



Amazonian seeds of a sustainable DIY. Oswaldo Stella

How to quote this text: STELLA, O. Amazonian seeds of a sustainable DIY. TRAMONTANO, M., ROÇA, L., MARTINS, M. J. S.. Translated from Portuguese by Marcelo Tramontano. *V!RUS*, [online] n. 10, 2014. Available at: <<http://www.nomads.usp.br/virus/virus10/?sec=2&item=1&lang=en>>. [Accessed: dd mm aaaa].

Oswaldo Stella is a mechanical engineer, MSc in Energy and PhD in Ecology and Natural Resources. In 2004, he co-founded the NGO Green Initiative, which began the first greenhouse gas emissions compensation system through reforestation of degraded areas in Brazil. In 2007, he joined the staff of Climate Change at IPAM - Institute for Environmental Research of the Amazon - as project coordinator, and today is director of the Climate Changes Program of the Institute.

"Science, education and innovation for an environmentally wholesome, economically prosperous and socially fair Amazonia." With this mission IPAM, the Amazon Institute for Environmental Research (<http://ipam.org.br/>), a scientific, non-governmental and non-profit institution has been, over the last twenty years, has been implementing projects and actions that seek to promote sustainable development in Amazonia, combining environmental, social and economic spheres.

We talked to Oswaldo Stella, director of IPAM's Climate Changes Program, which implements projects aimed at creating development and production models based on maintaining the forest standing and the recovery of degraded areas, coupled to payment systems for environmental services. By the example of IPAM, we wanted to understand how can be prepared the scene where practices Do It Yourself may be developed in the Amazonian region. Both in funding management, as in the implementation of projects and technology transfer for communities in vulnerable situations.

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V!RUS 10: The theme of this issue of the V!RUS journal is "Do It Yourself", embracing a sense of empowerment of communities, populations, etc., by different social actors. How do you relate IPAM's work and actions with this notion?

Oswaldo Stella: The mission of IPAM is, in short, contribute to reduce deforestation in Amazonia by promoting a development model that preserves the forest and brings prosperity to the inhabitants of the region. The continuity of this approach depends directly on the empowerment of local populations.

The State's role in the region is crucial but it is very sparse. So even in the implementation of public policies, the involvement of local people must be different from what we are used to see in other areas of our country. There, without the engagement of people, things do not even work.

V!10: To achieve this community involvement, researchers must exceed the dimension of technical knowledge and also assume a certain activist attitude of cultural activities developer?

OS: In the region, our work is divided between research and extensionism, that is, applied research, since implementing alternative systems for georeferencing plots to water harvesting systems. The scientific method, however, is always behind our actions.

V!10: How is this implementation of systems undertaken? What actions must the researcher perform?

OS: Firstly, the problem is identified. For example, families with whom we work on some projects have to walk up to 4km to have access to clean water. Then we identify the solution: to implement water harvesting systems in the plots, and then we develop and implement several different models, test and evaluate all of them and transfer the technologies to the community.

Knowledge transfer involves various actions. The first one is to identify the alternatives with which beneficiaries have more affinity and enable them to meet their goals within several feasibility criteria. Then, primers are designed to teach how the implementation, operation and maintenance of these systems should be made. Workshops are then arranged to show how some systems may be implemented. Finally, the beneficiaries themselves implement them.

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V!10: Over time, when observing the results that the projects have produced, after the completion of the initial deployment and training, the use that communities make of the systems implemented by IPAM has matched to what was originally intended? The local culture and inherent dynamics of populations end up by altering some uses?

OS: It depends on the implementation. The results of projects aiming the fulfillment of individual and essential needs, such as water supply systems, correspond much more than those designed to collective needs. This is directly linked to the cooperativism capacity that, in most regions, is very low.

For example, a key issue in family farming in the region is mechanization. As the growing areas are small, it is not feasible that every family has a tractor. There are few experiences where a group of families receives a tractor and can organize to keep it running.

In some places, the local government takes on the role of lending the tractor. In others places, they are hired and, in most cases, the slash-and-burn agriculture¹, also known as *coiavara*, is still done. It is an ancient technology of cutting and burning of trees. With the new environmental law which prohibits burning, the effort to reverse this aversion to cooperativism is urgent.

In many places where the associativism develops, we see the influence of European immigrants, especially Germans. This is not a rule. In floodplain settlements, successful associativism experiences are more common, perhaps because the type of production requires this behavior. This is not a specific issue of Amazonian family farmers: it is something historical, characteristic of Brazilian people in general. It is possible even to identify it in universities, for example.

V!10: Yes, certainly. But from this perspective, one can understand that the researcher, as an individual with another cultural background, must learn how to deal with the complexity of the local community, its values, to even achieve the implementation of systems?

OS: Yes, with no doubt. The marriage of traditional wisdom, scientific knowledge and local culture forms the basis for any successful experience.

¹ "The system [called stump fields] is based on the clearing and burning of vegetation, followed by a period of cultivation and, after the decline of soil fertility a fallow period for fertility restoration." (For further information, see Siminski, A. and Fantini, A. C. *Roça-de-toco: uso de recursos florestais e dinâmica da paisagem rural no litoral de Santa Catarina*. (Portuguese only), at http://www.scielo.br/scielo.php?pid=S0103-84782007000300014&script=sci_arttext. Accessed 11/3/2014.

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V!10: According to the executive director of the Institute, Paulo Moutinho, this tripod is the basis of IPAM's mission: social, environmental and economic. What would it mean, ultimately, to combine these three spheres in interventions in Amazonia? What would be the strategies and difficulties to accomplish this combination in the projects?

OS: The ultimate aim for the type of work we do is that successful experiences influence the construction and implementation of public policies. What can be noted, however, is that Brazilian regulatory framework was not built to promote sustainable development. Thus, tax and fiscal reforms aimed at giving more economic viability to such actions would be highly welcomed.

V!10: This leads us to another reflection that we would like to do with you on the financing, or funders of the Institute's projects. In a way, you are situated between State funder agencies and the communities in their needs, and not always State and communities interests converge. How do you deal with that when designing and implementing projects?

OS: Our work is directed to meet the needs of communities within the context of our mission. For example, we do not build hydroelectric plants but we can help families who will be displaced by the construction of hydroelectric plants. As we only implement projects designed in partnership with communities, where there are conflicting interests, there is no project.

V!10: Yes, but the State has at least three levels - federal, state and municipal - and it may happen that a project funded by the federal government has distant interests from state government or municipality, for example.

OS: Yes, sometimes interests are distant but not necessarily conflicting. A project can be a priority for one sphere and not for another.

V!10: And what about international funders? What are, in general, their interests in establishing partnerships with you? On the website of the Institute, one can see that the profile of international funders is quite varied.

OS: International foundations finance all sorts of philanthropy in the world - education, health, environment, and so on . Among them, some are focused on tropical forests. So annually we apply our proposals for public notices of these foundations.

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V!10: Once deployed a project, a co-management between IPAM and the community is expected to ensure the sustainability of the project? When does the action of IPAM end - or it does not?

OS: It depends on the project. In some cases, such as the one of the wells, the participation of IPAM ends when the wells are released to the families. In other cases, as in the strengthening of co-management in the settlements, the process is continuous, fostering the consolidation of management boards and associations.

V!10: How do management boards work? How much autonomy do they have for decision making?

OS: There are several types. For example, in Extractivist Reserves, the RESEX, councils have an institutional role already defined in the reserve creation decree. In the settlements, they are created most of the time as the embryo of social organization within the settlement. In general, from these boards, associations are created, which can evolve into a cooperative. In our case, if there is no association in a settlement where we are going to work we encourage the creation of a management board to establish a dialogue with that group.

V!10: Does IPAM sit on the board? At what moment IPAM retires?

OS: IPAM is not a member of the board.. IPAM dialogues with the members, helps them, in the beginning, to explain the importance, how it works, etc., so that the board can evolve to an association supported by the bureaucracy, by laws, and so on.

V!10: Has any project been replicated at the initiative of some management board? That is, without the participation of IPAM?

OS: The social organization, once developed, is the platform for various actions. Thus, it is difficult to specify how many and which projects have been implemented from a core of this type. However, it is clear that the more organized the group is, the greater the chance of access to private and public projects.

V!10: The contact between IPAM and local populations and communities also has a reverse, changing conceptions and provoking reflections among researchers?

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OS: Surely it is always a two-way street. From this relationship was born the current modus operandi of IPAM, which in addition to basic research, has a strong component of applied research and extension.

V!10: Finally, we would like you to do a more general consideration. The work of IPAM is focused on the development of activities and actions aimed at maintaining standing forests, restoring degraded forest areas, at the payment for environmental services and the structuring of carbon markets. How is it articulated, on a sustainable basis, within the micro and macro scale?

OS: Our work seeks to promote the connection among the reality in the field, on the ground, local organizations, municipal, state and federal governments, and the international climate changes agenda. Today, we have actions in all these levels. We seek to bring our experience on the ground to international negotiations and bring those results back.

V!10: In a quick evaluation, would it be possible to consider that most of the projects developed over these twenty years by IPAM were maintained? Were they spontaneously replicated? Have they consolidate methodologies of self-sustainability and environmental sustainability?

OS: Yes, from the international level, the concept of REDD² was based on a partnership effort on offset reductions in carbon emissions involving IPAM, to the implementation of CIDSX - Municipal Consortium for Sustainable Development of the Transamazonian road and Xingu.³

V!10: Would you like to add something, or highlight something that we do not ask?

² REDD - Reducing Emissions from Deforestation and Forest Degradation - The concept of REDD (Reducing Emissions from Deforestation and forest Degradation) basically stems from the idea of including in the accounting of greenhouse gas emissions avoided by those that are reducing deforestation and forest degradation. Was born of a partnership between Brazilian and American researchers, which led to a proposal called "Compensated Reduction of Emissions" (Santilli et al, 2000), which was presented at COP-9 in Milan, Italy (2003), by IPAM and partners. According to this concept, developing countries that have tropical forests, they could promote reductions of their national emissions from deforestation would receive international financial compensation to avoided emissions. The concept of compensated reduction has become the basis of REDD discussion in the following years. ([Http://www.ipam.org.br/saiba-mais/O-que-ee-como-surgiu-o-REDD-/3](http://www.ipam.org.br/saiba-mais/O-que-ee-como-surgiu-o-REDD-/3)).

³ For further info about IPAM, please refer to [www.ipam.org.br/download/livro/IPAM-em-Revista-](http://www.ipam.org.br/download/livro/IPAM-em-Revista-2012/735)

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OS: I do not think so, it was a really good conversation.

V!10: We also enjoyed, thanks!

OS: Best wishes for you guys!