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REVIEW OF THE ACTIVITIES OF THE EUROPEAN SYSTEM OF COOPERATIVE RESEARCH NETWORKS IN AGRICULTURE (ESCORENA): PROGRESS REPORT ON ASSESSMENT UNDERTAKEN IN 2003 (AND PROPOSALS FOR THE FUTURE)

I. ORIGIN AND DEVELOPMENT OF ESCORENA

1. The Regional Office for Europe established the European System of Cooperative Research Networks in Agriculture (ESCORENA) in follow-up to recommendations of the FAO Regional Conference for Europe in 1971 and 1973. The first network on olives was formed in 1973, with a further 19 networks created in two successive waves: ten between 1975 and 1982 and nine between 1988 and 1993. Geographically, cooperation included Eastern Europe from the very start which enabled all European and Mediterranean researchers to know each other and work together. The aim of all the networks was to promote the voluntary exchange of information and experimental data, to support applied collaborative research, to facilitate the exchange of germplasm and the sharing of methodologies and technologies, and to accelerate the transfer of technological advance to developing and transition countries. Establishment of a network was always predicated on two conditions: (i) agreement of the national authorities and institutions interested in cooperation and the selected topics; and (ii) approval of the European Commission on Agriculture (ECA). The national institutions thus financed the research activities, while FAO saw to coordination and the transfer of information (seminars, publications).

2. Much restructuring over twenty years left thirteen networks in 2002, three co-sponsored with the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM): pastures and forage crops, sheep and goats, and dry fruits. The others are: rice, flax, sunflower, cotton, olives, soybean, trace elements, SREN, buffalo and RAMIRAN. FAO coordination is provided by the Regional Office for Europe, working in conjunction with the relevant technical units of the following Departments: Sustainable Development (SD), Agriculture (AG) and Economic and Social (ES).

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3. The European Research Networks Advisory Committee (ERNAC) set up in 1987 was charged with periodically reviewing network activities and reporting back to the ECA. On the basis of the ERNAC evaluation¹ and the FAO report on ESCORENA activities, the ECA recommended at its 31st Session (Rome, 12-14 October 1999) that ESCORENA be maintained and reinvigorated through various means, including the modernization of information supply and an interactive Internet site and the allocation of added resources.

4. The lack of network funding was acutely felt from 1999 when the budget allocation was almost halved from that of 1998 (US\$82 000 against US\$156 000). The financial situation worsened in 2002 with: the 2002-2003 budget approved by the FAO Conference in November 2001 stipulating that funds apportioned under Programmes 2.1 and 2.5 did not include FAO servicing of ESCORENA and; no direct financing from member countries, with the exception of Spain's funds for the networks on olives and dry fruits.

5. At its Thirty-second session (Rome, 7-8 March 2002), the ECA reaffirmed its support for ESCORENA and, from among the various options proposed², endorsed the idea of embarking on a systematic evaluation of all networks to identify activities in each that were suitable for project-approach support, determining the modalities whereby FAO was to manage and support activities of the selected networks and working groups. The Twenty-third session of the FAO Regional Conference for Europe (Nicosia, 29-31 May 2002) approved the proposals submitted by ECA³ and, to mitigate the lack of financial support for ESCORENA, welcomed France's offer to provide the services of an expert charged with evaluating the networks, as the first vital stage in launching the project-approach⁴.

II. EVALUATION OF NETWORKS: METHODOLOGY

6. The visiting scientist made available by the National Institute of Agricultural Research (INRA, France) joined the Regional Office for Europe in November 2002. Spain also provided funding for expenditures relating to the ESCORENA evaluation (travel, consultations).

7. The evaluation was conducted in the framework of strategic objective C.2 of the Strategic Framework of FAO: "Adoption of appropriate technology to sustainably intensify production systems and to ensure sufficient supplies of food and agricultural, fisheries and forestry goods and services"⁵. Review of the networks to retain the most dynamic was conducted on the basis of the following criteria:

- comparison of networks and national strategic and thematic priorities;
- definition of objectives and relevance of expected outcomes to development;
- commitment of national institutions towards supporting the networks;
- importance of information, training and extension activities for development;
- motivational role of the coordinator.

8. As of December 2003, the review had covered twelve of the thirteen ESCORENA networks⁶. Meetings were organized by the visiting scientist with the coordinators of the retained networks (or where appropriate senior officials of the institutions concerned) or with all network stakeholders to identify priority areas and to jointly draft project/programme proposals.

¹ Report prepared in 1998 by the four members of ERNAC (M. Arnoux, A. Bozzini, J. Chataigner and B. Müller-Haye), document ECA: 31/99(4).

² In section B of document ECA/02/4—Rev 1)

³ ECA/32/02/4-Rev.1. The relevant text is given in Appendix 1 of this document.

⁴ See terms of reference in Appendix 3 of document ECA/32/02/4-Rev.1.

⁵ Strategic Framework for FAO: 2000-2015. A Summary, pp. 13-14.

⁶ Review of the SREN network is planned for early 2004.

9. The visiting scientist only retained networks that proposed programmes of activities with clearly defined scope and objectives and that covered at least one of the main spheres of activity that were likely to benefit developing countries and/or European countries with economies in transition, namely: (i) collaborative research; (ii) exchange of information; and (iii) training, updating and recycling. The possibility of creating networks on new priority topic areas was also considered. In December 2003, the invited scientist issued a progress report on the ESCORENA evaluation which serves as the basis for this document.

III. REVIEW OF CURRENT NETWORK SITUATION AND POLICY FOR THE FUTURE

10. The ESCORENA networks are traditionally classified into three categories according to field of agricultural activity: (1) crop production; (2) animal production; and (3) environment. It was noted that some networks have been relatively inactive for several years, either because of poor coordination due to limited interest in the field of study or because of a small number of participating countries. Such networks include those on trace elements, cotton and soybeans, for which the evaluation produced no programme of activity. The network on cotton, which still has some ongoing activities, could be incorporated into the network on flax which would then become the "Network on Fibre Crops". This does not, however, preclude the possibility of eventually identifying activities for support by one or more projects financed by one or more donors expressing a future interest.

A. NETWORKS WITH ACTIVITIES APPROPRIATE FOR SUPPORT

11. The programmes of activity of networks evaluated to date have been retained on the basis of the above criteria⁷. Their basic objective is not solely to increase production but also:

- to diversify and optimize the value of production: buffalo are hardy animals that produce high-value milk; Mediterranean varieties of rice cater to ancestral culinary traditions and are always in strong demand;
- to encourage production that has high added value: for example, as compared to other fruits, dry fruits are highly valued both in their raw state and after industrial processing;
- to respond to strong social demand associated with product quality: raising sheep and goats occupies a sizeable rural population and produces valued milk and cheese; mountain pasture will gradually produce further added value, with the development of labelled products;
- to contribute towards food security: for example, the cultivation of sunflower provides humans with high-nutritional-quality oil and livestock with a source of protein in the form of oilcake;
- to develop multipurpose crops: growing flax provides significant agricultural, industrial, artisanal and trade employment and satisfies a variety of nutritional (oil rich in Omega 3), clothing and cosmetic needs;
- to conserve the environment: e.g. the RAMIRAN network and the recycling of agricultural waste which is an important source of pollution and damage;
- to conserve the biodiversity of natural plant and animal resources: for example, the storing of gene banks in most networks (olives, dry fruits, flax, sunflower, rice, fodder seeds, buffalo sperm).

⁷ Except for the network on olives, which is due to decide a programme of activity at its next meeting in February 2004 in Sfax.

12. Retained research activities target strategic themes/axes that will produce relevant scientific results and rapid application for development. Of particular note is the inclusion of works on:

- genetics and animal improvement (buffalo, sheep and goats); genetics and varietal improvement (rice, dry fruits, fodder seeds, sunflower, flax);
- the study of procedures for the reduction of pollution and the recycling of waste.

13. As regards the dissemination of information, retained networks all regularly issue quality technical and scientific information in the form of newsletters, conference reports and reference works. Besides actual publication, they are also generally able to disseminate their research through specialized partner agencies, such as technical research and teaching institutes, cooperatives, formal extension bodies and chambers of agriculture.

14. Finally, retained networks are notable for their high-calibre management: their "coordinators" (heads of network) have a mandate that formally recognizes their scientific competence and their expertise in the research area in question. They all hold senior positions in their national research bodies: director of unit, head of department, president of centre and enjoy the total support of their superiors given that network activity fully reflects national strategic policy.

15. A detailed description of each retained network and programme of activity to be supported is given in document ECA 33/04/3-Sup.1.

B. PROPOSED NEW NETWORK

16. Several sectors could benefit from collaborative research because of strong interest to many European countries and developing or transition countries: for example, medicinal and aromatic plants, which could significantly enhance agricultural activity, especially in the more deprived regions; citrus fruits, which require cooperation, especially between the North and South of the Mediterranean in order to exchange varieties, control disease and transfer cropping techniques and biotechnology for environmental sanitation. The approach to collaborative research in all new areas should facilitate interaction between disciplines and involvement of all stakeholders, including the private sector. Similarly, new trends and experiences in Europe in integrated ecosystem management open up opportunities for new participatory methods of collaborative research. Key areas of topical interest include the proposal to establish a new network on quality and preparation of foods⁸.

17. Multidisciplinary (socio-economic) research could be organized along four strategic lines:

- study of the organizational aspects of agrifood processes intended to gain added value from specific quality;
- definition of property rights over seals of quality;
- help from public authorities in producer quality actions, particularly food safety and traceability;
- study of relations between consumers and producers, involving distribution channels in promoting quality.

18. In connection with the specific quality of foods, special attention will be paid to organic products which more and more countries are becoming increasingly interested in. Cooperation action could help build national capacity in structure and approach.

⁸ See document ECA 33/04/2, particularly paragraph 77 (v).

IV. COMMON CHARACTERISTICS OF ESCORENA NETWORKS

A. ADVANTAGES OF ESCORENA SYSTEM FOR RETAINED NETWORKS

19. The grouping of retained networks under an umbrella organization managed by a secretariat, the ESCORENA system as envisaged from inception and existing today, offers a number of advantages:

- a) After several years of activity, the ESCORENA networks have acquired a sizeable volume of resources that need to be preserved: (i) *scientific and technical resources*: as evidenced by the high number of papers presented at conferences organized by networks; (ii) *genetic resources*: as evidenced by the number of gene banks established under networks⁹. All these genetic materials continue to be available to the members of the ESCORENA networks and to provide a solid base for agronomic experimentation and genetic improvement of national production systems.
- b) ESCORENA permits the *involvement of teams of researchers from transition and/or developing countries* who would otherwise have difficulty in establishing international relations, in benefiting from opportunities made available by the European Union or in publicizing their results. *The multilateral dimension resulting from FAO support* is becoming crucial, in that Europe's Framework Programmes for Research and Technological Development are increasingly geared towards leading research teams and poles of excellence.
- c) *Technologies transferable* through ESCORENA: a great deal of technology has been developed in virtually all areas under study, including agronomy, varietal improvement, animal feed, artificial insemination and control of pollution from agricultural waste. Transfer of this technology is rendered easier by ESCORENA.

B. OPERATIONAL DIFFICULTIES

20. Operational difficulties are linked to:

- a) *The limited availability of FAO*. The often overwhelming workload associated with the heavy volume of information passing through the Organization leaves its technical services with little time to engage fully with the research and development networks, in spite of their keen interest in doing so. Calling upon greater involvement on the part of coordinators would significantly help energize networks and determine strategic policy.
- b) *Network coordination*: the coordinators' term of office was initially envisaged at four years, but has often lasted ten or even twenty years. More frequent change would be desirable, but would raise a number of problems: coordinators, elected by their colleagues because of their leadership skills, scientific expertise and seniority, soon get to know their teams and research areas well. This makes it difficult to replace them, especially as aspiring coordinators are in short supply and financial support still remains to be determined for the medium term. As long as a project approach is not put in place, neither FAO nor potential donors can apply modern forms of management: the selection and appropriate rotation of coordinators will only be possible in the framework of a project.

⁹ For example: the olive gene bank in Andalusia (450 varieties); the gene bank for dry-fruit trees in Catalonia; walnuts, almonds, pistachios, etc.; varieties of flax and jute in Poznan; buffalo sperm in Rome; sunflower varieties in Montpellier, and Serbia and Montenegro; forage and aromatic plant seeds in Nyons; rice varieties in Montpellier and Turin. European and Mediterranean breeds of sheep and goats have also been clearly identified and are the focus of cooperative work under the corresponding network.

V. PROPOSALS FOR THE FUTURE

A. THE PROJECT PROPOSAL FOR ESCORENA MANAGEMENT IN A FRAMEWORK OF PROGRAMMED SUPPORT

21. We need to recall the general terms of the ESCORENA management proposal that was presented to ECA in March 2002 and which is based on a project approach, whereby support is programmed and better tailored to its objectives. As supported by FAO, ESCORENA is expected to help development and research and the proposal is that this be done through projects. Donors' funds will therefore have to be managed within the framework of specific projects that target clearly defined activities of networks or working groups. Each project will be carefully reviewed by all stakeholders who will be fully involved in its formulation (donor, network coordinator, institution director of the beneficiary country and FAO). Once approved, the project will be implemented by the Regional Office for Europe (REU) with backstopping from the FAO technical officer directly associated with the project's topic area, following normal FAO field operation procedures.

22. For donors, the advantages of providing financial support to network activities through projects are many:

- a) ensured monitoring of activities and advance according to work plan;
- b) timeframe with cut-off dates, as required;
- c) quality and relevance of outputs kept under control;
- d) examination of needs and future demand for further assistance carried out on the basis of tangible project outputs;
- e) as supervisory body, regular progress reports at each ECA session, together, as appropriate, with recommendations on follow-up;
- f) possibility of submitting programme proposals for the future of ESCORENA to the ECA on the concrete basis of projects.

23. The advantage of the project approach for the networks is twofold: first, assurance that their activities will lead to concrete research outputs applied in developing and transition countries, enabling them to refine and expand their research work in areas covered by the project; second, more reliable and broader funding resulting from the inclusion of the project in their budget, as either the network coordinator or one of its members appointed by the coordinator would serve as project leader.

24. For the beneficiary countries, the impact of such projects on their national research systems would be the availability of European experts and technologies developed within ESCORENA, and the possibility of acquiring know-how from project activity and adapting it to local conditions. ESCORENA support to the development of national research systems in developing and transition countries would therefore be channelled not just through international meetings and technical publications, as in the past, but also through projects for the training of technical personnel and pilot experimentation in the framework of applied research.

25. To function at both project and programme level, such an approach requires that a technical unit for ESCORENA network projects be established within FAO. This unit (made up of at least one professional and one secretary) could be placed under the Regional Office for Europe, using the fact that it already has a project operations unit which has been implementing the FAO field programme in Europe for a number of years. This ESCORENA technical monitoring unit would therefore have the dual task of reporting to the ECA regarding (i) the monitoring and results of support projects for ESCORENA activities; and (ii) proposed projects/programmes to ensure optimal use of ESCORENA capacities for the benefit of development.

B. MANAGEMENT STRUCTURE AND FINANCIAL SUPPORT OF ESCORENA

26. A two-stage strategy is proposed, given that FAO's budgetary constraints prevent it from releasing staff to set up such a technical unit:

- a) in a first stage, minimum external funding is provided to support normal network coordination activities (meetings, publications); projects will be formulated during the course of the meetings/seminars held by the networks with the participation of the visiting scientist and relevant FAO technical services;
- b) in a second stage, and once a minimum number of projects have obtained funding, the unit is set up as soon as financial resources permit.

27. The visiting scientist currently on secondment to the Regional Office for Europe should receive guidelines from a Steering Committee to help direct the first stage of the strategy and to subsequently ensure regular monitoring. This Committee should be set up as soon as possible and should comprise two or three senior researchers from different countries, selected for a period of four years from among ESCORENA members and with sufficient experience in scientific cooperation. On the basis of the visiting scientist's work, the Committee would be charged with reporting periodically (every two years) to the ECA on the general orientation of ESCORENA, evaluating management of the dedicated budget, and proposing necessary changes, including new thematic and geographical strategies. Any new proposals should be based on the monitoring and evaluation of the quality of coordination of each network and on results, tasks that the invited scientist will be expected to carry out until the proposed technical unit becomes operational.

28. As soon as there is a sufficient volume of projects, this Committee would be supported by the technical unit (see para. 25). Experience shows that this unit could be entrusted to a senior researcher placed on secondment or made available by the national body. This post requires a good understanding of all agronomic disciplines and extensive experience in cooperation and the formulation and monitoring of projects. These attributes are required to be able to refocus network activities, should this be necessary.

C. ESTIMATED COSTS FOR IMPLEMENTATION OF THE PROJECT APPROACH

29. The first stage, maintaining minimum ESCORENA functioning until the networks provide a project formulation framework, only requires a very modest budget determined by the nature and volume of activities to be supported and the number of networks. The visiting scientist's evaluation has identified nine active networks plus one new network, making a total of ten networks relevant to development.

30. Proposed funding should cover two aspects:

- a) support of traditional "coordination" activities, which the ESCORENA networks have been carrying out for more than thirty years, to provide the framework for project formulation with all stakeholders: meetings, seminars, printing and dissemination of publications on research results. As the research institutions of developed countries are generally able to bear the cost of coordinator salaries for the time dedicated to their networks and meetings¹⁰, the funding will be directed especially to the members of developing or transition countries who do not generally have a budget to cover their travel expenses: finally, the individual network publications (newsletters, scientific and technical publications, information notes) that relate to the thematic area of the intended project should also be financed; we can estimate costs at an annual minimum of US\$5000 to US\$10 000

¹⁰ In particular international conferences which have registration costs enabling institutions to cover their organizational expenses.

for each network, depending on whether the network organizes an international seminar or not, which makes an average minimum subsidy of US\$15 000 per network per biennium. Total financing of the ten selected networks under this item would therefore require a minimum budget of US\$150 000. We also need to add the operating costs of the visiting scientist (salary supplement and travelling expenses), which brings the overall budget to US\$230 000 per biennium;

- b) the formulation of at least three projects per year will require an additional contribution of US\$20 000 per project to secure the services of experts from FAO and ESCORENA and cover logistics (travel, documentation, etc.); this means adding US\$120 000 per biennium to the budget indicated in para (a) above.

31. A total budget of US\$350 000 would therefore be needed in a biennium to start up the project approach, with the formulation of six project proposals. Talks with potential donors suggest the need to create a dedicated ESCORENA budget fund, which could be financed by the European countries, each providing a very modest annual contribution. It is important to note that this fund will not need to be replenished once the project approach becomes functional.

D. FUTURE ORIENTATION: MORE EFFECTIVE ROLE FOR ESCORENA IN DEVELOPMENT

32. We can already outline a number of general guidelines that would give ESCORENA a more effective role in supporting national research systems in developing and transition countries:

- a) *Broader thematic scope*: ten sectors are currently covered by ESCORENA, most concerning products studied in a multidisciplinary manner and, at different levels, from production to processing; in addition to the new network proposed above, other sectors could also become the focus of collaborative research because of particular interest to several European and Mediterranean countries (see para. 16).
- b) *Greater geographical coverage*: the activities of ESCORENA networks began in Europe and spread to the Mediterranean countries. Highly productive cooperation then developed with other regions where the network products were either important or under development: buffalo which is important in India, Iran, South America and Asia; flax, a traditional crop in China and Egypt; rice throughout Asia.
- c) *Better dissemination of information among technical personnel within FAO and countries in development or transition*: this can only be effectively done by organizing at FAO frequent meetings of technical personnel of FAO, ESCORENA and national research systems to publicize network activities and raise awareness of their existence as sources of knowledge and nurseries of potential experts for development projects. Technical information also needs to be disseminated through conference reports, newsletters and technical papers and through modern formats, including compact disc and the Internet, which are less costly and more flexible.
- d) *Increased use of experts working within the ESCORENA system* (estimated at some 2000): they could be used in the framework of development projects and projects implemented by FAO and its partners. The comparative advantage of the ESCORENA system lies in the laboratories that are associated with network activities and that are good locations for the training of researchers in the different disciplines.
- e) *Reinforced institutional links between the organizations involved in ESCORENA and FAO*: two aspects need to be considered: on the one hand, it is important to note that the coordinators of all the networks hold important positions in the organizational structure of their research institutions. They are generally senior researchers in charge of research units or indeed scientific departments. Their administrative status and scientific competence therefore facilitate the formalization of relations with their respective institutions, whose management has always supported coordination; on the other hand, lasting collaborative links between

FAO and research bodies associated with ESCORENA will only be possible if donor funding to networks is effected in the framework of clearly defined programmes/projects.

- f) *Closer relations between ESCORENA and international bodies:* numerous meetings of the visiting scientist in 2002/03 with key present and potential partners indicated that significant progress was possible, which suggests that much more could be done in the future by employing modern management techniques based on the project approach. Important meetings were held: (a) with the European Union to present ESCORENA's activities and identify opportunities for collaboration and possible co-financing under the Sixth Framework Programme for Research and Technological Development of the Directorate-General for Research (DG 12); (b) with the CIHEAM concerning the three co-sponsored ESCORENA networks, with full agreement on priority topics and programmes of activity; there only remain the uncertainties of financial support to ESCORENA and FAO's possible support role; (c) with other cooperation agencies, in particular the International Agricultural Research Centres (IARCs). In this connection, a decision was taken to hold a joint seminar on research on olives and olive oil (Sfax – February 2004) in the framework of a reactivated ESCORENA network that has been broadened to include all Arab countries. This initiative will help strengthen North-South and East-West cooperation in the Mediterranean. It will however need to be consolidated by drawing up a protocol between the two organizations defining respective roles and contribution.

VI. CONCLUSIONS

33. In its thirty years, ESCORENA has shown considerable vitality in continuing to function as an excellent system of multilateral and sometimes interregional cooperation.

34. It has been capable of adapting to the changes in political and economic environment in the 1990s and in agricultural development. Centred initially around countries of western Europe, it subsequently expanded eastwards and southwards, while engaging in new sectors of activity at the expense of others that had become obsolete.

35. The refocusing and continuity of the system requires a new context and decisions from ECA which it is invited to deliberate on:

- a) the reorientation of ESCORENA which will now be geared towards sustainable development: this new focus reflects the strategic thrusts of FAO as a development agency; the acquisition of scientific data should not be an end in itself but rather the penultimate step towards practical application in development projects;
- b) the establishment of a new network on food safety and quality (see para. 16);
- c) a Steering Committee should be put in place as soon as possible to help the invited scientist in his work of programme redirection and performance evaluation of networks and to guide the planning of ESCORENA activities; the work of the invited scientist should be carried out in the future by the technical unit responsible for project monitoring and evaluation (see para. 25 and 27);
- d) the gradual introduction of a project/programme approach; the projects will initially be formulated in the framework of the activities of networks whose relevance to development has been confirmed by the visiting scientist's evaluation (see ECA 33/04/3 Sup.1); these activities will therefore need to be supported until there is a sufficient critical mass of projects to establish a project monitoring unit, within the Regional Office for Europe, charged with reporting project results to ECA and, in agreement with the Steering Committee, making proposals for future projects and programmes (see para. 30);
- e) the implementation of a project/programme approach requires a dedicated budget for project realization and the orientation or launching of new programmes of

- action. Member countries should provide a financial contribution of US\$350 000 per biennium to be deposited in a trust fund managed by FAO (see para. 31);
- f) depending on ECA recommendations, an additional session could be organized immediately after the 24th FAO Regional Conference for Europe (Montpellier, 5-7 May 2004), to enable interested governments to discuss the establishment of a multidonor trust fund and make corresponding decisions.