

DOCUMENT OF COLLECTIVE COMMITMENT FOR THE CREATION AND IMPLEMENTATION OF THE “NETWORK OF KNOWLEDGE CONSTRUCTION IN EVALUATION OF SUSTAINABILITY IN AGROECOSYSTEMS”

Background:

This present network is the result of a set of individual, collective and institutional actions, emerging in the country from the 1990s, especially after the United Nations Conference for Development held in Rio de Janeiro in 1992. This event was crucial for reaffirming the need for building a new development paradigm for the twenty-first century capable of harmonizing the relations between society and nature, which from this time on was considered as "sustainable." Among the conclusions of this event, stands out the "Agenda 21" as a commitment between the nations to build strategies for "sustainable development" for the present century, especially for its chapter 40 in which is advocated the need for indicators that assess how these intentions with a view to a better world would be effectively be translated into practice. It is from this path that the methodologies for the assessment of agroecosystems and their sustainability indicators are born.

Regarding the sustainability of agroecosystems, it should be emphasized that this theme was born in Brazil, well before ECO-92, especially in the late 1970s, when social movements and scholars brought to light the socio-economic and environmental impacts of the model development then adopted in which strategies of agricultural production for export were inserted, based on intensive use of inputs (especially pesticides), mechanization and plant breeding. This model became known as the "green revolution" or as the "model of conservative revolution of agriculture" that meant a revolution in agriculture without changing its agrarian structure, among other structural issues.

From this decade on social movements and academic initiatives arose proposing alternative forms of production (alternative agriculture) without the use of pesticides, concerned and committed to its social function (the assertion of local identities, equitable distribution of generated wealth) and especially with the maintenance of the natural environment. The movement of the "agronomic prescription", the affirmative public policies of family farming and agroecology and its contribution to alternative ways of production (sustainable agriculture, organic and biological farming, permaculture, etc.), the participatory methods for construction of agronomic knowledge, and the need for tools to assess the sustainability of agroecosystems, appear in the wake of this context. Also deserving special mention was the creation in 2003 of the Brazilian Association of Agroecology which has mobilized thousands of people around the country, with the example of the recent National and International Congress in Agroecology (held in November of this year in Curitiba) in which 4,000 people participated and where approximately 1,000 scientific papers were presented, and in which the Network proponent group gave the workshop on "Sustainability Indicators in Agroecosystems." We must also consider the initiatives of public policies on this issue underway in ministries, research institutions, and expressively in formal and informal education at different levels. It is estimated that in Brazil more than 100 initiatives of Agroecology courses are underway: Technical, Bachelor's, Master's, Doctoral and Post Doctoral activities.

Thus, the group proposes the establishment and implementation of the “NETWORK OF KNOWLEDGE CONSTRUCTION IN EVALUATION OF SUSTAINABILITY IN

AGROECOSYSTEMS” born as a result of joint work, from interactive actions within the institutions in which they are inserted, particularly together with the post-graduate courses of the Federal Universities of Pelotas, Santa Catarina and Pará (UFPEL, UFSC and UFPA) in partnerships with research and agricultural extension institutions such as EPAGRI and EMBRAPA, with farming organizations and socio-environmental movements linked to the rural world. Noteworthy in these initiatives is the implantation of programs of postgraduate studies, research lines, disciplines, dissertations and theses, training courses, etc., with an emphasis on issues such as sustainable rural development, agroecology, sustainability indicators in agricultural ecosystems, sustainable agriculture, sustainability evaluation, and networks of family farming, among others, as exemplified below:

UFPEL/EMBRAPA CPACT:

- Southern Participatory Research Network (teaching interaction, research, extension and farmer organizations): EMBRAPA, UFPEL, EMATER, CAPA Network, ARPA-SUL, COOPA, FEPAGRO;
- Post Graduate Program in Family Agricultural Production Systems;
- Discipline of Sustainable Rural Development;
- Doctoral thesis of Marcelino Hoppe. Energy efficiency of plastic greenhouse agro-systems from an agroecological perspective. (2002). Advisor: Sergio Roberto Martins;
- Doctoral thesis of Helvio Debli Casalinho. Soil Quality as an indicator of sustainability of agroecosystems. (2003). Advisor: Sergio Roberto Martins;
- Doctoral thesis of Vania Lionço. The territorial approach in sustainable rural development of southwestern Paraná. (2007). Advisor: Sergio Roberto Martins;
- Master's dissertation of Angelo da Silva Lopes. Participative construction of strategies for agroecological transition in an agrarian reform settlement. (2007). Advisor: Helvio Debli Casalinho;
- Master's dissertation of Inez Varoto Correa. Sustainability indicators for agroecosystems in agroecological transition in the southern region of RS. (2007). Orientation of Helvio Debli Casalinho;
- Doctoral thesis of Luis Mauro dos Santos Silva. Impacts of productive credit on the local concepts of sustainability in family agroecosystems in the southeastern territory of Pará. (2008). Advisor: Sergio Roberto Martins;
- Doctoral thesis of Luiz Augusto Verona. Sustainability assessment in agroecosystems of a family base and in agroecological transition in the southern region of RS. (2008). Advisor: Helvio Debli Casalinho;
- Master's Dissertation of Lorena de Moraes Bernardi. The energy balance in different systems of corn production. Advisor: Helvio Debli Casalinho; (in progress);
- Doctoral thesis of Antonio Maciel Botelho Machado. Participative identification of sustainability indicators related to the use of legal reserve areas from agro forestry systems in the Contestado settlement, municipality of Lapa, Paraná. Advisor: Helvio Debli Casalinho, (in progress);

UFSC/EMBRAPA/EPAGRI:

- Disciplines of "Rural Affairs, Environment and Development", "Sustainability Indicators in Agroecosystems (Post Graduate Program in Environmental Engineering);

- Master's dissertation of Altamiro Moraes Matos Filho. Organic Agriculture from the perspective of sustainability: an analysis of the region of Florianópolis. Master's (2004). Advisor: Luiz Sergio Philippi.
- Doctoral thesis of Claudio Rocha de Miranda. Evaluation of strategies for sustainability of pig farming. (2005). Advisor: Paulo Belli Filho;
- Master's thesis of Vicente Sandrini Pereira: Sustainability indicators in agroecosystems of organic rice in the Araranguá basin (SC). (2008). Advisor: Sergio Roberto Martins;
- Doctoral thesis of Pedro Daniel da Cunha Kemerich. Sustainability indicators in replenishment areas of the Guarani Aquifer in the hydrographic basin of the Vacacaí-Mirim River (RS). Orientation: Sergio Roberto Martins. (In progress).

The theme of sustainability indicators has also been the subject of investigation in Post Graduate Environmental Engineering Programs on other issues that are present in the interfaces of agroecosystems with the natural and anthropic ecosystems, for example:

- Doctoral thesis of Adriana Carla Dias. Methodological bases of integrated environmental management in conservation areas, with emphasis on systems of interest. (2007). Advisor: Sergio Roberto Martins;
- Doctoral thesis of Eduardo Lopes Marques. Participative process at the University of Science and Technology of Angola (Luanda) in the definition of sustainability indicators as a support for environmental management. (2008). Advisor: Fernando Santana;
- Masters dissertation of Guilherme Farias Cunha. Sustainability indicators for environmental impact assessment on human health. Advisor: Roberto Soares (in progress).
- Doctoral thesis of Luiz Felipe Ferreira. Corporate sustainability indicators applied to a cleaner production program - a proposal for evaluation by means of environmental accounting. Advisor: Fernando Santana (in progress).
- Post doctoral Activities of Ana Vasconcelos. Climate changes and adaptation strategies for land use in the Prata Basin. Supervision: Sergio Roberto Martins.

Also consider the interactions of Post Graduate Environmental Engineering Program activities and EPAGRI with the Center for Agricultural Sciences of UFSC for Masters in Agroecosystems and the Center for Research on Environmental Monitoring and Assessment (NUMAVAM), through the work of co-orientation in theses and dissertations and participations in joint research projects, such as the SENSOR project (Sustainability Impact Assessment: Tools for Environmental, Social and Economic Effects of Multifunctional Land Use": completed) and CLARIS (Climate change and adaptation strategies in the Prata Basin) (in progress) with funding from the European Union.

UFPA:

- Masters Degree in Family Farming and Sustainable Development;
- Center of Agricultural Sciences and Rural Development;
- Socio-agronomic Laboratory of Tocantins-LASAT Marabá
- College of Agricultural Sciences, campus of UFPA in Marabá,
- Agroecological discipline in the Postgraduate Program of Amazonian Agriculture (MAFDS) UFPA / NCADR.
- Disciplines of Critical Topics on agroecology: the different dimensions of reality; systemic theory applied to the Establishment of family Agriculture, farming systems and the construction of more sustainable technical references; Indicators and comprehensive

assessment of sustainability in agroecosystems. Specialization Course on Agroecology and Sustainable Rural Development (UFPA / FCAM and NCADR);

- Disciplines on a systemic approach applied to agronomy (undergraduate and post-graduate);
 - Doctoral Thesis of Luis Mauro Santos Silva. Impacts of productive credit on the concepts of local sustainability in family agroecosystems in the southeastern territory of Pará. 2008. (2008). Advisor: Sergio Roberto Martins and Helvio Debli Casalinho
 - Research Project entitled: Adapting multidimensional tools to assess the quality of life of families settled in the southeastern territory of Pará (2009) UFPA / PROPESP / PARD
 - Undergraduate course completion work in Agronomy of Ana Caroline Neris Nogueira. Title: Evaluation of sustainability in Amazonian family agroecosystems with investments in the Pronaf Forest. (2009 -2010);
 - Regional Forum for Education in the Field (FREC).

Partner institutions:

The network consists of people who are placed in public or private organizations dedicated to work in the field of education, research, extension, agricultural production, development, formulation and implementation of public policies, with a priority focusing on family farming, colonial and traditional populations. The inclusion of people in the network should count on the respective support of the institution to which they are linked. In the medium to long term the Network aims to be a "network of networks": Therefore, instead of people, its members should be made up of other networks.

For the establishment and immediate implementation of the Network, the following members are regarded as founders (in alphabetical order):

- Agr. Eng. MSc. Altamiro Mattos Filho – EPAGRI (SC);
- Agr. Eng. Prof. Dr. Helvio Debli Casalinho – UFPEL/PPGSPAF (RS);
- Agr. Eng. Dr. Luiz Augusto Ferreira Verona - EPAGRI/CEPAF (SC);
- Agr. Eng. Prof. Dr. Luis Mauro dos Santos - UFPA /NCADR/LASAT (PA);
- Agr. Eng. Dr. José Ernani Schwengber; – EMBRAPA (CPACT-RS);
- Agr. Eng. Prof. Dr. Sergio Roberto Martins – UFSC /PPGEA/ENS (SC)

Objectives:

- To contribute to the development and refinement of methodologies to support assessment of sustainability in agroecosystems;
- To exchange individual and institutional information;
- Provide information (data, texts, books, theses, dissertations, events)
- Support the creation of local support references for strengthening of participative activities (institutions, technicians, rural populations etc.);

The achieving these goals will be guided by the following guiding principles:

- Agroecology as a field of knowledge and synergistic convergence of academic knowledge (agronomy and other engineering areas, biology, ecology, sociology, economics, anthropology, etc.) and non-academic knowledge (experience of farmers);
- The agroecosystem as a basic unit of analysis, considering its territorial integration (different possibilities of spatial scope, including hydrographic basins, municipalities, etc.)
- Participative methodologies;
- Emphasis on family agriculture, colonial and traditional populations;

Goals:

- Register the network in the Lattes system: "CONSTRUCTION OF KNOWLEDGE IN EVALUATION OF SUSTAINABILITY IN AGROECOSYSTEMS": achieved;
- Establish an Inter-institutional Coordinating Committee of the Network: in progress;
- Formalize the interaction and network integration with the formal spaces of the institutions in which the proponents of the network are inserted: in progress;
- Interaction with national and international networks on sustainability indicators: in progress;
- To produce a network through site and / or blog construction with a theoretical and methodological framework on indicators of sustainability: in progress.
- Develop a registration form for members of the NETWORK
- Plan the implementation of the 1st Seminar of the Network of "KNOWLEDGE CONSTRUCTION IN EVALUATION OF SUSTAINABILITY IN AGROECOSYSTEMS", to define its operational issues and schedule of activities: in progress.

Considering the above, the signatories below as founding members consider established and implemented the "NETWORK OF KNOWLEDGE CONSTRUCTION IN EVALUATION OF SUSTAINABILITY IN AGROECOSYSTEMS".

Florianópolis, the 20th of November, 2009.

Agr. Eng. MSc. Altamiro Mattos Filho – EPAGRI (SC);
Agr. Eng. Prof. Dr. Helvio Debli Casalino – UFPEL/PPGSPAF (RS);
Agr. Eng. Dr. Luiz Augusto Ferreira Verona - EPAGRI/CEPAF (SC);
Agr. Eng. Prof. Dr. Luis Mauro dos Santos - UFPA /NCADR/LASAT (PA);
Agr. Eng. Dr. José Ernani Schwengber; – EMBRAPA (CPACT-RS);
Agr. Eng. Prof. Dr. Sergio Roberto Martins – UFSC /PPGEA – Pro tempore Coordinator.