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REPORT ON THE SEMINAR/WORKSHOP "REHABILITATION OF  
TERRACES AND OTHER TRADITIONAL TECHNOLOGIES:  
PROBLEMS AND SOLUTIONS"

(Lima, Peru, 4-6 May 1988)

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### Introduction

1. This report contains the background to and summary of the conclusions of the seminar-workshop on "Rehabilitation of terraces and other traditional technologies: problems and solutions", held in Lima and San Pedro de Casta from 4-6 May 1988.
2. The seminar-workshop was organized by the Economic Commission for Latin America and the Caribbean (ECLAC), the National Office for the Evaluation of Natural Resources [Oficina Nacional de Evaluación de Recursos Naturales (ONERN)] of Peru, and the Nature, Science and Local Technology Association for Social Service [Asociación Naturaleza, Ciencia y Tecnología Local para el Servicio Social (NCTL)]. It was sponsored by the National Planning Institute [Instituto Nacional de Planificación (INP)] of Peru with the collaboration of the Development and Environment Institute [Instituto de Desarrollo y Medio Ambiente (IDMA)].
3. The meeting formed a part of the activities of the ECLAC/UNEP project "Technical Co-operation for Integration of Environmental Considerations in Development Planning. Phase II", which is being undertaken by the Joint ECLAC/UNDP Development and Environment Unit.

## I. ATTENDANCE AND ORGANIZATION OF WORK

### Place, date and objectives of the meeting

4. The seminar-workshop was held from 4-6 May 1988 in the city of Lima and in the town of San Pedro de Casta. The meetings in Lima took place at the headquarters of ONERN.

5. The objectives of the seminar-workshop were:

- a) To examine the progress made on inventories and evaluations of the rehabilitation of terraces and other traditional technologies for the management of the water and soil resources of the sierra region.
- b) To identify the difficulties encountered during the rehabilitation of terraces and related traditional technologies.
- c) To strengthen institutional and co-operation links between governmental and non-governmental bodies, Peruvian universities and international development co-operation agencies.
- d) To recommend future measures.

### Attendance

6. The meeting was attended by experts from governmental and non-governmental Peruvian agencies and from international organizations. (See list of participants in annex 1.)

### Inaugural meeting

7. At the inaugural meeting, the participants were welcomed by Mr. Luis Masson, Director of NCTL.

8. Mr. Nicolo Gligo, representing ECLAC, and Mr. César Calderón Saltarich, Head of ONERN, spoke on behalf of the organizing bodies.

Organization of work

9. During the three days of the seminar-workshop, activities were co-ordinated by Mr. Jorge Millones Ocampo (ONERN), Mr. Luis Masson Meiss (NCIL) and César Villacorta (INP). The discussions were chaired by various participants.

10. The organization of the seminar-workshop was based on the presentation of eight papers on items of the agenda, a field trip to the locality of San Pedro de Casta, and a discussion of the principal issues raised during the course of the seminar.

Agenda

11. The agenda was as follows:

- a) Rehabilitation of terraces and other traditional technologies, from the viewpoint of:
  - i) Peruvian universities;
  - ii) Public bodies;
  - iii) Non-governmental bodies;
  - iv) International organizations.
- b) Development planning for the sierra region.
- c) Identification of problems.
- d) Areas of interinstitutional co-operation.
- e) Areas of international co-operation.
- f) Solutions and recommendations.

## II. CONCLUSIONS

### The rehabilitation of terraces in rural development strategies

12. A wide-ranging debate took place on the importance of the rehabilitation of terraces and other technologies in the new rural development strategies. There is no doubt that the new rural development strategy of Peru lays emphasis on the need to develop the sierra region, by seeking to make up for the state of backwardness in which it had been left through omission and spoliation.

13. Although it was recognized that progress had been made in this area, as reflected both in the statements of the authorities of the country and in the plans and programmes elaborated, it was felt that the real importance attached to the rehabilitation of terraces and related technologies could only be determined from the decisions regarding the allocation of economic and financial resources.

14. However, it was noted that the policy of decentralization, based on the Law of Regionalization, was a tool which could be very useful for the implementation of development programmes and projects in areas with terraces to be rehabilitated.

15. It was clearly established that the rehabilitation of terraces and its complementary technologies should be considered as a basic element of integral rural development in areas with little productive land. In other words, the rehabilitation of terraces should be approached in terms of the relationship between man and the land, in addition to considerations of its social, economic and financial feasibility.

16. It was concluded that any rural development strategy based on these technologies must contain a key element of peasant participation and local organization. The challenges of production require creative responses which should be formulated through basic research, the accurate interpretation of such research, and indigenous capabilities.

17. The challenge of the Andean region makes it necessary to recognize the heterogeneity of the situation and, consequently, to formulate diversified proposals based on a modern approach to the management of information.

18. A major obstacle to the implementation of plans and programmes has been the absence of economic and financial appraisals which take due account of costs and benefits. The topic was thoroughly discussed and the conclusion

reached that the proper integration of a programme for the rehabilitation of terraces in national planning should necessarily contain a comprehensive economic and social appraisal.

#### Quantification of areas with terraces

19. The significance was acknowledged of the figures presented by ONERN, which, by the date of the seminar-workshop had processed the southern and south eastern regions. This information, after processing, will be vital to the prioritization of regions and the allocation of resources.

20. It was noted that the information on the current state of the terraces and the prospects for their rehabilitation, while fundamental to the elaboration of development programmes and projects, should be adequately supplemented by the social and economic data to permit the evaluation of the feasibility of efforts to rehabilitate these areas.

21. Agreement was reached on the need to promote the widespread dissemination of studies carried out by ONERN, and to ensure early publication of their results.

22. It was noted that the appraisal carried out by ONERN did not disaggregate according to types of terraces nor did it include the technological elements which could affect the levels of efficiency. Such information can only be obtained from larger scale studies, with a larger field work component.

#### Scientific and technological research

23. An examination was made of the efforts of universities to expand the scope of their studies on the technologies for the rehabilitation of terraces, and it was recognized that the necessary financial resources for intensifying such research had not been made available.

24. Emphasis was placed on the need to recover technologies used in pre-Columbian times, such as those concerned with orientation, the separation of walls, the size and shape of stones, capturing solar energy, inter alia.

25. There was a confirmation of interest in continuing with the comparative research on terraced and unterraced areas with soils, aimed at determining the loss of soils in the unterraced areas as a result of erosion.

26. The question was discussed of the need to establish a realistic and motivating framework of research in order to ensure that the rehabilitation of terraces and related technologies did not appear utopian, but as a key element in the broadening of the productive base.

The institutional problem

27. In comparing the current situation with that of a few years ago, it was observed that considerable progress had been made in relation to the structures and work of the institutions working towards the rehabilitation of terraces. It was unanimously recognized that this issue was not concerned with any single institutional field but that progress could be made to the extent that efforts were complementary and co-ordinated.

28. In this context, emphasis was placed on the role of non-governmental organizations (NGOs) in the development of the topic as catalytic and integrating elements for intersectoral and interinstitutional initiatives. It was, however, noted that the proper role of such organizations was not always clearly defined and that, moreover, they operated at the level of small localities. Consequently, it was the State, through its agencies, which should channel development of the subject through its global strategies and its plans and programmes.

### III. RECOMMENDATIONS

29. The seminar-workshop adopted the following recommendations:

- a) To promote the organization of this type of meeting to examine progress in this subject area, both in the field of research and in the implementation of integral rural development programmes and projects based on the expansion of the productive base through the rehabilitation of terraces.
- b) In view of the current level of information on the subject, to exercise a certain prudence in proposing global solutions.
- c) To ensure the widest possible dissemination of the quantitative evaluation undertaken by CNERN.
- d) To establish a national network for rural development based on the rehabilitation of terraces and other technologies, comprising governmental and non-governmental organizations.
- e) To promote, through the State, the implementation of a comprehensive programme for the rehabilitation of terraces, which should form part of the National Programme for the Management of Basins and Conservation of Soils.
- f) To request ECLAC to continue to promote meetings of this kind as well as to continue its contribution to the elaboration of the feasibility studies necessary to promote the comprehensive project.

## ANNEX I

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