Tilapia by the thousands

TILAPIA POND AT THU-DUC FROM START TO FINISH
Technical assistance, training, asphalt, steam rollers, crushers, concrete mixers, scrapers, rooters, tank trucks, dump trucks, watering trucks, jeeps, motors, milling machines, touradozers, tractors, mobile machine shops, motor graders, mobile trucks, mounted cranes, Mack fire trucks, steel bridges, suction dredges, fire fighting tug-boats, Layne wells, outboard Tregurtha motors, transmitters, receivers, telephone equipment, teletypewriters, generators, transformers, wire, calcium hypochloride, topographic instruments, corrugated iron sheets, asbestos roofing sheets cement, asphalt boilers.
All phases of public works in the Associated States were affected by the existence of a state of war. Operational military construction in the field of public works is normally planned and budgeted by the Armed Forces. The role of American assistance, therefore, is directed toward two major programs:

1.- Furnishing aid for the construction and rehabilitation of roads, airfields, communication facilities, bridges, railways, power and waterways in non-combat areas to allow expansion of social action efforts, to improve physical security and to permit the re-establishment of normal economic life.

2.- Contribution to the effort of the governments toward improvement of vital but underdeveloped phases of public works which serve both the civilian and military sectors. Such efforts include assistance in improving certain airfields, highways, ports, waterways, power plants, railways and communications installations in all three countries.

Provision is made for reconstruction or maintenance of the main highways, such as the Hanoi-Haiphong road, the North-South artery in Central Vietnam and the Saigon-Vientiane highway. Highway reopening and rehabilitation is to follow into liberated areas, as a means of improving security. In ports and waterways, highest priority work is being undertaken at the Saigon, Haiphong and smaller ports. In conjunction with the dredges which are expected to arrive soon, the improvement of inland
waterways is to be undertaken in South Vietnam and Cambodia, together with the construction of cargo-handling facilities. In some sections of South Vietnam and Cambodia, inland waterways are the principal means of transportation.

In Laos, considerable assistance will be provided for improvement of highway and waterway transportation, power and telecommunications. This plan has been under consideration for some time, in conjunction with a five-year plan developed and recently revised by the Laothian government. Transportation and telecommunications are principal needs of Laos in order to develop the economy.

4.11 - Highway Bridges

More than eight large and 22 smaller structures are underway or completed. Included in this number are two pre-stressed concrete bridges at Prek Te in Cambodia, and Khanh-Hoi in Vietnam. This is the first time that this type of bridge has been used in Indochina.

The newly reconstructed 6 span 400 meter NGUYEN-HOANG bridge, Hue Central Vietnam was dedicated April 13th, 1954. Three new metal spans were added and the whole structure re-enforced to withstand heavy military traffic.
#### 4.13 - Highway Improvement and Maintenance

Before the war, Indochina had an excellent system of some 20,000 kilometers of hard-surfaced roads, 5,500 of which were asphalted. Today the picture is quite different as a result of long years of warfare. While efforts have been made to keep roads in repair particularly for military needs, little permanent improvement has been effected because security conditions were unstable.

Asphalt, some 130,000 tons to date, locally purchased material such as crushed rock, and heavy equipment have been provided to help the military and civilian public works engineers maintain a road communication system.

There are more than 3,500 kilometers of paved roads in the controlled areas of the Associated States at the present time. Despite constant sabotage, projects are in continuous operation for the repair of more than 2,000 kilometers of vital highways.

The four metal span 219 meter Lâm-Hà bridge, from Hai-Phong to Kiên-An was recently completely re-built as a joint Franco Vietnamese and American project. Concrete approaches and railway tracks were added.
4.20 - Railroads

Railways

At the present time there are less than 1,412 kilometers of railroad line in operation in the Associated States compared with 2,908 kilometers before the war. Railway operations were conducted under armed guard during the past year because of guerrilla activities. Constant sabotage by communists intent upon destroying this valuable transportation facility practically stopped railroad traffic outside of urban areas. As yet no aid has been given to railways.

4.30 - Telecommunications

Telegraph, telephone and VHF radio equipment, mostly wireless, has been received and installed to provide 24-hour service in some vital cities. VHF equipment has been requested to replace that lost in Phontieu, Thakek, Saravane and Attopeu when Communist rebels invaded Laos.

4.40 - Port Facilities and Inland Waterways

4.41 - Harbor Improvement

Improvements have been made at the ports of Haiphong, Tourane, Nhatrang, Saigon and Vientiane. They consist, in general, of wharf extension, additional storage space, strengthened sea walls, channel dredging and channel marking. Seven dredges are under procurement for use in the ports and waterways of Cambodia and Vietnam.

Left to right: Road under repair, North Vietnam; sample of Laotian road; Mechanized road building in Laos.
Fiscal year 1954 saw increased war destruction by the Vietminh. Bridges and trains were blown up and villages wantonly destroyed. More and more aid had to be given the homeless and sick.
4.42 - Inland Waterways

Diesel propulsion ferry boats, tugs and fire boats and locally built native pirogues and cargo barges have been furnished to meet the difficult transportation problems of the Associated States.

There existed a very efficient system of inland waterways in pre-war days, but now they are badly in need of dredging, and upon arrival of new dredges a restoration program will be implemented.

4.43 - Cargo Handling and Storage

Technical assistance and some mechanical cargo handling equipment have been provided for installation at the ports. Several prefab storage huts were set up for additional storage space.
4.50 - Power

More than 90 sets of motor generators with ratings from 16 to 225 KVA have been received and installed in priority locations throughout the Associated States.

Two large electrical centers are being rehabilitated in Laos, one is a charcoal gas turbine plant and the other a gas and diesel driven plant. These new facilities have more than doubled the existing power supply in these two centers.
Luang Prabang, Laos. Arrival of a 100 KVA generator for installation in city municipal lighting plant.

4.70 - Other Public Works

The Governments are considering enlarged programs for refugee housing and other public works allied to community development. Studies are now being made of an inexpensive rammed-earth block in which little or no cement binder is required. Two American technical assistants visited Formosa to observe new methods and uses for the low-cost blocks.

4.72 - Other Urban Services

Fire and general service trucks, diesel and electric pumps, jeeps and printing equipment have been procured and distributed to the Associated States Public Works services.

4.90 - Air Transport

Airfield extension and drainage projects have helped military and civil traffic in Laos and Vietnam. The outlook is toward an enlarged program for runway construction and drainage and other facilities in FY 1955.

Recent Communist attacks on civil airfield facilities have prompted requests for replacements under the commercial import program.
Technical assistance, looms, cotton yarn, jeeps, trucks, construction material, forges, calculating machines.
The handicraft center at Hadong, North Vietnam, was operating at capacity as fiscal '54 ended. Hundreds of artisans were finding gainful employment there and apprentices were being trained in new skills. The success of this center had led to many demands for further assistance in this field.

A substantial development of small industries was limited by the war conditions which obtained generally throughout the Associated States. Furthermore, local capital finds returns from investment in commercial and residential construction more attractive. Until the situation becomes stabilized there will be considerable difficulty in encouraging small industry. Imagination and forcefulness, together perhaps with government sponsorship of long-term, low-cost loans and other forms of guaranties will be needed to develop this phase of economic life.

The Armed Forces of the Associated States have expressed interest in small defense-support industries but present indications point to state ownership rather than private ownership of these undertakings. The whole field of development of small industry will require increasingly serious study as conditions of security and stability improve.
6.00 - GENERAL AND COMMUNITY DEVELOPMENT

The main purpose of the Community Development Program is to reintegrate men and women, displaced by the war, into a life of productive effort and to permit a growth of civic responsibility through community cooperation. Every effort is being made to have these programs embrace the basic social services in health, education, agriculture, and other fields essential to community life.

To-date there have been 42 projects approved in General and Community Development for a total of US$ 1,430,034.44 and 156,515,105.39 piasters, divided up as follows:

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<th>Country</th>
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