance with their Sustainability Framework, comprised of a Policy of Environmental and Social Sustainability, a set of eight (8) integrated Environmental and Social Performance Standards, and its Access to Information Policy. The Framework was adopted in April 2006 and applied to all proposed investment projects that went through IFC’s initial credit review process. On January 1, 2012, the Sustainability Framework was updated following an 18-month consultation process with stakeholders to update the Performance Standards and Sustainability Policy to:

- (i) Strengthen IFC’s commitments to climate change, business and human rights, corporate governance, and gender;
- (ii) Revise and strengthen its project categorization system, and place greater emphasis on inherent risks and project context;
- (iii) Strengthen due diligence for financial institutions (FIs);
- (iv) Clarify due diligence for Advisory Services; and
- (v) Strengthen public disclosure requirements for extractive industry projects.

46. In addition to assessing potential impacts on the natural environment similar to those covered by the World Bank’s first Safeguard Policy on Environmental Assessment, IFC’s Performance Standard 1 (Assessment and Management of Environmental and Social Risks and Impacts) contains a number of other considerations, including:

- Formal statement of company policy on environmental and social sustainability reflecting IFC’s Sustainability Framework Policy
- Solid waste and hazardous waste management requirements
- Energy Efficiency audits
- Greenhouse gas (GHG) emission estimates
- Due diligence of past contamination of facility site
- Programs of Occupational Health, Safety & Security
- Emergency Preparedness & Response programs
- Extended Stakeholder Consultations beyond the Affected Community
- Participatory Monitoring processes

<sup>9</sup> World Bank; *Guidelines for Environmental Screening and Classification*; OPCS/QACU; p. 1; February 2007.

<sup>10</sup> World Bank; *Best Practices (BP) 4.01 of the World Bank’s Operational Manual for Environmental Assessment*; p. 1; January 1999 updated in March 2007.

- **NEPA and USAID's Regulation 216 Approach**

47. The United States' National Environmental Policy Act (NEPA) became effective on January 1, 1970. One of NEPA's most significant elements was to set up the procedural requirements for all federal government agencies to prepare environmental assessments or impact statements summarizing the findings of an evaluation of the relevant environmental effects of a federal project or action, across the spectrum of reasonably viable alternatives including the "no action" alternative. NEPA also included a declaration of the United States' environmental policies and goals, and established the President's Council on Environmental Quality (CEQ). As one of the most emulated statutes in the world, NEPA has been called the modern-day equivalent of an "environmental Magna Carta."
48. USAID's environmental safeguard policies known as 22 CFR Regulation 216 (aka "Reg. 216"), which was developed by USAID in 1975 to implement the procedural and technical requirements of the NEPA process for activities undertaken outside of the United States, employs a risk-based assessment system for any proposed action that would have a "significant" effect on the environment. Reg 216 defines "significant effect" in a circular manner as any action that would do significant harm to the environment. Therefore, to operationalize its implementation, greater precision in defining an action's "significant effect" on the environment has been developed by USAID taking into account both *direct* and *indirect* impacts, *cumulative* impacts, the *context* in which they might occur and the *intensity* of those expected impacts.

- **Canada's International Development Agency (CIDA) Policy for Environmental Sustainability**

49. In contrast, the Canadian International Development Agency (CIDA),<sup>11</sup> Canada's principal foreign assistance agency, adopted the *Policy for Environmental Sustainability* in 1992 (updated in 1998), which commits CIDA to integrate environmental considerations into its decision-making on policy, programmatic, and project activities. These requirements implement the Canadian Environmental Assessment Act's (CEAA) procedures for "Projects Outside Canada" and apply to all development co-operation projects supported by Canada. In July 1995, CIDA introduced the *Procedural Guide to the CEAA*, to assist country desk staff examine the environmental effects of projects in an appropriate manner at all stages of the project cycle. This Guide has since been supplemented by a series of guidelines specific to the project delivery model (i.e., referred to as "Lines of Business" for health, forestry, economic growth, etc...). The environmental assessment screening process established by the CEAA and its implementing regulations include a number of considerations, such as:
- the environmental effects of the proposed project (including effects of malfunctions or accidents);
  - cumulative effects likely to result from the project;
  - the significance of the effects;
  - public input and participation, where required;
  - technically and economically feasible measures to mitigate significant adverse environmental effects; and
  - any other matter relevant to assessment, such as the need for an alternative to the project, such as the need for any follow-up program, or the effects of the project on the capacity of the renewable resources to meet the needs of the present and those of the future.
50. Beyond the type, size, location, and degree of automation or mechanization utilized by an industrial facility or other economic activity in estimating the degree of environmental risk that a given project or activity poses is the managerial response to the potential risks it poses. Some industries produce very toxic or dangerous hazardous wastes, produce large quantities of solid waste in packaging their products or providing their services, emit highly contaminated liquid effluents or air emissions, or consume large amounts of water or energy in their productive processes. How these are managed in terms of developing a program of risk prevention and mitigation measures is critical in determining what the "effective net" contamination load will ultimately be released to the environment.

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<sup>11</sup> CIDA was recently integrated (effective March 21, 2013) into the newly renamed Department of Foreign Affairs, International Trade and Development to improve policy coherence and to change the perception of Canada's development assistance as "empowerment and not as charity."

- **International Organization of Standardization's (ISO) 14000 series of EMS Standards**

51. Such "mitigated" risks are taken into consideration by other systems, such as NEPA's use of "mitigated findings of no significant impact" (or FONSI, discussed later in paragraphs 70 and 74), or the International Organization of Standardization's (ISO) 14000 series of environmental management system (EMS) standards designed to help organizations voluntarily minimize their environment impacts, comply with applicable laws, regulations, and other requirements, and continually improve their environmental performance. ISO 14000 is similar to the ISO 9000 Total Quality Management (TQM) standard in that both standards pertain to the processes by which products are produced, rather than to the products themselves. As with ISO 9000, certification is performed by an independent third-party rather than being certified by ISO directly to eliminate the perception of any conflict-of-interest in awarding certificates. The ISO 14000 family includes most notably the ISO 14001 standard, which represents the core set of standards for designing and implementing an effective EMS; ISO 14004, which provides additional guidelines for operating good EMSs; and ISO 14031, which contains information and procedures for evaluating a firm's environmental performance once an EMS is established. The new ISO 19011 audit standard is used when auditing a given firm's compliance with both ISO 9000 and ISO 14000 standards at the same time.
52. The ISO 14000 series of standards is based on a set of basic principles and methodology revolving around a 4-step "Continual Improvement Process" of "Plan – Act – Check – Review." The first step of planning is used to assess a company's current EMS, identify gaps in it, and establish objectives and processes to set up an EMS. The second step of implementation involves identifying the resources required and assigning responsibility to members of the organization, especially among top management, for the EMS' operation and integration with other management systems. The third step of checking is required to measure and monitor EMS processes and report progress in achieving expected results and targets. Finally, the fourth step consists of a management review to determine the extent to which the objectives of the EMS are being met, that open lines of communications up and down the organization's management hierarchy are being appropriately used to effectively evaluate changing circumstances, and to make recommendations for further improvement of the system. These recommendations are incorporated through the process of continual improvement, new plans are made, and the EMS moves forward.
53. Certification by ISO 9000, 14000 or 19000 could all be used as acceptable grounds for expediting applications for environmental licenses presented to MARN by firms wishing to open new facilities or operations, or expand or update existing ones, in Guatemala. The use of FONSI (discussed later) can also be used to "down-grade" the risk classification of a project on the grounds that there is reasonable assurance that pre-emptive and pro-active steps would be taken to prevent, mitigate or compensate for environmental (and social) impacts.

- **Peru's National System for Environmental Assessment (SEIA)**

54. Peru's EA national system for environmental assessment (*Sistema de Evaluación de Impactos Ambientales* or SEIA) shares most of the same structures, sequencing, and technical processes as most other national systems analyzed in this paper, but has been plagued by public discontent and violent social protests emanating from a number of serious problems with widespread perceptions of a conflict-of-interest being exercised by sectoral ministries (e.g., the Ministry of Energy and Mines or Industrial Production) that both promote and regulate industries within their respective purviews, inadequate public participation mechanisms, and a lack of transparency in decision-making processes. Even though the Environment and Natural Resources Law (Legislative Decree 613 of 1990) provided a blueprint for environmental assessment and stipulated the procedures to implement the SEIA, almost 20 years passed before general EIA procedures were approved in 2009 by Law 27446 following the creation of a new Ministry of Environment (MINAM) in 2008, which replaced the National Environmental Council (CONAM) that had previously acted to coordinate and harmonize ministry-specific processes.
55. This trend toward greater centralized control and oversight provided by MINAM is being championed by civil society and environmental NGOs, who are proposing the creation of a technical body, attached to MINAM, to:
  - (i) review and approve EIAs for projects across all sectors of the economy,
  - (ii) more effectively disseminate information to the affected and interested public, and

- (iii) increase meaningful (vs. token) public engagement throughout the entire regulatory process from project proposal to decision-making and then extending through to participatory monitoring and shared management functions during the operational phase of large-scale projects or activities.

56. These changes are seen by the Environment Ministry as leading to “reforms [that] would improve the quality of decision-making, contribute to building trust, and reduce uncertainty and conflict,” according to the Vice-Minister for Environmental Management in MINAM.<sup>12</sup>

- **Mexico’s National System for Environmental Assessment (LGEEPA)**

57. In contrast to Peru’s trend toward greater integration and concentration of environmental assessment functions within a central Ministry of the Environment (MINAM), Mexico has trended in just the opposite direction: toward greater decentralization (*desconcentración*) of environmental assessment functions at regional levels within the competent authority (*Secretaría de Medio Ambiente, Recursos Naturales y Pesca* -- SEMARNAP and the *Instituto Nacional de Ecología* -- INE) and greater delegation (*descentralización*) toward lower levels of government. The purpose of this trend has been the goal of lightening the workload on SEMARNAP and INE, but supposedly it has been accompanied by a heavy dose of training and capacity-building of those entities.<sup>13</sup>

58. Mexico’s environmental assessment system contains an ample set of technical criteria or “factors” by which to evaluate the significance of anticipated environmental and social impacts from proposed projects, works, or activities. These include the following:<sup>14</sup>

- Magnitude of the expected impact in terms of its physical extension and intensity
- Duration of the expected impact and its potential reversibility or permanence
- Nature, type (positive or negative), and probability of expected impact
- Importance of potentially affected ecosystem or area
- Applicability of measures to prevent, mitigate, or compensate impacts

59. SEMARNAP and INE have also worked to simplify and streamline environmental assessment procedures through the introduction of expedited procedures and formats (*Informe Preventivo* and *Manifestación Preliminar de Impacto Ambiental*) to address those projects, works, and activities with environmental and social impacts that can be reasonably and reliably mitigated. These are contrasted with solicitations for environmental licences requiring fuller assessments (*Manifestación de impacto ambiental modalidad particular* and *modalidad regional*).<sup>15</sup> In addition, quantified pollution norms and standards (*normas técnicas ecológicas* and *Normas Oficiales Mexicanas*) and 11 guides in key economic sectors (such as forestry, fisheries, industrial production, electrical energy generation and transmission, mining, tourism, and petroleum and natural gas exploration and exploitation), oriented toward the prevention and mitigation of anticipated environmental and social impacts have been published and widely disseminated.

60. The goal of these efforts has been to internalize the implementation of best practices from the initial design of a proposed project or activity by its proponents throughout its construction and operational phases. The hoped-for outcome of this process in Mexico is the gradual self-regulation (*auto-regulación*) by the private sector to ensure greater compliance with these social and environmental safeguards that in turn will provide them with greater certainty and speed of the environmental licensing review and approval process by the competent authorities. The relevance and importance of this increased degree of certainty and timeliness to the private sector should not be under-estimated by Guatemalan authorities.

<sup>12</sup> Quote taken from Mr. Mariano Castro by Tierramérica, a specialised news service produced by IPS with the backing of the United Nations Development Programme, United Nations Environment Programme, and the World Bank; LIMA, Jul 31 2012 (IPS).

<sup>13</sup> SEMARNAP/INE; *La Evaluación de Impacto Ambiental: Logros y Retos para el Desarrollo Sustentable (1995 – 2000)*; November 2000; p. 95.

<sup>14</sup> <http://www.semarnat.gob.mx/temas/gestionambiental/impactoambiental/Paginas/criterios.aspx>

<sup>15</sup> <http://www.semarnat.gob.mx/temas/gestionambiental/impactoambiental/Paginas/proyectos.aspx>

## V. Proposals to Improve the Efficacy and Efficiency of MARN's EA Implementation

61. Now that some of the main strengths and weaknesses of the current use of the *Listado Taxativo* within MARN's implementation of its environmental assessment system have been identified and described, the question that next arises is: what should be done about that in order to improve its efficiency and effectiveness as a project screening and classification tool for the purpose of scoping the most appropriate environmental assessment process? It should be kept in mind that the original purpose of the *Listado Taxativo* was to orient the project proponent in selecting the appropriate environmental assessment instrument (for example, an EAI, DA, or EsIA), and not to determine the category of risk to which it pertained. This is a critical distinction.

### 1. Revert Purpose of *Listado Taxativo* to determine which EA Instrument to Apply, not to Classify Projects

62. The *Listado Taxativo*, as it is currently used, simply does not contain the information needed to make the determination of which risk category a given project should fall into because it leaves out many other critical situational / locational and managerial / operational aspects of the proposed project, work, industry, or activity (discussed in paragraphs 16, 22, 24-25, and 34-35). Therefore, the purpose of the *Listado Taxativo* should be changed back to its original intent to orient and guide project proponents toward selecting the appropriate environmental assessment instrument. Thus, the titles of the columns in AG 143-2007 should be changed from 'Categories A, B1, B2 and C' to the instrument that the proponent should use in submitting his/her application for an environmental license to MARN. That is, they should read "EAI" for an Initial Environmental Assessment, "DABI" for an Environmental Diagnostic with or without an Environmental Management Plan (PGA in Spanish), and "EsIA" for a full Environmental Impact Assessment Study. The determination of which risk category each proposed project would fall into (A, B1, B2, or C) would then be based upon an examination of the findings of the indicated instrument by MARN technical staff, and cleared by MARN managers.

### 2. Review and revise Criteria in *Listado Taxativo* to better capture potential impacts

63. Secondly, the criteria used and the ranges of values associated with different levels of potential environmental impacts for each criterion in the *Listado Taxativo* should be reviewed and revised to better reflect the true nature, (e.g., the severity, extension, duration, etc.) of the risks that would likely be posed by a given operation. This should be done in collaboration with other interested and knowledgeable stakeholders such as other Government agencies, private-sector trade associations, and civil society groups and environmental NGOs. It should also be done at the regulatory level of the ministry (*Acuerdo Ministerial*) instead of at the more formal and less flexible level of a government level regulation (*Acuerdo Gobernativo*) that must also be signed by the President.

64. The *Listado Taxativo* serves a useful purpose in that the nature of the activity is already taken into account since it organizes economic activities into groups with similar inputs, outputs and productive processes. This is a good start since some economic activities or "classes" by their *very nature* pose significant environmental risks from chemical or biological contamination or physical impacts, while other classes of economic activity do not due to their nature. Thus, while the operational impacts or risks associated with individual operations within a given sector or class of economic activities are fairly well known, what is not known are the management response (for example, measures to prevent, reduce, or mitigate those impacts or risks), or the risk of impacts due to the operation's specific location.

65. One tool that is commonly used in many EA systems to address these 'situational' impacts or risks is known as the "Leopold or interaction matrix" developed in 1971 by Luna Leopold, the Nobel Prize winning professor at the University of California, Berkeley for the U.S. Geological Survey.<sup>16</sup> This type of matrix involves not only identifying the potential impacts of operations, but also quantifying them numerically according to the nature of the impact, such as its magnitude, extension, duration, and effects on areas of particular concern or importance such as protected areas or on "Red Listed" species of plants and animals, social or cultural practices, noise levels, traffic and other considerations deemed important or pertinent. See Figure 4 on the next page.

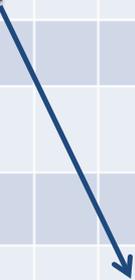
<sup>16</sup> Bass, R. & Herson, A. *Mastering NEPA*, p. 33; 1993.

66. Ranges of scores from 1 – 5 or from 1 – 10 are then defined for each criterion and used to describe each aspect of the expected impact taking into account managerial risk prevention and mitigation measures and site-specific factors that differentiate the impacts experienced in a given place resulting from the same type of project, work, industry, or activity. These individual scores are then summed up and used to classify projects into different categories of risk. Typically, “natural break points” will develop over time for similar types or classes of projects as they are assessed by MARN (or by other collaborating governmental agencies). In some cases, higher scores for any aspect of expected impact (such as risk to a rare, threatened, or endangered species, or to a protected area) can act as an automatic “trigger” requiring a certain, pre-determined level of review or scrutiny, and in some cases, automatic rejection of a proposed project.
67. Not all of the ranges for each aspect of the expected impact need to be the same. For example, while the “intensity” and “extension” of impact can normally be kept to a 5-point range (e.g., 1 for “minimal impact” or “small on-site impact only” up to 5 for “highly severe impact” or “large areas affecting, including off-site”), other criterion, such as “reversibility” may be scaled over a larger range (e.g., from 1 to 10) since an action or activity that is going to have an irreversible impact may need to be “weighted” more heavily in this scoring system to reflect its importance. These are only examples, and the final decisions regarding which criteria to use and their relative weighting should be made in participatory and transparent processes with key stakeholders invited to participate in their establishment (but not in their implementation, which would remain the sole prerogative of MARN). They are useful in terms of creating large enough range of outcome values to clearly establish in which category of risk a given project belongs without creating the problem of “false precision” in the face of uncertainty.

**Figure 4: Illustrative Example of Leopold or Interactional Impact Matrix**

Nature of Impact Type of Impact	Intensity	Extension	Duration	Reversibility	Human Health Impacts?	Social or Cultural Impacts?	Environmentally recognized area?	Red List plant or animal species?	Impacts on Traffic?	Noise nuisance?	Etc...	TOTAL score by Type of Impact
On Surface Water Quality												
On Ground Water Quality or Water Table Level												
On Retention of Rainwater or Increase in Run-off rate												
On Air Quality (dust, smoke, or chemicals released to atmosphere)												
On Solid Waste Quantity												
Use, storage, or disposal of dangerous or hazardous substances or wastes												
Etc...												
TOTAL score by Nature of Impact												

Each cell would be scored on a scale from 1 – 5 or 1 – 10 according to criteria defined for each criterion and summed in bottom far right-hand cell.



Source: Generated by author based on *Mastering NEPA* by R. Bass & A. Herson, p. 33, 1993.

### 3. Review and revise *Categorically Excluded activities in the Ventanilla Agil and Automatically Included activities in the Ventanilla Unica requiring a full Environmental Assessment*

#### • *Categorical Exclusions*

68. For those classes of economic activity that do **not**, by their nature, pose significant environmental risks, a list of “automatically excluded” activities is already maintained by MARN, similar to what is done by USAID in its environmental assessment system (22 CFR Reg. 216.2(c)), which lists a set of 15 specific USAID-supported ‘actions’ that are considered to be “Categorical Exclusions.” USAID’s list includes projects or activities of a ‘non-physical’ nature, such as institution-building grants, matching grants, general support to educational, technical assistance, research or training programs (excluding the construction of facilities, etc.); controlled experimentation; analyses, studies, academic or research workshops and meetings; projects where there is no potential significant effects upon endangered or threatened species or their critical habitat; document and information transfers; and programs involving nutrition, health care or population, maternal or child feeding, and family planning services.
69. However, MARN has included a number of projects, works, industries and activities that it considers to pose “minimal impacts,” such as restaurants, barber shops, hardware stores, and small housing construction and roadwork projects. While these classes of activities are limited in size by the authorizing statute (MARN Administrative Resolution 994-2012), their cumulative effects, especially in highly-populated urban areas, can be significant when viewed in their entirety. Such projects submit initial environmental assessments (EAs) to the fast-track *Ventanilla Agil* process, which covers the same six categories of questions as the ‘normal’ EAI format for the *Ventanilla Unica* process. However, the *Ventanilla Agil* omits a number of important questions, such as:
- Working business hours or hours open to the public;
  - Emissions of gases or combustible materials;
  - Use of dangerous or toxic chemicals or other materials that are stored and/or used on site;
  - Risks from natural disasters or from explosions, fires or flooding;
  - Occupational risks and any protective measures taken to avoid them;
  - Impacts on traffic; and
  - Other potential social and cultural impacts or opposition from local residents.
70. MARN should therefore review the list of activities included for fast-track approval in the *Ventanilla Agil* process and restrict it to the types of projects and economic activities which are truly “non-physical” by their nature, and that do not pose any risk to public health or the environment. Given the current lack of adequate review and credible enforcement, the current implementation of “low-to-minimal” impact projects in the *Ventanilla Agil* process represents an unjustified concession to political expediency at the risk of MARN not fulfilling its legal mandate and regulatory responsibilities to protect the people and environment of Guatemala from undue or unnecessary harm. Such “low-to-minimal” impact projects should be addressed as Category C projects requiring an EAI under the normal *Ventanilla Unica* process (not to be confused with the *Ventanilla Agil* version of the EAI).

#### • *Automatic Inclusions*

71. At the other end of the risk spectrum, USAID also maintains a list of actions, which by their nature, **always** require a full environmental impact assessment. There are 11 specific types of these high-impact projects that are listed in 22CFR 216.2(d), including: river basin development; irrigation, drainage, or water management projects, including dams and reservoirs; agricultural land leveling or large scale mechanization; development of new lands or penetration of new or improved roads into environmentally sensitive areas, any project forcing the resettlement of people; power plants and industrial complexes; and water supply and sewerage projects. To this list, MARN could easily add mining activities, refineries and petroleum pipelines, high-voltage electrical transmission lines, and other large-scale projects that are likely to have serious environmental or social impacts or be highly controversial political issues in Guatemala. MARN should create such a list of “automatically included activities” requiring full environmental impact assessments and publish it officially.

#### 4. *Leverage MARN resources by referring proposed activities in Special Ecological Areas or with existing Territorial Plans to relevant Government agencies for technical recommendation*

72. An additional step that could be easily taken by MARN would be to expand its use of referring environmental license applications in certain instances to other relevant Government agencies for their technical analysis and opinion on the categorization and/or approval of those projects. For example, MARN should conclude its negotiations with CONAP over how proposed projects or activities located within or near protected areas, or those potentially affecting them, should be handled by CONAP in order to efficiently obtain their technical recommendation on the appropriate classification of the project (along with other observations it considers relevant to MARN's decision). Likewise, a number of projects within the capital of Guatemala City could be referred to the planning department of the municipality. A large number of applications currently received by MARN involve projects with small individual environmental impacts, such as the construction of residential properties, small-scale commercial (but non-industrial) businesses, and civil works to maintain or repair public infrastructure (local road, water and sewage, power and communication lines, etc...). It is estimated that between 30% – 40 % of all applications received by MARN fall within these three categories of projects, and could be referred to the Planning Department within the Municipality of Guatemala City for their technical review and opinion. These types of projects or activities, many of which are currently listed as exempted from the normal environmental review process (*Ventanilla Unica*), typically pose significant cumulative risks due to their large numbers within concentrated areas. Many are now fast-tracked through the *Ventanilla Agil* without taking into consideration such cumulative risks, as required by Article 19 of MARN's regulation governing its Environmental Evaluation, Control and Enforcement system (AG 431-2007).
73. In addition, there is currently no spot-checking of these projects in follow-up field visits to ensure their compliance with the conditions of the environmental license, or to ascertain their cumulative impacts. However, the Municipal Planning Department's comprehensive land-use zoning plan (POT) defines which areas within the city are appropriate for different types and densities of building and development based on their environmental sensitivity, vulnerability to natural disasters, impacts on traffic (a major problem in Guatemala City), and access to current and planned public transportation corridors. (See paragraphs 37 and 39-40 for more details of the POT.) Because the POT is based on a spatial Geographic Information System (GIS) platform, it is capable of anticipating and estimating the impacts of a large number of projects whose individual impacts may be small when considered alone, but whose cumulative impacts can pose serious and significant environmental impacts and risks to the environment and public welfare, as required by Article 19 of AG 431-2007.
74. Therefore, MARN can reduce its workload and improve the technical rigor of the environmental and social review process by referring more environmental license applications potentially affecting protected areas to CONAP, and those involving the construction of private homes, small commercial businesses, and low-impact civil engineering works and maintenance of public infrastructure to the Municipality of Guatemala, which possesses the tools and legal authority to adequately assess their true impacts within Guatemala City.

#### 5. *Develop and Disseminate Best Practices Risk Prevention & Mitigation Guides for Specific Types of Activities on a Prioritized Basis*

75. For many of these types of projects or activities with similar risks and thus similar prevention and mitigation measures and strategies, simple guides listing best practices to prevent, reduce, or mitigate their environmental and social impacts already exist in other countries and in private sector associations that could be adapted and applied in Guatemala. Such 'cleaner production' or 'pollution prevention' guides have been developed by bi-lateral donor organizations, such as Canada's "class screening" and cumulative impacts tools to promote sustainable development taking the 'precautionary principle" into consideration,<sup>17</sup> and by multi-lateral institutions like the

<sup>17</sup> <http://www.ceaa.gc.ca/default.asp?lang=En&n=B053F859-1>

World Bank Group’s Environmental, Health, and Safety Guidelines (known as the 'EHS Guidelines')<sup>18</sup> that are technical reference documents with general and industry-specific examples of good international industry practices used by the International Finance Corporation (IFC) in its assessment of funded projects.

76. These types of guides can be very helpful in orienting project proponents to better design their operations in the first place and then in facilitating the environmental review process used by MARN allowing it to expedite their applications with the knowledge that such practices will be incorporated into their operations, as has been the experience in Mexico’s case (see paragraphs 57 – 60). Such “mitigated” findings of no significant impact (‘mitigated FONSI’s’) are commonly used in the United States’ environmental review process (NEPA) to approve projects that mitigate potentially significant impacts to less-than-significant levels. This type of approval, coupled with the dissemination of guides containing practical, tangible steps and measures to prevent, reduce, and/or mitigate impacts, encourages the adoption of environmentally and socially acceptable practices and operations. In order to “get ahead of the curve” in preparing such guides while keeping up with their current workload, MARN should solicit the support of donor agencies and private-sector associations with relevant knowledge and experience in a specific area or sector.
77. In summary, a large number of applications currently processed by MARN at both extremes of the risk spectrum (that is, in Categories C and A) that are now overwhelming its resources and staff time could potentially be reduced by taking the following steps:
- revising the list of “low to minimal” impact projects, works, industries and activities (Category C projects) that are “categorically excluded” from the normal environmental licensing process (essentially what the purpose of the *Ventanilla Agil* is now, as it is currently implemented, but with many of the 39 classes of activities posing physical or biological impacts removed);
  - revising the list of project classes, which by their nature should automatically conduct full environmental impact assessments (that is, Category A projects), as described above in paragraph 65, that would bypass the initial environmental assessment process;
  - referring projects in or near protected areas or those potentially affecting them to CONAP for their technical review and recommendation back to MARN, as well as the large number of applications received by MARN for residential properties, commercial operations, and public infrastructure works occurring within the boundaries of Guatemala City to the municipality’s Planning Department for their technical review and recommendation as an input to MARN’s licensing decision; and
  - developing or adopting practical guides of best practices used in other countries to prevent, reduce or mitigate potential environmental and social impacts caused by commonly occurring, but similar kinds of impact and prevention and mitigation measures in the residential housing and building construction, small commercial and retail shops, and light manufacturing sectors.

#### 6. Focus MARN Resources and Staff Time on Medium-Risk (Category B) Projects

78. For other projects and activities seeking environmental licenses from MARN that do not pose such clearly minimal or high risks and impacts (that is, those not falling within either the list of low-risk Categorical Exclusions of the *Ventanilla Agil* or high-risk Automatic Inclusion activities in Category A), they would continue to proceed submitting Initial Environmental Evaluations (EAls) directly to MARN via the *Ventanilla Unica*. The EAI format is six pages long and contains several dozen questions covering six different aspects of the proposed operation. For example, there are sections on the legal status and general information of the proposed activity, its location and the characteristics of nearby areas, productive inputs and processes, hours of operation, number of workers, etc. Other sections cover topics regarding its potential environmental and social risks as well as potential impacts on energy use, traffic, and nearby residents.

<sup>18</sup>[http://www1.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/IFC+Sustainability/Sustainability+Framework/Environmental,+Health,+and+Safety+Guidelines/](http://www1.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Sustainability+Framework/Environmental,+Health,+and+Safety+Guidelines/)

79. It was estimated by MARN to require two days of a consultant's time to complete, but interviews with registered consultants indicated that twice that much time is typically required to completely fill out an EAI. Even this level of effort in preparing EAIs is not unreasonable for projects presenting an unknown degree of potential environmental or social impact when compared to other initial screening instruments used in the United States (under NEPA) or in its overseas applications (for example, when applying USAID's Initial Environmental Examination), or compared to those used by multi-lateral development banks such as the World Bank, the Inter-American Bank, or the Asian Development Bank.
80. As it does now, MARN would review those EAIs to determine their correct classification. In most cases, this would be a decision between determining whether the proposed project presents low-to-medium risks (Category B2) or medium-to-high risks (Category B1). However, in some cases due to mitigation measures taken by the proponent (see paragraph 70 for "mitigated FONSI's"), MARN could make the determination that the risks are minimal and therefore the project qualifies as a Category C project. In other cases, due to other mitigating factors, such as proximity to a protected area or an area with a pre-existing development plan or land-use planning instrument in place, MARN might decide to raise the risk classification to a Category A project. There are no changes proposed in these cases, only that it should be the EA instrument, in this case, the EAI, that is used to classify the project, and not the *Listado Taxativo*.
81. What is proposed for Category B projects representing mid-range environmental impacts and risks is that MARN focus its attention and internal resources on these projects, not only in assessing the projects' impacts, but also later during the implementation of the construction and operation of the activity with credible supervision and enforcement actions to ensure compliance with the conditions of the license. The reason for this is two-fold: (i) Category C projects by definition represent low to minimal impacts and thus should not be a priority of MARN as demonstrated by the implementation of the *Ventanilla Agil* in mid-2012; and (ii) an alternative strategy is proposed for handling Category A projects that pose the highest risks.
82. Thus, MARN should focus on Category B projects since they pose significant risks and represent an important, but manageable number of the total number of environmental license applications made to MARN. Exact numbers could not be obtained from MARN during this consultancy, but it was estimated that between 500-600 of the nearly 2,400 applications submitted to MARN via the *Ventanilla Unica* in 2012 were Category B1 or B2 projects. See Table 6 below for the number of projects by category received by MARN in 2012. This represents a reasonable and realistic number of cases for MARN staff to focus on in assessing the projects upfront and then later in conducting spot-checks of compliance with the conditions of the license to provide a credible level of enforcement.

*Table 6: Number of projects by category*

EA applications received by MARN in 2012	Number	%	Category
Initial Environmental Evaluation (EAI)	993	42.15	C
Environmental Diagnostic (activities of low impact or DABI) without a Plan of Environmental Management (Plan de Gestión Ambiental or PGA)	499	21.18	C
Environmental Diagnostic (existing actividades de bajo impacto o DABI) with a Plan of Environmental Management (Plan de Gestión Ambiental or PGA)	64	2.72	B2
Initial Environmental Evaluation (EAI) with a PGA	111	4.71	B2
Environmental Impact Study (for proposed projects)	371	15.75	A o B1
Environmental Diagnostic (actividades existing before Law 68 of 1986)	318	13.50	A o B1
<b>Total</b>	<b>2356</b>	<b>100.00</b>	

*Source: MARN provided these figures in Excel spreadsheet to consultant in January 2013.*

83. Currently, there is too little supervision to create a credible threat of enforcement of the legal requirements of licenses that are granted, undermining the credibility of MARN and its EA licensing system. Again, practical environmental and social risk prevention and mitigation best-practices guides developed in collaboration with donors and private sector associations to disseminate to project proponents before they submit proposals to

MARN would greatly facilitate the work of MARN in evaluating their environmental impacts (by knowing that they have adopted best-practices) as well as increase voluntary compliance with the licensing conditions due to a greater understanding and appreciation of the reasons for those conditions.

84. Increased voluntary compliance in turn decreases the need for enforcement actions by MARN staff, which as can be seen in the Table 7 on the following page, is woefully understaffed in the enforcement division of MARN (Dirección Nacional de Cumplimiento Legal) with only a Director and three legal advisors, 12 clerks (*oficiales de trámites*), and seven administrative assistants.

**Table 7: MARN Staffing by relevant Divisions for Environmental Assessment and Supervision of Licenses**

<b>Division of Environmental Management (DIGARN)</b>	<b>Number of Staff Members by Function</b>	<b>Division of National Coordination (DGCN)</b>	<b># of Staff Members by Function</b>	<b>Division of Legal Enforcement (DGCL)</b>	<b># of Staff Members by Function</b>
Ventanilla Agil	4 (1 staff and 3 assistants)	Regional Delegates	21 staff	Director and legal advisors	4 Lawyers
Ventana Unica	3 staff	AMPI	1 staff	Law clerks	12 clerks
Env. Quality Unit	35 staff (30 professionals)	AMASURLI	1 staff	Administrative support staff	7 staff
Watershed Mgm't Unit	17 staff	Regional Representatives	8 staff		
Auditing	3 staff	HQ Mgm't	5 staff		
<b>Total DIGARN staff</b>	<b>62</b>	<b>Total DGCN staff</b>	<b>36</b>	<b>Total DGCL staff</b>	<b>23</b>

*Source: MARN provided these figures in Excel spreadsheet to consultant in January 2013.*

85. In addition to using its own resources and staff time to assess the risks posed by projects and monitor their compliance with the conditions contained in their licenses, MARN can leverage the expertise and experience of other parties involved in the environmental licensing system, such as registered consultants and consulting firms. For starters, MARN could change the incentive structures under which registered consultants or consulting firms currently work by evaluating the quality of the environmental assessments they submit to MARN on behalf of their clients (project proponents) and making this information publicly available to interested parties, such as project proponents who may be interested in knowing the quality of past work products submitted by a consultant or consulting firm. Even though they are legally responsible for the veracity and completeness of the assessments they submit to MARN on behalf of their clients, these controls appear to be inadequate to incentivize full disclosure and analytical rigor on the part of many registered consultants, according to persons interviewed during the consultancy with extensive experience and knowledge of this dynamic. Right now, consultants and consulting firms are essentially held accountable by their clients, who pay for their services, but who have a strong self-interest in having them understate any expected risks or impacts. By evaluating the quality of work submitted by consultants and consulting firms, and making those assessment publicly available, MARN can change the incentives of the system by making consultants and consulting firms more accountable to MARN and not just to their clients.
86. A similar system is used by the World Bank in which every project is self-evaluated at its completion (Implementation Completion and Results (ICR) Report), and then this ICR is independently reviewed and validated by the Independent Evaluation Group, which also comments on the "Quality of the ICR" in terms of a number of criteria, including: "Quality of evidence, Quality of analysis, Internal Consistency and Consistency with guidelines, Results-orientation, and Conciseness" among other factors.

## 7. Secure Adequate Funding Mechanisms to Conduct EAs for High-Risk (Category A) Projects

87. Category A projects are those presenting the “highest potential risk of causing “significant” environmental impacts within all the classes of the *Listado Taxativo*” (AG 134-2005, Article 28). MARN has defined 64 classes of projects, works or activities as potentially belonging to Category A based upon a full environmental impact study (EslA), including 35 classes that are exclusively Category A (by definition). Included within this category are “megaprojects” of a national, regional, or transcendent nature. Of the nearly 2,400 applications that MARN processed in 2011, only about 300 were classified as Category A projects (exact figures were not available).
88. In comparison to MARN’s classification system, it is easy to identify similarities with the World Bank’s “*Guidelines for Environmental Screening and Classification*,” (Feb. 2007). The World Bank also classifies a project as Category A “if it is likely to have adverse environmental impacts that are significant (based on type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts). These impacts are generally large-scale, irreversible, sensitive, diverse, cumulative or precedent-setting and may affect an area broader than the sites or facilities financed by the project.” (pp. 1-2). In contrast, NEPA does not classify projects into discrete categories like the World Bank or MARN, but it does define proposed actions as having a “significant impact” by considering the context which the impact occurs (that is, the affected interests, locality, region, or society as a whole) and the intensity of the expected impact.
89. Once MARN has made the classification decision that a given project, work or activity is Category A, then according to its enabling legislation (Article 10 of AG 431-2007), it may assemble a multi-disciplinary team of recognized technical experts to assess the proponent’s proposal (with the Minister’s previous authorization) if it is deemed necessary given the project’s “novelty, complexity, or transcendence in their scope/breadth.” The extensiveness of the review process is further described in the regulation (Article 44), wherein it states that the technical recommendation may be reviewed by an internal Technical Assistance Committee when that is deemed necessary or advisable. To date, the full implementation of that article has not been exercised by MARN. This higher level of review should be expanded and applied to mega-projects with impacts that are considered “novel, complex, or transcendent in scope or breadth.”
90. In terms of obtaining the funds required to pay for these project assessments, MARN has the authority to generate the economic resources “derived from providing services to users in order to carry out its substantive functions and activities” (Article 3). Currently, the environmental licenses that are granted by MARN are paid for on an annual basis with set fee schedules established in Article 79 of AG 431-2007. These range from 200 Quetzales (Q) annual for Category C licenses, to Q5,000 for Category B2 and Q15,000 for Category B1, to Q25,000 for Category A project licenses. For certain projects (described above), these funds can be supplemented by Performance Bonds and Environmental Insurance policies to ensure the proponent’s compliance with the conditions of the environmental license granted by MARN. These additional fees can reach as high as Q100,000 for Category A performance bonds to pay for the costs to “verify compliance with the environmental obligations of the license.” However, there are no additional funds currently available to pay for the costs of a conducting a credible and thorough review of the environmental assessments of very large and complex project proposals. MARN currently lacks the resources, time and expertise to conduct the necessary level of technical review required by such extraordinary projects. Investigating how this critical gap in the safety net provided by Guatemala’s EA process can be closed should be addressed in a future analysis.
91. In contrast, the 2003 NEPA Task Force Report to the Council on Environmental Quality “*Modernizing NEPA Implementation*” provided a range of estimated costs and timeframes for conducting various kinds of environmental assessments (EA) divided into three groups: small EAs not expected to pose “significant” impacts, large EAs of more controversial or high profile projects with “significant” impacts that can be reliably mitigated to a “non-significant” level (i.e., mitigated FONSIs), and environmental impact studies or “statements” (EIS) for projects that pose “significant” impacts.

- Small EAs: require from 2 weeks to 2 months to complete; and cost between US\$ 5,000 and US\$ 20,000.
- Large EAs: require from 9 to 18 months to complete; and cost between US\$ 50,000 and US \$200,000.
- EISs: require from 1 to more than 6 years to complete; and cost between US\$ 250,000 to US\$ 2,000,000.

92. However, an alternative to set amounts fixed at one point in time, it may make more sense to make them a one-time cost and tie that cost to an annual incremental increase pegged to the inflation rate in Guatemala. Instead of being fixed by legislation (AG 431-2007), this cost could be tied to some percentage of the total investment of the Category A project (e.g., from 1 – 2 percent) to cover the costs of highly technical and specialized assessments of environmental impact studies that MARN must conduct within two months for Category A projects and within four months for “mega-projects.” The costs of such assessments place an unreasonable burden upon MARN due to their technical complexity and sophistication, and the one-time only cost for such extraordinary reviews/assessments should be borne by the project proponent as a cost of obtaining an environmental license to operate in the country. The objective of this approach is to provide an alternative, unbiased technical assessment done by a credible source to compare with the environmental impact study (EslA) presented by the project proponent. Right now, MARN does not possess that capacity. The technical merits of the case, along with public concerns and perspectives, could then be considered by MARN in reaching its final decision to approve, condition, or disapprove the application for an environmental license.
93. Once an operation or facility is functioning, on-going environmental mitigation measures and monitoring programs and/or social compensation funds are required as part of an Environmental Management Plan (PGA) or system. One alternative to the current “set price” approach being taken by MARN would be for MARN to include the costs of running an agreed PGA into the terms of the environmental license that the project proponent would be obligated to pay, as this would reflect the actual costs of running a mitigation and monitoring program.
94. In the United States, the costs to comply with environmental assessment requirements and run environmental management systems for large industrial sectors tend to range from 2 – 5 percent of the total investment to build and operate the facility. Thus, limiting on the amount of a bond or insurance policy set at Q100,000 (approximately US \$12,000- \$13,000) for a multi-million dollar investment in an industrial plant or complex is clearly inadequate to achieve its stated purpose of ensuring compliance with environmental requirements. In addition, because many large “megaprojects” are owned and operated by multi-national corporations or foreign companies partnering with Guatemalan firms (such as is common practice in the mining sector), most of these firms already voluntarily comply with international standards of environmental management and corporate social responsibility (CSR). Thus, in many cases, they are accustomed to incorporating much higher costs for environmental compliance into their operating budgets.

## VI. Concluding Observations

95. One of the most striking aspects of researching background materials for this consultancy and report were the similarities found between the findings of earlier studies and this analysis on a number of issues. First of all, the **design** of the environmental assessment system was found to be fundamentally sound and up-to-date with other comparable EA systems worldwide. The sequencing of steps beginning with the initial screening and scoping of projects, the tailored use of various types of assessment instruments reflecting the breadth and seriousness of projected risks, the incorporation of relevant external technical analysis and public participation in the decision-making process, the consideration of alternatives, and follow-up mitigation measures taken on the basis of monitoring data and programs that were all contained within the regulatory implementing framework of AG 431-2007 were judged to be more than adequate to achieve their purpose. What was found lacking was the **implementation** of the system as it was designed to be operated due to a lack of adequately trained and compensated staff, financial resources, and political support, much of which reflects a deeper political context in which protection of the environment and public health are not highly valued. The resulting **institutional weakness** is most noticeable in the lack of any credible enforcement of the regulatory framework, which was widely

perceived as “the major gap” in a 2010 study of the EA system conducted by the Dutch donor assistance program.<sup>19</sup>

96. Secondly, MARN’s EA system was designed upon the premise of “collaborative associations” between the public sector (that is, MARN and other relevant Government agencies), the private-sector as represented by commercial and trade associations such as CIG, CACIF, AGEXPORT, and civil society represented by environmental and social rights NGOs and civil society organizations. However, as was pointed out in the 2010 Dutch study<sup>20</sup> this collaborative association was “asymmetrical” in that while project proponents and representatives from the private sector occupy important and influential spaces in policy- and decision-making processes, civil society and private citizen interests lack the resources and technical sophistication to adequately represent their concerns and interests. This asymmetry creates an atmosphere of social conflict and opposition rather than one of collaboration.
97. Thirdly, MARN needs to manage in a more strategic manner. This manifested itself in at least two ways during the consultancy: (i) actively managing (vs. passively maintaining) the registry of consultants to change the incentives they have to provide more unbiased analytic services to MARN and the public interest it serves, and (ii) fully leveraging external resources and the expertise of other entities in carrying out its mandate. This first issue was discussed in more detail in paragraphs 79-80 while the latter was discussed in paragraphs 36-41 and 66-68.
98. Finally, there is an almost total absence of any discernible or tangible intent on the part of MARN to enforce the laws and regulations that currently exist, reflecting a lack of resources to support credible enforcement activities and the political will to act more assertively on behalf of larger, longer-term interests of society. More importantly there is a deeper failure to appreciate the economic and social consequences of continued environmental mismanagement and degradation on the part of narrowly-focused private sector interests that are either unwilling or uninterested in voluntarily complying with the letter and spirit of current laws. Nor on the part of society at large which does not demand stronger actions to stop destructive or unsustainable practices or activities that threaten the country’s continued economic growth and development. There is a widespread perception of collusion and corruption between the government and private sector economic interests held by the general public. This is especially prevalent among the rural poor who feel largely marginalized and disempowered by decisions mainly involving the energy sector and extractive industries that affect them most directly and adversely. This sense of powerlessness has resulted in increasingly violent confrontations between different socio-economic and ethnic groups within Guatemalan society. And it appears that no specific tool or analytical process will have any appreciable impact on this larger socio-political context until and unless the underlying **environmental governance** issues are also addressed to build greater public trust and social harmony than currently exists in Guatemala.

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<sup>19</sup> Iturbide, M.J. and Samandú, L. *Evaluación del apoyo de la cooperación holandesa al desarrollo de capacidades- Estudios de caso basados en evidencia*, pp. 18, 35, 42, and 46. April 2010.

<sup>20</sup> *Ibid*, pp. 10, 19, 41, and 45.

## Annexes

### Annex A: MARN and USAID Meeting Summary Notes (in Spanish)

- *Memoría de la Reunión en USAID sobre el Listado Taxativo (25 de enero 2013)*

**Asunto:** Reuniones para compartir los hallazgos preliminares del análisis del Listado Taxativo adentro del Sistema EA en MARN por la consultoría al Proyecto USAID-PRS

**Participantes:** Ana Vilma Pocasangre (Project Supervisor, USAID/Guatemala), Dani Newcomb (Environment Officer – USAID/Guatemala), Oscar Murga (¿título?), Alejandra Sobenes (Coordinadora, Componente 4, Proyecto USAID-PRS) y Richard Carlos Worden (consultor internacional)

**Temas Destacados Discutidos:**

Presentación de hallazgos:

El Consultor Richard Carlos Worden, presentó los hallazgos en el análisis del listado taxativo, siendo el principal el que el listado taxativo no es un instrumento idóneo para caracterizar impactos ambientales. El instrumento ha sido un referente que ha orientado a los proponentes a considerar preliminarmente una categoría determinada de impacto. Existiendo una gran debilidad en la capacidad y expertise del recurso humano y la falta de recursos económicos en la Dirección General de Gestión Ambiental del MARN, el listado ha venido siendo utilizado como el instrumento de categorización de impacto que como sola referencia. Se mencionó el volumen de expedientes que se maneja en el MARN (3000 expedientes por año, aproximadamente) y que de éstos, la mayoría, se refiere a bajo impacto. Se presentaron algunas propuestas para descargar al MARN de este tipo de expedientes, llevando una mejor coordinación para la descentralización de algunas actividades, por ejemplo con la Municipalidad de Guatemala. También se presentaron algunas primeras recomendaciones para el MARN en otros aspectos del proceso de EIA, como el tema de registro de consultores y el tratamiento de evaluación de proyectos de alto impacto.

Otro de los temas discutidos fue sobre la importancia de conocer qué se está haciendo respecto a la categorización de impactos ambientales en otros países centro-americanos fue mencionada por la Srta. Newcomb, quien ofreció ponerse en contacto con personas en la instancia mexicana (SEMARNAT) sobre el tema. Sin embargo, el estudio comparado con países vecinos no fue acordado en los TdR por el tiempo corto de la consultoría (sí fue ofrecida información, por ej.: NEPA en los EE.UU., CEEA en Canadá, y instituciones internacionales tales como Reg. 216 de USAID, ó del Banco Mundial, del BID y de las Naciones Unidas). Este proceso de seguimiento podría ser parte de una tarea por consultores locales y/ó con los técnicos del MARN. Por último se hizo referencia al tema relativo al rol de USAID como donante en el futuro cercano respecto a MARN y el sistema de EA en Guatemala. USAID indicó que se evalúan los requerimientos del Ministerio cuando éste prioriza los temas que quieren apoyo. En ese sentido, podría considerarse temas tales como la preparación de más guías y manuales específicos de prevención y mitigación en sectores claves/prioritarios; o el apoyo al MARN en el desarrollo de mecanismos de contratación de empresas consultoras pre-calificadas para analizar los Estudios. Dependerá de la solicitud del MARN y de las posibilidades de la USAID de prestar el apoyo. USAID refirió que será el MARN en que analizará el informe y que manifestará su interés de dar continuidad a las recomendaciones sugeridas y al apoyo de la cooperación para implementarlas.

- *Memoría de la Reunión en MARN sobre el Listado Taxativo (28 de enero 2013)*

**Participantes:** las Directoras de las Direcciones Generales de Gestión Ambiental (Sra. Teresa Calderón) y de Cumplimiento Legal (Sra. Ogaldez), el técnico de la Dirección General de Coordinación Nacional (Sr. ¿?), el técnico de la Unidad de Calidad Ambiental en la DIGARN (Lic. Luis Carlos Rodríguez), y otros oficiales del MARN con la Sra. Alejandra Sobenes (Coordinadora, Componente 4, Proyecto USAID-PRS) y el Sr. Richard Carlos Worden (consultor internacional).

**Temas Destacados Discutidos:**

Presentación de hallazgos:

El Consultor Richard Worden, presentó los hallazgos en el análisis del listado taxativo, siendo el principal el que el listado taxativo no es un instrumento idóneo para caracterizar impactos ambientales. El instrumento ha sido un referente que ha orientado a los proponentes a considerar preliminarmente una categoría determinada de impacto. Existiendo una gran debilidad en la capacidad y expertise del recurso humano y la falta de recursos económicos en la Dirección General de Gestión Ambiental del MARN, el listado ha venido siendo utilizado más como el instrumento de categorización de impacto que como sola referencia. Se mencionó el volumen de expedientes que se maneja en el MARN (3000 expedientes por año, aproximadamente) y que de éstos, la mayoría, se refiere a bajo impacto. Se presentaron algunas propuestas para descargar al MARN de este tipo de expedientes, llevando una mejor coordinación para la descentralización de algunas actividades, por ejemplo con la Municipalidad de Guatemala. También se presentaron algunas primeras recomendaciones para el MARN en otros aspectos del proceso de EIA, como el tema de registro de consultores y el tratamiento de evaluación de proyectos de alto impacto.

El tema más ampliamente discutido se refirió a la recomendación preliminar referente al tratamiento de la evaluación de proyectos de alto impacto. Muy específicamente en cuanto al costo para el Estado de este tipo de evaluaciones (EslA). El consultor mencionó la posibilidad de que este tipo de estudios fuera realizado por consultores contratados y supervisados por el MARN, pero pagado por medio del pago de la licencia exigida a los proponentes, lo que ahora es Q25,000/año por proyectos de la Categoría A. Este tema fue considerado de manera preliminar y el MARN considera muy difícil implementar por razones de la resistencia del sector privado (los proponentes) y por percepciones de ausencia de imparcialidad del sector público, de las ONGs, de pueblos indígenas y de la sociedad civil. Sin embargo, se sugiere investigar más los sistemas de pagos en otros países (tales como en los EE.UU., Colombia y México) para averiguar si hay suficiente sustento para abordar el tema en el informe al MARN.

Otros temas mencionados incluyeron el tema de un Registro “evaluado” de Consultores por parte del MARN; el uso del Listado Taxativo solamente como referencia para determinar si hay riesgos ambientales y sociales ó no. El consultor recomienda no usarlo para categorizar los proyectos en cuatro categorías. El consultor recomienda el perfeccionamiento de los instrumentos de análisis y revisión de los expedientes al Ministerio (el Preliminar, la Inicial y el Estudio Completo) es indispensable; y la necesidad y ventajas de orientar y dedicar más recursos financieros y humanos del MARN a la revisión y vigilancia de los proyectos de Categoría B; y la categorización de los proyectos de Categoría A por definición (igual al sistema de USAID).

Al final, los participantes conversaron mucho sobre la propuesta de hacer más alianzas estratégicas con otras instancias del estado, tales como la Municipalidad de Guatemala y con el Consejo Nacional de Áreas Protegidas (CONAP). Este tema se considera MARN como una prioridad urgente para aliviar la gran carga de trabajo de MARN en la revisión de proyectos en áreas donde ya existen Planes de Ordenamiento Territorial (POT) en la Municipalidad de Guatemala ó con Planes de Manejo Ambiental (PGA) en las Áreas Protegidas. Es un asunto que parece que el Ministerio va a seguir en adelante de inmediato.

Por último se hizo referencia a que el consultor terminaría el análisis correspondiente y enviará al MARN el informe preliminar, el cual será analizado por el MARN quien hará llegar al PRS sus observaciones para ser enviadas al consultor y poder concretar el informe final.

## Annex B: References

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- CEQ Websites of U.S. Council of Environmental Quality. Link to the overall White House CEQ website: <http://ceq.hss.doe.gov>; many links to CEQ Guidance at: [http://ceq.hss.doe.gov/ceq\\_regulations/guidance.html](http://ceq.hss.doe.gov/ceq_regulations/guidance.html); and link to U.S. EPA's special supporting role at: <http://www.epa.gov/compliance/nepa/submiteis/index.html#comments>
- CP+L One of the best websites for pollution prevention and cleaner production links to specific "class" level best practices guidance is: <http://www.cleanerproduction.com>
- DFID Great Britain's Department for International Development. Main website at: <http://www.dfid.gov.uk/> with supporting links at: <http://www.dfid.gov.uk/pubs/files/approach-environment.pdf>; <http://www.dfid.gov.uk/pubs/files/environment-guide-2003.pdf>; and <http://www.dfid.gov.uk/pubs/files/environmental-screening-review.pdf>
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- USAID Main link to USAID's 22 CFR Regulation 216 is: [http://transition.usaid.gov/our\\_work/environment/compliance/regulations.html](http://transition.usaid.gov/our_work/environment/compliance/regulations.html) with an unofficial translation in Spanish at: [Unofficial Translation of 22 CFR 216 in Spanish.](#)
- World Bank Main link to World Bank's Environmental and Social Safeguard Policies are:

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Annex C: Detailed Calendar of Meetings Held during First Week of Consultancy

Enero						
Hora	Lunes	Martes	Miércoles	Jueves	Viernes	
	14	15	16	17	18	
9:00	Llegada a la Oficina del Proyecto PRS		Llamada con USAID/Washington (Jim Hester & Victor Buellen)	Ing. Vásquez. Oficina USAID/PRS	Reunion con Manuel Bastarrechea. Consultor del MARN	
10:00	Consultor Richard Carlos Worden. Instalarle en la oficina USAID/PRS y reunir con gerentes (Luis Casteñeda y Alejandra Sobenes).	Ministra del Ambiente, MARN, y Directora y staff de DIGARN	Error en tiempos acerca de la reunión con USAID	Reunion con Teresa Robles, Jennifer Tikka y Ana Vilma Pocasangre. Oficinas de USAID/Guatemala		
10:30						
11:00		Continuación con la Directora Teresa Calderón y staff de DIGARN	Skype con Sr. Stephen Lintner y Charlotte Bingham del Banco Mundial en Washington			Skype con Janine Fererati del IDB en Washington y dar seguimiento en Guatemala
11:30						
13:00 - 18:00	Reunion con staff de la Dirección General de Gestión Ambiental (Luis Carlos Rodriguez y Edwin Gomez)		Reunion con Juan Carlos Godoy en la oficina de TNC.	Ricardo Santa Cruz y equipo gerencial de AGEXPORT. 15 av. 14-72 zona 13. 5505-0628	Skype con Roberto Troya de WWF y seguimiento en Guatemala	
				Cena con Adan Pocasangre	Cena con Alejandra Sobenes	

Annex C Continued – Second Week of Consultancy

Enero						
Hora	Lunes 21	Martes 22	Miércoles 23	Jueves 24	Viernes 25	
9:00	Jorge Cabrera. ONG's. Oficina USAID/ PRS	Reunion con gerencia del Comite Ambiental de CACIF	Reunion con Omar Samoyoa del BID en Guatemala			
10:00	Reunion con Klaus Koper de la Assoc de Construcción en CACIF				Reunion (de-briefing) con Ana Vilma Pocasangre, Oscar Murga y Dani Newcomb en USAID	
11:00	Reunion con Edwin García, Mamerto Gomez, Gustavo Gonzalez y Cesar Beléton de CONAP	Reunion de seguimiento con CONAP	Reunion con Susana Asensio de Planificación en la Municipalidad de Guatemala		Preparar la presentación al MARN para el lunes, 28 de enero	
			Almorzar con Alejandra Sobenes en el Centro			
13:00 -- 18:00	Daniel García y miembros de la Comisión de Ambiente de la Cámara de Industria.		Oscar Nuñez y Luis Castillo de los Defensores de la Naturaleza	Trabajar en la Oficina del Proyecto PRS	Preparación de la Presentación a USAID/Guatemala	Salida al Lago Atitlan
			Reunion de Seguimiento con Ivan Buitron de AGEXPORT			

Annex C Continued – Third Week (partial) of Consultancy

Enero			
Hora	Lunes 28	Martes 29	
9:00		Enviar todas las materiales de Guatemala a Bangkok por correo	
10:00		Asuntos últimos pendientes	
11:00		Trabajar la Memoria de las reuniones en USAID/GT y MARN con Alejandra Sobenes	
	Regreso de Lago Atitlan		
13:00	Ajustes finales a la Presentación	Preparar timesheets y expense reports for Weidemann Assoc.	
-- 18:00	Presentación al MARN (Directores de DIGARN, DGCN y DGCL)	Final de la Consultoria. Salir a California	