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Seminar-Workshop on the Exchange of
Experiences and Technology Transfer
on Mini Hydro Electric Generation Units

Kathmandu, Nepal, 10-14 September 1979

COUNTRY PAPER OF IRAN*

Presented by

A. Tolou**

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Iran with an area of about half India's has little more than 1/20th of the latters population. More than half of this population, i.e. about 20 million are Scattered in more than 60'000 villages all over an area amounting to 1.6 million square kilometers.

The drive to create a national electricity grid throughout the country which, up to the revolution, the focus has been on it, among its other disadvantages, has been unable to give electricity to more than a tiny percent of the villages, and that only to those located in the more densely populated areas. The bulk of Iran's villages especially those in remote and scarcely populated areas in the central, southern and eastern part of the country are still deprived of electricity.

The former regime had a huge nuclear electrification plan to privide 23000 Mw electricity in 20 years. It was supposed to supply electricity, through a national grid, also to the villages. This project, however, like several others whose purpose was not prosperity but the so-called prestige, and whose results were an ever increasing dependence to foreign technology, foreign manpower and foreign raw materials, now is abandoned. The resulting gap in electricity power supply in the coming years is to be filled by other means.

Mini hydro power generation units can be one of the ways to meet part

of the demand in the country-side. The possibilities of setting-up mini-micro hydro generation units differ in different regions of the country. Water resources in Iran are generally scarce, however in the mountaineous regions of north and west there are many streams running in very steep terrain where you can easily obtain large heads, and many cascades. There have also been many corn mills which can be modified to sites for mini-micro hydro turbines.

Another source of water supply in Iran is the traditional "qanat" which is very common in drier areas. Qanats are underground tunnels, some of them tens of kilometers long, which for centuries have brought subterraneous water on the surface where there have been no surface waters. There are thousands of qanats throughout the country which give perennial water. However because of the low head in the qanats, only those with higher flow can be used for mini hydro.

Those were the potentials for mini hydro development in Iran, however, the concept of mini hydro is somewhat new for the country, and before any serious consideration of its applying there, in addition to a thorough survey of the soil, water resources etc., the economic side of the matter has to be particularly studied in the case of an oil producing country such as Iran.

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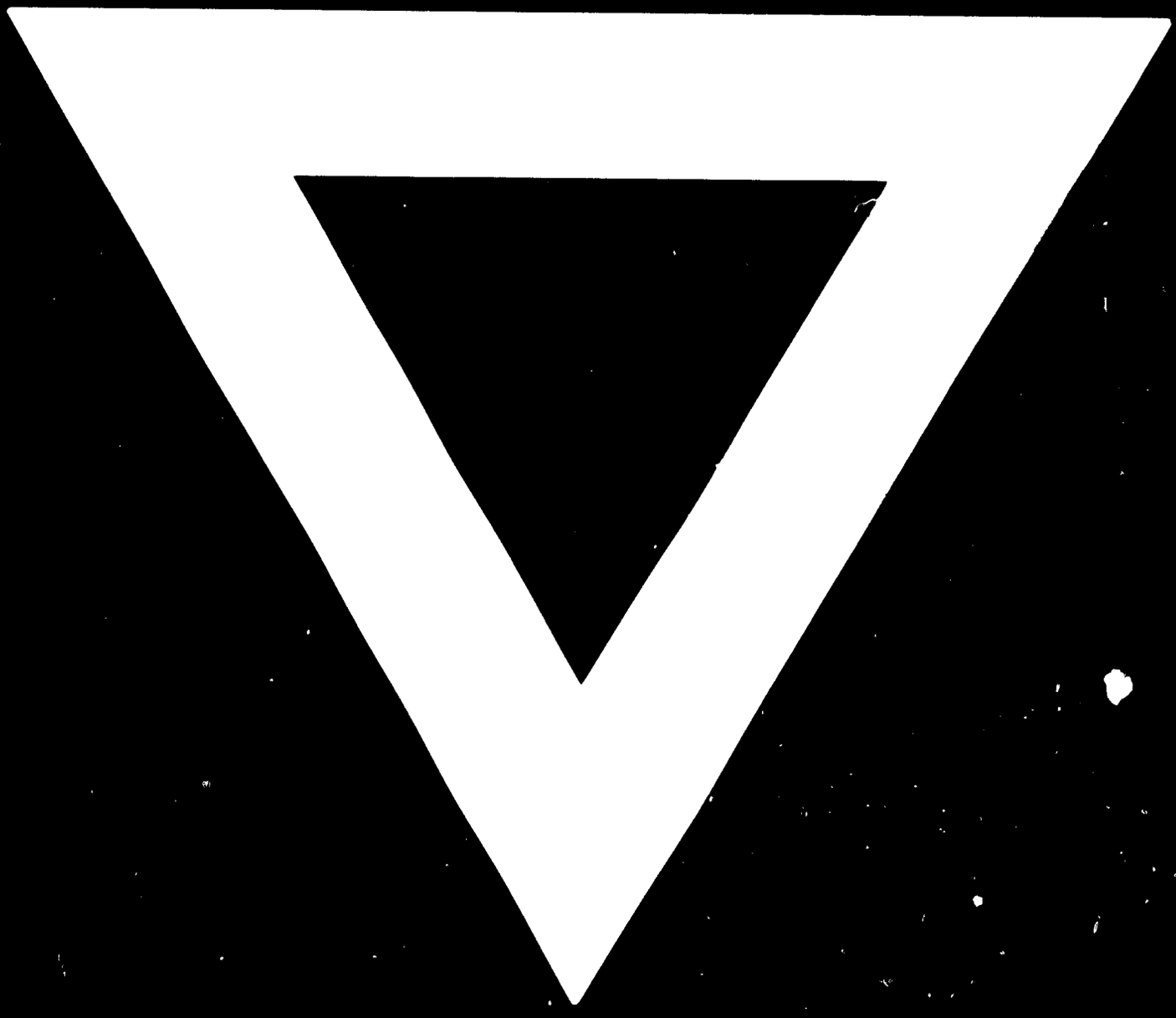

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