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Presentation

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The balance between economic growth and the preservation of nature has been the focus of several debates around the world. Such debates are vital, to the extent that proper management of natural wealth is directly related to the conservation of the quality of life on the planet.

In the scope of the Government, the NGOs, the press and the various segments of society, it is essential to think deeply upon sustainable development; the seriousness of the permanent nature of the damage caused to ecosystems, as well as the need for proper use of non-renewable resources with a view to ensuring the well-being of the current generations and of the future ones.

The size of the problem has turned the environment into a strategic area in the global scene. In line with this context, the Supreme Audit Institutions (SAIs) began to reinforce attention to environmental audits, in order to provide determinations and recommendations to the managers in charge, with a view to the improvement of the actions pertaining to ecological protection.

This was the guideline for the preparation of the 100th edition of the *Journal of the Federal Court of Accounts* now offered to the public. It is a special edition - whose content focuses on this specific issue - launched at a very significant time: the Week of the Environment, more precisely during the International Conference of Environmental Auditing, promoted by the TCU.

This issue, edited in Portuguese, English and Spanish, contains key articles for broadening the view of the future of the environment.

The reader will find, in the first section of this volume, articles by renowned Brazilian authorities. Next, texts produced by the famous SAIs of Canada, Colombia, Holland, Norway, New Zealand and the United Kingdom are grouped. To these, in the last part, are added articles by specialists and experts with experience in the matter.

It is therefore a great pleasure for this Presidency to present the 100th edition of the *TCU Journal*, which will certainly offer to those who read it a valuable contribution on the environmental theme, as it will to those who carry out activities linked to this field of work and who wish to move forward in the construction of a better world.

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Environment, Sovereignty and Responsibilities

“Humankind is the solemn bearer of the obligation to protect and improve the environment for present and future generations”

Declaration on the human environment made by the UNO in 1972

Ubiratan Aguiar

Brazilian Court of Audit
Minister

INTRODUCTION

The environmental issue has become a world-wide concern in the last decades, being the focus of discussions in a variety of forums, under various shades. Since it involves a subject that awakens enthusiasm, it is often addressed without much reflection, in the heat of discussions, leading both defenders and opponents into speeches filled with sophisms.

Addressing the environmental issue responsibly requires a brief digression, with a view to setting the issue in its proper context by outlining the evolution of the world economy and the use of natural resources.

The end of the nineteenth century was a period of considerable development for modern society, with the introduction of a new model of production that generated significant changes in the patterns of social and commercial relations. The Industrial Revolution – and consequently the technological revolution – increased the commercial and financial flows, as well as migratory flows of the work force. As a result, a large number of jobs were offered to unskilled workers, leading to economic growth and better income distribution.

This process went on until the beginning of the twentieth century, when it was harshly interrupted by the First World War.

With the economic crisis of the thirties, the new society that had emerged faced stagnation of the monetary flows and a mass of unemployed workers, as a result of the migration to the large urban centers that had taken place in the nineteenth century. That was the beginning of the great challenge of increasing the use of the labor force and capital.

In this context, room was made for the emergence of developmental economic theory, later called Keynesian theory, which preached economic development based on intense use of labor and capital, supported by the belief in limitless use of inputs that were abundant and cheap at that time: labor and natural resources.

The intense use of natural resources for the promotion of economic growth, which then seemed infinite, remained virtually unchanged until the early seventies when, alongside the oil crisis caused by war in the Middle East, the first scientific studies warning about environmental issues were conducted.

In face of this scenario, it became clear that a transformation or evolution of the concept of economic development was required, and thus a more comprehensive expression of sustainable development emerged, whereby economic growth was linked to the need for environmental conservation.

This global concern with the paths of economic growth based on a predatory model was, at that time, expressed in the United Nations Conference on the Human Environment, in Stockholm, in 1972, resulting in the Stockholm Declaration on the Human Environment that states as a guiding principle:

“Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development”.

From then on, the issue of sustainable development has been the focus in numerous such events, and was prominent in the 1992 Rio de Janeiro Conference and the 2002 Johannesburg Conference. The former resulted in the Rio Declaration on Environment and Development, of which I highlight the following principle:

“The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”.

THE INTERNATIONALIZATION OF THE DISCUSSIONS

However, joining stable rates of economic growth and respect towards environmental issues is not an easy task. One of the biggest difficulties is related to the internationalization of the discussion and the variety and diversity of the agents involved.

Alien to the will of men, nature has nothing to do with the borders that artificially delimit national territories. Its effects enter countries without the need for permit visas or assent. The storms caused by global warming of the planet, acid rains and radioactive clouds, all have a will of their own.

This inconvenient autonomy of nature forces humanity to remember, ever more frequently, that the planet is only one, whether we like it or not. That the poor and the rich share the same space that we call “Earth” and that the microenvironment where each one lives it depends on other people, who most of the time are unknown and far away. Only by joining the efforts of all the inhabitants of the planet, regardless of race and creed, will we be able to ensure the comfort of each one.

In international forums promoted for the discussion of the environmental issue, attempts to maintain the “status quo” and to place blames are often more intense than the actions to address the problems.

“Alien to the will of men, nature has nothing to do with the borders that artificially delimit national territories. Its effects enter countries without the need for permit visas or assent.”

The selfishness of those who seek to maintain their “status quo” does not allow the realization that, in face of the exhaustion of the developmental model, only the adoption of a holistic system, where the benefit of each individual is extended to all others, can effectively eradicate the evils that contribute to environmental degradation.

The search for culprits is a mistake, in that it intends to address the environmental issue from the point of view of present events, not taking into account the huge environmental losses inherited from those who irresponsibly sought their development without regard for the depredation of their natural parks and exportation of their wastes, which still goes on today.

It is true that the economic and social situations of North-South countries are completely different, therefore so are their interests, which makes any discussion on international environmental policies extremely complex.

RIGHT TO SOVEREIGNTY

It is in this context of diverging and conflicting interests that ideas are launched, in the guise of solutions, aimed at affronting the self-determination of the nations and casting doubt on the real intention of their proponents. In the discussions about the environmental issue, the representatives of the international system – dominated by economic interest and therefore by so-called developed countries – frequently seek to protect their respective national interests, often in a colonialist approach that is incompatible with the evolution of foreign relations.

As early as 1962, aware of this trend, the United Nations General Assembly enacted Resolution N. 1803 under the heading “Permanent Sovereignty over Natural Resources”, in face of international law and the need to promote international cooperation in the economic growth of developing countries. The resolution, reflecting the concern with the establishment of the right of sovereignty of the states that make use of natural resources, declared:

1. *“The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned.*

2. *The exploration, development and disposition of such resources, as well as the import of the foreign capital required for these purposes, should be in conformity with the rules and conditions which the peoples and nations freely consider to be necessary or desirable with regard to the authorization, restriction or prohibition of such activities.”*

Again in relation to sovereignty, the 1972 Stockholm Declaration on the Environment decreed that the local and national administrations and their respective jurisdictions are responsible for establishing most of the rules and for enforcing large-scale measures related to the environment, and included among its principles:

“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”

Finally, the 1992 Rio de Janeiro Declaration on Environment and Development expresses the principle of sovereignty when it confers to the States the sovereign right to exploit their own resources pursuant to their own environmental and development policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

UNDERDEVELOPMENT AND ENVIRONMENT

It is a fact that part of humankind's environmental assets – waters, forests, natural resources – are located in the territories of countries that are considered underdeveloped or developing. It is around the use of these assets that much of the discussion regarding environmental preservation takes place.

The fact that many of the environmental problems are motivated by underdevelopment is not questioned. The need to eradicate poverty and meet basic needs, which has already been addressed in the so-called developed countries, requires immediate use of natural resources. The expansion of agricultural borders to the loss of various ecosystems, the intensification of mining activities and the incentive to polluting industries, for example, constitute attempts to generate jobs and income to bear the burden of surplus economies, capable of fulfilling international commitments to pay unreasonable foreign debts.

Because of the phenomenon of globalization, companies in underdeveloped countries are driven to focusing on results, rather than on their production processes. As a result, labor rights are reduced and consistent environmental policies are nonexistent.

Even the absence of a strong environmental legislation might be deliberate, to the extent that several companies, when deciding on a site for their facilities, consider the costs of complying with environmental rules. The absence of such rules can mean, for the underdeveloped countries, the chance to create jobs and the increase of their Gross Domestic Product.

If the technological gap were not enough, the competitiveness of the companies of the so-called developed countries is assured through generous subsidies, particularly in the agricultural sector, the main market of emerging economies.

The ceaseless search for competitiveness without the support of the international community drives underdeveloped countries into a vicious circle where the attempt to eradicate poverty generates even more poverty, in that basic sanitation and education are ignored, condemning future generations to disease and low-pay jobs.

The international system then demands from the underdeveloped or developing countries an environmental position that is absolutely incompatible with the minimum requirement of their national realities.

Apart from the responsibility of the countries that are often referred to as “third world”, it is also generally agreed that the problems of an environmental nature were mostly generated by the countries that today are referred to as developed, as a consequence of their increasing industrialization and technological development.

So this is the impasse: should the underdeveloped countries be condemned to poverty, without the chance to use their natural resources, as did the countries that are rich today because of the extractivist policy that they adopted? How will the underdeveloped countries be able to contribute to environmental conservation, if they find themselves engulfed in severe social and economic problems related to hunger, health, violence, education, which require generation of wealth to be solved?



COMMON AND DISTINCT RESPONSIBILITIES

The real question for poor countries is how to overcome underdevelopment and to bear the burden of responsibility for environmental preservation. The question that must be formulated, however, is: must this responsibility be borne exclusively by these countries? Certainly not. The responsibility of the nations of the North cannot be limited to demanding results and threatening the sovereignty of other nations.

It is the asymmetry of conditions faced by the developing and developed countries that supports the principle of common but distinct responsibilities. On the one hand, the developed countries want to conserve the natural resources on Earth, but they no longer have enough of them. On the other, the developing countries need to overcome poverty and see in the use of environmental resources a viable means of achieving this goal. Thus, to conserve their natural resources, they would have to pay the opportunity costs developed countries did not have to pay in their growth process.

In this sense, international cooperation and the transfer of financial and technological resources are essential for developing countries to be able to use their wealth without damaging the quality of the environment.

In the context of shared responsibilities, the responsibilities of developed countries can be summarized as follows:

"The real question for poor countries is how to overcome underdevelopment and to bear the burden of responsibility for environmental preservation. The question that must be formulated, however, is: must this responsibility be borne exclusively by these countries? Certainly not. The responsibility of the nations of the North cannot be limited to demanding results and threatening

- allocation of direct resources, in the form of donations, to fund institutional strengthening, data collection and research, and other necessary actions for the conservation of the remaining resources (during Rio 92, the industrialized countries agreed to allocate 0.7% of their GDP to environmental protection in developing countries; however, this has not occurred. On the contrary, aid has decreased every year. In 92, it was 0.33% and in 2000, 0.22%);

- allocation of indirect resources, such as facilitation of the payment of the foreign debt;

- technology transfer to assist environmental protection actions in developing countries;

- the real question for poor countries is how to overcome underdevelopment and to bear the burden of responsibility for environmental preservation. The question that must be formulated, however, is: must this responsibility be borne exclusively by these countries? Certainly not. The responsibility of the nations of the North cannot be limited to demanding results and threatening the sovereignty of other nations. reduction of subsidies to the agricultural sector;

- implementation of controls to stop the population from consuming environmental products from illegal sources;

- encourage consumption of environmental goods produced in a sustainable way, identified by means of certification and labeling.

On the part of developing countries, responsibilities include:

- guaranteeing that environmental resources are explored in a sustainable manner, by means of enforcement of appropriate development policies;

- granting of incentives only for sustainable enterprises and restriction of implementation of unsustainable enterprises;

- compliance with effective environmental rules in the operation of public enterprises;

- provision of basic services to the population, such as education, sanitation, health, among others;

- appropriate enforcement of command and control instruments (normatization and control).

The discussion on the role of developed countries, however, goes far beyond this.

As Fernando Pessoa, the Portuguese poet, wrote, “everything starts in the river of my village”. It is therefore necessary to adopt domestic solutions, alongside the search for solutions to the wider problems.

Developed countries adopted for decades a pattern of inadequate consumption that resulted in the destruction and exhaustion of most of their natural resources.

They required and still require environmental resources, using raw materials and other goods from unsustainable sources, such as illegal timber, and have a high level of consumption of goods that generate wastes that remain in nature for many years.

It is time to develop an ethical environmental policy, whereby discourse is accompanied by concrete actions, such as the condemnation of biopiracy, which makes us pay royalties for the use of our native species, and the signing of the Kyoto Protocol, which limits the emission of gases that cause the greenhouse effect.

CONCLUSION

As Dostoyevsky wrote in “Uncle’s Dream”, “we all know that a man who gets lost in an unknown part of town, especially at night, will never again walk properly through the streets. Some unknown force seems to impel him, at every moment, to turn into another street that is in his way.”

It will take a huge effort of humankind, lost in the confusion of possible paths for the environmental issue, to overcome the fatalism envisaged by Dostoyevsky.

Simplistic proposals, such as the invasion of national sovereignty, emerge as promises of solutions that end up only removing the scientific focus from discussions, and hiding the true factors that cause environmental degradation.

Only the eradication of poverty, with the support of developed countries in a policy of shared responsibilities, can assure the sustainability of the use of environmental assets, since, as Francis Bacon said, “*one can only conquer nature by obeying it*”. ■

The Challenges of *Amazônia Legal*

"It escapes us, in the Amazon, the vastness only to be measured, if divided; the immensity that needs reducing in order to be appraised; the greatness only unveiled if abridged, through microscopes, and an infinity dosed little by little, slowly and slowly, indefinitely, torturously..."

Earth is still mysterious. Its space, as Milton's space, hides in itself. Annuls its own hugeness, extinguishing, falling all over, abridged to the geometrical fatality of the earth curvature, or deluding curious eyes with the treacherous uniform of its immutable aspects. Human intelligence would not bear impromptu the weight of that amazing reality. It will have to grow with it, adapting to it, in order to dominate it. To see it, one should renounce the purpose of unveiling it."

Euclides da Cunha

Humberto Souto

Brazilian Court of Audit
Minister

Euclides da Cunha arrived at the Amazon in 1905, assigned to head a Brazilian commission created to handle borderline issues with Peru. He produced a series of essays, which are still considered one of the best studies ever produced about the Amazon region. Almost one hundred years following that historic moment, we can still feel, with the same intensity as he did, the weight of the forest before us. A century later, the vastness, still not completely explored, intensifies the responsibility we assumed towards its appropriate management. In every Brazilian, lies an inner desire to dominate it, to grow with it, adapting it. More than a desire, I would say this is a responsibility, as the efforts employed today will guarantee that the Brazilian nation can continue to benefit from this asset belonging to all of us.

The Federal Court of Accounts is rendering accounts to society on a share of this responsibility. At the Plenary Session on 14th April this year, I had the grateful opportunity to present process TC nº 017.231/2003-8 for the Collegiate to pass judgment. This process contains the Operational Nature Audit Report, focused on governmental actions aimed at protecting the environment in the Amazon Region and providing its development by means of sustainable forest management techniques.

In my Vote, I highlighted the value I ascribe to initiatives such as this audit, given the strategic importance of the audited subject and its social relevance, in view of the urgent character of our search for sustainable development of the Amazon Forest, without losing sight of the environmental protection.

The present article – written to fulfill the unanimous request of my Colleagues; whom I salute in the person of the President of the House, Minister Valmir Campelo – is based on the Audit Report carried out and on my Vote presented to the Plenary of The Federal Court of Accounts during that session. The commitment I undertook with this initiative is to present you with a brief view of the importance the Federal Court of Accounts devotes to the theme, and our concern regarding the preservation of the Amazon Forest.

CONTEXT OF THE AUDIT: AMAZÔNIA LEGAL (LEGAL AMAZON)

The region defined as *Amazônia Legal*, in numeral VI of paragraph 2, article 1, of the Brazilian Forestry Code (Act nº 4.771/1965, altered by Provisional Rule nº 2.166-67/2001), is outstanding both for its vast territorial dimension and for its social, economic and environmental diversity. Its territory comprises seven States (Acre, Para, Amazonas, Roraima, Rondonia, Amapa e Mato Grosso) and part of another three States (Maranhão, Tocantins e Goiás).

Worldwide, the area is prominent for encompassing the largest tropical forest in the world, covering approximately 400 million hectares, thus representing an important assortment of forest and environmental products. Within the country, the view on the importance of the region and its environment as an asset, was even highlighted in the Federal Constitution in paragraph 4, article 225, as follows:

“The Brazilian Amazonian Forest, the Mata Atlântica, the Serra do Mar, the Pantanal of the Mato Grosso state and the Coastal Zone are national assets, and their utilization shall take place, in compliance to the law, within conditions which ensure the preservation of the environment, including the use of natural resources”.

In the national scenario, the *Amazônia Legal* region has been characterized as an agricultural border, and a rapid expansion of agricultural and livestock-raising activities is being observed. Such occupation process, however, has been based on simplistic models, in which the original vegetation is removed and substituted by a monoculture of grains or pasture. In the process of exploiting new areas, the wood sector has been acting as a catalyst in the expansion of the agricultural border,

once the removal of wood facilitates deforestation for farmers, who can fund the clearance operation of the area with the sale of their produce. According to data from the National Institute of Spatial Research (Inpe), the deforestation rate of the Amazon Forest is around two and a half million hectares per year. At this rate, the region has lost 12% of its vegetation in the last 30 years.

Therefore, one can conclude that the Amazon Forest, despite its recognized importance, is being threatened by inadequate occupation, with no consideration for its effective potential, and no concern for the implementation of a productive system compatible with environmental preservation. However, the actions to be taken on this regard cannot be oriented by a radical and blind conservation policy, without taking into consideration all the economic potential of the resources of *Amazônia Legal*, and turning it into a “huge ecologic reserve”. The current constitutional text itself defines an asset and provides for its utilization, nevertheless, establishing that this utilization should be done under conditions that assure the preservation of the environment.

This situation resulted in the approval of the inspection within the previously mentioned process, within the scope of the Federal Court of Accounts Auditing Plan for the second semester of 2003. This effort, developed by this Court of Accounts, aims at identifying effective governmental actions, so as to support initiatives promoting the development of the Amazon region in a sustainable manner. I will briefly present the methodology used in the audit and the results achieved.

However, the actions to be taken on this regard cannot be oriented by a radical and blind conservation policy, without taking into consideration all the economic potential of the resources of Amazônia Legal, and turning it into a

In order to clearly identify the focus of the investigation, as well as the limits and dimensions of the work, the following auditing issues were defined:

1st) Is it possible to guarantee that sustainable forest management is in fact “sustainable” (environmentally sound, socially just and economically viable)?

2nd) Is the implementation of sustainable forest management plans being sufficient to guarantee sustainability in the exploitation of the forest in the Amazon region?

3rd) What is required for the application and dissemination, by the Federal Government, of knowledge acquired from sustainable forest management projects?

SELECTION OF THE OBJECT AND SCOPE OF THE AUDIT

Having as guidelines the concern with forest conservation and the identification of actions to promote the sustainable development of the *Amazônia Legal* region, a lot of attention was dedicated to the wood sector, considering its significance for the region – the sector circulates around USD 2.5 billion a year, totaling around 20% of the agribusiness exports in the country. The focus of the operational audit was, therefore, directed towards the identification and examination, within the wood sector, of techniques and actions aimed at the maintenance of the sector in a socially fair manner and reducing the environmental impact it generates.

The scope of the audit was then defined: to study successful experiences related to the employment of techniques of sustainable forest management in the Amazon, identifying successful actions promoting the sustainable development of the region and that could be supported and adopted by the Federal Government, as well as presenting recommendations to improve the governmental performance in the area of environmental protection.

Decree nº 1.282/1994, in paragraph 2 of article 1, regulates the provisions of the Brazilian Forestry Code related to the Amazon Forest. It defines sustainable forest management as the management of a forest so as to obtain economic and social benefits, respecting ecosystem sustainability mechanisms. Such definition makes clear that, in order to be sustainable, this management should be economically viable, ecologically correct and socially just.

AUDIT FINDINGS

THE FIRST QUESTION

In reference to the first question, with regards to the possibility of guaranteeing that sustainable forest management is, in fact, “sustainable”, the first observation was that results obtained with the adoption of sustainable forest management in forest exploitation contributed to improving socio-economic and environmental conditions in the region.

Part of this conclusion was taken after some visits to wood companies with certified forest areas. Forestry certification is granted in Brazil by the Brazilian Forest management Council (private entity) according to norms and standards internationally established. It guarantees the origin of forestry products, attesting that the wood used in the product originates from an appropriately managed forest, i.e., is ecologically sound, socially just and economically viable, and in conformity with current legislation. Certified enterprises are subject to external audits which evaluate and monitor the activities developed.

In Brazil, forestry certification covers over 1.3 million hectares, approximately 36% of which (460 thousand hectares) in the Amazon. Within the nine Brazilian wood companies with certified forest areas in the region, four were visited: Cikel Brasil Verde S.A., Gethal Amazonas S.A., Mil Madeireira and Juruá Florestal Ltda. The conclusion was that the requirements established by the certification body in order to guarantee the sustainability tripod (environmental soundness, social justice and economic viability) are effectively met. Labor and safety laws are observed, in addition to some extra benefits offered to workers, such as a private healthcare plan, assistance with the purchase of medicines and the basic food basket. In the visit, one could observe that, with the compliance to certification requirements, there was an increase in job posts and income.

This first observation was also based on the analysis of the business model implemented by Maflops – *Manejo Florestal e Prestação de Serviços* (Forest management and Services Rendering), based on wood production in settlement communities. The model provides settled families with a road network and forest management plans for each property, in addition to payment for the sale of part of their wood to the company. Maflops employs community members in forestry inventory and woodcutting, using low-impact techniques. Small farmers are made aware of the negative aspects of the cut-and-burn type of agriculture, and are encouraged to market non-wood products. The company also helped building houses for the settled families using resources provided by Incra.

With regards to the sustainability aspect of the management employed, the team concluded that low-impact exploitation assures long-term maintenance of the forest structure, reducing cutting cycles and costs, and increasing productivity.

Low-impact exploitation systems (or stewarded exploitation) have been developed as a response to social demands for forest conservation and environmental protection. Such systems, aim to make use of the best exploitation techniques available, so as to reduce harm to residual forests, soil depletion and erosion, protect water quality, mitigate the risk of fire and help, at least potentially, maintaining biodiversity regeneration and protection.

Recent research carried out in Eastern Amazon by Embrapa, by the Tropical Forest Institute and by Imazon have shown that low-impact exploitation systems (EIR - *exploração de impacto reduzido*) offer financial, market and human resources advantages, when compared to conventional exploitation (EC - *exploração convencional*). According to BARRETO, P. e AMARAL, P., op. cit., 1998, in stewarded exploitation the volume of wood obtained is 30% higher than in non-stewarded exploitation (38.3 m³/ha *versus* 29.7 m³/ha). This higher productivity of EIR results from a lower degree of waste during tree cutting and logging.

In addition, higher costs with EIR planning are fully offset by waste reduction (in conventional exploitation 6.8% of the volume cut is wasted) and by significant increase in productivity of the dragging and storage operations. Data from the Tropical Forest Foundation showed that the total cost per m³ is US\$ 15.68 in conventional exploitation, and US\$ 13.84 in stewarded exploitation. Therefore, even if the same gross revenue were to be obtained with the wood, profitability would be higher with the use of low-impact exploitation. The increase in productivity observed in EIR, resulting in a cost reduction per m³, allows the increase of labor utilization in the operation.

The audit conclusion regarding the first question is that sustainable forest management is effectively sustainable, that is, environmentally sound, socially just and economically viable. The traditional model of wood logging generates waste of usable wood and harms the future productive capacity of the forest, as it is not planned. With appropriate management, wood logging can be a sustainable economic activity, ensuring job and income generation, and at the same time, conservation of forest characteristics.

Consequently, it is worth pointing out the key role of the Federal Government in the induction and dissemination of management techniques that allow appropriate development of forestry activity. Therefore, it is necessary to continue and expand governmental actions encouraging the adoption of sustainable management by actors in the sector, who are often unaware of the benefits brought by this type of exploitation. As positive examples, one can mention ProManejo and the Management Project of the Tapajos National Forest.

SECOND QUESTION

Regarding the second question, relative to whether “the implementation of the plans for sustainable forest management is sufficient to guarantee the sustainability of forestry exploitation in the Amazon region”, the results of the audit showed that wood exploitation in the Amazon is not being carried out in a sustainable fashion due to flaws in the implementation and inspection of the management plans.

With regards to control regulation on forest management in Brazil, several measures were adopted in the 80's and 90's aiming at controlling harmful forest logging. Theoretically, these regulations should result in the sustainable management of the Amazon, but reality is different. Despite comprehensive rules controlling forest management, deforestation and illegal logging still remain in the region.

There have been slow advances on forest management. In 2001, the amount of wood originated from management plans (according to IBAMA's criteria) represented only one third of the total amount of wood extracted from the Amazon region. Certified forests produce only 2% of the total amount of logs

extracted. According to LENTINI, M, op. cit, 2003, only nine out of 2.570 wood companies own certified forests.

It was also observed that IBAMA's reviews on forest management plans (PMF - *plano de manejo florestal*) have resulted on the halt or cancellation of a significant part of these plans (63% in 1998 and 43% in 2001). According to leaders of the Institute, such situation is caused mainly by the lack of standardization of technical assessment criteria for the approval of PMFs. Furthermore, PMF approvals by IBAMA or affiliated institutions have been significantly slow, disregarding by far the 60-day limit imposed by the Normative Instruction MMA nº4, 4/3/2002.

Adding to these factors, it was observed that the wood utilized by industries in the Amazon coming from natural forests, could also be originated from another legal source: the authorized deforestation, in spite of being restricted to 20 % of the rural property, when situated in forest areas within *Amazonia Legal*. However, it was verified that in several cases of authorized deforestation, the techniques adopted for the extraction of wood caused great negative impact on the environment. Also, it was observed that legal deforestation through these means represents a source of even cheaper wood than the one coming from the PMFs.

Thus, the conclusion reached by the audit regarding this second topic, is that legal deforestation and illegal logging are still prevalent in relation to forest management plans, and this predominance is directly related to governmental action, or to the absence of it, once governmental control has not been able to guarantee the effective sustainability of approved forest management plans, and besides that, the excessive bureaucracy for the approval of forest management plans and the lack of inspection end up inevitably affecting investments on sustainable forest management.



THIRD QUESTION

Regarding the third topic about “what is necessary for the application of the know-how acquired with forest management plans by Federal Government”, there is such complexity involved, that it unfolds into at least two variables. The first is with regards to rural land policies implemented in the *Amazonia Legal* area. According to the audit, they jeopardize the implementation of forest management for the reasons demonstrated as follows.

A study carried out by Imazon and the World Bank, reported by SCHNEIDER *et al*, 2000, concluded that regions with rain precipitation above 2.200 mm/year – a characteristic that is observed in about 45% of the Amazon area – are not recommended for farming and livestock raising. Nevertheless, governmental projects for rural land distribution implemented during the 60's, disregarded the potential of the Amazonian ecosystem and developed, with government funding, production systems incompatible with environmental limitations (mainly monocultures in vast areas of land).

The problem persists, as INCRA is currently implementing settlement projects in the region, which do not offer basic conditions so that settlers could develop sustainable economic activities, making them an easy target for wood loggers who co-opt them in, buying the wood from their land for insignificant prices, depleting the forests. Unable to use appropriate techniques, the settlers use burning for “clearing” the area, frequently causing the fires showed in the media. The absence of a sustainable productive system, makes small farmers leave their plots or sell them to big farmers, contributing, therefore, to the concentration of land ownership in the hands of a few.

The Brazilian Forestry Code (Law nº 4.771/1965, with alterations made by Provisional Measure nº 2.166-67/2001), in its article 16, establishes rigorous limitations for deforestation of rural properties in the Amazon region. It introduces legal reserves, consisting of compulsory maintenance of the native vegetation in 80% of each property situated in forest areas and 35% for those situated in areas of *cerrado*. Clear felling is not permitted in legal reserves, therefore not allowing for their use as grazing or cultivation areas, leaving a low-impact forestry exploitation as an alternative for its utilization. Therefore, one can conclude that rural land policies in the Amazon should consider, mainly and previously, the natural potential of the settlement area.

Based on the economic aptitude of the area, governments should implement or encourage projects compatible with the existing environmental restrictions (for example, the previously mentioned community forest projects developed by Mapflops), dedicating attention to providing financial and structural conditions for the sustainability of the enterprise. With regards to financial conditions, it is important to highlight that the low availability of credit lines for forestry activities and the excessive requirements to approve the funding, may result in encouragement to other activities with more credit availability, as is the case with agriculture.

Forest management, as previously mentioned, is economically viable and allows for the conservation of forests, and can be used as a predominant option for production systems in settlements, replacing farming activities that frequently contribute to increasing deforestation rates and result in the consequent loss of the environmental asset.

legal reserves

The second variable in the third question, relates to the audit conclusion stating the need for the implementation of a sustainable forestry policy.

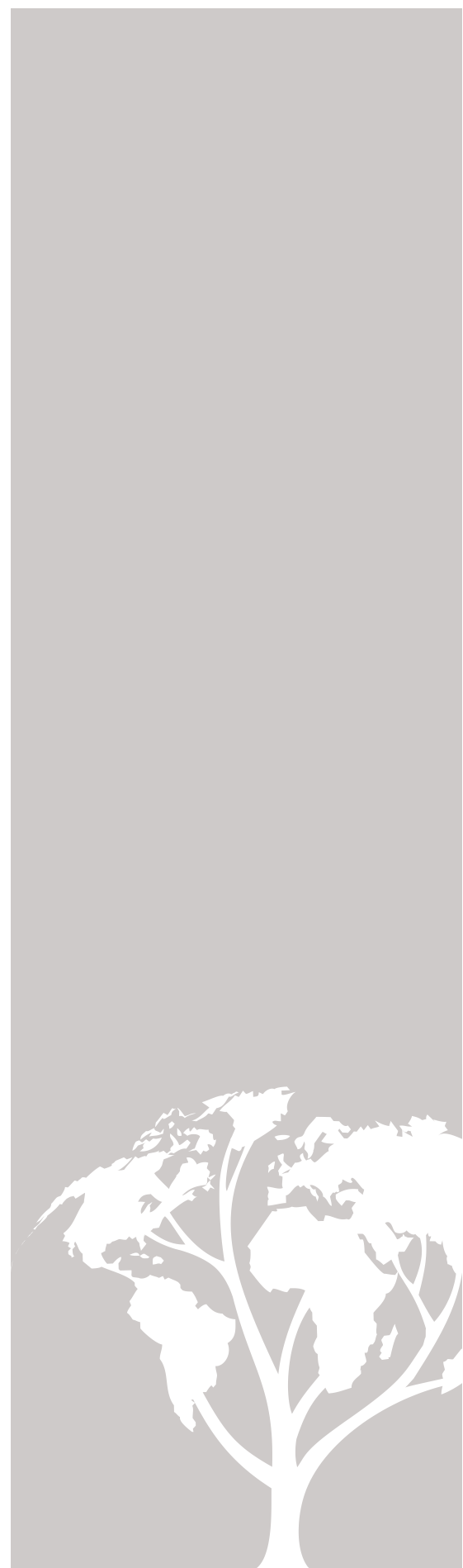
According to data published in *Indicadores Rurais* (Rural Indicators), year VII, n°49, wood logging and its byproducts generated a trade balance surplus of 2.5 billion dollars from January to September 2002, with exports reaching US\$ 3,069 billion and imports totaling US\$ 491,8 million. This sector ranks in the third position among the most exported products. Data in the period from January to September 2003 showed a positive variation of 28,3% on exports, while imports decreased 10,4% in relation to data from 2002. Therefore, not only the material aspect of the wood sector is quite relevant, but also its potential to generate income for the country.

.Despite the economic importance of wood activities, it is observed that current Brazilian forestry policy is not compatible with the economic magnitude of the sector or with the territorial dimensions it should encompass. The Multi Year Plan (PPA) 2004-2007 forecasts the expenditure of R\$ 107,419,298.00 with this area in the next four years, indicating an average yearly availability of less than R\$ 27 million (if no contingent protection comes into place) for a sector that generates more than US\$ 2.5 billion a year and needs urgent and deep transformations in its *modus operandi* in order to evolve from being a wood extractor to becoming a wood producer.

The conclusion reached by the audit regarding this second variable related to the third question is that some points need to be reassessed or improved by government administrators, aiming at the legality and sustainable development of the wood sector: access to forests, funding, policies encouraging sustainable exploitation, fomenting, technical assistance, inspection, publishing sector's data, promotion of Brazilian products abroad, among others.

Norms published by IBAMA in 2003, require land titling documentation of the area for the approval of management plans, no longer accepting only land ownership documents. With this change, several wood loggers have not managed to approve their management plans, therefore, losing the right of access to the forest. However, it must be verified if the rule in place is compatible with the reality of the Amazon region, where according to the work *Fatos Florestais da Amazônia* (Amazon Forest Facts), found at www.imazon.org.br 47% of the land is public land or have no definite titling. Maybe a solution can be found within legality.

Another critical point indicated is that access to funding for the forestry sector has been difficult, and there are other complaints regarding the fact that the stock of wood is not accepted as a collateral.



It is necessary to make equal conditions for the wood originated from legal deforestation and the wood originating from management plans. The current bureaucracy for the approval of management plans, clearly more complex and time-consuming than the one necessary for authorized deforestation, discourage entrepreneurs who end up extracting the wood via legal deforestation or even illegal logging.

The fomenting, technical assistance, publishing data of the sector and promoting Brazilian (legal) wood products abroad are some of the points that should be encouraged by the public sector, in order to induce the growth of sustainable wood activities. It could be mentioned, for example, the fact that data such as production, trade surplus and other indicators of the sector end up being omitted, because they are included in global indicators of the agricultural sector.

The inspection of wood logging activities is also a problem point. The continental dimension of the country compared to the small number of IBAMA inspectors, has led to an inefficient performance. It is necessary to reach out for modern ways of inspection, examining the possibility of using remote tracing techniques, satellite images, monitoring by Inpe, as ways of identifying and focusing on the regions that should be inspected. The introduction of a system similar to that used for the custody chain of logged wood (a tracing process of wooden goods to confirm its origin), shaped in accordance to forestry certification, could confer improved reliability to the origin of the wood.

Certainly, without modernizing the inspection, and considering the current situation of the cadres of IBAMA inspectors, there is little chance that the control of wood activities will increase the expectation that those who violate the law will be punished, and consequently the restraint of illegal logging.

CONCLUSIONS

The audit carried out by the Federal Court of Accounts, that I summarize in this document, demonstrated that forest management comes as the most adequate way for the rational exploitation of native forests, with advantages in relation to the traditional way of wood exploitation, because of its lower production cost, higher productivity, safer market and maintenance of forest structure, as well as providing for the exploitation of non-wood resources in the exploited area.

The Amazon Forest currently represents the largest tropical forest reserve in the world, a fact that mobilizes attention worldwide for the protection of this important ecosystem. The current levels of deforestation and degradation of the area are still worrying and there are several obstacles to an effective and increasing implementation of sustainable forest management in the region. However, if measures are taken with a view to make viable and stimulate appropriate forest management, there are perspectives of sustainable development for the wood sector, creating jobs, tax revenues, social and economic benefits, as well as the possibility of keeping the level of forestry exploitation compatible with the environmental restrictions of the region.

It is imperative and urgent, the implementation of a series of measures by governmental bodies and entities, specially collective actions, in view of the enormous magnitude of the challenge involved in establishing adequate policies for the Amazon region. To this end, I have put forward to the Plenary of the Federal Court of Accounts, the proposal of establishing recommendations, which have received unanimous support from my highly regarded Colleagues.

To the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), it was recommended the adoption of measures aiming at simplifying the process of approval of forest management plans; to study the possibility of establishing mechanisms to even the competition between the wood originated in forest management and that from legal deforestation; to standardize the technical evaluation criteria for the approval of forest management plans; and the capacitation of employees for the execution of standardized processes of evaluation and inspection of forest management plans.

The Federal Court of Accounts recommended to the Secretariats of Forestry and Biodiversity, of Amazon Coordination and of Sustainable Development, all part of the Ministry of Environment, and to the National Institute for Colonization and Agrarian Reform (*Incra*), that be produced the macro mapping of *Amazônia Legal*, aiming at making land titling issues more evident, as well as the potentials of its ecosystem, in order to guide forestry policies in the region.

It was also recommended to the same entities, in consultation with Ibama and Banco da Amazônia (*Basa - Amazon Bank*) the establishment of a sustainable forestry policy for the *Amazônia Legal* considering the aptitudes of each ecosystem, land regularization, forestry permits, tax incentives for sustainable exploitation, fomenting, forestry technical assistance, recovery of degraded areas and emphasis on modernizing inspections.

Specifically to *Incra*, it was recommended that when designing the Projects of Development and Settlement in the Amazon region, the forestry aptitude of the area should be taken into consideration, providing, whenever possible, the structural and financial conditions favorable to the sustainable exploitation of natural resources, and to promote land regularization, with priority given to conflict areas.

To the Secretariat of Production Development, belonging to the Ministry of Development, Industry and Trade, the Federal Court of Accounts recommended the study of strategies, so as to improve publicity on the potential of Brazilian tropical woods in the world market, with a view to increase the number of species legally traded abroad.

Finally, it was recommended to the Secretariat of Logistics and Information Technology, in the Ministry of Planning, Budget and Management, and also to Ibama, the study of ways to regulate the compulsory verification of raw material origins, specially regarding the legality of the extraction, whenever federal government entities and institutions are to purchase products with wood in its composition..

In summary, as declared on my Vote, expressed in the TC nº 017.231/2003-8, it is conspicuous to realize that forest management, as a way of exploitation, is an example of good practices of protection and promotion of development in *Amazônia Legal*, and can be effectively considered sustainable. On the other hand, the effective implementation of such system, as well as the continuity of existing undertakings and the widespread adoption of such practices, depends on urgent and integrated actions of different governmental bodies and institutions. To this effect, I believe the recommendations made by the Federal Court of Accounts can largely contribute.

Therefore, I believe that the Federal Court of Accounts, by means of this audit, of which I hereby give you an overview, has provided a relevant contribution towards the appropriate development of the Amazon region, a part of the Brazilian territory that at the same time is so rich and so needy.

"(...)there are perspectives of sustainable development for the wood sector, creating jobs, tax revenues, social and economic benefits, as well as the possibility of keeping the level of forestry exploitation compatible with the environmental restrictions of the region."

I could not finish this article without dedicating an honorable word to the effort developed by the team of the Secretariat for Control of Public Works and Assets (*Secob*), the technical unit of this Court, in charge of carrying out the audit. Not only in the intellectual sense, but mainly in the physical one, in its most muscular definition, considering that missions in the Amazon region and the magnitude of the tasks involved, almost always take herculean proportions and are surrounded by adversities.

Well, almost one century after Euclides da Cunha, auditors of this Court repeat that rough journey and face the forest in order to get to know it. It is registered in the reports of the process, that in order to achieve their objectives, the audit team had to take shelter on improvised camps in the forest and travel through long distances on dirt tracks in precarious conditions. These distances, always particularly significant in this region, also represented a serious limitation, and reports show that in the period between 5th and 21st November 2003, the team covered 2,285 km.

This is the struggle Euclides da Cunha spoke of, to reveal the forest, so that we can, based on the findings brought by our auditors, grow with the forest, adapting it, in order to dominate it. This is the contribution of the Federal Court of Accounts, towards the slow and gradual path leading to the discovery of this unknown region, and that is the key to success in the challenge bequeathed by Euclides da Cunha: “to progress or to perish”. ■

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Sustainable Development in Brazil

Agenda 21

Marina Silva

Environment Minister
Brazil

The concept of sustainable development, disseminated through the report *Our Common Future*, implies that it is possible to achieve development without destroying the environment. Based on this concept, the document proposes the union of all countries to overcome the increasing degradation of the global environment in its atmosphere, forests, rivers and oceans.

The notion of the need for a common and global effort to correct the path of the economic and social development model is established in the political scenario. However, one cannot say that the current development in the globalized world is sustainable in view of the concentration of economic power and income, financial speculation, increased extraction of natural resources, pollution and environmental impacts on a global scale, which can even cause devastating climatic phenomena. However, just the fact that we are witnessing increasing concern over environmental problems and the need to reach a level of healthy development is an encouraging sign that these issues are gradually permeating the social fabric on a global level and raising the awareness of the population. And that is not all: in the last 10 years there has been huge progress towards generating scientific knowledge related to these issues, which is even causing a revolution in the established paradigms. It seems that we are experiencing the beginning of a major cycle of a new form of organization of knowledge based on a range of interconnected disciplines.

The United Nations Conference on the Environment and Development - Rio 92, adopted the concept of sustainable development and innovated, proposing the Agenda 21, which was signed by 179 countries that attended the event. This document, which was the key outcome of the event, contains the widest range of assumptions and recommendations on how nations should work to change their development vectors into sustainable models and begin their sustainability programs. It is a volume with 40 chapters and 800 pages, describing the action program for introducing the environment into the development framework. It contains treaties on areas that affect the link between the environment and the economy, including the atmosphere, energy, deserts, oceans, fresh water, technology, international trade, poverty and population. The document is divided into four sections: social and economic dimensions related to international policies that can help consolidate sustainable development, the strategies to fight poverty and privation and the introduction of changes in the production and consumption patterns; conservation and management of resources for development, related to the management of natural resources, waste and toxic substances; strengthening of the role of the main social groups, which suggests the necessary actions to promote the participation of civil society; and means of implementation, addressing the financial mechanisms and legal instruments for implementation of projects and programs focusing on sustainable development.

With this context, we can say that Agenda 21 has entered the lives in our society as an organizing factor of the priorities in various places and established the mechanisms to improve the quality of life of the whole population. With the process of implementation of Agenda 21, a great number of new actors and social groups were formed and consolidated, making society co-responsible for the project of sustainable development of its community, its city and even its country. And it is important to highlight that it is not an environmental agenda, but rather an agenda for sustainable development.

In Brazil, the process of construction of the Brazilian Agenda 21 included a broad diagnosis that mobilized all the interested segments around public debates in 26 states and discussion and thinking among at least 40 thousand people, representing several government sectors and civil society. All this movement produced the Brazilian Agenda 21, which is organized into six key themes: Sustainable Agriculture, Sustainable Cities, Infrastructure and Regional Integration, Natural Resources Management, Reduction of Social Inequalities and Science and Technology. The outcome of this work is found in the two volumes of the Brazilian Agenda 21: Result of the National Consultation and Priority Actions, launched in 2002, a short time before the World Summit on Sustainable Development, or Rio + 10.

Johannesburg, in turn, meant for Brazil an opportunity to reaffirm the significance of Rio 92 and to renew an international partnership based on common goals, bringing closer together developed and developing countries to promote sustainable development at the global, regional, national and local levels. Furthermore, it promoted great participation of non-government organizations, social movements and business, academic and scientific sectors, recognizing the importance of engaging all the actors in order to reach the sustainable development targets. However, there is a lot of criticism, particularly from organized civil society, that we had little progress up to or during the Summit. But if Brazil manages to carry out the implementation of the commitments approved at the Summit and renews its commitment towards

cooperation, we can contribute a lot to a future in which conservation, sustainable use of natural resources and the establishment of sustainable patterns of consumption and production will become a reality.

Now is the time to direct the debate towards rendering the actions, commitments and goals agreed in the Johannesburg Implementation Plan feasible, as well as those in the Agenda 21. This requires working and thinking of creative solutions that can lead to concrete outcomes in the path towards sustainability, with very clear implementation goals, taking into account our needs in terms of renewable energy, drinking water supply, access to biodiversity resources, processing of agricultural and agriforestry products, among others. This responsibility is shared among government leaders, NGOs and social movements and the business sector, which, in turn, has shown willingness to think in the long term, with a view to the preservation of natural and human resources.

In fact, Sustainable Development and Agenda 21 are today two concepts that have been in our vocabulary since the last decade, but what are the guiding principles of the actions that lead us to believe that we can implement them? In the first place, the key assumption is defense of life through constant search of quality and balance in the relationships between people and between them and all living forms and manifestations in nature. Based on this principle, we can seek development focusing on social justice and, integrating the right to a healthy environment for all, on environmental justice that, for our government, means that most of the population is not exposed to the negative environmental effects of political and economic actions, and has equitable access to natural resources and to information pertaining to such resources, to information on environmental risks and to democratic decision-making on local policies and programs.

"History shows that only through debate among all sectors of society is it possible to build a political force that is the voice of the demands of citizens, who experience the social and environmental problems locally."

It is a huge challenge, because although there is clear consensus that it is impossible to achieve environmental solutions dissociated from social, economic, cultural and ethical solutions, the discourse is still fragmented and hard to assimilate. In this sense, it is necessary to join efforts to translate sustainability at the various levels that condition it, without losing its unity. Sustainability is in itself strategic and integrated, and its cross-cutting nature makes it a great tool for the political exercise of Brazilian leaders, since it has a strong foundation in the mature relationships among the different groups and sectors in the sustainability field and there is a huge amount of quality information on the theme, with a focus on government action.

We have no doubt that Agenda 21 meets the complex requirements for putting the engine of sustainability in place and keep it working. According to the principles established by the government of Luis Inácio Lula da Silva, for an environmental policy that is integrated and linked to development, Agenda 21 is one of the main instruments for introducing cross-cutting environmental management into government policies, since its methodology enables social inclusion together with development in its widest sense, income generation and preservation of the environment. But how can this be achieved? History shows that only through debate among all sectors of society is it possible to build a political force that is the voice of the demands of citizens, who experience the social and environmental problems locally. Therefore, Agenda 21 – which has proved to be an efficient guide for processes that unify society, promoting understanding of citizenship concepts and their application, influencing the design of public policies – is one of the key instruments for building participatory democracy and active citizenship in Brazil. It is time to promote its full implementation and dissemination.

In 2003, the strategic importance that Agenda 21 achieved lead the government to consider it a Program in the Multi-Annual Plan- 2004-2007 PPA. The Program Agenda 21 is made up of three essential actions: promote internalization of the principles and strategies of the Brazilian Agenda 21 in the design and implementation of national and local public policies, through strategic, decentralized and participatory planning, in order to establish the priorities to be defined and executed in partnership between government and society, in the context of sustainable development; promote the design and implementation of Local Agendas 21 based on the principles and strategies of the Brazilian Agenda 21 which, in line with the global Agenda, recognizes the importance of the local level in the achievement of sustainable public policies; and articulate a national strategy for continued qualification of regional agents that promote sustainable local development, through dissemination of the principles and strategies of the Brazilian Agenda 21 and induce the processes of design and implementation of the Local Agendas 21.

Regarding the Local Agenda 21, we have today 400 processes in course – almost double the number recorded up to 2002 – and our target is to reach, by the end of the government, 1.500 experiences throughout the Country. In order to implement this process, incentives are provided to the various actors of society to implement them in their localities, and the Program's team and the Ministry of the Environment as a whole have been working to qualify and monitor processes in communities and follow up on the implementation of the Forums of the Local Agenda 21. In 2003, through institutional partnerships and through the National Fund for the Environment, an invitation to bid was published for the construction of 64 new local Agendas 21, the biggest induced demand in the history of the Fund. Other financing institutions, such as the Banco do Nordeste and the Caixa Econômica Federal are also engaged in the promotion of the Local Agendas 21.



Incorporated into the activities as disseminating and educative elements, the National Meeting of Local Agendas 21 and the National Conference on the Environment were also part of the activities of the Agenda 21 this year. The first National Meeting of Local Agendas 21, held in November in Belo Horizonte, was attended by approximately 2.000 people from all regions of Brazil, which confirms the great interest of society for the themes of Agenda 21 and, above all, marked this as a wide and effective process that involves and stimulates participation. Regarding information and education, and in partnership with the Ministry of Education, the Training Program on Agenda 21 was developed and executed, with a focus on training about 10,000 teachers in public schools in the Country, who, through the TV program Leap into the Future, produced by TVE, discussed the importance of implementing Agenda 21 in the communities and schools. In line with the Strategic Planning of the Agenda 21 program, this training program will have continuity and will involve not only teachers, but also the participants of the Local Forums of Agenda 21, representing both civil society and the local governments.

Another action, the internalization of the Brazilian Agenda 21 in the construction of public policies at the different levels of government, is considered vital to improve quality and move forward in the construction of a Sustainable Brazil. Thus, on the 28th of November, president Luis Inácio Lula da Silva signed a decree increasing from 10 to 34 the number of members of the CPDS – Policy Commission for Sustainable Development and National Agenda 21, making it more representative and increasing its capacity to coordinate the process of Agenda 21, and attempting to engage the whole federal government in this process. The institutions that make up this new broadened CPDS are: Ministry of the Environment, which chairs the Commission, Ministry of Planning, Budget and Management, the vice-chair, Civil office of the Presidency, Ministry of Science and Technology, Ministry of Foreign Relations, Ministry of Cities, Ministry of Education, Ministry of Finance, Ministry of Culture, Ministry of Labor and Employment, Ministry of Agrarian Reform, Ministry of Agriculture, Stock Raising and Supply, Ministry of National Integration, Ministry of Health, Ministry of Development, Industry and Foreign Trade, National Association of Municipalities and Environment – ANAMMA, Brazilian Association of Environment Organizations – ABEMA, Brazilian Business Council for Sustainable Development – CEBDS, Forum of Urban Reform; organizations representing youths, human rights, Indian communities, traditional communities, consumer rights, business organizations, scientific community organizations, the Brazilian Forum of NGOs and Social Movements for the Environment and Development - FBOMS and trade union federations. The CPDS works within the Chamber of Natural Resources Policies of the Government Council, and among other competences, it coordinates the implementation of the Brazilian Agenda 21, supports the processes of Local Agendas 21, including proposals for funding mechanisms, and supervises the design and evaluation of the implementation of the PPA.

*F*inally, in order to add to our list of partners, we have increased dialogue with municipal and state governments and with the parliament, through the mixed Parliamentary Front of Agenda 21. One of the main goals of this front, composed of 107 Federal Representatives and 26 Senators, is to articulate the Brazilian Legislative Branch, at the federal, state and municipal levels, to allow greater fluency in the discussion of environmental themes, dissemination of information related to them and mechanisms for communication with civil society.

Incorporating the principles of sustainability in the national public policies, as well as in the actions with the different social segments, is a process that requires cultural changes and changes of patterns and habits long rooted in our society. The aim is for the government as a whole and the various segments of society to understand that development can be a great opportunity for collective construction of sustainability in the Country. We are all responsible for collaborating in the achievement of a change of paths and attitudes, which implies in developing capacity for mobilization and achievement, in order to turn conflicts into cooperation and establish consensus based on the ethics that emerge from the relationships between men, women and nature, thus generating the preservation and the quality of life that we deserve. ■



Trade and the Environment

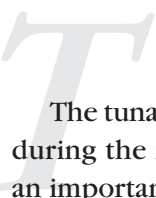
Celso Amorim

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1. INTRODUCTION

Until the 1980's environmental protection was not a central issue in trade negotiations. As an example, there is no reference to the environment in the text of the General Agreement on Tariffs and Trade (GATT). The main understanding was that the issues of the environment and trade belonged to different universes. In recent years they have begun to be seen as interconnected, due, on the one hand, to a growing interest in environmental themes, and, on the other, to the perception, sometimes mistaken, of the harm caused to natural resources by the increase of economic activity. International trade, considered the mainspring of economic development, has begun to be seen, in some countries, as the environment's natural enemy. Part of this tendency is explained by the global implications of both environmental and trade policies, the impact of which goes beyond national borders. Just as resolution of many environmental problems requires international cooperation – as in the case of the decrease of forest areas, loss of biological diversity, climate changes and erosion of the ozone layer – also in the sphere of international trade a broader area is now covered by multilateral agreements supported by the WTO, which now has a binding conflict resolution mechanism.

Beginning in the 1980's and '90's, the tension between free trade advocates and environmentalists has increased, with the appearance of new cost-related controversies, as a consequence of the implementation of measures for protection of the environment. In effect, the 'polluter pays' principle, contained in the Agenda 21 - approved at the United Nations Conference on the Environment and Development (Rio 92), while determining the responsibility for environmental damage, did not clearly determine how such costs were to be calculated and, therefore, internalized by countries. In the opinion of free trade advocates, certain environmental regulations border on economical irrationality and are often unsupported by scientific proof. On the other hand, environmentalists are suspicious as to the environmental repercussions of certain aspects of trade liberation. More rigorous environmental regulations also imply higher costs, and may negatively affect the competitiveness of companies that apply them. This leads to a discussion that partially reproduces the north-south cleavage, when one considers the risk of the environmental norms defended by the developed countries turning into non-tariff barriers, even if the original objective is not necessarily protectionist in nature.



The tuna-dolphin case, judged at the GATT in 1990, during the negotiations of the Uruguay Round, was an important milestone in the context of the tension between the trade and environmental agendas. The North American ban on importing Mexican tuna, based on the rationale of the accidental capturing of dolphins, was considered discriminatory by the panel, for being extra-jurisdictional and based on the method of production (infringing the 'similar product' clause), and for not exploring other means, considered less restrictive to trade, to reach the same objective. From the environmentalists' point of view, the decision made by the panel prioritized trade obligations over commitments referring to the environment.

Environmentalists began doubting the capacity, then of the GATT and now of the WTO, to judge commercial disputes involving measures for the protection of the environment. To them, GATT's article XX (which stipulates that nothing in the text of the agreement should be interpreted in such a way as to impede the adoption or implementation of necessary measures for the protection of the environment and of human, animal or vegetable health) should be revised in order to allow the accommodation of environmental concerns. The creation of the WTO Committee on Trade and the Environment (CTE) and the reference to the importance of sustainable development in the preamble of the Marrakech Agreement reflect, in a way, a concern for establishing a relationship between international instruments for environmental protection and the multi-lateral trade system. It must be pointed out, however, that the WTO does not implement environmental agreements. The CTE restricts itself to analyzing the relationship between environmental and commercial measures, in order to promote sustainable development. For that, the committee is charged with proposing possible amendments to or changes in the rules of the WTO, if necessary in order to highlight the positive synergies between trade and the environment. Nonetheless, the CTE has never reached the point of recommending any change in the rules of the WTO, since its members could not reach consensus.

The concept of common but differentiated responsibilities, consolidated in Agenda 21, adds to the difficulties related to the definition of norms and application of environmental policy. According to this principle, industrialized countries bear a moral responsibility in relation to many ecological problems brought about by centuries of economic activity. Based on this argument, developing countries argue that they should not bear the obligation to invest in environmental programs in the same proportion as developed countries, due to their history of utilization of natural resources.

Whatever conflicts may occur regarding this issue end up surfacing in the commercial sphere, since negatively perceived instruments, such as trade-restrictive measures, are stressed, instead of positive incentives like financial aid or technology transfers with environmental objectives. Frequently, trade-restrictive measures are considered negative or ineffective for the protection of the environment, especially if they are not accompanied by "positive" instruments such as technical cooperation or investment in training, aimed at the implementation of environmental commitments. The "tuna-dolphin" and "shrimp-turtle" cases, involving the USA and Mexico, and the USA and a group of Asiatic countries, respectively, are examples of extraterritoriality of an environmental measure in the field of international trade. In both cases, the efficiency of the trade-restrictive measure for the natural resources it is trying to preserve is questioned, since the capturing of dolphins and turtles by the countries affected by the embargo continued at the same levels as before the measures were imposed.



The lack of an institutional structure to protect the environment – in the same way as the WTO tries to ensure the maintenance of free trade – explains, for the most part, the antagonism between commercial and environmental interests.

Another tension-provoking factor refers to the mechanisms for implementation of environmental measures, now under the responsibility of national authorities. In the environmental field, there is no international equivalent to the WTO's conflict resolution mechanism, which would partially explain the increasing recourse to trade-related measures within the context of environmental conventions. In the absence of precise rules that could be enforced, the trade sanction mechanism, within the sphere of the environmental conventions, becomes a means of pressure on governments to fulfill the environmental commitments they have made. The lack of an institutional structure to protect the environment – in the same way as the WTO tries to ensure the maintenance of free trade – explains, for the most part, the antagonism between commercial and environmental interests. The idea of creating a global environmental organization has already been debated in academic and political circles, without, however, reaching a consensus as to the convenience of creating such an organization.

It is worth mentioning that the WTO's jurisprudence in relation to environmental concerns and human health has evolved positively, in the sense that the rules are interpreted in a way that is more flexible and sensitive to these interests. In the "shrimp-turtle" case, for example, the Appeal Agency recognized the right of the USA to adopt a unilateral measure to protect sea turtles, in situations involving shrimp fishing, as long as the parts agreed to search for a satisfactory bilateral or multilateral solution. In the asbestos case, it confirmed the right of France to bar the importing of certain products that contain asbestos, based to its alleged cancerogenic effects. In both cases the justification for the exemption to the WTO's rules is based on GATT 94's Article XX. In face of this positive evolution, many countries question the need to alter the WTO's rules, particularly Article XX, since tensions have been satisfactorily settled.

2. THE DOHA ROUND

During the WTO's fourth ministerial conference, which took place in Doha (2001), countries such as Norway and Switzerland, in addition to the European Union, have tried to make the WTO's rules more flexible, in order to accommodate environmental concerns. More specifically, they intended to revise the rules relative to labeling (TBT), precaution (SPS) and the general exceptions to the WTO agreements (GATT 94's article XX), particularly the clarification of the relationship between Multilateral Environmental Agreements (MEA's) and the rules of the organization. These countries' arguments were mainly based on the system's lack of predictability, in the case of commercial disputes that might involve trade measures taken within the domain of the MEA's, due to the potential risk of incompatibility between the trade and environmental agendas. Only the members (and not the conflict resolution mechanism) would be responsible for clarifying the rules in order to eliminate occasional ambiguities. The inclusion of this theme in the agenda of the IV Ministerial Conference was a response to pressures, not only from environmentalist groups but also from consumers, who are increasingly concerned with food quality and its connection to trade. An example is the controversy caused by the moratorium applied by the EU against the importing of transgenics.

On the other hand, a great majority of countries, among which are all the developing countries, the USA, Canada, Australia and New Zealand, maintained the idea that the WTO's relationship between trade and the environment is satisfactory, rendering further clarification unnecessary. In the opinion of these countries, the delicate balance reached at the Uruguay round should not be disturbed by reopening issues that are difficult to resolve, such as precaution, method and process of production (PPM) and the consistency between trade measures taken within the sphere of the MEA's (or even unilaterally) and the WTO rules.

There were strong suspicions as to the true intentions of the Europeans with regard to the environmental propositions. Even though based on an alleged non-protectionist rationale, the true objective of the European Union was said to be to make the WTO's rules more flexible, in order accommodate 'environmental' and 'social' concerns (such as consumers' rights to have access to information through State regulations), and thus avoid potential questioning of its environmental policy with commercial implications for the conflict resolution system. It was feared that if the European point of view prevailed, benefits derived from future advances in the area of agricultural or industrial liberalization might be cancelled out by imposition of non-tariff environmental barriers. Even the USA, a great advocate of inclusion of the environmental theme in GATT/WTO (recall the tuna-dolphin and turtles-shrimp cases, as well as the case on gasoline against Brazil), did not show much enthusiasm for the establishment of rules that leave a very wide margin for precautionary measures, based upon their own experience in contentions with the EU (hormone-beef).

The idea that while attempting to broaden the WTO's "environmental flexibility," these proponents would be working in favor of the environmental cause, must also be questioned. True commitment to the environmental cause is measured by effective implementation of the commitments made under environmental conventions, and not by an attempt to change the WTO's rules. The organization should not be seen as environmentalists' natural "enemy," especially if one considers recent legislation. To the contrary, the increase in trade flows due to trade liberalization tends to generate the resources necessary for the promotion of sustainable development. Developing countries are the first ones to reap benefits from this trend, since they are enabled to invest more consistently in environmental control programs. In effect, along with the high patterns of consumption sustained by wealthier societies, poverty is one of the greatest enemies of environmental preservation. Thus, advocacy of the environmental cause should incorporate the cause of struggle against poverty. For this reason, it is necessary to increase access to markets, especially for the products in which developing countries have a greater comparative advantage.

The negotiations on commerce and the environment launched in Doha comprehend three areas: 1) clarification of the relationship between 'specific trade obligations' taken within the domain of the Multilateral Environmental Agreements (MEA's) and the WTO's rules; 2) institutional arrangements for information exchange between the secretariats of these MEA's and the WTO's specific committees and criteria for accepting observers, and 3) reduction and elimination of environmental tariffs and non-tariff barriers to environmental products and services. Of these three, the most complex and the one that implies greater risks, in terms of altering the WTO's body of regulations, is the first one. The second one has already become, in a certain way, a consolidated practice of CTE, although there are specific problems relating to the admission of some secretariats. As for the third one, due to the "interface" with the area of access to markets, it has been considered within the scope of the two respective negotiating agencies, that is, the group on access to markets for non-agricultural products and the group on services.

"Our position has been based, to a point, on the motto: "if it ain't broken, don't fix it."

The main theme under negotiation refers to the relationship between multilateral rules of commerce and the specific trade-related obligations contained in the MEA's, and the possible conflicts between these two legal frameworks. Discussions on the issue are concentrated, at the moment, on the definition of "specific trade-related obligations" and their relationship to international trade rules. On one side, led by the European Union are the delegations that propose a broad definition of the term, which would include the so-called "result obligations." According to the proposition advocated by these countries, any measure adopted by a country with the purpose of fulfilling the objective of a certain environmental agreement, even if not explicitly stated there ("result obligations"), would automatically be considered compatible with the WTO regulations. In practice, the acceptance of this approach would imply giving *carte blanche* for the adoption of measures without adequate scientific proof, with the supposed purpose of protection of the environment, which might unjustifiably restrict trade.

Other delegations, among them Brazil, the United States and Australia, defend a more pragmatic approach for treating the issue in the CTE, so as to avoid generalizations, centering upon the comparison, case by case, between the trade devices of the MEA's and the WTO rules. The stance defended by Brazil and other developing countries on the relationship between the Convention on Biological Diversity and the TRIPS Agreement ("Trade Related Aspects of Intellectual Property Rights") is an example of this type of approach. For many countries, there would not be, *a priori*, any conflict between the two legal systems that would justify the need to change the WTO's current rules, especially GATT's Article XX.

The issue of MEA's was extensively debated in the CTE during the first years of its existence. In general, the resolution of the trade-related environmental problems unilaterally is already accepted by member States. An example of this approach would be the recommendation of the Appeal Agency in the 'shrimp-turtle' case, for the USA and Malaysia to try to reach a permanent institutional arrangement, involving all the interested parties, for the preservation and conservation of sea turtles. However, some countries still question the effectiveness and the implications of institutionalizing statements in favor of the environmental cause in the WTO's rules.

A few issues should be initially resolved, such as the definition of an MEA. A few criteria are suggested, for example: a) being open to the participation of all interested countries; b) a balanced representation in terms of regions and levels of economic development; and c) an adequate representation of countries that consume and produce the good covered by the MEA.

Another problem mentioned in the Doha Declaration refers to the fact that the paragraph explaining the distinction between the WTO rules and the "specific trade obligations" contained in the MEA's clearly sets apart the countries that are not members of the "agreement at hand." As is known, the USA has failed to adhere to several environmental instruments, such as the Basil Convention on Dangerous Residues and the Kyoto Protocol, contrary to many developing countries, including Brazil, which are parties to many environmental conventions, and therefore subject to specific commitments in this matter. If the WTO negotiations over this concrete point perchance evolve towards the establishment of effective commitments in terms of "specific trade obligations" within the domain of certain MEA's, these will apply only to a circumscribed number of countries (the parties in the MEA's), creating, in fact, a dual system of obligations and rules, set apart in accordance with the compliance with environmental instruments. Countries considered "up to date" with their environmental obligations, for being parties to MEA's, would therefore be punished, by having the WTO commitments added to their existing ones. Needless to mention, this hypothetical result would end up causing an effect contrary to what is desired, functioning, in practice, as a disincentive for countries to adhere to environmental instruments, and might even cause other countries to denounce existing ones.

3. BRAZIL'S INTERESTS

Brazil's position on the issue of trade and the environment is characterized by a balanced approach. We have stated, at the CTE and in other forums, our satisfaction with the existing rules, which seem capable of accommodating environmental objectives without disregarding concerns over the continuation of trade liberalization. The balance is delicate. This has been observed by members and confirmed by the conflict resolution mechanism ("shrimp-turtle"/"asbestos"), which has shown political sensibility in relation to the growing interest of public opinion in environmental themes. Our position has been based, to a point, on the motto: "if it ain't broken, don't fix it."

However, in face of the negotiations launched at Doha, it might be in the interest of Brazil to show the importance the government gives to the environmental theme. This more aggressive stance may be instrumental, also, in laying bare the contradiction between the supposedly pro-environmentalist position at the WTO of certain developed country partners, and the unsatisfactory implementation of made commitments made by them in the framework of the MEA's. The best way to promote the objective of sustainable development seems to be strengthening the environmental agenda, emphasizing the positive and not the negative measures. Ideally, different environmental controversies should be resolved in MEA's. the WTO's action should be circumscribed to specific cases, which would be treated in the sphere of environmental agreements, since they would include trade-related issues with a potential for conflict between the two legal orders.

At the same time, it will be necessary to do a more prospective exercise, in terms of legal implications for the multilateral trade system, creating an exception to the rules of the WTO for specific trade-related obligations, seen under certain MEA's (independently of the form it may take – amendment, interpretative code, code of good conduct or consultative mechanism). One of the concerns that should be kept in mind would be the impact of this possible exception upon unilateral environmental measures, inasmuch as it might represent a significant precedent for extraterritorial initiatives, based on arguments in favor of environmental conservation. The distinction between commercial measures allowed in MEA's and their implementation in concrete cases should not be overlooked. The exception, if created, would require examination under the GATT 94's article XX (which determines which environmental measures should not be applied in such a way as to constitute an arbitrary or unjustifiable discrimination among countries in which the same conditions prevail; that is, a disguised restriction to international trade). It will also be necessary maintain the current relationship between agricultural negotiations and those related to trade and the environment. Possible progress in the former might be undermined by the imposition of environmental barriers. Recent evidences of the EU's interest in introducing the theme of environmental labeling in the negotiations during the V Ministerial Conference show that they may intend to try to annul new possibilities for access to markets by imposing technical barriers to trade. ■

The Path Towards Environmental Management

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Some strength, some axis is moving and levering a new way of thinking, a new society. History is not dead; to the contrary, it is being built upon new paradigms; and so swiftly that sometimes it gives us the feeling that we are late in sharing in the transformation.

A short time ago, in Brazil, not even the democratic liberties were assured; and today hope has given birth to the unexpected. Paraphrasing the theologian Leonardo Boff, we have a government in which we believe, born from the longing of the people, born from hope, begotten by dreams and the will to do right.

The environmental issues, which have become, in the contemporary world, catalyzers of concerns, anxieties, expectations, political and social longings, are, in a way, shedding light upon new perspectives; and attempting to reverse the trends of random economic growth, in the direction a model of sustainable development committed to respect for life.

The concept of sustainable development, from Ignacy Sachs, Maurice Strong, the Brundtland report, and so many others, although still under discussion, sometimes technical, sometimes political, has raised itself to the highest level of international political proposals.

Among the many debates about this concept, at the National Conference, the following approach has been consolidated: "A socially just and economically feasible way of exploiting the environment that ensures the perpetuity of renewable natural resources and ecological processes, preserving biological diversity and other ecological attributes for the benefit of future generations, while fulfilling the present needs".

Therefore, recalling an article by Henry Acselrad in the book "The Challenge of Sustainability," the type of model that makes citizenship a condition for development comes into existence when "in its construction, integrated environmental policies concur, democratizing the material basis of society and finding support in the possibilities afforded by the variety of biomes, ecosystems and other territorial configurations; that is to say, in the diverse types of knowledge held by the social subjects who are a reference for those Territories.

Still, recalling once again Leonardo Boff, the Brazilian empire, or the “Tropical Rome”, contrary to the Roman Empire, is to be based on solidarity instead of military domination. Its mission would be to “unify the human family in the home of Earth”. The theologian stated that there are four steps to be taken in order to reach this new status. The first would be to press the State, which should be focused on social issues and the general population, to take the necessary measures. Another would be to demand engagement on the part of the national intelligentsia. “It has a debt to pay to those who did not have the privilege of going to the university. It is necessary to bring together the types of knowledge characteristic of the masses and the professionals”, he explains. The third measure, dependent upon the second, would be to aid the mobilization of the masses; while the fourth point would be the adoption of an “ethics of caring”, by politicians. For the theologian, the governors “should spend more time on the plain than on the Plateau.”¹

Medium and long term success of all that can be attained from this knowledge will not depend upon the Lula government and its environmental work agenda alone, but upon all of us, in the struggle against poverty; considering the relationship between poverty and the environment, which should be systematically included in the urgent demands from society and the political dialogue.

We, and almost everyone in Latin America, have lived through a good part of the 20th century under dictatorships that restricted individual liberties. The environmental issue has only begun to be discussed among us in greater depth since the 1980's; meanwhile, the environmental problems have increased, due to the concentration of the populations in large urban centers, and the inadequate appropriation of natural resources, as a consequence of numerous economic activities. The continuous urbanization, associated with industrial expansion, has become a growing problem for public health.

Yet, our heritage is incalculable. Our biodiversity is one of the most extensive in the world. This is because we have a vast territorial extension and a broad geographical and climatic diversity, in addition to the largest covering of tropical forests in the world, mainly concentrated in the Amazon. Among the countries possessing a “mega-diversity”, Brazil is in first place, concentrating 15 to 20% of the total of identified species on the planet. It must also be pointed out that, according to data disclosed by the Ministry of the Environment in 2002, there are 55 thousand species of superior plants here (approximately 22% of the world's total). The following data can be added to this information: Brazilian biodiversity is also the greatest in terms of fresh water fish and mammals, the second in amphibians, the third in fish, and the fifth in reptiles. Not to mention our water resources: the Amazon river basin is the largest on the planet; the basins of the Paraná and Prata rivers – located between Bolivia, Paraguay, Uruguay, Brazil and Argentina; and that of the Orinoco river, between Venezuela and Colombia, are among the most important on the planet. South America has the largest aquifer in the world, the Guarani; taking up part of the territories of Brazil, Uruguay, Paraguay and Argentina.

In face of this scenario of poverty and greatness, our political responsibility increases proportionally to the constitutional pledge that makes sacred the right of all to an ecologically balanced environment for the common use of the people, essential to their quality of life. Thus, the governmental strategy broadens, becoming receptive to values of social and environmental equity and justice.

"The environmental issue has only begun to be discussed among us in greater depth since the 1980's; meanwhile, the environmental problems have increased, due to the concentration of the populations in large urban centers, and the inadequate appropriation of natural resources, as a consequence of numerous economic activities."

1. A reference to the plateau on which the city of Brasília, the capital of Brazil, is located. (translator's note)

Upon verifying the results of the national hearing, compiled from the state and regional pre-conferences, a consensus on the definition of five strategic foundations for the project of the Positive Environmental Agenda of the Ministry, as a whole, has been identified:

- Participative management and partnerships between the three levels of government;
- Partnerships with the civil society and private players;
- Generation and dissemination of environmentally sound information and technology;
- Environmental education; and
- Social control and inclusion.

Upon these foundations I based my presentation on sustainable development and the construction of desirable futures for the environmental area.

Environmental actions must be seen and treated as part of a system and not as the responsibility of one sector or sphere of the government. Minister Marina Silva has established the relevant issue of transversality as the structuring axis for the governmental policy of the Ministry. This axis constitutes the conducting wire for the operationalization of the governmental actions, within the ambit of the “Sistema Nacional of Meio Ambiente” (National System of the Environment). SISNAMA, created in 1981, becomes strategic because it represents a political project for integrated governmental action, including systemic environmental management.

Still, SISNAMA lacks a greater closeness to society and private initiative to, essentially, give it a contemporary character. That is, to endow it with the instruments capable of overcoming the internal contradictions and make of it a facilitator of social-environmentalism. This means introducing its action into a social process and not restricting it within the restricted domain of environmental issues. Today, a very broad opportunity is open for the establishment of partnerships between different bodies of the government, within the scope of a policy of convergence of interests; as long as objectives and roles are clearly defined in the promotion of environmental and social development. These objectives and roles are described in the results of the National Conference, and will be addressed by the Tripartite Commissions, proposed by the Ministry of the Environment, and about which Dr. Langone will be speaking.

The active participation of civil society in environmental advocacy will only be assured at the end point of the system if there are political will and strong environmental entities to effectively respond to the demands of the population and support them in their struggle for quality of life and living conditions .

Only the perfecting of the coordinated effort of all the agencies that deal with environmental issues per se, and of the related sectors, will allow the country to make a leap in quality for the environment.

Participatory democracy, transversality and social control presuppose that the State will necessarily draw nearer to the citizens, in order to improve their quality of life; eradicating poverty, and assuring them all the rights of citizenship. In order to engender this approximation, in the field of environmental management, Ibama has been making efforts towards generating legal, institutional and operational arrangements; as well as differentiated mechanisms and modalities, to promote a narrow and active cooperation of the civil society, for the defense of the environment. This will only be assured, at the end-point of the system, if we build a net for political and institutional coordination, capable of efficiently responding to the demands of the communities, in their struggle for their own quality of life and living conditions.

Francisco Reifscheineder and Pedro Viana Borges, in the introduction to an article about multi-institutional partnership in the field of agricultural research, defined the reason for the constant search for partnerships by the public companies, both among themselves and with the private initiative, very well: "The growing competitiveness existing in the contemporary world implies in a curious paradox: the search for partnerships has become a way of developing quality products and assuring substantial portions of the market". In the specific case of the public sector, partnerships acquire even greater prominence, if we take into consideration: 1) the need for interaction with the private sector, in order to assure the fulfillment of the existing demands, and 2) the limited resources available.

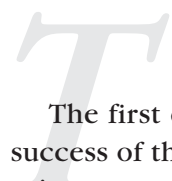
And they continue: " Partnership must be understood as the relationship between two or more different institutions complementing each other, from which both parts obtain advantages and benefits. The results of the partnership should also exceed the mere sum of the individual efforts of each partner. Multi-institutional partnerships are a necessity of the new times in which we live".

In this line of thought, President Lula recently sent to the National Congress a bill that institutes general norms for biddings and contracting of partnerships between the public and private sectors, within the ambit of the public administration.

In accordance with this law, what is considered a partnership between the public and private sectors is an agreement between the public administration and private entities, establishing a legal bond for the implementation or management, as a whole or in part, of services, enterprises and activities of public interest; in which financing and the responsibility for investment and exploitation are incumbent upon the private sector participant, while observing the guidelines for efficiency. The expectation of the government is to make available approximately \$36 billion in resources, which should be preferably invested in infrastructure.

It must be pointed out that this law applies to the agencies of the direct administration, special funds, autarchies, public companies, mixed economy societies, and the remaining entities controlled directly or indirectly by the Federal government, the States, the Federal District and the Municipalities.

At the present time, a broad range of alternatives and opportunities is open to the environmental area. Indirectly, it has been established, in principle, that all infrastructure projects should be enabled to be in line with the conservation of the environment: the construction of roads, waterways, ports, telecommunications and electrical power structures - with specific investments in the sector. Directly, it assures environmental services; especially in the areas of public sanitation, waste management, leakage treatment, and garbage collection; all of which, according to data from the Ministry of the Cities, require \$178 billion, in order to overcome the deficit, in the entire country, in the next 20 years.



The first desired institutional condition for the success of the partnership between the public and private sectors is the creation of a forum for discussion and business; the second is the existence of good projects. In this respect, president Lula has said: “We need to establish partnerships for the projects for which the government is without resources”. He states: “It is not money that makes the project, but the project that makes the money.” In his government program for the environment, a pledge has been made to discuss new mechanisms and create special funds, for the financing of specific policies and programs.

The social-environmental funds are intended to channel resources, following previously established criteria of eligibility, towards small projects from low income groups, devised and implemented by public or private agencies, NGO's or associations, or community groups. If well managed, they are an excellent tool for environmental management. The bill that establishes norms for the contracting of partnerships between the public and private sectors provides that the federal government may complement the funds, by means of a Fiduciary Fund of Incentive to Partnerships Between the Public and Private Sectors; and authorizes the states, municipalities and the Federal District to do likewise, by specific laws, through funding with the characteristics established in the bill.

The state and municipal governments will be enabled to encourage partnerships with private initiative for environmental services; especially in the fields of public sanitation, waste management, leakage treatment, garbage collection and others contributing to regional and local social-environmental development.

An example of the possible means for creating conditions of sustainability are the environmental commodities: goods originating from natural resources, which function as inputs for the industry and agriculture, and are divided, according to experts in this field and market, into seven modalities: water, energy, biodiversity, wood, ore, recycling and polluter control (water, soil and air).

In this context, Amryah El Kalili, economist and coordinator of the CTA (Consultant Trader Adviser) project, from the Economists' Union of São Paulo, presented, in a seminar, a project that foresees the development of a mechanism for appreciation of forest products, transforming them into assets of the Atlantic Rain Forest. “The bromeliad, the urucu or palm will have certificates proving that they were produced in sustainable conditions, and not illegally extracted”, as he explains. With the implementation of this project, the products of the Atlantic Forest would be traded in stock markets.

Within this perspective, opportunities are also opened for a carbon-credit market in Brazil. The mechanism of carbon credits has been foreseen in the Kyoto Protocol, which has already been ratified by more than 100 countries, but is still pending the adhesion of Russia, in order to be go into force.

Business deals are already being closed, independent of the final ratification of the protocol. Countries such as Holland have already been financing projects – acquiring these credits by anticipation – in several countries of the world, including Brazil.

A generalized change of consciousness is taking place in every part of the world. In community settings one encounters a new movement of citizens, above political parties, crossing over the traditional jurisdictions, working almost without resources, acting in conjunction, in order to solve common problems, especially those related to the eradication of poverty and improvement of the quality of life, and which allow a dignified, peaceful and equalitarian existence for all.

Communities have been organizing themselves through community counsels, committees, class associations and neighborhood associations; and are becoming structured to the point where the government will have to listen to them when it makes political decisions and devises public policy.

In this sense, true decentralization is one that draws the State nearer to the citizens, thus making possible the leap from representative democracy to participatory democracy. This is an efficient partnership. Social control, currently so widely discussed, is an effect of this model.

The partnerships within the public sector, between the public and private sectors, and between governmental and non governmental associations and communities have made possible the emergence of successful initiatives throughout the country.

The expansion and strengthening of these initiatives requires that they be organized into networks, so as to allow better interaction among the agents involved, as well as facilitate the flow of information and knowledge, and exchange of experiences from the periphery to the center, and vice-versa. The success of these partnerships will greatly depend upon the competence of the public authorities in watching over the environment and “preserving it for present and future generations.”

In this sense, an undelayable priority is the creation of a National School of Public Environmental Management (Escola Nacional de Gestão Ambiental Pública), which will be an important instrument of cooperation and support for SISNAMA in the training of experts committed to the development of the essential knowledge that would guide the progressive transformations of the public policy in the environmental field.

Environmental education, at all levels and in all modalities of education, is an essential element in the context of sustainable development. It includes building awareness in society as to the need for environmental preservation. It reinforces changes in attitudes towards the environment, and promotes habits of sustainable use of natural resources in the communities; making possible the involvement of the people themselves in the planning and evaluation of social projects.


It has become necessary to foster the training of creative scientists, which would associate other types of knowledge with the academic subjects. Intellectual transversality will surely allow advancement in the quality of environmental education. The sustainability of a new standard of development requires political will, in order to enable academicism to break through its structure; which traditionally perceives only one axis on which to base its analysis. This systemic vision will exponentially increase the sustainable use of the mega-diversity of our biological resources, channeling this knowledge into projects that contribute to push forward development, for the benefit of those who are socially less favored.

Decidedly, the prospects are optimistic.

The projection of scenarios is not a mere exercise of the imagination, for the future that awaits us should not be foreseen based only on the subjective character of individual beliefs. On the contrary, scenarios are defined based on an evaluation and combination of several factors that should contribute to making them feasible and balanced. Among these factors, the “moving forces” stand out.

Therefore, identifying the main moving forces for the environment is the first task to be carried out in this procedure. moving forces are social-economical factors that drive forward environmental changes. The way in which these factors evolve determines the conformation of worldwide and regional development, and the long-term state of the environment, allowing for reflection on the relationship between these forces and the environmental issue.

Within this perspective, seven moving forces have been identified – Politics and Geopolitics, Demography; Sciences and Technology; Economy and Society; Values and Culture; Ecology and the Environment, and the Energetic Balance.



Considering the difficulties in identifying and managing the uncertainty generated by the far-reaching global transformations, it becomes necessary to make use of instruments that would allow one to identify, process and evaluate these factors of global change (moving forces) and their implications in shaping different time periods in the future. Therefore, identifying the trends of these factors of change has been essential for the construction of the scenarios and determining of their direction in the long term.

These trends allow for the identification of possible changes in society, which could turn into threats or opportunities; and which a government must create capacities to confront or take advantage of. In order to reduce risks and take advantage of opportunities, government and society in general should be capable of thinking and acting within a framework of great transformations.

The construction of scenarios is not a mere exercise of futurology. Based upon the identification of the moving forces and their trends, a few hypotheses have been generated. Even though some aspects of modern life can be anticipated, growing and continuous technological innovation, globalization, and the collapse of trade barriers fill the journey to the future with uncertainties and surprises. Analyzing these hypotheses may signify a change in this process. By exploring a series of future hypotheses it is possible to obtain a clearer image of what we may face, and what may be the consequences of the decisions we make. Therefore, the pertinent question that the hypotheses can answer is not what will take place, but what may take place, and how leaders can act to lessen the effects of those events.

Society, through its institutions, will promote quality of life; assuring universal access to essential services and consolidating awareness of the indivisibility of the environment, both as a theme, and in economic, cultural and geopolitical terms, with human beings acting individually and collectively for the benefit of present and future generations. ■

Can Environmental Auditors Help Protect the Rainforest? Improving Governance and Accountability in Environmental Protection

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Like many countries around the world, Brazil faces several environmental challenges. Brazil is endowed with water resources: at least 13% of the planet's renewable supply of freshwater is in Brazil. However, highly populated cities suffer from water shortage and water pollution. Brazil also owns the largest tropical forest in the world. In spite of government efforts, deforestation of native forests has continued resulting from land clearing for agricultural purposes and the demand for wood products. Illegal deforestation and timber traffic in the border areas of the Amazon Forest Region, by foreign companies, is a great problem. The Amazon forest is often called the "lung of the planet". Reduction of the forest cover will therefore contribute to the global warming of our planet. Waste and wastewater management are also an issue in these big cities.

Rapid and profound changes have taken place across our planet over the past few decades. Not only have our societies undergone rapid transformation at the hands of new economic and technological forces, but the physical world in which we live—our natural environment—is also being transformed. In 2002, the United Nations Environment Program (UNEP) released its third *Global Environmental Outlook*, also known as GEO-3. Assembled by leading scientists and experts from around the world, the *Outlook* paints an alarming picture of our planet's condition. Rainforests and coral reefs are disappearing; drinking water supplies are contaminated with disease-causing agents and toxic chemicals; air pollutants cause respiratory ailments in children and adults; land is spoiled by the dumping of hazardous wastes; overexploitation of resources is putting many animals and plants on endangered lists; and global warming is producing unprecedented changes to our climatic system. (See text box for the key environmental trends identified in GEO-3.)

KEY ENVIRONMENTAL TRENDS**FORESTS**

- Loss of natural forest is 14.6 million hectares annually (an area the size of Nepal).
- Deforestation of tropical forests is almost 1 percent annually.

BIOLOGICAL DIVERSITY

- About 24 percent of mammals and 12 percent of bird species are currently regarded as globally threatened.

FRESHWATER

- 1.1 billion people still lack access to safe drinking water and 2.4 billion lack access to adequate sanitation.
- Lack of access to a safe water supply and sanitation results in hundreds of millions of cases of water-related diseases, and more than 5 million deaths, every year.

ATMOSPHERE

- Indoor and outdoor air pollution are estimated to be responsible for nearly 5 percent of the global burden of disease. In developing countries, 500,000 people die annually from outdoor pollution and 1.9 million from indoor pollution.
- The overall warming amounts to about 0.6 degrees Centigrade over the 20th century; the 1990s were the warmest decade and 1998 the warmest year since 1861. The warming is largely due to emissions of carbon dioxide from fossil fuel combustion.

WASTE

- Between 33 percent to 50 percent of solid wastes generated within most cities in low- and middle-income countries are not collected.
- Fewer than 35 percent of cities in the developing world have their wastewater treated.

Source: UNEP/GEO

"Because environmental problems are rooted in economic and social policies, they occur at all levels from local to global, and success requires action by many players over long periods of time."



The Global Environmental Outlook and other UNEP assessments show that there have been significant changes in our lives and the environment over the past 30 years. While some notable improvements have been achieved, the overall state of the environment is more fragile and degraded than in 1972. For many Supreme Audit Institutions (SAIs), none of this is news. They have identified issues of waste management, water and air pollution, forest loss, land degradation, and impaired ecosystems as the top environmental issues facing their respective countries.

Our governments are responsible for dealing with these problems and working towards solutions. It isn't an easy challenge. Because environmental problems are rooted in economic and social policies, they occur at all levels from local to global (and thus can involve municipal, regional, and national governments), and success requires action by many players over long periods of time. Nevertheless, governments around the world have addressed environmental issues over the years through the creation of environmental ministries, policies, and programs and through international institutions and treaties, laws and regulations, and expenditures:

HOW DO AUDITORS FIT IN?

What does the condition of our planet's environment have to do with auditors, you might ask? Well, if the thousands of environmental audits conducted by SAIs over the past decade are an indication, quite a lot!

"Environmental auditing" is a catch-all term used to describe a range of audit activities with a focus on the environment. While there are many variations, SAIs are currently engaged in three basic types of auditing with an environmental perspective: financial (attest), compliance, and performance (value-for-money). Each of these is formally described and defined in INTOSAI auditing standards and in guidance prepared by the INTOSAI Working Group on Environmental Auditing (WGEA). Environmental audits apply general audit methods and standards with a different focus. When conducting environmental audits, auditors typically might ask the following kinds of questions:

- Do the financial statements properly reflect environmental costs, liabilities (including contingent liabilities), and assets?
- Is the organization spending money in accordance with financial rules and governing legislation?
- Is the government complying with international environmental treaty obligations, domestic environmental laws and regulations, and government policies and programs?
- Is the government meeting the environmental performance targets it has set for itself, and what results has it achieved?
- Is the government controlling environmental risks from its own operations?
- Has the government put in place an effective accountability framework for its environmental programs and policies?

For many SAIs, environmental auditing has become a mainstream activity, as important as any other type of audit or area of mandate. And SAI efforts in this area are helping governments do a better job. Addressing environmental matters falls squarely within the mandate—some argue the responsibility—of national audit offices for the following reasons:

- Governments spend significant public resources on managing environmental problems—SAIs need to hold them accountable for prudent financial management, reporting, and results.

- Governments have signed numerous international agreements and enacted domestic laws and regulations—SAIs need to hold them accountable for compliance.

- Governments, in their financial statements, must account for the environmental costs and liabilities created by their land holdings and operations—accounting standards require them to adhere to proper accounting practices.

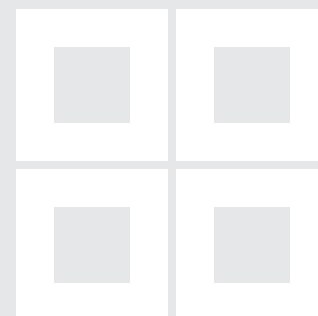
- In some cases, the governing legislation for the SAI specifies environmental requirements:

MEETING THE CHALLENGES: HOW THE WORKING GROUP ON ENVIRONMENTAL AUDITING CAN HELP

Although environmental auditing is now a popular activity in SAIs, it is not without its challenges. INTOSAI members have identified a number of real and perceived barriers to undertaking environmental audits, including:

- inadequate SAI mandates;
- insufficient established environmental auditing norms and standards;
- lack of skills or expertise within the SAI;
- insufficient data on the state of the environment;
- insufficient national monitoring and reporting systems; and
- insufficient formulation of governmental environmental policy, such as the lack of measurable goals, the absence of a strategy, and an insufficient regulatory framework.

In many ways, the INTOSAI Working Group on Environmental Auditing (WGEA) exists to help SAIs overcome these barriers. It was formed by INTOSAI in 1992 to meet the burgeoning requirement for environmental auditing expertise. The WGEA membership has grown from 12 founding members to more than 50, and it is now a large and active INTOSAI body.



For the first 9 years of its existence, the Netherlands Court of Audit chaired the WGEA, and impressive accomplishments were achieved under its leadership. Since 2001, the Office of the Auditor General of Canada has been the WGEA Chair and Secretariat. In 2001, a 15-member steering committee was established to manage the operational and day-to-day activities of the WGEA. In addition, six INTOSAI regions have established their own regional working groups on environmental auditing. The SAI of Brazil coordinates the OLACEFS regional technical committee on environmental auditing.

The WGEA aims to encourage SAIs to use their audit mandates and audit methods in the field of environmental protection and sustainable development. Its mission is to assist both member and non-member SAIs in acquiring a better understanding of the issues involved in environmental auditing, to facilitate the exchange of information and experience among SAIs, and to publish guidelines and other information for their use. The WGEA provides a variety of services and products to SAIs, including the following:

WEB SITE

The WGEA Web site (<http://www.environmental-auditing.org/>) is loaded with information for use by members. This includes the mission and mandate of the WGEA, contact data for members, downloadable copies of all guidance documents produced to date, titles and extracts of hundreds of environmental audits, minutes of meetings, and updates on events and activities:

GUIDANCE DOCUMENTS

The WGEA has developed many papers to help SAIs identify audit issues and use their mandates to conduct environmental audits. They are all available on the WGEA Web site. For a list of some of these documents, see this issue's "Reports in Print" section.

INFORMATION EXCHANGE

The WGEA handles this key aspect of its mission in many ways. As noted earlier, considerable information about auditing practices—including access to environmental audit reports—is available on its Web site. In addition, the WGEA now holds a technical seminar featuring presentations by SAIs as part of its regular meetings. The 8th meeting of the WGEA held in Warsaw in June 2003 featured sessions on the topics of waste, water, and sustainable development. At the 9th meeting, to be held in Brasilia in June 2004, seminar sessions will deal with biodiversity, meeting new challenges, regularity audits, and joint, concurrent, or coordinated audits:

TRAINING

In 2002, the WGEA entered into a unique partnership with the INTOSAI Development Initiative (IDI) to develop a training program for environmental auditors designed to strengthen SAIs' ability to conduct environmental audits. Environmental subject matter experts and certified training specialists worked together to produce an intensive, 2-week training course on environmental auditing that has met with enormous success. The first pilot course, the Environmental Auditing Workshop, took place in Antalya, Turkey, in 2003 and the second in Nairobi, Kenya, early this year. Plans are underway to deliver the course in other regions. Plans are underway to deliver the course in the OLACEFS region:

SURVEY OF MEMBERS

Among the tools developed by the WGEA to assist SAIs in conducting environmental audits are the INTOSAI member surveys it carries out every 3 years. The surveys gather information that serves as a milestone to mark the progress achieved by WGEA members and allows for the evaluation of trends and accomplishments. The information also serves to shape the WGEA's work plan, strategies, and products. Since the inception of the WGEA, four separate surveys have been undertaken:



The fourth INTOSAI survey conducted in 2003 covered 2000-2003. It was sent to all the SAIs participating in INTOSAI. The results are quite revealing: 67 of the 114 responding SAIs have conducted one or more audits concerning environmental issues. Of these, 54 percent have personnel dedicated to environmental auditing and 72 percent indicated an interest in auditing aspects of sustainable development. Perhaps most impressive was the volume and range of environmental audits conducted by SAIs (see table 1).

TABLE 1: ENVIRONMENTAL ISSUES AUDITED BY SAIS, 1994-2003 (*)

Environmental issue	Number of reports		
	2000-2003	1994-1996	1997-1999
Internal environmental management by public authorities or departments	138	162	81
Freshwater: drinking water, water quality, rivers, lakes	132	131	147
Waste: waste in general, hazardous waste, non-hazardous waste, waste processing, landfills	118	103	126
Pollution prevention	83	74	73
Agriculture, pesticides, land development, forestry	74	85	85
Nature and recreation (including national parks and forests, recreation and tourism)	73	102	83
Eco-systems: biodiversity, ecological infrastructure, eco-systems management	64	57	57
Environment and human health	60	72	110
Traffic, mobility, transport	58	32	61
Air pollution	45	72	65
Salt water: marine pollution	39	25	29
Industrial pollution	36	81	70
Disaster management and emergency preparedness	35	33	30

A report may be listed in more than one category.

THE WGEA: FUTURE DEVELOPMENT AND DIRECTION

The WGEA's future certainly looks bright—and busy. Interest in getting support from the WGEA seems to be at an all time high. SAIs are seeking more guidance on a range of environmental topics, more training and technical assistance, and more opportunities for information exchange:

In February 2004, the Steering Committee of the WGEA met in Lima, Peru. It reviewed its draft work plan for 2005-2007, which will be discussed by the full WGEA at its upcoming meeting in Brasilia:

The WGEA has set a number of ambitious goals:

- to increase the number of parallel, joint, or coordinated audits environmental audits by SAIs;
- to expand SAI training in environmental auditing techniques;
- to increase cooperation and communication between the WGEA and other international organizations;
- to expand the breadth of environmental auditing tools available to SAIs;
- to strengthen communications and information sharing among SAIs; and
- to explore the potential for funding sources to support WGEA activities.

Once the WGEA's work plan is finalized, it will be presented to the XVIII INCOSAI in Budapest in October 2004 for formal adoption:

MORE HELP IN MEETING THE CHALLENGES

Environmental auditing is here to stay. This International Conference on Environmental Auditing is a wonderful opportunity for all SAIs to learn from others and to upgrade their practices in order to help their respective governments improve environmental and sustainable development performance and to protect the health and safety of their citizens. While it may appear that auditors are "closet environmental do-gooders" who believe that their work can help reverse disturbing global trends by improving the way governments address environmental problems, the reality is that environmental matters fall squarely within the mandate of SAIs. ■



Environmental Audit and Regularity Auditing

International Organization of
Supreme Audit Institutions -
INTOSAI
Working Group on Environmental
Auditing - WGEA

BACKGROUND

This article is a synopsis of the INTOSAI Working Group on Environmental Auditing (WGEA) paper, 'Environmental Audit and Regularity Auditing'¹ that is due to be presented for approval as a formal INTOSAI document at the INCOSAI meeting in Budapest, Hungary in October 2004.

The paper was developed in response to an issue that was raised at the 6th meeting of the WGEA held in Cape Town, South Africa (April 2000): that of the difficulties faced by auditors in addressing environmental issues within a regularity (financial and compliance) audit framework.

Accountants and auditors have traditionally not been associated with the conservation or environmental movement. However, as providers of information, reports, and assurance on which business and government decisions are frequently based, they have increasingly been drawn into the environmental arena. The influence of accountants and auditors comes from their access to financial and performance information. They analyze, report, and communicate information on which decisions are based and performance is evaluated. They can encourage greater transparency and informed decisions about the application of resources and the impact of activities on environmental outcomes without distorting existing accounting standards.

The paper illustrates how an environmental audit focus can be brought to the financial and compliance audit activities of a SAI.

TYPES OF AUDITS

Previously, in its paper, "Guidance on Conducting Audits of Activities with an Environmental Perspective"², the Working Group on Environmental Auditing has identified three types of audits in which environmental issues can be addressed. These are audits of financial statements, compliance audits and performance audits.

1. <http://www.environmental-auditing.org>

2. INTOSAI WGEA Guidance on Conducting Audits of Activities with an Environmental Perspective 2000.

FINANCIAL STATEMENT AUDITS

During an audit of financial statements, environmental issues may include the following:

- initiatives to prevent, abate or remedy damage to the environment;
- the conservation of renewable and non-renewable resources;
- the consequences of violating environmental laws and regulations; and
- the consequences of vicarious liability imposed by the state.

COMPLIANCE AUDITS

Compliance auditing with regard to environmental issues may relate to providing assurance that governmental activities are conducted in accordance with relevant environmental laws, standards and policies, both at national and international (where relevant) levels. As stated above, financial statement audits may also include examination of compliance with accounting standards and financial regulations.

PERFORMANCE AUDITS

Performance auditing of environmental activities may include

- ensuring that indicators of environmental-related performance (where contained in accountability reports) fairly reflect the performance of the audited entity; and
- ensuring that environmental programmes are conducted in an economical, efficient and effective manner³.

Which of these different types of audits a SAI may use will depend primarily on the mandate under which the SAI operates.

THE REGULARITY AUDIT

A regularity audit (defined by INTOSAI Auditing Standards⁴.) embraces:

- attestation of financial accountability of accountable entities, involving examination and evaluation of financial records and expression of opinions on financial statements;
- attestation of financial accountability of the government administration as a whole;
- audit of financial systems and transactions including an evaluation of compliance with applicable statutes and regulations;
- audit of internal control and internal audit functions;
- audit of the probity and propriety of administrative decisions taken within the audited entity; and;
- reporting of any other matters arising from or relating to the audit that the SAI considers should be disclosed.

The standards acknowledges that there can be overlap between regularity and performance auditing, and in such cases classification of a particular audit will depend on the primary purpose of that audit.

FINANCIAL AUDIT

Financial statements should provide information on the financial position, performance, and cash flow of an entity that is useful for making and evaluating decisions about the allocation of resources. Specifically, a financial statement in the public sector should provide information useful for decision-making and demonstrate an entity's accountability of its resources⁵.

3. The INTOSAI WGEA Guidance on Conducting Audits of Activities with an Environmental Perspective 2000 describes in more detail the different types of performance audits that can be conducted (paragraph 210).

4. INTOSAI Auditing Standards, June 1992.

5. International Public Sector Accounting Standard IPSAS1: *Presentation of Financial Statements* issued by the International Federation of Accountants, May 2000.

Generally, financial statements of governments (or their constituent entities) have tended to avoid environmental issues. However, there is a realisation that there are costs, compliance, and performance issues associated with environmental policies and obligations that should be reflected in financial statements.

The International Auditing Practices Committee (IPAC) defines environmental matters in a financial audit as:

(a) “initiatives to prevent, abate or remedy damage to the environment or to deal with the conservation of renewable and non-renewable resources (such initiatives may be required by environmental laws and regulations or by contract, or they may be undertaken voluntarily);

(b) consequences of violating environmental laws and regulations;

(c) consequences of environmental damage done to others or to natural resources; and

(d) consequences of vicarious liability imposed by law (for example, liability for damages caused by previous owners)”⁶.

To date, the accounting and auditing communities have focused on environmental liabilities. While an organization’s financial statements may include land assets (valued on the same basis as other property), a recent focus has been on “environmental assets”—natural assets that do not provide resource input but which provide environmental services such as habitat or flood and climate control and other non-economic functions such as aesthetic or health values. This idea stresses that bodies are accountable not only to their shareholders but also to society for the stewardship of the natural environment. The consideration of environmental assets is still at an early stage of development, with the private sector very much taking the lead.

COMPLIANCE AUDIT

Compliance audits can examine an entities compliance with a range of matters. Firstly, they can examine an entities compliance with financial authorities and accounting practices (for example, legislative controls such as appropriations of the entities spending). Secondly, they can examine compliance with environmental laws and treaties. Auditors may be interested in examining compliance with laws and treaties as non-compliance could affect the entity’s financial statements. Also, auditors may be interested in examining such compliance because, apart from any effect on financial statements, it will inevitably incur expenditure and could, therefore, be of relevance in relation to the wider use of public funds.

This type of environmental audit can:

- Promote compliance or provide increased assurance about compliance with existing and impending environmental policy and legislation.
- Reduce the risks and costs associated with non-compliance with regulations.
- Save costs by minimizing waste and preventing pollution.
- Identify liabilities and risks.

The regularity audit therefore encompasses financial and compliance auditing, and the compliance aspect of a regularity audit may be in relation to compliance with accounting standards and/or compliance with relevant environmental laws and treaties.

6. International Auditing Practice Statement 1010: The Consideration of Environmental Matters in the Audit of Financial Statements, March 1998.

WHAT CAN A REGULARITY AUDITOR DO? ⁷

OBTAIN KNOWLEDGE OF ENVIRONMENTAL MATTERS

In all audits, a sufficient knowledge of the business is needed to enable the auditor to identify and understand matters that may have a significant effect on the financial statements, the audit process, and the audit report (ISA 310, paragraph 2).

The auditor is not expected to know more than management or the environmental experts.

The regularity auditor should consider the industry in which the entity operates, as it could indicate the possible existence of environmental liabilities and contingencies. Certain industries are more exposed to environmental risks—for example, chemical, oil and gas, pharmaceutical, and mining industries, or government agencies with responsibilities for environmental management or regulation.

Assess inherent risk, internal control systems, and control environment

Having acquired a sufficient knowledge of the business, the auditor assesses the risk of material misstatement in the financial statements. This would include the risk of misstatement due to environmental matters, namely environmental risk.

Examples of environmental risk include:

- compliance costs arising from legislation; and
- impact of non-compliance with environmental laws and regulations.

The audited entity can adopt different approaches to achieve control over environmental matters. Small entities or entities with low exposure to environmental risk may include environmental control systems in their normal internal control systems. Entities with high exposure to environmental risk may design and operate a separate internal control sub-system—for example, an environmental management system (EMS)⁸.

The auditor should also obtain an understanding of the control environment for environmental matters. For example, areas to examine could include a governing body's and its management's attitude, awareness, and actions toward internal control.

If the auditor considers there is a risk of material misstatement of the financial statements, specific procedures would need to be designed and performed to ensure that there is no material misstatement.

CONSIDER LAWS AND REGULATIONS

When planning and performing an audit, a regularity auditor evaluates compliance with applicable laws and regulations, where non-compliance may materially affect the financial statements. However, an audit cannot be expected to detect non-compliance with all laws and regulations⁹.

The regularity auditor obtains a general understanding of environmental laws and regulations that could result in the material misstatement of the financial statements or which may have a fundamental impact on the operations of an entity.

7. Public sector reporting is a spectrum between cash accounting and accrual accounting. Governments around the world adopt a variety of reporting practices along this spectrum. The WGEA paper discusses the impact of environmental issues on financial statements prepared using both methods of accounting and what a SAI should consider when auditing financial statements.

8. Standards for an EMS have been issued by the International Organization for Standardisation ISO 14001: Environmental Management System—Specification with Guidance for Use.

9. ISA 250: Consideration of Laws and Regulations in an Audit of Financial Statements.

The auditor is not expected to possess the expertise or professional competence to determine if an entity is in compliance with the environmental laws and regulations. The auditor, however, can use his training, experience and understanding of the entity and industry to recognize non-compliance issues and seek expert advice.

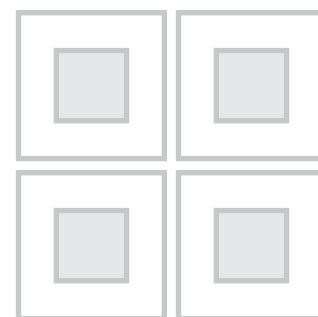
PERFORM SUBSTANTIVE PROCEDURES

The regularity auditor also obtains evidence to support the environmental disclosures made in the financial statements through enquiries of management—those responsible for preparing the financial statements and those responsible for environmental matters.

If the entity has an internal auditing function, which examines environmental aspects of the entity's operations, the auditor should consider using that work. In certain situations, an environmental expert may be involved in an outcome that is recognized or disclosed in the financial statements, for example, in quantifying the nature and extent of a contamination, or in considering alternative methods of site restoration, etc. In such cases, the auditor should consider the impact of the expert's work on the financial statements and the professional competence and objectivity of the environmental expert.

Another aspect the regularity auditor may consider is the use of any income that an entity may be responsible for collecting, such as funds collected under the 'polluter pays' model. The auditor may examine the financial systems and controls around the collection of such funds, and also whether the funds are being used for the purposes it was intended.

Environmental reports have been developed as a method for companies to communicate their environmental performance and impact to stakeholders; they can be seen as a new and important aspect of corporate governance. Such reports might include an organizational profile, an environmental policy statement, details of targets and achievements, and details of performance and compliance.



REPORTING

SERVICE PERFORMANCE REPORTING

Some governments either report information on service performance in financial statements or separately. In such cases, SAIs may further the accountability and reporting aspects of their regularity audit role.

Entities that have an impact on the environment can be categorized into three groups:

- Entities whose operations directly or indirectly affect the environment, whether positively or negatively—such as by rehabilitation or utilization and pollution.
- Entities with powers to make or influence environmental policy and regulations—whether internationally, nationally, or locally.
- Entities with the power to monitor and control the environmental actions of others¹⁰.

“Development of adequate information, control, evaluation and reporting systems within the government will facilitate the accountability process. Management is responsible for the correctness and sufficiency of the form and content of the financial reports and other information”¹¹.

If key environmental departments or agencies are required to produce a statement of what they intend to achieve (a statement of service performance for environmental outputs or outcomes), SAIs could encourage governments to make such statements a part of the entity’s request for a budget. Each year the achievement of the previous year’s statements could be reviewed as part of the financial audit.

OTHER FORMS OF REPORTING

Organizations in the public sector are making progress in developing corporate governance and arrangements for risk management. There has been a move away from a singular focus on financial risk toward giving attention to all major risks that will impact on the public. The management of all significant risks to a body’s fulfillment of its objectives has led to changes in corporate responsibilities and reporting.

Environmental reports have been developed as a method for companies to communicate their environmental performance and impact to stakeholders; they can be seen as a new and important aspect of corporate governance. Such reports might include an organizational profile, an environmental policy statement, details of targets and achievements, and details of performance and compliance. ■

10. INTOSAI Guidance on Conducting Audits of Activities with an Environmental Perspective, 2000.

11. INTOSAI Auditing Standards, Revised Edition 1992, paragraphs 23-24.

CONCLUSION

The environmental problems of the world will not be solved overnight nor will they be solved solely by the actions of SAIs. However, much trust is placed in the role of the SAIs and they can be part of the solution.

A supreme audit institution can undertake an audit with an environmental focus using a regularity (financial and compliance) mandate. It is not necessary to have a performance audit mandate to conduct an audit with an environmental focus. A SAI may feel that their greatest skills and experience lie in the audit of financial and compliance issues. It would make sense for them to use this experience in an environmental audit.

The role of a SAI is to respond to the expectations of citizens by providing independent, credible, and objective verification of the information provided by government agencies with respect to their activities and their impact on the environment.

The audit of financial statements enables the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an identified financial reporting framework. Material respects can be directly linked to environmental costs, obligations, impacts and outcomes. In this context the audit of financial statements requires the auditor to consider environmental matters as part of the regularity audit.

In addition, auditors need to be aware of ongoing developments—such as recognizing environmental assets. They should seek out opportunities to encourage their clients to adopt regimes that may be considered good practice but are not currently mandatory—for instance, the production of environmental reports. As standards—in both financial reporting and corporate governance—move toward fuller reporting and disclosure of environmental, social, and ethical reporting, auditors will need to reappraise their approach. ■

The role of a SAI is to respond to the expectations of citizens by providing independent, credible, and objective verification of the information provided by government agencies with respect to their activities and their impact on the environment.

Reviewing Sustainable Development: The National Audit Office's Approach in The United Kingdom

Marcus Popplewell

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BACKGROUND

This article is based around a summary of a paper, prepared by Joe Cavanagh and Tom Wallace of the United Kingdom National Audit Office, for the meeting of the Steering Committee of the INTOSAI Working Group on Environmental Audit in Costa Rica in January 2003 and subsequent developments.¹ It sets out:

- (a) The broad aims of the United Kingdom's Sustainable Development Strategy
- (b) Who is responsible for promoting sustainable development in the United Kingdom
- (c) How sustainable development is being integrated into policy making
- (d) How the UK is seeking to implement the goals of the World Summit on Sustainable Development
- (e) What the Sustainable Development Strategy has achieved to date
- (f) The National Audit Office's plans to review progress in achieving sustainable development

(A) THE BROAD AIMS OF THE UNITED KINGDOM'S SUSTAINABLE DEVELOPMENT STRATEGY

In May 1999 the United Kingdom Government published its first Sustainable Development Strategy.² The Strategy set out how sustainable development was to be achieved, including the arrangements within central government bodies. The Strategy recognised that for sustainable development to be successful, it must be integrated into central and local policy making and the behaviour of individuals and private companies. The main aims of the Strategy are:

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources;
- high and stable levels of economic growth and employment.

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1. Implementation of sustainable development in the UK, United Kingdom National Audit Office, July 2003
 2. A better quality of life: a strategy for sustainable development for the United Kingdom, Cm 4345, The Stationery Office, London, ISBN 0-10-143452-9, http://www.sustainable-development.gov.uk/uk_strategy/content.htm

(B) RESPONSIBILITIES FOR SUSTAINABLE DEVELOPMENT IN THE UNITED KINGDOM

The Department for Environment, Food and Rural Affairs has the key role in promoting sustainable development across government and society, and internationally by:

- ensuring that policies across Government address sustainable development issues;
- acting as an advocate for sustainable development;
- monitoring and reporting on progress;
- leading on sustainable development policy internationally.

One of the Department for Environment, Food and Rural Affairs' 10 high level targets is to "Promote sustainable development across Government and the country as a whole as measured by achieving positive trends in the Government's headline indicators of sustainable development."

Sustainable development it is not a policy that can be delivered by one department alone. In addition, therefore, there is:

- A committee of Government ministers to co-ordinate sustainable development policy - the committee produces a report each year summarising progress made in greening government procurement and operations.

• A Parliamentary Committee devoted to environmental audit - the Environmental Audit Committee was set up in 1997. It is responsible for monitoring the progress of Government bodies in meeting environmental protection and sustainable development targets. The National Audit Office has recently agreed to support the Committee in this work.

• A Sustainable Development Commission - the Commission is a Government sponsored body whose objectives are to: review progress in achieving sustainable development; recommend action to reverse unsustainable trends; raise awareness of sustainable development issues; and stimulate good practice.³

• Regional and local sustainable development strategies - all regions and local communities have their own sustainable development strategies. A set of 29 local sustainable development indicators are used to monitor the performance of local authorities.

(C) INTEGRATING SUSTAINABLE DEVELOPMENT INTO POLICY MAKING

The Government's Sustainable Development Strategy, launched in 1999, identified 10 guiding principles and approaches that underpin the achievement of sustainable development:

1. Putting people at the centre.
2. Taking a long term perspective.
3. Taking account of costs and benefits.
4. Creating an open and supportive economic system.
5. Combating poverty and social exclusion.
6. Respecting environmental limits.
7. The precautionary principle.
8. Using scientific knowledge.
9. Transparency, information, participation and access to justice.
10. Making the polluter pay.

The Government has developed a Policy Makers Checklist to provide officials with helpful information and contact points on statutory requirements (e.g. Human Rights Act), good practice (e.g. consultation) and the full range of impact assessment and appraisal tools (e.g. Environmental Impact Assessments, Regulatory Impact assessment).

The Department for Environment, Food and Rural Affairs has now developed an Integrated Policy Appraisal tool to improve the integration of environmental and other sustainable development objectives.⁴ The tool provides a framework for a standard assessment of policy proposals against a series of environmental, social and economic impacts. The Government also uses fiscal measures to encourage more sustainable development, such as a low fuel duty for "ultra-low sulphur diesel" and an above inflation increase in petrol duty each year.

3. <http://www.sd-comission.gov.uk/>

4. www.defra.gov.uk/ebus/enabling/procurement/susdev-ipas.pdf

(D) ADAPTING THE UNITED KINGDOM'S SUSTAINABLE DEVELOPMENT STRATEGY TO REFLECT THE WORLD SUMMIT

Rather than establishing a separate process for following up the 2002 World Summit on Sustainable Development, the United Kingdom Government intends to build on existing sustainable development processes. In 2003, the Government set out its 17 main commitments from the 2002 World Summit on Sustainable Development, along with related objectives, actions and follow-up process.⁵ The areas where commitments have been made are: sustainable consumption and production patterns; renewable energy and energy efficiency; biodiversity; fisheries; oceans; integration of environmental issues into country-led poverty reduction processes; water and sanitation; access to energy; finance; corporate social responsibility; trade; agriculture; international sustainable development governance; co-ordinated World Summit on Sustainable Development/Monterrey follow-up; partnerships; human rights; chemicals.

In 2003, the United Nations Environment and Development United Kingdom Committee carried out a consultation exercise to identify priorities for the United Kingdom arising from the Summit. Predictably this found that different stakeholder groups have very different agendas. However, the main themes identified by the various groups included:

- Energy;
- Corporate accountability and responsibility;
- Sustainable production and consumption;
- Mainstreaming sustainable development and joined-up thinking;
- Biodiversity.

A key element of the World Summit on Sustainable Development is assistance for developing nations. The Government plans to increase its overseas development assistance from £3.0 billion to £4.5 billion by 2005-06. The Department for Environment, Food and Rural Affairs is also developing a strategy for sustainable consumption and production.

(E) THE UNITED KINGDOM'S PROGRESS TO DATE

Each year since 2000, the United Kingdom Government has produced a report recording national progress using 19 "Headline" indicators.⁶ The indicators cover three broad themes: economic, social and environment. These indicators are part of a larger set against which progress can be measured. Since the Sustainable Development Strategy was launched in 1999, ten headline indicators show improvements towards meeting targets. Four indicators have deteriorated significantly: robbery, air quality, road traffic volumes and household waste (see Figure 1 below).

The Sustainable Development Commission recently produced its own assessment of the Government's reported progress on sustainable development since 1999.⁷ The Commission noted that the Government's strategy *A Better Quality of Life*, launched in 1999, was intended to provide a framework for guiding and monitoring progress. The Commission concluded that the Strategy and the subsequent assessment of progress have been a valuable means of keeping sustainability on the agenda, and showing where progress is being made and where it is lagging. The Commission said:

"The UK is one of very few governments anywhere in the world that have established a process of this kind. During the period of the strategy, there has been some significant progress on several aspects of sustainability in the UK, as Achieving a Better Quality of Life (ABQL 2003) demonstrates. Sustainable development is gradually becoming more widely recognised as a key policy goal. There are numerous aspects of government policy and action by other bodies that have been modified to some extent by the requirements of sustainability. A number of the key indicators of sustainability are moving in the right direction. There is a somewhat more widespread understanding of the need for a more sustainable society amongst the public and in schools and colleges." (paragraph 5 of the Commission's assessment)

5. <http://www.sustainable-development.gov.uk/eac-wssd/commitments.htm>

6. Review of progress towards sustainable development: Government annual report 2003, <http://www.sustainable-development.gov.uk/ar2003/index.htm>

7. Shows promise. But must try harder, An assessment by the Sustainable Development Commission of the Government's reported progress on sustainable development over the past five years, April 2004, <http://www.sd-commission.gov.uk/pubs/assessment/index.htm>

“We see a set of indicators several of which are either inappropriate for measuring true sustainability, or for which the targets and timetables that have been established are insufficiently demanding to represent significant progress towards sustainability.”

However, the Commission also said:

“Our own assessment is that neither the UK Government, nor the devolved administrations nor our society as a whole have as yet fully assimilated how far the goals of sustainable development represent a radical critique of present policies and achievements, how far adrift we are from meeting our global and national responsibilities and creating a fully sustainable society, and how very much more needs to be done in engaging society as a whole in facing up to the challenges of sustainability. The commitment given so far is too generalised and too patchy to deliver the changes needed. We all need to try a great deal harder.” (paragraph 8)

“The Government sees a set of indicators most of which are showing reasonable progress towards sustainability. We see a set of indicators several of which are either inappropriate for measuring true sustainability, or for which the targets and timetables that have been established are insufficiently demanding to represent significant progress towards sustainability.” (paragraph 10)

The Government itself produces a report each year on the sustainability of its operations – the Sustainable Development in Government Report 2003.⁸ The Report gives performance data in nine areas (overarching commitments, travel, water, waste, energy, procurement, estates management, biodiversity and social impacts).

8. Sustainable Development in Government: Second Annual Report 2003, <http://www.sustainable-development.gov.uk/sdig/reports/ar2003/index.htm>

Indicadores		Mudanças desde 1990	Mudanças desde a estratégia
ECONOMIC			
Economic output		✓	✓
Investment		↔	↔
Employment		↔	✓
SOCIAL			
Poverty & social exclusion		↔	✓
Education		✓	✓
Health		↔	↔
Housing conditions		✓	✓
Crime	- robbery	✗	✗
	- theft of, or from vehicles and domestic burglary	✓	✓
ENVIRONMENT			
Climate change		✓	✓
Air quality		✓	✗
Road Traffic	- total road traffic volumes	✗	✗
	- road traffic intensity (per GDP)	✓	✓
River water quality		✓	✓
Wildlife	- farmland birds	✗	↔
	- woodland birds	✗	↔
Land use		✓	✓
Resíduos	- household waste	✗	✗
	- all arisings and management	...	↔



Significant change, in direction of meeting objectives



No significant change



Significant change, in direction away from meeting objectives



Insufficient or no comparable data

(F) THE NATIONAL AUDIT OFFICE'S PLANS TO REVIEW PROGRESS IN ACHIEVING SUSTAINABLE DEVELOPMENT

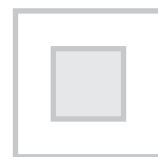
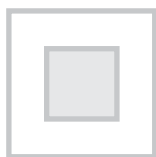
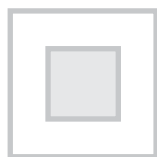
In developing our review of the progress in achieving the objectives of the World Summit on Sustainable Development, we intend to start by identifying each department's strategy for delivering the various Government commitments in the areas listed in section (d) above. This may not be straightforward, but once done we should then be able to identify and review the delivery mechanisms, the adequacy of objectives and targets, and consider how we review progress against targets.

In terms of future plans, we have identified a number of areas of potential interest for the United Kingdom Parliament and taxpayer. We think these areas might include: sustainable consumption and production – “decoupling” economic growth from environmental degradation; energy – increasing the use of renewable energy sources and access to affordable energy; oceans – building sustainable fisheries; biodiversity – significantly reducing the current rate of loss of biodiversity; chemicals – international processes for managing potentially hazardous chemicals; or corporate accountability – actively promoting corporate accountability and encouraging improvements in social and environmental performance in industry.

In a separate but related development, we produced a briefing in April 2004 on sustainable development in government operations, in response to a request from the Parliamentary Environmental Audit Committee. The briefing reviewed the Sustainable Development in Government Report 2003. In carrying out the work, we developed a framework of key questions which drew on our previous experience and data validation guidelines from recognised sources. The questions were designed to investigate four broad issues:

- **Targets:** The quality (e.g. appropriateness, clarity and coverage) of the sustainable development targets that departments are being asked to achieve;
- **Data:** The completeness and quality of the data included in the Report (including comprehensiveness, internal consistency and whether or not it had been validated);
- **Performance:** Departments' achievements, according to the data available;
- **Narrative:** The quality of the narrative which accompanies each section of the report and interprets the data (e.g. whether it draws accurate conclusions from the data and provides helpful illustrative examples).

Our analysis was based primarily on review of the published data and narrative, combined with detailed discussion with the Department for Environment, Food and Rural Affairs team and other contacts where necessary. We did not directly research departments' inputs to the Sustainable Development in Government Report 2003. This primary research will be an important element of further work we will carry out on specific areas of sustainable development in government. ■



Auditing water issues: experiences of SAIs

Sylvia van Leeuwen

Netherlands Court of Audit

1. INTRODUCTION

Water is a vital prerequisite for human life. Safeguarding the sustainability of water resources can be considered a public responsibility for all governments. Because of its worldwide importance, water was adopted as the central theme of the Working Group on Environmental Auditing of the International Organisation of Supreme Audit Institutions (INTOSAI) in 1996. The role of Supreme Audit Institutions (SAIs) in this area is to audit the regularity of public expenditure and government performance.

2. THE RELEVANCE OF WATER

People need water for drinking, food preparation, sanitation and a multitude of other purposes. Water is of crucial importance for human life and has ecological ('planet'), social ('people') and economic ('profit') values at a societal level. Striking a balance between these dimensions is the main policy challenge for governments nowadays. This objective is better known as 'sustainable development', which means, for example, the use and management of freshwater resources for current purposes without endangering the ability of future generations to meet their needs.

The total volume of water on earth is about 1386 million km³. Only 2.5 per cent of the total volume of water is fresh water – about 35 million km³ – and less than 1 per cent of all fresh water is directly accessible for human use (Gleick, 2000).

There are ongoing concerns about the quantity and quality of water resources, like the lack of access to fresh water and sanitation, water pollution from agricultural and industrial activities, flooding, desertification, and loss of biodiversity. By the mid-1990s, about one third of the world's population lived in countries suffering from moderate-to-high water stress. It is estimated that by 2025 this will be the case for two-thirds of the world's population (UNEP, 2002). The problems of water pollution and water shortage are global in nature and affect all countries, although they differ in degree and scale. Moreover, water scarcity can become a limiting factor to economic growth in the future.

3. THE ROLE OF GOVERNMENTS AND THE CHALLENGE TO SAIS

In Latin America and the Caribbean, water availability varies greatly between countries and even within them. Water demand is rising, mainly due to agricultural use (for irrigation purposes) and industrial use. Irrigation technology and practices are often inefficient. Water use for domestic purposes is also on the increase, but big inequities exist. Many of the poor in rural and urban communities do not have access either to clean water or to sanitation services. Water quality deteriorates from untreated sewage, the excessive use of fertilizers and pesticides, and industrial pollution. Sources of groundwater contamination and depletion are the release of heavy metals, nutrients, chemicals, and hazardous wastes from mining, industry and agriculture. Only 13 per cent of sewage in the region receives any kind of treatment, which in itself provokes considerable health and environmental risks (UNEP, 2002b).

International cooperation is important in solving water problems. In March 2003, over 24,000 people from all over the world attended the 3rd World Water Forum held in Japan. Topics discussed included the actions needed in order to solve global water challenges and to meet the goals set forth at the United Nations Millennium Summit in New York in 2000, the 2001 International Freshwater Conference in Bonn, and the World Summit on Sustainable Development in Johannesburg in 2002.

The importance of water for economic development, for public health and for the quality of ecosystems means that each government has the responsibility of seeing that basic services are provided and a balance of competing interests is maintained. Only a central government is in the position to have an overview of all claims on the available water stocks and can fulfil the crucial role of serving public interest. Even if actual water services are privatized, it can be considered a public responsibility to ensure that the public receives an adequate supply of clean water for domestic use.

Several governmental and other public bodies, often in close cooperation with private organizations and international bodies, are involved in problem-solving activities concerning water issues. Governments have various instruments at their disposal, including the formulation of a general water policy, water pricing, legislation, permits, inspection and enforcement, fees and fines, investments in infrastructure, and scientific research. Also the provision of information to the public and monitoring and reporting are important elements of water policy and programmes.

SAIs can audit the implementation of government plans and programmes, the application of instruments and the budget spent on water programmes and measures. This fits the traditional role of SAIs, namely assessing whether public money has been spent according to the rules and if it has been used economically, efficiently and effectively. Choosing the right (most relevant) subject and focus for their audits is the main strategic challenge for SAIs, if they are to have maximum effect.

Many of the poor in rural and urban communities do not have access either to clean water or to sanitation services. Water quality deteriorates from untreated sewage, the excessive use of fertilizers and pesticides, and industrial pollution.

On the national or regional level, both regularity and performance audits are done on water issues. Frequently occurring types of audit focus on:

- compliance with national environmental laws and regulations by government departments, municipalities, and/or other bodies;
- the implementation of environmental programmes;
- the evaluation of impacts or effects of existing national environmental programmes;
- the environmental effects of non-environmental programmes; and
- government environmental management systems.

Depending on an SAI's mandate, the general environmental policy towards water management and the evaluation of impacts or effects of *proposed* national environmental programmes can also be a possible starting point.

Environmental policies related to water often have an international dimension. A total of 261 river basins worldwide are shared by two or more countries. Together with the marine environment, these transboundary water resources are the shared responsibilities of most countries. Many international environmental agreements are in place, aimed at dealing with water issues that are shared by countries. Despite the many agreements, problems have often not been solved. In this respect, some even speak of a *crisis in governance* in the sense that close international cooperation has often not come about.¹ Independent institutions like SAIs could play a role by auditing the national implementation of international arrangements relating to water issues.

To support the audit of environmental issues, and international environmental agreements in particular, the working group has developed manuals and guidelines on the audit process, audit methods and the selection of international environmental agreements (INTOSAI, 1998 and 2001; INTOSAI Working Group on Environmental Auditing, 2001 and 2003). These are all applicable to the audit of water policy issues too. Experiences of SAIs with water audits are reflected in the working group's paper "Auditing water issues" (INTOSAI Working Group on Environmental Auditing, 2004). All publications mentioned are available, in various languages, on the Working Group's website: www.environmental-auditing.org.

4. EXPERIENCES OF SAIs

In the past decade, over 500 water audits were carried out by SAIs. European and Latin American SAIs have developed several water-audit projects cooperatively, for example in compliance with international environmental obligations.

The topics that were audited vary from region to region. Each country is, naturally, confronted with issues specific to its area, and therefore the focus of SAIs will be on the policies set and the budgets spent to solve these issues. Many audits were on fresh water, while others concentrated on the marine environment. The most audited subjects were water quality, rivers and lakes, prevention and/or recovery from flooding, drinking water and sanitation. Other audit topics included the natural value and biodiversity of water ecosystems, the prevention of pollution of the marine environment, and the costs of water-related infrastructure.

Some freshwater topics are not yet being frequently audited by SAIs, but could be relevant as well, for example water as a source of energy (hydro-electric stations, dam projects) and measures to fight drought like agricultural irrigation projects.

To illustrate the possibilities of SAIs, some examples of audits are described below.

4.1 WATER QUALITY

The SAI of China (1999) conducted a regularity audit focused on the operating funds of a wastewater treatment plant that was financed by wastewater treatment fees. It was found that the fee was low and quite a big gap existed between the subsidy the plant received and the operating funds available to the plant. The Chinese SAI recommended that the fee for wastewater treatment should gradually be raised to ensure the plant's normal operation.

1. HRH the Prince of Orange of the Netherlands (2002). *No Water No Future: A Water Focus For Johannesburg*.

Most audits are performance audits. For example the SAI of Argentina (1997) undertook an in-depth analysis of the quality of groundwater and sources of pollution in urban areas. The audit focused on the capital, Buenos Aires, and 19 other urban areas. The history and geographical make-up of the area studied was described and an inventory was made of all water stocks, the water services provided, all sources of contamination (industry, agriculture) and even contaminants. Health issues connected to deficiencies in water supply and quality were also dealt with. The SAI of Argentina made many recommendations. At an abstract level it recommended the development of an integral policy for the protection of groundwater and the prevention of pollution. Moreover, according to the SAI, a policy needed to be formulated to deal with water services and sanitation, and systems had to be established to monitor quality, quantity and the use of the area's underground reservoirs.

4.2. RIVERS AND LAKES

In several audits, the geographical entity of a watershed, river, lake or water basin was the subject of the audit. The environmental problems related to these water entities vary widely between countries and between regions within countries, but all have to do with some form of water pollution.

The national ministries responsible for water management, environmental protection, flood protection, health, and environmental education are generally included in these audits. In most, the provincial councils and/or local municipalities situated along the river or lake are also included. A third group of bodies being audited consists of inspectorates – the organizations responsible for testing or checking water quality, drinking water, health or the environment. The fourth group of institutions being audited are water companies, state enterprises and private-sector enterprises. These groups can be involved in the audit as a provider or a user of water resources, as an actor to improve water quality, or as a polluter, or a combination of these.

Examples are audits on the rivers Rio Pirai (Bolivia), Rio Tachira (Colombia and Venezuela), Nile (Egypt), Loire (France), Rio Mantaro (Peru), Oder (the Czech Republic, the Slovak Republic and Poland) and Danube (Romania, Bulgaria, Croatia, the Slovak Republic and Slovenia).

In Latin America, the SAIs of Peru, Bolivia, Colombia and Venezuela have performed comprehensive audits with a watershed as the starting point. The audits include institutions belonging to the central and departmental governments as well as the local governments in the watershed area. Attention was paid to water pollution caused by various sources, such as industry, mines, agriculture and households.

The audit of the SAI of Bolivia on the pollution of the Pirai River, Santa Cruz (1999) shows the relevance of water-quality measurements as one of the audit methods. The analyses included the physical and chemical water properties as well as the presence of bacteria. The SAI concluded that the monitoring duties carried out by the Environmental Authority were not effective concerning the control of the water quality of the Pirai River.

The SAI of Peru (1999) paid special attention to the effects of contamination on the health of the local population in the Mantaro River Basin in the Andes. This river is contaminated by mining activities, as well as by urban garbage. In cooperation with a hospital, toxicological analyses were performed of the level of lead in citizens' blood samples. The worrying result was that 60 per cent of the citizens had more lead in their blood than the recommended level.



4.3 FLOODING

The issue of managing water quantity in relation to flooding, and in particular the risk of flooding, has been dealt with in several audits. An example is the French SAI, which audited flood prevention measures in France (2002). The audit showed that flooding of the River Seine would cause a lot of damage. However, the populations at risk were not sufficiently aware of their vulnerable position and very often, there were no plans to reduce the risk in the most urbanized flood-prone areas. Nor were the general preventive measures sufficiently effective.

Other SAIs, like those of Poland (2002) and the Czech Republic (1997-1998), audited the performance of rescue operations during flooding, flood damage repairs, and the management of state funds allocated to determine the damage from flooding.

4.4. DRINKING WATER AND SANITATION

Because of the importance of drinking water, SAIs devote a lot of attention to this topic. The audits are generally focused on the availability and the quality of potable water, and/or on leakage (resulting in unaccounted-for water), often in relation to costs. Most bodies audited in this field are (public) water companies.

In 2000 the SAI in Mauritius conducted an audit on leakage in potable water storage and distribution systems. The reason for this audit was a large volume of unaccounted-for water (UFW) (around 47 per cent of total production in 1998 and 1999) that led to the classification of Mauritius as a 'water stressed' country. A decrease in rainfall in combination with an estimated increase in the demand for potable water by more than 20 per cent by 2010 poses an urgent problem for the country. This shortage could seriously hamper economic and social development. The SAI concluded that if the target of decreasing UFW to 35 per cent by 2010 could be achieved, no other substantial water resources would have to be harnessed. The main causes for the high level of UFW that were identified were the poor performance of contractors, inadequate monitoring of their work by water companies, the widespread use of sub-standard materials, a general shortage of materials, equipment and skilled labour, and limited job specifications.

"In several audits, the geographical entity of a watershed, river, lake or water basin was the subject of the audit. The environmental problems related to these water entities vary widely between countries and between regions within countries, but all have to do with some form of water pollution."

In 2002, the Brazilian SAI conducted an audit on water resources management. The audit focused on the Federal Government Acts and revealed that 19 metropolitan regions in Brazil are at risk of a crisis in their water supply system now or in the future. The main causes are fountainhead degradation, poor sewage treatment systems and water leakage. The report concluded that federal agencies responsible for managing water resources do not deal with these issues in a systematic, integrated way due to a lack of coordination of government actions and insufficient analysis of the impact of the policies that deal with the use of water. The Brazilian SAI suggested that the National Council of Water Resources, which is responsible for the coordination of the states and the national water resources plan, has to take part in the budgetary plan. The high rates of water leakage in the state's sanitation companies were also noted: out of 27 state companies, nine have losses over 50 per cent and three show figures that reach almost 70 per cent. According to the report, leakage is mainly a result of a lack of maintenance of the water distribution system. As a consequence, suggestions were made to increase federal support for the necessary corrective actions, such as the reopening of credit lines, and to focus on actions to improve the institutional, operational and commercial management of the state's sanitation companies.

4.5. NATURE AND BIODIVERSITY

Indirectly most water audits on rivers, lakes and seas involve the broad issue of nature and biodiversity. However, dedicated biodiversity audits on water issues appear to be scarce.

One example is the audit on the compliance with international agreements on wetlands (SAI of the Netherlands, 1999). The Netherlands is party to the Ramsar Convention on the Protection of Wetlands and must comply with two European Union directives: the Bird Directive and the Habitat Directive. The main findings were that the Netherlands has drafted many plans for the management and restoration of wetlands but in practice the implementation of these plans was often problematic or extremely slow. International obligations were inadequately operationalized in national policy and the ministry responsible for nature management had not made agreements with local authorities on the fulfilment of international obligations. As a result, local authorities were badly informed about the substance of the obligations. The Ministry of Nature Management did not have a clear picture of the condition of nature sites or of the effects of the regional wetlands policy and thus could not determine whether compliance with international obligations had been achieved.

4.6. MARINE ENVIRONMENT

The marine environment is, by definition, a topic shared by more than one country and most recent audits on the marine environment have focused on the national implementation of international obligations.

An example is the audit of the MARPOL Convention on Prevention of Marine Pollution by Ships and the OPRC Convention on Dealing with Pollution at Sea. Eight SAIs cooperated in this audit: Cyprus, France, Greece, Italy, Malta, the Netherlands, Turkey and the United Kingdom. They highlighted two complementary aspects: the prevention of pollution (by ensuring the quality and safety of ships and adequate facilities for waste collection in harbours), and measures to be taken against polluters and pollution (including, for example, surveillance above the coastline, the reporting of incidents of spillage to coastguard centres and the cleaning up of spills, and, last but not least, tracing and prosecuting polluters who violate the law). Each of the participants reported their national findings to their respective governments (reports available from the SAIs of the Netherlands, 2001; United Kingdom, 2002; Cyprus, 2002; Turkey, 2002; Malta, 2003; Greece, 2003; Italy, 2003). A joint report that will focus on best practices and lessons learned is currently being prepared (publication expected in 2004).

biodiversity

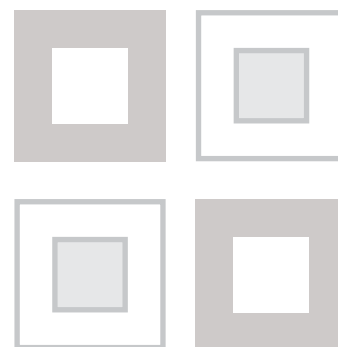
5. CONCLUSIONS

These audit examples illustrate that SAI audits on water issues are very diverse. Some deal with financial control and management issues and have water issues as a secondary subject, while others take water problems in society as a starting point, such as lack of access to clean water. It is not possible to formulate a general conclusion based on opinions of SAIs concerning water policy but one element that does seem to be a central problem of policy implementation and organization is the general lack of sufficient and reliable policy information. Basic information on the money spent, activities carried out, outputs delivered and impacts achieved to be used for key management and policy decision-making often seems to be inadequate.

Audits help to raise public consciousness of the relevance of water problems. The aim of the SAIs' audit work is to increase the quality of government policy and performance and the transparency of its (financial) operations by providing structured feedback to policy makers and executives. Since 1996, members of the INTOSAI Working Group on Environmental Auditing have been exchanging experiences on the central theme of water. Non-member SAIs have also done audits related to water and environment. The working group's paper "Auditing water issues", prepared by the SAI of the Netherlands, summarizes the collective experience of SAIs worldwide, drawing on the lessons learned from more than 350 audits and providing practical tips for SAIs. The paper was approved by the Working Group and was published recently (INTOSAI Working Group on Environmental Auditing, 2004).

The working group encourages SAIs to work together since environmental problems have no regard for national borders. A joint or coordinated audit is one of the instruments SAIs have to address common issues. Sharing experiences and audit methods can also improve the quality of the work of SAIs.

Because of the relevance of water as a prerequisite for life, the INTOSAI Working Group on Environmental Auditing decided to continue to work on this theme in the near future. The working group has recommended that SAIs maintain their current high level of interest in water issues in their work and make use of the experiences of water audits of their sister organizations within INTOSAI. ■



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Auditing Waste Management

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The world faces a number of major challenges to its environment. In Global Environmental Outlook,¹ the United Nations Environmental Programme has assessed the relative importance of environmental issues within and across regions. The issue of urban and industrial contamination and waste is rated to be critically important or important in all areas of the globe.

At the 1992 Rio Conference, waste was made one of the priorities of Agenda 21² with specific attention given to ensure the environmentally sound management of toxic chemicals, solid wastes and sewage-related issues and the safe and environmentally sound management of radioactive wastes.

At the Johannesburg World Summit on Sustainable Development in 2002, the focus was on initiatives to accelerate the shift to sustainable consumption and production and the reduction of resource degradation, pollution and waste.

Audits help raise awareness of the problems addressed. Auditing waste management systems is a way to help reduce the problems caused by waste in a country by revealing the shortcomings of the management system and the responsible actors and identifying areas that need improvement.

The INTOSAI WGEA³ recommends auditing waste

At its seventh meeting in Ottawa, Canada in September 2001, the INTOSAI Working Group on Environmental Auditing (WGEA) decided to adopt "waste" as a second key theme apart from water. In the third questionnaire conducted by the Working Group, 65% of the Supreme Audit Institutions (SAIs) identified waste as the most pressing environmental problem together with fresh water (also mentioned by 65%).

In order to facilitate the auditing work in the area of waste the Steering Committee for the Working Group on Environmental Auditing engaged itself in an active role as consultant, and a team from the SAI of Norway was set up in order to act as a working unit, collecting data and putting the material to paper.

1. Global Environmental Outlook-1, United Nations Environmental Programme, Global State of the Environment Report 1997. [Http://www.grida.no/geo1/exsum/ex3.htm](http://www.grida.no/geo1/exsum/ex3.htm)
2. Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally and was adopted by more than 178 Governments at the UN Conference in Rio de Janeiro. (UN Sustainable Development web page <http://www.un.org/esa/sustdev/agenda21.htm>)
3. Working Group of Environmental Auditing

The result is a background paper on waste management in support of SAI environmental audit activities. The paper gives information on waste management, issues and provides SAIs with information they might use in order to conduct audits in this area. The paper has been published in March 2004 and is now available on the WGEA Website under WGEA Publications (<http://www.environmental-auditing.org/>)

In the following I will present the main outline of the paper.

CLASSIFICATION AND HANDLING OF WASTE

Waste is a product that is no longer suited for its intended use. It may be worn out, or it may be an unwanted by-product of a process. This definition goes further than the more intuitive one because it also includes fully usable substances that are of no use to the present owner.

There are many ways of classifying waste. For the legislator, and thus for the Supreme Audit Institution (SAI) the distinction between hazardous and non-hazardous waste may be the most important because different regulations usually apply to different types of waste. Special kinds of hazardous waste include clinical/medical waste, electronic and electrical equipment and radioactive waste. In this presentation the following main types of waste have been used: solid, hazardous and radioactive.

Different kinds of waste require different treatment and final handling, due to both the physical and chemical composition of the waste and the levels of danger. The composition will have an impact on the collection process and on whether the waste can be used for energy-production, composting etc.

If waste is not handled in a satisfactory manner, it poses great danger to the environment and the well-being and health of humans and animals. Radioactive waste can be lethal and pollute large areas for centuries to come. Medical waste can promote the possible spread of diseases and infections. Hazardous waste may cause illness and loss of life. Illegal dumping and mismanaged landfills are unsightly and smelly, and they can contaminate soil and water. Burning of waste pollutes the air.

PUBLIC RESPONSIBILITY

The problems created by waste require practical solutions and policies. Countries regulate the handling of waste with legal measures, and authorities at various levels inspect and monitor the operations of waste generators, transporters and handlers. Nuclear and hazardous waste are often subject to more stringent monitoring than solid waste. Individual citizens, especially in urban areas, do not handle their own waste after the initial stages. Thus, it is important that the waste collection and treatment services be conducted in a fair, effective and environmentally sustainable manner.

THE ROLE OF THE SAIS.

Supreme Audit Institutions (SAIs) are put in a unique role when it comes to auditing waste management. Deficiencies in a country's waste management systems are a matter of national importance and therefore of interest to the SAI. By exposing the insufficiencies, the SAIs may help improve the quality of waste management, and through this the national and international environment. This is already recognised, and during the years 1997-99 the INTOSAI members produced more than 100 audit reports on waste, in at least 49 different countries. In year 2000 as many as 20% of the SAIs reported that they were planning audits on waste in the next three years.

"If waste is not handled in a satisfactory manner, it poses great danger to the environment and the well-being and health of humans and animals. Radioactive waste can be lethal and pollute large areas for centuries to come."

HOW TO DETERMINE FOCUS FOR THE WASTE AUDITS

Our report suggests an approach for identifying the most pressing areas on which to conduct waste management audits. This is a four-step procedure, starting with identifying the risks entailed by waste in a country. The next step is mapping out the relevant actors and their responsibility. The third step is taking the waste stream into account, and the final step is choosing a focus for the audits after the consideration of audit topics.

STEP 1 – ENVIRONMENTAL AND HEALTH RISK SCENARIOS

Auditing is usually about financial risks. In environmental auditing, risks to health and the environment are prime concerns.

The first step in the planning of waste audits consists of creating risk scenarios by identifying the main problem areas related to waste in the country and the risk they pose for public health and the environment. This exercise will give a picture of the danger the waste entails. If there are serious problems at basic levels of waste handling, we argue that this is of national importance and therefore possible for the SAI to address in order to raise consciousness about it.

STEP 2 – THE ACTORS AND THEIR RESPONSIBILITIES

The second step is to create an overview of the organisational structure of the waste management system. Most likely, there will be different systems for radioactive, hazardous and solid waste. This overview should include the most important actors: authorities at the national, regional and local levels, the waste generators and other actors that may pose a risk through their handling of waste. The responsible government bodies and the nature of the accountability relationships between the different actors should be identified.

Most countries have a legislative body responsible for formulating environmental policies and necessary laws. International agreements provide directions for the national legislative work. In many countries one government authority, usually called the Ministry of the Environment, is responsible for all of the

environmental policy at the federal or national level, including the management of waste. In other countries, several ministries are responsible for different parts of the waste management system. In these countries, it is important to map out which parts of the policy each ministry is responsible for and how they are coordinating their work.

A number of important functions come under the responsibility of the ministry, but these may often be carried out by subordinate agencies. The important consideration is whether the highest governmental authority (the ministry or ministries) has an overview of the activities and makes sure they are performed well.

Many countries have an authority responsible for controlling pollution and for inspecting and monitoring the environment and the activities that have an impact on the environment. If the country has an agency like this, it is necessary to map out the role it plays in the waste management system. If such an agency does not exist, the SAI should identify who is performing these functions. If these functions are not taken care of, it may be the responsibility of the SAI to inform the appropriate authorities.

Depending on the type of waste, the authorities that administer or regulate the waste may be at the regional or provincial level or at the local or municipal level. All actors should be mapped out, even though some of these actors may not come within the core of the SAI's mandate to audit.



STEP 3 –THE WASTE STREAM

When the actors and their responsibilities are mapped out the problems related to poor management should be considered. General knowledge related to typical weaknesses in management systems can be applied.

The waste stream is a good starting point when searching for defects in the waste management system in order to establish an audit.

Stage one in the waste stream is prevention, and the motivation behind this stage is the sustainable use of resources in general.

The *second stage* is the generation of waste. The government could influence the generation of waste through economic incentives, where the efficient use of resources and a limited generation of waste are rewarded. The polluter-pays principle⁴ is such an incentive.

The *third stage* of the waste stream is Recycling, Reuse and Recovery. Some governments have the objective of recycling, reusing and recovering as much of the waste as economically and environmentally feasible.

The *fourth stage*, the collection of waste, is usually regulated to some extent by local or national authorities and may be handled by public or private actors. Again, control is a key instrument.

The transport and export of waste are the *fifth stage*. There are usually official requirements for this activity. The operators may be either public or private. The transport of hazardous chemicals requires firm regulations to avoid possible accidents. When it comes to the export of hazardous waste, there are strict international rules to be followed.

Stage six is the treatment and disposal of waste which is most often subject to regulations from the authorities. In many countries, an operating permit is required, and inspections are common practice.

The possibility of illegal dumping, *stage seven*, must be acknowledged. Monitoring, inspections, etc. are available control instruments, and the statutory basis is essential. Both the permission to conduct inspections and appropriate sanctions must be in place.

"Many countries have an authority responsible for controlling pollution and for inspecting and monitoring the environment and the activities that have an impact on the environment. If the country has an agency like this, it is necessary to map out the role it plays in the waste management system."

4. Principle 16 of the Rio Declaration: "the polluter should, in principle, bear the cost of pollution".

STEP 4 – CONSIDER AUDIT TOPICS – CHOOSE FOCUS

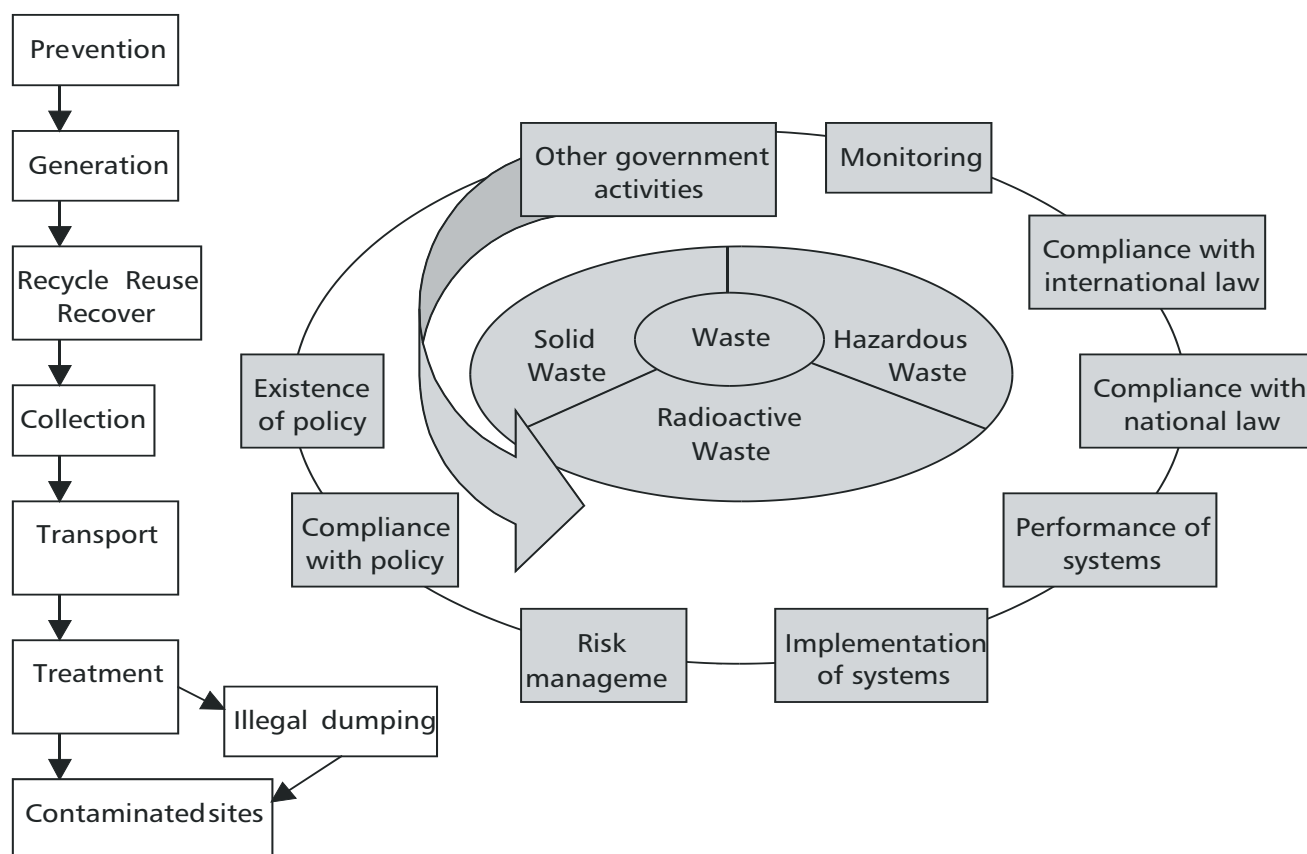
There is a number of relevant audit questions that an auditor may raise to assess the quality of waste management and problem areas that may be revealed by audits. Each of the audit topics may be addressed at each of the stages in the waste stream.

Once the most serious risks are identified, the structure of authority established and the challenges related to the waste stream revealed, a focus for the audit may become quite apparent. However, there is a wide range of audit questions that may be asked and approaches that may be chosen. In the following we present as an example under each heading a question:

- Existence of waste policy: Is there a waste policy that applies to every stage of the waste stream?
- Compliance with national environmental policy: Have the general environmental policy and the waste policy been reflected, specified, and put in concrete terms in instruments such as legislation, plans, budgets and financial tools?
- Risk management: Does the government have an overview of the risks and are measures being taken to manage them?
- Quality of the implementation process: Have policies, regulations, etc. been implemented efficiently and effectively?
- Performance of the waste management system: Do the responsible agencies have the necessary instruments for fulfilling their obligations regarding waste management?
- Compliance with national law and regulations: Are there any illegal practices in connection with the waste handling?
- Compliance with international obligations: Are the policies, legislation and practises relating to waste management in compliance with the international obligations and commitments to which the country has agreed?
- Monitoring: Is there a system that ensures a necessary overview of the waste handling?
- Effects of other government activities: Do the public ministries, departments and agencies manage the waste created by activities under their authority?

CHOOSE A FOCUS

The inclusion of these audit topics in the process of choosing a focus for an audit gives the following three dimensions: type of waste, stage in the waste stream and audit topic. To visualize these three dimensions we have constructed a figure that incorporates them.



This figure gives the auditors an overview of the most pressing areas to look at and of possible approaches. Examples of questions derived from these three dimensions are:

- Is there a policy in our country for the prevention of hazardous waste?
- Is the legislation relating to treatment of solid waste in compliance with the environmental policy?
- Is there adequate monitoring of the disposal of radioactive waste?

In actual audits, more than one of these questions is often addressed, as is the case in most of the audits that will be presented.

THE WAY FORWARD IN THE AUDIT OF WASTE MANAGEMENT

As I referred to above, in 2001 the INTOSAI Working Group on Environmental Auditing decided to make “waste” a second key theme. Based on the INTOSAI WGEA paper on auditing waste management, the Working Group recommends that the Supreme Audit Institutions of the world consider auditing waste management and the systems used to regulate and monitor this issue in the next work plan period (2005-2007). It is my hope that this joint effort will ensure a focus on this world scale problem and will help to improve the environment. ■

Environmental Evaluation: Basis for the Fiscal Control Focus

"There is no doubt that we still live with two opposing realities.

All players seem to agree that the current style has been exhausted and is unsustainable, not only in economic and environmental terms, but particularly as regards social justice. On the other hand, the key measures for the transformation of the economic and social institutions that resulted in the current style are not being adopted.

At most, the notion of sustainability is used to introduce what amounts to environmental restriction in the process of accumulation, without addressing the political and institutional processes that regulate the property of, access to and use of natural resources and environmental services. Neither are key actions introduced to change consumption patterns in the industrialized countries which determine the internationalization of the style."

(Roberto Guimarães, Tierra de Sombras: Desafíos de la sustentabilidad y del Desarrollo Territorial y Local ante la Globalización)

Bibiana Guevara Aldana
Office of the Controller General
Colombia

Worldwide, it is increasingly considered important to attribute monetary value to natural resources and the environment, a process led by the more industrialized nations, whose growth affected the environment due to excessive and inadequate use of these resources. This new look follows a shift in perception: from free assets, the environment and natural resources became economic assets, whose conditions presuppose accepted techniques that include biological, social, cultural, environmental aspects, etc., for their integration into the laws of the market.

However, the assessment of the implications that the economy has on the environment and natural resources was conceived with gaps and mistakes that do not allow their identification, nor the identification of the expenditures carried out to manage and protect the natural resources, often making it impossible to quantify the impacts generated by economic activity.

There is unquestionable pressure on the environment caused by any economic activity, or human activity in general, and damages resulting from exceeding the environment's renewal or assimilation capacity. In terms of national accounts, in order to review environment policies, apart from good will, there is only incipient environmental auditing, and little it done to quantify the impact of economic activity on this.

Furthermore, expenditures from the administration, management and protection of the environment are not considered equally in their economic evaluation, rather they are subject to the interpretation of whoever evaluates (the State, companies, families) and are often included without taking into account other production costs.

In view of the above, in the macroeconomic sphere, a national audit adjustment was considered, or its completion through satellites audits. The theoretical and practical difficulties of carrying out an adjustment of national audits led countries, in general, to chose to complement it with satellite environment and natural assets audits, aimed at calculating the internal expenses of management and protection (control) that any damages presumably aggregate.

Consolidating a damage aggregate to the environment with a view to sustainable development requires, in the first place, collecting objective information on the environment, composed of statistics, indicators and indices (United Nations proposal, 1990) allowing the definition of environmental objectives and accounts both for planning and monitoring, and from the point of view of the Supreme Auditing Institutions – SAIs, whose role is to oversee the management of public resources. By including environmental policies with indicators based on statistics and formulation indices, the indispensable elements are met for the construction and action of the State, constituting valid objects of control to identify progress or hindrances in their implementation.

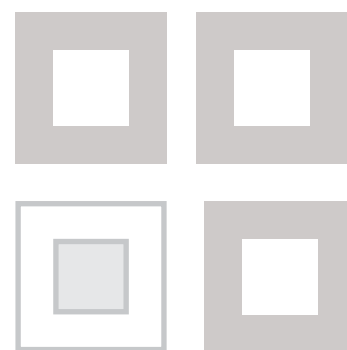
This more complex view, inherent to the environment, both in policy design and compliance, also requires a correspondence in the territorial and institutional scope, whose approach has traditionally been numerical-legal and does not allow recognition and claim of the natural assets as part of the public assets.

Therefore, one of the tasks of SAIs is to include under their scope of action the environment and natural resources, determining, for ethical and practical reasons, that sustainable development is an essential goal of public administration, as important as enforcing legal principles and effective, efficient, economical and equitable use of resources

Thus, the review and evaluation of environmental policies cannot be limited to verifying their compliance with the wider national policies, without the necessary statistics and indicators that evidence the current situation and the stimulation of a resource or the characteristics of the environment, with qualitative measurement instruments that allow the SAIs to play their role as policy advisors and support the work of the executive and legislative.

In the control of and support to policy design, the evaluation must become a tool that allows the identification of the environment and the natural resources as elements that add value to the management and economic activity of a country and that require the reduction of the impacts produced on them.

"Apart from theoretical discussions on the evaluation methodologies, which, however, must be known by the auditing institutions – the SAIs must clarify specific criteria on evaluations and tracking the progress towards sustainable development"



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The justification, used so far in face of the high costs of the technical evaluations of the impacts on the environment and natural resources and their reduction, hindering their generalized use, requires that the institutions responsible for the management of the natural resources and the environment look for homogeneous and general methodological mechanisms that constitute technical and practical approaches to generate the monetary identification, which is a result of the management and protection of the environment and the natural resources. Technical options are still presented that have no link with the other existing elements of jurisprudence in each region, and they are still removed from the search for the integral values derived from their application.

In this sense, in the opinion of the CGR of Colombia, although it is right to advance in the construction of methodological evaluation tools, it is also necessary, when reviewing the environmental policies launched by the SAIs, to observe guidelines such as those set by the INTOSAI (International Organization of Supreme Auditing Institutions), in view of the role that it plays towards the sustainable development of each country.

Definitively, in the analysis carried out, the auditing entities should stand out in the adoption of the appropriate corrective and preventive measures in relation to any weaknesses observed in the linkages of the environmental policies, with a view to cutting across all sectors of the country. The environment and the natural resources are affected by the actions of society and by the development of the activities of the different sectors of the economy, therefore they have to be identified and operationally incorporated at the sectoral level.

This weakness, reflected at the financial, legal, budgetary and management levels, hinders the coherence of the environmental policy at the different levels of regional implementation, and generates pulverization of resources, duplicity of efforts and lack of coordination among the different actions, supposedly hindering the achievement of results and making it difficult to identify the funds allocated to the management, conservation and protection of the natural resources and the environment; moreover, without elements to assess our natural assets and the different impacts on them, it is even more difficult to establish the costs that must be added to the execution of programs and projects of the established policies.

In this field, it is recommended that the SAIs work jointly with the different institutions in each country responsible for the elaboration of the necessary environmental information to develop the environmental audit programs, the environmental indicators and the environmental management, taking into account the variables and limitations of this type of work and making use of technical tools for the development of the audits.

It is only through sufficient knowledge on natural resources and the environment of each country, that the SAIs will be able to know to what extent the management, protection and conservation follow the sustainability planning of the country, and will be able to advise, in partnership with the political control exercised by the parliament, on the legal, financial or other types of requirements that must be taken into account.

With regard to the so called micro control, referring to the control exercised by the auditors over an institution or specific activity, this also lacks sufficient elements for the complex auditing of natural resources and the environment. The lack of evaluation of management and protection can distort the planning and implementation tools, making it difficult to prioritize objectives and influencing the results of the control.

Thus, in the scope of environmental fiscal control, the auditor is not able to quantify the environmental damage, which is a key element in a process of fiscal responsibility with a view to compensation. Generally, legal gaps prevent the compensation.

Generally, the legal inconveniences in the region are related to the political, social and economic reality, which are aspects that define priorities other than the environment and privilege the urgent short term issues rather than medium and long term decisions; the traditional structures of the law must be adapted to address a theme as complex as the environment; environmental normatization is profuse and diffuse in some cases. In this sense, it must incorporate elements that render it effective and efficient; the role played by judges and auditors in environmental and sustainable development issues deserves to be supported and taken into account within a structure of interdisciplinary and cross-sectoral analysis.

When there is no compensation resulting from a law suit, the role played by judges and auditors should be reinforced with the inclusion of control of an efficient environmental management and the coordination of the efforts of the judiciary and the executive; furthermore, the environmental decisions must be based on economic and technical criteria, as well as political will.

As approbatory and required elements in a legal suit, given the characteristics of the environmental theme, it is necessary to consider the constitution of specialized forums, and to take into consideration, in the legal suits, both the methodologies of evaluation of the environment and natural resources and the cost of its degradation, as well as assuring the participation of the technical sector and of civil society in the resolution of environmental conflicts; all this without leaving aside the analysis of the high approbatory cost and the costs of the environmental suit, as well as the difficulty in enforcing the environmental sentences.

These issues must allow dialogue both within the SAIs and between partnerships, allowing the proposal and review of the legal and technical elements to bridge the technical gaps and weaknesses in the processes, including the environmental factor, with increased awareness on the theme both by auditors and judges .

However, apart from the need to undertake consolidation work, it is necessary to observe parallel methods for immediate application of more effective enforcement, since not knowing a technically established value for the natural resources and the environmental services (identifying its present and future possibilities) does not prevent guiding the efficient use of the natural resources and the environment, nor the reduction of its degradation and destruction.

The sense of precaution required for the exercise of fiscal control on the management of natural resources and the environment must generate as an auditing tool, in the first place, the technical-conceptual approach of the evaluation methodologies (in such a way that the auditor does not lose sight of this tool in his work and confers the proper importance to the people in charge of its administration). More than just the evaluation, the SAIs must make use of tools that allow the auditor to identify the methodological concepts and their spirit, so that they can be a reference for the exercise of the auditor's functions. To be unaware of this draws out a numerical-legal control that does not address the complexity of the relationship between man and nature and therefore cannot assure good use and management of the public resources.

The traditional legal schemes based solely on quantification as a determining element of the sanctions or convictions, do not allow, in most countries, the consideration of alternative penalties that would only be submitted to judges and auditors, who would be qualified to understand the actual dimension of the environmental issue.

In this sense, some positive experiences could be considered, such as the sentence pronounced for the offense of resistance to the environmental authority, compelling the author to work in the dissemination of the characteristics of the forests, their rational exploitation, the native species and the dangers of illegal or abusive extraction, in the schools close to the author's domicile and at the place where the offense took place (Cordoba Police, Argentina), or alternative penalties might be considered for environmental offenses, such as the care of animals in environmental protection reserves. (Brazil).

The environmental qualification of auditors and judges, as well as the participation of the technical sector in these processes, can induce the consideration of environmental protection as above economic factors and the study of its impacts, reducing the costs of the process.

A basic element in the consolidation of the environmental element as determining the progress of sustainable development, to which we are committed as countries and in which, as SAIs, we have an important role to play, is to rely on the citizens, whether organized or not, ensuring the opportunity and quality of participation and previous specific education, without rejecting their knowledge, presented with a view to learning, warning or commenting on the negative or positive environmental impacts of a project or action.

As INTOSAI stresses, although most SAIs cannot establish policies, and must limit their work to review, not implementation, and since they are subject to the definition of sustainable development that the country follows, in their control functions, developing the fiscal control of the environment in general, its management, preservation and control, they must never move away from the technical elements required in an audit process.

This distinction is necessary if, as found in a survey of audits carried out by SAIs on natural resources and the environment, most of them were limited to environmental diagnosis, exercises of evaluation of an activity or resources, assignments of a philosophical duty, among others, or descriptions of legal and financial compliance that does not take into account the complexity and the processes of planning, collection of evidence or execution, analysis and reports required in a technical audit.

Thus, with regard to citizen participation in environmental issues, the work of civil society in the Colombian case deserves to be highlighted, for promoting public hearings and actions that evidenced different environmental problems and their social and economic repercussions, which became tools for the audit process. The evaluations in these cases are directly linked to the different effects pointed out by the communities and they are the ones who establish the priority of the variables to be evaluated.

In short, it is necessary to define, in the environmental fiscal control, technical elements that, when applied in an audit process, allow the timely establishment of the participation of the SAIs with the construction of an indispensable criterion within the auditing agencies, regarding the implications of sustainable development, as well as the minimum tools necessary to review its articulation with the affected economic sectors.

Apart from theoretical discussions on the evaluation methodologies, which, however, must be known by the auditing institutions – the SAIs must clarify specific criteria on evaluations and tracking the progress towards sustainable development, undertaken by each country, not only for compliance, but also to review its sufficiency, based on the indicators established by the different governments, so that the necessary redefinitions and reorientations can be developed.

This important task, which is supported by the theoretical and technical elements provided by INTOSAI and other organizations such as the United Nations, can be carried out jointly in the region, especially in view of the fact that an important step has already been taken with the preparation of a common methodological proposal for the development of environmental fiscal control (a contribution of the SAIs of the countries in the region), with a view to achieving a State such as that defined by Guimarães, “regulator, facilitator, associativist and strategist, capable of providing quality and coverage of public services, and that offers the institutional and strategic foundations for growth with more equitable bases than in the past” ■

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The Brazilian Court of Audit and Control of Environmental Management

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I - INTRODUCTION

Aware of the high social and economic costs of impacts caused to the environment, most national governments have begun to consider, in the decision making processes, the environmental consequences of human action.

The main characteristic of the environment is its interface with a variety of areas, contributing decisively to the sustainability of our productive activities and to maintain life itself. Thus, we can identify the presence of the environment in the hydrologic cycles that influence the Earth's climate, in the weather processes that shape the landscape, in the cycle of nutrients for agriculture and in the continuous evolution of the species, not to mention the importance of natural resources for other economic activities, such as mining, fishing, tourism, and others.

It is a fact that environmental management has been included in the agenda of Public Administration in an increasingly significant way¹. Its performance in this area is based on the primary obligation to protect the environment or on the obligation to prevent, mitigate or compensate the degradation resulting from the action that it implements. In order to fulfill this duty, the agencies and public entities of the three levels of government must carry out their activities in such a way as to prevent their distinct specific objectives from having a negative impact on the systemic outcome of governmental actions.

In this context, the role of the audit agencies is very important, both in verifying compliance of the management actions with the legal rules and in contributing to ensure coherence between the government's action and the requirements of a sustainable development model.

These lines of action are gradually being adopted by the Supreme Audit Institutions (SAI) in the whole world. There are currently groups of several of these entities focused on developing the methods for environmental auditing and the required knowledge to carry out this function. We can mention, as an example, the Working Group on Environmental Auditing of the International Organization of Supreme Audit Institutions, whose actions are aimed at promoting the proper management of natural resources by means of building the capacity of the SAIs to support their respective governments in improving environmental performance and protecting the health and safety of their citizens.

1. In this sense, amongst the objectives stated by the Federal Constitution, in article 3 the following are highlighted: the guarantee of national development and promotion of the common good. This necessarily includes the preservation of the environmental health and ecologic balance and its essential processes, since this is condition for the well-being and survival of human beings.

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The Brazilian Court of Audit (TCU), aware of these issues, has been developing audits in the entities responsible for the implementation of the Brazilian environmental policies, as well as in other agencies and programs whose action is likely to promote any significant environmental impact.

As from 1996, the TCU began to implement the Project for Development of Environmental Audits. The first measure adopted was the development of a study with a view to defining the strategy for addressing the issue. Later, lines of action for training the staff and environmental audit manuals were designed.

In 1997, in partnership with the Department for International Development - DFID and with the UK SAI (Cooperation Agreement TCU/UK), techniques were developed for operational audits in areas defined as priorities, among which the environmental area was selected.

In 2000, the TCU began to chair the Special Technical Commission on the Environment - Comtema - composed of the following countries of the Organization of Latin American and Caribbean Supreme Audit Institutions (Olacefs): Argentina, Bolivia, Brazil, Chile, Colombia, Honduras, Paraguay, Peru, and Venezuela.

In 2001, as a result of the studies developed in the scope of the Court itself, a specialized technical unit was created to address topics related to the areas of public works, assets and environment, called Secretariat for Control of Public Works and Assets of the Union (Secob). It includes among its competences technical support in the relationship of the TCU with other SAIs, support to the other Audit Secretariats in carrying out environmental audits, and articulation and integration of the control of environmental management by means of actions that encourage the execution of environmental audits.

It should be noted that other Secretariats of the Court are also dedicated to the subject, particularly the External Control Secretariat (4^a Secex), responsible for carrying out audits and instruction of the accounts of the agencies and entailed linked to the Ministry of the Environment; the Secretariat for Control and Evaluation of Government Programs (Seprog), charged with planning and coordinating the evaluations of government programs; as well as all the TCU Secretariats located in the States.

II - COMPETENCE IN THE ENVIRONMENTAL AREA

The external control exercised by the National Congress, with the assistance of the Brazilian Court of Audit, has its guidelines established in articles 70 and 71 of the Federal Constitution. Under these guidelines, the mission of the TCU is to assure the effective and regular management of public resources to the benefit of society. In the environmental area, the Court also exercises external control of the actions under the responsibility of the Federal Government, as well as of the use of federal resources in activities related to the protection of the environment.

In view of its relevance, the environmental issue has been privileged in the Federal Constitution. Article 23, *caput* and numerals VI and VII establish as a common attribution of the Union, the States, the Federal District and the Municipalities, to safeguard the common wealth, protect the environment, fight pollution, preserve the forests, the fauna and the flora. In turn, article 225 defines the environment as a public asset for the common use of the people, essential to healthy quality of life. Thus, it ensures the condition of strategic common wealth for the survival and development of the current and future generations.



As already pointed out, the TCU's area of action includes all the actions under the responsibility of the Federal Government that are related to the protection and use of the environment – including those resulting from transfer of resources to States and Municipalities through agreements and other such instruments.

It should be emphasized that environmental management, understood as the task of managing the productive use of environmental resources while preventing the reduction of environmental quality and the productivity of renewable resources (TCU, 2001), not only encompasses actions aimed at environmental protection, but also those related to activities that potentially or effectively cause negative environmental impacts.

In order to exercise this control, the Court uses various mechanisms, such as inspections, judgment of processes of rendering of accounts, as well as analysis of denunciations and representations.

In the field of inspections, which includes audits, inspections, surveys and tracking, the work focuses on verification of aspects related to accounts, finances, budget, assets and operation in the administrative units of the three branches of the Union, involving issues of legality, legitimacy and economy in the use of federal public resources. In the scope of this work, the environmental issue could also be the object of analysis. For example, in the case of audits of public works that potentially cause environmental impacts, the concession of the proper environmental licenses might be analyzed; or in operational audits, recommendations are made to the responsible agencies and entities on how to improve the process of management of environmental resources.

Regarding rendering of accounts, in government programs or projects and activities with environmental impacts, aspects related to legal compliance and the results of these actions are identified, and recommendations are made for improving previous work. With a view to conferring greater effectiveness to the processes of rendering of accounts, the TCU is currently analyzing, in the light of guideline contained in Decision N. 516/2003- TCU/Plenary, the adaptation of Normative Instruction N. 12/96 to include the obligation to present indicators that allow analysis of the environmental management of Federal Government agencies and entities.

It should also be noted that the analysis of representations and denunciations, forwarded by authorities or by society, allows verification of aspects pertaining to any failure to comply with the legislation in force, mismanagement or activities that are damaging to the environment.

the control over actions that potentially or actually cause environmental degradation will be exercised in such a way as to ensure compliance with the obligation to carry out previous environmental audit and to implement the proper mitigating and compensatory measures.

III – ACTION STRATEGY

The Court has been developing work in the environmental area since the beginning of the nineties. In 1998, it established a strategy for systemic action in the area and, as from that year, has been attempting to update and review its terms.

For exercising control of environmental management, the following guidelines were adopted (TCU, 1998):

The preservation of the quality of the environment and of ecological balance are goals of the Public Power; guaranteed through the rational use of environmental resources, with a view to their equitable and permanent availability, enabling social and economic development;

I- Poverty is one of the main causes of environmental degradation. Thus, its eradication is one of the ways to protect the environment. Therefore, there needs to compatibility between enters the promotion of social and economic development and the preservation of environmental quality and ecological balance.

In 2003, a broad institutional diagnosis was carried out, with a view to identifying characteristics of the organization in the area of environmental control based on its internal setting, as well as opportunities and threats faced in the fulfillment of its mission, based on the knowledge of the external setting. As result of this diagnosis, a biannual action plan for 2004/2005 was approved through Decision N. 217/2004 – TCU/ Plenary.

Regarding the government actions aimed at environmental protection, the Court will focus on priority actions as defined by the Federal Government, in order to guarantee that the scarce available resources are appropriately and efficiently allocated to these areas. Moreover, as environmental management is characterized by the participation of multiple agencies in its implementation, coordination and articulation among all the actors involved will be pursued.

In turn, the control over actions that potentially or actually cause environmental degradation will be exercised in such a way as to ensure compliance with the obligation to carry out previous environmental audit and to implement the proper mitigating and compensatory measures.

Another objective that will permeate the work will be the evaluation of the costs of negative impacts to the environment resulting from absence of prevention measures to protect the environment, in light of the fact that lack of this type of information sometimes leads public managers into making inadequate choices when deciding upon allocation of resources. This will enable comparison of the costs of correcting the impacts caused by government action with the costs of the measures that, if implemented, would allow mitigation or compensation of the impacts.

It is also envisaged that work will be done on themes that will receive special attention from the National Congress and society, with the aim of presenting a picture of the situations that are revealed and suggestions to the managers in charge for the adoption of improvement actions.

In the design of the strategy for the systemic action of the TCU in the environmental area, the following inputs and information were considered:

III. 1 - EXTERNAL SETTING

Regarding environmental issues, Brazil stands out in the international scenario due to several characteristics: its territorial and demographic size, being among the ten largest nations in the planet; the presence of the immense continuous mass of pluvial forest, still quite preserved; and the inequality of social and territorial distribution of income, which explains the speed and the extension of the alterations in the covering and the use of the land. (Ibama, 2002)

As regards the situation of environmental management in Brazil, it is necessary to improve the links between agencies that make up the National System of the Environment, as well as to adopt measures to encourage the inclusion of the environmental variable in the decision making process of related to government actions that potentially or actually cause degradation, particularly those pertaining to government policies, plans and programs.

The difficulties faced are largely due to the scarcity of resources allocated to environmental management, even in comparison with other sectors of the Federal Administration. To tackle this situation, the possibility of establishing partnerships with other public agencies involved in environmental control must be addressed.

Moreover, the control exercised by audit institutions must be carried out in an integrated manner, including the institutions that control the various spheres of government, as well as international entities. Such measure is especially important because the environmental problems cannot be limited to specific geopolitical spaces, and usually reach beyond regional borders.

III.2 – INTERNAL SETTING

The TCU has been seeking to stimulate strategic thinking and action, developing the foundation for the full accomplishment of the public mission assigned to the organization. This is especially important as regards environmental management, since it encompasses a huge scope and involves a significant number of agencies and public entities. Without the establishment of clear objectives, as well as the way to reach them, success is very unlikely in this area of control.

The policy of incentive to the qualification of the staff also support control in the environmental area. In this sense, the Court has already promoted a series of courses and sponsored qualification at *strictu sensu* post-graduate level staff members involved in the area.

It should be noted that the successive improvement observed in the TCU in relation to the establishment of routines for the implementation of its control processes benefits the control of environmental management directly. The existing manuals, both in the specific area of environmental audits and those pertaining to operational and compliance audits, enable greater efficiency and effectiveness in the accomplishment of the work.

effectiveness

IV - MAIN RESULTS

Next, some of the relevant work already appreciated by the TCU in the environmental area is summarized. The full content of the reports, the votes and decisions is available at www.tcu.gov.br (*Link: Jurisprudence*)

IV.1 – CONTROL OF ENVIRONMENTAL IMPACTS OF ACTIONS IMPLEMENTED BY THE FEDERAL GOVERNMENT

Since 1999, inquiries of an environmental nature have been included in the scope of audits that are aimed at government actions that potentially or effectively cause negative impacts on the environment. The goal is to identify whether these impacts are previously analyzed.

Initially, only the audits of public works² included such inquiry, with a view to the verification of compliance with environmental legislation regarding the development of environmental impact study and licensing. In this case, information referring to serious irregularities are forwarded to the National Congress, which can determine the interruption of the execution of the budgetary resources until corrective measures are adopted by the managers in charge.

As from 2003, this analysis began to take place in all the audits carried out by the Secretariats of External Control whose object has the potential to cause significant environmental degradation. In this line, it also began to be analyzed whether the implementation of public programs was preceded by strategic environmental evaluation. This type of analysis is a pioneer instrument in the field of evaluation of environmental impact, which has been defined as the systematic process to foresee and evaluate the consequences of decisions adopted at strategic planning stages.

Based on the results of work that has already been done, the conclusion is that much of the government actions do not receive adequate environmental treatment. For example, approximately 30% of the works inspected throughout 2003 presented significant failures in the process of evaluation of this nature.

In the area of public works, it is worth pointing out the audits for the evaluation of compliance with environmental rules in water and road works, which were appreciated by Decisions N. 1572 and 1846/2003-TCU Plenary, respectively.

IV 2 - AUDIT ON THE PERFORMANCE OF THE FEDERAL GOVERNMENT IN THE MANAGEMENT OF WATER RESOURCES

Between 2001 and 2002, the TCU carried out an environmental audit with the aim of analyzing the issue referring to the management of water resources and the water supply crisis that some Brazilian localities were facing.

Based on the analysis of the causes of this crisis, it was found that the characteristics that surround it are present in all the regions of the country. One of most important is the launching of sewer *in natura* into water bodies that are used for supplying water to the population. Moreover, there were already problems related to increased costs of capture and distribution, reduction of the amount and quality of the water for human supply, and wastefulness, signaling the crisis perspective.

According to the National Water Agency (ANA), 19 metropolitan regions of the country (where 1/3 of the population lives) presented, in common, “deficiencies in the collection, treatment and final disposal of sanitary sewers, [resulting] in loss of the quality of source water and consequent reduction of water available for supplying”.

Based on the audit’s findings, the Court formulated, by means of Plenary Decisions N. 566/2002 and 1259/2002, several determination and recommendations to the agencies and entities in charge. Considering the importance of the subject, the TCU is supervising the implementation of these measures.

In this supervision, some important advances have been verified. Experts from audited agencies have even claimed that some issues raised in the audit process helped in the development of ideas that had been previously conceived, such as:

2. The TCU annually keeps track of the execution of over 400 public works with the objective of informing the National Congress on the occurrence of serious irregularities, so that it can analyze the convenience of interrupting budgetary resources until the problems identified are solved.

- Preparation of the Reference Base of the National Plan for Water Resources;
- Beginning of the preparation of the Strategic Plan for Water Resources;
- Beginning of the preparation of the Atlas of Priority Works for the Semi-Arid Region;
- Beginning of the preparation of the Diagnosis of the Current Situation and Perspectives regarding Water Supply to the Metropolitan Regions and Urban Agglomerations;
- Charging for the use of the water of Rio Paraíba do Sul;
- Articulation between the National Water Agency - ANA and the Brazilian Institute for the Environment and Renewable Natural Resources – Ibama.

IV.3 - AUDIT ON AGRARIAN STRUCTURE OF THE AREAS OF ENVIRONMENTAL PROTECTION UNDER THE RESPONSIBILITY OF IBAMA

Ibama's areas of environmental protection, initially derived from the incorporation of the property of the former Brazilian Institute of Forest Development (IBDF) and the Special Secretariat of the Environment (Sema) in 1989, presented several irregularities concerning their agrarian structure, including the presence of private properties in them, which was forbidden by the legislation in force (Decree N. 84.017/79).

Decision N. 190/1994-TCU 2nd Chamber³ attempted to address the problem, determining that Ibama compensate the private owners, and the implantation of a Management Plan and Bylaws for National Parks that did not have these documents.

Likewise, it should be noted that the TCU worked in a process related to the agrarian structure of the National Park of Bocaina Mountain Range (PNSB), located at the border between the States of Rio de Janeiro and São Paulo, identifying the existence of areas purchased for the formation of the protection unit that were partially located under the waters of the Atlantic Ocean.

IV.4 - INSPECTION OF ACCIDENT IN DAM FOR CONTAINING CHEMICAL WASTES

As a result of news published in the media in 2003, Ibama and ANA were inspected with a view to analyzing the rupture of a dam for containing chemical wastes under the responsibility of the companies Florestal Cataguazes Ltda. and Industry of Paper and Cellulose of Cataguazes Ltda., which took place in Minas Gerais, as well as the action of those entities in the prevention of new accidents involving environmental liabilities.

In the aforementioned inspection, the team detected failures and inconsistencies in the processes of licensing and inspection of Ibama, and proposed a range of control measures of environmental liabilities in order to minimize the possibility of occurrence of other accidents.

Decision N. 1.199/2003-TCU/Plenary pointed out aspects related to the need to change the operational process, conferring more security to the identification, monitoring and reduction/neutralization of existing environmental liabilities in the states and municipalities.

Thus, in accordance with the environmental recommendations of the TCU, the environmental agencies will have to promote, in their respective areas of action, work directed to the immediate identification and mapping of the existing environmental liabilities, their location, chemical composition of the wastes, necessary measures for neutralization/reduction or possible economic use, as well as the responsibility for their administration. With this data base, the Civil Defense and the environmental agencies will be better equipped to tackle accidents of this type. Other issues contemplated in the aforementioned Decision were the recommendations to strengthen the National System of the Environment (Sisnama), integrating the entities that compose it, as well as the promotion of hearing with Ibama employees indicated in the inspection report, aiming at investigating the responsibilities for the accident.

3. Enforce rigorously the provisions in the Forest code (Law N. 4.771, of 15/09/65) in private properties located within the limits of the Conservation Units, as provided for in articles 22/24 and 33/34 and in article 225, paragraph 1, numeral II, of the C.F. (sub-item 9.4.2); j) adopt the necessary steps to the establish the Management Plan and the Bylaws in the National Parks that still do not have them, as provided for in articles. 5/7, 43, paragraph 1, and 56 of the Regulation of the Brazilian National Parks, approved by Decree N. 84.017/79 (sub-items 9.4.4 and 9.4.5); l) adopt the necessary measures to fulfill, in the region of the National Park of the Capivara Mountain Range -PI, the provisions pursuant to article 225, paragraphs 1 numeral IV, and 2, of the C.F. and articles 17, 19, paragraph 3, and 27 of Decree N. 99.274/90 (sub-item 9.4.9); m) adopt effective steps towards removing the inhabitants improperly settled in the area of the National Park of Brasília, in view of the provisions pursuant to article 27 of the regulation of the Brazilian National Parks, approved by Decree N. 84.017/79 sub-item (9.4.10).

IV.5 - AUDIT ON THE PROGRAM OF SUSTAINABLE DEVELOPMENT OF WATER RESOURCES FOR THE BRAZILIAN SEMI-ARID - PROÁGUA

In 2000, the TCU carried out, in the scope of the Cooperation Agreement TCU/UK, operational audit of Proágua (Decision N. 829/2001-TCU/Plenary). Such program was aimed at guaranteeing the increase of the supply of good quality water for the Brazilian semi-arid, so that the relative water scarcity would not continue to constitute an impediment to the sustainable development of the region.

The audit goal was to evaluate the contribution of the actions that were implemented in the scope of the Program, at the federal and state levels, in achieving the goals of institutional strengthening and poverty reduction.

Among its main results, the design of normative instruction that governs agreements for the execution of water infrastructure works with the Ministry of the National Integration deserves highlight. Such rule contains the specification of technical viability, economic-financial, environmental and institutional criteria whose lack harmed the effectiveness of the Program, as verified during the audit.

Another important advance was the intensification, by ANA, of the development of courses/workshops for qualification and training of local managers and professionals involved in the area of water resources, in order to provide technical support and to pass on the recommendations of the audits carried out by the TCU and the Federal Secretariat of Internal Control (SFC), particularly regarding the prioritization of the design or revision of the state policies on water resources, establishment of independent agencies and implementation of instruments to charge for the use of the water and concession of grants. This will help speed up the analysis of studies and projects, as well as promote systematic technical guidance to the state units.

V - CONCLUSION

The techniques related to environmental audits are relatively new in comparison with the conventional audit instruments.

In face of the undeniable importance of the area, it is vital that all the Supreme Audit Institutions structure themselves to help their countries in the appropriate management of environmental resources, either by means of compliance audits or operational audits.

With a view to achieving the best practices in environmental auditing, as well as defining training methods for its auditors, the SAIs have been meeting regularly to exchange experiences. We should highlight the meeting of the Working Group on Environmental Audits in the scope of the Intosai, coordinated by the SAI of Canada, and the Comtema, chaired by the TCU; and the International Conference on Environmental Auditing to be carried out in Brasília, in June 2004.

The Court, in the light of this context, has adjusted its structure in order to oversee government actions that have an impact on the environment, so that it can help improve environmental management and ensure the proper protection of the environmental wealth of the Country. ■

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Economic Valuation as a Decision Criterion

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This article seeks to analyze, briefly and concisely, the use of economic valuation as an economic decision criterion.

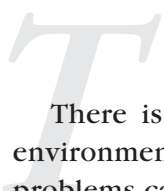
1. INTRODUCTION

As has been widely debated, the protection of the environment is basically a matter of inter and intra-temporal equity. When the costs of ecological degradation are not borne by those who generate it, these costs become externalities for the economic system, that is, costs that affect third parties without due compensation. Economic activities are thus planned without taking into account these environmental externalities and consequently the consumption patterns of the people are shaped without any internalization of the environmental costs. The result is a pattern of appropriation of the natural capital where the benefits are enjoyed by a few users of environmental resources who do not compensate the costs incurred by excluded users. Moreover, the future generations will be left with a supply of natural capital that results from the decisions of the current generations, bearing the costs that these decisions can imply.

Although the use of environmental resources does not have a price that is recognized in the market, its economic value exists to the extent that this use changes the level of production and consumption (well-being) of society.

In face of these environmental externalities, we have a favorable situation for government intervention. This intervention can include different instruments, such as: determination of property rights, the use of norms or standards, economic instruments, monetary compensations for damages and others.

Despite government intervention being legitimate, it is not trivial. In the case of conservation of biological diversity, the intervention is even more complex in view of the fact that our theoretical and managerial knowledge is still insufficient.



There is consensus as to the difficulties that environmental management entails. The current problems can, however, be classified in three main categories: (i) low budgetary provisions in relation to the high costs of management; (ii) economic policies that induce environmental losses; and (iii) equity issues that make it difficult to enforce the law. Thus, it is clear that we have a situation requiring the introduction of the economic criterion in environmental management.

This notion of the role of the economic criterion is far from innovative and is increasingly disseminated in other countries.

2. DETERMINATION OF PRIORITIES, ACTIONS AND PROCEDURES FOR ENVIRONMENTAL MANAGEMENT

Budgetary restrictions require that society estimate the value of environmental goods and services in relation to other consumption and production options. That is, the economic value of an environmental resource reflects the consumption and production sacrifice associated with its preservation. Thus, we need to estimate how much society is willing to pay to protect this good. This means measuring how far society is willing to forgo consumption (and its respective production) of private resources in exchange for environmental consumption.

The established environmental approach is based on the physical-chemical, biological or geographic criterion. However, regardless of the adoption of a certain criterion, we can increase the efficiency of environmental management (i.e., capacity to reach the desired objectives) with the complementary use of an economic criterion. In other words, by strengthening the human dimension of environmental management.

It should also be emphasized that knowledge on ecology is a requirement for application of the economic criterion.

3. THE ECONOMIC VALUE OF ENVIRONMENTAL RESOURCES

The economic value of environmental resources is not generally observable in the market through prices that reflect their opportunity cost. It is derived from all their attributes and these attributes may or may not be associated to a use. That is, the consumption of an environmental resource takes place through its use or non-use.

Thus, in literature it is usual to disaggregate *the economic value of the environmental resource (EVER)* into *value of use (VU)* and *value of not-use (VNU)*. Values of use can be, in turn, disaggregated into:

Value of Direct Use (VDU) - when the individual currently makes use of a resource, for example, in the form of extraction, visits or other production activity or direct consumption;

Value of Indirect Use (VIU) - when the current benefit of the resource derives from the ecosystemic functions, such as, for example, the protection of the soil and the climatic stability that results from preservation of the forests;

Value of Option (VO) - when the individual attributes value to direct and indirect uses that might be chosen in the near future and whose preservation might be in jeopardy. For example, the benefit from drugs derived from tropical forest plants whose medicinal properties have not been discovered yet.

The value of non-use (or passive value) represents the value of *existence (VE)* that is dissociated from use (although it represents environmental consumption) and derives from a moral, cultural, ethical or altruistic position in relation to the rights of existence of non-human species or conservation of other natural wealth, even if they do not represent current or future use for the individual. A simple expression of this value is the great attraction of public opinion for saving whales or for their conservation in remote regions of the planet, where most people will never visit or have any benefit from use.

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There is also a controversy in literature regarding the value of existence representing the desire of individuals to keep certain environmental resources so that their descendants, that is, future generations, can enjoy direct and indirect use (bequest value). It is a conceptual issue to consider to what extent a value thus defined is more associated with the value of option or of existence. What matters for the challenge of valuation is to admit that individuals can assign values regardless of the use that they make today or intend to make tomorrow.

Thus, an expression of EVER would be:

$$\text{EVER} = (\text{VDU} + \text{VIU} + \text{VO}) + \text{VE}$$

Note, however, that one type of use can exclude another type of use of the environmental resource. For example, the use of an area for agriculture excludes its use for conservation of the forest that covered the soil. Thus, the first step in determining EVER is to identify these conflicts of use. The second step is to determine these values.

One can see the degree of difficulty in finding market prices (whether appropriate or not) that reflect the values attributed to the environmental resources. This difficulty grows when we go from values of use to values of non-use. In the values of use, the indirect and option uses, in turn, present greater difficulty than the direct uses.

The task of assigning economic value to an environmental resource consists of determining how much better or worse the well-being of the people will be due to changes in the amount of environmental goods and services, either in appropriation by use or not.

4. METHODS OF VALUATION

The methods of valuation analyzed here are thus classified: *production function methods and demand function methods*.

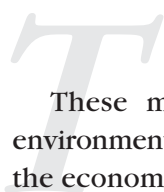
Production function methods: methods related to marginal productivity and substitute goods (replacement, defensive expenses or costs avoided and costs of control).

If the environmental resource is an input or a substitute for a private good or service, these methods use the market prices of this private good or service to estimate the economic value of the environmental resource. Thus, the environmental benefits or costs of the availability variations of these environmental resources for society can be estimated.

On the basis of the prices of these private resources, generally admitting that they do not change in face of these variations, an indirect estimate is made of the economic values of the surplus of the producer of the environmental resources whose availability variation is under analysis. The benefit (or cost) of the availability variation of the environmental resource is given by the product of the varied amount of the resource times its estimated economic value. For example, the loss of nutrients in the soil caused by deforestation can affect agricultural productivity. Or the reduction of the level of sedimentation in a basin due to a reforestation project can increase the life cycle of a hydroelectric plant and its productivity.

Demand function methods: methods of complementary goods market (hedonic prices and travel cost) and contingent valuation method.

"The task of assigning economic value to an environmental resource consists of determining how much better or worse the well-being of the people will be due to changes in the amount of environmental goods and services, either in appropriation by use or not."

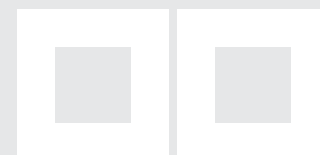


These methods assume that the availability variation of the environmental resource changes the willingness to pay or to accept from the economic agents in relation to that resource or its complementary private good. Thus, these methods estimate directly the economic values (shadow-prices) on the basis of demand functions for these resources derived from (i) markets of private good or services that are complementary to the environmental resource or (ii) hypothetical markets designed specifically for the environmental resource under analysis.

Using demand functions, these methods allow measuring the willingness to pay (or to accept) of individuals relative to the availability variations of the environmental resource (measurement of surplus of the consumer). With these measurements, it is possible to estimate the variations in the level of well-being related to the excess satisfaction that the consumer obtains when paying a price (or paying nothing) for the resource that is lower than what the consumer was willing to pay.

These measurements of willingness to pay can also be identified in a survey with a sample population on values of payment of a tax for environmental investments in the protection of biodiversity. By identifying these measurements of willingness to pay we can design the respective demand functions.

The choice of one method or another of economic valuation of the environment depends on the purpose of the valuation, the hypotheses considered, the availability of data and the scientific knowledge regarding the ecological dynamics of the object in question, as will be seen further on. ■



Environmental Audit

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1. TERMINOLOGY

The term “auditor” was used in the 16th century and the term “auditoria” (audit) in the 17th century.¹ The expression comes from the Latin *auditor*, *auditoris* – listener.

In Portuguese: “*Auditoria* – s.f. (*auditor* + *ia*) 1. Cargo de auditor. 2. Casa ou tribunal onde o auditor desempenha as suas funções. 3. Função de auditor junto às empresas comerciais”.² Auditoria, segundo a contabilidade, “é o exame analítico e pericial que segue o desenvolvimento das operações contábeis, desde o início até o balanço”.³ (1. Post of an auditor. 2. House or court where the auditor executes his/her functions. 3. Position of an auditor in commercial firms”. Audit, in accounting terms, “is the analytical and expert examination following the development of accounting operations, from its beginning to the balance sheet”).

In English: “1. An examination of records or accounts to check their accuracy. 2. An adjustment or correction of accounts. 3. An examined and verified account. 4. ‘Rare’ – an audience or hearing”.⁴

In French: “*Audit* – de l’anglais *internal auditor* – dans une entreprise, personne dont la fonction est de s’assurer que les directives de la direction sont suivies et que le patrimoine de l’entreprise est préservé”.⁵

2. CONCEPT OF ENVIRONMENTAL AUDIT

Environmental audit is the procedure of regular or occasional examination and assessment of a company’s behavior in relation to the environment.

The environmental audit can be either public or private, as it may be determined and/or carried out by the Public Power or by the company itself.

1. Antonio G. da Cunha, Dicionário Etimológico da Língua Portuguesa, p. 83.

2. Dicionário Brasileiro da Língua Portuguesa, Mirador Internacional, p. 222.

3. Aurélio Buarque de Holanda Ferreira, Novo Dicionário da Língua Portuguesa, p. 160.

4. The American Heritage Dictionary of the English Language, p. 86.

3. ENVIRONMENTAL AUDIT AND SUSTAINABLE DEVELOPMENT

Private environmental audit has been driven by “the awareness of advantages over the competition, which can confer to certain companies the adoption of measures attesting their “ecological awareness” within their competition strategy, new products, new technologies and new management systems”.⁶In addition, nowadays, in the occasions of mergers or selling of companies, including state ones, it is good practice to perform an environmental audit in order to establish any possible environmental asset. “Some of the major transnational corporations – at least partly as a response to Bhopal shock – have now started to carry out regular environmental audits to ensure that long term regulation requirements and environmental responsibilities (such as legal obligations related to waste disposal) are accurately reflected in their subsidiaries’ balance sheets”.⁷

In the North American environmental legal system, a bank that has financed companies involved in soil degradation – having the financing a mortgage security – in the case of borrower insolvency, can become the owner of the contaminated soil, thus, also becoming responsible for the pollution.⁸ In this case, it is appropriate to verify, through an environmental audit, the activities of the borrowing company.

Directive 1.836/93 of the European Economic Community defines environmental audit as “the management tool including systematic, documented, regular and objective assessment of the working of the management system organization, as well as of the environment protection processes”.

Different legislations will provide other characteristics related to environmental audit, notably, the persons who are qualified to carry it out and their degree of publicity.

Sustainable or sustained development is that which meets the needs of present and future generations. The novelty in this concept is the introduction of future generations, not only as stakeholders, but also as entitled to rights in relation to development.

The 1988 Federal Constitution introduced this concept in art. 225, *caput*.

Until the advent of the concept of sustainable development, economic planning, even when following an environmental trend, was limited to planning the schedule – short, medium and long term – aiming at the present generation, that is, the generation that would immediately enjoy the planned development.

In order for future generations to find usable environmental resources which have not been exhausted, corrupted or polluted by present generations, new environmental control mechanisms were designed and are being introduced in legislations.

“The adoption of new types of certificates and of information communication to third parties, as well as the adoption, within internal management, of new management information systems are inevitable and indispensable for companies which wish to adhere to the principles of sustainable development or of durable development. The administration councils, the managers, stakeholders and regulatory authorities wish to obtain this information, which they require to be trustworthy and relevant. Company directors, who are sensible to innovation, will want to take part in the design of new types of information and of information communication, both for the decision making process and for the accounts review. These directors will insist that the profitability aspect of information and information communication systems, as well as associated systems, should be duly taken into consideration.”⁹

6. Benoît Boivin, “La verification environnementale”, in *Développements Récents en Droit de l’Environnement*, p. 81. 1992.

7. Peter H. Sand, *Lesson Learned in Global Environmental Governance*, p. 33. 1990

8. Patrick Thieffry, “L’opportunité d’une responsabilité communautaire du pollueur — Les distortions entre les États-membres et les enseignements de l’expérience américaine”, *Revue Internationale de Droit Comparé* 1103-123, 1994.

9. Benoît Boivin, *ob. cit.*

The Entrepreneurial Chart for Sustainable Development of the International Trade Chamber, published during the II Industry World Conference on Environmental Management (WICEM II, Paris, 1991), in its Principle 1 recognizes that environmental management within the company is a determinant factor of sustainable development and points out another fundamental principle – “Conformity to regulations and information: inspect performance of actions on the environment, regularly carry out environmental audits and assess conformity to company internal requirements, to legal requirements and to these principles; as well as, regularly provide relevant information to the administration council, shareholders, staff, authorities and the general public”.

4. SCOPE OF AUDIT

In the state of Rio de Janeiro the following facilities should carry out yearly environmental audits: “I – refineries, oleoducts, petroleum or petroleum derivative terminals; II – port facilities; III – facilities for storage of toxic and dangerous substances; IV – facilities for the processing and for the final disposal of toxic or dangerous residues; V – facilities for electricity generation using thermal or radioactive sources; VI – facilities for treatment and systems for the final disposal of household effluent; VII – petrochemical and steel industries; VIII – chemical industries and metal works” (art. 5º Law 1.898, of 26th November 1991).

"In order for future generations to find usable environmental resources which have not been exhausted, corrupted or polluted by present generations, new environmental control mechanisms were designed and are being introduced in legislations."

The sole paragraph of art. 5º allows the State Commission for Environmental Control (Comissão Estadual de Controle Ambiental-CECA), as proposed by the State Environmental Foundation (Fundação Estadual de Meio Ambiente-FEEMA), “excuses the environmental audit in facilities for final disposal of household effluent, in chemical industries and metal works”.

The system in the state of Rio de Janeiro is combined with regards to obligation, since only the activities in items I to V are required to carry out environmental audits in a compulsory manner, and the environmental body is not allowed to excuse such requirement. With regards to the other activities licensed by the environmental body, the environmental audit will be voluntary, that is, it is the company's choice.

The state of Espírito Santo, through Law 4.802, of 2nd August 1993, published in the State Gazette of 16th August 1993, has all the same requirements (items I to VII) comprised in the Law of Rio de Janeiro state and an extra three requirements: “IX – cellulose and paper industries; X – hospital waste; and XI – mining”.

5. CONTENTS OF ENVIRONMENTAL AUDIT

5.1. BRAZILIAN LAW

Law 1.898/91 of Rio de Janeiro state establishes that an environmental audit, through its studies and assessments, shall determine: “I – effective or potential levels of pollution, environmental degradation caused by activities of individual or legal entities; II – operational and maintenance conditions of equipment and systems of pollution control; III – actions to be taken to restore the environment and protect human health; IV – capacitation of people responsible for the operation and maintenance of systems, routines, environmental protection facilities and equipments, as well as those related to workers health” (art. 1º).

The Law in Rio de Janeiro determines that both the pollution found and the potential one are considered. Besides pollution it encompasses environmental degradation, including the fauna and flora. Therefore, environmental resources used by a company (such as, for example, paper and cellulose factories) will be taken into consideration, not only the operational conditions of pollution control equipments and systems, but also the maintenance conditions of such equipments and systems.



The Law of Rio de Janeiro includes measures of making amends to the environment and to human health, regardless of any judicial action requiring this reparation. The environmental audit will observe what is effectively done to remedy any harms, be them inevitable or not, caused to human health and to the environment, observing the principle of civil liability regardless of guilt.

The environmental audit in the states of Rio de Janeiro, Espírito Santo and Paraná mentioned below, is not limited to the examination of preventive measures against harm specifically to the environment, but with regards to human health it will contemplate systems, routines, facilities and equipments related to workers health and safety. The hypothesis of accidents demonstrates the rigidity of the professional *milieu* not dissociated from the internal and external environment of the company.

Law 4.802, of Espírito Santo, of 2nd August 1993, pursues the same objectives of the Rio de Janeiro Law, adding purposes that should be highlighted (art. 2^o): "I - to estimate the quality of the performance of environmental management functions, of systems and equipments used by the company or entity... IV - verify the administration of guidelines and standards of the company or entity, aiming at the preservation of the environment and of life; ... VI - propose solutions which allow to minimize the probability of operators exposure and public exposure to risks originating from hypothetic (but possible) accidents, as well as of continuous emissions which could directly or indirectly affect their health or safety".

Law 11.520/2000 - Rio Grande do Sul State Environmental Code, in its chapter XII - Environmental Audits, in its art. 98, provides that among the aspects to be included in the environmental audit, a comparison should be made between the environmental impacts present in the EIA/RIMA and the ones actually observed, and that a schedule should be presented with corrective and preventive actions.

Law 13.448 of 11th January 2002, of Paraná state, determines the assessment of accident risks and contingency plans for the evacuation and protection of workers and of the population in the influenced area; when necessary; the assessment of the effects of pollutants over workers and neighboring population, as well as the analysis of available alternatives, processes, systems, treatment and monitoring for reducing the level of pollutant emissions.

5.2. COMPARED LAW

Resolution 1.836/93 of the European Community - EC (now European Union),¹⁰ of 29th June 1993, proposes as themes to be included in an environmental audit: 1) assessment, control and reduction of impacts of the activity in question over different environment sectors; 2) energy management, economy and selection; 3) raw materials management, saving, selection and transportation; water management and saving; 4) waste reduction, recycling, reutilization, transportation and elimination; 5) assessment, control and reduction of noises inside and outside the facilities; 6) selection of new production methods and modification of existing ones; 7) product planning (concept, packaging, transportation, utilization and elimination); 8) environmental behavior and practices of contractors, subcontractors and suppliers; 9) preventing and limiting environmental accidents; 10) emergency processes in case of environmental accidents; 11) information and capacitation of staff regarding environmental issues; 12) external information regarding environmental issues.

The EC norm disposes in its Annex I that a list should be presented with "legislative, regulatory dispositions and others related to environmental policies". To this end, it is necessary a legal assessment of the company's behavior, however, within an interdisciplinary approach.

10. Published in the European Economic Community Journal.

In the United States, the environmental audit encompasses, among other subjects: “financial planning of investments in the environmental segment; financial effectiveness of environmental regulations; awareness and motivation of staff in the environmental segment; company mergers and acquisitions; anticipation in relation to legislative and regulatory evolutions”.¹¹ Lepage Jessua points out that companies used to use audits as a preventive measure against legal actions.

The British Standard BS 7.750/92 recommends that “the procedures should include, when appropriate, considerations about: a) controlled and uncontrolled emissions in the atmosphere; b) controlled and uncontrolled water discharge; c) solid and other waste; d) soil contamination; e) usage of soil, water, fuel and energy and other natural resources; f) sound, smell, dust, vibration and visual impacts; g) effects over specific parts of the environment and ecosystems”.

The mentioned norm also provides that the procedures should include effects originating from, or susceptible to originate from: a) normal operating conditions; b) abnormal operating conditions; c) incidents, accidents and potential emergency situations; d) past, current and planned activities.

The environmental audit should also analyze environmental policies and the environmental program, when the company has explicitly elaborated these two documents. The lack of such documents or their being in preparation does not hinder the execution of the audit. It is opportune to point out the concepts of these terms in the Directive 1.836/93-EC: the “Environmental Policy” portrays the global goals and principles of action of a company concerning the environment, including conformity to all relevant regulatory dispositions; and “Environmental Program” is the description of company goals and specific activities to ensure better environmental protection in a certain industrial facility, including the description of measures taken or forecast in order to enforce these goals and, when appropriate, deadlines for the application of such measures.

6. ENVIRONMENTAL IMPACT STUDY (ESTUDO DE IMPACTO AMBIENTAL-EIA) AND ENVIRONMENTAL AUDIT

In Brazil, there are two types of Environmental Impact Studies (EIA): one previous to the installation of the activity or building works and one required before the authorization and/or the working or operating license.

The environmental audit will always take place after the Previous Environmental Impact Study (Estudo Prévio de Impacto Ambiental-EPIA) constitutionally required for the beginning of building works or activity potentially causing significant degradation of the environment. (art. 225, § 1º, IV, of FC). The audit should assess whether the guidelines in the study are being observed and whether environmental control methods are effective.

However, the Environmental Impact Studies (EIA) for granting a new authorization and/or license for operation is different. In this case the environmental audit may be carried out before the EIA/RIMA and guide some of their considerations.

The two environmental-legal institutes are similar in the sense that both will be carried out at the company and/or entrepreneur’s expenses. The independence of the auditors is a topic which will be addressed later on.

7. LICENSING AND ENVIRONMENTAL AUDIT

In the case of an Installation License and/or Installation Authorization, the audit stage will come after the licensing. However, for granting an Operation License and/or Operation Authorization, the environmental audit can happen before this stage, and it will also be of great importance when the licensing is renewed.

Renewing the license has become an administrative activity without the engagement of the interested individual or legal entity. The environmental audit will avoid that this procedure becomes a mere routine and will be able to add a different dimension to the intervention of the public environmental body.

In the case of an Installation License and/or Installation Authorization, the audit carried out *a posteriori* should verify the observance to the conditions in the licensing.

11. Corinne Lepage Jessua, *Audit d’Environnement*, p. 288.



8. MONITORING AND ENVIRONMENTAL AUDIT

Monitoring is a procedure for measuring effluent emissions and disposal, being registered continually or in predetermined periods. Elaborating the register is indispensable for the company's own information and for the environmental public body, as well as for the process of auditing.

Environmental monitoring can be carried out by the company itself, in a self-regulatory action, or by the environmental public body. The fact that the company or entrepreneur carries out self-monitoring does not eliminate the environmental public body's duty to verify the correctness of the data originated from this monitoring.

The environmental audit cannot do without the environmental monitoring, because without its data it becomes so difficult to carry out a proper environmental assessment that the audit becomes an environmental inspection, that is, it will assess current conditions without including preceding periods. The environmental audit aims to analyze the company's activities in a determined preceding period of time, and if there are no precise and broad data, this assessment is hindered. Therefore, a company that does not carry out regular self-monitoring, is not able to present as valid an integral environmental audit.

9. INSPECTION AND ENVIRONMENTAL AUDIT

Environmental inspection is characterized by its non-periodic nature and by the fact that it is not yet subject to a linking schedule for the environmental public body. Without the inspection, the Public Authority is not able to follow up and verify the licensing.

Inspection will use data from the environmental monitoring, however, when these are not available, the inspection itself should collect the data even if focusing on the current reality of the environment, that is, at the time when the inspection was carried out.

The environmental audit, however, will depend on examination and assessment of the data collected and documented along time, that is, including a certain preceding period as well as the current reality of the environment.

It is worth highlighting the regulation in the state of Rio de Janeiro regarding environmental audits. In its art. 5º declares that "the presentation of the environmental audit results does not imply suspension of any inspecting action nor of the obligations of environmental control of the activities." Therefore, the audit does not exempt the Public Power from inspecting, and if it is observed that its omission or lack of inspection have contributed to creating a dangerous situation for human, vegetal or animal safety, or contributed to irreversible harm to the fauna, flora or the environment, civil servants will respond, even criminally, as stated in art. 15, § 2º, Law 6.938/81, amended by Law 7.804/89.

10. THE PUBLIC ENVIRONMENTAL BODY AND THE AUDIT

Not all environmental audits will be compulsory because of legislation or determined by the public environmental body. In the core of the audit there is great freedom with regards to its execution, however, there are other legal systems which attribute a compulsory nature to some audits.

In the case of compulsory audits, similarly to the Environmental Impact Studies (EIA), the public environmental body can elaborate a "term of reference" including guidelines to be followed in specific cases or in general.

Optional or voluntary audits are not subject to public environmental body intervention. They are valid for themselves, not depending on administrative approval. However, these audits, especially when related to the benefits of quality labels or certification, should conform to legislation requirements.

11. THE ENVIRONMENTAL AUDITOR

11.1 CONCEPT OF AUDITOR

The Directive 1.836/93-EC conceptualize the auditor as “the person or team, belonging or not to the company cadres, acting in the name of the company’s higher body, having, individually or collectively the competences referred to in topic C of Annex II and sufficiently independent in relation to the activities inspected in order to be able to judge objectively”.

11.2 AUDITOR’S CAPACITATION

The Directive 1.836/93-EC, in Annex II, C, affirms: “Environmental audits should be carried out by persons or groups of persons with adequate knowledge on the sectors and areas of the audit, including knowledge and experience on environmental management and on relevant technical and regulatory environmental issues, as well as the necessary qualification and specific competences for the execution of audits, so that they can achieve the aimed objectives. The resources and time dedicated to the audit should be adequate to the scope and objectives of the audit.”.

11.3 THE INDEPENDENCE OF AUDITORS

11.3.1 THE INDEPENDENCE OF AUDITORS IN PUBLIC ENVIRONMENTAL AUDITS¹²

Law 1.898/91 of the state of Rio de Janeiro provides:

“Art. 4º. - Whenever it is judged convenient to ascertain the trustworthiness of an audit, governmental bodies can determine that the audit be carried out by independent technical teams.

“§ 1º. In the cases referred to in the *caput* of this article, audits should be carried out preferably by non-profit institutions, as long as one can ensure the technical capacitation, conditions for meeting deadlines and global values compatible to those proposed by other technical teams or legal entities.”

Law 11.520/2000 – Rio Grande do Sul State Environmental Code, in its chapter XII – Environmental Audits, with eleven articles, provides:

Art.90. “The environmental audit shall be carried out by a multidisciplinary qualified team, registered with the competent environmental body, not dependent directly or indirectly of the contractor, who will be technically responsible for the results presented.”.

It is not easy for auditors to conquer independence, even within public environmental audits, since they are paid by the individual or legal entity being audited. Since impartiality is a fundamental factor for the trustworthiness of the procedure, it seems that, similarly to EIA, a Public Audience is necessary. Therefore, the public, including environmental associations and other non-governmental organizations, will be able to inspect more closely the whole procedure of public environmental audit.

The Directive 1.836/93-CE, in Annex II, C, states: “Auditors should be sufficiently independent in relation to the activities they examine, in order to act in an objective and impartial manner.” It is worth highlighting that the European Economic Community Directive created an external independent auditor, called environmental inspector. This auditor is subject to a supranational accreditation regime, valid in all EC countries (currently European Union).

"The environmental audit cannot do without the environmental monitoring, because without its data it becomes so difficult to carry out a proper environmental assessment that the audit becomes an environmental inspection, that is, it will assess current conditions without including preceding periods."

12. V. Independent biannual audits and Law 9.966 of 28th April 2000 in item 11.1.5 of Sole Chapter of Tit. XII.V. Resolution 306 of 5th July 2002 (Federal Gazette dated 19th July 2002, section, 1, p.75)

11.3.2. THE INDEPENDENCE OF AUDITORS IN PRIVATE ENVIRONMENTAL AUDITS

As previously mentioned, the private environmental audit is the one carried out voluntarily by the audited individual or legal entity. As included in the concept of auditor within the Directive of the former European Community (currently European Union), an auditor can be a person belonging to the company cadres.

Corinne Lepage Jessua points out that “if the environmental auditor is part of the company, he/she will find the difficulties inherent to any internal auditor, and even greater difficulties in the sense that the environment still is, in the majority of cases, the company’s “poor relative”. In such conditions, the internal environmental auditor runs the risk of not having all the independence or power necessary to perform his/her mission in a satisfactory manner. Indeed, in a hierarchical plan, the environmental auditor should not be subordinated to another director or superior out of an environmental direction or audit.”¹³

In order for the environmental audit to be effective, the EC recommended (Annex II, C) that “the company’s administration, in its higher level, should support the audit”.

The auditing regulation in Rio de Janeiro states in its art. 4º:

“The environmental audit may be carried out by the company’s own team, by a contracted company, be it private or not, profit-making or not, as well as by autonomous auditors.

“Sole paragraph. The company that carries out its own Environmental Audit cannot make up its team with technicians responsible for the audit operation.”

11.4 AUDITORS’ LIABILITY

Environmental civil liability is objective and independent of guilt, as per art. 14, Law 6.938/81. This is the entrepreneur or the company’s responsibility, of which they cannot be exempt because they were subject to an audit.

The audited entrepreneur or company, however, can claim against independent auditors who have ill advised them with negligence, inability, imprudence and/or fraud. Independent auditors’ liability fits within the system of subjective responsibility, or responsibility with guilt, therefore it is up to the authors of the legal proceedings (audited entrepreneur or company) the onus of proving them guilty.

In the private environmental audit, carried out by internal auditors, it does not seem very likely that the entrepreneur or the company should claim against their staff, unless in cases of fraud, since there is a subordination link, irrefutable in the hierarchical scale of any company.

12. REGULARITY OF ENVIRONMENTAL AUDIT

The private or public environmental audit should be repeated in determined time intervals. It is not generally sporadic, happening only in the event of environmental catastrophes, even if an extraordinary audit may be carried out.

The time routine of an audit is linked to the idea of following up proposed measures, making this procedure more integrated, not isolated within a company’s production chain.

Law 1.898/91 of Rio de Janeiro, in its art. 5º, *caput*, establishes, for the activities prescribed, compulsory annual audience. Law 848, of 10th April 1992, of São Sebastião (state of São Paulo), establishes environmental audits every two years (art. 3º, § 7º). The municipal Law in Vitória (Law 3.968, of 15th September 1993) establishes a maximum interval of two years between audits, and the Law 4.802/93, of Espírito Santo state, establishes a limit of three years (the law of the Vitória municipality is entirely within the municipal constitutional autonomy). Law 13.448 of 11th January 2002, of the state of Paraná provides that compulsory environmental audits should have maximum intervals of 4 years (art. 4º).

Private environmental audits shall be subject to the company’s environmental policy and, notably, to the expiry dates of quality certificates conferred to them.

13. Ob. cit., p. 147.

13. ENVIRONMENTAL AUDIT DOCUMENTATION

British Standard BS 7.750/92 suggests in item 4.4, “Effects over the environment”:

“4.4.1 Report of legal, regulatory and other specifications: companies should create and maintain procedures to register all legal, regulatory and other specifications relevant to the environmental aspects of its activities, products and services.

“4.4.2 Communications: companies should create and maintain procedures for receiving, documentation and response of communications (internal and external) of relevant stakeholders relating to environmental effects and their control.

“4.4.3 Assessment and register of effects over the environment: companies should create and maintain procedures to examine and assess both direct and indirect effects over the environment of their activities, products and services, as well as compile a register of those effects identified as significant.”

14. PUBLICITY AND CONFIDENTIALITY OF THE ENVIRONMENTAL AUDIT

The dissemination of environmental audit data to the public may involve “risks of distortion by a publicity system which is very demanding or of a misconception with regards to auditing. The preoccupation with communication and marketing should not overcome a serious and objective analysis of environmental performance making it omit deficiencies and offering a deformed image because it is overly optimistic. Also, as validly pointed out by Corinne Lepage Jessua.¹⁴, one should not omit real risks under the pretext that if they appear in the audit it would denounce the company’s president or people responsible.”

It is worth highlighting that in European Union countries, as in other countries, including Brazil, the confidential environmental audit is allowed and valued. The company may voluntarily utilize this assessment instrument for self-orientation, having the right to maintain secrecy with regards to the data in the audit. I emphasize that this confidentiality includes the auditing procedures, and not the data comprised in the self-monitoring regularly carried out by the company.

The directive 1.836/93-EC only provided for voluntary environmental audits. However, companies adhering to the eco-management system will include “providing information to the public concerning the matter” (art. 1º, § 1º). Therefore, in the European Economic Community regulation, especially for obtaining a “Declaration on the Environment” issued by companies, there are no secret or confidential audits.

The environmental audit in which confidentiality is extolled, is that aimed at the company’s internal adjustment and counsel. The situation is different with the audit aiming at obtaining environmental quality certification. In this case the participation of the public is relevant. In this sense, Franca’s Municipality (state of São Paulo) Environmental Code (Complementary Law 9/96) provided: “ When individual and legal entities carry out optional private audits, aimed at obtaining environmental quality label or certification, the audit report will be subject to the public audience procedure, as per art. 18 of this Code”.¹⁵

15. ENVIRONMENTAL AUDIT AND NON-GOVERNMENTAL ORGANIZATIONS

The experience of “Friends of the Earth” in the United Kingdom, which has carried out environmental audits at municipal level since 1988, is mentioned.

14. Ob. e loc. cit.

15. The author participated as Legal Consultant in the preparation of the preliminary draft that circulated in Franca’s Municipal Chamber; the author of the project was the physician Dr. Joaquim Pereira Ribeiro.

It seems to me that there are two possible types of environmental audits carried out by non-government organizations - NGOs.

The first type of audit would be carried out in areas outside the boundaries of the property of the audited company, measuring external effects of the activity on water, atmosphere, biota and soil. This audit would not require the company's agreement; it could take place with its cooperation or even if it disagreed.

The second type of environmental audit would be an activity of a NGO within the audited company, contributing with the environmental public body, but with definite and indispensable agreement of the audited company. However, not to be mistaken with an NGO visit to a company with an audit. In a visit, the company is free to show whatever it sees fit, and there is no formal right of inspection.

16. PUBLIC CIVIL ACTION AND ENVIRONMENTAL AUDIT

The Federal and the State Public Prosecution Service has the irrefutable right to require the environmental audit report when the audit is carried out to fulfill legislation requirements. However, it is not the case with optional or voluntary audits, as per Law 7.347/85.

In the cases provided for in the municipal and state laws mentioned, if the environmental audits are not carried out, it is possible to enforce this obligation through a public civil action. It is also possible to search the enforcement of the obligation of not having it done, when the audit is carried out by persons declared as unsuitable or persons who do not meet legislation requirements. ■

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