FINAL REPORT

I	**The Name of the Institution to be evaluated**	**ICPA** **20/06/2012 – 21/06/2012**
II	**Evaluation Period**	**2007 – 2011**
III	**Members of the Team**	
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CONCLUSIONS AND RECOMMENDATIONS TO THE INSTITUTE:

The institution evaluated, ICPA, is a unique research infrastructure with a very specific field of activity: the investigation of the Romanian soils, their use, change and perspectives for the country. In the past, ICPA has been one of the best situated research institutions in Romania, with clearly prevailing functions of providing practical services and standards testing and with substantial financing. The political changes in the last two decades decreased the human potential at the institute and totally cut the direct national financing, which turned ICPA to a self-financed structure, with all its benefits and drawbacks. The structure of the institute is compact and economical and the management is quite effective. On the other hand, the Institute has retained the old hierarchical, not very useful administrative structure with several levels of management (Councils). The need of external financing has created rather diverse and non-sustainable research topics and a constant flow between the research groups. This has resulted in hectic research plans and difficulties for the groups to reach the critical mass required to do better research. This is especially clear in the groups pointed more towards theoretical investigations and is less pronounced in groups occupied with testing and services. The institute has also retained the old-fashioned system for recruitment of scientists, which resulted in a low number of PhD students, no 'fixed-term' (only 'permanent') contracts and big gaps between generations. The institute is active in publishing large numbers of books and research papers in national (Romanian) journals in Romanian language, but has a very low number of ISI papers published in the last four years. The institute is very active in patenting, having only national patents though, some of them very important and some developed together with SMEs. The latter patents are not well exploited due to bad management of the contracts signed with the SMEs concerning IPR.

As a whole, this is a strong research structure for the Romanian agrarian science, which has an important role in the system of research, agricultural practice and education in Romania. It has good research infrastructure and highly qualified human potential.

The main recommendations for the further development of the institute are summarised below:

To motivate the (young) researchers:

- Seminars should be organised by the different research groups and at the Institute level. The group seminars should be weekly given by PhD students and other team scientists to discuss their work progress. The Institute should organize monthly seminars held by external scientists (at least twice a year by foreign scientists). For this the Institute should prepare a yearly (or seasonal) agenda.
- To intensify the qualification of the young researchers, send them for research and study in other European research institutions using national, bilateral and European grants (FP7 – Marie Curie, COST STSMs).
- Teach the young researchers and PhD students to write scientific papers.

Make possible changes in recruitment and payment policy:

- Try to accredit PhD programs at the Institute in its fields of research.
- Establish a system of Government funded three-year grants for PhD students.
- Establish a system for fixed-term temporary contracts for institutional staff with accreditation and performance-based extension.
- Establish a system for performance-based salary supplementation, depending on fund-raising, ISI publications and supervision of young researchers.

Research infrastructure:

- Create a Common Research Laboratory (Research Platform), containing all general and expensive equipment where all research groups have access. This lab should be kept on the account of all institutes' groups or from the dedicated (possible) future government financing.
- Create a Service Laboratory, kept on the basis of fees received from the external testing and certification.

Patenting and implementation of research:

- Establish a system for licensing of national patents to receive royalties from their implementation. This could be done by smarter contracts with collaborating SMEs.
- Intensify the international patenting.
- OR: establish a Technology Transfer Office, to take care of the above items.
- Organise a spin-off company to perform applied research and non-R&D professional services.

Team E1 – Rural Development Department

R&D activity

The team's research activity is sustainable agro-environmental management, with focus on protection and rational use of soil resources. One of the main activities in the department in the evaluated period was completing of a final version of the Romanian Soil Taxonomy System SRTS, released in December 2011, which had been verified and implemented in the interested institutions (County Soil Testing Offices, Agriculture Universities, County Agriculture Directorates) through seminars, workshops, and field trips.

Human Resources

The team is composed of 11 members: 4CS I, 1CS II, 4CS III and 2 CS grouped in 3 subunits: Soil Genesis and Eco-pedology, Soil Mapping and Land Evaluation and Ecological Agriculture. The average age in the team is 46 and it is one of the two teams in the institute with the average age over the recommended 45. In the last 4 years, in the department, four PhD theses have been completed and other two are in their final stage. One of the team members conducts his PhD thesis in collaboration with the University of Rome.

Infrastructures

The infrastructure is good and adequate for their activities.

Management & Research Environment

The research was financed only from national sources, mainly from public money received through competitive grants. The team has also secured several economic contracts, with various operators from industry, agriculture and transport in order to evaluate soil quality, yield potential of various sites for agricultural crops, vineyards and orchards, the level of pollutant loads in soil, methods and technologies for amelioration of contaminated soil and sites.
During the evaluation period members of the team have published as co-authors only 4 research ISI articles with cumulative AIS of 4.8.

General Feedback

The team is too much involved on providing non R&D services and not enough focused on research activities. Efforts are needed to employ young researchers.

Team E2 - Agricultural Chemistry and Plant Nutrition Department

R & D activity

The team conducts basic and applied research in the field of soil chemistry, agrochemical evolution of soil under the influence of different methods of fertilization and agro-techniques, developing and testing of new fertilizers, fertilization technologies uses within some systems of sustainable production, etc. They have an important role at national level by working together with relevant compartments of the County Agricultural Departments and Ministry of Agriculture and Rural Development in testing fertilizers prior import, testing samples taken during inspection activities conducted at national level, tests on samples of fertilizers in agrochemical testing phase in order to be authorized for use in agriculture in Romania. They also provide technical assistance and chemical analysis within projects or research programs conducted in collaboration.

Human Resources

The department has 14 members, among which 3 CS I, 4 CS III, 2 CS and 5 technicians, *three of the team members being PhD students.* The average age in the team is 43. The department is organized in three sub-units: Testing and Quality Control of Fertilizers; Plant nutrition and Soil-water-food quality relationships. The team has experienced researchers in agro-chemistry and specialised chemists in physic-chemical analysis. The laboratory has also the capability and specialized personnel for formulating new fertilizers, for elaborating the technologies to obtain them and providing technical support.

Infrastructure

Good infrastructure. They have a laboratory (LICCI) accredited by RENAR, which is qualified as a reference laboratory by MAPDR and notified at the Council of Europe.

Management and Research Activities

In the evaluated period, the team had revenues mainly from national R&D programs (> 1 Mill Euro), but also from private national and foreign entities (287 K Euro). A small amount of money (76 K Euro) has been secured from non R&D services. Members of the team have been involved or coordinating over 25 research projects in la last 5 years, published 19 books, and over 200 research articles published or presented in numerous national and international events. However, only one article has been published in ISI journal with AIS of 0.09. This is an aspect that needs to be seriously considered in the future. The team has been granted 4 patents from the 11 patent applications submitted.

Development Plan

In order to continue current research directions, the department plans to recruit new members, e.g. specialized agronomists and soil scientists needed to develop the domain and to purchase equipment necessary for analyzing the new fertilizers with organic substances.

General Feedback

One of the well performing teams in terms of fundamental and applied research production. One major negative point is the lack of effort to publish in internationally recognized ISI journals.