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OTHER FUNDS AND PROGRAMMES

UNITED NATIONS FINANCING SYSTEM FOR SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

Project recommendation of the Administrator\*

Application of Technologies Appropriate for  
Rural Areas in Indonesia (Phase II)  
(INS/83/T01/A/71/99)

I. Background

1. Some 78 per cent of Indonesia's population reside and find their livelihoods in rural areas. For the most part, they are directly or indirectly dependent on the use of the natural resources available in their immediate locality. Often their ability to maximize utilization of the resources is constrained by an adherence to less productive, traditional techniques and limited knowledge. The Government, recognizing that technological underdevelopment is both a cause and effect of rural poverty since it hampers the full utilization of available resources, has actively sought to promote the welfare of rural communities by introducing and disseminating rural technologies.

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\* Submitted in accordance with the provisions of the Annex to General Assembly resolution 34/218, paragraph 37, Section IX.C, concerning procedures for approval of projects to be supported by the Financing System and exceeding \$2 million in total cost.

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2. In particular, the current national development plan identifies the reduction of post harvest produce losses, the improvement of rural water supply and sanitation, increased small-scale agricultural output, diversified rural income generating schemes, and utilization of new and renewable energy sources as priorities for urgent attention.
3. In October 1980, UNFSSTD approved an applied programme for the development, adaptation and dissemination of new and improved rural technologies. Under Phase I, (which was successfully completed in November 1982) support was given to the creation, within the framework of the Indonesian Institute of Sciences (LIPI), of an Appropriate Technology Unit, and to the identification of actual technology needs of the rural communities. Through fellowships, training, field trials and some equipment supply, the Unit's staff has risen to 20 full-time professionals; an inventory of some 25 potentially effective rural technologies has been assessed; laboratory and field station facilities in Bandung have been initiated; and existing dissemination agents in the government's extension services have been enlisted in a concerted programme to deliver relevant rural technologies to identified communities. Phase I has, in addition, contributed to the design of the follow-up phase, in collaboration with end-users.
4. Phase II seeks to implement further measures for developing, testing and disseminating technologies in the priority areas. Following the preparations under Phase I, it proposes to establish a Centre for Rural Technologies (CRT) based on the growing capabilities of the LIPI Appropriate Technology Unit and located in new premises available in Kalijati (60 kms. from Bandung), where construction has already begun and the necessary infrastructure is available. It is envisaged that the Centre will evolve into Indonesia's principal applied research and development unit for the demonstration and adaptation under real conditions of technologies appropriate for rural areas.
5. Presently, numerous institutions, national and international, governmental and non-governmental are actively engaged in research and development activities and programmes in appropriate technologies. A co-ordinated effort to focus appropriate technology research and prototype development/demonstration in rural areas is therefore required to ensure the efficient utilization of limited resources and avoid wasteful duplication. Phase II seeks to create working linkages between such efforts through the co-ordinating and development role of the proposed CRT.

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## II. The project

6. The general development objective of the project is to improve rural living conditions through the application of new and improved technologies for the reduction of produce losses, increased productivity, improved water supply and sanitation, increased employment opportunities and diversified sources of rural income, using new and renewable energy sources.

7. Through the activities of the CRT, Phase II seeks to attain the following immediate objectives:

(a) To promote the widespread adoption and to assist in the dissemination of already available and proven rural technologies in order to meet the immediate requirements of the rural population, utilizing and strengthening existing dissemination services;

(b) To develop and adapt on the laboratory and pilot scale, a selection of existing and new technologies (water supply and sanitation; post-harvest techniques to reduce losses; processing and packaging of cash crops; feed preparation for fish farming; domestic cooking techniques; solar energy utilization; gasification and anerobic fermentation; production of organic fertilizer through biochemical/electrical processes);

(c) To establish a collection system for rural and energy technologies data;

(d) To monitor the performance of pilot scale technologies in order to ascertain their dependability as well as any potential obstacles apparent under operating conditions of a technical, social and economic nature;

(e) To demonstrate, in a representative variety of rural locations, the identified technologies, individually and optimized in relation to each other, so as to evaluate their economic potential through an appropriate cost/benefit analysis.

8. In order to encourage local production and dissemination of suited products and processes, a systematic effort will be made at the national level to: quantify the market potential and the possible scale of cost-effective production of such technologies, identify local manufacturing capabilities and possible local technological content, ascertain joint co-operation modalities for utilizing external inputs for implementing such production, a rural network for repair and maintenance including training, a credit facility for small loans, and other incentives for the dissemination by local entrepreneurs and farmers of the identified technologies.

9. The activities of the project will be supported by a Steering Committee which will provide policy guidelines and advice on project implementation. Furthermore, in order to create the necessary working linkages between the CRT's work programme and related activities being carried out in Indonesia, by local practitioners and other multilateral co-operative programmes, a Rural Technology Working Group will be constituted to assist the Centre in operational matters.

### III. Financial Data

10. The expenditure components of the proposed UNFSSTD assistance are as follows:

|   | <u>\$</u>      |
|---|----------------|
| Project personnel   | 576 200        |
| Training  | 164 800        |
| Equipment   | 980 000        |
| Miscellaneous (travel, maintenance,<br>running cost, credit fund) | 270 000        |
| Estimated support costs   | <u>199 000</u> |
| Total Estimated Cost  | 2 190 000      |

11. The Government of Italy has officially indicated that it will provide the necessary funds for implementation of this project, through a Trust Fund to UNFSSTD to be established for this purpose. This Trust Fund will be administered according to the provisions concerning Trust Funds conditioned upon procurement from the donor country established by Governing Council decision 82/5 and subsequent decisions at its Thirtieth Session.

### IV. Recommendation

12. In the light of the above, the Administrator recommends that the Governing Council approve the project for Application of Technologies Appropriate for Rural Areas in Indonesia (Phase II), at a total estimated expenditure of \$2 190 000.

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