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# **PITSILIA CROP SYSTEM: AN EX-POST EVALUATION**

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## **KEYWORDS**

Integrated Rural Development, Project Evaluation, Highlands, Cyprus

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## **STUDY AREA:**

**Vilages:** Aghia Marina, Xyliatos, Chandria, Palaichori, Avlona

## **1. INTRODUCTION**

The study area consisted of five mountainous villages in the Pitsilia area of Cyprus, namely, Aghia Marina, Xyliatos, Chandria, Palaichori, and Avlona. They are situated in an area of an average altitude of around 1000 m.

The main activity of the residents was Agriculture and the villages were suffering from isolation, economic depression and decreasing population which led the Government of Cyprus in 1974 to design and implement an Integrated Rural Development Project with the financial contribution of the World Bank.

This project referred to the whole area of Pitsilia including 49 villages and 21000 residents.

The project commenced in 1978 and was successfully completed in 1984.

The total cost of the project was 24.3M\$ of which 17.25M\$ were diverted to water development works.

The objective of the current study is an ex-post evaluation of the Pitsilia project concerning the economic component and the agriculture development in the above mentioned four villages

## **2. METHODOLOGY OF WORK**

In order to perform the study, the study group visited the five villages, Aghia Marina, Xyliatos, Chandria, Palaichori, and Avlona and interviewed representatives of Land Consolidation Committees,

village Authorities and farmers. A questionnaire formulated by the group was used with interviewees to extract information in the following areas.

- a. Agriculture and more specifically water development projects, land consolidation and improvements, minor irrigation schemes, cropping pattern changes.
- b. road networks
- c. marketing of Agricultural products
- d. social infrastructures
- e. government support
- f. general information about the project and the study area.

### **3. RESULT**

#### **3.1 Agricultural sectors**

##### *3.1.1 Irrigation works*

##### **Chandria - Aghia Marina**

A pond of 70000 m<sup>3</sup> was completed in 1983 irrigating an area of 18.77 ha. The project was undertaken jointly by the water Development Dpt of the Ministry of Agriculture, Natural Resources and Environment of the Government of Cyprus and "CYBARCO", a private Cypriot firm. The result was a six fold increase the irrigated land. Additional land was irrigated by a borehole scheme.

Financing of the two projects was provided by the farmers (1/3 of cost) and the government.

Management of the scheme after construction is done by a body involving the local Authorities and the Farmers.

The farmers do not pay for the water they receive but they pay for the maintenance and the Operation of the project depending on the size of their plot.

The nearby Xyliatos Dam, is the largest single water project constructed within Pitsilia project and has a capacity of 1.3cm. It was completed in 1984 by the water Development Dpt with the collaboration of a Cypriot Construction firm "C.C.C". Total expenditure of the Xyliatos project was around 1.8 M £ and its purpose is to irrigate land mainly belonging to the inhabitants of Aghia Marina, Xyliatos, Chandria, Kyperounda and Lagoundera. Total irrigated land is 308 ha of which 85 ha is in Aghia Marina and 77 ha in Chandria.

##### **Palaichori - Avlona**

In Palaichori no additional water works were implemented during Pitsilia project since a Dam was already operational irrigating 130 ha. The irrigation land was already consolidated and around 15 km of farm roads were already constructed.

In Alona during the Pitsilia project a borehole scheme was implemented in 1984 irrigating 12.73 ha . The whole project expenditure was 45000 œ.

##### *3.1.2 Roads*

One of main outcomes of Pitsilia project was the establishment of a road network connection between the Pitsilia, area with the capital Nicosia and the villages of the area between them.

### *3.1.3 Land Consolidation (L.C)*

Land consolidation was implemented by the land consolidation authority from 1978 to 1983 in the villages of Aghia Marina Xyliatos, Louvaras, Kalo Chario, Pelendri and Potamitissa involving a total area of 470 ha . It aimed at mainly at improvement of the defective land tenure system and the increase of the economically viable holdings.

In the villages under study, L.C. was implemented only in Aghia Marina. The main results of the project were the following :

- a. The number of owners decrease by 33%.
- b. The average size of ownership increased by 186 % from 0.19 to 0.54 ha .
- c. The average size of the plot increased from 0.09 to 0.46 ha .
- d. The number of plots owned in undivided shares was eliminated
- e. The total farm road network construction is 9.4 km with a cost of 32.513£ (1980) From the construction of this network 100% access to agricultural plots was achieved.
- f. A total area of approximately 10 ha and 38 trees of a total value of 9660 £ belonging to 269 owners were compulsorily acquired through the scheme and redistributed to other owners. An area of 0.14 ha of Government land was also used for the same purpose. The time required for the implementation of the scheme was 3 years and 6 months (i.e. from initiation of voting to acquisition of position of land).

### *3.1.4 Sales strategy of local agriculture products and cupping pattern changes*

Due to the extended water works after the Pitsilia project the farmers were able to change their crops to a wider range of products. Before the project main crops were almonds, olives, and seasonal crops like potatoes, tomatoes, vegetables etc. After the project new crops were introduced such as deciduous fruit trees, citrus, olives, pistachios, strawberries as well as kiwi in Palaichori.

Farmers are selling their products either through retailers and wholesalers or cooperatives. The co-operative of Kyperounda is also dealing with farmers from Aghia Marina while the co-operative of Palaichori is showing remarkable activity in the last years increasing its annual turnover from 130000 £ in 1995 to an expected 200000 £ in 1996. The SELITEP owns cold storehouse and transport facilities .

## **3.2 Government support**

In Xyliatos Dam project the total cost was borne by the government of Cyprus which in turn was selling the water to the farmers at a fixed cost per CM.

In the case of the pond or borehole schemes in the examined villages the funding was jointly done by the Government (2/3 of cost) and the farmers (1/3 of cost).

The farmers concerned after implementation of the project were responsible for the management and operation of the project.

The Government also helped the farmers offering them technical assistance, advice, loans, training and seeds, plants and generally assisted them to adjust to the new reality.

## **3.3 Demographic effect**

Generally the project resulted in reversing the tendency of local people to more to larger cities.

In Aghia Marina the population is stabilised.

In Palaichori however there is an interesting population increase, as shown below.

Year	Population
1960	3000
1970	1500
1980	1000
1992	1298

There are 45 children in kindergarten and 153 pupils in the primary school.

#### 4. CONCLUSION

The main benefits from the implementation of the Pitsilia projects as far as the five villages examined are concerned can be summarised as the following:

- Time saved by farmers to visit their scattered and fragmented ownership. For instance in the case of Aghia Marina was 9135 hours per year after the project.
- Decrease in the size of uncultivated land i.e. 11 ha of uncultivated land in Aghia Marina were turned into cultivation after the project.
- Decrease in capital cost to the farmer i.e. 22 hours per ha /year were saved due to farm road construction.
- Increase of internal rate of return of the project for Aghia Marina L.C. works was 15%.
- The average income increased 3 to 4 times according to farmers, after the project.
- The improved road network together with the irrigated land allowed locals to stay in the villages and look after the land which gave a good income. In addition, others who had abandoned their land to move to the cities were able to visit their homeland more often and look after the land.