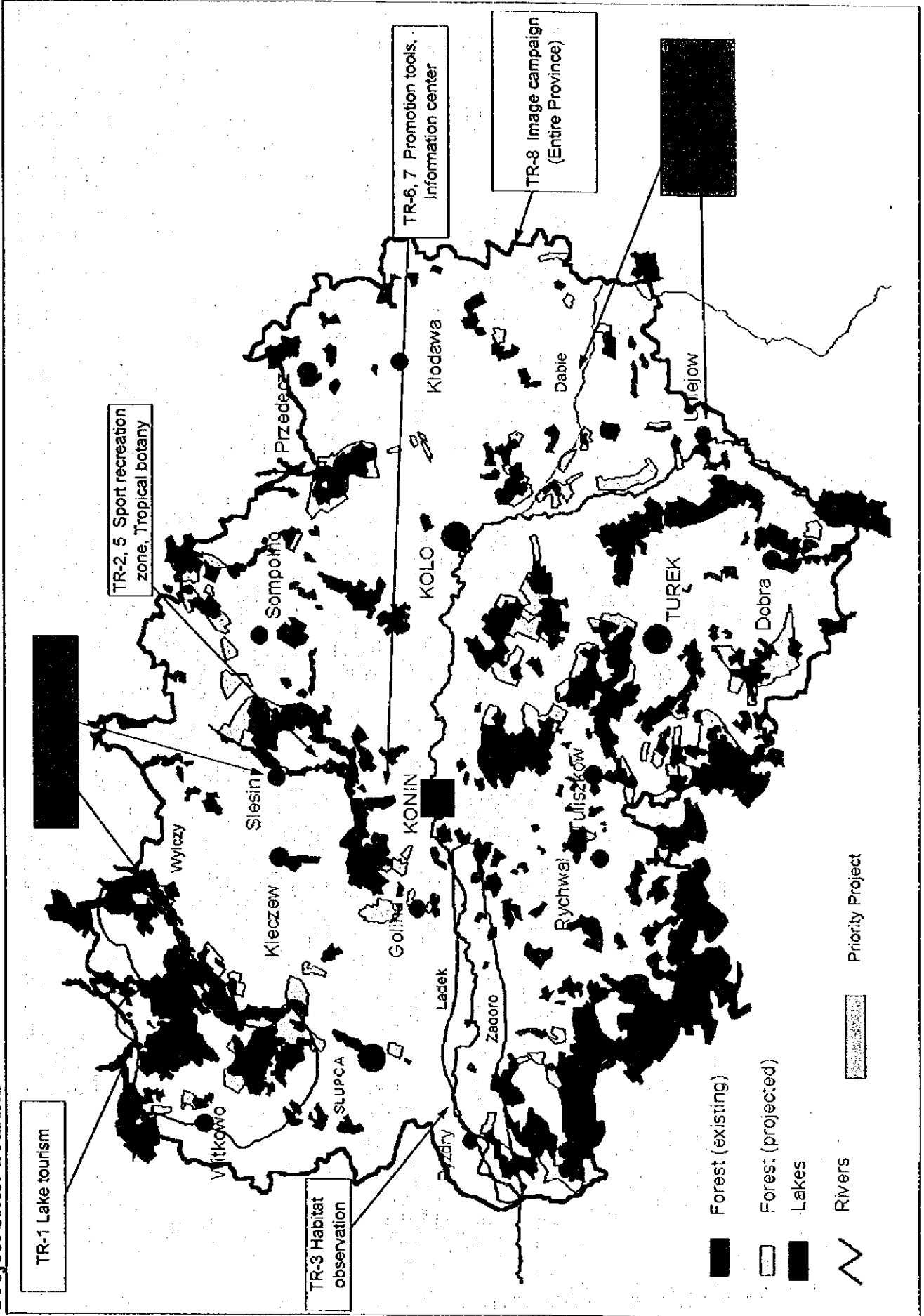


TOURISM



Project Sites: Tourism



Project Sites: Tourism

TR-1 Lake tourism

TR-2.5 Sport recreation
zone, Tropical botany

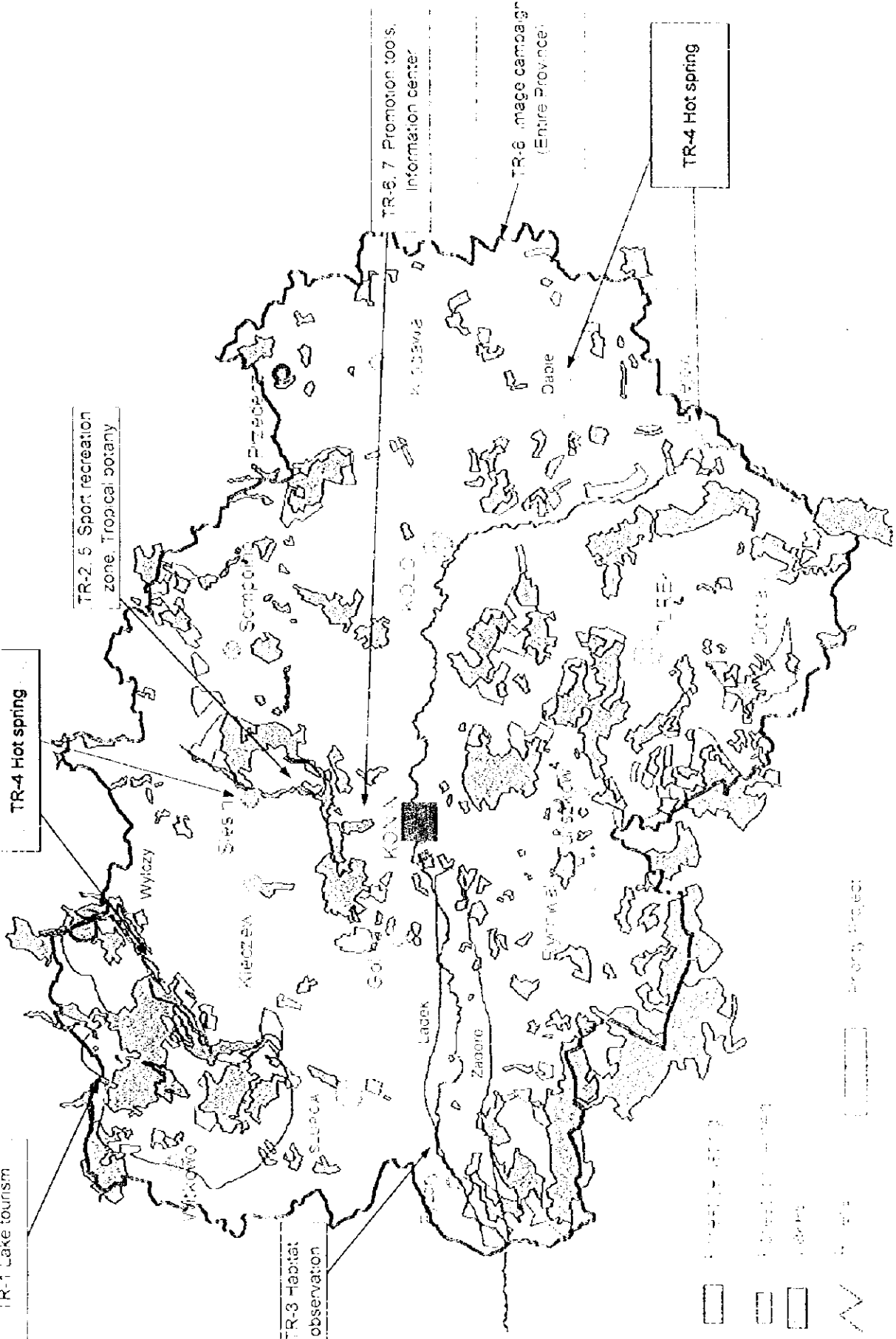
TR-4 Hot spring

TR-3 Habitat
observation

TR-6.7 Promotion tools,
Information center

TR-6 Image campaign
(Entire Province)

TR-4 Hot spring



- Project site
- Project project
- Road
- Lake
- River



Project No. TR-1

1. PROJECT TITLE	Development of the lake areas in north-west Konin
2. PROJECT SITE	Gminas of Witkowo, Powidz, Ostrowite and Wilczyn
3. IMPLEMENTATION AGENCY	Primarily private sector assisted by public sector
4. EXPECTED DIRECT JOB CREATION	110 people for each sub-area
5. ESTIMATED PROJECT COST	US\$ 5,000,000 for each sub-area
6. RATIONALE	<p>The north-western part of Konin Province is blessed with a chain of lakes including Skorzecinskie, Powidzkie, Budzislawskie, Wilczynskie, Suszewskie and Kownackie, and a clean natural environment. The quality of tourism resources in the area is not first class compared with that of Masurian lake district, which is in the north eastern part of Poland and famous to all European tourists, but also attracts visitors from all over the Wielkopolska region. The primary tourism activity in the area is camping in the summer with Skorzecin along Skorzecinskie Lake being the center of camping. The current problem in the area is low usage of tourism resources, which are only utilized only in summer. There is virtually no tourism activity in other seasons except ice sailing at Powidzkie in the winter when the ice is frozen over the lake and is thick enough. The new development of areas along the lakes is currently following the past trend and is directed toward selling areas for second houses. In order to obtain stable employment and income for people in the area, it is required to target the establishment of all season tourism. Although the realization of all season tourism at a single stroke will not be possible, the development policy for the future would be to widen the current summer season tourism to spring and autumn.</p>
7. PROJECT PURPOSE	<p>To develop the lake area in the north-western part of Konin Province as an integrated tourism area.</p>

8. OUTPUT

Since all lakes are extended over multiple Gminas, it is necessary for the Gminas concerned to coordinate, and cooperate, with each other and to prepare an integrated tourism development policy. The policy means the regional integration of both tourism and the various tourism activities in the area. Each Gmina will retain its characteristics including steam engine locomotives in Witkowo, winter sports on ice in Powidz and horse riding in Ostrowite. Several sub-areas may be developed. Each sub-area would consist of hotel(s) operating all-year-round with sports and recreational facilities. Since it is a nature-based tourism area, the development policy and actual development should be environment-friendly.

1. An inter-Gmina tourism development committee is organized.
2. A Master Plan for development of tourism in the area is formulated.
3. Pre-investment studies are conducted.
4. Private investment to establish an integrated tourism development policy is made.
5. An integrated tourism area is established.

9. ACTIVITIES

- 1.1 Organize an inter-Gmina tourism development committee of concerned Gminas
- 2.1 Prepare a Master Plan for integrated tourism development in the area.
- 2.2 Designate areas for tourism development.
- 2.3 Obtain approval for the use of state-owned land/forest for tourism development, if applicable.
- 2.4 Determine incentive measures for inviting investors.
- 3.1 Hire consultants/experts for a feasibility study.
- 3.2 Conduct a feasibility study for the investment.
- 4.1 Purchase land for the development.
- 4.2 Prepare a detailed design for the construction and area development works of each sub-area.
- 4.3 Prepare land for the development.
- 4.4 Construct buildings and facilities and purchase equipment.
- 5.1 Advertise the tourism area to potential visitors.
- 5.2 Start operation of the hotel(s) and tourism facilities.

Project No. TR-2

1. PROJECT TITLE	Development of an integrated sports-recreation zone
2. PROJECT SITE	Miasta Konin of Gmina Slesin
3. IMPLEMENTATION AGENCY	Private sector
4. EXPECTED DIRECT JOB CREATION	50 people
5. ESTIMATED PROJECT COST	US\$ 5,000,000
6. RATIONALE	
<p>Currently there is not a sports and recreational facility for all season use in Konin Province. The development of an integrated sports-recreation zone consisting of various sports and recreational facilities will become a core part of tourism in Konin, which, presently, does not exist. The facility will be offered above all for the use of residents of Konin Province. The possible site for such a zone would be the northern part of Miasta Konin of Gmina Slesin which is the geographical center of Konin Province and will allow easy access for users in the Province. The indoor facilities in the zone will be able to utilize the waste heat of power plants which are also available in the area.</p> <p>The zone would function as a resting place for pilgrims of Lichen Stry which now attracts more than 1.5 million pilgrims a year and is expected to have around 3 million pilgrims after the completion of a new sanctuary by the year 2000. If 10% of pilgrims would visit the zone on the way back from the sanctuary, in addition to usage by local residents, it will secure the financial viability of the sports-recreation zone.</p>	
7. PROJECT PURPOSE	
To develop an all-year-round sports-recreation zone making use of underutilized heat discharged from power plants.	

8. OUTPUT

The integrated sports-recreation zone will consist of:

- (1) Indoor sports facilities for volleyball, basketball and table tennis, and also a gymnasium and swimming pool;
- (2) Outdoor sports facilities for football, tennis and horse riding;
- (3) Recreational facilities for flower garden, greenhouse, children's playground and golf putting course; and
- (4) Restaurants and coffee shops.

It will be possible to use the facility for the training of the national team in certain sports including football, volleyball, etc. The zone would be operated by a membership system and also receive visitors.

1. Investors are invited.
2. A Feasibility Study is conducted.
3. Private investment to develop an integrated sports-recreation zone is made.
4. The integrated sports-recreation zone is completed.

9. ACTIVITIES

1.1 Designate an area for tourism development.

1.2 Determine incentive measures for inviting investors.

2.1 Hire consultants/experts for a feasibility study.

2.2 Conduct a feasibility study for the investment.

3.1 Purchase land for the development.

3.2 Prepare a detailed design for the construction and area development works.

3.3 Prepare land for the development.

3.4 Construct buildings and facilities and purchase equipment.

4.1 Advertise the integrated sports-recreation zone to potential visitors.

4.2 Start operation of the hotel and facilities in the integrated sports-recreation zone.

Project No. TR-3

1. PROJECT TITLE	Development of a natural habitat observation park
2. PROJECT SITE	Gminas of Ladek, Pyzdry, Rzgow and Zagorow
3. IMPLEMENTATION AGENCY	Public sector
4. EXPECTED DIRECT JOB CREATION	22 people
5. ESTIMATED PROJECT COST	US\$ 500,000 (does not include cost for the establishment of Academic Research Center of Ecology)
6. RATIONALE	
<p>The area of 13,428 ha in mid-stream of the Warta River which flows across the province in an east-west direction was designated as the Warta Landscape Park by Konin Province in 1995. The policy measures for the environmental protection and the use of the park are not yet prepared but are scheduled to be discussed soon. The area is an important nesting place in Poland for 153 species of birds, and is home to various mammals such as elk, beaver, otter, etc. The area also provides a base for migrating birds. There exist archaeological sites which date back to the stone age. The area is partly used as grazing ground for cattle. It also has important educational assets for scholars, students and pupils in teaching the importance of environmental protection and ecological research.</p> <p>It is necessary to formulate the development policies of the Park to coordinate the protection of natural habitat and to control the use of the Park. Action should be taken as soon as possible, otherwise degradation of the Park's environment will continue and some of the important natural habitats will be lost forever. One of the upstream tributaries of the Warta River, the River Ner, is particularly polluted, and is affecting the environmental condition of the Park. There is an urgent requirement to control the discharge of this polluted water.</p>	
7. PROJECT PURPOSE	
To develop a swamp and forest area along the Warta River as a recreational park for natural habitat observation.	

8. OUTPUT

The natural habitat observation park in the area will require the establishment of:

- (1) Natural Habitat Observation Center, and
- (2) Academic Research Center of Ecology.

Activities of the two centers must be well coordinated and complement each other, but the latter, which includes the divisions of Mammals, Ornithology, Amphibians, Ichthyology, Entomology, and Botany(land and water), would be established and operated by an academic institution such as Botany Department of Poznan University. Therefore, it is excluded from the scope of the following process of project.

The facilities equipped by the Park are the Natural Habitat Observation Center, which would be built at the edge of the Park, and the walking road network for natural habitat observation. The guides who have knowledge of environmental protection and natural habitat of the Park will be stationed at the Center. They will give explanations of exhibits in the exhibition hall/rooms of the Center to visitors and be prepared to guide groups of visitors through the Park and give the necessary on-site explanations.

The activities and environmental condition of the Park should be carefully monitored by the Environmental Protection Department of the Provincial Office.

1. A committee for the Protection and Development of Warta Landscape Park consisting of the Provincial Office and concerned Gminas is organized.
2. The walking road network and Natural Habitat Observation Center are constructed.
3. The Park is opened.

9. ACTIVITIES

- 1.1 Organize a committee for the Protection and Development of Warta Landscape Park consisting of the Provincial Office and concerned Gminas.
- 1.2 Prepare a Master Plan for the Development of Warta River Natural Habitat Observation Park.
 - 2.1 Prepare a detailed design for the construction and area development works.
 - 2.2 Prepare routes for the walking road network of natural habitat observation.
 - 2.3 Construct buildings and facilities and purchase equipment.
- 3.1 Start operation of the Park.

Project No. TR-4 (Refer to Detailed Project Study for PTR-1)

1. PROJECT TITLE	Development of hot spring resources
2. PROJECT SITE	Gminas of Uniejow, Dabie, Slesin and/or Wilczyn
3. IMPLEMENTATION AGENCY	Primarily private sector being assisted by public sector
4. EXPECTED DIRECT JOB CREATION	160 people
5. ESTIMATED PROJECT COST	US\$ 9,600,000
6. RATIONALE	
<p>There are about 40 spas in Poland, all of which exist mainly for treatment and curing purposes and not for tourism. Most of them exist at Tatra mountain areas with only a very few in the Polish lowland. However, geothermal water resources are reservoired at various depths in the lowlands of Szczecin - Lodz Mesozoic sub-basin and Konin Province is just located on this sub-basin. The existence of geothermal water has been confirmed since the 1970s within Konin Province including Uniejow, Dabie, Kolo, Slesin and Wilczyn. However the use of the resources has not made any progress since the discovery because of the existence of Konin's development potential based on other resources and the high costs involved in geothermal water resources development.</p> <p>However, the recent consideration on geothermal water resources as an environmentally-friendly source of energy and the availability of subsidies for its development have focused the use of the resource for heating purposes. It has also brought about the possibilities of utilizing the downstream water for tourism purposes. The utilization of the resource for tourism purposes as a hot spring resort will bring 36,500 visitor-nights/year to the hotel and 184,000 visitors to restaurants in the resort. It will, therefore, add a new feature to tourism in Konin.</p>	
7. PROJECT PURPOSE	
To utilize unused hot spring resources found in various parts of Konin Province for tourism and recreational purposes.	

8. OUTPUT

Since Kolo is considering the use of the resource only for heating purposes, the possible location of the resort will be Uniejow, Dabie, Slesin and/or Wileczyn. The proposed hot spring resort is basically a tourism resort which provides various sports and recreational services rather than traditional treatment and curing facilities. Major facilities in the resort will include a hotel (100 rooms, 200 beds), swimming pool, restaurant, rest houses, 9 hole mini-golf course, tennis courts, flower garden and greenhouse, pier and boats, children's playground, etc.

1. A policy for the development of geothermal water resources for tourism purposes is established.
2. Promotion measures to attract investors are implemented.
3. A Pre-investment Study is conducted.
4. Private investment to establish a hot spring resort is made.
5. The hot spring resort is constructed and operated.

9. ACTIVITIES

- 1.1 Determine a policy for the use of geothermal water resources.
- 1.2 Prepare a Master Plan of geothermal water resources development in the Gmina.
- 1.3 Designate areas for tourism development.
- 1.4 Obtain approval for the use of state-owned land/forest for tourism development, if applicable.

- 2.1 Determine incentive measures for inviting investors.
- 2.2 Prepare documents and pamphlets for inviting investors.

- 3.1 Hire consultants/experts for a feasibility study.
- 3.2 Conduct a feasibility study for the investment.

- 4.1 Purchase land for the development.
- 4.2 Prepare a detailed design for the construction and area development works.
- 4.3 Prepare land for the development.
- 4.4 Construct buildings and facilities and purchase equipment.

- 5.1 Advertise the resort to potential visitors.
- 5.2 Start operation of the resort.

Project No. TR-5

1. PROJECT TITLE	Construction of a tropical botanic and butterfly garden
2. PROJECT SITE	Miasta Konin, Gmina Kleczew or Gmina Slesin
3. IMPLEMENTATION AGENCY	Private sector
4. EXPECTED DIRECT JOB CREATION	25 people
5. ESTIMATED PROJECT COST	US\$ 1,100,000
6. RATIONALE	
<p>There are various tourism resources in Konin Province but there does not exist any prominent tourist attraction of international or national importance except Lichen Stary which is a religious facility. Although this cannot be counted as a tourism resource in its real meaning, it is a potentially important source of attracting tourists to Konin. In order to attract tourists' attention toward Konin, it is required to build a tourism facility of international or national repute since nature-based resources in the province are not of sufficient value to attract such attention.</p> <p>Konin Province has a comparative advantage in the existence of waste heat. The possible development of a tourism facility of international or national repute should be based on exploitation of unused resources: an idea to be studied carefully and positively will be the establishment of a tropical botanic and butterfly garden. The "butterfly" could be replaced by "bird" or "fish" in the course of the detailed analyses of project's feasibility. However, the "butterfly" seems to be attractive since there is not any such facility in Europe, while "bird" and "fish" exist in many countries, and has the potential to attract tourists' attention from all over Europe.</p> <p>The number of visitors to the garden is conservatively estimated as 1 million a year.</p>	
7. PROJECT PURPOSE	
To establish facilities making use of waste heat in order to attract tourists from all over Europe and domestic tourists from throughout Poland.	

8. OUTPUT

The structures of the proposed tropical botanic and butterfly garden are large scale greenhouses (12 greenhouses) with their final shape an area of 6,000 square meters, capacity of 60,000 cubic meters and height of 20 meters at their highest points. Plants and species of butterfly will be gathered from local, European and tropical climates in different continents of the world. The facilities would be gradually developed in several phases.

It would also require cooperation with Ecology Department of Academic Institution, facilities for which would be planned and financed by the Institution.

1. A Feasibility Study is conducted.
2. Greenhouses and pipelines for taking waste heat water from the power plant are constructed.
3. Tropical and sub-tropical plants and butterflies are gathered.
4. A tropical botanic and butterfly garden is opened.

9. ACTIVITIES

- 1.1 Prepare a feasibility study for the project.
- 1.2 Arrange for the cooperation with Ecology Department of Academic Institution(s).

- 2.1 Purchase land for the development.
- 2.2 Prepare a detailed design for the construction works.
- 2.3 Construct buildings and facilities and purchase equipment.

- 3.1 Procure tropical and sub-tropical plants and butterflies from all over the world.
- 3.2 Conduct ecological research for nursing tropical plants and butterflies.

- 4.1 Advertise the garden to potential visitors in European and domestic markets.
- 4.2 Start operation of the garden.

Project No. TR-6

1. PROJECT TITLE	Upgrading of tourism promotion tools
2. PROJECT SITE	Miasta Konin
3. IMPLEMENTATION AGENCY	Public sector
4. EXPECTED DIRECT JOB CREATION	2 people
5. ESTIMATED PROJECT COST	US\$ 25,000 per year (annual operation cost)
6. RATIONALE	
<p>The most effective and efficient way of promoting tourism in Konin, which is still in an early stage of development and not yet known in the tourism markets in and out of the country, is to develop tourism resources in the province based on the regionally-concerted development concept and to promote it by integrating the promotion measures of all tourism related entities. However, the current tourism promotion procedure lacks these standpoints and promotion tools are prepared by each tourism entity without any coordination among them. The project is to remedy this shortcoming through up-grading the tourism promotion tools.</p>	
7. PROJECT PURPOSE	
<p>To re-examine all existing tourism promotion tools and to prepare new ones based on a tourism development concept.</p>	
8. OUTPUT	
<p>The project starts from the organization of the Tourism Promotion Committee to be chaired by the Tourism Department of the Provincial Office and consisting of representatives from tourism-related private entities and Gminas and to formulate a tourism development policy for the province in a long-term perspective. The policy will include several alternative ideas of development reflecting each entities' and areas' characteristics and their development potential. At the same time they are based on the concerted and integrated concept of tourism development and promotion tools will be renewed and upgraded based on this concept.</p> <ol style="list-style-type: none">1. The Tourism Promotion Committee is organized and a tourism promotion policy of the Gmina is prepared.2. New and upgraded tourism promotion tools are prepared.	

9. ACTIVITIES

1.1 Organize the Tourism Promotion Committee.

1.2 Prepare a tourism promotion policy for the Province.

2.1 Prepare tourism promotion tools based on the unified promotion concept.

2.2 Promote Konin tourism using promotion tools of the unified concept.

Project No. TR-7

1. PROJECT TITLE	Establishment of a tourist information center in Konin
2. PROJECT SITE	Miasta Konin (in front of PKP Konin station)
3. IMPLEMENTATION AGENCY	Primarily public sector followed by private sector
4. EXPECTED DIRECT JOB CREATION	3 people
5. ESTIMATED PROJECT COST	US\$ 43,000 for construction of the center US\$ 22,000 for annual operation cost
6. RATIONALE	<p>Currently, there is no tourism information center in Konin. Tourists who are planning to visit areas in Konin are not able to contact any tourism information center in order to obtain information to prepare their travel plans in advance. Tourists who arrive in Konin by rail and by bus cannot obtain such information at the railway station or at bus terminals. To provide necessary information to tourists is a basic requirement of promoting tourism and, therefore, it is urgently required to establish a tourism information center in front of or in the waiting lounge of PKP Konin railway station.</p> <p>The function of a tourism information center is simply to provide sufficient information on tourist attractions in the region, accommodation, traffic services to reach destinations, etc. to tourists. It will be very important to consider the railway station as a site since trains of 160 km/hour speed will soon be introduced on the E-20 railway and the tourists who utilize this means of transport are expected to increase substantially.</p> <p>The tourism information center is operated jointly by public and private sectors. Functions of the information center as well as the financing of construction and operation might be determined by the above-mentioned Tourism Promotion Committee (cf. TR-6).</p>
7. PROJECT PURPOSE	To establish a tourism information center for tourists who arrive at Konin and are planning to visit Konin.

8. OUTPUT

1. Tourism promotion center is planned by the Tourism Promotion Committee.
2. The center is constructed and operated jointly by public sector and private tourism entities in Konin Province.

9. ACTIVITIES

- 1.1 Organize the Tourism Promotion Committee.
- 1.2 Prepare a plan for the establishment of a tourism information center.
- 1.3 Select the site for the center.

- 2.1 Prepare the land area for the center which is provided by the public sector.
- 2.2 Construct the center by the joint financing of tourism entities in Konin Province.
- 2.3 Operate the center by the joint financing of tourism entities in Konin Province.

Project No. TR-8

1. PROJECT TITLE	Promotion of "Clean Konin" campaign program
2. PROJECT SITE	Whole Konin Province
3. IMPLEMENTATION AGENCY	Primarily public sector followed by private sector
4. EXPECTED DIRECT JOB CREATION	2 people
5. ESTIMATED PROJECT COST	US\$ 46,000 for annual operation cost
6. RATIONALE	
<p>Konin Province is still considered as a polluted area from its past experience of awful environmental problems. This general understanding is partly correct since the Province has not yet completely overcome the pollution emitted by industrial entities, although the situation has greatly improved recently. Socio-economic revival should be based on the complete removal of pollution from the Province, which must be the target for all citizens in the region. Konin requires a province-wide campaign to bring about a pollution-free region. It is vitally important to change the general understanding on the environmental situation of Konin, otherwise neither tourists nor investors will come to the Province.</p> <p>The "Clean Konin" campaign consists of two phases.</p> <p>1st Phase:</p> <p>In this phase the "Clean Konin" campaign mainly appeals to residents, economic units and the public sector within Konin Province. It is the phase to bring about a pollution-free province by all-out efforts of all concerned parties within the province. Assistance from the central government is required to bring about a pollution-free Konin in coordinating the solutions to inter-provincial environmental problems such as polluted discharge of sewage from Lodz Province into the Ner and Warta Rivers. This is a major source of pollution in these rivers.</p> <p>2nd Phase:</p> <p>When the 1st phase of the "Clean Konin" campaign approaches its target, the 2nd phase will begin with targets mainly outside Konin Province. It is aimed at showing tourists and potential investors that Konin is really a "Clean Konin" and is no longer a "polluted Konin".</p>	

7. PROJECT PURPOSE

To promote the campaign of bringing about a pollution-free province and publicize the cleanness of Konin to tourists and potential investors.

8. OUTPUT

1. A pollution-free "Clean Konin" is realized.
2. A "Clean Konin" appeals to tourists and potential investors.

9. ACTIVITIES

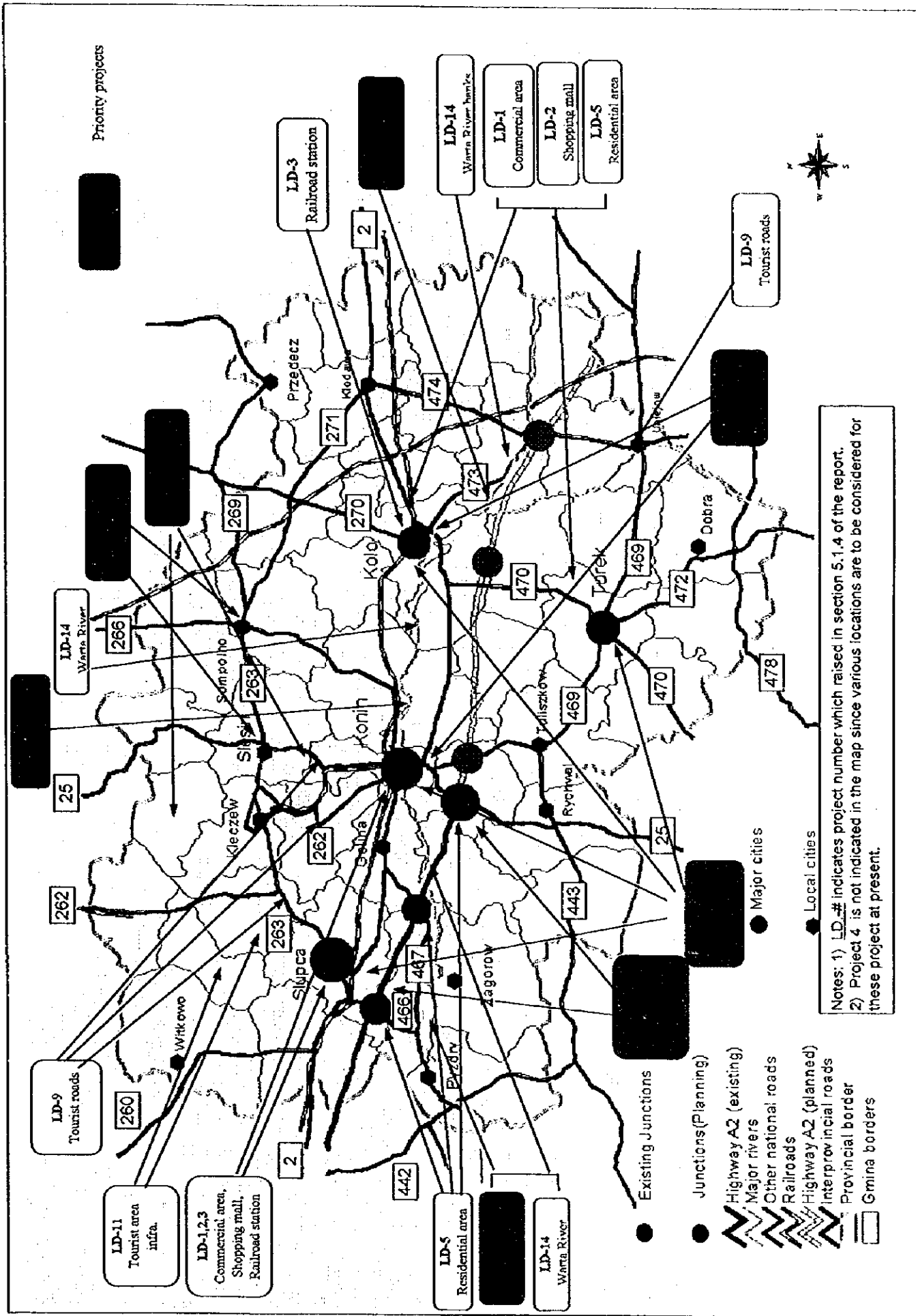
- 1.1 Organize an Environmental Improvement and Protection Committee by the Provincial Office, Gminas and representatives from private enterprises.
- 1.2 Determine a policy for the realization of a "Clean Konin" by the Committee.
- 1.3 Appeal to residents, economic entities and the public sector of Konin Province to bring about a "Clean Konin".
- 1.4 Implement ail-out efforts to bring about a pollution-free Konin.

- 2.1 Determine a policy to make a "Clean Konin" appeal to tourists and potential investors.
- 2.2 Ensure a "Clean Konin" appeals to tourists and potential investors.

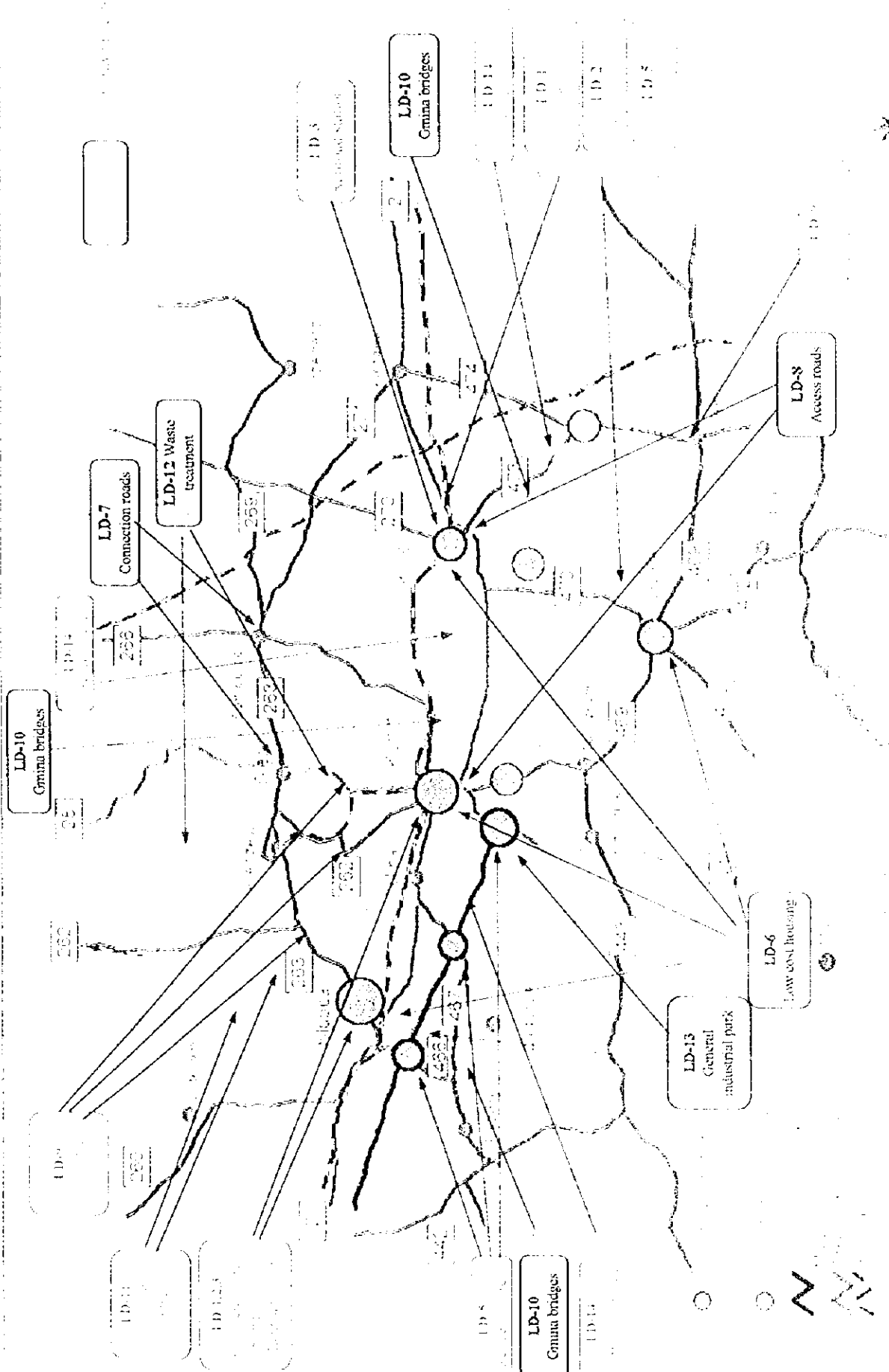
**LAND USE DEVELOPMENT and INFRASTRUCTURE
IN KONIN PROVINCE**



Project Sites: Land Use Development and Infrastructure



Project Sites: Land Use Development and Infrastructure





Project No. LD-1

1. PROJECT TITLE:	Development of selected commercial area
2. PROJECT SITE:	Major cities or their suburban area
3. IMPLEMENTATION AGENCIES:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	300 for each site.
5. ESTIMATED PROJECT COST:	US\$ 1,000,000 each site.
6. RATIONAL:	<p>Commercial area in Konin City are scattered throughout the city area. A relatively high concentration of commercial facilities is seen in front of the station, but individual stores are fairly small. Other smaller commercial districts are mainly established within residential areas. Typically, stores occupy the first floors of apartment buildings that have residential flats above the second floor. This mixed use pattern, seen extensively in the city area, may become an obstacle to future urban development projects, especially those specialized in residential or commercial use. The Konin province has not implemented any urban development projects including commercial development since 1986. According to the Department of Spatial Planning of the Voivodship, the lack of funds is a primary reason, and although some projects have been planned by inviting private investment, they have failed to attract investors. While the department expects private investors to lead redevelopment efforts, they think that it is a long way before private initiatives emerge as expected. Nevertheless, they feel the need for urban renewal projects that have not been carried out more than a decade. By taking into account these factors, the study team believes that there is potential demand for commercial development and therefore proposes this project provided that it will be developed through several phases up to 2010.</p>
7. PROJECT PURPOSE:	The project is proposed to vitalize commercial activities in Konin.
8. OUTPUT:	<p>(1) Development of commercial area in major cities is planned. (2) Investors are found and the area are developed by the investors. (2) Operational body is organized in each area. (3) Legal backup systems such as tax benefit to the investors is established.</p>
9. ACTIVITIES:	<p>(1) Select specific sites in major cities or in their suburban area. (2) Make zones in each site. (3) Prepare basic infrastructure including road, electricity, gas, water supply. (4) Prepare required facility such as buildings, parking spaces, loading/unloading zones, etc.</p>

Project No. LD- 2

1. PROJECT TITLE:	Construction of large scale shopping mall
2. PROJECT SITE:	Near the city center or their suburban area
3. IMPLEMENTATION AGENCY:	Private sector
4. EXPECTED DIRECT JOB CREATION:	Total 200
5. ESTIMATED PROJECT COST:	US\$ 500,000 for each site.
6. RATIONAL:	<p>This project has been proposed as an alternative to the LD-1. Definition of a city varies with countries. In the U.S., a city is defined as an urbanized area having 50,000 or more population, called the SMSA (Standard Metropolitan Statistical Area). In Japan, an urbanized area having 50,000 or more population is eligible to become a city. While these definitions cannot be directly applied to Konin City, its 83,000 population indicates that it has a range of urban functions available in other cities to meet the needs of residents. In the U.S., most of SMSAs and smaller urban areas having 30,000 or more population have shopping malls which are essentially a collection of stores that meet most of shopping needs as well as entertainment and recreational facilities such as a movie theater, a small concert hall and an open space provided with street furniture, and a library and other educational facilities in some cases. In Japan, shopping malls of varying size are found in most of "new town" areas that are developed in the suburbs of large cities. At present, Konin City has a similar commercial facility called the shopping mall, although its size is fairly small. The shopping mall is essentially a supermarket selling foodstuff and other daily necessities and is crowded with shoppers, especially on weekends. It has an open space inside where various events are held regularly, including concerts by young people and live forecasting of TV entertainment programs. Nevertheless, Konin City has few entertainment and recreation facilities and spaces compared to its size, including parks. As a result, many young people go to Poznan on weekends, where such facilities are available. The proposed project is designed to add more functions to the existing shopping mall by developing a movie theater, a concert hall and other facilities, which will serve as a core urban center to meet the needs of local residents including those in neighboring areas, and ultimately people in the entire province. Thus, the project can expect sufficient demand to support it.</p>

7. PROJECT PURPOSE:
To vitalize consumers activities in major cities of the province, particularly in Konin city.
8. OUTPUT:
(1) Investors are found and the development plans are made by the investors. (2) Construction plan of commercial area in major cities is planned. (3) Operational body is organized in each area.
9. ACTIVITIES:
(1) To select sites near to the city center or their suburban area. (2) To make zones in each site by preparing infrastructure. (3) Prepare required facility.

Project No. LD-3

1. PROJECT TITLE:	Development of the railroad stations area
2. PROJECT SITE:	Major cities of the province (Konin, Kolo, Slupca)
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	Total 200
5. ESTIMATED PROJECT COST:	US\$ 500,000 for each site
6. RATIONAL:	<p>The province has major railway stations in Konin, Kolo and Slupca. Among them, the Konin station is located in the city center and is surrounded by residential areas and a commercial district at the station front. On the other hand, the Kolo station is also located near the city center but has extensive farmland on its north side. Thus, the area around the station can be developed to commercial and residential areas, thereby to improve the living environment for local residents. In addition, the two station facilities, although well developed, are deteriorated due to aging, including buildings, platforms and other auxiliary facilities. Also, traffic congestion is often observed at the station front areas where many buses and taxis start or end their trips. Finally, the Slupca station is located approximately 3 km from a central district and is inconvenient for users in terms of accessibility. The area around the station is occupied by a coal storage yard on the north side and is mostly farmland for the rest. Again it has high development potential for residential and commercial areas by using the station as the core. The proposed project, therefore, primarily addresses: 1) the need for rehabilitation of the Konin station facilities (including buildings and platforms) and renewal of station front facilities and the existing commercial district; and 2) the need for redevelopment of station front areas in Kolo and Slupca. Although the project is not considered to have a high level of urgency, the improvement of station services for users seems to be deserved for some priority as the means to promote tourism by renewing platforms, adding tourist information centers as well as accommodation facilities, and redeveloping the commercial district.</p>
7. PROJECT PURPOSE:	To give convenience to tourists, business man and potential investors by appealing good images of Konin.

8. OUTPUT:

- (1) Development plan is made.
- (2) Investors are found and the area are developed by the investors.
- (2) Operational body is organized in each area.
- (3) Legal backup systems such as tax benefit to the investors is established.

9. ACTIVITIES:

- (1) To investigate trend of those passengers who get off at each station by identifying types, objectives, destinations, number of days and places for accommodation, etc.
- (2) To roof platforms of the station, construct new station building, hotels, booth for tourist guide, one-stop mini-shops, shopping area, loading/unloading zones to public transportation for transit passengers, and preparing transportation methods to the tourists' destinations.

Project No. LD-4

1. PROJECT TITLE:	Land allocation for rural industrial zones
2. PROJECT SITE:	Various locations within the province
3. IMPLEMENTATION AGENCY:	Public sector
4. EXPECTED DIRECT JOB CREATION:	Total 500 to 600
5. ESTIMATED PROJECT COST:	US\$ 2,000,000.
6. RATIONAL:	<p>In the province, factories and business enterprises are scattered without forming a significant industrial concentration and create various problems including pollution. For instance, a meat processing plant in Slupca, located along national highway No.2, emits obnoxious odor that is diffused to an entire city area, depending upon wind direction. A metal product factory in Golina discharges soot and smoke that adversely affect an extensive area in its surroundings. Some factories discharge industrial effluents without proper treatment to nearby farmland, causing secondary pollution. Some facilities to process farm products cause traffic congestion on major roads due to an increased traffic of large trucks and tractors that run at low speeds during the harvesting season. Furthermore, the trucks and tractors are forced to run on less than the shortest route due to poor conditions of a roads and/or a bridge on the way, depending upon their destination. These problems must be overcome by building or improving adequate facilities, e.g., treatment plants and road networks, and promoting pollution control measures at each factory, most of which require substantial investment and are very difficult to be implemented under current financial constraints. The project proposes to relocate such factories and business enterprises to specific areas, which is considered to be a workable alternative to implementation of disparate projects. A primary candidate site is an area near an industrial waste treatment facility that is jointly developed by HUTA Aluminum and the Konin City.</p>
7. PROJECT PURPOSE:	To avoid secondary pollution caused by the industry which are located near farming area.
8. OUTPUT:	<ol style="list-style-type: none">(1) Land allocation law, plans, and programs are made.(2) Development plan is made.(3) Sites are selected in several areas.
9. ACTIVITIES:	<ol style="list-style-type: none">(1) Make land allocation plan and put in force to the plan.(2) Select the sites, make zones, and prepare necessary infrastructure.(3) Select specific industry by pointing out the name of the industry and re-allocate such industry from agricultural area.

Project No. LD-5

1. PROJECT TITLE:	Residential area provision for new investment project
2. PROJECT SITE:	Near the places where the new investment are to be made.
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	Total 100
5. ESTIMATED PROJECT COST:	US\$ 500,000.
6. RATIONAL:	<p>In the future, the province is expected to attract large foreign investment projects, including an increasing number of companies which will operate in the proposed industrial parks and other areas. As this happens, there will be growing demand for housing and other facilities to provide workers with the good living environment. A Scandinavian corrugated cardboard manufacturer and a U.S.-based food service company have already decided to locate the facilities near Konin City and will start commercial operation soon. A foreign company is making inquiry on feasibility of a large project using a land area of over 50 hectares and reportedly asks about availability of land suitable for employee housing. To meet these demands effectively, the local government is expected to develop a comprehensive land use plan that envisages residential development for a growing number of workers, including large housing colonies, by selecting candidate sites and developing clear blueprints, while giving consideration to the need for balanced development of urban and rural areas. In many cases, it is anticipated that employee housing for small companies will be developed by using public funds and recovering investment through rent, while that for large projects will likely be built by companies implementing them. Thus, the project proposes to be prepared for future foreign investment by securing residential land for investing companies and their workers, thereby allowing a housing development plan matching individual investment projects.</p>
7. PROJECT PURPOSE:	This project is proposed to promote its attractiveness of Konin to the investors.

8. OUTPUT:
(1) Construction plan is made. (2) Investors are found and the area are developed by the investors. (3) Buildings and facilities are designed and constructed upon the request from the investors.
9. ACTIVITIES:
(1) Draw a plan near to the industrial zones. (2) To acquire the land and start the construction at the time when new investments are to be made. (3) To enlarge construction by looking at circumstances and conditions of the investments.

Project No. LD-6

1. PROJECT TITLE:	Supply of low cost housing
2. PROJECT SITE:	Suburban area of the major cities
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	200
5. ESTIMATED PROJECT COST:	US\$ 21,000,000
6. RATIONAL:	<p>Konin is lagged behind in housing conditions compared to other provinces, ranked 33rd among 49 provinces. At present, approximately 85% of residents in Konin City reside in flats which are relatively small in per unit area (approx.80 m² on average) and the number of rooms (2.8 on average), and each room is very small (8.3 m²). The poor housing conditions seem to push demand for detached housing among low- and middle-income groups. In fact, the number of detached houses built in urban Gmina grew at an annual rate of 9% and 21% during the two-year period between 1995 and 1997, but most of them were built by people with high income (e.g., medical doctors, lawyers and corporate managers), including second houses in suburban areas. According to the study team's interview survey of low- and medium-income groups, nearly 80% of residents living in flats want to obtain detached houses. The project is proposed because Konin City has vast land to meet such housing need and can supply sufficient amounts of wood and other construction materials. It will start from land acquisition and construction of several model houses using local materials available in the province with floor area ranging between 80 and 100 m² and at a cost between 100,000 and 150,000 PLN, including a yard and a garage.</p>
7. PROJECT PURPOSE:	To improve standard of living conditions in the province.
8. OUTPUT: (See Detailed Project Study PLD-2 for further information)	<ol style="list-style-type: none"> (1) Feasibility study for the project is made. (2) Space for construction site are selected. (3) Development on selected sites are carried out. (4) Several types of model houses are made. (5) Special low housing loans system are made. (6) Orders of the selected type of a house are received. (7) Construction of the ordered houses is initiated.
9. ACTIVITIES:	<ol style="list-style-type: none"> (1) Carry out the feasibility survey by investigating the latent needs for demand. (2) To select the prospective sites and make a blueprint. (3) Supply pre-fabricated and standardized type of housings(e.g. Type A, Type B) by offering special conditions on purchasing such as low housing loans.

Project No. LD-7

1. PROJECT TITLE:	Expansion of connecting roads among main cities
2. PROJECT SITE:	Crossing section in major cities
3. IMPLEMENTATION AGENCY:	Public sector
4. EXPECTED DIRECT JOB CREATION:	Total 1,000
5. ESTIMATED PROJECT COST:	US\$ 5,100,000
6. RATIONAL:	<p>In the Konin province, roads assume an important role as a physical distribution system, particularly in rural areas. This is because a rail system runs east and west and serves only cities in a central part of the province, namely Slupca, Konin and Kolo, whereas other cities, Turek, Slesin and Sompolno, are remote from the railroad network and must rely on roads for physical distribution of goods as well as movement of people. Recently, vehicular traffic in these cities has been on the rise to create various problems. Between 1990 and 1995, traffic volumes passing through Turek, Slesin and Sompolno surged 111%, 19% and 15% respectively. Turek City experiences the rapid growth of traffic as vehicles coming from neighboring provinces of Lodz, Kalisz and Sieradz increasingly flow into trunk roads, International Highway A2, national highway No.25 and No.2. Although the city has constructed a bypass road between national highway No.469 and 470, which runs around the city area, vehicles using No.469, 470 and 472 must pass through the city area, aggravating traffic congestion there. In Sompolno, 4 trunk roads run through the urban area. Because these roads have rotaries in the city center, which are located in commercial areas with parking facilities, bus stops and shopping districts, traffic congestion is accelerated. In Slesin, national highway No.25 and 263 cross in the central part to create heavy traffic congestion. In particular, NO.25 is one of trunk roads serving as a major route of transportation connecting Gmina in the province as well as the province and neighboring provinces, and it is connected to tourist resort area such as Powidz, resulting in mixed traffic flow of trucks, buses and passenger cars. To improve the situation, the project proposes to expand road capacities among major cities in the province.</p>
7. PROJECT PURPOSE:	To prepare transportation infrastructure and relieve traffic congestion, increase mobility and accessibility of goods and services in the province.

8. OUTPUT: (See Detailed Project Study PLD-1 for further information)
(1) Construct plan on detour route in major intersections is made.
(2) Existing major intersections in certain cities are expanded and widened.
9. ACTIVITIES:
(1) Review flow of goods and services and means of transportation.
(2) Review the conditions of existing roads.
(3) Select which roads are to be required to initiate construction by setting priorities.
(4) Widen and enhance the size of the selected connecting roads.

Project No. LD-8

1. PROJECT TITLE:	Improvement of access roads to main roads (A-2 and National Road No.25)
2. PROJECT SITE:	Crossing section of A-2 and Road 25
3. IMPLEMENTATION AGENCY:	Public sector
4. EXPECTED DIRECT JOB CREATION:	300
5. ESTIMATED PROJECT COST:	US\$ 7,000,000
6. RATIONAL:	<p>As pointed out earlier, roads are the most important means of physical distribution in the province, including linkages with other provinces. In particular, national road No.2, running east and west in the central part of the province, serves as an arterial road to move goods within the country and to and from foreign countries. Similarly, No.25, running north and south, serves as a major access road between Gmina in the province and to neighboring provinces. The two roads recently undergo explosive growth of traffic volume. For instance, traffic through the intersection between the two roads in the suburbs of Konin City, including convergence of vehicles from A2 and 469, soared 250% between 1990 and 1995. Similarly, the number of vehicles passing through Kolo City grew 66% on No.2, 47% on No.473 and 14% on No.270, when measured at their intersections with No.2 and 25, suggesting the high levels of traffic congestion at intersections of trunk roads. This is also evidenced by the number of traffic accidents attributable to or related to traffic congestion, which increased some 12% on No.2 between 1996 and 1997 and 32% on No.25. This project is proposed as a priority project with urgency that is effective in reducing traffic congestion by expanding the intersection between No.2 and 25 and access points from other roads to the trunk roads, and reducing traffic accidents by developing bypass routes (including a route bypassing a highly congested section of No.2 between Konin and Kolo via Kramsk, and reaching Konin City via No.266.).</p>
7. PROJECT PURPOSE:	To prepare transportation infrastructure and relieve traffic congestion, increase mobility and accessibility of goods and services in the province.
8. OUTPUT: (See Detailed Project Study PLD-1 for further information)	<p>(1) Construction plan on detour route in major intersections is made. (2) Existing major intersections in certain cities are expanded and widened.</p>
9. ACTIVITIES:	<p>(1) To select prospective detour route. (2) To hold public hearings (3) To initiate geological survey (4) To setup exact route and acquire the lands (5) To draw blue prints and start construction</p>

Project No. LD-9

1. PROJECT TITLE:	Preparation of roads in tourist areas
2. PROJECT SITE:	Powidz, Lechen, and Lake Jeziorsko
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	Total 200
5. ESTIMATED PROJECT COST:	US\$ 300,000
6. RATIONAL:	<p>The Konin province submitted its land use plan to the central government in 1985, which is characterized by clear zoning of tourist areas. Especially, the province envisages Gmina located northwest of Konin City, such as Powidz, Ostrowite and Witkowo, which are endowed with lakes and forest populated by diverse wild animals, to become major tourist attractions in the future. Another major tourist spot is a church in Lichen, 10km north of Konin City, which is visited by around one million tourists annually. The former is mainly accessed by a combination of rail and bus services originated in Konin City, or directly by automobile or chartered bus. In both cases, a primary route uses national road No.25, driving northward and via Slesin, followed by Routes 262 and 263.or Route 262 only (via Kazimierz Biskupi and Kleczew). These routes, however, have various problems to adversely affect accessibility. First of all they include a large number of very narrow sections, and must pass through three city areas. There are a few dozens of steep curves that disturb with smooth driving of large buses. Finally, there are the absence of proper road signs in required locations. The project is designed to improve accessibility to the promising tourist area by expanding No.262 and 263 and establishing bypass routes to avoid Kazimierz Biskupi and Kleczew. On the other hand, the improvement of access roads to the Lichen district, also considered in the proposal, has been dropped because the church has already started to expand the existing roads by acquiring some 10 hectares of land.</p>
7. PROJECT PURPOSE:	The project is proposed to improve transportation infrastructure to give tourists comfortable and smooth trip to the tourist area.
8. OUTPUT:	<ol style="list-style-type: none">(1) Construction plan on detour route is made.(2) Existing major roads are expanded and widened.
9. ACTIVITIES:	<ol style="list-style-type: none">(1) Review numbers and flow of tourists and means of transportation by classifying into types of transportation.(2) T review the conditions of existing roads.(3) To select which roads are to be required to initiate construction by setting priorities.(4) To widen and enhance the size of the selected connecting roads. It should be indicated that that the project will include to widen and enhance selected routes, particularly routes to Powidz, Lihen, and Lake Jeziorsko.

Project No. LD-10

1. PROJECT TITLE:	Construction for rehabilitation of bridges connecting Gmina roads
2. PROJECT SITE:	Several locations in entire province
3. IMPLEMENTATION AGENCY:	Public sector(Each Gmina)
4. EXPECTED DIRECT JOB CREATION:	20 per bridge (Approx.600 total)
5. ESTIMATED PROJECT COST:	US\$ 500,000
6. RATIONAL:	<p>Within the Konin province, there are 87 Gmina bridges, approximately 70% of which are located in rural Gmina. Most bridges were constructed before 1975 when Poviats was the smallest administrative unit. They were originally managed and serviced by the former Ministry of Agriculture and the former Ministry of Transportation and Communication. After the administrative unit were transferred to Gmina, however, bridge maintenance budgets have been cut back to prioritize construction of schools and hospitals, and the bridges have substantially dilapidated. Today, 31 bridges, around one third of the total, are believed to require rehabilitation or reconstruction within the next few years. In particular, bridges over the Warta River and its branches are inundated during the floods to hinder traffic of large trucks carrying harvested farm products. Also, snowfalls and rains often disturb with transportation of daily necessities such as food and fuels. Moreover, while the Gmina bridges form transportation networks connecting Gmina, they cannot be used to transport certain types or quantities of goods, forcing vehicles to make a detour. In consequence, low-speed trucks and tractors run on national roads to aggravate traffic congestion. By weighing the situation and its economic impacts, the project is proposed as a priority project with a high level of urgency.</p>
7. PROJECT PURPOSE:	To prepare transportation infrastructure and relieve traffic congestion, increase mobility and accessibility of goods and services in the province.
8. OUTPUT:(See Detailed Project Study PLD-1 for further information)	<p>(1) Plans on construction or rehabilitation plan of Gmina bridges are made. (2) Construction or rehabilitation of the selected Gmina bridges are initiated.</p>
9. ACTIVITIES:	<p>(1) Gather information such as conditions of all existing bridges, loading capacity of the traffics, frequencies in use of bridges by type of transportation. (2) Set the priority to which bridges are to be rehabilitated or newly to be constructed. (3) Set the Gmina budget or collect funds from other sources.</p>

Project No. LD-11

1. PROJECT TITLE:	Preparation of water supply and sewage systems in tourist areas
2. PROJECT SITE:	Powidz, Ostrowite
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	Total 100
5. ESTIMATED PROJECT COST:	US\$ 200,000
6. RATIONAL:	<p>Designation of specific areas by the province as prospective tourist areas has created various negative impacts on the area and its development process. The prospect has encouraged uncontrolled development in the Powidz, Ostrowite and Witkowo Gmina, accelerating environmental pollution and destruction of a local ecosystem in some cases. In particular, development projects led by many private investors are carried out by ignoring various legal requirements for construction of hotels, cottages and other houses, such as the laying of water mains, connection of lead pipes to septic tanks, and strictly controlled transportation of wastes to treatment facilities. As a result, untreated sewage and household wastes are discharged into lakes and forest, smearing a public image as the tourist area and polluting the environment. Despite the situation with grave concern, the Voivodship has failed to conduct sufficient monitoring activities to enforce the applicable law to unlawful development projects, allowing the spreading of uncontrolled development activities. The project proposes to prepare water supply and sewage treatment systems in the promising tourist areas with a view to effectively protecting valuable recreational resources and the natural environment.</p>
7. PROJECT PURPOSE:	The project is to make Konin an attractive place for tourism by furnishing basic and necessary infrastructure in tourist areas.
8. OUTPUT:	<ol style="list-style-type: none">(1) Preparation plan of water supply and sewage systems is made.(2) Construction of integrated water treatment systems is initiated.
9. ACTIVITIES:	<ol style="list-style-type: none">(1) Review actual status of illegal development settings which are undertaken by illegally invested area by private investors.(2) Request those investors to evacuate, or even compel them to evacuate from the area by putting in force.(4) Implement scientific research on drainage and make zones of the area.(5) Initiate the construction of water supply and sewage systems.

Project No. LD-12

1. PROJECT TITLE:	Construction of a centralized waste treatment and disposal facilities on the refilled land
2. PROJECT SITE:	Konin and Turek
3. IMPLEMENTATION AGENCY:	Public sector
4. EXPECTED DIRECT JOB CREATION:	200
5. ESTIMATED PROJECT COST:	US\$ 5,000,000
6. RATIONAL:	<p>At present, household wastes produced in the province are dumped to disposal sites owned by Gmina without classification into kitchen garbage, flammable and inflammable materials. The disposal sites are provided in open spaces in suburban areas, and as each site is filled with wastes, a new site is developed by excavating the ground. As most disposal sites are located in or near farmland or forest in a scattered manner, they create serious environmental problems including contamination of ground water and creation of secondary pollution. As garbage collection charges are directly collected from households on a tonnage basis, some households avoid payment by disposing their wastes to forest, farmland or lakes. At present, the Konin province does not have a full-scale waste treatment facility. There is a plan to construct a treatment facility jointly by Gmina in Konin and two neighboring provinces of Sieradz and Kalisz. The facility will consist of a comprehensive waste treatment system and disposal site to take care of wastes produced in a 20-25km radius zone around Kalisz City. While Konin and Turek have participated in the plan, other major cities of Kolo and Slupca have not joined despite repeated invitations from a joint management body. Under these circumstances, the project intends to address the need for construction of waste treatment facilities for Gmina located north of national highway No.2.</p>
7. PROJECT PURPOSE:	To protect living and natural environment of the province.
8. OUTPUT: (See Detailed Project Study PLD-3 for further information)	<p>(1) Construction plan on a controlled final disposal facilities of treatment plat and dumping ground is made.</p> <p>(2) Construction of the plant is initiated.</p>

9. ACTIVITIES:

- (1) To carry out detailed feasibility study
- (2) Hold public hearings
- (3) Select sites
- (4) Initiate geological survey
- (5) Land acquisition
- (6) Make zoning and draw blue prints
- (7) Selection of treatment plant
- (8) Start construction

Project No. LD-13

1. PROJECT TITLE:	Construction of Industrial parks for general use
2. PROJECT SITE:	Near to the exit of international highway A-2
3. IMPLEMENTATION AGENCY:	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION:	20
5. ESTIMATED PROJECT COST:	US\$ 8,500,000(varies depending on the location and conditions)
6. RATIONAL:	<p>In 1996, there were 68 projects related to companies with foreign involvement and foreign investment pledges, with the total value of \$1,425,000. The figures accounts for meager 0.6% of the total in Konin and seven neighboring provinces (Bydgoszez, Kalisz, Leszno, Pila, Poznan, Torun and Wloclawek). Yet, they are considered as some signs of growing foreign investment. In fact, an industrial park site to be developed in the Stare Miasto Gmina in the suburbs of Konin City will welcome a foreign corrugated cardboard manufacturer using used and recycled paper, which will complete and start operation of a factory by the end of 1998. Also, a foreign food service company will open the first suburban-type restaurant in the province. Finally, a foreign company has made an inquiry on a large investment project using more than 50 hectares of land. In anticipation of these projects, Gmina near the exist from International Highway A-2 (Slupeca, Golina, Konin and Stare Miasto) are securing land and preparing to build infrastructure according to an actual size of investment. This project is proposed as a priority project with a high level of urgency, which is required to meet investment requirements and support ongoing efforts of Gmina to attract foreign investment.</p>
7. PROJECT PURPOSE:	The project offers to turn investors' eyes to Konin by establishing large scale industrial zones with ideal investment environment.

<p>8. OUTPUT: (See Detailed Project Study PLD-4 for further information)</p> <p>(1) Feasibility study is carried out.</p> <p>(2) Investors are found and the area are developed by the investors.</p> <p>(3) Operational body is organized.</p> <p>(4) Legal backup systems such as tax benefit and incentives to the investors are established.</p>
<p>9. ACTIVITIES:</p> <p>(1) Select the sites along the highway or near to the exit or to promote currently planned industrial zones by Gmina.</p> <p>(2) Provide necessary infrastructure such as electricity, water supply, natural gas, and communications systems.</p> <p>(3) Initiate promotion activities for attraction to the investors by preparing catalogs, brochures and other sales kit.</p>

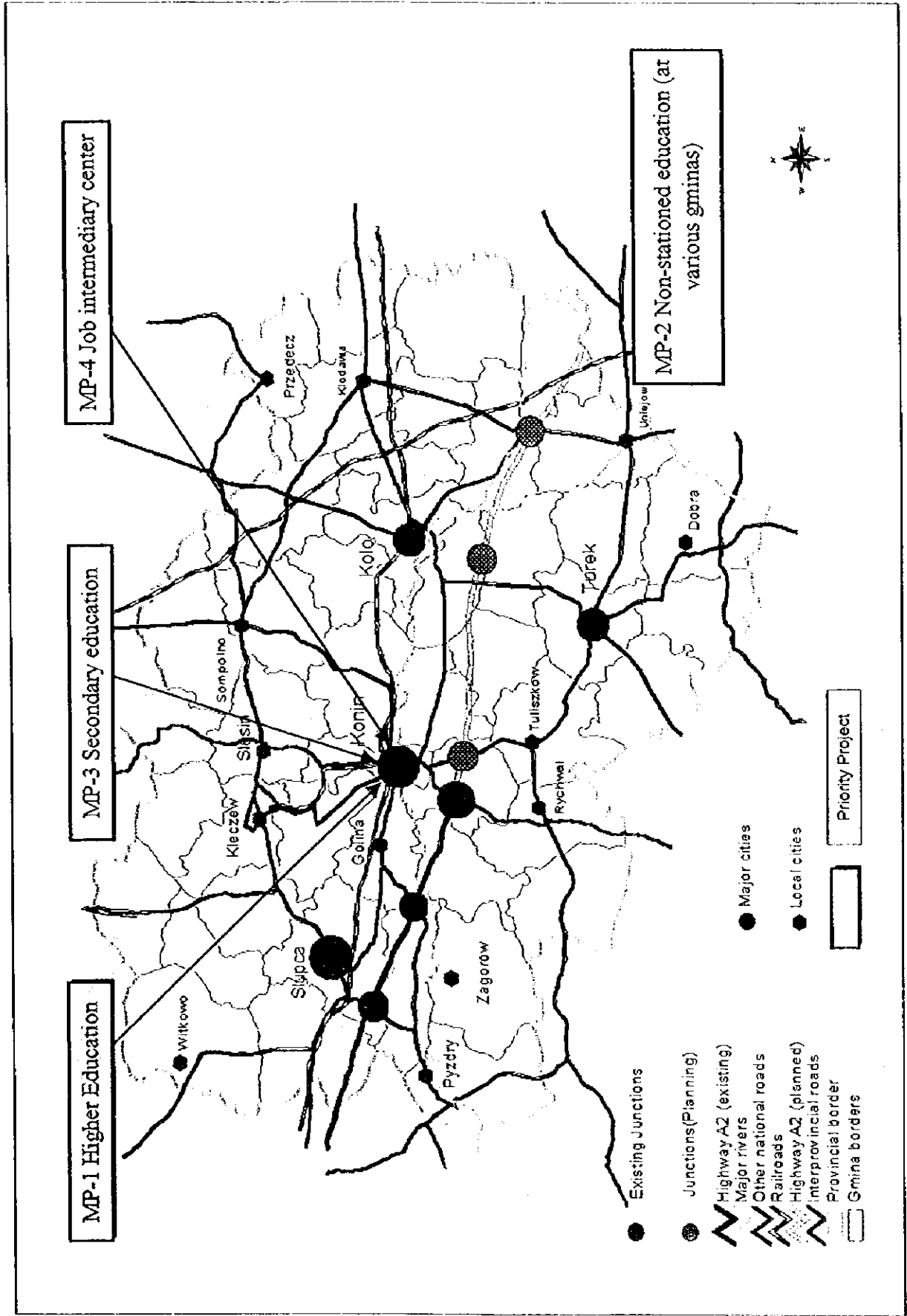
Project No. LD-14

1. PROJECT TITLE:	Development of Warta River banks
2. PROJECT SITE:	River banks along the Warta River
3. IMPLEMENTATION AGENCY:	Public sector
4. EXPECTED DIRECT JOB CREATION:	200
5. ESTIMATED PROJECT COST:	US\$ 1,000,000
6. RATIONAL:	<p>The Warta River crosses the Konin province for a distance of 120 km and is designated as first-class river in the country. However, it is only protected by low banks over its entire length and its dry riverbed area is undeveloped. Also, the river is seriously contaminated by industrial effluents from an industrial area in the nearby Lodz province, which flow into a branch stream, the Ner River. Within the river basin, portions in Zagorow, Ladeq and Pyzdry are designated by the central government as nature conservation areas, and various projects to protect the river and its surroundings are underway, including the national-level Econet project including afforestation, development of parks along the river as well as dry riverbed areas. Nevertheless, the river east of Konin is severely contaminated partly due to the proximity to the Ner River. Also, the lack of adequate banks for flood control causes inundation of surrounding areas including farmland, and Gmina roads and bridges due to heavy rain or snow melting. This often creates damage to houses and farmland, secondary pollution of crops by contaminated water, and the blocking of road networks. This project proposes effective flood control by reinforcing or building banks along the Warta River and establishing dry riverbed areas, which will significantly reduce floods and their damage. Also, the banks and dry riverbeds will be developed to build recreational facilities for local residents, including parks, parking facilities, sport facilities, bicycle roads, providing additional benefits.</p>
7. PROJECT PURPOSE:	To protect living and natural environment of the province.
8. OUTPUT:	<ol style="list-style-type: none">(1) Development plan is made.(2) Construction is initiated.
9. ACTIVITIES:	<ol style="list-style-type: none">(1) Negotiate on pollution control issue with the industries in Lodz.(2) Select the sites and make a blueprint of the site by dividing into the purpose of use.(3) Start construction

MANPOWER DEVELOPMENT



Project Sites: Manpower Development





Project No. MP-1 (Refer to Detailed Project Study for PMP-1)

1. PROJECT TITLE	Establishment of the school of higher education
2. PROJECT SITE	Konin Gmina
3. IMPLEMENTATION AGENCY	Alternative 1: A private post secondary school in Konin with a private school of higher education in another province Alternative 2: The provincial and the municipal authorities with an existing state university
4. EXPECTED DIRECT JOB CREATION	125 people
5. ESTIMATED PROJECT COST	US\$ 300,000
6. RATIONALE	<p>An increasing number of students have received higher education since 1990 in the country. Konin Province, however, provides very limited opportunities of getting higher education. Only two colleges provide a limited variety of higher education with their licentiate programs. The shortage of highly educated youth hinders the growth of local economic activities, and the undeveloped local economy, in turn, discourages young university graduates from coming back to their home province. This vicious circle should be stopped immediately by establishing a university in Konin.</p> <p>This project intends to establish schools of the higher education in the province. The project could be implemented via either non-State or State initiatives. In the first alternative, a private school of higher education (SHE) is established on the basis of the existing post secondary school in the province, having received technical assistance from existing SHEs in other provinces. The initial cost of the project is estimated to be around US\$ 300,000, for the equipment and teaching materials. With a few years experience, the SHE is expanded and upgraded to have the master program. The second alternative is initiated by the local authorities. A branch school of the State university of another province will be established in Konin. The State university supplies all the teaching staff and equipment, but the local authorities have to provide the building for the school.</p>

<p>7. PROJECT PURPOSE</p>
<p>The province has more graduates of higher education.</p>
<p>8. OUTPUT</p>
<p>First Alternative</p> <ol style="list-style-type: none"> 1. A new private SHE (school of higher education) is established in Konin. 2. This new private SHE is upgraded and permitted to have the master program. 3. The SHE supplies a sufficient number of graduates. <p>Second Alternative</p> <ol style="list-style-type: none"> 1. The cooperation with the State university is strengthened via the State SHE. 2. The State university establishes its branch school in Konin. 3. The new branch school supplies a sufficient number of graduates.
<p>9. ACTIVITIES</p>
<p>First Alternative</p> <ol style="list-style-type: none"> 1. Obtain the teachers and other assistance from the existing private SHE. 2. Attract private investors to provide the initial capital of the project. 3. Introduce exchange programs with western European universities. <p>Second Alternative</p> <ol style="list-style-type: none"> 1. Provide the building for the branch school. 2. Obtain the teachers and other assistance from the State university.

Project No. MP-2

1. PROJECT TITLE	Expansion of the non-stationed education for workers
2. PROJECT SITE	Konin Gmina
3. IMPLEMENTATION AGENCY	Lifelong Education Center (CKU)
4. EXPECTED DIRECT JOB CREATION	12 people
5. ESTIMATED PROJECT COST	US\$ 200,000
6. RATIONALE	
<p>Due to the rapid and comprehensive liberalization of trade since 1989, a number of cheap and relatively well manufactured imported products have been available in all parts of the country. Many of them are manufactured by east Asian producers, who benefit from the almost unlimited supply of cheap labor in their countries. The Polish manufacturers have faced severe competition from these imported cheap products, and this competition has significantly affected the local industrial structure. The low cost manufacturing of simple products immediately lost its competitiveness in the market, and its cheap and unskilled labor became redundant. On the other hand, relatively sophisticated and highly valued manufacturing have more opportunities to expand. The demand for skilled workers is increasing.</p> <p>The general skill levels of the workers are, however, considered to be low in Konin Province. Except for the three key industries, the local enterprises employ a very limited number of well educated and highly skilled workers. Due to the weak accumulation of skills in the province, the local enterprises find it difficult to upgrade their manufacturing structures. Moreover, the local labor department faces difficulties in finding job opportunities for the unemployed with low skills. Under these circumstances, it is necessary for the province to provide local workers with wider and bigger opportunities to obtain further skills.</p>	
7. PROJECT PURPOSE	
More people in the province receive wider and bigger opportunities to become educated while working.	

8. OUTPUT

The Lifelong Education Center (Centrum Kształcenia Ustawicznego: CKU) in Konin city was designated to be one of the 15 strategic centers of non-stationed education (edukacji niestacjonarnej) in the country by the Ministry of Education in 1997. CKU is required to provide non-stationed education to the workers in the three provinces in the region, which are Konin, Plock and Kalisz. This project intends to reinforce the existing non-stationed education of CKU. The staff of CKU will receive further training for developing teaching materials for non-stationed education, and promoting the scheme to the local workers. New equipment and teaching materials are, moreover, introduced to expand and improve the scheme.

1. Institutional capacity of CKU is improved.
2. Services of non-stationed education are expanded and improved.
3. Working people in the province are given more opportunities to become educated.

9. ACTIVITIES

- 1.1 Provide technical training to the staff of CKU.
- 1.2 Dispatch experts of non-stationed education to CKU.

- 2.1 Purchase new teaching materials for non-stationed education.
- 2.2 Purchase new equipment to make their own teaching materials.

- 3.1 Advertise the projects to working people in the province.
- 3.2 Introduce financial or fiscal incentives to those who receive non-stationed education.

Project No. MP-3

1. PROJECT TITLE	Expansion of general secondary education
2. PROJECT SITE	Various gminas in the province
3. IMPLEMENTATION AGENCY	The Education Authority in the province
4. EXPECTED DIRECT JOB CREATION	120 people
5. ESTIMATED PROJECT COST	US\$ 3,000,000
6. RATIONALE	<p>Since the economic and social structures changed significantly in 1990, the demand for secondary education has rapidly increased. The ratio of enrollment to secondary education increased from 45% in 1990 to over 60% in 1996. The enrollment ratio of general secondary education, in particular, rose significantly from only 18% to 27% in the same 6 years. A large proportion of graduates from general secondary schools, 69% in 1997, continue to study in the higher schools, such as universities or colleges. It is clear that an increasing number of young children wish to obtain higher education now. It is the general secondary education that provides them with such opportunities.</p> <p>The expansion of general secondary education in Konin Province, however, has not been adequate. The number of general secondary schools per population in the province is only 45% of the national average. Furthermore, the number of teachers per population is 72% of the national average. Moreover, the number of students in general secondary schools per population is only 68% of the national average. On the other hand, the province has an excessive capacity of basic vocational education, which provide relatively unskilled workers to the labor market. In order to meet the demands for higher education, the province should expand general secondary education to a large extent.</p>
7. PROJECT PURPOSE	The province has more children who receive general secondary education.

8. OUTPUT

This project intends to increase the capacity of general secondary education in the province. In order to reach the national level, the number of general secondary schools should be increased from the current ten to twenty two. Moreover, over 130 classrooms should be created and 120 teachers should be employed to work in these newly established general secondary schools. As a result, the number of students of general secondary schools will increase from the current 6000 to 8800. So as to let more local children receive general secondary education, it is also necessary to make their parents understand the importance of receiving a higher education.

1. The province has more general secondary schools.
2. The number of qualified teachers for secondary education increases.
3. More children attend the secondary schools in the province.

9. ACTIVITIES

- 1.1 Construct new general secondary schools.
- 1.2 Expand the existing general secondary schools.
- 1.3 Purchase the teaching materials and the equipment.

- 2.1 Employ qualified teachers for general secondary education.

- 3.1 Promote the importance of general secondary education, and encourage local families to send their children to the schools.

Project No. MP-4

1. PROJECT TITLE	Establishment of a job intermediary center with a database
2. PROJECT SITE	Konin Gmina
3. IMPLEMENTATION AGENCY	Primarily public sector being followed by private sector
4. EXPECTED DIRECT JOB CREATION	2 people
5. ESTIMATED PROJECT COST	US\$ 10,000
6. RATIONALE	<p>The unemployment ratio of the province remains higher than that of the country. There is no doubt that the shortage of job opportunities is the reason for the severe unemployment in the province. It is also pointed out that the weak coordination in the local labor market is another cause of the high unemployment ratio. From the interviews with local entrepreneurs, it is shown that they often face problems in finding and subsequently employing appropriate people to meet their specific demands; hence, they have to rely on their personal contacts to meet these employment needs. Some of the municipalities have their own networks to coordinate the demand and supply in the local labor market. These networks are, however, not necessarily connected with each other, so they usually cover only small parts of the province. The amount of information in one network is, consequently, very limited. It is necessary to connect these networks, and to establish a comprehensive information network about the demand and supply in the local labor market.</p> <p>This project intends to establish a job intermediary center with a database in Konin city. Every municipality is required to have its own information network of the local labor market, and all of the networks are connected to the job intermediary center. It becomes possible for the local entrepreneurs to efficiently find the most appropriate people for their requirements. The job seekers can also advertise their expertise on the networks effectively. This center could be operated in semi public institutions such as the Regional Development Agency.</p> <p>In order to operate this job intermediary center and to connect it with the local networks successfully, various kinds of technical and financial assistance are provided. Its staff receive training to manage the inter network system, and the necessary equipment and materials are introduced to realize the project. The project should be occasionally advertised in the media in order to obtain sufficient information from both the local entrepreneurs and the job seekers.</p>

7. PROJECT PURPOSE

The demand and supply in the local labor market are efficiently coordinated.

8. OUTPUT

1. Project executing system is established.
2. A job intermediary center is set up.
3. Data network of the center with the local municipalities is established.

9. ACTIVITIES

- 1.1 Determine an executing body.
- 1.2 Formulate an annual plan for the project.

- 2.1 Provide technical assistance to the staff of the center.
- 2.2 Purchase materials and equipment for the center.

- 3.1 Create a data network about the labor market with the local municipalities.
- 3.2 Advertise the center to the local enterprises and the local job seekers.

Chapter 2

DETAILED PROJECT STUDY



PAG-1 Strengthening of Agricultural Technologies in Konin (AG-1, AG-2)

1 Rationale of the Proposed Project

1.1 Problems of Present Technology Development and Extension

There are several institutions in charge of the development and extension services of agricultural technology. They make varying attempts to spread new agricultural knowledge among farms, but the information is not being fully exchanged among all institutions and farms.

Agriculture schools teach young students many related subjects. The province has seven agricultural high-school complexes with around 4,000 students. Among them, Koscielce and Kaczki Srednie complexes provide a wide range of courses. Also, 50% to 60% of the graduates from the 7 high-school complexes move on to practical farming, while 20% to 25% of them enter the agricultural academy in Poznan or other agricultural universities. The complexes in the province, however, do not play a sufficient role in training leaders or researchers who can establish or develop Konin's agriculture.

ODR, with headquarters at Koscielce, is responsible for agricultural "extension services." ODR is engaged in education and vocational training for rural people to play a leading role in group activities in the future. ODR is carrying out several programs to introduce new knowledge, with field trips to other provinces. Also, a "chamber of agriculture" and "forum" are being established as centres for information exchange. Moreover, ODR is trying experimental activities. They have selected several farms to cooperate mainly in examining new varieties of animals, cereals and fodder crops. Many activities are under way, but a shortage of budgets and staff are limiting ODR's scope.

Experimental Station of Species Appraisal (called "ESSA" in the following passages) is also testing new varieties. It is controlled directly by central government, but activities are also limited by a shortage of budgets and staff.

On the other hand, farms can take advantage of several 'routes' to learn about new technology and agricultural practices. For example:

- 1) ODR presents them with details of scientific developments, such as new varieties available. Some farms often introduce these new varieties into their own fields.
- 2) ODR offers several training programs and certification for farms, such as the IPO training program (integrated management of fruit production) and its technical certification.
- 3) Farms can take new knowledge on board from some technological magazines, such as in horticulture.
- 4) Farms can exchange new knowledge with other neighboring farms.

However, the number of farms taking these opportunities are limited, and new technology and knowledge are difficult for many farms to access.

All in all, a lot of activities are being attempted in order to diffuse new knowledge among many farms. However, because of the limitation on budgets and staff, the activities are not satisfactorily disseminated from the viewpoint of establishing agriculture most suited to Konin's soil and climate.

1.2 Future Direction and the Project

The desirable way forward for agricultural development and "extension" systems in the Konin province are summarized as follows:

- 1) A concept to establish agriculture suited to Konin's natural and social conditions.
Present agriculture in the province does not necessarily have as high a productivity as other provinces. It is necessary to establish agricultural techniques for Konin's natural and social conditions, and increase productivity at the same time as improving the quality of produce.
- 2) To establish a network for exchanging information among farms and the institutions for education, extension and experimental services.
At present, many activities are being conducted by ODR and other institutions. However, the shortage of budgets and staff restricts the wide range of activities. It is necessary to establish a system which makes it possible to expand the extension service activities.
- 3) To train people to be leaders or researchers who will initiate group

activities or establish new practices and technology suitable for the province in the future.

Some facilities do exist to train people as leaders but, again, the shortage of budgets and staff restricts expansion of the activities. More opportunities should be established for training and other practical activities.

The proposed project should offer a system for wider information exchange and provide more and more opportunities to be aware of new technology and knowledge.

2 Project Purpose

In order to improve quality and productivity by helping farms' access to agriculture technology and knowledge, a comprehensive information exchange system is established.

3 Output of the Project

- (1) An experimental research center is established as an institution for integrating the experimental activities in the province.
- (2) A system of experimental farms is established, based on a concrete concept.
- (3) The curriculums in Koscielce agriculture school complex are expanded.
- (4) The linkage system - network - involving institutions and farms is established for exchanging people and information.
- (5) The curriculums in other agriculture school complexes are expanded in the future.

4 Project Description

4.1 Establishment of an Experimental Research Center

Presently, ODR is engaged in both extension services and experimental activities. To establish an effective system for developing both technology and "extension", the two activities should be separated, with each activity supporting the other. Therefore, it is proposed that an experimental research center is established in Koscielce. The location is advantageous for establishing a linkage system with

ODR, the agricultural school complex, and ESSA.

Of course, ODR should make the selection of experimental farms and listen to the wide range of farm demands, passing these on to the experimental research center. On the other hand, the experimental research center should inform ODR of new concepts of experimental activities, and provide their results to ODR. Also, ODR has to play a role in 'broadcasting' the results in cooperation with the research center. This is the kind of system which should be established.

The experimental research center will have an office building, a laboratory, small-scale farm land and a parking lot arranged on a two-ha site. There are several reasons for having no large-scale farm land:

- 1) If the research center has large-scale farm land attached for practising advanced farming with modern facilities and equipment, neighboring farms will have an antipathy to the center. It will be difficult to establish a close relationship between farms and the research center.
- 2) Konin province has many different kinds of soils and hydrological conditions. Therefore, an experimental result or conclusion from any one area is not necessarily useful for establishing agricultural methods suitable for the whole of Konin. It is better to collect varying data from many areas in cooperation with many farms.

Consequently, the proposed project will include the strengthening of the experimental farms' network. The research center will request the selected farms to cooperate in the experiments.

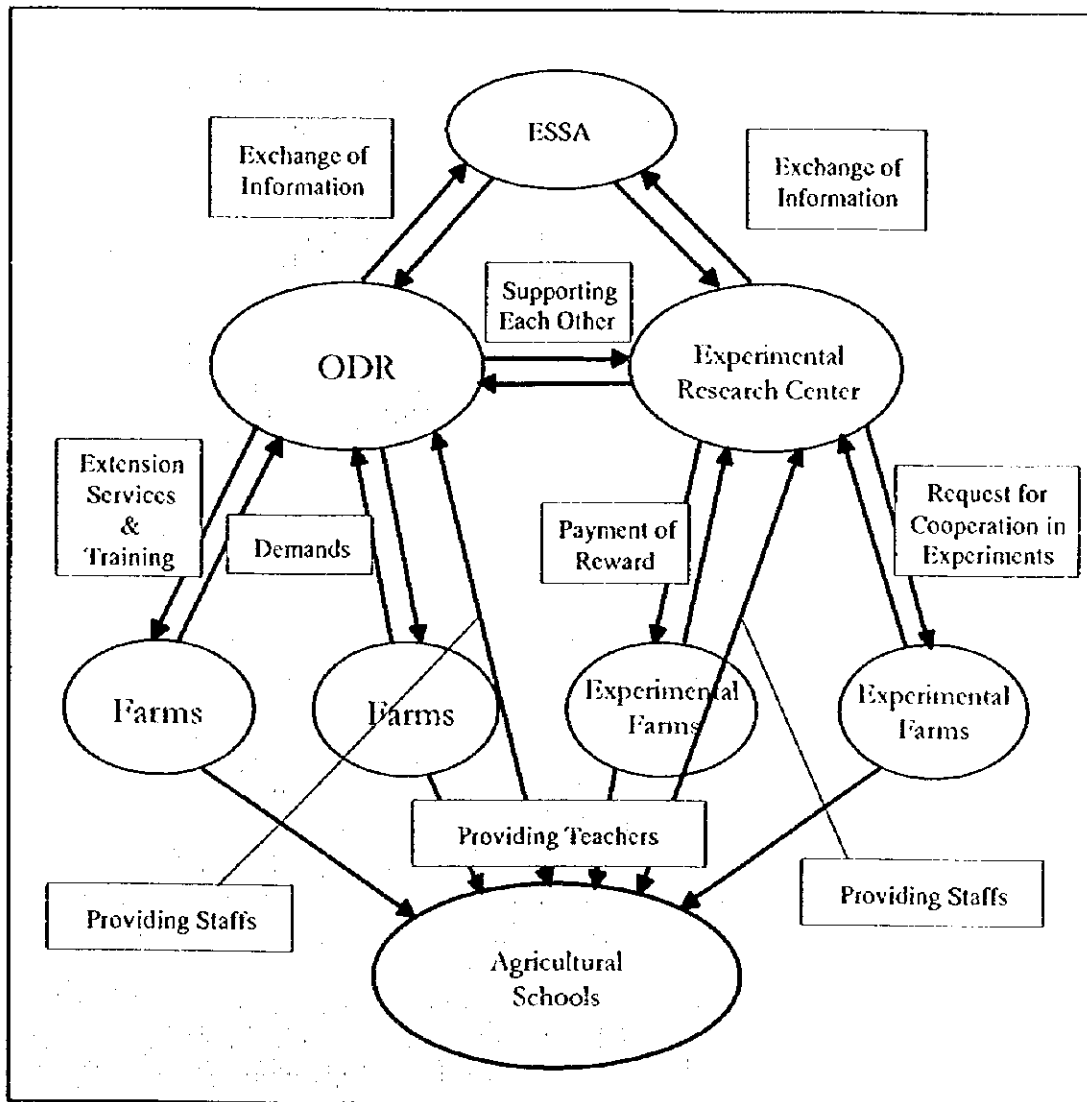
4.2 Linkage System among Farms and the Institutions

Figure PAG-1-1 shows the proposed linkage system among farms and the institutions for extension and experimental services. The system aims at developing more and more opportunities to exchange information and people in order to establish Konin's agriculture.

This system includes the strengthening of the relationships between the agricultural schools and the service institutions or farms. For example;

- 1) To invite agricultural school teachers from institutions,
- 2) To invite agricultural school teachers from farms,
- 3) To make opportunities for farms to provide land for student training,
- 4) To build up staff at the institutions by inviting graduates from agricultural schools and, also, from agricultural universities in other provinces.

Figure PAG-1-1 LINKAGE SYSTEM FOR AGRICULTURAL TECHNOLOGY DEVELOPMENT AND EXTENSION SERVICES



4.3 Proposed Themes of the Experiments

Table PAG-1-1 shows the proposed themes of the experimental activities. In these themes, "methods and effects of irrigation" is an important issue. When main irrigation facilities are installed, the following questions will arise:

- 1) What kind of on-farm facilities are effective - sprinklers, drip-watering pipes, or others?
- 2) How should farms set up on-farm facilities, and how should farms water their land?

In the case of Japan, field irrigation methods are established, but in Poland they are not. It is necessary to establish methods which are suitable for soil and plant conditions in the province.

Table PAG-1-1 PROPOSED THEMES OF EXPERIMENTAL ACTIVITIES

Field	Theme of Experimental Activities
In-field Plant Production	<ul style="list-style-type: none"> ♦ application of new crops, such as sunflower and cotton, to the soil and climatic conditions in Konin ♦ application of new varieties to the soil and climatic conditions in Konin ♦ evaluation of various plant protection methods
Horticulture (Greenhouse Plant Production)	<ul style="list-style-type: none"> ♦ development of reasonable methods or systems for heat supply, water supply and fertilizing ♦ examination of various plant protection methods ♦ application of new varieties to Konin's agriculture
Livestock Production	<ul style="list-style-type: none"> ♦ development of effective breeding methods ♦ application of new varieties to Konin ♦ development of effective protection methods against diseases ♦ development of waste treatment methods
Organic Farming	<ul style="list-style-type: none"> ♦ development of organic farming methods which are adaptable to the conditions in Konin ♦ examination of the effects of various types of organic fertilizers and the quality of organic products ♦ examination of the effects of special fertilizing materials, such as brown coal ash and charcoal, on the soil quality
Methods and Effects of Irrigation	<ul style="list-style-type: none"> ♦ establishment of the most effective on-farm irrigation methods according to the soil and plant conditions ♦ examination of the effects of irrigation on the soil quality, productivity and quality of produce

4.4 Strengthening of the Agricultural Schools

In the earlier stage of the project, Koscielce agriculture school's curriculums will be strengthened. The following activities will be included:

- 1) To introduce more attractive courses including practical field activities,
- 2) To invite teachers from ODR, the experimental research center, farms and researchers from other provinces,
- 3) To invite agriculture school graduates and, also, agriculture university graduates from other provinces,

In the later stage of the project, other schools can follow the activities of the Koscielce school by evaluating the results.

4.5 Project Cost

The Table PAG-1-2 shows the estimated cost of the project.

Table PAG-1-2 ESTIMATED PROJECT COST

Item	Foreign (US\$,000)	Local (US\$,000)	Total (US\$,000)
A. Land Acquisition Cost	0	20	20
B. Site Preparation	0	20	20
C. Engineering Services	20	20	40
D. Construction of the Research Center	3,220	3,230	6,450
Office Building	600	600	1,200
Laboratory	2,500	2,500	5,000
Equipment	70	30	100
Appurtenant Works	50	100	150
E. Indirect Field Expenses	300	300	600
Base Project Cost	3,540	3,590	7,130
F. Physical Contingency	250	400	650
G. Price Contingency	720	1,400	2,120
Total Project Cost	4,510	5,390	9,900

4.6 Implementation Schedule of the Project

Table PAG-1-3 shows the proposed implementation schedule of the project.

Table PAG-1-3 IMPLEMENTATION SCHEDULE OF THE PROJECT

	1998	1999	2000	2001	2002	2003
Feasibility study of the project	—————					
Construction of the research center		—————				
Invitation for staff			—————			
Start of experimental activities				—————		
Start of new curriculums of Koscielce school	—————					
Start of new curriculums of other schools					—————	

5 Implementation Body and Finance Source

(1) Implementation Body

In the earlier stage of the project, the office of the Konin governor needs to be an implementation body. In the later stage, the involvement of the private sector should increase.

(2) Finance Source

In the earlier stage of the project, the provincial budgets need to be introduced. In the later stage, the portion for which the private sector is responsible should become larger through such programs as providing teachers or instructors, and providing training courses for students or rural people.

6 Activities

1. An experimental research center is established as an institution for integrating experimental activities in the province.
 - 1.1 To acquire a site for the research center.
 - 1.2 To design the buildings in detail.

1. 3 To construct the research center.
2. A concrete system of experimental farms is established.
 2. 1 To clarify the selection method of experimental farms.
 2. 2 To establish a reward system for experimental farms.
3. The curriculums in Koscielec agriculture school complex are expanded.
 3. 1 To introduce more attractive courses, including practical field activities.
 3. 2 To invite teachers from ODR, the experimental research center and farms, and to invite researchers from other provinces.
 3. 3 To build teaching staff from the agriculture school's graduates and from agricultural universities' graduates in other provinces.
4. The linkage system among the institutions and farms is established for exchanging people and information.
 4. 1 To establish a system of accepting and answering farms' demand.
 4. 2 To establish a system of dispatching teachers or staff members among agricultural schools and the institutions to extension services.
 4. 3 To establish a system of exchanging information among farms and the institutions for extension services.
5. The curriculums in other agriculture school complexes are expanded in the future.
 5. 1 To introduce attractive courses including practical field activities.
 5. 2 To invite teachers from ODR, experimental research center and farms, and to invite researchers from other provinces.
 5. 3 To hire staff from the agriculture school's graduates and from agricultural university graduates in other provinces.

7 Expected Benefit of the Project

7.1 Direct Benefit

- 1) The new technology and knowledge will be disseminated throughout the whole province, which will contribute to an improvement in productivity and quality.

- 2) Job opportunities are created by taking on staff and researchers for the experimental activities. (50 persons)

7.2 Indirect Benefit

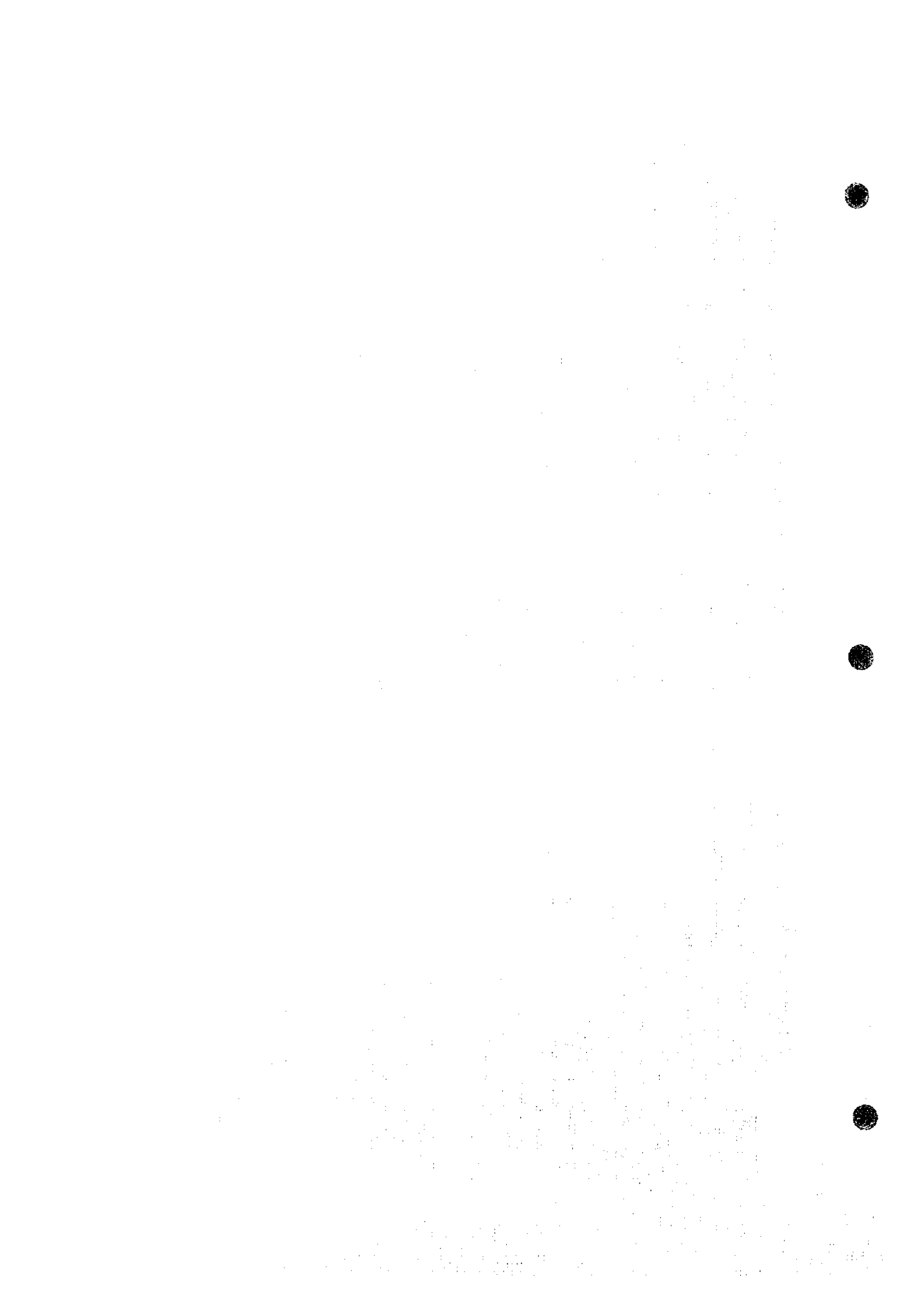
Farms will have more opportunities to exchange opinions, which could promote group activities and improvements.

8 Weakness of the Project

Without a parallel improvement in marketing systems, the increase in productivity will not bring higher profitability to farms. Therefore, marketing issues will need to be solved by other programs or projects.

Project Design Matrix (PDM) for PAG-1 STRENGTHENING OF AGRICULTURAL TECHNOLOGIES IN KONIN

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal Profitability of farms is improved in Konin Province</p>	<p>Profitability of farms' income</p>	<p>Accounting book of farms Farm survey</p>	
<p>Project Purpose Quality and productivity are improved by helping farms' access to agricultural technology and knowledge</p> <p>Output</p> <ol style="list-style-type: none"> 1 An experimental research center is established as an institution for integrating the experimental activities in the province. 2 The system of experimental farms is established based on a concrete concept. 3 The curricula in Koscielce agricultural school are expanded. 4 The linkage system among the institutions and farms is established for exchanging people and information. 5 The curricula in other agricultural schools are expanded in the future. 	<p>Farmgate prices of agricultural produce Productivity of agricultural produce</p> <ol style="list-style-type: none"> 1 1) Actual performance of the research center, 2) Farms' evaluation 2 1) Actual performance of the activities, 2) Farms' evaluation 3 1) Actual performance of the curricula, 2) Students' evaluation 4 1) Actual performance of the system, 2) Farms' evaluation 5 1) Actual performance of the curricula, 2) Students' evaluation 	<p>ODR's report, statistical book, farm surveys</p> <ol style="list-style-type: none"> 1 1) Documents on the activities, 2) Questionnaires 2 1) Documents on the activities, 2) Questionnaires 3 1) Questionnaires 4 1) Documents on the activities, 2) Questionnaires 5 1) Questionnaires 	<p>Farms can keep records of dairy transactions</p>
<p>Activities</p> <ol style="list-style-type: none"> 1-1 Acquire the necessary land for the research center. 1-2 Design the buildings in detail. 1-3 Construct the research center. 2-1 Clarify the selection method of experimental farms. 2-2 Establish a reward system for experimental farms. 3-1 Introduce more attractive courses including practical field activities. 3-2 Invite teachers from ODR, experimental research center, researchers from other provinces, and farms. 3-3 Invite specialists who are graduates from Koscielce agricultural school and also graduates from agricultural universities in other provinces. 4-1 Establish a system of accepting and answering to farms' demands. 4-2 Establish a system of dispatching teachers or staff members among agricultural schools and the institutions for extension services. 4-3 Establish a system of exchanging information among farms and the institutions for extension services. 5-1 Introduce more attractive courses including practical field activities. 5-2 Invite teachers from ODR, experimental research center, researchers from other provinces, and farms. 	<p>Input</p> <p>Manpower :</p> <ol style="list-style-type: none"> 1) Personnel for the project : Staff from the office of the Konin Governor, local self-government and ODR 2) Consultants/Experts : 5 people for 3months each = 15 man/months <p>Finance :</p> <ol style="list-style-type: none"> 1) Project cost : USS 9,900,000 possible to introduce foreign funds 		



**PAG-2 Establishment of Comprehensive Irrigation Management System
(AG-3)**

1 Rationale of the Proposed Project

1.1 Problems of the Present Development Scheme

The problems of the present irrigation development scheme are summarized as follows;

- 1) A water resource development program has been formulated, but it has no financial support at present. Therefore, its start is delayed, and it is not certain when it will materialize.
- 2) The installation of on-farm irrigation facilities is a matter for individual farms, and the administrative bodies have no definite plan of on-farm management systems.

(1) Water Resource Development

In Konin province, the programs for water resource development are given the first priority for the future agriculture. Jeziorsko Dam has been constructed on the upper stream of the Warta river for several purposes, which include reserving irrigation water for 57,000ha farm land. But the irrigation area of the dam covers only areas around the upper stream of the Warta river.

In addition to the dam a large number of reservoirs are being planned in the whole province in order to develop water resources for irrigation. This plan is called the "Small Retention Program." But the program is not financed at this moment, with little prospect for its commencement. A major reason is that many available funds have already been earmarked for restoration and reinforcement of the facilities damaged by the flood in 1997.

A large number of existing small rivers and canals, the major purpose of which is the drainage, also contribute to irrigation. These rivers and canals, however, can irrigate mainly grasslands by natural infiltration of water into the subsoil. Therefore, most of plant cultivation lands are not irrigated at this moment.

PAG-2 Establishment of Comprehensive Irrigation Management System

Table PAG-2-1 shows the total capacity of existing and planned reservoirs by the Small Retention Program. The capacity of each planned reservoir is smaller than existing reservoirs. Detailed study is needed whether necessary water can be obtained from the reservoirs.

Table PAG-2-1 EXISTING AND PLANNED CAPACITY OF RESERVOIRS BY THE SMALL RETENTION PROGRAM

	Number (nos)	Capacity (m ³)
Existing Reservoirs	4	15,163,000
Planned Reservoirs	12	3,657,000
Total	16	18,820,000

Source: Konin provincial office for amelioration and water arrangement (WZMiUW)

(2) On-farm Irrigation Facilities

On the other hand, the administrative bodies have no concrete plan for developing on-farm intake and watering facilities. The installation of on-farm facilities is basically a matter for individual farms, or a matter of the future development after water resources are facilitated. On-farm irrigation has no financial support in the public budget at present. However, very few farms can install such on-farm facilities by themselves. Most of farms cannot easily get irrigation water because they do not have enough funds, or any available water resources. There are, in fact, many farms who need irrigation water urgently in order to achieve higher productivity or better intensive farming practices.

Table PAG-2-2 shows the area which has already been irrigated by watering facilities. It can be seen that very few farm lands have irrigation facilities.

PAG-2 Establishment of Comprehensive Irrigation Management System

Table PAG-2-2 CULTIVATION AREA AND IRRIGATED AREA IN THE PROVINCE IN THE YEAR 1996

Crop	Cultivation Area (ha)	Total Area (ha)	Irrigated Area (ha)
Cereals	205,151	263,018	1,980 (0.8%)
Field Crops	49,467		
Vegetables	3,988		
Fruits	4,412		

Note: 1) Irrigated area means the area which have irrigation facilities such as pumps and sprinklers.

2) Each crop category includes the following crops.

Category	Crops
Cereals	wheat, rye, barley, oat, wheatrye, and others.
Field Crops	maize, potato, sugar beet, and rape.
Vegetables	cabbage, cauliflower, onion, carrot, cucumber, tomato, and others.
Fruits	apple, strawberry, cherry, and others.

Source: Konin provincial office for amelioration and water arrangement (WZMiUW), Statistical office, Konin

1.2 Future Direction and the Project

A desirable future direction is to make a concrete plan which develops a comprehensive water utilization mechanism from water resources to on-farm facilities. If on-farm irrigation systems are left undeveloped, and farms have to wait for water reservoirs to be completed, farms cannot be given necessary water forever. A plan of on-farm systems should be included in the total water supply plans based on consistent and concrete concepts.

The proposed project aims at the establishment of the total development and management system of irrigation facilities.

2 Project Purpose

In order to help farms improve quality and productivity of agricultural produce, a comprehensive system for irrigation development and management is established.

3 Output of the Project

- (1) An effective system for irrigation management is established on both the administration side and the farms' side.
- (2) Basic concepts of the irrigation development are clarified.
- (3) Main irrigation facilities are installed in the pilot areas.
- (4) Farms can operate and maintain the installed main facilities by themselves.
- (5) A support system is established for individual farms to install on-farm facilities.
- (6) A support system is established for further irrigation development.

4 Project Description

4.1 Comprehensive Management System for Irrigation

(1) Necessity of Organizing Farms

At present in the province, very few farms have installed their own irrigation facilities. The majority of farms cannot afford to have any facilities, nor can they have access to the water resources which are available in the vicinity. The crucial point of the project is to find out a method to support those majority of farms.

For this reason, the proposed project will include the construction of large-scale irrigation facilities which cover wide farm land areas. Large scale facilities require a change in the water management system. The present individual management system should be replaced by an organizational management system covering the areas concerned. Therefore, it is necessary to establish an organization for the comprehensive management of installed facilities and water utilization.

(2) Desirable Management System

A desirable management system should:-

- 1) be managed by administrative bodies and farms, who need to cooperate well.
- 2) be based on consistent and concrete planning concepts which comprehend both main facilities and on-farm facilities.
- 3) integrate all of the project implementation stages, that is, planning,

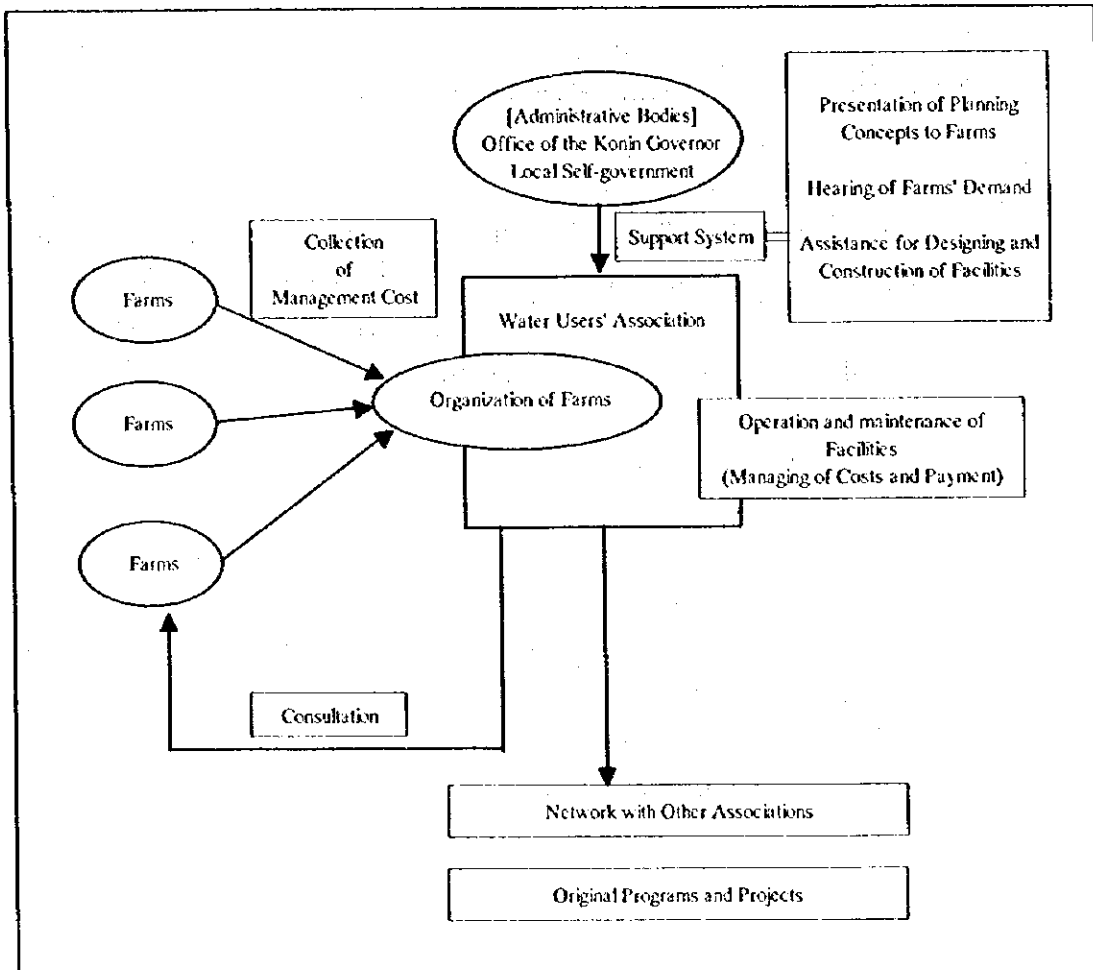
PAG-2 Establishment of Comprehensive Irrigation Management System

designing, construction, and operation and maintenance.

Figure PAG-2-1 shows the proposed scheme of the management system. Administrative bodies will constitute the support system for farms. Farms organize a water users' association. The association will collect water users' fees as management costs from farms, and will be responsible for the total operation and maintenance of facilities. The association will also give suggestions to farms about individual technical matters, and, in the future, start providing some original programs and projects for further development. For example, collection of technological information, making opportunities to discuss many common problems among member farms of the association and farms in other areas, and construct development plans for other irrigation areas.

A problem in this scheme is collection of water users' fees. The land tax is already a burden to farms. Besides, farms have to pay the management cost including electricity charge of pumps and maintenance cost of facilities. Many farms would not be willing to pay the management costs for the irrigation system. However, it is necessary to develop a system that farms can only be included in if they make the required payment. Also, fair payment system needs to be developed.

Figure PAG-2-1 Schematic Chart of Comprehensive Management System



4.2 Basic Concepts of the Irrigation Development

(1) Selection of Pilot Areas

The first step of the project is the selection of pilot areas for irrigation. The project aims at providing irrigation water for the majority of farms who have no water resource at present. However, it is impossible to install irrigation facilities through the whole province at one time. By evaluating the urgency, necessity and possibility of irrigation development in many districts in the province, several pilot areas should be selected as high priority.

The pilot areas could be selected based upon the following criteria:-

- 1) There is a great demand for productivity improvement by supplying water.

PAG-2 Establishment of Comprehensive Irrigation Management System

Vegetables and fruit are cultivated in a wide area, or many farms have the intention to change their production profile into production of profitable vegetables or fruit which require much water. There is a possibility of improving productivity by the irrigation development.

2) Water resources can be obtained relatively easily.

There are possible water resources nearby, such as natural lakes, planned reservoirs, and coal mining areas which discharge much water. Construction costs of the facilities are, therefore, expected to be relatively low. Available water must not be polluted and water use must not be strictly regulated by laws.

3) There is a big market in the vicinity.

After the irrigation facilities are developed, great benefit can be obtained because of the conditions of the market.

Table PAG-2-3 and Figure PAG-2-2 show the description and the location of the pilot areas selected based upon the above-mentioned points. In the selected areas, the main produce are vegetables and fruit which require a large amount of water. Cereals, field crops and potatoes also require water, but these crops are considered to be of secondary priority.

The possible water resources in the selected areas are natural lakes, planned reservoirs, existing reservoirs, discharge water from coal mining areas, and groundwater. The big rivers, such as the Warta river and the Ner river, are not suitable for water resources of irrigation. Some parts of these rivers are polluted. Also, the construction cost of intake facilities from those rivers will be expensive because planned facilities will require the consideration on flood protection measures. There are many small rivers or canals in the province, but they cannot supply all the water required for the irrigated areas. The small rivers are narrow, do not have a large amount of discharge, and sometimes dry up in summer when much water is necessary.

On the other hand, natural lakes and artificial reservoirs are not necessarily good water resources for irrigation. Those lakes and reservoirs are tourist areas and are used for recreational purposes, so the water availability will be limited. Developing irrigation facilities on a wide scale requires much water, and there is a

PAG-2 Establishment of Comprehensive Irrigation Management System

strong likelihood that the water will often run out. (see the section (3) Water availability) Therefore, even in cases where lakes or reservoirs are suitable for providing the water resources, installation of deep wells beside the intake facilities would be less likely to cause trouble. Although this will cost a lot of money, it is inevitable.

Discharge water from coal mining areas is regarded to have as high a potential as water resources. The amount of water discharge is 1.0 to 2.0m³/s, sufficient to supply water for wide area irrigation. Also, the water from coal mining areas can be used for heat supply and irrigation water for the proposed greenhouse parks in project PKI-2, and for irrigation water for the proposed experimental farms on the refilled land of mines in project AG-10.

Some of the selected pilot areas have no water resources other than groundwater. Installation of deep wells cost more than the intake facilities from surface water, however, productivity improvement and marketing possibility could be more important factors for the selection.

All in all, the pilot areas are selected on the basis of the three critical points, namely, demands for productivity improvement, possible water resources, and marketing possibility.

The plans for the main facilities are shown in Attachment-1 to Attachment-7.

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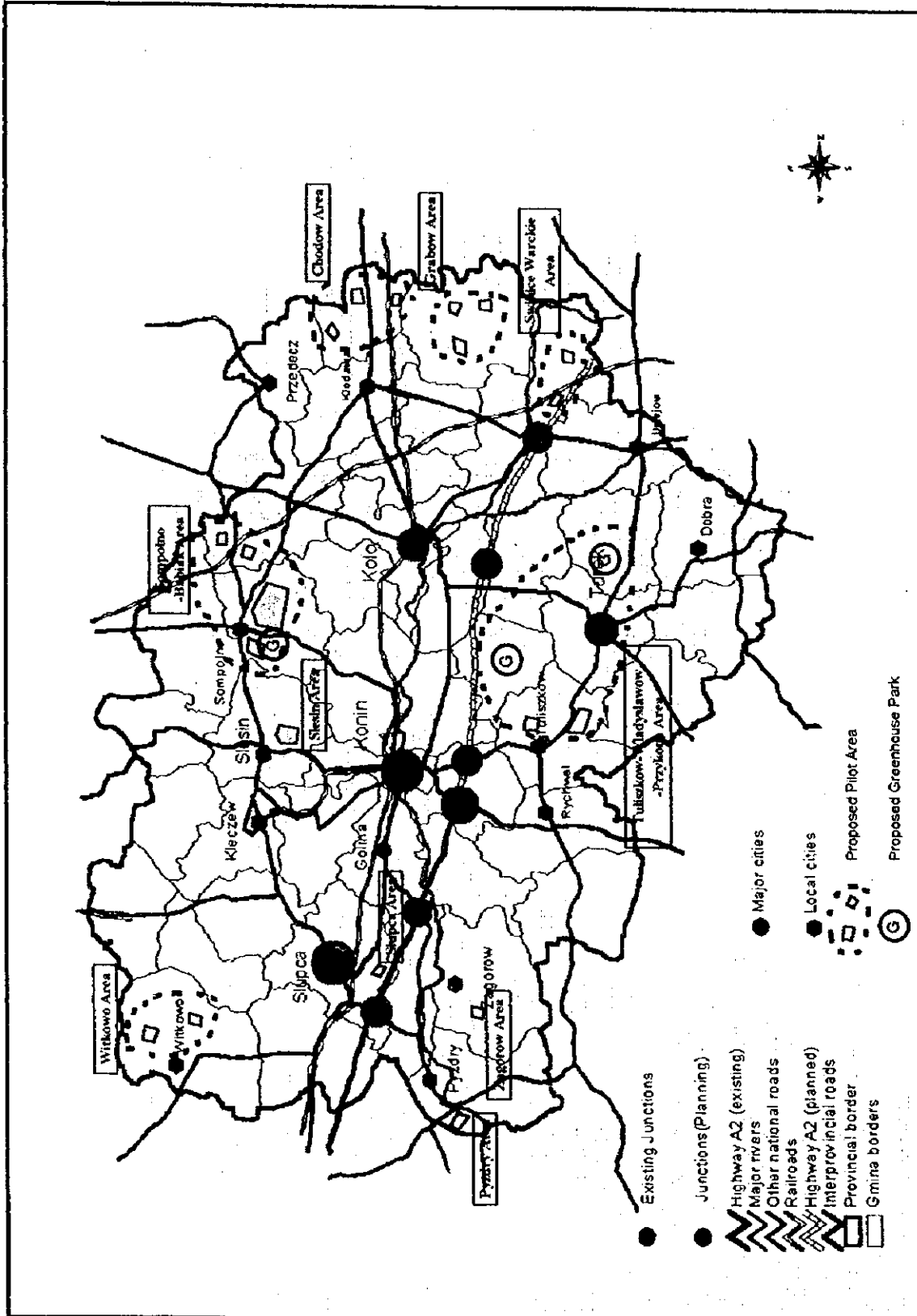
Table PAG-2-3 DESCRIPTION OF SELECTED PILOT AREAS FOR IRRIGATION DEVELOPMENT

Gmina	Villages	Possible Water Resource	Area (ha)	Remarks
Sompolno -Babiak	Sompolno; Ploszewo, Dabrowa, Zofia, Biele, Bronislawa, Lubstow, Nowa Wies, Sycewo, Zakrzewek, Makolno. Babiak; Lubotyn, Brzezic.	Natural Lake; Planned Reservoir; Discharge water from a coal mining area	Sompolno; Orchards 951 Vegetables 97 Total 1,048 Babiak; Orchards 181 Vegetables 46 Total 227 Total; Orchards 1,132 Vegetables 143 Total 1,275	Discharge water from a coal mining area can be used for a proposed greenhouse park in Sompolno Gmina. Concentrated cultivation of apple and strawberry.
Slesin	Mikorzyn, Wasosze.	Natural Lake; Ground water	Orchards 145 Vegetables 48 Total 193	
Witkowo	Cwierdzin, Witkowo, Ruchocinek.	Natural Lake; Groundwater	Orchards 242 Vegetables 79 Total 321	Possibilities to sell products to tourists or a nearby market outside the province. (Gniezno, Poznan province)
Stupca	Kowalewo-Opactwo.	Existing Reservoir; Groundwater	Orchards 72 Vegetables 232 Total 304	
Pyzdry	Pyzdry.	Groundwater	Orchards 226 Vegetables 50 Total 276	Scattered orchards, delivering products to a nearby market outside the province. (Wrzesnia, Poznan province)
Zagorow	Lukom.	Groundwater	Orchards 68 Vegetables 68 Total 136	Appeals for strawberry production and irrigation.
Grabow	Biesiekiery, Kurzjama, Besk Stary, Grabow.	Groundwater	Orchards 133 Vegetables 761 Total 894	Concentrated cultivation of onion and cucumber for markets outside the province. (Lodz, Lodz province; Leczyca, Plock province)
Chedow	Elizanow, Boryczyny Chrzanowo, Kalen Duza, Dlugie.	Groundwater	Orchards 304 Vegetables 113 Total 417	
Swinice Warckie	Stemplew, Tolow, Kraski, Swinice, Swinice Kolonie.	Planned Reservoir; Groundwater	Orchards 95 Vegetables 75 Total 170	Small ponds owned by some farms, not supplying enough water. Cultivation of apple, cherry and vegetables.
Tuliszkow -Wladyslawow -Przykona	Tuliszkow; Tuliszkow, Zadworna, Wymyslow, Wielopole, Pietno, Grzymiszew.	Discharge water from a coal mining area	Tuliszkow; Orchards 437 Vegetables 65 Total 502	Discharge water from a coal mining area can be used for proposed greenhouse parks in Wladyslawow and Przykona Gminas.
Total			Orchards 2,854 Vegetables 1,634 Total 4,488	

Source: Agriculture Department, Konin Province

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Figure PAG-2-2 SELECTED PILOT AREAS FOR IRRIGATION DEVELOPMENT



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(2) Water Requirement

Water requirement for irrigation should be discussed from two different aspects: long term water requirement and short term water requirement. Further detailed study is necessary to clarify the exact water requirement. General ideas are described in the following paragraph.

Long term water requirement is usually decided on the basis of water balance through a term of a year or longer. Water balance simulation will be conducted, taking into account daily rainfall, daily water reserving and daily water consumption in a model-case water-shortage year. The simulation will be a basis for the whole irrigation plan. The required capacity of reservoirs will be calculated by the simulation.

Short term water requirement depends mainly on the water holding capacity of soils and amount of water absorption by roots of crops. The water requirement changes by season in accordance with the change of soil and crop conditions. Also, the maximum water requirement indicates the amount of water which is required when the dry weather continues. The required capacity of pumps and main pipelines will be calculated by the short term analysis.

Concerning the short term water requirement, a rough value can be indicated. Generally, the maximum water requirement in summer is 3mm/day or 4mm/day, regardless of soil or crop conditions. Therefore, assuming that the maximum value is 3mm/day, water requirement can be calculated as follows;

Water requirement per unit area (ha);

$$\begin{aligned} q &= \frac{0.003\text{m/day} \times 10,000\text{m}^2}{24 \times 0.80} = 1.56\text{m}^3/\text{hr}/\text{ha} \\ &= 0.0260\text{m}^3/\text{min}/\text{ha} \\ &= 0.000433\text{m}^3/\text{s}/\text{ha} \end{aligned}$$

where 0.80; Irrigation efficiency.

Based on the above calculation, the total water requirement of each pilot area is shown in Table PAG-2-4. These requirements indicate the planned capacities of

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the main irrigation facilities, such as pumps and pipelines.

Table PAG-2-4 MAXIMUM WATER REQUIREMENT OF EACH PILOT AREA

Pilot Area	Irrigation Area (ha)	Water Requirement (m ³ /min)	Remarks
Sompolno-Babiak	1,275	33.2	
Slesin	193	5.02	
Witkowo	321	8.35	
Slupca	304	7.90	
Pyzdry	276	7.18	
Zagorow	136	3.54	
Grabow	894	23.2	
Chodow	417	10.8	
Swinice Warckie	170	4.42	
Tuliszkow	502	13.1	
Total	4,488	116.7	

(3) Water Availability

A number of reservoirs are being planned throughout the province. It is necessary to check the water availability of the reservoirs.

The example of Sompolno-Babiak, which has the largest irrigation area of all the pilot areas, is given as below;

- Capacity of Sompolno reservoir; 172,000m³
- Irrigation area of Sompolno; 1,048ha
- Maximum water requirement; 39,237m³/day
(= 1,048ha x 1.56m³/hr/ha x 24hr)
- Catchment area of the reservoir; 800ha
(roughly estimated by the 1 to 100,000 topographical map)

Then, $172,000 / 39,237 = 4.4$ days

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Therefore, the Sompolno reservoir can only reserve the water for 4 days. In other words, the water will run out if dry weather continues for 5 days or more. Fortunately, in the case of Sompolno-Babiak, the discharge water from coal mining area is available. So the reserved water can be supplemented with the discharge water.

On the other hand, the reservoir's ability of collecting water can be evaluated as follows;

In the case of 10mm of rainfall, assuming that 10% of this rainfall will flow into the reservoir, the amount of water which can be collected is;

$$Q = 10 \times 10^{-3} \text{m} \times 800 \times 10^4 \text{m}^2 \times 0.10 = 8,000 \text{m}^3$$

Then, $172,000 \text{m}^3 / 8,000 \text{m}^3 \times 10 \text{mm} = 215 \text{mm}$

This means that 215mm of rainfall will be required in order to reserve water in the reservoir. Considering the amount of rainfall in the growing season is 200 to 500mm, it will take a long time to reserve the water. As already mentioned, in the Sompolno-Babiak area, the discharge water from coal mining is available; therefore, much rainfall is not necessary. However, without the discharge water, the water would be consumed immediately, and the water would not be reserved easily.

More detailed study is necessary to clarify the water requirement and water availability for each pilot area. A rough estimate is shown as an example in the above calculation.

(4) Basic rules for efficient water use

Maximum water requirement is 3mm or 4mm per day. On the other hand, the capacity of on-farm facilities such as sprinklers is 1mm to 4mm per hour. Therefore, if the sprinklers are operated for several hours in a day, or operated once in several days, enough water can be provided.

On the contrary, if sprinklers are operated on the whole irrigated area at the same time, the water will run out immediately. This is because the main facilities are

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designed on the basis of the daily average value being no higher than 3mm or 4mm. Consequently, it is necessary to make a basic rule for water use; for example, using water in different places at different times. Cooperation among member farms of the water users' association will be required for effective water use.

4.3 Project Cost

The Table PAG-2-5 shows the estimated cost of the project.

Table PAG-2-5 ESTIMATED PROJECT COST

Item	Foreign (US\$,000)	Local (US\$,000)	Total (US\$,000)
A. Land Acquisition Cost	0	160	160
B. Site Preparation	0	100	100
C. Engineering Services	200	100	300
D. Construction of Facilities	22,000	8,800	30,800
Reservoirs	0	2,300	2,300
Pumps as intakes from surface water	8,800	2,900	11,700
Pumps as intakes from groundwater	7,100	1,500	8,600
Pipelines	6,100	1,100	7,200
Open Channels	0	500	500
Appurtenant Structures	0	500	500
E. Indirect Field Expenses	1,200	900	2,100
F. Pre-Operation Expenses	800	300	1,100
Base Project Cost	24,200	10,360	34,560
G. Physical Contingency	1,700	1,100	2,800
H. Price Contingency	4,500	4,040	8,540
Total Project Cost	30,400	15,500	45,900

Table PAG-2-6 shows the proposed implementation schedule of the project.

Table PAG-2-6 IMPLEMENTATION SCHEDULE OF THE PROJECT

	1998	1999	2000	2001	2002	2003	2004
Feasibility study of the project	—————						
Organization of the associations		—————					
Construction of main facilities in pilot areas			—————				
Installation of on-farm facilities				—————			
Operation and maintenance				—————			
Start of original programs					—————		

5 Implementation Body and Finance Source

(1) Implementation Body

The project should be implemented in cooperation with the office of the Konin governor, the local self government, and ODR with the organizations of farms (water users' associations).

(2) Finance Source

In the earlier stage of the project implementation, a finance source from foreign organizations for international cooperation will be introduced. In the later stage local governments and farms are expected to pay part of the project cost.

6 Activities

1. An effective system for irrigation management is established on both the administration side and the farms' side.
 - 1.1 To establish a comprehensive support system from planning to maintenance.
 - 1.2 To organize the water users' associations in the pilot areas.
2. Basic concepts of the irrigation development are clarified.
 - 2.1 To study in detail the water requirement and water availability for irrigation.
 - 2.2 To formulate a plan of typical main facilities and on-farm facilities.

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3. Main irrigation facilities are installed in the pilot areas.
 - 3.1 To design the main facilities in detail.
 - 3.2 To construct the main facilities.
4. Farms can operate and maintain the installed main facilities by themselves.
 - 4.1 To establish a fair payment system for management cost of the associations.
 - 4.2 To prepare a guideline for operation and maintenance of the main facilities.
5. A support system is established for individual farms to install on-farm facilities.
 - 5.1 To establish a consultation body for farms.
6. A support system is established for further irrigation development.
 - 6.1 To establish an information network among the associations and other farms.
 - 6.2 To start some new programs or projects toward future development.

7 Expected Benefit of the Project

7.1 Direct Benefit

- 1) The productivity of farm lands is improved.

Water shortage which prevents the plant growth is resolved, and land productivity is improved. Also, differences in productivity by soil classes will be smaller. A typical irrigation plan in Japan will lead to a 10 to 20% increase in production. Such a level of productivity improvement can be expected in Poland.
- 2) The quality of agricultural produce is improved.

Adequate water supply itself contributes to improvement in quality of produce. The watering system will also help to create more opportunities to change the production profile and introduce new varieties or crops, and indeed lead to higher quality production. Moreover, more and more good quality produce will appear on the market, which will help to improve the profitability of farms.
- 3) Damage caused by water shortage will be prevented.

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Establishment of durable water resources and water supply systems will reduce the damage to production by water shortage or drought.

- 4) Job opportunities are created for management of the comprehensive irrigation system. (100 people)
Job opportunities will be created for the operation and maintenance of facilities, and assistance and control of group activities, such as management of cost and payment, consultation for farms, promotion of meetings with farms in other areas, collection of technical information, and designing of new programs useful for future development.

7.2 Indirect Benefit

- 1) Group activities are promoted.
The installation of common irrigation facilities which cover wide areas of lands will be a motivation for producers to act in a group.
- 2) Change in production profile from traditional to new varieties which meet market demands and will increase sales opportunities for farms.

8 Weakness of the Project

Without the improvement in marketing systems, productivity improvements would not lead to higher profitability for farms. Therefore, projects aimed at solving these issues need to be implemented at the same time.