

# **A Ten-String Polyphonic Experience of Transcontinental Research and Training Cooperation**

*Amazonia 21*

The Experiences of the European-Panamazonian Interdisciplinary Research and Training Project for Sustainable Development

[www.amazonia21.org](http://www.amazonia21.org)

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## **Abstract**

*Amazonia 21 - Operational Features for Sustainable Development In Amazonia* - is an interdisciplinary research and training project funded by the European Union's Framework Program for Research and Technological Development, concerning Cooperation with Third Countries and International Organizations (INCO-DC, DG XII). The project is composed by 10 partner institutions from 4 Panamazonian countries (Brazil, Venezuela, Columbia, Bolivia) and Europe (Austria, Germany, Netherlands, Scotland).

The present paper offers some experiences and conclusions from our ongoing work within the project, among different partners, approaches and cultural systems, which might be helpful for similar activities. The project team experiences the interaction of very different professional, geographical, cultural, social and conceptual approaches, which shows to be successful, despite the difficulties and problems which necessarily arise from the complexity of the whole enterprise.

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<sup>1</sup> Robert Lukesch (ÖAR, Austria), Harald Payer (ÖAR, Austria), Norbert Fenzl (UFPA, Brazil) further informations on the project website [www.amazonia21.org](http://www.amazonia21.org)

## **Introduction**

Amazonia as the world's most important reserve of biodiversity, energy and mineral resources (bauxite, kaolin, iron, lignite, manganese, copper, nickel, diamonds, gold, zinc, natural gas, and petroleum) deserves a special attention of humanity. It includes wide parts of Brazil, Ecuador, Venezuela, Colombia, Bolivia, Peru, Guyana, French Guyana and Suriname and its population is estimated to about 28 million people. The economy of this enormous region, called *Panamazonia*, is mainly based on unsustainable appropriation of natural resources such as forestry, mining, crude oil extraction, intensive agriculture, mass cattle farming, predatory fishing, electricity generation in large hydro power plants. Massive infrastructure projects like pipelines, power lines, roads, dams, and waterways are designed to open the Amazon rainforest frontier to large-scale industrial development for regional and global markets, which still threaten millions of acres of pristine wilderness, national parks, and indigenous peoples' territories.

Since the beginning of the 90ies however, changes of perceptions are going on in Amazonian society and among Amazonian political leaders in order to look for new and less destructive ways of economic development, basically in the direction of sustainable use of the huge tropical biodiversity. After the UNCED in Rio de Janeiro in 1992, these intentions began to take shape and focus on policy relevant research in sustainable development and on the elaboration of the AGENDA 21 for Amazonia, actually worked out by a broad set of governmental, intergovernmental, private and non-governmental institutions of Amazonia. In this general scenario, Amazonian academic institutions based on transdisciplinarity and new research lines focused on Sustainable Development, are called to produce new scientific and technological know-how and human resources capable to create the theoretical and practical background for the coming political and economic changes.

## **The Project**

*Amazonia 21* is the acronym for an interdisciplinary research and training project funded by the European Union's Framework Program for Research and Technological Development, concerning Cooperation with Third Countries and International Organizations

(INCO-DC, DG XII). The project works as a starting-point for common understanding for operationalizing and managing sustainable development in Amazonia.

The core partners involved are ten institutes from Europe and from 4 Panamazonian Countries (PAC), Brazil, Venezuela, Colombia and Bolivia<sup>2</sup>. All the institutes are working in different areas of sustainable development research and consultancy. The project intends to provide integrated recommendations for the operationalization of sustainable development in Amazonia. It should define appropriate strategies for a more sustainable use of land and natural resources from the local to the transnational level, and it should also help to consolidate the academic and technical cooperation between Amazonian and European institutions committed to research, training and action for sustainable development. Thus, the main objectives are defined as follows:

- To compare different European and Panamazonian countries' approaches to elaborate a common view about assessing and measuring sustainable development, focused on sustainable use of land and natural resources in the Amazonas/Solimões basin.
- To integrate these approaches and instruments into PAC University training programs and research headlines.
- To elaborate recommendations for innovative actors and policy makers.
- To establish sustainable relationships between the scientific partners and strengthen co-operation links between European and Panamazonian Countries.

In order to deal with the complexity of the manifold dimensions of sustainable development, especially in such an enigmatic and partially unknown region like Amazonia, the project has selected an interdisciplinary and cross-spatial (local, regional, sectoral, national, transnational) mix of tasks:

- Creation of Sustainability Indicators for Amazonia, based on the analysis and overview of the most important concepts and indicators for sustainable socio-economic processes, actually used all over the world. Based on such a system of Indicators, we give practical political and economic orientations for actions directed to shift actual economic activities towards a more sustainable use of Amazonian biodiversity.
- Probation of the applicability of Material Flow Accounting in the PAC on local, regional and national levels.

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<sup>2</sup> Europe: Austria (IFF-University Vienna, ÖAR), Germany (Wuppertal-Institute, Free University -Berlin), Netherlands (IVM,Free University of Amsterdam), Scotland (Lews Castle College)  
PAC: Brazil (University of Pará/NAEA), Venezuela (Central University of Venezuela/CENAMB), Colombia (National University of Colombia/IMANI), Bolivia (University R.G.Moreno/CIMAR)

- Case studies upon structural change and ecological modernization in four key sectors of the Amazonian economy (biomass production, mining, crude oil extraction, and energy production) with respect to sustainability parameters.
- Structural analysis of innovative actions and policies in selected Amazonian regions in order to identify patterns of sustainable practice in human development, land and resource use, combined with technical assistance to these actors on local and regional levels thus establishing long term relationships between practitioners and scientists.
- Creation of an Integrated Training Program focused on operational features of Sustainable Development to enhance capacity building in sustainable development, integrating the academic and field research into the existing post-graduate programs of the project partner institutions.

## **The Experience**

It is not the explicit aim to elaborate a theoretical contribution to the matter of inter-, trans - or hyperdisciplinarity of sustainable development. However, we like to offer some experiences from our ongoing work within the project, among different partners, approaches and cultural systems, which might be helpful for others, too. We experience the interplay and possible merger of different professional (research vs. consulting), geographical (Europe vs. Amazonia), conceptual (empirical data analysis vs. systemic approaches rooting in constructivism) and social (academics vs. practitioners) cultures.

To guide and to organize such a scientific enterprise through the entropic storm of different economic, social, scientific and cultural realities, contradictions and problems needs a good portion of optimism and know-how in dealing with chaos. But, as the first results show, the chances of success are much higher than one could think at the beginning.

### *The complexity of the Concept*

First of all we need to see that the subject "Sustainable Development" is by itself a very new and complex issue. Even if great steps forward have been done mainly in European Research Institutions, there is no consolidated and established scientific framework for this concept, because of its most overwhelming and interdisciplinary character.

On the other hand, in the so-called industrialized, developed countries, even "weak" sustainability is far from being achieved. Although we doubtlessly face very encouraging partial results, the global mainstream of economic policies doesn't seem to worry about "our

common future". However, we keep on trying and the experience of Amazonia21 shows that it is necessary and possible.

### *The organizational experience*

The project is organized in five specific tasks:

- **one conceptual** task,
- **three empirical** tasks based on methodological, sectoral and territorial case studies and
- **one capacity building** training program, with theoretical - methodological concepts and operational guidelines of sustainable development.

The training program started with a very successful "train the trainer" seminar in Minihof - Austria in July 1999 and has been implemented in the PAC partner institutions in form of special courses. The case studies are actually being executed with different degrees of difficulties but with good perspectives of success. The first really interesting result is the national Material Flow Analysis of the Brazilian Economy<sup>3</sup>.

To our surprise, the main obstacles and difficulties are not of scientific character, but much more a problem of communication and consequently of organization. Project management is nowadays obviously based on Internet and the funding institutions and most European project partners take the existence of a functional network between all the research partners for granted. But even when telecommunications works, understanding each other is rather complex. First of all the project language is English, but with one exception, none of the partners are native speakers.

But the main obstacle is that the usual working and living conditions obliges the PAC partners to deal permanently with a certain level of chaos, disorder and contradictions. So far, they need to be much more flexible, more relaxed in relation to "disorder" or what we can call "noise". These situations, mostly unknown by European partners, produce sometimes a lack of patience, tensions, stress and some levels of misunderstanding.

To manage these "bottlenecks" of communication the milestone meetings of the project were very helpful. Especially the first one, held in Naiguatá, near Caracas in April 1999 was of utmost importance for the future of the project. During one week the project team went through different phases of a very intense communication process: from uncomfortable approximation,

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<sup>3</sup> National MFA of Brazilian Economy, PhD thesis worked out by Jose Albert Machado, NAEA, UFPA, Belém.

through general confusion, tense adjustment of main concepts, alleviated understanding of the basic common features to a final friendship and a cooperative closing session.

Thus, the learning process got installed, but it needs permanent refreshing. The Minihof-Liebau seminar and the 2<sup>nd</sup> milestone meeting in Leticia/Colombia (January 2000) showed that building up trustful relationship and efficient networking are continuous and infinite processes and need personal investment and ardent patience.

## Conclusions

After more than one year of ongoing project we certainly can conclude that, besides all the complexity of such an enterprise, the chances to succeed are much greater as one can imagine. Never the less, there are some basic points to be taken into account *before* starting such an „enterprise“:

- Project networks, especially between the so-called developed and less developed parts of the world, have specific characteristics which are sometimes far beyond traditional problems of interdisciplinarity and inter-institutionality. Execution of such projects or programs require a very special attention to the trans-cultural aspects of human relationship.
- Management of such project networks requires very *specific qualities and skills of the coordination*, capable to deal with sometimes very tricky and subtle communication problems.
- The *structural and financial organization of the projects* needs to preview the complexity of the future communication between the actors. For example precise definition of tasks, milestone meetings, investments in adapted communication technology, etc.
- The reality of the project must be also *understood by the funding organization*. The rules and project techniques, even if obviously necessary, are often based on very inflexible technocratic parameters capable to put in danger the execution of the whole project. This is an important aspect of international cooperation, even if in the specific case of *Amazonia-21* the relationship with the INCO assessors was not problematic.

We still would like to mention two other points which are often underestimated during the specific project work. Projects like *Amazonia-21* showed to produce a great quantity of „side effects“ which are not directly visible or predictable neither by the project team, nor by the funding institution. The amplitude and velocity of self-organization dynamics of such projects are sometimes amazing. These side effects are basically caused by a very quick

reproduction and dissemination of the essential project ideas, causing the emergence of new projects and training programs in the partner countries. But side effects are not only positive. We also need to be aware and prepared for negative reactions, specifically when success threatens previous existing concurrency or tensions.

Finally, as everybody knows, there is no sustainable result of unsustainable projects. So, the concept of sustainability, as incipient it might still be, must be applied to the project itself.