5. Preparation of the teaching and dissemination material.
6. Training instructors and users.
7. Technical assistance in the execution step.

Contacts were made with CORDEPIURA, CORDELAM and CARE which had several reconstruction programs to be implemented in the disaster area. Finally, an agreement was signed between CORDELAM and the PUCP for the reconstruction of the three relocated towns in the Department of Lambayeque.

The agreement centered the technical assistance in Nuevo Tupac Amaru, where CORDELAM had already programmed the construction of 140 houses and the people was apparently ready to build. Technical assistance to Canasloche and Chochope was not specifically mentioned in the agreement due to limitations of time and human resources, but it was intended to give them the thecnical assistance according to the availability of resources.

In this way, the initial work plan was modified, since CORDELAM had already defined the first three steps.

4. PROGRAM DEVELOPMENT

The dissemination activities were centered in three rural towns: Nuevo Tupac Amaru, Chochope and Canasloche; and one main city of northern Peru (Chiclayo). The program lasted one year, from June 1984 to May 1985, period during which the following activities were performed:

- Preparation of dissemination material (brochures, and audio-visual programs).
- Dissemination lectures at several levels: engineers and architects, local builders and users.
- Elaboration of the technical file (construction plans, list of materials, budget estimates, etc.)
- Training local builders through SENCICO (National Training Institute for Construction Workers).
- Socio-economical study of two rural communities
- Technical assistance during the construction stage.
- Dissemination of the new technology in the city of Chiclayo (newspapers, radio programs, etc.)

The technical team in the field consisted of three engineers and one technician specialized in adobe construction, later on,an anthropologist joined the team to conduct the socio-economical study of the communities involved.

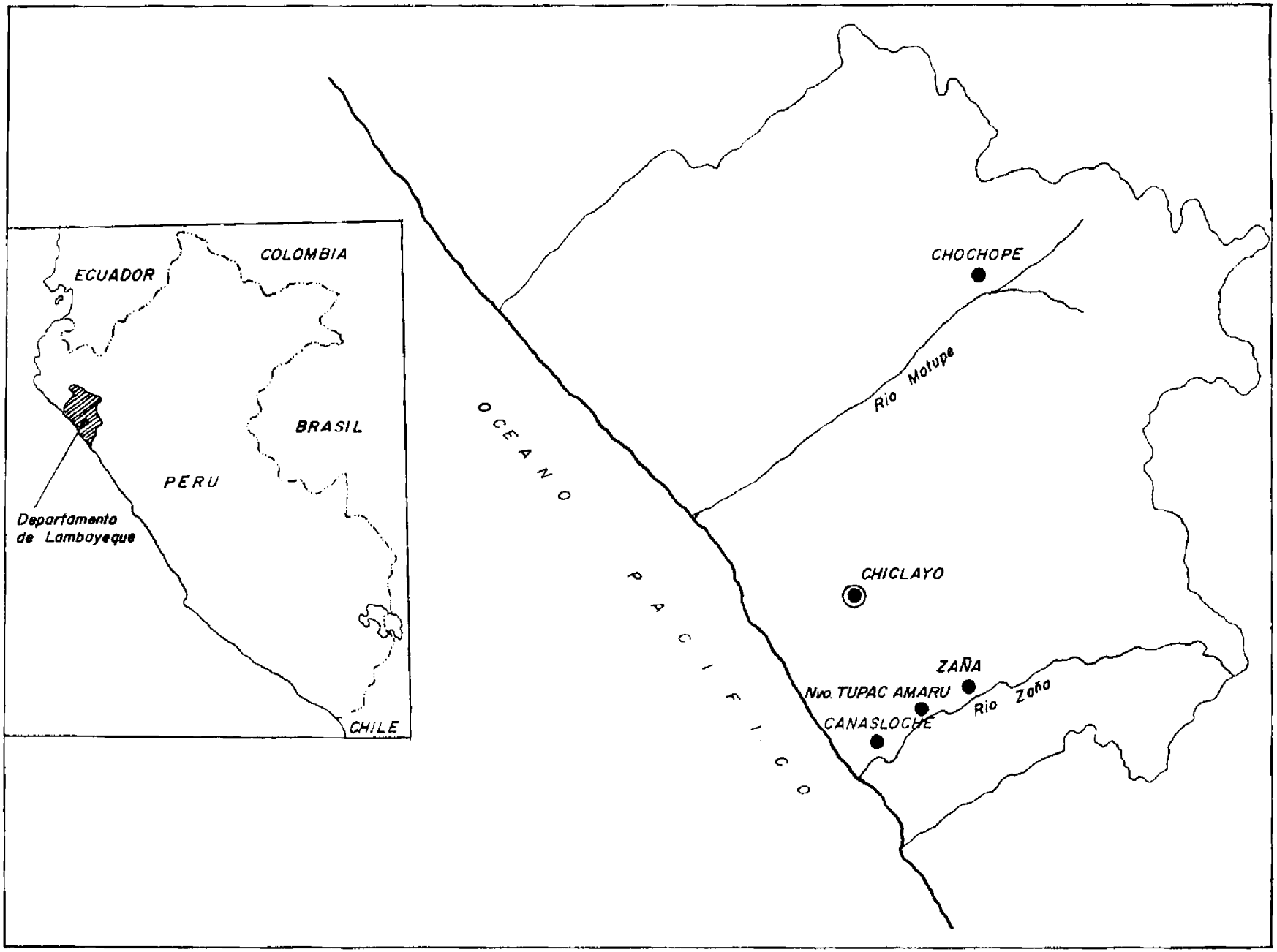

Fig. 3 Area of influence of the dissemination project.

4.1 Acquisition of Construction Materials

Between June and July 1984, the technical file was elaborated by the team in the city of Chiclayo. This was an indispensable requirement for the allocation of funds in the acquisition of materials. The condition to elaborate the technical file was to develop a basic house module, which could be expanded later on by the people. The module had 25 square meters, which fit the budget limitation proposed by AID which amount US$ 300 per house unit. The design considered a concrete foundation, adobe walls and a roof of wood beams, cane and mud.

Once the technical file was approved by AID and the funds were transferred to CORDELAM, i.e. September 1984, public auctions had to be held for the purchase of the materials. In spite of the efforts of CORDELAM, the first materials arrived in the towns in November, due to a serie of bureaucratic requisites in the process of acquiring the materials.

4.2 Dissemination Activities in the Rural Towns

The first contact with the communities was in July 1984, in the town of Nuevo Tupac Amaru. It was determined that the people did not know the amount and extent of the aid and the requisites demanded in exchange, i.e. labor hand for the construction.

After several assemblies in which the new technology and the requisites for the aid were explained to the settlers, they signed an act compromising to work in the construction of their houses.

The first action towards dissemination was related to the fabrication of adobes. The proposed technology meant more work and thus less production, originating a first rejection towards the new technology on behalf of the adobe makers hired by the beneficiaries. A similiar attitude was adopted by the masons at the time of erecting the adobe walls, due to the cane mesh inside them. This fact, together with the little importance given to the seismic resistance of their houses made little attractive the acceptance of the new design by the settlers.

In Canasloche, 5 Km away from Tupac Amaru, there was a total rejection from the beginning of the program and not a single adobe was fabricated with the new technology

The results in Chochope were different, the first contacts with the community were made in September and until November there was no great activity because the population was not totally convinced to participate in the project. The initial differences of opinion towards the project were smooth down by allowing the people to fabricate adobes in their traditional way but with the dimensions required by the project and to make changes in the module architectural distribution.

Fig. 4 Dissemination lecture to the settlers in Nuevo Tupac Amaru.

Fig. 5 Presentation of project to the assembled settlers in Chochope.

In January, 28 houses were about to be finished and with this progress, CORDELAM distributed corrugated plates of tarred pasteboard for the roofs, since there was seasonal rain in that area. The construction stopped in February and March because of the rainy season. In April with a new incentive of a food distribution program, the number of participants in the project increased to 69 families.

The food program was also implemented in Tupac Amaru bu it did not incentivate the people to participate in the project, resulting in only 14 families which built with the new technology.

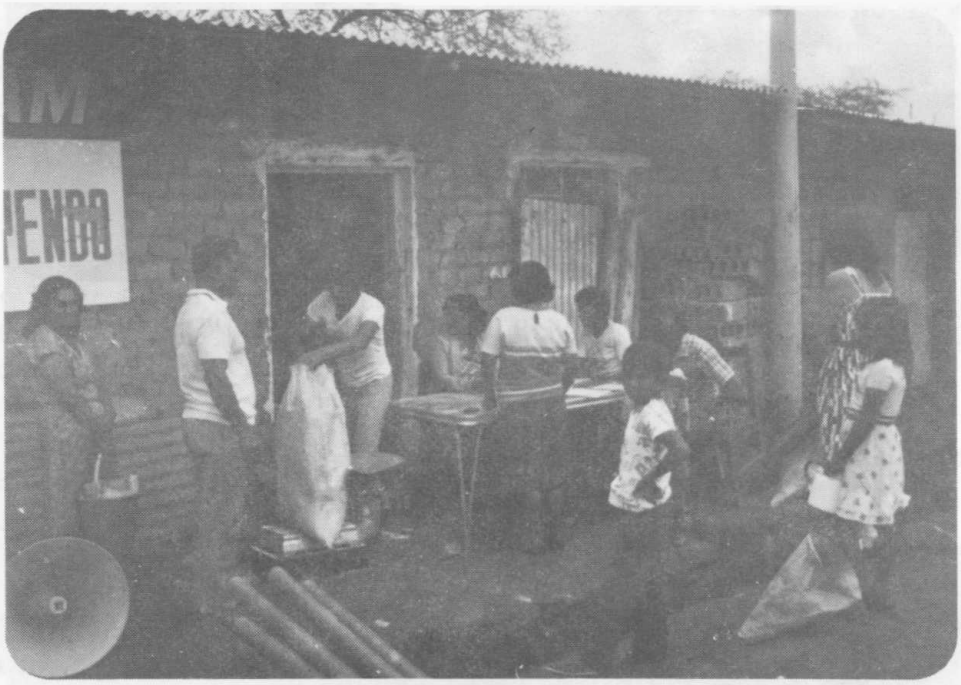

Fig. 6 Food distribution to beneficiaries in Chochope.

4.3 Dissemination Activities in the City of Chiclayo

In order to find out the acceptability of the new technology in a different environment as it is a main city, a dissemination campaign was implemented in Chiclayo. It consisted on radio programs, newspaper ads, and some television interviews. This campaign was coordinated with SENCICO, institution which showed great interest on adopting the new technology for adobe constructions, and which joint training courses had been carried out.

The campaign motivated several individuals and institutions to ask for more information, but the variety of cases made it necessary to study each one individually, taking into account both the needs and the economic resources. This task required personnel with enough time to analyze and solve each of them and only one project was concreted, the construction of a medical post in a rural village.

It was also of interest, the contacts made with the local authorities which organized several dissemination lectures in the slum areas of the city which build mainly with adobe.

4.4 Epilogue

As the time went on, CORDELAM was worried about the low participation of the people of Nuevo Tupac Amaru and Canasloche, and the consequent unused materials already bought and stored, which were not delivered to the beneficiaries

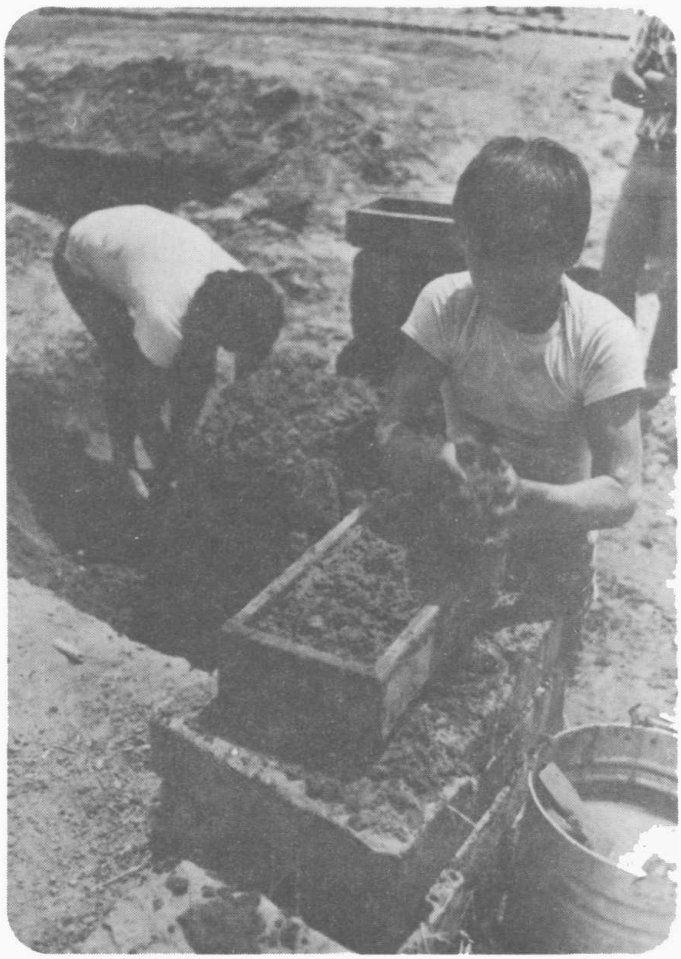

Fig. 7 Children from Nuevo Tupac Amaru making adobes with the new technology.

because did not accept the new technology. In view of this fact, CORDELAM took the decision of giving the materials to be used in the construction of their houses with the traditional technology.

In Nuevo Tupac Amaru, the people started to use the foundation materials (stone, concrete and cement) massively but after that, the construction of walls decreased again.

In Canasloche, the people was not able to use the materials for the foundation because of a lack of water in the town. The pipe line system that should provide water to the town was not ready yet.

In Chochope, until the end of the project, the construction continued massively with SENCICO taking the task of giving technical advise in the construction of houses with the new technology, and some months after the end of the project, there were more than one hundred families involved in the project.

Fig. 8 Building a house with the new technology in Nuevo Tupac Amaru.