



Twenty-one commitments for the XXI Century

1. Sustainable production and consumption, against the culture of waste.
2. Ecological efficiency and social responsibility for business.
3. Return to strategic planning, regional infrastructure and integration.
4. Renewable energy and bio-mass.
5. Information and knowledge for sustainable development.
6. Permanent education for work and life.
7. Promote health and avoid disease, making the Single Health System (SUS) more democratic.
8. Social inclusion and income distribution.
9. Make sanitary sewage and garbage collection universal to protect health and the environment.
10. Manage space and municipal authority.
11. Sustainable development of rural Brazil.
12. Promote sustainable agriculture.
13. Promote the local Agenda 21 and integrated, sustainable development.
14. Implant mass transportation and sustainable mobility.
15. Preserve the quantity and improve the quality of water in water basins.
16. A forest policy, control of deforestation and corridors for biological diversity.
17. Decentralization and a Federal pact; partnerships, consortia and local power.
18. Mobilization of the State: environmental management and economic instruments.
19. International relations and global governing for sustainable development.
20. Civil culture and new identities in the communication society.
21. Pedagogy for sustainability: ethics and solidarity.

Brazilian Agenda 21: www.mma.gov.br

Charging for water is going to begin

The Paraíba do Sul River Basin will be the first in the country to charge for the use of water. Beginning now, companies like the National Steel Company in Volta Redonda and the water supply companies will have to pay for the use of water resources. The National Water Agency will charge for it. **Page 46**

Instrument of change

President Fernando Henrique Cardoso promised to incorporate Agenda 21 suggestions in governmental policy. The document should be a basis for governmental planning at the federal, state and local levels. The final text of Agenda 21 will provide guidelines for the discussions of Brazilian representatives at Rio + 10 in Johannesburg. More than 85% of Brazilian businessmen adopt measures to protect the environment and say they are committed to implementing Agenda 21. **Page 18**

Building the future

After five years of discussion and negotiations among representatives of society, business and government all over the country, the Brazilian Agenda 21 was ready to be officially launched. The big question now is how to get the 21 objectives set out to reach sustainable development off the drawing board. Consultant Paulo Haddad followed the development of the Agenda step by step and compares the new phase to a chess game, where there are many possible moves. **Page 14**



JUAN PRATGINESTOS



MARTIN D'AVILA

INTERVIEW

Regina Elena Crespo Gualda

Maria do Carmo Bezerra

"The environment is not the only pillar of sustainable development"

One of the greatest difficulties in drafting the Brazilian Agenda 21 was showing that the final goal was not an environmental document but rather one on sustainable development. While the environment is just one of the dimensions of development, it is the environmental area all over the world that promotes sustainable development. Specialists in the area and those responsible for coordinating and consolidating Agenda 21, Regina Elena Crespo Gualda and Maria do Carmo Bezerra tell about their experience in conducting the democratic process. **Page 8**

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Companies create private reserves

The number of companies that decided to invest in Private Natural Heritage Reserves – RPPNs – is growing. In the João Monlevade RPPN in Minas Gerais, the Belgo Mineira Company is protecting 100 species of animals and 90 species of plants, many of which are endangered. **Page 27**

Brazil of all the arts

With the support of the *Comunidade Solidária*, artisans from all over the country learn to appreciate their work, guarantee family income and salvage secular Brazilian traditions. **Page 60**



EDER CHIODETTO

Partnerships among producers, research institutes, government and the community make it possible to find solutions for environmental degradation caused by swine wastes. Nearly half of the 36 million-odd pigs, distributed on some two million farms, are found in the states of Southern Brazil. **Page 56**

A new management model



DELFIN MARTINS/PULSAR



FIAT

Good business ahead

Businessmen recognize that preserving the environment results in profits, leads to new and profitable business deals involving recycling materials and they are increasingly investing in projects that promote citizenship and contribute to improve workers' self esteem. **Page 22**

JOSÉ CARLOS
CARVALHO

MINISTER OF
ENVIRONMENT

A commitment of all

There was a historic moment in July of this year, when President Fernando Henrique Cardoso officially launched the Brazilian Agenda 21. After five years of exhaustive work involving all segments of society, it was possible, with negotiation and participation, to build a reliable document that shows the way for Brazil in the 21st Century. Thus, the country met one of the main commitments signed at the UN Conference on the Environment and Development, held in Rio de Janeiro, in 1992. At that time, the 179 Heads-of-State and of government who signed Global Agenda promised to re-think the current patterns of development in the world.

Certainly, with the document in our hands, we are not beginning from scratch. In the past 10 years, great changes have taken place, in the actions of government and business and in the behavior of citizens, who are more aware of their role in the fight to improve the quality of life. With all those efforts going on, Brazil will participate in the World Summit on Sustainable Development in Johannesburg in a comfortable situation, although there are still many challenges ahead.

Building the agenda mobilized a significant part of society. Nevertheless, it is fundamental to continue the effort to put in practice what Agenda 21 means, since most people still see it as something diffuse and complex. The discussion between the State and the institutions of society over the document should be permanent and translated into the different languages of those who govern, planning specialists, mayors, business leaders, community leaders and the common citizen.

This publication seeks to increase that understanding. We talked to people who took part in the development of the document, but did not want to limit ourselves to that. We looked in the Administration, in organized civil society and in business for experiences that are working within the spirit of the Brazilian Agenda. Together with this publication, we are including a CD-Rom with the Brazilian Agenda 21 and the Priority Actions.

Undoubtedly, the process of drafting the Brazilian Agenda 21 is the broadest experience of participatory planning developed in the country in the period since the 1988 Federal Constitution was written, even though there have been other meetings where there was a great deal of consultation and participation. Some of those stand out, like the Rio-92 Report, the Áridas Project, the positive Agenda for the Amazon and the National Conference on Science and Technology.

The meaning of this experience is revealed by the range of the target public - from small rural communities to the most expressive business organizations, by the extent of its geographical coverage (localities, states, micro and macro-regions) and by the variety of themes discussed favored by the concept of ample and progressive sustainability. Starting with the initial proposals of the Commission, with contributions by specialists and with public hearings held all over the country, which mobilized some 40,000 people, actions and recommendations were defined and should become an ethical and political commitment to be assumed by all Brazilians.

A participatory planning process the size of

“The tasks that the Agenda proposes do not only affect government, business and civil organizations. They demand intense participation of the Legislative Branch at the Federal, state and local levels, and of the Public Prosecutor’s Office, and must now be distributed.”

brazilians

AGENDA 21

the one carried out to develop Agenda 21 should have practical consequences for the sustainable development policies, programs and projects that are indispensable to promote the changes demanded by Brazilian society.

Therefore, the Brazilian Agenda 21 is not structured only as a set of general recommendations aimed at camouflaging economic and political-institutional tension and conflicts, which will probably emerge upon its implementation.

Lack of understanding of this reality while formulating and executing policies for sustainable development could become a great obstacle in making the concept of amplified sustainability a successful one.

The Brazilian Agenda 21 is not a governmental plan but rather a commitment of society in terms of choosing future scenarios. The federal contribution is decisive as the proposals are introduced in the priorities of the next Multi-Year Plan. State and local governments should, equally, cooperate to implement the actions recommended.

Brazilian business, which reacted proactively to the challenge of changing production patterns in the country, will have a great deal to contribute to making the actions and recommendations in the Brazilian Agenda 21 viable.

Different organizations from civil society have already proven specific abilities and competence, and therefore have the credentials to exercise in practice the important role of starting the ball rolling on relevant actions to build the sustainable development of the country. The duties that the Agenda proposes do not only affect government, business and social movements. They demand intense participation of the



JOSÉ CARLOS CARVALHO

MINISTER OF ENVIRONMENT

Legislative Branch at the federal, state and local levels, and of the Public Prosecutor's Office. The duties now must be distributed according to competence, preference and ability of the different institutions.

The strength of the Brazilian Agenda 21 resides in the ample participation it reached during its formulation and in the construction of a process of co-responsibility for the phase of implementing its actions and recommendations. It is, indeed, a social pact.

Despite all the effort that has been made, the big challenge begins now: the implementation stage. The Brazilian Agenda 21 began to effectively exist when the phase of defining priority actions and identifying institutional mechanisms and economic instruments essential for its exercise began. The Brazilian Agenda 21 is the Brazil that rejects devastation and, at the same time, refuses the concept of sectarian and immobile policies.

“The discussion between the State and the society over the document should be permanent and translated into the different languages of those who govern, planning specialists, mayors, business leaders, community leaders and the common citizen.”

INTERVIEW

REGINA ELENA
CRESPO GUALDA

MARIA DO
CARMO BEZERRA



“Agenda 21 is a powerful planning instrument”

“The environment is one of the pillars, but it is not the only actor in the process of sustainable development.”

It was a long road that lasted five years, marked by discussions that were not always easy, meetings around the states and the complex construction of a document that shows the path towards a society with more solidarity. Responsible for this coordination task, and later, for consolidating the Brazilian Agenda 21, two people stand out at the Ministry of Environment (MMA): Maria do Carmo Bezerra, a professor at the University of Brasília (UnB), who coordinated execution of the

National Agenda 21, from its first discussions in 1997, and Regina Elena Crespo Gualda, who today is Secretary for Environmental Quality at MMA. These two professionals with a large experience in the area of the environment, tell us in this interview about the road they embarked on, the difficulties they overcame, the victories and the fruits of that democratic process. And they point to the real possibilities for implementing Agenda 21: “It will only happen if each Brazilian sees it as his own agenda of priorities.”

Was it complicated to reach the final text of the Agenda, with discussions that were so broad that they covered the whole country?

Maria do Carmo – It was hard work with ups and downs, especially because there was no prior experience in putting together a Sustainable Development Agenda to help us draw up our flight plan. The Commission responsible for the process slowly developed a methodology to arrive at the result we now have. It is important to stress that the Agenda 21 is, above all, a process of participatory planning and of co-responsibility. These are, by the way, completely new characteristics chosen by Brazil as the road to follow.

What were the biggest difficulties the Commission faced?

Maria do Carmo – The difficulties of the road chosen were thought about and weighed beforehand. We were aware that we had chosen a difficult road, because we lacked tradition in working in an inter-sectoral way, involving social, economic and environmental issues. Broad participation had all the ingredients of the toughest road, but it would be, we believed from the very beginning, the best way to construct the sustainability of Brazilian development. It was what made it different from other processes and perhaps the only road that could lead to some transformation. The objective was to have a document capable of stimulating a process of change that could lead to sustainable development, based on co-responsibility, because it isn't enough to build an agenda for action in a participatory manner, you also have to make a pact to implement it.

What were the main conflicts?

Regina Gualda – One difficulty and a contradiction which appeared throughout the process was making the participants understand that the Agenda 21 was not an environmental document but rather one of sustainable development. All around the world the area of the environment promotes sustainable development, even though it is just one dimension of development. The fact that environmental agencies exercise that role makes the process of involving different social and economic segments of society difficult since it is traditionally seen, especially by the economic area, as a responsibility of the environmental area.

How did the concept of the environment evolve into the concept of sustainable development?

Regina – The Stockholm meeting in 1972 was marked by discussion of environmental issues, and the Conference on the Environment and Development (Earth Summit, 1992) presented the world with the theme of sustainability. The environmental issue arose as a new fact in Stockholm because, before then, there was no environmental concern as the basis for development. At the Rio Conference, the meaning of sustainable development was added, that is, environmental management could not advance if the social and economic dimensions were not also moving in the same direction of building a society with more solidarity.

Doesn't that environmentalist perspective still prevail in many cases?

Maria do Carmo – That was and still is one of the obstacles to advancing the Agenda 21 in Brazil. The creation of the Commission for Sustainable Development Policies (CPDS), presided over by the Minister of Environment, to draft the Brazilian Agenda 21 differed from the international trend. Some sectors of society questioned the fact that CPDS headquarters were at the Ministry, since Agenda 21 would not be exclusively about environmental issues, while, on the other hand, other sectors of society demanded that we assume coordination of the process of drafting the Brazilian Agenda 21. Society saw, and still sees, Agenda 21 as an environmental program. At the UN, where there is a specific Commission on Sustainable Development, CDS, they have the same difficulty in interacting with other commissions in the UN system, which treat other issues in a segmented way.

Regina – Constructing sustainability means necessarily going through that change in perspectives. There was a very big effort on the part of the people who conducted the process to keep reminding everyone that it was not an environmental agenda but rather a change in the context of development which today is seen as predominantly economic. Creation of CPDS itself was a response to those difficulties, since it was composed of representatives from all sectors on an equal level. This Commission, charged with drafting the national Agenda 21 was placed under the MMA, at the time when Gustavo Krause was

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REGINA ELENA
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MARIA DO
CARMO BEZERRA

“The discussion on sustainable development began during the Earth Summit, a conference that many still believe was only about the environment.”

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“One goal we constantly had in mind was always to give people back some of the energy they had invested in the process. That gave us credibility to build true partnerships and to be seen as reliable.”

Minister and Aspásia Camargo was Executive Secretary. Maria do Carmo was in charge of its coordination from the very beginning.

Where was the strongest resistance to the Agenda 21 process?

Maria do Carmo – I couldn't point out one segment of society; I suppose almost all of them. Within the Federal government, other ministries resisted participation, thinking it was an issue for the Ministry of Environment; in local governments, the same thing happened with the Environment Secretariats, although I should add that they were our most sensitive partners because they had the same difficulties in internalizing the theme of sustainability within the structure of government.

And how did the public respond to this call?

Maria do Carmo – Businessmen were not motivated at the beginning of the process. However, when we had concluded the first round of discussions, they presented some excellent contributions to the state debates during the broader consultations. Among the civil society organizations, it was the NGOs that already dealt with environmental issues that responded first. As the process continued, the social and academic areas joined in. The challenge of our work was never to give into the temptation of stopping the process before we had involved all segments of society. We continually created conditions to involve more agents so that we could draw up proposals on the various issues that represented a consensus, which expressed the way society thinks.

How did the proposal for wide scale participation arise and what issue was chosen?

Regina – In 1999 – during the first round, we brought together opinion makers, people who are competent in different areas to prepare thematic documents. There were representatives of civil society, from NGOs and from the private sector. This was because we had perceived the difficulty of having a broad consultation process without starting from concrete proposals on which we could build a consensus. At any rate, it was a great challenge within the context of a country that has no tradition of participation in the formulation of public policies nor of coordination among different sectors.

Maria do Carmo – Because of the methodology chosen, we selected six issues and

asked representatives of the different segments to present their proposals: natural resources management; sustainable agriculture; sustainable cities; infrastructure and regional integration; reduction of social inequalities, and science and technology for sustainable development. At the beginning, we imagined that those documents, once consolidated, would result in our Agenda 21, but it didn't happen that way.

What changed things?

Maria do Carmo – The changes came in the process of self-assessment and learning within CPDS itself. The first assessment made us see that the documents prepared on the basis of thematic discussions were not Agenda 21 yet, because as we analyzed the profile of those who had participated and saw that, while there were some extremely interesting, strategic proposals, they provided a very academic viewpoint, one of non-governmental organizations and environmentalists. It was not the result of a social pact among different segments of Brazilian society, aimed at a process of effective change. That was when the real challenge of how to build such a social pact truly began.

And what was the major challenge at that moment?

Maria do Carmo – Not to give in to the temptation of concluding Agenda 21 at any cost. We were being pressured for a final product by everyone, especially by the press. At this point we should underscore the generosity of the Commission members and of the Ministers who were in charge of the process all this time. They could easily fall into the temptation of saying, “I finished the agenda the way I wanted it,” especially since they are constantly under political pressure. However, they preferred to make room for the process to follow its course. This is one of their merits, to which we owe much.

And the press was bearing down on you, saying the government had not done its homework?

Regina – At that critical moment we had excellent proposals but we did not have the viewpoint of all sectors. Business had only minimum representation and government itself was absent, especially governmental agencies from the infrastructure area were reticent to participate and we needed to win those people over. That was when we adopted the methodology of taking the discussion to each Brazilian state.

How was society mobilized?

Regina – It was very interesting when we consolidated all the thematic documents into one large reference document, it even strengthened the Commission. At that time, the conflicts that are inherent to different sectors of society became explicit. Some wanted a document that expressed the Administration's viewpoint, alleging that they did not agree with existing criticism, while others, like businessmen, could not see their perspectives included in the document. Finally, we managed to draft a document in which the Commission relinquished its own interests as a segment of government in order to be able to produce a document that would make it possible to broaden the discussions.

Maria do Carmo – This document, which consolidated the first stage of national consultation, was called "Brazilian Agenda 21 – Basis for Discussion", and it was launched at the height of the dissemination of a governmental program called "National Development Axes", which included the Multi-Year Program for 2000-2003, which is the Federal Budget. As Regina said, when the decision was made to make conflicts explicit in order to make real changes possible, the Commission and the chosen path were really consolidated, because the documents contained the criticisms that society made at that time to the Administration's plan, as well as highlighting the parts of the plan that were working.

How were those tensions resolved?

Maria do Carmo – When CPDS arrived at the consensus that the agenda would not represent the vision of any single segment but rather a pact among them. Everyone would have to give up some of their convictions to negotiate a compromise. The Commission believed that it was important to broaden the discussion, because it was the duty of society itself to draft a proposal for sustainable development.

Regina – That was the essential point. I had the opportunity to participate in what Maria do Carmo calls the most important moment, and I believe it was the most important moment for the whole country in recent years. To have that grandiose perception that the work was not ours, the governments' or that of a small commission, even though it was representative, but rather of society as a whole. It was a great exercise in participatory democracy in the country.

What was the proposal presented by the Commission?

Maria do Carmo – In June, 2000, we finished "Basis for Discussion" and handed it to President Fernando Henrique Cardoso. He announced the process of national consultation would be broadened to include public hearings on the proposals in the document in each of the 26 states.

Regina – At the same time that those difficulties were overcome, another very difficult stage began. How can you have a broad process of consultation and then consolidate it into a consistent plan of action which is both coherent and expresses everyone's viewpoint?

What was the inspiration, what model was adopted?

Maria do Carmo – The objective was to put the Agenda on the political agenda of the country. Regina had had experience in working with the National Environment Program, which has the states as its main partner. We used that experience with the state environment secretariats to adopt a methodology of partnership, where every one could include, exclude or reformulate the actions proposed in the "Basis for Discussion".

Regina – First, we evaluated the reasons why some segments had not shown up for the first stage. Why had the productive sector been absent? And the political area? So, we went after people to sponsor the discussions and people who could help get the business sector involved in the process and fill in other absences. We established partnerships with regional development banks, which particularly helped us involve the business sector. In addition to the State Environment Secretariats, we established partnerships with the Banco do Nordeste, the Superintendencies for Development of the Amazon and the Northeast, the Banco do Brasil and Caixa Econômica Federal.

Did the number of partnerships grow, increasing the level of awareness of the new development model?

Regina – The Banco do Nordeste had already been working in the area of sustainable development, but a partnership is a two-way street, because at the same time that they financed us, they reinforced the conceptual basis of their projects.

Maria do Carmo – The partnerships with banks and states generated sub-products, like greater



The partnerships with banks and state governments generated sub-products, like an increased demand for generating local agendas and a special line of credit at the National Environmental Fund to support such initiatives. Some banks became agents in those programs, such as Banco do Nordeste. ”

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awareness in the different regions of the country for the development of the Local Agenda 21s. That even led the Ministry of Environment to open a special line of credit in the National Environment Fund to finance these initiatives. On the other hand, banks like the Banco do Nordeste became agents promoting the Local Agenda 21s.

What is the best way to increase mobilization and involve all of society?

Regina – The methodology for this phase was consolidated during the process and it became another great moment for learning. At the Ministry, we identified all the institutions that should be involved, like federations of industries, NGOs, universities and others. Then, together with state agencies and our partner banks, we set up a preparatory meeting – in each state – with those institutions.

Maria do Carmo – In the meeting to raise awareness, we explained the process to the different segments, creating a social control mechanism so that the spirit that dominated CPDS would predominate in each state – i.e., so that no segment alone should conduct the process. We handed over a set of documents to each sector representative, together with a form. It was prepared to guide discussions on the document in their area and send us suggestions for consolidation. We generated a report in each state. That material was the basis for the 26 public hearings held between September, 2000, and April, 2001.

How did the states react to the call to discuss the Agenda?

Maria do Carmo – **Maria do Carmo** – Motivation varied greatly from one state to another. Many imagined that there would be great mobilization in São Paulo, the richest state in the country. On the contrary, the greatest mobilization took place in the poorest states of the Federation, which lack social integration and have a desire for change. Those states are at a great disadvantage because of the current rules of the game. The Northeast was the region of the country where discussions around Agenda 21 were first concluded and the area where mobilization was greatest.

Regina – In São Paulo there was little debate, with some 90 people, most of them environmentalists. Even MMA Executive Secretary Aspásia Camargo herself took part in the preparatory meeting held with the State

Federation of Industries, Fiesp, without great success. In the Amazon region, I believe the process was initially seen as undue interference in regional development, since the region has its own mechanisms for discussing public policies. Only later was the process for building Agenda 21 understood, and we had extremely interesting discussions in the state of Amazonas, where communities that live on the river banks and far into the interior were involved. Amapá did not hold a debate, alleging that the state already had a sustainable development plan, which was a mistake, because we were not making state sustainable development plans but rather discussing Brazil.

Were the contributions good?

Maria do Carmo – We often had to emphasize the idea that we were looking for the viewpoint of each state on the development of Brazil. We wanted discussions to bring up issues that had not appeared during the first round of consultations, which we knew were controversial issues in the country but which were essential to promoting sustainable development. A few examples are desertification, changing the course of the São Francisco River, the model of occupation of the Cerrado, all regional issues but ones that are extremely relevant to sustainable development. The confusion regarding the issues of local and national interest consumed a lot of time and some 60% of all discussions ended up on a state level, often even on the local level.

Regina – From that we gathered a wealth of material for construction of the Local Agenda 21s. It is very difficult to go to a state which hasn't identified its problems and even those of the municipalities. But we can guarantee that national themes were covered in depth during the discussions. A report on the contributions of each of the 26 states was prepared as a way to give society a type of feedback. One goal we constantly had in mind was always to give people back some of the energy they had invested in the process. That certainly gave us credibility to build true partnerships and be seen as reliable.

And from a political viewpoint, was the participation of governors important?

Regina – The only state where the governor participated right from the beginning because he understood the importance of Agenda 21 was the state of Santa Catarina. Governor

“The next step is to disseminate it and involve society even more. It should set off campaigns that show how to save resources of any kind, natural or human, since they are all limited. That is the challenge of sustainability.”

Espiridião Amin opened the meeting in his state and made a speech about the meaning of sustainable development.

Maria do Carmo – It was interesting because that event took place on September 12, the day after the terrorist attack on the twin towers in New York. Everyone was under the impact of the tragedy, and he made a beautiful speech about sustainability, especially about the need to change political priorities and to strengthen local, national and international government.

And now? How will the actions proposed in the Agenda and presented to society by President Fernando Henrique Cardoso be implemented? Since we are in the middle of an election, will it be seen as an essential instrument for each candidate?

Maria do Carmo – The Agenda was consolidated as a set of goals. The commitment undertaken by President Fernando Henrique Cardoso on the day he launched the Brazilian Agenda 21, July 16th, was that the document would provide inputs for actions included in the Multi-Year Plan for 2004-2007 (according to the Constitution, every four years the Executive Branch must present a plan for allocation of public resources and the plan must be approved by Congress).

Regina – The Agenda offers a series of proposals that could become government programs, and others that could be taken on by other segments of society. I believe that the Agenda 21 we managed to develop is a powerful planning instrument, which brings a view of the whole country. But it will only happen if all those who helped build it believe it is their responsibility to implement it and achieve those goals. This obviously includes the new Administration and Congress to be elected this year.

Is there a risk it will be kept in a drawer, as just another document?

Maria do Carmo – If it is considered a governmental document, and especially, if it is considered this Administration's document, then most probably nothing will happen. It only will become a reality if each of the segments involved becomes engaged and consider that it really represents a social pact, and fight for its implementation. Whether in the trade unions, the universities, the Local Councils or in the National Congress. It may sound utopian, but this is the spirit that really guided the preparation of the Brazilian Agenda 21.

Does the Agenda show how to implement the new proposed model of development?

Maria do Carmo – The Brazilian Agenda tried to make progress on the means of implementation. During the Rio Conference, the approved document emphasized what should be done but not how to do it. Now, we are arriving at the Johannesburg Summit with a negative evaluation on implementation of the Global Agenda 21. The Brazilian Agenda 21 offers a set of instruments for implementation which were also arrived at by pact. That is another difference in the Brazilian experience.

Regina – It should also be noted that the process of implementation has already begun. In many areas, we Brazilians have already been working on sustainable development for some time. Agenda 21 records the entire national consultation process and the strategy formulated by listening to society, but many proposals that were made during these five years are already being carried out, both in the environmental and social areas.

Is there a need for great changes, high investments?

Regina – When speaking about implementation, we are talking about programs that are already underway. Much of Agenda 21 can be implemented without new money, simply moving the direction of budgets and altering priorities. This will make a big difference. Changing priorities ensuring harmony among economic growth, social inclusion and environmental preservation, exactly what the Agenda proposes. Brazil certainly needs more resources to promote development, but resources which were being used to promote sustainability have migrated a long way towards creating a society with more solidarity.

Maria do Carmo – But for the process of compromise, co-participation and co-responsibility to advance it is essential that the media also contribute. The great role that Brazilian media should undertake is to make different segments of society aware of the project. The next step, therefore, is to disseminate it and involve society even more. It should set off campaigns that show how to save resources of any kind, natural or human, since they are all limited and must be managed with their finite nature in mind. That is the challenge of sustainability.

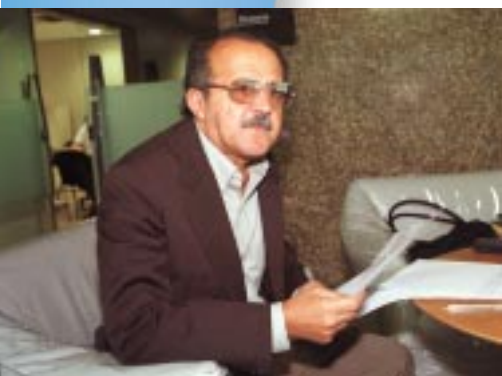


“Agenda 21 records the entire national consultation process and the strategy formulated by listening to society, but many proposals that were made during these five years are already being carried out, both in the environmental and social areas.”

A challenge for society

The document is ready. So now what? Getting the 21 objectives in Agenda 21 off the drawing board is compared to something like a novel with several chapters or a chess game with many possible moves.

Negotiation of conflicts. Commitment of actors. After five years of discussion and examining sustainable development proposals from all over the country, those are the ingredients that former Planning and Finance Minister Paulo Haddad points out as indispensable for getting Agenda 21 off the ground. As consultant for the Commission on Sustainable Development Policies (CPDS), Haddad guarantees that Brazil now has its hands on a proposal for action unlike any ever seen before in the country.



MARIA TEREZA CORREIA/EST. MINAS

Haddad says there is no recipe to follow: "You have to negotiate"

"Making it happen now is basically a question of political decision and the commitment of everyone involved," adds Haddad. Having launched the challenge, he says the mechanisms for action not only exist but are part of Agenda 21 itself. "Contrary to other countries, the Brazilian agenda is not made up only of proposals, but rather it points out detailed ways to implement them, with plans for action occupying a third of the whole agenda."

Haddad adds that there are five types of mechanisms for action detailed in the agenda. On the one hand are the more traditional instruments of fiscal and financial intervention, which make up the mechanism of direct state interference in the economy. On the other are more innovative instruments that use market mechanisms to carry out environmental policies, like some of those adopted by the

OCED (Organization for Cooperation in Economic Development) countries, which in Brazil are just beginning.

The other instruments are: creation of partnerships between government and second and third sectors; the so-called endogenous actions, planned and carried out by civil society within the local community itself, with the government acting only as a support agency; and the use of international technical and financial cooperation mechanisms.

The former Minister underscores the fact that partnerships with the third sector are growing in Brazil, and that the second sector, made up of for-profit companies have also been participating more in social, environmental and cultural policies, investing more in them in recent years. Today those investments equal one per cent of the GDP. "This is a good amount, and it's growing, something that didn't exist in Brazil on that level ten years ago. In many cases, it is even more than some Northeastern states spend on their own social actions."

According to Haddad, there are no set recipes. "Each of these instruments for action involves a problem or demands negotiation, either with Congress or with society at large, in order to find a balance between efficacy and justice. There is no easy solution, but one can't just freeze in the face of difficulties, either," says CPDS Consultant Haddad. Instead of outlining a specific path, he says there are many possible paths to take and find the best alternative, "something like a novel with many chapters or a chessboard where many moves are possible."



DELFIN MARTINS/PULSAR

A working base for administrators

Haddad believes we should remember that Agenda 21 is a complete and complex plan which dives into issues that go from social exclusion to food wastage, including issues like environmental degradation, family agriculture and changes in rural production and consumption, life in the urban environment and many others. Also, the Agenda needs to be seen in the current Brazilian context of economic crisis and elections for president and governors.

"It would be ideal if the new president and governors would take on the Agenda as their working plan for public policies. But in the short term we can expect localized, specific and transitory gains. We do not expect the Agenda to be implemented as a whole. It is a long-term document," explains the former Minister. He adds that the Agenda is a program for society, which can generate many decentralized actions by companies, NGOs and communities, including broadening their local agendas.

"From now on it all depends on political, social and cultural commitment and engagement of government and civil society. There is resistance from some economic, and

even cultural, quarters, but there is also a lot of room to advance," he analyzes. Haddad adds that public opinion is mobilized, and the proof is that more than 40,000 people participated in drafting Agenda 21 and more than 6,000 proposals were put forward. He says that there has never been another experience in planning in Brazil with a greater degree of participation.

"This shows the level of motivation and public awareness of the issues on the Agenda, which offers a modern platform for action at a time when there is great dissatisfaction with Brazilian development indices," says Haddad. Even though the 2000 Census showed some improvement, 30% of the Brazilian population still lives below the poverty line.

He adds that, during the Real Plan, the average economic growth in Brazil was 2.4%, while the population grew 1.6%, so that the income *per capita* grew 0.9%. "That is very little for a country with so much poverty. Now we must go through a cycle of economic growth that is sustainable in the long run, combining economic growth, social equality and the environment."

CHANGES

Agenda 21 is a complete and complex plan which dives into issues that go from social exclusion to food wastage (photo), environmental degradation, family agriculture and changes in production.

AGENDA 21

"It is ethics between generations. When we make a decision today, we have to think about the well-being of the current generation and that of the future one. This is the thread that permeates the whole Agenda."

Paulo Haddad

Support for family farming: an Agenda 21 commitment



DELFIN MARTINS/PULSAR

Act and negotiate, the crucial points

The next steps to make Agenda 21 viable have different deadlines and conditions. When talking about recovery of degraded areas, this requires two or three decades, foresees former Minister Paulo Haddad. When talking about recycling solid wastes, it is a question of an immediate decision, and when talking about controlling air pollution, a measure can bear fruits within a year or two.

"That is why Agenda 21 is not a package, it is not a single road and there is no defined

schedule for results," explains CPDS consultant Haddad. Implementation will also depend on how complex the issues involved are and on the demands for coordinated action. Food wastage is one example since it happens in Brazil on all levels, from production, to distribution, to commercialization, to consumption.

"This demands specific programs, from environmental education for production and consumption, to market mechanisms and saving resources in production," observes the consultant, adding that slash and burn agriculture, for example, imposes an ecological price on food production while, on the other hand, waste in the transportation system endangers rational distribution, etc.

Nevertheless, he believes there are some immediate actions that can be undertaken in the short term, like creating a school for citizenship, aimed at disseminating the principles of sustainable development. That, according to Haddad, is the action which could move forward fastest in Brazil. "The public education system has advanced a lot, with actors who are the workers in education and are very aware and ready to work with environmental education."



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Economic interest

Other more immediate actions could include: a tax reform to encourage the sound use of natural resources, following the example of sustainable management of forests and recycling solid wastes, among others; transforming the environment into an area of business, the so-called eco-businesses; increasing the value of family farming; taxing water; better management of existing preservation areas, using conservation units that preserve the biodiversity of the Cerrados, of the Atlantic Forest and of the Amazon also for tourism and research into new materials and germplasm banks, as has been done in the Amazon.

"It has become clear that the more economic interest created in preservation, the more protection there will be, as we are now seeing in the Pantanal wetlands because of the interest in fishing, ecotourism and the hotel industry," says Haddad.

Family farming, which has a conservationist tradition in Brazil, is an ally of sustainable agriculture. In the long run, the family farms even have greater productivity than predatory

agriculture. "Since the farm is usually the family's only asset, they tend to conserve it and use the property more rationally. At times, they fail to do so only for lack of knowledge, which underscores the importance of efforts in extension work," Haddad points out.

The growing scarcity of water in the country, where river basins have disappeared, justifies the measure of taxing water used in activities like irrigation and mining. "This has been done in the Paraíba do Sul River Basin and it should be extended to other areas through the river basin committees. Any asset that is free tends to be used unsoundly," Haddad believes.

According to the former minister, the more difficult solutions for the questions in Agenda 21 will take place when and where there is a conflict between sustainability and profitability, an example of which is the conflict in the Amazon between sustainable development and the timber industry. "Therefore, this Agenda is, on the one hand, a platform for action and, on the other, a platform for negotiation."

HOW TO GET AGENDA 21 OFF THE DRAWING BOARD

IMMEDIATE ACTIONS

Haddad points out six actions in the agenda that could be adopted in the short term:

- Enhance the value and encourage a school for citizens so that sustainable development becomes part of children's education.
- Enhance the value and encourage family farming with a conservationist tradition in Brazil, concentrating efforts in extension programs.
- Carry out a tax reform to encourage sustainable development projects.
- Transform the environment into an area for business.
- Increase the use of existing conservation units, implementing tourism and research of new materials and germplasm banks.
- Tax the use of water in activities like mining, irrigation, etc.

FIVE BASIC MECHANISMS

- More traditional instruments, such as fiscal and financial intervention, that involve direct state intervention in the economy.
- More innovative instruments such as market incentives to carry out environmental policies, like those used by OECD countries.
- Creating partnerships between government and the second and third sectors
- Endogenous actions of the community itself.
- International technical and financial cooperation mechanisms.

THE THREE MAIN STEPS

- Negotiation, to administer conflicts
- Social compromise, to obtain the commitment of all actors
- Choice, to identify the best alternatives among the many possibilities.

A powerful instrument for transformation

Proposals intended to implement a model for sustainable development in the country were discussed during five years all around the country and resulted in a compromise among the more than 40,000 representatives of civil society, government and business

When Brazilian Agenda 21 was launched at a ceremony at the Presidential Palace on July 16th, President Fernando Henrique Cardoso promised to adopt the guidelines of the document when formulating the proposal for the federal budget and in preparing the Multi-Year Plan for the period from 2004 to 2007. "We will incorporate the agenda in governmental policy," guaranteed the President of the Republic.

The promise follows a suggestion made by the Minister of Environment, José Carlos

Carvalho, to use the document as a base for governmental planning at the federal, state and local levels. It was also a response to an appeal made by the representative of the National NGO Forum, Rubens Born. "We cannot let this document sit on a shelf. We must ensure its implementation. It is an instrument of transformation because it proposes policies for creating a better Brazil," said Born.

Agenda 21 was also well received by business. The President of the Brazilian

AGENDA 21 IS DIVIDED INTO FIVE BASIC THEMES:

Economy of savings in the knowledge society: issues like combating waste of natural resources and providing incentive for the efficient use and conservation of energy.

Social inclusion for a society that has solidarity: priorities like combating illiteracy, professional training, distribution of income and environmental sanitation.

Strategy for urban and rural sustainability: policies for development like education, technical assistance, management of natural resources and development of steering plans.

Strategic natural resources: water, biodiversity and forests. Management of water resources and control of deforestation.

Government and ethics for sustainability: definitions of sustainable development indicators, encouraging partnerships and voluntary work, increasing the participation of citizens with international relations.



Business Council for Sustainable Development, Felix Bulhões, confirmed that a large part of Brazilian businessmen believe in that social and financial profits can be achieved by implementing an efficient model for sustainability. "It is important now to make Brazilian Agenda 21 happen," he said. He also reminded us that many business initiatives already follow the lines proposed in the document.

The same is happening within the government. According to Minister José Carlos Carvalho, ecotourism, family farming and distribution of the federal primary school scholarship are a few examples of

actions that meet the guidelines of the new national pact for sustainable development.

"Businesses that today are re-using the wastes from their factories are already adopting the measures proposed in Agenda 21," Carvalho noted. "But it is of no use, for example, for government to invest in environmental actions like creating sanitary landfills, if the common citizen continues throwing garbage in the streets," he observed.

MMA



World conference

The final text of Agenda 21 will be the basis for discussion by the Brazilian representatives at Rio + 10, the World Conference on Sustainable Development to be held from August 26 to September 4 in Johannesburg, South Africa. During the event, countries from all over the world will evaluate the proposals approved during the 1992 Earth Summit in Rio de Janeiro, and they will discuss what has already been implemented.

With its Agenda ready, Brazil will arrive with confidence at the meeting. It will have arguments to defend the proposal that 10% of energy sources be renewable. Presented by Brazil, the proposal was approved by the Ministers of Latin American and Caribbean countries during the preparatory meeting for Johannesburg, held at the beginning of this year in São Paulo. The country may also demand implementation of actions to preserve the environment as a prerequisite for international loans.

"With Agenda 21 defined, Brazil can discuss opening international markets, transfer of technology for sustainable development and even access to international resources," commemorates Agenda 21 Coordinator, Maria do Carmo Bezerra. The Brazilian mission, she says, will be backed by the results of mobilizing

some 40,000 people all over the country during the five years of work that resulted in the 21 national objectives set forth in the agenda as priorities for the country.

"They are very precise actions that translate the ethical and political commitment of a pact that should be undertaken by all Brazilians over the next ten years," explained Maria do Carmo. According to Ministry of Environment Secretary for Environmental Quality, Regina Gualda, who co-chaired the Commission for Sustainable Development Policies and Agenda 21 (CPDS) with Minister José Carlos Carvalho, the challenge has no deadline. She says what is important now is to incorporate the values and principles of sustainable development in the public policies of federal, state and local governments.

"For this purpose, it is necessary to see this new pact as a collective commitment capable of involving the whole nation," states Regina.



**CPDS team
watches President
Fernando Henrique
Cardoso launch
Brazilian Agenda 21**

BY PAOLA
LIMA

Faithful partners

More than 85% of Brazilian businesses adopt measures to protect the environment, and businessmen say they are committed to implementing Agenda 21. Business that doesn't bet on sustainable development loses its competitive edge in the market

Moreira Ferreira (L):
"Reducing waste."
Bulhões: "Business
will profit."



Business was one of the important partners for state and federal governments when developing the Agenda 21. Businessmen should also be the most active participants in implementing the guidelines for sustainable development. So far, the country only has reason to commemorate. According to a poll held in 1998 by the Brazilian Economic and Social Development Bank (BNDES), the National Confederation of Industry (CNI) and the Brazilian Service for Support to Small Business (Sebrae), some 85% of Brazilian businesses adopted some procedure associated with environmental management. It is expected that that percentage will rise after official launching of Agenda 21.

For companies that already had a tradition in socially responsible stances, applying the orientation of the Agenda is just a natural consequence of actions developed over recent years. However, even companies that still resist will perceive that without adopting the new standards, they will become less competitive. Due to ideology or necessity, industries have begun to make their operations compatible with the concepts of sustainable development.

"Brazilian industry has been adopting

more and more practices that reconcile production with sustainable use of natural resources, with significant results in reduction of pollution and waste," guarantees National Confederation of Industry President Carlos Eduardo Moreira Ferreira. Furthermore, he says that continuous improvement in production models together with strategies for sustainable development can result in excellent opportunities for business and access to new markets.

The Chairman of the Brazilian Business Council for Sustainable Development (Cebds), Felix Bulhões, states that businessmen believe they will derive profits from the sustainable development model. The Executive President of Cebds, Fernando Almeida, is more incisive. He says that companies must adjust to the new demands of the internal and external market if they don't want to go bankrupt. And, among those demands, are practices of environmental preservation and sustainable development. "The social prestige of a company today comes from its environmental and social responsibility. If it has an environmental debt it will not develop," explains Almeida. Cebds represents more than 450 companies and participated actively in drafting the text of Agenda 21.



Human resources

Despite overall good intentions, there are obstacles to implementing several points in the agenda. For business, the diversity of laws, regulations and technical standards in the country makes it difficult to start up new companies and expand existing ones. "We still need to perfect our environmental policies and the regulatory action of government on all levels in order to offer a favorable environment for the sound use of natural resources," says Moreira Ferreira.

Businessmen also insist that it is necessary to train human resources for the new form of development. Both business and the government should be involved in that effort. "The big bottleneck today is making people

understand that investment in sustainable development will bring profit in the long run. It is something to be calculated in decades," argues Fernando Almeida.

During discussions on Agenda 21, businesses, represented by Cebds and CNI, prepared a document with recommendations for discussion during the World Conference on Sustainable Development, Rio + 10, in South Africa. Among the main themes in the document are sound use of forestry resources, management of water resources, social responsibility, concern for climate changes and biological diversity, safe management of toxic products and increasing in energy supply.

AGENDA 21

TRAINING

Businessmen insist that it is necessary to train human resources for the new form of development. Both business and the government should be involved in that effort.

THE GOALS OF AGENDA 21

Sustainable production and consumption.

Some actions: promote a national campaign against wastage, especially water and electricity; restrict production of disposable products.

Eco-efficiency and social responsibility of companies.

Some actions: provide incentive for corporate social responsibility; promote partnerships to improve production.

Preserve the water of the river basins.

Some actions: disseminate awareness that water is a finite and badly distributed asset; develop and disseminate technologies to reuse water in industry.



Renewable energy.

Some actions: encourage the efficient use of energy and its conservation; promote research on renewable sources of energy.

Information and knowledge.

Some actions: establish partnerships with universities and public research centers; carry out research on and use alternative sources of energy to reduce indiscriminate consumption of biomass.

Promoting sustainable agriculture.

Some actions: adopt soil management practices that control erosion; adopt the principle of precaution in planting and create a visible stamp for authorized transgenic products.

Forestry policy and the control of deforestation.

Respect the environmental legislation; do not promote burning as an instrument of soil management; use alternative sources of energy to reduce the indiscriminate consumption of biomass.

Social inclusion and income distribution.

Some actions: improve distribution of income in the country; improve living conditions and social justice.

Time for good business

Companies take the lead in the race to meet the challenge of sustainable development, discover that it is profitable to recycle, and invest more and more in social and environmental protection projects

Brazilian business has started doing its homework. Many companies that would now be given an "A" in sustainable development are in a very different position in the classroom than they were ten years ago, when the Earth Summit met in Rio de Janeiro. Or 20 years ago, when Brazilian legislation couldn't stand on its own feet when it came to environmental protection and when there

were no instruments for fining or imprisoning those who harmed nature. Either in response to pressure or to be awarded certificates recognized in both the internal and external markets, like ISO 14,000, Brazilian business has proven on the balance sheet that investments in environmental management systems bring short and medium term results that are much more satisfactory than simply

GOOD IMAGE

The need to comply with environmental legislation is one of the reasons for greater investment by large industries in sustainable development over the past decades. The greatest motivation, however, according to José Cláudio Junqueira, a counselor on planning at the Minas Gerais State Environmental Foundation (Feam), are the demands by the foreign parent companies, which want ISO certificates and are highly concerned with preserving their image. In this effort, many companies go beyond what is

needed for certification.

According to Junqueira, the sector which has advanced most - perhaps because it was the first area targeted by environmental agencies - is that of the transformation industries, like steel, petrochemical, chemical and automotive industries. However, there are areas of production that are still lagging behind, he says. Junqueira gives as examples pig iron, textile and electroplating industries as well as tanneries, and dairies. "These areas, despite all the technological and financial support that they have received, have not yet responded satisfactorily," he claims. The

mining and extractive sectors, with the exception of the major companies, face an even greater challenge, complying with environmental legislation.

According to Feam studies, the sector that is most lagging behind is infrastructure. "The government still has the bad habit of thinking that its undertakings should receive special treatment in environmental licensing. The result is that licensing is hurried and the conditions are not met," explains Junqueira. One of the problems is that environmental agencies do not have enough people working in environmental licensing, as Junqueira points out.



MIGUEL ANDRADE

doing what is necessary to reach a truce with inspection agencies.

“The benefits of a project like Xerimbabo (in environmental education), which has helped thousands of children and adults to understand the importance of respecting nature over the past 20 years goes far beyond the billion reais we have invested in the environment since our foundation,” says Usiminas CEO Rinaldo Campos Soares. He believes those awareness programs have become “one of the best forms of community integration.”

The CEO of the Cataguases Leopoldina Power and Light Company, Manoel Otoni Neiva, who is part of the Minas Gerais Industrial Federation’s (Fiemg) Environmental Committee, believes that business today is concerned with the issues of managing solid waste and water resources and of climate

change. He states that Fiemg has been supporting implementation of environmental management systems in companies in the state, discussing parameters for pollutant emissions and following environmental bills. “We no longer confront, but rather work as partners with the environmental agencies and environmentalists,” Neiva guarantees.

Despite the fact that management is moving towards practices of sustainable development, progress in creation of cleaner technology and more palpable results on the bottom line of the social, economic and environmental balance sheets of companies who invest in those areas, there are still great challenges. This is because most investments have been made by the big companies, especially those with international parent companies. There are, however, also examples of excellence in companies that are entirely Brazilian.

**Jambreiro
Forest: RPPN
protects
biodiversity**

PRODUCTIVE
SECTOR

Fiat's Ecological
Island is a
benchmark in
Latin America



The command is to recycle



Located in Betim, the industrial area of Greater Belo Horizonte, Fiat Automóveis, the first Brazilian automotive industry to receive the ISO 14001 environmental certificate, breathes recycling 24 hours a day. All of its 9,000 workers are involved in the process of separating used material, from office paper to styrofoam boxes for motors (photo). The company has saved 30 million reais just by recycling water during the first half of this year. During the same period it made seven million reais from selling residues.

By recycling residues and re-using water, the company reached extraordinary profits. Over the past five years, the

company has invested 80 million dollars in equipment and installations to recycle liquid, solid and gaseous effluents generated by its industrial processes. The Ecological Island inside the factory has become a reference in Latin America.

“Now we are exporting know-how both to our clients and to our suppliers, as well as to other companies that come to us,” commemorates the man responsible for environmental management. Ceuti Nakano. More than 90% of all the daily solid waste from vehicle production is taken to the Ecological Island.

Each car produces an average of 300 kilos of waste – a third of its weight. Paper, cardboard, plastic, styrofoam, wood, oil, plating, leftover steel, iron, aluminum, steel shavings and other residues become raw material for other industries.

Economic value

According to the man responsible for maintaining and operating the environmental control systems, César Brant, Fiat Automóveis has been seeing residues as material with economic value for a long time. However, the current level of excellence was reached because of the challenge presented by the astronomical volume of styrofoam motor packages coming from Argentina. "To give you an idea of the volume of styrofoam, which is 60 tons a month - you could fill the whole area of the factory, 2.25 million m², three times over. We were literally drowning in styrofoam," Brant remembers.

With no solution in sight, technicians went into the field to find an industry that could recycle styrofoam into some form of handicraft. Fiat Automóveis financed a study and developed equipment capable of grinding up the styrofoam and submitting it to a heating and cooling process. Then it returns to the form of polyethylene, the raw material, which is converted into pellets and sold internally to make new products, like pens, shoe heels, spools and the like.

With an environmental concern, Minerações Brasileiras Reunidas (MBR

mining), which produced 28.1 million tons of iron ore last year, also sells oil, used tires and scrap. Usiminas, the first and largest Brazilian steel company and the second largest in the world, also received the ISO 14001 certificate for its correct disposal of solid waste, one of the three pillars of its environmental management system, together with recycling water and creating green areas.

The idea, according to Usiminas Environmental Manager José Eustáquio Wanderley Costa, is to generate the smallest possible volume of residue, re-use it or make it economically competitive. Thus, from 2000 to 2001, the amount of disposed wastes fell by 13.5%, reaching 4.5%, after 51.2% were sold and 44.3% recycled. One example of a residue that is sold is steel slag. Used instead of gravel, up to 600,000 tons a year of slag is sold for asphalt paving.



Debt paid

The Belgo Mineira iron company, located in João Monlevade, 110 km. from Belo Horizonte, sells all the slag from its blast furnace - 20,000 tons a year - as raw material for cement. The rest of the steel slag (12,000 tons a month) and grease are sold for paving. The mud resulting from water treatment in the blast furnace is sold to the ceramic industry, and the hydraulic oil goes to recycling firms.

The company, which produces 4.5 million tons of steel for construction and industrial use and has 7,000 employees, spent 652 million dollars in the past 20 years on plant modernization. Of that total, 165 million were invested in development of programs and installation of equipment for the environment, explains Engineering, Utilities and Environment Manager Augusto Espechit.

With those investments, Belgo Mineira paid a debt it had with the community. "Before 1985, the situation was very serious. The streets were polluted and the Piracicaba River became useless. Today, we are recognized as one of the cleanest cities in the country," Espechit says proudly. The air filters installed to comply with environmental legislation reduced the emission particulates by 95% and a system to separate water from contaminated oil, patented by the company, is being sold to several companies all over Brazil. The company manager guarantees that investing in the environment brings returns, and high ones. "It is our responsibility to have the environment as an ally. We have a clean factory, a healthy community and a recovered river," he commemorates.

PRODUCTIVE
SECTOR

Recycling
styrofoam boxes:
making money
with new
products

Special care with water

PRODUCTIVE SECTOR

Usiminas' Xerimbabo Project: forest preservation and environmental education



Water is a cause of great concern because of its scarcity and its unequal distribution around the planet. It is therefore targeted by industries who are concerned with having efficient environmental management systems. They invest in processes of recirculation to rationalize use, and in effluent treatment, to reduce the pollutant load in the rivers.

Fiat Automóveis, for example, saved 30 million reais during the first half of this year alone, as a result of having installed a recycling system, according to Ceuti Nakano, responsible for the environmental management system. The company recirculates 92% of its water, a savings of 1.3 billion liters per month. To do this, Nakano explains,

biological treatment is used, so that the water is purified by colonies of bacteria without the use of chemicals. The plant's sewage is also treated, and the resulting mass is transformed into 60 tons of biofertilizer a week.

Certified by ISO 14001 and BS 8800, the Belgo Mineira steel mill also drastically reduced its water consumption and increased its level of recirculation from 57% in the mid nineties to 97%, with the resulting reduction in emissions into the river. The 5,400 m³/hour of water used from the Piracicaba River during the mid nineties fell to 950 m³/hour to replace internal loss and evaporation, and 330 m³/hour for use as drinking water.

According to its environmental manager, João Eustáquio Wanderley Costa, Usiminas recirculates 91% of all the water it consumes. To have an idea of that consumption, if there were no system for recirculation, it would be enough water to supply a city with 11 million inhabitants, with an average daily consumption of 250 liters.

MORE GREEN AREAS

Since water preservation cannot be dissociated from conserving green areas, the two actions always go hand-in-hand in investment plans by businesses, and they fuel many environmental education programs. Preserving the green around mills, factories and assembly plants can be considered one of the main links between companies and the community, which is invited to take part in hiking around their paths, replanting ciliary forests and other activities.

Even the companies that are still working to meet environmental legislation and getting ISO 14000 certification have advanced in that area. This is the case of the Soecom cement factory, which produces 100,000 tons of cement per month in Vespasiano. Located in the metropolitan region of Belo Horizonte,

the company wanted to find solutions for its environmental problems. One action it adopted was transforming 16,000 m², where there had once been a farm, into a community center.

According to Environmental Consultant Eduardo Mota, an orchard, a vegetable garden and trails to observe the native Cerrado vegetation are being built at the center. "Our policy is to discuss all actions with the community," he explains. A recognizably successful project is led by Usiminas at its Usipa factory in Ipatinga. It is the 18th Xerimbabo Project, visited this year by 95,000 students from more than 500 schools in Eastern Minas Gerais. The project takes place in a preserved area. Also, the Ciliary Forest Project was responsible for planting 243,000 seedlings along 22 kilometers of the Piracicaba River. The goal is to plant

380,000 by 2005, affirms Environmental Manager João Eustáquio Wanderley Costa.

Planting trees is also one of the activities of Alcoa Alumínio S.A., one of the largest subsidiaries of Alcoa Inc, a US company with a turnover of 23 billion dollars around the world. The public relations director of the production unit in Poços de Caldas, Elisabeth Russo, says some 330,000 seedlings were planted around the country, 500 of which were seedlings of Brazil wood. In 2001 alone the company invested six million dollars in environmental, educational and health projects in Brazil. The One Million Trees Project, launched in 1998, calls for planting all those trees at Alcoa subsidiaries around the world by 2008. "The environment is part of the tripod of Alcoa special projects, together with education and health. They reflect positively on the company image in the community and add value to our product," explains Elisabeth.



PRODUCTIVE SECTOR

Hedgehog and rare
plants at Cataguases
Leopoldina RPPN:
species saved

RPPNs, a growing business

Transforming areas into Private Natural Heritage Reserves (RPPN) is an activity growing among businesses. Today the country has 404,815.84 hectares protected in 361 RPPNs located in 10 different biomes of the country. In Minas Gerais alone, 48,000 hectares are preserved, and at least half of that area is under control of the private sector, which gives an idea of what is happening all over Brazil.

At the João Monlevade RPPN, which belongs to Belgo Mineira, 100 tree species and 90 plant species, many of which are endangered, are being protected. One of those is the Indian crow (*Pyroderus scutatus*), a large bird identified in few parts of the country. There is an Environmental Education Center at the RPPN, which develops a program with primary students from the schools in Monlevade and neighboring municipalities. "Some 490,000 kids have come through here," states Environmental Manager Augusto Espechit.

Recognized by Ibama as an RPPN in 1999, an area of 313 hectares, 280 of which are Atlantic Forest, is being preserved in Itamarati, in the Rainforest Zone of Minas Gerais, by the Cataguases Leopoldina Power and Light Company. According to the man responsible for the reserve, Ricardo Aguiar da Silva, they have found 220 species of birds in the area,

some of which are endangered, like the harpy eagle - one of the largest birds of prey in the world - as well as mammals like the maned wolf, the otter and the ocelot.

But the big stars are the orchids and bromeliads. Thirty-five species of orchids and 22 of bromeliads have been identified.

One of the oldest RPPNs in Minas Gerais is the one at Mata do Jambreiro, an area of 912 hectares some 10 kilometers outside Belo Horizonte and owned by MBR Mining. The company also hopes to have its reserves at Capitão do Mato and Morro do Chapéu, covering 810 hectares, and Andaime Farm in Itabirito (175 hectares) declared as RPPNs. "The return on this investment is very important, because it benefits the communities and shows it is possible for a mining activity to live in harmony with environmental protection," says Environmental Manager Carlos Eduardo Leite dos Santos. At the Jambreiro reserve, 18 species of large trees, 16 mammal species and 174 bird species have been identified.



RICARDO AGUIAR



RICARDO AGUIAR

PRODUCTIVE SECTOR

BY MEMÉLIA
MOREIRA

The force of the third wave

Brazilian business has become an integral part of the project to promote sustainable development in the country and is a step ahead of the proposal to implement corporate social responsibility

**Business condemns
aggressions to
land that result in
damage such as
erosion: losses**

Aloof when the 1992 World Conference on the Environment and Development was held here, Brazilian business has joined the international movement that allies profit to environmental protection. Three weeks before the World Summit in Johannesburg on August 26, the Brazilian Business Council for Sustainable Development (Cebds), which

represents 60 big business groups in the country, met in Brasilia to debate issues like new paths for sustainability, social and corporate responsibility, reduction of poverty and the role of different factors in sustainable development.

“Sustainable development is more than a niche reserved for environmentalists. It is part

DELFIN MARTINS/PULSAR



of business,” claims Fernando Almeida, the CEO at Cebds and a professor at the Rio de Janeiro Federal University. He believes business is really doing its homework. One of the best indicators that the global market is moving irreversibly in that direction is the Dow Jones of sustainability. The value of stocks in companies that invest in sustainable development is 20% higher than the value of those that do not.

Almeida refers to sustainability as if they were waves. The first, which swept the world during the 60s, 70s and 80s, after the Brundtland Report, created a new concept. The second came after the international agreements were signed at the Rio Conference. He believes that mankind is now feeling the effects of the third wave, resulting from the challenge of implementing those agreements and making quantitative and qualitative leaps forward in the social, economic and environmental areas.

The businessman guarantees that now and since Agenda 21 was formulated, “the business sector was without a doubt one of the ones that most evolved got most and adapted itself to the new vision proposed for the development of society.” The key-word for

convincing the sector, according to Almeida, was “eco-efficiency”, a term that began to circulate after the 1992 Earth Summit and that won over many people in Brazil.

“We adopted that concept in order to survive, because the future of the economic world will only be ensured if there are mechanisms capable of conciliating the production of goods and services with the preservation of natural resources and social well-being,” Almeida justifies. Proud of having been one of the pioneers in the area of sustainable development, Almeida says that “two items (from Agenda 21, Chapter 3) are already being consolidated in business - eco-efficiency and corporate social responsibility.”

The big discovery made by business, in Almeida’s opinion, was to realize that it is possible to obtain economic gains and, at the same time, to reduce the environmental impact of production, by making a series of interventions in the productive process, rationalizing the use of raw materials and energy, recycling waste and even decreasing,

PRODUCTIVE SECTOR

Multibrás Project pays attention to women: social awareness

A GROWING PHENOMENON

The other item of Agenda 21 that the Cebds president is also proud of fulfilling deals with “corporate social responsibility”. Business is collaborating to carry out the proposal of reducing social inequalities in Brazil, formulated in Agenda 21. According to data from the Institute of Applied Economic Research (IPEA) cited by Fernando Almeida, Brazilian businesses “have been promoting social actions”, and the Southeast is the region with the best record in that area. Sixty-six percent of all businesses in the region invest in social programs. In

the Northeast, the number falls to 55%, in the Mid-West to 50%, in the North to 49% and in the South to 46%.

That situation was almost “unthinkable” in 1992, says Almeida, when businessmen were suspicious of environmentalist movements in society. “But now, the number of businesses who bet on the two pronged approach of production and environmental protection is a growing phenomenon”, he adds, repeating

his prophecy that those who do not adapt to it will drop out of the market by the next global meeting to discuss survival of the Earth.

While businessmen are not direct participants at UN conferences, they will be present at Johannesburg, where there will be a seminar to debate the role of business in constructing Agenda 21.



MULTIBRÁS

PRODUCTIVE SECTOR

TAXES

According to the Cebds data, six states are redistributing funds raised by the Tax on Merchandise Circulation using environmental criteria.

in the administrative area itself, the use of paper. He is convinced that the businesses that refuse to reconcile production and environmental quality "will be out of the market in 10 or 15 years."

In Almeida's opinion, this reconciling contributed, for example, to making Brazilian steel companies more profitable than their competitors. Many of them are re-using the water and producing electricity from the heat produced by their coke plants. In the services sector, big hotel chains and restaurants have installed equipment to guarantee energy savings and are encouraging their clients to follow correct procedure to reduce waste. They also adopted the system for separating garbage, an example being followed by thousands of restaurants in the South, Southeast, Mid-West and Northeast. The Amazon area of the North has incorporated this trend in the past four years.

One exemplary case of business adopting Agenda 21 philosophy comes from Corona Mills in São Paulo. One of Brazil's largest sugar exporters, the mill has a special sector for environmental protection and research. It treats the effluents from its industrial process and

has even begun avoiding burning the plantations by adopting mechanized harvesting. Part of the energy used in the company is generated by sugar cane bagasse, but the goal is to increase the system to cover the whole industry. That is why its research department has been studying ways to increase energy production from cane-bagasse and also ways of making cellulose from it.

Besides those initiatives Corona preserves 20% of its lands and has its own nursery, where thousands of seedlings of native species are produced for reforestation. In agriculture, the company's main activity, the option adopted to protect the soil was planting in strips, which avoids erosion.

Even industrial wastes have their role. Both the sugar cane liquid and solid wastes are reused as organic fertilizer used in the plantations with the advantage that it keeps borers away, without the use of pesticides as elsewhere in the country. It was precisely the use of organic fertilizers that made the difference. Some of the countries to which Corona exports do not use products treated with pesticides.

A new source of profit

Results of investments by Brazilian businessmen who bet on sustainable development are pointed out by the Brazilian Business Council for Sustainable Development (Cebds) in its Report on Business Sustainability, published this year. Cebds represents 60 business groups in the country, which have 450 productive units in their various production sectors and are responsible for 500,000 direct jobs. The Council participates in international discussions on sustainable development and decisions on global standards.

The document, which was given to President Fernando Henrique Cardoso early in June, includes social, economic and environmental indicators and shows how the country has advanced in the search for sustainable development. Thermoelectric

plants, which have created compensatory funds for reforestation and environmental recovery to compensate for their greenhouse gas emissions, are one of the main examples. Another important advance pointed out is charging for water use in the Paraíba do Sul River (see more on page 46).

According to the Cebds data, six states are redistributing funds raised by the Tax on Merchandise Circulation (ICMS) using environmental criteria. The document also points out the growing number of areas registered in federal and state agencies as Private Natural Heritage Reserves (RPPNs). Furthermore, the number and size of the forest management units certified by the Forest Stewardship Council (FSC) more than doubled in 2001, when six operations registered 295,000 hectares.

To commemorate

The data in the Cebds report was gathered by researcher Maria Cecília Lustosa, from the Federal University of Rio de Janeiro, together with the São Paulo State System for Data Analysis Foundation. According to the document 47.1% of a total of 41,000 companies covered in the research believe that environmental preservation is a crucial factor for technological innovation. Another 31.7% believe that preservation is important, compared to 21.2% who are indifferent or believe it is of little importance.

The Report on Business Sustainability also includes the results of a study on the Competitiveness of Brazilian Industry, carried out by the National Confederation of Industry (CNI), the Service to Support Small and Medium-sized Companies (Sebrae) and the Brazilian Economic and Social Development Bank (BNDES), covering 1,158 companies in 16 states. The data reveals that there is still a great deal to do, especially regarding the smaller companies, which represent 20% of Brazilian GDP.

As results which should be commemorated, the study shows that the investments in technological and operational improvements, management and control have optimized use of raw materials, reducing emissions of air

pollutants and improving control of liquid effluents in almost half the companies. Some 30% have reduced their solid wastes.

During 1998 and 1999, 63% of the companies made investments to reduce losses and rejects of raw materials and final products. Other areas, like energy conservation, treatment and control of liquid and solid effluents and noise, received investments in more than half the companies.

PRODUCTIVE SECTOR

Lumber business: entrepreneurs want control

JUAN PRATGINESTÓS



Transformation agents



Brazilian business quickly understood the changes brought about in the country after Rio-92, beginning with the Brazilian commitment to find ways to promote sustainable development. "An important parcel of our productive sector has already shown it understands its role as an agent of economic and social transformations," explains Minister of the

Environment, José Carlos Carvalho.

The advances, he says, are registered both in the realm of environmental management and in that of social programs. Of a total of 9,140 companies polled this year by the Institute of Applied Economic Research (IPEA), 59% invested in social programs during 2000. That meant a total of 4.7 billion reais, or around 0.4% of the GDP. The country has 782,000 private companies, according to IPEA.

Another poll showed that after Rio-92, there was a great leap forward in the level of social-environmental awareness of the people. According to a study by the Superior Institute of Religious Studies (Iser) and the Ministry of the Environment, the number of Brazilians involved in voluntary work. All around the country. "One can see a growing disposition to participate in work like campaigns against wasting natural resources," claims Carvalho.

Priority for education

The concern with training and insertion in the job market are the main points in the agendas of agencies within the S System

Launching of Agenda shows the new awareness in Brazil with regard to the need to associate the principles of sustainability to development. It is no coincidence that social issues permeate the 21 objectives of the document which resulted from a compromise among the more than 40,000 people who participated in its development.

Pointing to that set of objectives, however, does not mean that the country is starting from scratch in deciding what path to take to achieve the goals for sustainable development. Many companies, non-governmental organizations and institutions have already set their own paths within the new concept of progress. Such is the case of the Integrated Center for Manufacturing and Technology (Cimatec), in the Northeast Region, which was implemented by the National Training Service for Industry (Senai).

Resulting from the actions of the group known as System S, the center is made up of eight

teaching and professional training institutions, which follow the orientations of the trade associations linked to learning in the areas of industry and commerce. Some 16 million reais were invested in this unit alone, which will focus its work especially on the automotive, transformation and electro-electronic areas.

In truth, what makes System S (the "S" stands for "social") a group of winning entities is precisely the view of associating education to the supply of jobs and to the level of personal income. "Our real intention is not to prepare important businessmen but rather to help people have their own source of income. We do that by teaching how to develop a profitable activity," explains Luiz Carlos Correa, coordinator of Education at the Social System of Commerce (Sesc) in Brasília.

Correa indicates, among other courses for socially enhancing value, the ones in basket weaving, waiters and rug weaving. Besides

Planning the future

Some System S agencies work with an eye on the future, planning

the next steps. This is the case of Senai, which will give more emphasis in its next actions to encourage competitiveness. This will be done through technological restructuring and making industries adapt to global standards, carrying out exchanges with multinational

companies that have more experience and positive results.

Founded 60 years ago, Senai is one of the Brazilian agencies that are already working to fulfil the objectives of Agenda 21. Since its creation, it has trained 33 million students in courses in 28 different areas. The courses offered by Senai are professional training courses and their quality is recognized all over the country.

In harmony with the Agenda 21

proposals, Sesc plans to mark its next five years of work encouraging permanent education for work and life. The first step will be to build its own buildings, avoiding the expenditure of renting classrooms which it now has in many places. "Another idea for the very near future is for different units to interact, with more regional support for youth and adult education, always giving special emphasis to basic education," says the coordinator.





TRAINING

Third Meeting of Bands at Sesc in Minas Gerais: culture and income

helping people increase their family income, Sesc contributed to the social improvement of the cities where it acts. That is because, according to Correa, people leave the streets once they learn other activities and can become “better prepared people to sustain a family.” There is a big difference between the courses offered by Senai and Sesc. While Sesc courses are aimed at training low-income people, Senai offers professional training courses that are recognized all over Brazil.

Sesc also acts in the areas of child education and complementary education, as well as health, leisure, culture and social welfare. Currently Correa’s favorite program is the preparation course for college entrance exam, which has been working in several cities in Brazil as an experiment for the past two years. “This is where we have made most progress on a national scale,” he admits. “It is gratifying to see people who did not think they would be able to finish high school getting into university.”

These students, according to Correa, were admitted to highly sought universities like Brasília (UnB) and the Federal University of Goiás (UFG). He figures that the biggest deficiency in Brazilian education is in primary school. “For a long time, Brazil has been most concerned with its high school and college courses.” Basic education,

according to Correa, should be seen as permanent and continued education, “from pre-school to high school”.

Correa warns that there are still a large number of adults who do not know how to read and write, and he agrees with the priority the Brazilian Agenda 21 gives to education. Objective 16, part of the chapter called social inclusion for a society with solidarity, points to the need to develop actions for permanent education for work and life. He also defends investment in practical knowledge, “which our system has always ignored or disdained.”

TRAINING FIGURES

- **33 million** workers have attended technical and professional training courses.
- **2 million** students enroll annually.
- **270** training and professional education centers.
- **28** areas covered.
- **1,800** programs offered.
- **122** international partnerships.
- **43** certificates of excellence in ten international tournaments for professional training.

Business participation in Agenda 21



* Fernando Almeida is
Executive President of
the Brazilian Business
Council for Sustainable
Development – Cebds

During formulation of Agenda 21, the business sector was undoubtedly one of the sectors that best adapted to the new view proposed for development of society. Historically, we can cite the UN Summit held in Rio de Janeiro in January, 1992, or the Earth Summit as it came to be known, as the launching pad for mobilizing businesses and businessmen. During that conference, where 170 Heads-of-state were present, Swiss businessman Stephan Schmidheiny launched the key word: “eco-efficiency”. The

concept, then almost unknown, gained substance in his book *Changing Course*.

From that point on, the elite of businessmen around the world began to understand that the new concept was no mere fad, but rather a pragmatic vision that survival of future generations – and of the economic market itself – could only be ensured by adopting mechanisms capable of reconciling production of goods and services with the preservation of natural resources and social well-being. In less than five years,

the concept of sustainable development was consolidated. And that was the compass that guided the discussion of the issues and proposals now incorporated in the final text of the Brazilian Agenda 21.

The Brazilian Business Council for Sustainable Development (Cebds) was created in 1997. Representing large business groups in the country (there are currently 60), Cebds representing the private sector, became partner of government and organized civil society to disseminate the concept of sustainability. Thus, the Council joined the Commission for Sustainable Development Policies and Agenda 21 and participated, as one of the organizers, in a series of public meetings promoted all over the country and open to society to discuss the drafting of Agenda 21. It is estimated that during 1999 and 2000 at least 40,000 people, representing the most varied segments of society, participated in those hearings and thus contributed to producing the content of this important document.

Last June, at the request of the Ministry of Environment, a meeting was held at Cebds to prepare business response to Agenda 21. Representatives of the National Confederations of Industry, Agriculture and Commerce took part in the meeting. The

“Historically, we can cite the UN Summit held in Rio de Janeiro in January, 1992, or the Earth Summit as it came to be known, as the launching pad for mobilizing businesses and businessmen.”

stance taken by the sector is based on the basic precepts approved during the 1992 Rio Conference, especially regarding the great international conventions, like the Climate Convention and the Biodiversity Convention. Last July 16, Cebds Chairman Felix de Bulhões spoke on behalf of the business sector during the ceremony to launch the Brazilian Agenda 21, at the Presidential Palace in Brasília.

Besides with participating in the theoretical discussion and mobilization work aimed at producing a Brazilian Agenda 21 we could be proud of, the country's private sector has been doing its homework. Aside from formalities and protocols, the largest business groups in the country have been adopting a series of practices provided for in Chapter 3.1 of Agenda 21, which proposed 21 objectives. Among these objectives, we can highlight the following: sustainable production and consumption, eco-efficiency, corporate social responsibility, implementation of renewable energy projects and dissemination of knowledge on sustainable development.

Among these objectives, two are consolidated and practiced ever more widely among large business groups in Brazil. One is eco-efficiency. Big business has perceived that it is possible to make profits and, at the same time, reduce the environmental impact of production through a series of interventions in the productive process, rationalizing the use of prime materials and energy, recycling wastes, etc. Brazilian steel mills have set an example for the world. Brazilian steel is highly competitive in the world market. One of the reasons for its increased competitiveness is in the projects developed by steel mills to reuse water and produce energy from the heat of its coke

plants. To disseminate the concept of eco-efficiency among smaller businesses, Cebds has worked together with governmental agencies and the UN to administer the Brazilian Cleaner Production Network. Today, there are units operating in eight states, and another 10 are being implemented. The Network was created especially for the small and medium enterprises in the country.

Another objective seen in Agenda 21, Chapter 3.1 that should be emphasized is corporate social responsibility. A growing number of Brazilian companies are developing social programs. The Institute of Applied Economic Research (Ipea) recently published this year's research showing that 67% of the companies in the Southeast Region invest in social actions for the benefit of the population. In the other regions of the country, the percentage falls, but it is still significant: 55% in the Northeast, 50% in the MidWest, 49% in the North and 46% in the South. The Banco do Nordeste is a significant example. The bank created a line of credit for small businesses that has financed thousands of self-employed professionals, artisans and the like, incorporating all those workers in the market.

Whether by applying these concepts within their own companies or working to disseminate them within society, business has effectively shown that it can change the course of economy from a social and environmental perspective. The Cebds will present the Report on Business Sustainability, containing the actions of business in the areas of eco-efficiency and corporate social responsibility, in Brasília, on August 6. This document shows that Brazilian business can be used as an example of results.

PRODUCTIVE SECTOR

FERNANDO
ALMEIDA*

“Big business has perceived that it is possible to make profits and, at the same time, reduce the environmental impact of production through a series of interventions in the productive process”

“The Institute of Applied Economic Research (Ipea) recently published this year's research showing that 67% of the companies in the Southeast Region invest in social actions for the benefit of the population.”

State and local governments build *local Agendas*

The initiative of building an Agenda 21 in states and municipalities is already spreading all around the country. The Department of Institutional Coordination and Agenda 21, responsible for guiding and supporting the process of drafting Local Agenda 21s, is supporting 214 experiences that are in different phases of execution this year. Last year, there were 124, nine times more than in 2000, when only 15 local governments had begun the work. The number of municipal governments interested increased rapidly after a special line of resources

for developing the Local Agendas was opened in the National Environment Fund.

The work is supported by a primer indicating the steps necessary to put together a representative document. The text explains that a local Agenda 21 should be created by a participatory, multi-sectoral process, bringing together different social groups to propose activities that imply in changing the pattern of development. By reflecting on its own history, the community learns to identify its problems and, above all, to plan its future.

Living with drought: theme of Pernambuco Agenda

JOSE SILVA/AG. A TARDE/AJB



Pernambuco is a reference

In August, when the state of Pernambuco launched its Agenda 21, the result of wide scale participation by government, business and society, it became a reference for the other states of the Northeast. Created in September, 1999, the Pernambuco Forum for Agenda 21 defined the following issues for discussion: sustainable cities; management of natural resources; combating desertification and living with drought; reduction of social inequalities; sustainable infrastructure and economy.

The first version of the Pernambuco Agenda 21 was discussed in the 11 administrative regions of the state. The final document was consolidated in July, 2002, with eight goals to be reached by 2015: eradication of extreme poverty and hunger; guaranteed primary education; promotion of gender equality and strengthening the role of women; reduction of infant mortality; improving maternal health; combating infectious diseases; guarantee of a sustainable environment and creation of partnerships for development.

Goiânia reviews guidelines

Goiânia, the capital of the state of Goiás, extended the experience of discussing the budget with the community to the elaboration of a local Agenda 21. The work is based on desirable scenarios and information from the 11 administrative regions of the city. It also has interactive dynamics that guarantee permanent discussion. The Forum for the Agenda now includes 72 governmental agencies and non-governmental organizations, and it is hoped the number will rise to 100 by the end of the work. Financed by the National Environmental Fund, construction of the Goiânia Agenda 21 coincides with a review of the city guidelines (for zoning, etc.).



Streetcar
circulates in
Santa Tereza:
tradition

AGENDA 21

Rio defends female leadership

The presence of women in formulating, managing and monitoring public policies aimed at sustainable development was especially apparent in Rio de Janeiro, where there is a project to consolidate female leaderships within this process. In Rio, discussion on the Local Agenda 21 began in 1997, when the councilmen approved creation of the Forum 21 for the City of Rio de Janeiro.

Responsible for drafting the city's Agenda 21, the Forum began to gather information for social, economic, environmental and participatory sustainability. Some five years later, the Regional Committees and Comissão Macrofuncional 21-21, organized during that time, are working on finishing the document, which will be presented to the people in Rio.

Five regional committees are working on elaborating the Rio Agenda 21. They gathered information from meetings, lectures and seminars. In meetings of the 18 representatives of the executive group, diagnoses of problems and possible solutions are systematized. The activities are disseminated in an information bulletin and sectoral meetings.

Pioneering spirit in Santa Teresa

The oldest neighborhood of Rio de Janeiro will be the first to have a Local Agenda 21. The Viva Santa non-governmental organization, with support from the National Environment Fund (FNMA), began mobilizing the 41,000-odd residents in the old neighborhood of Santa Teresa, creating a Consultative Council made up of 21 technicians and specialists, all with strong ties to the area.

The idea is to enhance the value and protect the environmental and cultural heritage while improving the living standards of the residents, integrating the various segments of society and encouraging local leadership. Twenty-six representatives from different sectors of life make up the nucleus of the Local Agenda 21. They gave priority to strengthening sociability among the neighborhood leaders and sectors before investing in the formulation of the document.

United by tourism

The Agenda 21 of Aldeia, also in Pernambuco, is different because it covers parts of seven municipalities located along PE-27 state highway. They have in common stunning natural beauty, which attracts visitors and rural and ecological tourism. A consultancy is concluding a pre-diagnosis with an integrated view of the region for the municipalities of Camaragibe, São Lourenço da Mata, Abreu e Lima, Araçoiaba and Paudalho and for parts of Recife and Paulista. The objective is to provide inputs for the discussions to be held with the population. This pre-diagnosis will be distributed among the residents of the municipalities, which will work to mobilize the people to participate in the local seminars.

Children
in Joinville
learn to
preserve the
river source:
fulfilling
the Agenda



CITY HALL ARCHIVES

Rethinking the city

The debate Rethinking Volta Redonda, promoted five years ago by the local Commercial and Industrial Association, was the starting point for construction of the Volta Redonda (Rio de Janeiro) Agenda 21. Since the municipality shares its industrial nature with its neighbors, the document has a regional scope. This Agenda 21 therefore includes the municipalities of Barra Mansa, Pirai, Pinheiral, Resende, Quatis, Porto Real and Itatiaia. There are big companies in the region like the National Steel Company, Tupi Cement, Clariant, Light and Barra Mansa Steel Company. The process of building the local Agenda 21 has already brought results like creation of the Association of Users of the Waters of the Paraíba do Sul River.

Santa Catarina wants consensus

A large seminar, to be held at the end of the year, will mark the end of another stage in the building of the Preliminary Agenda for the state of Santa Catarina, a type of preview of what the final document in the state will be. Two years ago, Governor Espiridião Amin and 16 civic and business entities signed a protocol of intentions, promising to respect consensus proposals and ensure broad participation of society.

The Agenda 21 executive commission has representatives from 34 public and business institutions. In all, 120 entities participate in the discussions: commercial and industrial federations, universities, city halls, NGOs and the government. Among the main challenges for sustainability are the water issue and the management of river basins.

Joinville makes a diagnosis

One of the pioneers in preparing a local Agenda 21, launched in April, 1998, the Joinville municipal government gathered 34 entities that represented society - resident associations, public agencies, environmentalists, universities, businessmen, workers - to elaborate the document. The first step was given by the Municipal Secretariat of Agriculture and the Environment, which offered the seminar "Sustainable Development and Citizenship". All the meetings were open to the community. The work was widely divulged, step by step, guaranteeing that people could participate. To arrive at the final text, the work groups responsible for preparing the Agenda carried out a diagnosis of the county, with orientation by specialists and debated 18 basic issues parting from a systemic vision. The issues covered all aspects of life in the county in an integrated manner. Another four items were observed: working with the idea of results on the short, medium and long run; adopting the principle of modelling for action; defining scenarios, and obtaining a self-regulating document.

Serra builds its scenario

Business participation was one of the outstanding points in elaboration of the Agenda 21 for the municipality of Serra, in Espírito Santo. The main step to prepare the document was taken by city hall, which based itself on the principle of strategic planning as an instrument to increase participation of society in defining the destiny of the city. The measure worked. Religious, union, party, business, community and educational leaders met with local authorities to make a diagnosis of the situation, build new scenarios, identify strategies and projects and formulate the local Agenda 21. The work was supported by 25 consultants and lasted 11 months.

Victoria revises its project

The Plan for Sustainable Development of Victoria, capital of the state of Espírito Santo, was readjusted in a revision of the Local Agenda 21, which called for construction of a desirable future by 2010. The community, through a council, analyzed errors and correct points so that adjustments could be made maintaining the projection for growth and reduction of the poverty index in the capital.

Companies from the private sector sponsored construction of the Agenda 21 and also took over the cost of this revision, working with two scenarios, one for regression and the other for progress, baptized "The Crab Walk" and "The Jump of the Blue Merlin". During the revision, new strategic procedures will be defined. Four years after implementation of the Local Agenda 21, the city has seen economic growth and a drop in infant mortality as a result of higher investments in programs for social insertion.

Piracicaba wants to implement the Agenda

"Piracicaba will be a model city for sustainable development in Brazil and an excellent place to live." This sentence starts the Agenda 21 of that São Paulo municipality, in a lovely book that also has old and new photographs of the main points of the city. To publish the book, the municipality formed groups of encouragement, with representatives from the community who joined the government to try to put the actions proposed in the document into practice.

Building an Agenda 21 was part of strategic planning and received support from business and a consultative group with 33 representatives of entities and institutions. More than 1,200 people participated. An NGO called Piracicaba 2010 - Reaching the Future, became a corporation. The working groups ensured broader participation of people linked to each theme, and the City Council participated in the thematic seminars, receiving ideas and suggestions from the community. The Agenda was launched in August 2001.

Piracicaba wants to be the model: a good place to live

MIGUEL CAVALLARO NETO



New COURSES for the coast

Marked by stunning landscapes that attract tourists from Brazil and abroad, the northern coast of Bahia is the target of OndAzul Foundation, which is working with local communities to introduce concepts of sustainable development and find a better quality of life for the population

BY
PEDRO ROCHA

The nearly 200 kilometers of the Northern coast of the state of Bahia are host to some of the most beautiful beaches in the country. The Coconut Palm Coast, which extends from Lauro de Freitas to Jandaira, on the border with the state of Sergipe, has a clear tourist potential. Besides the scenery and the warm water, the beaches in that region are part of the country's iconographic memory. There are various scenarios, from the coconut palms of Arembepe - a beach made famous by hippies in the 1970's - to the dunes of Mangue Seco, where the famous soap opera Tieta do Agreste

was filmed. In between them, we find Praia do Forte, which is the headquarters of one of the most successful programs on Earth for preserving sea turtles and one of the main places for ecological tourism in the state.

As a direct result of its attractions, the region underwent great growth based on tourism. The fishermen's villages, which were the main options for lodging, are being replaced by inns and tourist complexes. However, together with the economic bonanza, this development, which has proven unorganized and irregular, has produced forms of environmental and



Partnerships

The big question today, after officially launching the Brazilian Agenda 21, with its 21 objectives for sustainable development in the country, is how to implement it. According to the team that worked on consolidating Agenda 21, the answer to that question depends, necessarily, on building partnerships among the federal, state and local levels of government and civil society. If there is dependence

only on the fiscal resources of the three levels of government, the chances of implementing the Agenda will be reduced.

The work of the OndAzul Foundation is a positive example of partnerships in projects to combat poverty and generate income and jobs, associated to environmental preservation. The projects carried out according to the principles of sustainability have a lower cost and make it possible to exercise citizenship,

and they do not fail to pay back loans.

One of the points of consensus in formulating Agenda 21 was giving priority to actions destined to reducing poverty and social inequalities. The document proposes, among other measures, mobilizing partnerships by using the social responsibility of business; adopting integrated management of public policies of sustainable development; and investing heavily in human capital, especially in primary and secondary education, and in professional training.



POLLUTION

Among the forms of environmental deterioration seen in the region, one of the most threatening is the disposal of organic waste, especially in the Joanes River Basin, which has been polluted by untreated sewage.

cultural degradation affecting the natural resources and the landscape.

The highway through the Northern coast of Bahia is called the Green Line, because it was planned and built according to the concepts of environmental preservation. But that was not enough to guarantee that the concepts of sustainability were implemented along the road. According to Juca Ferreira, a councilman in Salvador from the Green Party and vice-president of the OndAzul Foundation, if the current pattern of occupation continues, the comparative advantages of the micro-region as a privileged place for human habitation will be endangered. "The environmental problems are still in an incipient stage, but they could become really serious if the process of growth continues spontaneously," says Ferreira.

Among the forms of environmental deterioration seen in the region, one of the most threatening is the disposal of organic waste, especially in the Joanes River Basin, which has been polluted by untreated sewage from the cities of Salvador, Lauro de Freitas

and Camaçari. Fishing and other economic activities of the local population have been affected by river pollution.

Many of the beaches suffer from the predatory action of weekend tourism. This is due to the excessive demand, and also because of lack of planning and infrastructure for tourism. While it has a beautiful coast, the traditions in these cities are curiously inland oriented, which not only reflects in the way tourism is treated, but also in the extractive activities of fishermen and artisans. "They lack understanding of coastal processes," Ferreira claims.

The Coconut Tree Coast also has the Camaçari Petrochemical Center, the largest in the Northeast, which increases opportunities for employment and income, but is also a potential polluter. According to Ferreira, the situation in the region presents, simultaneously, great opportunities and great dangers, making environmental management a joint challenge that needs cooperation among the various municipalities to be dealt with appropriately.

Residents make
a living by
fishing and in
tourist trade



ARQUIVO FUNDAÇÃO ONDAZUL

Looking for comfort

A study carried out by the OndAzul Foundation indicates that the population of the Coconut Tree Coast, which today is not more than 350,000, should reach a million by 2020. Unless new solutions are adopted, the tendency is for the model of occupation

to pressure traditional populations that live from extractivism, family agriculture and small shops for tourists. Installation of tourist complexes like the one in Costa do Sauípe, in Mata de São João, create new opportunities for investment, but also run the risk of destroying the environmental heritage.

In 1999 the Ministry of Environment (MMA), the Caixa Econômica Federal (CEF) and the OndAzul Foundation began a partnership to find joint solutions to implement a process of sustainable development in the region. The first concrete result appeared in April, 2002, when

five of the seven municipalities in the region signed an agreement to implement the Intermunicipal Consortium of the Coconut Tree Coast. One of the main objectives of the partnership is to put a break on problems like social exclusion of the local inhabitants.

The MMA is providing resources and technical assistance so that the consortium can become an instrument for formulating public policies that will make sustainable development of the region possible. One of the main projects will be the Demonstrative Environmental Model for Sustainable Settlements, a housing complex with 200 homes planned in such a way as to preserve the natural characteristics of the terrain. The houses will be built in Abrantes Village, in the municipality of Camaçari.

The definition of living areas and complementary services, open areas for common use and environmental protection areas will be determined by the terrain. The architecture used in the buildings should help reduce the energy and water consumption, as well as offer better thermal and acoustical comfort, unobstructed visibility and ventilation, by making good use of the characteristics of the terrain.

CONTACT WITH NATURE

Besides the homes, there are plans for urban infrastructure, with educational, health, security services and convenience shopping, all provided in a way which is not aggressive to the environment. The complex will offer conditions for direct contact with nature and the natural landscape and will have low energy consumption. Therefore, the natural topography, vegetation and drainage will be maintained wherever possible, avoiding leveling the ground.

In the shantytowns, furniture made from pet bottles

Created in 1990 by singer and composer Gilberto Gil, the Ondazul Foundation has carried out many environmental education programs and publicity campaigns, with slogans like *Beautiful Beach - Clean Beach* and *Don't let the ocean die on the beach*, which had great impact on people in the early 1990s. The NGO has participated in mobilization to defend the Baía de Todos os Santos, the São Francisco River and to change the course of the Green line on the coast of Northern Bahia. Between 1993 and 1996, its activities were suspended, only to be re-activated a year later.

Its priorities are preservation, conservation and optimized sustainable use of Brazilian waters and associated ecosystems. But it also invests in urban ecology projects, like the one to recycle pet soda bottles in Vigário Geral. The Vigário Geral shantytown is one of the poorest in Rio de Janeiro.

The place has been known internationally since 1993, when the assassination of 21 people by military policemen who said they were repressing drug traffic shocked Brazilian society. Now the slum may get back into the news, but as the headquarters of a successful experience to re-use pet bottles. Currently 55,000 plastic bottles that might have been blocking drainage systems or polluting river banks are being transformed into some 2,500 pieces of furniture.

The metamorphosis is taking place in the Pilot Waste Recycling Plant. The objective is to generate opportunities for employment and income and, at the same time, contribute to environmental education in the community. According to Ondazul Vice-President Juca Ferreira, the project is a showcase of what can be done to get the plastic bottles out of nature.

He explains that the process should be understood as part of a bigger strategy to reintegrate the bottles into the productive process, with research on new possibilities for using the material that are not solely based on recycling. Another advantage is that it makes the population aware of garbage problems.

The project involves implementing the Pilot Plant and forming teams of monitors and waste collectors, made up of members of the community, who are paid as a team. These teams will later continue the process, establishing a production cooperative. They receive on the job training, beginning with involvement of apprentices in the daily activities of the plant and then in a two-month training period for each group.



NGO
PRESENCE

**Gilberto Gil
gathers residents:
actions to combat
exclusion**

ZERO COST SYSTEM

Re-using the bottles begins by washing them and cutting the top. Then they are joined together, making cylindrical blocks used as the structure for furniture. Once united by high resistance adhesive tape, these structures are covered with foam rubber. Finally the pouf or chair receives finishing with fabric or other material such as vinyl, canvas or rubberized material.

The furniture produced with the bottles collected by the project team is sold, and the money is invested in creation of the

cooperative and multiplying experiences. But the community of Vigário Geral benefits without paying anything. Therefore, a system of exchanges was established, whereby 185 pet bottles give you the right to a piece of furniture. If the buyer prefers to turn in the bottles little by little, the person accumulates credits until he reaches the number of bottles needed. Acceptance of the project can be seen by the growing number of families in Vigário Geral that have furniture made with bottles in their homes.

The Brazilian Agenda 21: a future reality to be built now

“We cannot forget that what we have today is a document, inherited from a participatory process and from good promises that resulted from a cycle of UN debates on human development - a cycle which began at the 1992 Earth Summit.”

The development of the National Agenda 21 was a special, very important moment for all Brazilian society. Undoubtedly, the process by which it was prepared is a relevant example of collective construction of a new political, social, economic and environmental project: the sustainability of human development in Brazil. Just to have an idea, all interested segments of society were mobilized to develop the Brazilian Agenda 21 with public debates in 26 states. The text of *Brazilian Agenda 21: Basis for Discussion* received some 6,000 suggestions. And, according to the Commission for Sustainable Development Policies (CPDS), at least 40,000 people read and analyzed its contents. But it should be noted that the country only began this work in 1997. Therefore, if it had made that decision right after Rio-92, it could be at a much more advanced stage now, seeing some of the fruits of its Agenda 21.

If we want a clear vision of the National Agenda 21, we should see it as an instrument with a double character (both process and product are important), and as having

multiple functions. The Agenda made it possible to aggregate proposals for actions, guidelines and strategic ideas to formulate public programs and policies, giving voice and responsibility to actors from the various segments of society. Another function of the Brazilian Agenda 21 is to provide the opportunity of making all of society aware and mobilized to transform structural aspects that are perverse in our current development model. Its development and implementation can also contribute to recovering ethical values and a practice of authentic social solidarity.

We cannot, however, forget that what we have today is a document, inherited from a participatory process and from good promises that resulted from a cycle of UN debates on human development - a cycle which began at the 1992 Earth Summit. Implementation of Agenda 21 proposals will depend, in part, on making it a reference instrument for Brazilian society as a whole, and especially for leaders from various sectors, including those at the three levels of government and those in legislative institutions. In that sense,

“Agenda 21 should be made known to all candidates to public office: from state governments to the presidency, from state deputies to representatives in the National Congress.”

Agenda 21 should be made known to all candidates to public office: from state governments to the presidency, from state deputies to representatives in the National Congress. Agenda 21 should, from our point of view, be a reference for the preparation of the government's Multi-Year plans (PPAs), for the federal, states and municipal budgets, which could best be drawn up through participatory processes in order to avoid propagating errors of the past into the future (notably, suggesting zero-base budgets). It should also be used to establish steering plans for development or organizing use of territory, both in cities and in river basins. Overcoming the "voluntary tone" of Agenda 21 and making it part of the dynamics in decision making is the challenge to its implementation.

It should definitely be noted that the private sector should use Agenda 21 directives with the same engagement, changing the form and content of economic activity and not simply restricting it to meet the standards of eco-efficiency, since the Brazilian Agenda 21 also calls for effective changes in the current patterns of production and consumption. On the other hand, organized civil society should persevere so that ethical values and democratic processes are employed, as well as to ensure the means to strengthen the organizations of the Third Sector in the decision making process, to implement and evaluate public policies and programs.

Toward that end, we must also have indicators that can show lay citizens, specialists and those who govern if our

society is undergoing the transformations that will lead it toward sustainability and a progressive improvement in the quality of life. A set of indicators that, without losing the specificity of what is to be evaluated, enable a systemic analysis of our reality, with due credibility, will certainly depend on the engagement and involvement of many different organizations.

Finally, public authorities need to coordinate efforts to make the Brazilian Agenda 21 popular, without making it commonplace. They need to make the idea of sustainability so well-known and feasible that any citizen from any point in the country can easily understand its social and political importance and demand its implementation. Above all, we need to make the Brazilian Agenda 21 a reality to be built in the present, with effects on the short, medium and long term, not seeing it simply as the promise of a distant future.

VITAE CIVILIS



**RUBENS
HARRY BORN***

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“Organized civil society should persevere so that ethical values and democratic processes are employed, as well as to ensure the means to strengthen the organizations.”

Charges are beginning

From now on, companies and water supply companies will pay for the use of water resources. If you pollute, you pay more. The new system will begin in the Paraíba do Sul River Basin

The target of environmental aggressions intensified during the forties, when it began to receive chemical effluents from industries like the National Steel Company in Volta Redonda (RJ), the Paraíba do Sul River will be the first place in Brazil where the use of water is to be charged from factories and urban water supply companies.

With the innovation, which should begin in November, the river will have a new source of income to finance projects for environmental recovery. During the first 12 months, the Paraíba do Sul River Basin Integration Committee (Ceivap) expects it to raise 14 million reais.

The charge, following the model adopted in France in 1965, is provided for in Federal Law 9.433/97, which defines river water as an

economic asset. The Water Act, as it is known, determines that the revenues coming from sound use of rivers be invested in the environment in the river basin where they were raised.

The payment system, proposed by Ceivap, which is responsible for the participatory management of the water resources of the Paraíba and its tributaries, was approved in March by the National Water Resources Council (CNRH), at the Ministry of Environment. Charges will be made by the National Water Agency (ANA) a Federal agency created in 2000.

The Paraíba do Sul River Basin covers 55.5 square kilometers in one of the most urbanized and industrialized regions of the country, in the states of São Paulo, Rio de Janeiro and Minas Gerais, in Southeastern Brazil. More than

A great deal to commemorate

While it still has a long way to go to become economically, socially and

environmentally sustainable, Brazil already has a lot to commemorate. The creation of the National Water Agency (ANA) and of economic instruments for environmental management, like the River Basin Management Committees, are some of the measures that have been implemented since the 1992 Earth

Summit. "These are examples of the progress we managed to achieve in a decade of important advances toward sustainable development." We cannot underestimate the work of the past ten years," states Carvalho.

According to the Minister, while it is still too early to evaluate the results, it is a consensus that, without the support of a modern regulatory structure, it will not be possible to implement the goals of conservation and preservation of urban and rural

ecosystems. A fundamental instrument was ensured when the Law of Environmental Crimes was enacted in 1998. The law makes companies and citizens responsible for activities that harm the environment and make it possible to charge for the preservation of crucial resources like water. "It is the legal support that the country needed to enforce the resolutions of the National Environment Council and defend the process of sustainable development."





GOVERNMENTAL ACTION

five million people live in the 180 municipalities in the basin, which provides water to 7,000 industries and part of the 10 million inhabitants of Greater Rio de Janeiro.

The second largest metropolis in the country, Greater Rio receives water from the Paraíba River through the Santa Cecilia Pumping Station in Barra do Piraí (RJ), which sends it to the Atlantic side of the Serra do Mar mountain range. The metropolitan region also uses water from the Piraí River Basin. In all, 180 m³ of water per second are supplied to Greater Rio.

Another objective of the charge is to induce users to the sound use of water by reducing waste and pollution. The criteria and amounts of the charge were established by Ceivap in December, 2001, after debates with representatives of all sectors that use the basin's water resources. For each cubic meter of water captured, industries and water companies will pay 0.008 of a real, if it is consumed or sent back into the river clean. If it is sent back polluted, the charge goes up to 2.8 cents.

"Those who pollute more will pay more," says Ceivap Executive Secretary Edilson de

Paula Andrade. Users must declare to ANA the volume of water captured and the treatment it is given after use, and that information will be checked out by ANA and by state environmental control agencies.

While legislation would also make it possible to charge for water used in farming, mining and electricity generation, these businesses will only pay in the future, after criteria for use and amounts have been established by Ceivap. In the case of rural activities, Ceivap Technical Office Coordinator Cláudio Serrichio explains that the charge will be much lower than that stipulated for industries and water companies, so that the impact on the cost of agricultural products is not more than 1%.

To begin charging, ANA and Ceivap are formulating a plan for use and conservation of water resources and constituting the Water Agency for the Paraíba do Sul Basin, which will carry out actions to recover the area and for the sustainable development of the basin, including providing support to administering the water payment system. The water resource plan for the period from 2003 to 2007 is being

COSTS

For each cubic meter of water captured, industries and water companies will pay 0.008 of a real, if it is consumed or sent back into the river clean. If it is sent back polluted, the charge goes up to 2.8 cents.

GOVERNMENTAL ACTION

drawn up by the Hydrology Laboratory at the Coordination of Graduate Programs in Engineering (Coppe) at the Federal University of Rio de Janeiro (UFRJ), based on programs for environmental investments in the basin, with federal, state and local funds.

Environmental investments in the Paraíba do Sul River Basin amounted to 48.6 million reais in 2001, according to Ceivap. Almost 80% came from the ANA Program for Cleaning Up River Basins (Prodes), which includes federal and state funds intended for work on sewage collection and treatment systems in counties like Pindamonhangaba (SP) and Volta Redonda (RJ).

The other funds came from the Federal Budget as amendments presented by Rio deputies in Congress. These sums together with state and local counterpart funds, are paying for sanitation work in Rio de Janeiro municipalities like Resende and Campos dos Goitacazes.

Total recovery of the Paraíba do Sul Basin would, nevertheless, require investments estimated at 2.6 billion reais, over a period of 20 years, since the damage to the environment

increased in direct proportion to the urban growth of the region. Industrialization, since the 1940s, led to an accelerated and unplanned urban occupation of the Paraíba Valley. In the past six decades, the river and many of its tributaries received raw sewage, untreated industrial effluents, leachate from garbage dumps, destruction of ciliary forests, soil erosion, by indiscriminate extraction of sand and use of pesticides in agriculture.

Rio de Janeiro contains 37.7% of the area drained by the Paraíba do Sul basin. It needs 1.4 billion reais of these long term investments, with the rest divided between São Paulo and Minas Gerais. Each state has an investment plan drawn up with resources from the Ministry of Planning, financed by the World Bank, intended to formulate a global program of actions to clean up the river. This model of management, uniting federal and state efforts together with those of local governments and civil society entities, is based on the principles of Federal Law No. 9,433/97, which established the National Water Resources Policy.

PARTNERS

The Paraíba do Sul River Basin Integration Committee is formed by 60 members, including representatives of state and local governments, private sector, civil society entities and users.

Modern management concept

Ceivap, created by Federal Decree 1,842/96, is an example of this new concept in water management in Brazil. The committee is formed by 60 members. Three of them are federal, representing the Ministries of Environment, of Mines and Energy and of Planning. There are 19 representatives from each of the three states drained by the basin, including representatives of state and local governments, private sector, civil society entities and users.

Committee President Eduardo Meohas, who is also Mayor of Resende (RJ), testifies to the increased interest in solving environmental problems in the region. "I am pleased to see the attitude adopted by some industries, which are becoming aware and installing equipment in their facilities to decrease the pollution of the Paraíba Basin," he says.

The biggest private investment in environmental recovery of the Paraíba do Sul Basin is being carried out by the National Steel Company (CSN), which was the biggest polluter of the river for five decades. After making a commitment to the Rio de Janeiro Environmental Engineering Foundation (Feema) in 2000, it

began putting into practice 130 actions for environmental control, and so far CSN has spent 60 million reais to contain water pollution.

"That means that our contribution to Paraíba do Sul pollution became minimal," ensures CSN General Manager of the Environment, Luiz Cláudio Ferreira Castro. He claims that most of the pollution of the river now comes from raw sewage.

1,100 kilometers long, the Paraíba do Sul has been important for Brazilians since the 18th Century, when it was the site of a gold rush. In the 19th Century, the pre-industrial economy along the stretches in Rio and São Paulo was at its peak, with the Coffee Cycle. The river source is in the Serra da Bocaina National Park, at 1,800 meters above sea level, in the country of Areias (SP), where it is known as Paraitinga River.

When it joins the Paraíba River, they form what is called the Paraíba do Sul. Its valley, between the Mar and Mantiqueira mountain ranges, extends in the interior of Rio de Janeiro and delimits the border of that state with Minas Gerais. The mouth of the river is located at Atafona, in the Rio county of São João da Barra.



VERTIGINOUS GROWTH



In São Paulo, the area known as the Mid Paraíba Valley, one of the most industrialized and urbanized regions of the state, the river receives chemical effluents and sewage discharges. Covering 35 municipalities, the region has undergone accelerated economic and urban growth over the past five decades. In 1950, the region had an urban population of 202,980 inhabitants (or 45% of the total population of 490,722 inhabitants). According to the 2000 Census, the urban area now has 1,631,994 inhabitants (or 91.4% of the total population of 1,765,778 inhabitants). The population growth kept pace with the industrial boom in the region: from 751 industries in 1960 to nearly 4,000 in the nineties.



In Rio de Janeiro between the Funil Dam, on the border with São Paulo, and the Santa Cecilia Pump Station, in Barra do Piraí, the water is mostly

used to provide drinking water, including for human consumption in the Metropolitan Region of Rio de Janeiro, where 10 million of the state's 12.8 million inhabitants live. With the majority of industries in the Rio de Janeiro Bay, this part of the Paraíba River has one of its most critical points passing through the counties of Barra Mansa and Volta Redonda, where the National Steel Company (CSN) is located. Industrial pollution is seen in the concentration of phenol, cyanide and heavy metals. Pollution has been reduced in recent years due to controls adopted by CSN and other industries.



Between Santa Cecilia Pump Station and the municipality of Carmo, the Paraíba do Sul River has a low flow during a great part of the year. This phenomenon requires environmental control policies to protect the river from discharges of pollutant loads. The main sources of pollution in a large part of this

stretch are practically restricted to sewage from small towns like Barra do Piraí, Vassouras and Paraíba do Sul. However, once the Piabanha and Paraibuna tributaries join it in Três Rios, the Paraíba River increases in size and flow, as well as in pollution. There, the river receives all the domestic and industrial wastes from that city and the neighboring cities of Petrópolis and Teresópolis.



Along the stretch between Carmo and its mouth, in Atafona, in the municipality of São João da Barra, farming activities dominate the economy, as they do in the areas around the main tributaries of the river in this stretch - the Pomba and Muriaé Rivers, which make up part of the sub-basins in Minas Gerais, and the Dois Rios River. From the latter, the Paraíba receives all the industrial and domestic pollution from the municipality of Nova Friburgo. Although there is a great deal of organic pollution in this stretch, the quality of its waters is considered satisfactory.

A new profile for the land

Farm families are to have a guaranteed income and will learn silviculture and forestry system practices. Ten thousand will benefit in 2002. Next year, the number will double. The program will begin in degraded areas of the Atlantic Forest

CHANGES

The proposal is to change the profile of actions to recover degraded areas, encouraging reforestation for trade and multiple use of small family farms by offering programs that generate income and employment.

Families from small farms will be the protagonists, from the beginning this year, of the first big program to recover degraded areas in the country - Forest Pronaf. Pronaf is an abbreviation for the National Program of Incentive to Silviculture and Agroforestry

Systems for Family Agriculture, created by the Ministry of Environment (MMA) and the Ministry of Agrarian Development. The work will begin with the Atlantic Forest, a rich and diversified biome that covered the coast of Brazil from Rio Grande do Norte to Rio Grande



Family of
farmers in the
South: resources
for replanting

DELFIN MARTINS/PULSAR

do Sul but which today is reduced to just 7% of its original size. Over the next five years, some 120 million reais will be invested in the program. Over the next five years, R\$ 600 million will be applied to the program.

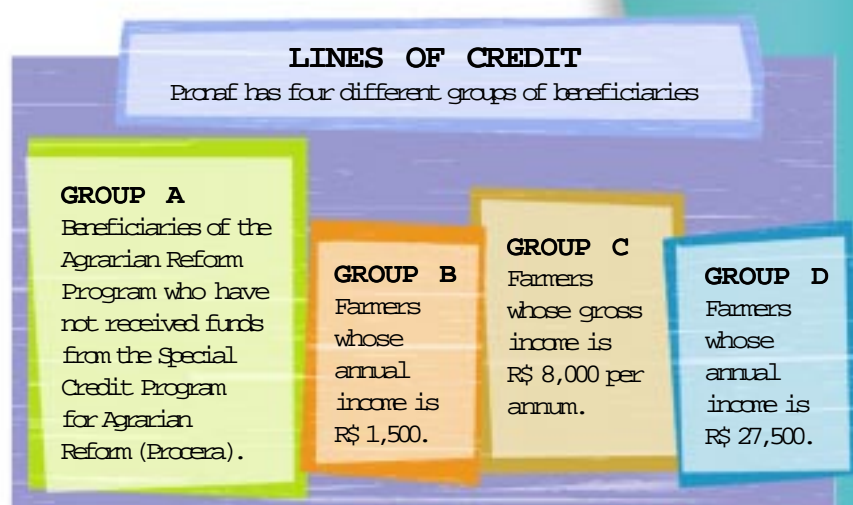
Forestry Pronaf invests in diffusing silviculture and agroforestry system technologies, with the support of the National Environment Fund (FNMA) and the National Forest Program (PNF). The proposal is to change the profile of actions to recover degraded areas, encouraging reforestation for trade and multiple use of small family farms by offering programs that generate income and employment.

The farmers will have access to specific technical assistance services and will be trained in silviculture and forestry systems while the project is being implemented. In the technical assistance stage, the general conditions of the property will be analyzed, with emphasis on environmental issues, conservation of natural resources and recovery of the land and water.

To promote reforestation, the program offers special credit to small farmers, who can receive up to R\$ 6,000 at 4% interest per annum. They will have 12 years to pay off the loan, and the first eight years (or six months after the first felling) will be

free of payments. The farmers who pay on time will receive a special reduction of 25% in the interest due.

Forestry Pronaf will benefit ten thousand farmers now in 2002. During subsequent years, the number will double, reaching 20,000 families, who will have their occupation and income guaranteed. "Everyone will learn silviculture and forestry system practices," adds Minister of Environment José Carlos Carvalho. He believes the program is the most important economic instrument created so far for sustainable development.



Sustainable agriculture

During the stage of discussion and raising suggestions for the Brazilian Agenda 21, non-governmental organizations presented

proposals to strengthen family farming and enhance the value of local development processes. The NGOs also believe that the participation of working rural women in the productive and social process should increase in value and that they should be assured access to credit.

The proposals are part of Objectives 11 and 12 of the Brazilian Agenda 21, which deal with sustainable development in rural Brazil and promotion of sustainable agriculture.

Among the recommendations in the Agenda to help reach those objectives is the establishment of a group of indicators of sustainability for agriculture. The proposal is to have comparative monitoring of different categories of productive systems and encourage environmental management of farms and ranches.

Another important goal is to build an information system that can show the true health conditions of the rural population so that prevention and treatment can be made possible. Training health professions from the public health system should also be encouraged so that it can work in harmony with the reality of rural work.



"With this specific credit program, we are encouraging reforestation of the Atlantic Forest and also supporting conversion of small farmers to organic agriculture," announces Planning Manager of the program, Aluizio Lopes. Small family farmers who own the land or work it as squatters, sharecroppers or tenants working an area of up to four tax modules are eligible for the loan.

They should also live on the property or in nearby villages, occasionally hire labor and have a maximum of two full-time employees. They will receive the appropriate seedlings together with resources from the National Environment Fund and the Green Grant Program. Besides farmers, traditional

fishermen, extractivists and those who work with aquaculture (breeders of frogs, mussels, fish, etc.) are also eligible for the program.

The services will first be hired by a specific call for bids from the National Environment Fund, open to NGOs and state and municipal companies in partnership with universities, foundations, associations, farm co-ops and forestry companies. Among the actions called for in the Forestry Pronaf is installation of septic tanks on the farms. The objective is to improve the standard of living and also to preserve the environment. They will be built under the responsibility of the Ministry of Environment.

Farm families that fall into Pronaf groups C and D (see table) will be eligible for the credit. That includes property owners, squatters, tenants or sharecroppers who make at least 80% of their family income from farming and ranching on the property or other activities on the land. Up to 40% of the total loan can be released during the first year for implementing the project and planting seedlings. The 4% interest rate also includes a 25% bonus for each payment made on time. The loans will be made available at the Banco do Brasil and Banco do Nordeste.

Artisanal fishermen, extractivists and those engaged in aquaculture, whose tanks do not cover more than two hectares or 500 cubic meters are also eligible for the loan. It is expected that the program will recover areas of environmental preservation and encourage reforestation for commercialization, in order to generate employment and increase family income by making multiple use of small farms.

SOCIAL DEBT

Preparing the population of rural Brazil for sustainable development is one of the challenges proposed by the Brazilian Agenda 21. The more than 40,000 representatives of society at large, business and federal, state and local government who discussed the document during five years arrived at a consensus reflected in Objective 11. It clearly points to the potential for sustainable development of rural Brazil as a powerful instrument to reduce the nation's social debt. The document calls for non-predatory exploitation of the country's natural resources as a means of giving an impulse to the national economy while reducing the exodus from rural areas.

BENEFICIARIES

Family farmers from Pronaf groups C and D located in the priority areas of the Atlantic Forest.

Land owners, squatters, tenants and sharecroppers.

Residents on the farm or in nearby urban or rural settlement.

WHO IS CONSIDERED A FAMILY FARMER

At least 80% of income coming from farming, ranching and other activities on the land.

Utilization of family labor; may have up to two permanent employees and use hired hands occasionally.

Area covering up to four tax modules.

Gross annual income of up to R\$30,000, excluding retirement pensions.



Family
farming:
more
support

Goods results

Forest Pronaf is part of the National Program to Strengthen Family Farming (Pronaf-Plant Brazil), a program from the Ministry of Agrarian Development, which invested R\$ 4.1 billion in the 2001-2002 Harvest Plan. Some 1.5 million loans were made in the 2000-2001 period alone, when R\$ 4.13 billion were invested. Pronaf has lines of credit for overhead and investment, but is not limited to credit. It also offers training for family farmers, as well as support, through agreements, for the infrastructure in municipalities where family farming is predominant.

"The program takes care, simultaneously, of environmental management, animal health, training and organization of the farmer," explains the President of the Rural Technical Assistance and Extension Company (Emater) of the state of Paraná, Rubens Ernesto Niederheilmann. In Paraná, Emater specialists work with this concern in 85% of the 108,524 contracts signed in

2002 and developed in partnership between the agricultural worker and owner unions.

One of the pioneering states in the adoption of silviculture and agroforestry practices outlined in Forest Pronaf, Paraná is commemorating the results of investment in family farming. From 1996 to 2000, the number of farmers in Paraná unable to repay their debts did not go over 0.3%, while the national average was 1.78%.

In Rio Grande do Sul, work supporting development of family farming was also successful. Out of the R\$ 4.2 billion released by the Ministry of Agrarian Development last year, the state carried out a little more than 52% of the contracts, giving its farmers 250,000 letters of acceptance. The Emater-RS President, Lino de David, expects to increase investments this year. He makes a demand, however: "If they want to increase community organization and ensure the success of environmental actions, they have to place a priority on rural extension."

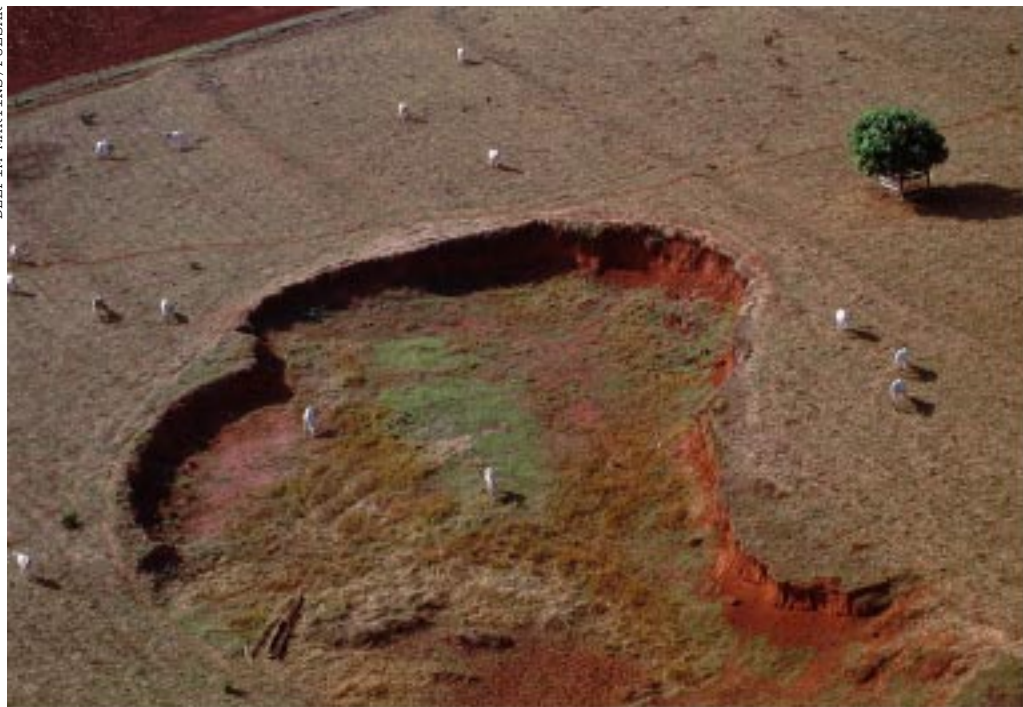
GOVERNMENTAL ACTION

POTENTIAL

Objective 11 clearly points to the potential for sustainable development of rural Brazil as a powerful instrument to reduce the nation's social debt.

Deforestation
and predatory
use cause erosion

DELFIN MARTINS/PULSAR



INCOME

Fátima do Sul became a national reference when its model for diversification of activities improved the income of 650 farm families. They increased their activities with dairy farming, and planting maize, soybeans, rice, greens and cotton.

Threat of desertification

Sugarcane, soybeans, oranges, coffee, maize and the production of fowl, cattle and swine are the so-called giants of Brazilian agribusiness. And they are among the largest consumers of natural resources in the ecosystems of Southern and Southeastern Brazil. Agricultural practices together with climatic conditions are the main causes of soil erosion and degradation in the country, and they are targeted by actions recommended by Agenda 21 under the objective of promoting sustainable development in rural Brazil.

The concern shown in Agenda 21 finds an echo in the large volume of resources that are wasted due to environmental degradation. Pronaf estimates that 5.9 billion dollars (or 1.4% of the Gross Domestic Product) are lost as a result of degradation of soils used for agriculture and forestry. Worse, if this imbalance goes unchecked, the threat of desertification increases. By betting on training family farmers to develop non-predatory practices, Pronaf hopes to change that picture.

Family farms have 4.1 billion reais to plant for the 2001-2002 harvest. These

resources will meet the needs of 1.3 million farm families. The Harvest Plan determines they should be invested in organic production and in the professional training of the youth of the rural area. The farmers can also develop vegetable, fruit and dairy farming. Women farmers receive 30% of the resources for rural credit.

With that support, farm women managed to make around 450 reais a month by selling eggs, free-range chickens, cheese, bread, sweets, garden greens, fruits and vegetables. That is the case in Fátima do Sul. Located 237 km from Campo Grande, Mato Grosso do Sul, the municipality became a national reference when its model for diversification of activities improved the income of 650 farm families. They increased their activities with dairy farming, and planting maize, soybeans, rice, greens and cotton.

"The program can be a model for other municipalities," says the Pronaf state executive-secretary, Carlos Gonçalves. The production is sold at the Farmer's Market installed with 60,000 reais that Pronaf invested in the site.

Surprising leap forward

At the same time as it creates Forestry Pronaf, Brazil is commemorating a total of more than four million hectares, in the past eight years, added to the total of 15.2 million hectares of protected areas, which there were at the beginning of the 1990's. The numbers don't stop there. More than 11.2 million hectares of protected areas will be created by the end of this year, thus doubling the hectares in protected areas which existed in 1990.

"It is a surprising leap forward. Our priority could be no other. The land generates riches which represent human survival," commemorates the president of the Brazilian Institute for the Environment and Renewable Natural Resources (Ibama), Rômulo Barreto Mello. Preserving these areas, according to Mello, means ensuring immense economic and social benefits for Brazilians. It is not a trite conclusion. The Ibama President reminds

us that the damages caused to the country over decades by the predatory use of natural resources are as incalculable as the benefits from preserving them.

GOVERNMENTAL
ACTION

JUAN PRATGINESTÓS



Deforestation
in the Amazon:
more control

FAMILY HOUSE TRAINS YOUTH

With the motto *Learning from Reality*, the Rural Family House (CFR), which exists in 30 countries on five continents, gives young farmers access to professional training. Currently the 83 Pronaf Family Houses involve 250,000 people directly or indirectly. Bringing together from 60 to 80 youngsters (from 14 to over 25 years of age), each one involves 3,000 people. With the new units, 952,000 people should benefit. Each youngster mobilizes his family and ten neighboring families, involving 40 people.

Created in France in 1937 on the initiative of a group of families, who adopted the method called alternance pedagogy, this project trains future rural entrepreneurs. Integrated into Pronaf in 1998, the Rural Family House offers

professional training and education for farmers' children. Youths over 14 years of age who have completed the fourth grade can receive their primary school diploma together with professional training, while others can receive their high school diploma.

The pioneer stage began in 1987, in the municipalities of Barracão and Santo Antônio do Sudoeste, in the state of Paraná. In 1991 the program arrived in Santa Catarina, Rio Grande do Sul and other states. Seventy-five children of small farmers in Ituporanga (SC) benefited from the first of the five Family Houses built along SC-302 highway. Built in partnership with the municipalities, the houses cost 180,000 reais. Other houses will be built in the west of the State (Seara),

the south (Armazém), the northern plateau (Major Vieira) and the extreme west (São José do Cedro). More than 250 associations are preparing to create CFRs. Two Marine Family Houses are already operational in São Francisco do Sul (the oldest) and Laguna, Santa Catarina. The state recently increased its training program to include fishermen's families.

National production of fish currently has stabilized at around 700,000 tons, with some 500,000 tons from the sea and 200,000 from continental waters. The Amazon Basin provides 60% of the freshwater fish. Fish sales have a turnover of over a billion dollars a year. In associations or co-ops, the youngsters learn commercialization of fish. The social results show solidarity and a perceptible improvement in the relationships with families, friends and the community.

Alternatives to pig farming

Research institutes, governments, producers and the community in Southern Brazil join together to find solutions to environmental degradation caused by pig wastes

Farmer Valdeci Vito, from Concórdia, in the state of Santa Catarina, is a man worried about the environmental pollution caused by swine wastes and believes that the farmers union can solve the problem. The detail is that Vito raises chickens and not pigs. But he believes that everyone has to be concerned. "The issue is more urgent for pig farmers, and they are trying to solve the problem of waste. But we all have to worry, everyone has to work together on the problem. Otherwise it will cost us all a great deal," he says.

Eight hundred kilometers away, in Guarapuava, central Paraná, the owner of a

farm with 1,200 sows had very serious problems with the pollution caused by the animal wastes, beginning with the silting of the lake on his property. He sought help and with very little was able to solve most of his problems. "Our mate only needed a little guidance. All he had to do was solve a hydraulic problem, fix the roof on his sties and fix the manure piping to eliminate up to 80% of the waste produced by the animals," says Romeu Carlos Royer, a pig raiser in Marechal Cândido Rondon, in Western Paraná, and President of the Pig Farming Association of Paraná (APS).

Swine herd in
the South is
the largest
in the country



DELFIN MARTINS / PULSAR

Although they live in different regions and raise different animals, Valdeci Vito, Romeu Royer and the farmer from Guarapuava have something in common. They all take part in courses, lectures and debates aimed at making pig raisers aware of a problem that is becoming frighteningly large in the country: environmental degradation caused by swine manure. With a herd of 36 million animals distributed in around two million farms, Brazilian pig farming is one of the targets of the National Environment Program (PNMA II) at the Ministry of Environment.

Financed by the World Bank, the program proposes implementing a new model of environmental management for Brazilian farms that raise pigs. The essence of the model is controlling environmental degradation caused by pig farming. Implementation of the project began in April of this year on farms in the states of Paraná, Santa Catarina and Rio Grande do Sul. A series of meetings for farmers, visits by specialists, courses and debates were held in the region before implementation.

So far, even before there is any structural intervention in the farms, it is obvious that the issue is one of the farmers' daily concerns. This, undoubtedly, helps implementation of

the project, which calls for a case by case study of technologies used to control environmental degradation and the technologies each farmer can afford.

Paraná, Rio Grande do Sul and Santa Catarina together have 47% of the swine herds in the country. The absolute majority (80%) of pig farmers in the South are small farmers who work within a family economy. "The technology exists. What we are looking for are alternatives the farmer can afford. The idea is to support small and medium-sized farmers who do not have the funds to find a solution on their own," says Maricy Marino, coordinator of the Management of Environmental Assets Module under PNMA II.

According to Maricy Marino, each Brazilian state chose a priority to act within PNMA II. In the South, the three states decided to work on pig farming using the same general lines of control and reduction of the pollution caused by wastes and carrying out the project according to the specific situation in each region.

Coordinated by the State Environmental Secretariats, with a group of sponsors that includes environmental and research institutes, universities, state rural extension agencies, the Brazilian Agricultural Research Enterprise (Embrapa), city halls, farmer

CONTROL

The essence of the model is controlling environmental degradation caused by pig farming. Implementation of the project began in April of this year on farms in the states of Paraná, Santa Catarina and Rio Grande do Sul.

Attention to *small* farmers

The Brazilian Agenda 21 has a special recommendation to the development banks.

It is essential, according to the documents that financial

agents like the Brazilian Economic and Social Development Bank (BNDES), Banco da Amazônia (Basa), Banco do Nordeste (BNB), Caixa Econômica Federal and Banco do Brasil (BB) systematically adopt the objectives of Agenda 21 and observe its social and environmental dimensions when defining criteria for loans and incentives. The idea is to provide access to loans and incentives to projects that best meet social policies:

those with great power to redistribute income and to bring the ecosystems of each region into equilibrium. Thus, projects like pig raising in Southern Brazil, and others of the type that benefit small farmers, will receive support so that they can become successful.

The document also warns that one of the biggest challenges posed by Agenda 21 is the conception and implementation of public policies capable of ensuring competitiveness for micro, small, and medium-sized Brazilian companies. An important step has already been taken with simplification of the tax system and tax reduction in the system known as Simples.



PIG FARMING

PROJECT

Paraná began implementing the project to control environmental pollution caused by pig farming in May of this year. One thousand eight hundred farms were analyzed and mapped.

unions and farmer associations, the project is carried out in river basins previously selected by each state. The objective, Maricy explains, is to seek solutions according to the situation on each farm. Once tested and validated, these solutions can be applied to other pig breeding farms around the country.

During its first year of execution, PNMA II is allocating a million and a half dollars to

each of the three states in the project to control environmental pollution caused by pig farming. If the results are approved at the end of the year, another seven million can be allocated to Paraná, four million to Santa Catarina and four million to Rio Grande do Sul. Between 100 and 200 farms in each state are now involved, and the goal is to reach 1,000-2,000 farms in each state.

In a hurry

Not even the current crisis in pig farming (the farmer is receiving 34 cents of a dollar for each kilo of live pig, when 64 cents is considered satisfactory) is reducing the rush some farmers feel. "We have to begin now, start changes now, to gain credibility, show that it works," says Romeu Carlos Royer, President of the Paraná Pig Farming Association.

"If we talk about costs now, the farmer runs away, because the activity is losing money now, but the program is efficient and promises to invest reasonable resources," he states. The problem, he says, is that if the pollution caused by the wastes is not resolved, the activity itself will be compromised. In the Basin of Lajeado dos Frangos, in the municipality of Concórdia (SC), Artanir Vargas says the farmers are waiting. "There is still a lot to discuss, to see what will be implemented in reality, which system is best for each farm, how it will all work out, but the fact is that we have no alternative. If we don't

do it, don't control pollution, what will happen? Our lives depend on our farms," he explains.

Artanir has added up the costs and seems interested in adopting bio-gas - a system which produces gas from manure fermentation. "Here we can produce 10 m3 per day. That's a gas cylinder a day," he says. Since he keeps 600 head of swine, he needs to find a solution for the 1,200 tons of manure the animals produce each year.

"Bio-gas won't completely solve the problem of what to do with the pig waste, but it's a help, it's savings." The solution that he will adopt on his property still needs to be "well thought over", but he has no doubt that something has to be done. "It is sad to see everything being lost, there is no other solution. The problem is that it is hard to take out a loan. In this case the producer's investment (30%) can be paid in labor or land, which makes things easier."

Xavantina, swine capital

With a total of 4.6 million swine, Paraná began implementing the project to control environmental pollution caused by pig farming in May of this year. One thousand eight hundred farms in the West and Southwest of the state, where 70% of all the swine in the state are located, were analyzed and mapped. There are 12 municipalities in those regions. There are a total of 180,000 farms in the state, the great majority (80%) of which are small farms, with 36,000 dedicated to swine breeding. Nevertheless

the great majority of the farms keep swine for their own consumption.

Sandra Maria Pereira de Queiroz, PNMA II Coordinator in the state, explains that the selection was made according to the amount of pollution and the location of the pig sties, many of which are in areas of permanent preservation. All the registered farms have their pig sties at a point where water flows into the Toledo, São Francisco, Marrecas, Pato Branco, Vitorino and Longra River Basins. "Often Sanepar (the Paraná Sanitation

PIG FARMING

Company) has to suspend water supply in some region due to the high level of water pollution," she says.

The agreement with the Ministry of Environment was signed last December. The first five months of the year were dedicated to mapping the properties, studying the needs case by case and monitoring the water in the rivers of the two regions. "Now everything is ready and equipped and we are debating each point with the farmers, trying to define what will be done with each one," says Sandra Queiroz.

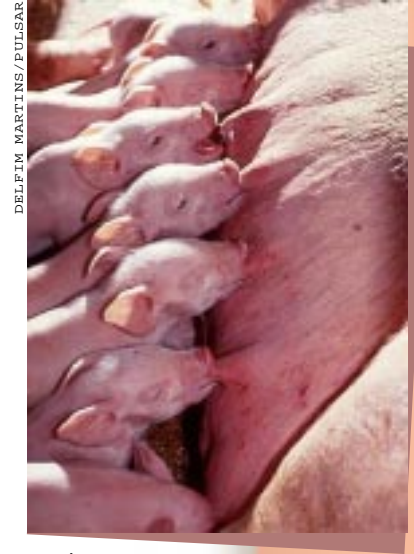
With the largest herd of swine in the country —almost five million head —Santa Catarina is implementing the project in the basins of the Lajeado dos Fragosos River in Concórdia and the Coruja/Bonito River in the Braço do Norte municipality. Data from Embrapa, published on the site www.suino.com.br, show that Braço do Norte has the second highest concentration of pigs per square kilometer in the world, coming in only behind Bretagne, in France.

Most of the state's herd is in the West, which has one of the highest rates of animals per square kilometer. Xavantina County, according to Embrapa, has 5,000 inhabitants, who raise 130,000 pigs, giving it the title of highest number of pigs per capita.

"On the first foray, we trained 60 farmers in Concórdia and 30 in Braço do Norte", says Cícero Juliano Monticelli, a researcher at Embrapa Swine and Fowl, which executes the project in that state. No less than 65 specialists from partner and supporting entities are also receiving training, ensuring that each farmer gets the maximum assistance.

Monticelli explains that the first step in implementation is mobilizing both farmers and their communities. The programming of courses and lectures is intense and everyone is following the project step by step. The first step, making an inventory of the situation in each farm, made it possible to develop a precious data bank.

Furthermore, the project tries to involve the largest possible number of companies, cooperatives, agro-industries and institutions representative of the activity and the community. In the state, the project is coordinated by the State Secretariat of Urban Development and the Environment, and, as in the other two states in the project, dozens of institutions are involved as partners or sponsors.



DELFIN MARTINS/PULSAR

Brazil's largest swine herd is in Santa Catarina

NO WASTAGE

The Rio Grande do Sul Environment Secretariat is implementing the project to control pollution caused by pig farming in the basin of the Turvo, Santa Rosa and Canto Cristo Rivers. The state has a total of 3.9 million heads of swine. According to the Department of Water Resources in the Environment Secretariat, 4,000 farms have gone through the diagnosis and there will be some sort of intervention in 1,135 of them.

Among the factors that led the state to opt for swine farming in PNMA II is the production of no less than 37.8 million liters of swine wastes a day in the state, according

to information found on the state government's official web site. Among the goals are to end the great wastage of water used in cleaning and feeding the animals and in recovering degraded areas.

The Rio Grande do Sul Environment Secretariat believes inadequate management or absence of a waste treatment system, high concentration and inadequate placement of buildings and incorrect disposal of manure in the soil make pig farming a big source of contamination and pollution, especially of the soil and water.

Learn more about pig farming at the following addresses:

www.cnpes.embrapa.br
www.porkworld.com.br
www.suino.com.br
www.embrapa.br
www.mma.gov.br

Art gains value and becomes income

With the support of Comunidade Solidária, communities excluded from development find sources of income using the raw materials that nature provides them, learn to appreciate their work, strengthen their self-esteem and salvage century-old Brazilian traditions

Able hands weave the straw, the silk, the stem, transforming the buriti palm and the lives of 5,000 residents of Urucuaia, in the semi-arid region of Minas Gerais, a place where there was just a charcoal kiln and subsistence farming. In 1998, looking at the local culture itself for options for making a living in regions hit by drought, consultants from the Comunidade Solidária Council found in nature and in century-old handicrafts a proposal for development adapted to the climatic conditions of the region.

Urucuaia is also the name of a river—a tributary of the São Francisco. Its banks are covered with buriti palms (*Mauritia vinifera*), the raw material for local artisans. Today organized in

the Urucuaia Association of Artisans, they produce fruit deserts, packaging, baskets, hammocks and even furniture. As they find a new source of income, they strengthen their self-esteem, salvage cultural memory and encourages the youth in the community to perceive the work of their elders as art.

Young people are called to participate through the school, where master artisans present their work with explanations on the techniques used to execute them. Then the students work on the theme producing poems, stories and sketches, and studying the scientific aspects of the raw material. They all learn to respect the work and the correct way of

preserving the raw material used in its production, with techniques for replanting and respecting life cycles for extraction.

Out of that experience arose the Solidarity Handicrafts Program, which makes this type of work possible in 60 Brazilian municipalities, without public funding, in partnership with the Brazilian Service to Support Small Business (Sebrae), the National Folklore and Popular Culture Center, the Caixa Econômica Federal, NGOs and city halls. Consultants from those agencies work a year and a half in the community, enough time for the artisans to get organized and start seeing the changes.

The consultants hold workshops to improve quality, creativity and new techniques while also working on actions to bolster citizenship. They also provide guidance on health and literacy and promote cooperativism. At the other end, the Solidarity Handicrafts Program looks for markets to sell their products.

Beginning in September, all the co-ops in the program will have a place to sell in São Paulo at the ArteSol Center. Besides reselling to shops and other points of commercialization, the center will be a new space to guarantee sustainability of the groups. The first 26 municipalities from the North and Northeast to enter the program already have a catalogue of products with descriptions of the materials, techniques, information about the community, address and telephone, so that interested parties can buy directly from the association.



Everything from the buriti palm can be used: art and food

Palm also becomes a toy

CITIZENSHIP

Artisans in Abaetetuba, Pará, use the miriti or buriti-do-brejo (*Mauritia flexuosa*) palm tree, from the same family as the one used in Minas Gerais, to make toys which they sell at the Círio de Nazaré religious festival in October. Founded in the early 17th Century, Abaetetuba has 120,000 inhabitants and is located 60 kilometers from the state capital. The toys are also produced in Bahia do Guará, where the "toy men", as they are known, spend hours on a boat to arrive in the streets of Belém, where they twirl their wheels full of miniatures.

Some 70 families with 300 artisans, mostly men, make the toys. The organization of the

work involves the whole family, either helping to paint or putting the final touches on a piece. It is also within the family nucleus that the tradition and the skill are perpetuated, following the characteristics of traditional handicrafts.

When Sebrae came to help the artisans in 2000, they made it possible to develop new designs for decorative objects, opening a new market. Today the work is also being sold in the major cities of Southeast Brazil.



FOTOS: EDER CHIODETTO

Woven
baskets
and toys:
unlimited
creativity

Rag dolls from
Esperança: a
source of income



Point to point

In the state of Paraíba, the doll *Esperança* (Hope), which is the name of the municipality where it was created, gave rise to a big family of dolls, transforming the life of the small community of Riacho Fundo, which has 250 inhabitants. Made of cloth, rags, thread, ribbons, lace and a lot of decorations, it is sewn together, stitch by stitch, one part at a time. One of the first projects that reinforced the conviction that

it was possible to promote citizenship and open new paths for communities to find their place in the productive process is the production of dolls, they were originally the work of just two artisans – Socorro and Derita. Today, it has become the source of income for 40 women in the small town, who work at the House of Hope and sell their families of dolls all over Brazil and abroad.

TRADITION SAVED

The pieces woven by the lace making and embroidering women of Nisia Floresta, a town 43 kilometers from Natal, capital of Rio Grande do Norte, guard the tradition of making lace with bobbins that was brought from the Azores and Madeira Islands, which colonized the region. However, during the 1980s the traditional lace and embroidered linen in the trousseaus gave way to industrialized products and the level of activity fell sharply.

Although the region has great tourist potential, few people have jobs in this activity. Most live from subsistence fishing and agriculture, home made products and handicrafts.

Revitalized when Solidarity Handicrafts arrived, the work is now practiced again as a profitable activity, attracting young women to the art of making lace with bobbins and to the art of embroidering.

The apprentices – daughters, nieces, grandchildren and godchildren – develop their abilities following the same stages of lace making: the cloth made of linen or rustic cotton is unraveled and stretched out on a grid. Then it is filled by embroidering the model selected. The final stage is washing, ironing and taking off the grid before the borders are cut. Formerly, production was only made on order by women who acted as intermediaries. Today the artisans organize production to find new places to sell.

Handicrafts, especially “boa noite” embroidery, are one of the main economic activities in the community of Ilha do Ferro, located 18 kilometers from the city of Pão de Açúcar in Alagoas. This unique work in Brazil was revitalized and perfected, incorporating influences of modern life.

Today the Art-ilha Cooperative congregates the embroiderers. Besides showing one of the most beautiful techniques of embroidery, the co-op unites and gives value to the whole community, as an alternative for income that contributes to improve the living standards of the artisans and their families, with work they like to do. “Boa noite” is the name of a flower in the region.

Earth, fire, hands and feet



The "Community of Pots" is formed by 35 families that make a living from small farms and from artisan production of a type of utilitarian ceramic in

the county of São João da Varjota, in the semi-arid region of Piauí. Descendants of slaves from the old sugar mills, the artisans use hands, feet, corn cobs, knives, hoes and pieces of gourds as work instruments.

The matriarchal figure and master artisan is Antonia Maria de Souza, 75, who has been making pots since she was seven years old. In her family, eight children and 11 grandchildren continue the skill, making pots, pans, pitchers and the like from

sunrise to sunset. They sell it all at a store built beside the Transamazonian Highway (BR-230). They produce 500 pieces a month.

In Jequitinhonha Valley, the women of Campo Alegre and Coqueiro Campo, in the county of Turmalina, Minas Gerais, have their day full of fire and clay. In domestic kilns, they fire their vases, pots, water jars, decorative pieces and dolls. Some 100 women from the two towns work with clay, using their creativity when they make figures of brides and grooms, nursing women, women, twins, and figures that are half ox-half frog, half man-half dog. What is surprising is the technique for using colors, which are all obtained by the texture and varied tones of the clay itself and by the way it is fired.

Women from Jequitinhonha and their creatures (in the same position): clay artists

Poverty and inequality

Brazil has managed to improve its social indicators as a result of business participation and the growth of voluntary work around the country. According to the Brazilian Institute of Geography and Statistics (IBGE), the 2000 Census reveals substantial improvements in the social area during the period from 1992 to 1999. Infant mortality rates, for example, fell from 44 to 29 deaths per 1,000 births. The average years of study among the population from 15 to 55 years of age increased by 16%, from 5.7 in 1992 to 6.6 in 1999.

During the same period, the illiteracy rate for those over 15 years of age fell from 23% to 13.3%. And the number of homes with basic sanitation rose from 50.3% to 59.4%. According to IBGE, social inequality is harder to combat than poverty, and those rates remain practically unaltered. During that period, the number of families living with up to one minimum wage per capita fell, but the proportion of black families in that situation (26.2%) continued higher than that of white families (12.7%). Agenda 21 should, influence the formulation of public policies capable of reducing these inequalities.



FOTOS: EDER CHIODETTO

Acquiring new business

Some 700 Brazilian small towns are discovering the formula to win over new businesses that generate jobs and income among their own residents and within their own geographic area. This proposal for combating poverty by creating alternatives suggested by the community itself is the basis of the Active Community Program, linked to the Executive Secretariat of the Comunidade Solidária. The novelty is in the involvement of the community and the discovery of its talents, which means the program is already working according to the Brazilian Agenda 21 perspectives, with the population influencing the process of planning sustainable development.

The program works like this: the interested town joins the program and soon receives the visit of a development agent - a consultant from Comunidade Ativa - who will discuss the ways to promote development in that place with community leaders, councilmen, people from city hall and whoever else wants to participate. That is how the Forum for Local, Integrated and Sustainable

Development (DLIS) is created.

Those meetings give rise to an agenda of priorities, later presented at the local, state and national levels of government. That assures residents that the work and projects selected for the place where they live will be the ones they themselves chose. Some of the ideas presented at the DLIS Forum can be put into practice immediately and leaders are encouraged to execute them.

That was how a group of 80 women from the town of Campo Redondo, 144 kilometers from Natal (RN), organized the Association of Mothers of Campo Redondo and began managing a textile factory. The factory produces cloth wrappers for a candy factory in Natal that exports its products to the US and Canada.

The equipment - 22 sewing machines and two industrial irons - was bought with resources from the program to Support Small Producers and Senai trained the seamstresses.

This small business changed the perspectives of families who lived fearing their children would leave in search of a better life. "I want my kids here," dreams Cícera Aderita da Silva, 53, who saw five of her children leave to find jobs in Rio de Janeiro. She hopes to see other new businesses and jobs appear in her hometown.

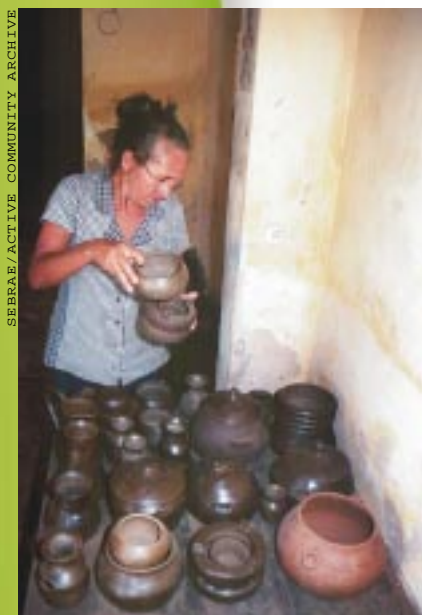
The bottom of the weir

In Campo Redondo, cleaning the weir gave residents a way to create a small handicraft business that helps support 30 families. The mud taken from the bottom of the weir called the attention of a group of residents, who transformed it into clay. Trained by Sebrae technicians, they learned to produce vases, pans, ashtrays and other objects. The sale of those objects brings a little extra money home to the families. "The problem became the solution," says the local manager of the DLIS Forum, Maria da Conceição Araújo Moreno, 21.

In the small town, the Association of Mothers

also have a school for teaching computing, with 60 students and an Artisan's House which helps sell the pieces produced by the 300 local artisans. The computers were donated by local companies and the National Service for Industrial Learning (Senai) trained three people to act as instructors in the school.

"We really want to see this grow," says Maria da Conceição. Part of the plan for development of the city is improving the water supply, rural electrification, creation of agroindustries, small factories and capacity building of labor, as well as technical assistance in raising animals and planting.



Creation of vases and utensils in Campo Redondo

Training for tourism

High season at Araguacema beach in the state of Tocantins, on the banks of the Araguaia River, is in July, when the level of the river lowers and reveals islands of sand. That spectacle attracts some 30,000 tourists to the small city of just 6,000 inhabitants. But the town hall had budget problems, because it was getting no return on the infrastructure investments during the high season. Looking for a solution to his problem, Mayor João Paulo Ribeiro Filho went to the DLIS Forum, which decided to promote raffles, to obtain business support and to charge something from the traders that put up tents on the sand islands near Araguacema, and from the boatmen who charge to take tourists on tours between the city and the islands.

The residents make their living from the Araguaia River, and after their discussions at the Forum, they discovered the importance of preserving it. The boatmen were trained to serve tourists and fishermen better and taught not to help those who want to practice predatory fishing. They asked for installation of an Ibama inspection post.

Little by little, the community is learning what it can do to improve the place where they live. And it is deciding together with the

Mayor where the resources will be applied, what the priorities are and who are those who need more. "For each mistake of the Forum, there are nine correct moves," declares Mayor João Paulo Ribeiro Filho.

Forum encourages artisans

In Alagoas, there are also forums at work. The quilts produced by women in Cajueiro, Alagoas, are sold in stores in Northeastern capitals, in Brasília, in Rio de Janeiro and in São Paulo. They make 100 quilts a month, which bring at least 100 reals for each of the 100 seamstresses who are members of the Municipal Handicrafts Association.

This initiative received incentive from the DLIS Forum, which encouraged the artisans to invest in what they know how to do — bed quilts and quilted pillows. The work became good business once they began to view it as lucrative production and began to ask for scraps of cloth from companies, betting on quality.

Araguaia River:
boatmen are
trained. Below,
patchwork quilt
from Cajueiro



COMUNIDADE ATIVA

Residents in search of a better life

In Rondônia, Palmerinda Souza, 45, from the city of Pimenta Bueno, was privileged to receive the first house built in a community effort with wood seized by Ibama. With 50 square meters – living room, kitchen, bathroom and two bedrooms – the house is just the beginning of a process to improve the life of Mrs. Souza.

The partnership between Ibama and Comunidade Ativa will provide 70 more houses for people indicated by the DLIS Forum. “The priority is for single mothers and old people who take care of their grandchildren,” explains Maria do Reis, a Forum member. Another four

municipalities in the Comunidade Ativa program participate in the “own home” project – which does not imply in

donating the land, but rather replacing the land used previously. The work helps mobilize community residents, who are assisted in building their own houses. The system adopted by Comunidade Ativa attracted state governors and in less than three years has found partners from North to South.

In Acre it is working in 22 municipalities and resulted in the creation of association of carpenters and extractivists. The Government of Bahia incorporated the semi-arid region into the program and will benefit 11,500 people. In Santa Catarina, the state government completed the work, expanding the program to another 154 municipalities.

The Executive Secretariat of the Comunidade Solidária created partnerships with the World Bank to expand program actions. One of the results was creation of the World Bank

Citizenship Prize. It also got support from the Institute for Social Studies and Educational Development to distance train lay teachers in Paraná, Rio de Janeiro, Santa Catarina, São Paulo, Bahia, Espírito Santo and Rio Grande do Sul.

From the shack (L) to the house made with wood seized by Ibama



MOBILIZATION GROWS

Defending social inclusion marked the work developed by the Comunidade Solidária Council, created in 1995, beginning a heretofore unknown process of mobilization in Brazil, and one which integrates all types of resources – human and financial – from the state, private sector and the community. And all not for profit.

Council President Ruth Cardoso explained that the programs coordinated by Comunidade Solidária – Solidarity Handicrafts, Solidarity Literacy, Solidarity University, Solidarity Training – all have the same characteristics of partnership, decentralized decision making,

reinforced self esteem and promotion of citizenship to combat poverty and social exclusion.

Solidarity University involves 180 institutions of higher learning and 13,100 students in 910 cities. By the end of 2002, it is foreseen that 17,210 students and 1,415 professors will be mobilized. It also develops activities in Mozambique.

The Solidarity Literacy program is present in 2,010 municipalities in 21 states and in the metropolitan areas of São Paulo, Rio de Janeiro and the Federal District, costing the government 34 reais per student.

Since the beginning of the program, 114,000 literacy teachers were trained by 204 universities.

Solidarity Training was created in 1996 and has prepared 115,000 youngsters for the work market. At the beginning of 2001, the program became part of Alvorada Portal, which is part of the Alvorada Project that was created by the Secretariat for Social Promotion of the Presidency of the Republic. Through that partnership, the program administered 87 courses for 3,324 participants, mostly young people, from 225 municipalities in the North and Northeast, where the Human Development Indices are lowest in Brazil.

