Republic of Lebanon

Position Report
Service Area of Hasbani Watercourse

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
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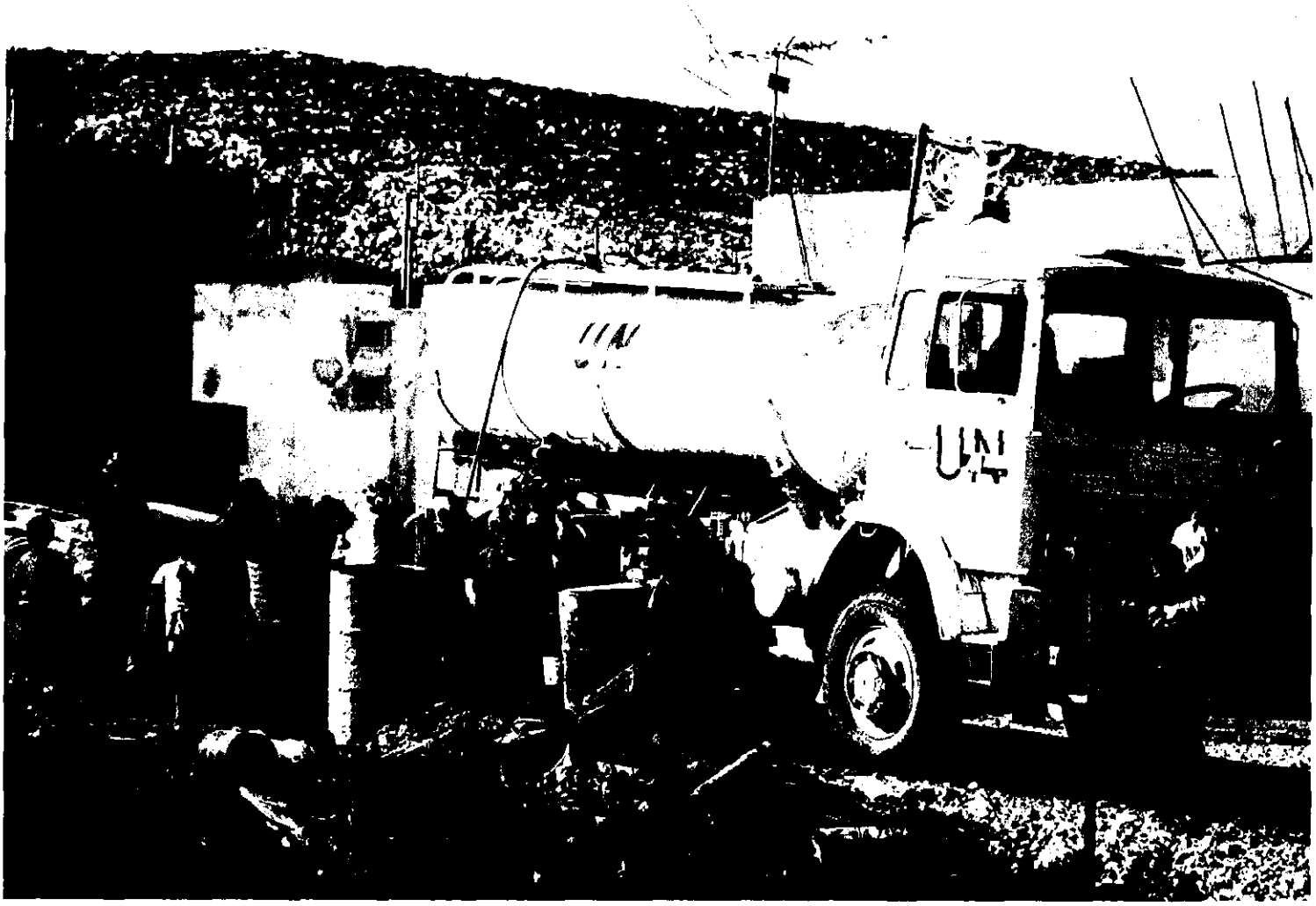
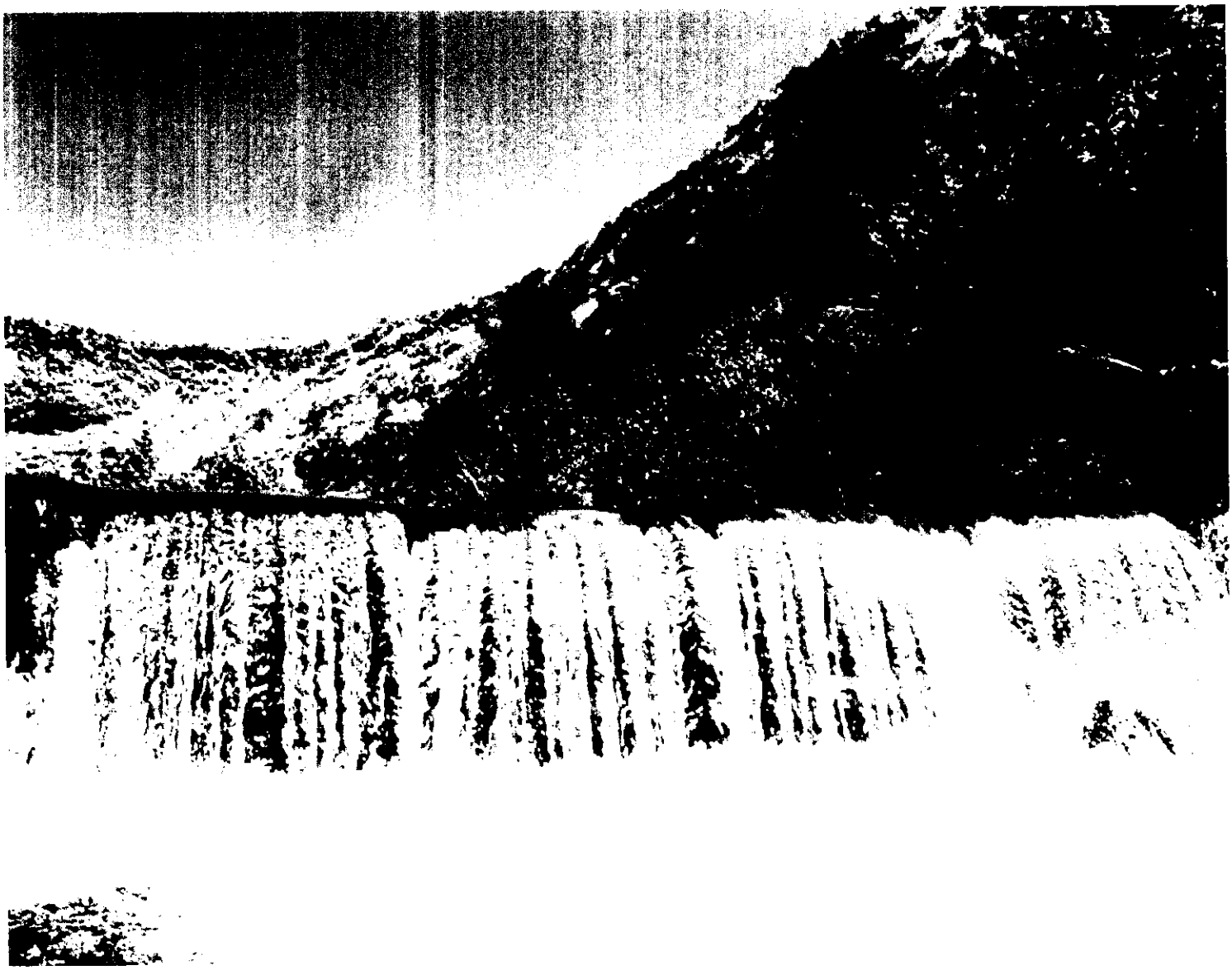


Reuters , oct. 2002

The people of South Lebanon storing water from the United Nations vehicles.



Reuters , oct. 2002

The Wazzani river flowing towards Israel.

SERVICE AREA OF THE HASBANI WATERCOURSE

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Units used

L/c/d :Litres per capita per day

m^3/d : cubic metres per day

Mcm/a : million cubic metres per annum (per year)

Ha : hectares

POSITION REPORT

POSITION REPORT

1 INTRODUCTION

For 22 years, beginning in 1978, South Lebanon was under Israeli occupation. **During the Israeli occupation, the majority of the inhabitants of the region were forced to leave their homes, while those who remained in their homes were not allowed to utilize available water sources.** On the other hand, during the same period, the Israeli territories near the border became over developed compared to the devastation that can be readily seen in the parts of Lebanon formerly under Israeli occupation. The Lebanese Government was unable during the Israeli occupation to rehabilitate the existing drinking water and irrigation systems, or to construct any new water systems.

In May 2000, most of the Lebanese territories under Israeli occupation were liberated with the exception of the Chebaa farms and three locations on the "Blue Line" adopted by the United Nations as the withdrawal line. Lebanon made clear reservations concerning these points. Entire communities have returned to their devastated villages and towns, and to their heavily mined agricultural lands[1]. Consequently, the need for water has increased very substantially. Lebanon has sought to partly meet this demand for water from the Hasbani watercourse.

As early as the 1950's, the Point 4 mission from the US Bureau of Reclamation emphasized that socio-economic conditions would only improve in South Lebanon if the Government could implement rural development programme. This was confirmed by the Regional Socio-Economic Development Programme for South Lebanon Report prepared by the High Relief Committee in collaboration with the UNDP in July 1999. **The economy in the south is agriculturally based. Its development is dependent upon Lebanon being allowed to meet its legitimate needs for water from the Hasbani watercourse.**

Israel has been preventing Lebanon from meeting its needs for water from the Hasbani Watercourse since at least the middle 1960's and has exploited the Hasbani Watercourse almost exclusively. **In fact, an Israeli pumping installation can still be found on the Wazzani springs pumping more than 2,000 cubic metres per day (m^3/d) to territory occupied by Israel.** Moreover, the Israelis continue to exploit Lebanese water from the Chebaa Farms, estimated at twenty five million cubic metres per year.

[1] More than 500,000 mines and unexploded ordnances remain in the land, without proper location maps.

LEBANON

(ISRAEL)

Reuters , oct. 2002

The blue line separates the arid land of Lebanon from the richly cultivated land of israel

On the 31st of August 2002, the Government of Lebanon started the construction works of the Wazzani Water Supply Project, in order to supply 12,000 cubic metres per day (4.4 million cubic metres per year, mcm/y) of drinking water, from the Wazzani springs to villages and towns located within the service area of Hasbani watercourse. This project is in response to vital, basic, humanitarian, socio-economic needs within the service area. At present, the volume of water received by the inhabitants in the project area is 50 Litres per person per day, which amounts to 3,190 cubic metres per day for the entire area with a population of approximately 65,000 whereas the per capita demand in Israel is estimated at 350 Litres per capita per day.

The present developments regarding the Hasbani water supply project pose the plight of a thirsty people in south Lebanon trying to rehabilitate its land and recover from the scourge of Israeli occupation.

Since the start of the construction, Israel has been making bellicose statements against Lebanon in a blatant and blunt defiance of international law thereby aiming at depriving the Lebanese of their inalienable rights to their water and at continuing its illegal appropriation of Lebanon's water. It has alleged that Lebanon is diverting the Hasbani watercourse. The Israeli allegations are completely false, untrue and unfounded. **Any observer who wishes to visit the site will clearly see that Lebanon is not diverting the Hasbani watercourse, particularly since there are no relevant construction works being undertaken on the watercourse**.

Therefore, Israel is not in a position to claim any violation of the relevant international regulations. Representatives of the United Nations Organisations are welcome to visit the area and corroborate that Lebanon, in fact, is not diverting the Hasbani watercourse.

Furthermore, the on-going water supply project within the Hasbani watercourse area falls completely within the legal framework of the norms and principles of International Law, particularly that Lebanon's utilisation of its waters is without any excess, bearing in mind that Lebanon has not yet addressed the totality of development needs of the watercourse area, and is keen on achieving this goal within the scope of its rights under International Law.

The following presentation will describe the Wazzani Water Supply Project - 2002 along with other projects the Government of Lebanon is considering for the Hasbani watercourse area.

Reuters , oct. 2002

The blue line separates the arid land of Lebanon from the richly cultivated land of israel

2 BACKGROUND

2.1 *CHARACTERISTICS OF THE HASBANI WATERCOURSE AREA*

2.1.1 Geographic characteristics

The Hasbani River flows from the Hasbani Spring, located in the lower half of the watercourse area about 21 Km north of the southern international borders. It then flows south and receives the water of the Wazzani springs some 4 kilometres before Lebanon's southern international border (Figure 1). The Wazzani springs are located in the southern extremity of the Hasbani Watercourse. The area of the watercourse is approximately 600 km^2. The Hasbani watercourse has a number of seasonal tributaries:

- Wadi al Fater which drains the northern part of the watercourse area, above Hasbani Spring;
- Wadi Al Fardis - Wadi Chebaa;
- Wadi Sreid.

The above tributaries become dry during the summer.

The Hasbani watercourse area is characterized by the asymmetry of its banks. The left bank extends along the north western slopes of Mount Hermon, with the highest point of the bank located at an altitude of 2,814 m above sea level. The inclination of the left bank at this altitude is steep and decreases gradually, eventually flattening out into Marjayoun Plains. The highest point of the right bank of the River lies in Mount Dwaweer at an altitude of approximately 1,300 m above sea level.

Figure 1:


HASBANI WATERCOURSE AREA
Legend
Villages
Main Rivers
Hasbani Basin
Springs
N
0 2.5 5 km
1:250,000
Figure 1

2.1.2 Hydrology

The total volume of water within the Hasbani watercourse results from the combination of rainfall and melting snow. The percentage of the volume flowing between December and April is approximately between 70 to 80% of the total annual volume. In the period from mid November to mid May, the percentage of volume flowing is approximately 75% to 90% .

a. Average run-off water[2]

The average run-off water downstream of Wazzani Springs in the Hasbani watercourse, has a calculated average of approximately:

- 143 mcm/y, based on a 30-year average, which includes dry and wet periods;
- 164 mcm/y, based on a markedly wet 10-year period.

b. Underground water

The total annual underground water flowing through the Lebanese territory to the Houle' depression and the occupied territories is estimated at 200 mcm/y[3] to 210 mcm/y[4].

2.2 *SOCIO-ECONOMIC CONDITIONS WITHIN THE HASBANI WATERCOURSE AREA*

2.2.1 Population

The inhabitants of the Hasbani watercourse area, along with all the inhabitants of the region formerly under Israeli occupation, live a precarious economic existence.

The present population is estimated at 170,000 inhabitants[5] with a growth rate of between 2.2 to 2.5 %[6].

The UNDP-Ministry of Social Affairs report of October 2000[7] considered South Lebanon a priority in the field of regional development actions. The study reported that deprivation in the previously occupied areas reached 60%.

One quarter of monthly household incomes within the region are less than US$ 300 for a family of 4.8 persons[8], which is the average size of households in the region. One third

2 Source: ARCS, Étude du Bilan des Ressources en Eau dans le bassin du Hasbani", Septembre 2000.
[3] UNDP, Etude des Eaux Souterraines, 1970
[4] Source: ARCS, Etude du Bilan des Ressources en Eau dans le Basin du Hasbani, Septembre 2000
[5] Ministry of Interior 2002
[6] UNDP report 1999
[7] The National Programme for Improving the Living Conditions of the Poor, UNDP-MoSA, October 2000.
[8] Regional Socio-Economic Development Programme for South Lebanon, UNDP, July 1999

Reuters , oct. 2002

The ways and means for storing water in the south of Lebanon.

of household incomes come from government grants aimed at alleviating the deleterious effects of the occupation. Other sources of income include small-scale non-irrigated agriculture. Furthermore, the socio-economic circumstances of the inhabitants are exacerbated by the number of people who were displaced, orphaned, disabled or imprisoned during the occupation.

The region displays the scars of the long Israeli occupation. Vast areas are planted with land mines by the Israelis; while most areas of Jabal Amel display severe deforestation. In addition, the evidence of badly damaged agricultural land can be found in all regions formerly under the occupation.
It must be noted that the region was much less developed than the rest of Lebanon before the occupation in 1978, particularly in terms of public infrastructure such as drinking water networks, sewerage collection and disposal networks and irrigation systems.
The challenges facing the region of the Hasbani watercourse service area are numerous, and include particularly the construction of infrastructure facilities to improve the living conditions.

2.2.2 Socio-economic indicators

This region has for 22 years lived apart from the rest of the country due to the Israeli occupation. Every aspect of life has been affected by the occupation and associated conflicts. The local economy, health services, educational facilities, basic infrastructure, such as drinking water and sanitation services, have all been devastated.

The survey undertaken by the Ministry of Social Affairs and UNDP in 1998 indicates that the villages previously under Israeli occupation are characterised by high illiteracy, high rate of unemployment and gender inequality in illiteracy rates. The socio-economic indicators of the three administrative cazas in which the watercourse area falls are lower than the national average. The percentage of illiteracy in the Caza of Marjayoun for instance is 23.6%, nearly double the average national value.

a. Former detainees

The socio-economic circumstances of former detainees and their families are particularly grave.

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The ways and means for storing water in the south of Lebanon.

Approximately, 19.3% of former detainees are illiterate while only 36.8% have completed elementary education. Approximately, 20% of the detainees are unskilled, while 80% are semi-skilled. The unemployment rate is 39.3% amongst the former detainees.

b. Widows and orphans

The Israeli occupation caused thousands of deaths in all groups of population. Those killed often leave behind families and orphans. Thousands of families have lost one parent while hundreds have lost both. Most orphans live with extended families, and charitable organizations take extreme cases.

Without a doubt, families that lose their source of income after the principal income earner dies, face real difficulties in terms of nutrition, education, clothing, health and other social problems.

c. Handicapped

The number of people wounded during and after the occupation from shelling and mines explosions continues to grow.

The handicapped situation places affected families under tremendous stress. The loss of income is severe if either the handicapped is the main income earner or if another active family member is forced to leave his job to care for the handicapped. Unfortunately, access to professional care for handicapped is limited, which means they are unable to achieve any sort of economical independence or contribute to the economic well being of their families.

2.2.3 Domestic water supply networks

The domestic water supply networks within the watercourse area are more than 50 years old and have not been maintained for the last 24 years due to the Israeli occupation. Because of the deficiency of the networks, most villages are receiving much less water than what is internationally acceptable for basic needs.

2.2.4 Government plan for development

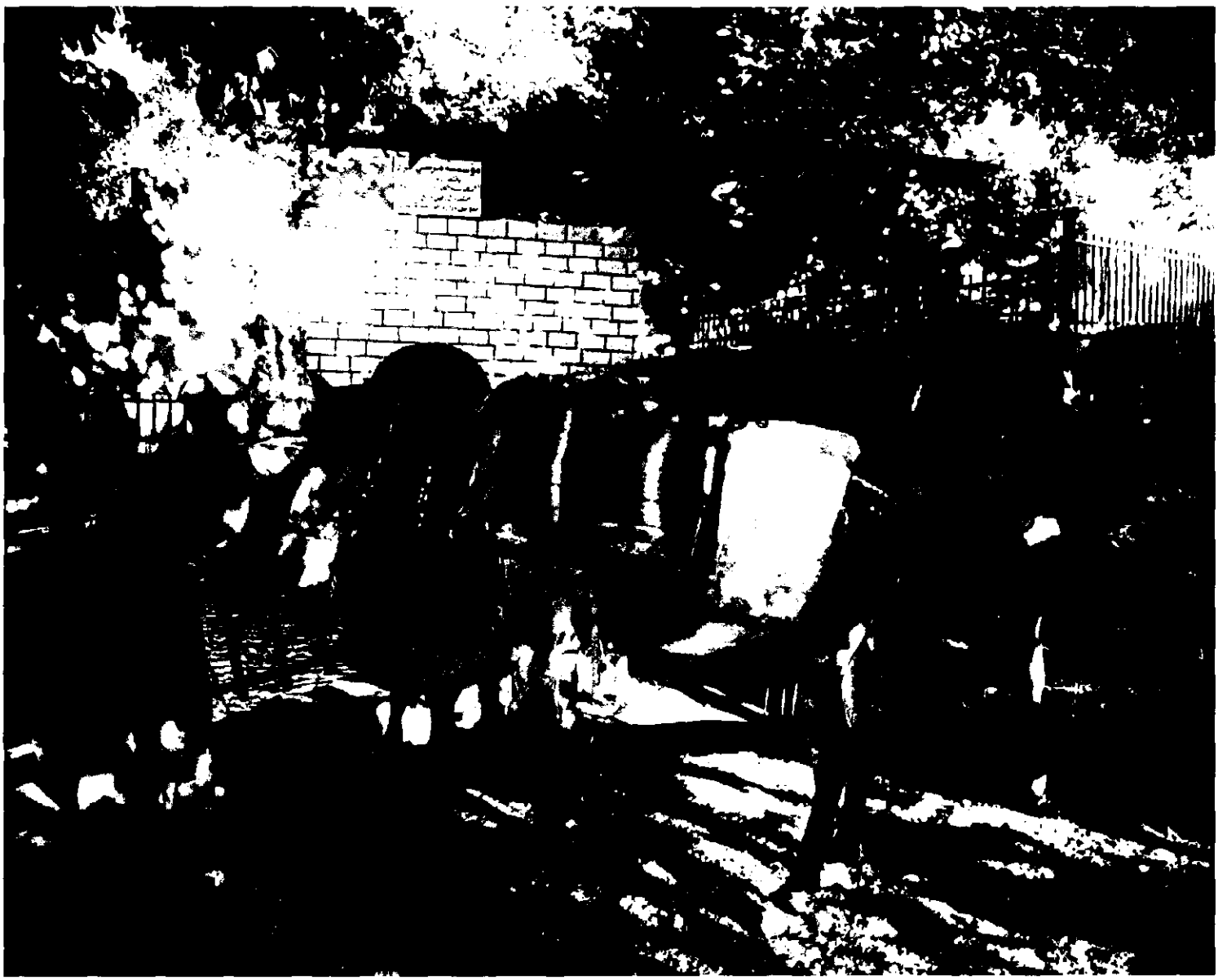
In light of the above, the socio-economic circumstances within the Watercourse area are bleak indeed. The development of the region is considered a national priority due to the need to return life back to normal. Unless the Government can institute developmental programmes within the region, the desolation of the 22 years will continue. The agricultural sector, as the engine of the local economy, along with basic infrastructure, are the focus of the Government's developmental effort in the region. **A well functioning economy will greatly contribute to insuring security and stability for the people of the region.**

In recognition of the above, the Government, in collaboration with UNDP formulated the Regional Socio-Economic Development Programme for South Lebanon in July 1999. The programme is based on the following:

- Development of the economic sectors capable of creating jobs, such as services, tourism, industry and agriculture;
- Improvement of agricultural productivity through irrigation, new diversification techniques and renovation of the agricultural extension services;
- An approach shifting assistance aimed at creating a spirit of enterprise;
- Creating favourable environment for economic activities;
- Reverting to national norms of the public services.

Subsequently, the Government of Lebanon formulated a 1.3 billion US$ development programme[9] for the liberated regions, comprising a component for basic services and socio-economic development (1.18 billion US$), a component for compensation and financial assistance (148 million US$), and a component for mine action assistance (8.1 million US$), as shown in the following (Table 1). This programme was presented at the international donor's conference held in Beirut in July 2000. The implementation of much of the programme depends upon the availability of funding.

[9] GOL, Consolidated development programme for South Lebanon and parts of West Bekaa and Rachaya, 2000.



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The ways and means for storing water in the south of Lebanon.

Table 1: Consolidated development programme for the liberated regions of South Lebanon

Category	Cost (US$)
A- Basic services and socio-economic development	1,183,091,508
B- Compensation and financial assistance	148,300,000
C- Mine action assistance	8,125,000
Total	**1,339,516,508**

Source: Consolidated development programme for South Lebanon, 2000.

3 EXISTING WATER CONDITIONS

3.1 *DOMESTIC WATER RESOURCES AND DRINKING WATER SYSTEMS*

As per described in section 2.2.1, the present population of the watercourse area is 170,000 inhabitants with a growth between 2.2 and 2.5%.

The main supply lines are more than 50 years old, corroded in most of the sections and damaged by the passage of the Israeli military equipments. All valves and air valves are damaged, inoperable and leaking.

In 2001 a small pumping station was installed on the Wazzani Spring to supply the village of Wazzani with drinking water (Wazzani Project – 2001). It consists of two pumps, one operating and one on stand-by, each having a capacity of providing an ultimate flow of 1300 m^3/d if operated 24 hrs a day. Currently, it is operated for 12 hours a day to provide 0.23 mcm/y. The pumping station discharges into a local reservoir at Maysat through a 1700 m long and 4 inch galvanized pipe. The characteristics of the pumps are described in (Annex 2).

3.2 *IRRIGATION AND AGRICULTURE*

During the past two years, 2 farmers installed 2 pumps along the Hasbani River to irrigate their lands. As described earlier, agriculture is the main source of income for the villagers and farmers in South Lebanon. These two pumps operate only during the dry season (5 months), and only for a few hours a day.

Both pumps are of the vertical turbine type. Their maximum flow is 50 litres/second approximately. Their technical characteristics are described in (Annex 3).

LEBANON

Reuters , oct. 2002

View from Israel towards Lebanon showing the abundant agriculture of Israeli land and the dryness and aridity of Lebanese land.

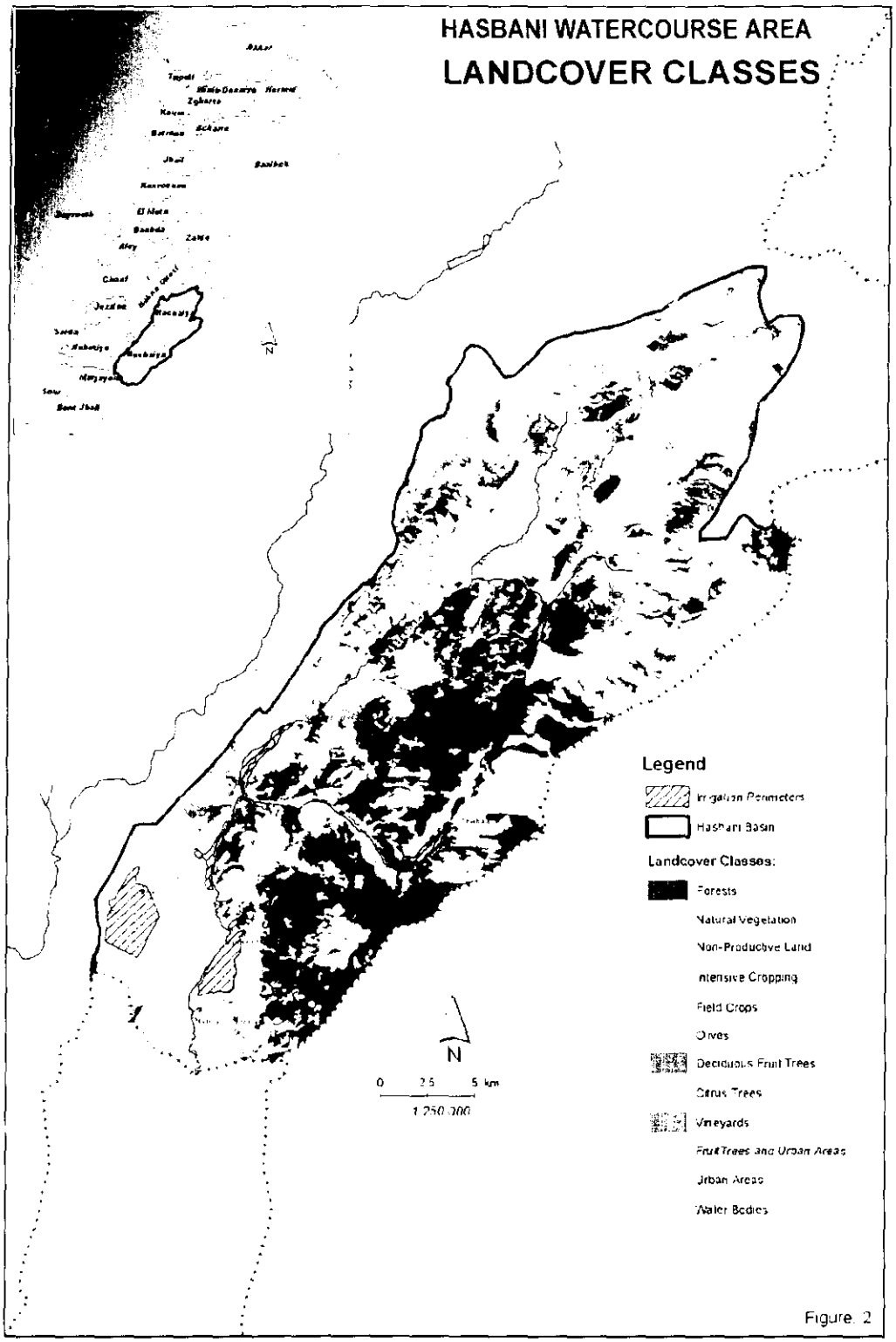
The land use of the Hasbani Watercourse area has been developed from satellite images taken in 1998. According to the Socio-economic Development Programme for South Lebanon, published by the UNDP in July 1999, the cultivated lands under irrigation cover 500 Hectares, which represent less than 5% of 12,500 hectares which are under dry cultivation due to the lack of water. Another 2100 Ha are under heterogeneous cultivation[10]. During the occupation, the Government was unable to implement schemes to increase the area of cultivated land under irrigation. The farmers were forced to rely on dry cultivation without irrigation, which has 1/5 the return of irrigated cultivation.

Furthermore, according to FAO Land Cover Map below which was developed for Lebanon and published in 1991, 15,636 hectares were classified as green covered within the Hasbani watercourse area among which 12,000 hectares were classified as cultivable lands.

It should be noted that the area of the irrigated and under cultivation did not increase between 1991 and 1999, due to the Israeli occupation.

[10] A combination of dry and intermittently irrigated cultivation.

Figure 2: Land cover map



3.3 *INDUSTRY*

Presently, industrial development within the watercourse area is limited to artisanal activities. Hence, the Government is encouraging the establishment of food industries in the area to further stimulate the regional economy and create employment opportunities. However, the Government development plan foresees a development of the industrial sector as part of the consolidated programme.

3.4 *CURRENT WATER USE*

The volume of water that Lebanon presently withdraws from the Hasbani watercourse is less than 7 million cubic metres per year, as shown in (Table 2).

Table 2: Water Withdrawn from Watercourse

Use	Amount withdrawn (mcm/y)
Domestic use	2.70
Irrigation	4.18
Total	**6.88**

The present supply of drinking water does not meet the demand. The supply and distribution networks and facilities require rehabilitation and additional resources should be developed to meet the growing demand.

3.5 *ISRAELI INSTALLATIONS ON THE WAZZANI SPRINGS*

During the occupation of South Lebanon, the Israeli forces installed two pumps, operating 24/24 hours, on the Wazzani Springs, within Lebanon's territory, to supply villages in the occupied territories. These pumps installed on Lebanese territories are still operating. They are supplied with power from Israel. (Photo No. 1).

The two submersible type pumps are immersed in the Wazzani springs to supply a reservoir in the occupied territories through two 4 inch polyethylene pipes (Photo No. 2) across Lebanon's eastern border. Two other vertical axial pumps are installed near the reservoir to pump the Wazzani spring water deep into the occupied villages (Photo No. 3).

The estimated volume of water extracted from the Wazzani Springs through these Two Israeli pumps is estimated to be approximately 2,600 m^3/day or 1 mcm/y.

Photo 1: The Israeli Pumps in Lebanese Territory

Photo 2: The Polyethylene Pipe Crossing Lebanese Territory

Photo 3: A Photo of the Pipeline in the Occupied Territory

4 WATER SCHEMES WITHIN THE HASBANI WATERCOURSE AREA

The Government of Lebanon has made a firm commitment to develop the Hasbani Watercourse area which has witnessed hostile military activities since 1948. Lebanon's primary aim is to rebuild the area and insure the reintegration of its population by creating employment opportunities in agriculture and associated food industries. The Government has sought the assistance of the international donor community in its effort to develop the region.

4.1 *THE WAZZANI WATER SUPPLY PROJECT – 2002*

This project is part of the Government's plans to meet the immediate needs defined previously in Section 4. The need for drinking water in the region served by this project is urgent.

At present the existing water supply system does not provide the inhabitants with adequate amount of water to sustain their daily activities. Once the project is completed people of the region will have access to water that is affordable and sustainable. The project should have been completed some years ago, particularly in light of the great need for drinking water in the area served by the project. However, the Israeli occupation of 22 years, prevented the execution of the project. Israel continues threatening the ongoing works.

The project serves 13 villages with a population of approximately 63,000 inhabitants. Considering a gross per capita demand per day of 215 litres[11] ,the total demand would be approximately 13,488 m^3/day (4.9 mcm/y) in the year 2002 as calculated in (Table 3) hereafter.

The Wazzani water supply project consists of pumping around 12,000 m^3/day of water from the Wazzani springs. As can be seen from (Table 3), the project will only meet part of the current demand which is approximately 13,490 m^3/day (4.9 mcm/y).The expected daily shortage is 1,490 m^3/d in 2002. Adequate management of the demand and supply would be required to cover the expected shortage.

[11] Gross per capita demand is equal to per capita need of a 150 L/c/d plus 10% of per capita need for non-domestic purposes plus (150+15) x 0.3 for losses.

Table 3: Population and needs for Wazzani Water Supply Project

Name of Village	Population 2002	Drinking Water Needs 2002 (m^3/d)	Drinking Water supplied in 2002 (m^3/day)
Adeisseh	5,347	1,150	160
Kfar Kila	7,683	1,652	120
Deir Mimas	3,562	766	75
Khyam	20,311	4,367	875
Ain Arab	817	176	20
Majidieh	50	11	0
Ibl Saqi	3,348	720	175
Blat	2,985	642	175
Debbine	2,670	574	120
Marjayoun	9,187	1,975	750
Bwayda	391	84	0
Qlaia	4,882	1,050	600
Bourj Mlouk	1,502	323	120
TOTAL	**62,735**	**13,490**	**3,190**

All the above villages are within a radius of 12 Km from the Wazzani Spring. They are within the Hasbani watercourse area and are in urgent need of drinking water for humanitarian reasons.

4.1.1 Technical description of the project

The Project comprises two parts, both of which are under construction. For a comprehensive description of the technical aspects of the projects, refer to drawings of (Annex 4).

Part 1 of the project consists of the following:

- Rehabilitation of water intake structures;

- Rehabilitation of the old existing pumping station near Wazzani Springs (9x6.5m – refer to drawing WE2, Annex 4);
- Widening and asphalting of the road leading to Wazzani Springs with related retaining walls;
- Installation of 2 suction pipes;
- The installation of 2 horizontal booster pumps: one operating and the one standby of 12,000 m^3/day approximately 4.4 million m^3/year with all electro-mechanical accessories. (Q:140 l/s – refer to Annex 4);
- Installation of electric panel boards and cables;
- Installation of new valves;
- Installation of electro-mechanical parts;
- Laying of main pump lines from Wazzani pumping station to the Maysat existing reservoir (Dia: 16 inch, L: 1,700 meters, ductile iron – refer to drawing WE4 of Annex 4);
- Construction of a pumping station at Maysat junction (refer to drawing WP1-WP2 of Annex 4);
- Installation of 5 horizontal pumps: 4 operating and one standby in Maysat pumping station (Q:35 l/s per pump) with all corresponding accessories (refer to documents 7 & 8 and drawing WP3 of Annex 4);
- Laying of main pump lines from Maysat pumping station to the reservoirs of the villages in the Watercourse area (L: 14,000 meters) and to existing networks (refer to drawings WP4 & WP5 of Annex 4);
- Electrical work;
- Other civil work.

Part 2 of the project consists of the following:

- Laying of main pump lines from Maysat pumping station to Ibl al Saqi reservoir and other village reservoirs in the area (Dia: 14 inches; L: 14,000 meters) and to existing networks (refer to drawings WP4 & WP5 of Annex 4);

4.2 *THE HASBAYA-HABBARIEH WATER PROJECT*

The Hasbaya-Habbarieh Water Project will involve both drinking and irrigation water and is part of the Government's plans to meet medium and longer-term needs.

The project serves 13 villages with a population of approximately 70,000 people.

Villages served by the project are:

Hasbaya, Kawkaba, Almary, Kfar Hammam, Habbarieh, Kfar Shouba, Rachaya al Foukhar, Ain Jarfa, Shwaya, Abou Qamha, Ain Qenya, Al Fardis, Chebaa.

4.2.1 Technical description of the project

The project comprises the following components:

- Rehabilitation of irrigation networks in the Chebaa area;
- Installation of 10 inch transmission line from Nabeh al Mghara to Hasbaya to supply the Hasbaya region from January till July;
- Installation of 10 inch transmission line from Hasbani pumping station to Hasbaya regional reservoir;
- Expansion of Hasbani pumping station;
- Rehabilitation of the Habbarieh pump station.
- Construction of a reservoir in Shwaya;
- Construction of Bwayda pump station;
- Installation of 8 inch line from Bwayda pump station to Shwaya reservoirs;
- Installation of 8 inch line from Shwaya reservoirs to Habbarieh divider;
- Installation of transmission line from Shwaya to Ain Qenya.
- Replacement of existing transmission and distribution networks for the rest of the villages and towns within the project area.

This project is at the preliminary study stage.

4.3 *IBL AL SAQI PROJECT*

The Government plans to increase the irrigated area within the Hasbani Watercourse Basin from the current 500 hectares to meet the FAO future forecast. (Refer 3.2)
To improve the productivity of the agricultural sector, irrigation networks and techniques would have to be modernized. To reach this end, the Government is working closely with concerned international agencies for the selection of suitable crops and irrigation methods. The Government efforts will allow a reduction of actual losses and an increase of cultivated lands.

To provide the necessary water, in light of the existing yearly deficit in water supply within the Hasbani watercourse area, particularly during the 5 dry months from May to October, the Government plans to construct a water storage dam on the Hasbani watercourse, at Ibl al Saqi.

This dam will create renewable sources, by maximizing the storage capacity of run-off and surface waters and will therefore offset part of the water deficit in the region.

The Ibl al Saqi project is at the project identification stage.

4.4 *THE HASBAYA WASTEWATER PROJECT*

For the protection of local water sources, the Government is planning to implement the Hasbaya Wastewater Project.

The project involves the construction of sewage collection networks and a wastewater treatment plant located in Hasbaya. The project will serve the towns of Hasbaya and Ain Qenya with a population of approximately 20,000 people.

This project is at the identification stage.

5 LEGAL TERMS OF REFERENCE

Lebanon expressed its goodwill as a member of the international community by ratifying the UN Convention on the Law of the Non-Navigational Uses of International Watercourses on the 31st of March 1999. The Convention was adopted on the 21st of May 1997 in the United Nations General Assembly by 103 votes in favour, including Lebanon, 3 against and 27 abstentions, Israel being among the abstainees. The requirements for the entry into force of the Convention have not yet been fulfilled.
Lebanon's actions in relation to International watercourses are governed by the norms and principles of International Law reaffirmed by the above Convention.
The main guiding rules are the following :

- Right of all the riparian States to utilize the international watercourse. No State has a priority on another in utilizing the water. Lebanon is being denied its basic , natural and legitimate right to utilize its water. Furthermore, we stressed in this report that Israel has been and still is exploiting the Hasbani watercourse almost exclusively since at least the mid sixties. The consumption by the Lebanese inhabitants in the watercourse area is currently 50 Litres per person per day as

compared to Israel's current consumption of 350 Litres per person per day of the Hasbani watercourse. Once the project is completed and implemented Lebanon's consumption is expected to reach 150 Litres per person per day which still seems rather insignificant measured to Israel's water consumption .

- The principle of equitable and reasonable use of water. This principle governs the allocation of water. It is well rooted, in the judicial practices of federal States (United States of America, Germany and Switzerland) – and more precisely in the case law relating to the allocation of water. Such relevant factors, though not exhaustive , comprise various elements such as: (a) Geographic, Climatic, Hydro-geologic (b) Population dependant in the service area and its potential growth, (c) Existing projects and acquired rights, (d) Planned projects, (e) Social needs, (f) Economic needs. As was shown above, the Wazzani water supply project is sanctified under the principle of equitable and reasonable use of water. It serves to meet the basic needs of a population dependant upon the Hasbani watercourse. We already stated above the villages expected to benefit from such project. Currently, they are receiving 3,190 cubic metres per day while their need is 13,488 cubic metres per day. It becomes clear and obvious that Lebanon, whose consumption of the Hasbani water is until this date almost nil, is undertaking such project with total regard and respect to the rule of equitable reasonable of water as referenced above.

  Within the same context, the Hasbaya-Habbarieh water supply project and the Ibl al Saqi dam project both conform to the above principle.(refer to sections 4.2 & 4.3).

- The No-Harm rule. This rule received a wide recognition as a well established concept of international law. In this regard, the key concept of "appreciable harm" has been changed into "significant harm" and thus the level of accountability of upper riparian State which may cause a damage to the lower riparian State. Therefore, to imply a harm, the damage should be significant with consequential effects upon public health, economic productivity and environment of another State . Lebanon did not overuse or abuse its right in the Wazzani water. So far, the volume of water utilized by Lebanon , has been unfairly confined to 7 mcm/a. Lebanon's utilization of the Wazzani waters causes no harm to Israel.

- The principle of notification. Senior Lebanese officials informed the United Nations Organization as well as the permanent members of the Security Council about the Hasbani project . Lebanon intends to duly submit this report to the United Nations Organization.

  As illustrated, Lebanon's actions are in accordance with these terms of reference.

Indeed, in planning to pump the Wazzani water, Lebanon does not divert the watercourse nor does the Wazzani water supply project affect Israel in any way. Lebanon's aim is to supply Lebanese villages with water to satisfy their vital, basic, humanitarian, social and domestic needs. In pursuing this goal, Lebanon is exercising, as a sovereign State, an unequivocal right well established under International Law. Furthermore and notwithstanding its pressing needs, it is relevant to emphasize that Lebanon is fully entitled to utilize the water that rises in and flows through its territories in accordance with its legitimate rights and International Law, be it for drinking, irrigation and development needs.

6 CONCLUSION

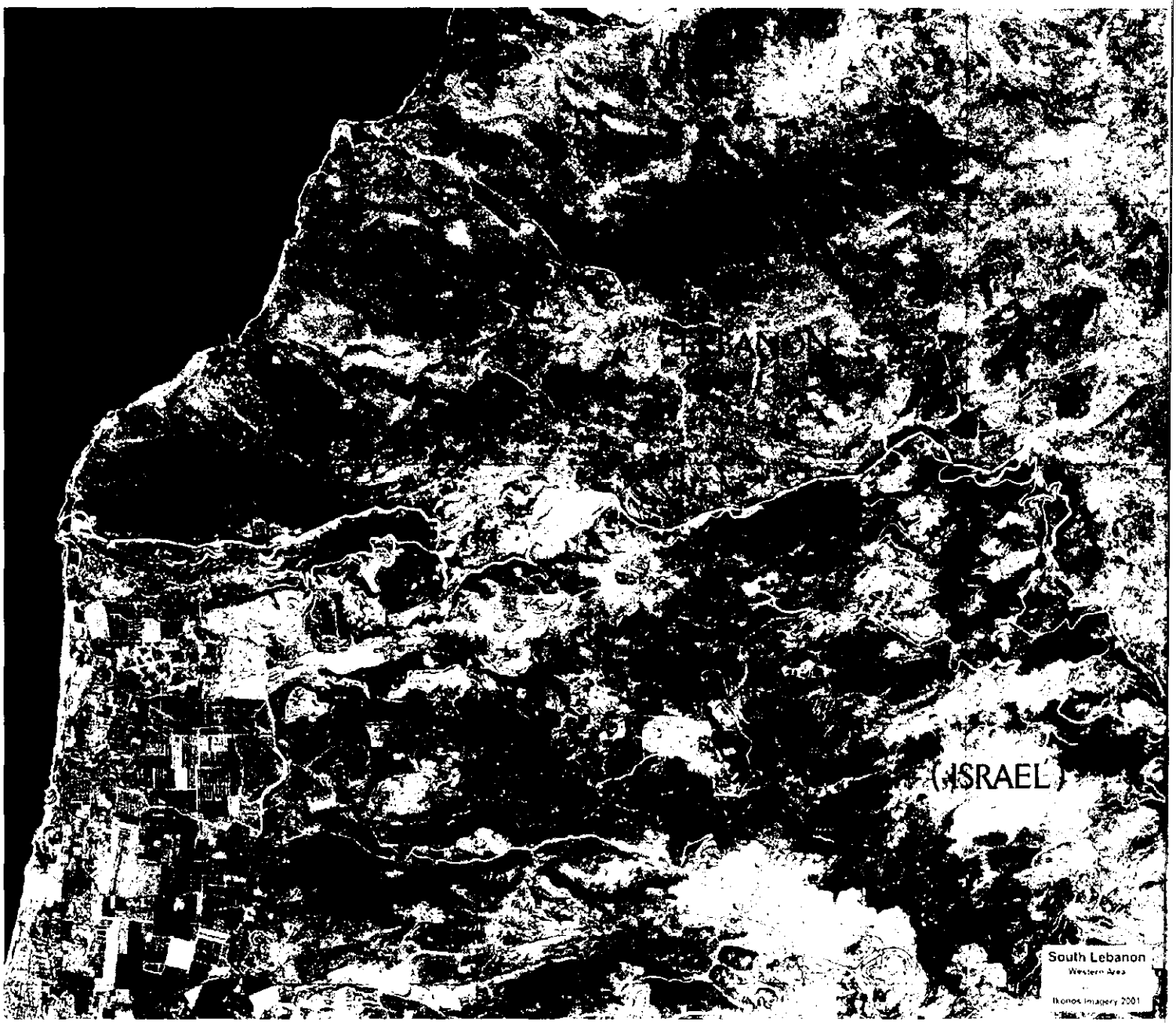
As water scarcity grows in the Hasbani watercourse area due to the devastating Israeli occupation of South Lebanon for 22 years, Lebanon is now seeking to use the water of the Hasbani watercourse area to partially satisfy the water needs of the population of the region and encourage those who left during the occupation to return to their homes. Lebanon can only meet the humanitarian needs within the watercourse area by implementing water supply and irrigation projects.

Lebanon's ongoing Wazzani Water Supply Project is a legitimate undertaking, since it does not entail a diversion of the Hasbani watercourse nor does it cause any prejudice to Israel. Rather, the project aims at meeting, **in an equitable and reasonable manner**, the vital human needs of the population in the area. Lebanon's action is, therefore, in conformity not only with International Law and covenants but also with the most basic principles of humanitarian International Law.

Every effort made by Lebanon to benefit from its own water resources in its southern territories has been met so far by Israeli threats to wage war against Lebanon and deprive it of its lawful and natural rights to its water. The responsibility of any aggression against Lebanon or obstructing action taken in this respect falls fully on Israel, which has been relentlessly aggravating the situation and disrupting international peace and security in the region.

Given the prevailing circumstances, Lebanon calls upon the United Nations Secretary General and the Security Council to take the necessary measures, within their responsibilities, for the cessation of the Israeli threats and the removal of the Israeli impediments to the safe use by the Lebanese of their own water.

ANNEX 1



Reuters , oct. 2002

Aerial pictures bring to light the huge difference in green areas between Lebanon and Israel.

ANNEX 2

POTABLE WATER SUPPLY TO WAZZANI VILLAGE

PROJECT YEAR 2001

1 BOOSTER OPERATING AND 1 BOOSTER STANDBY

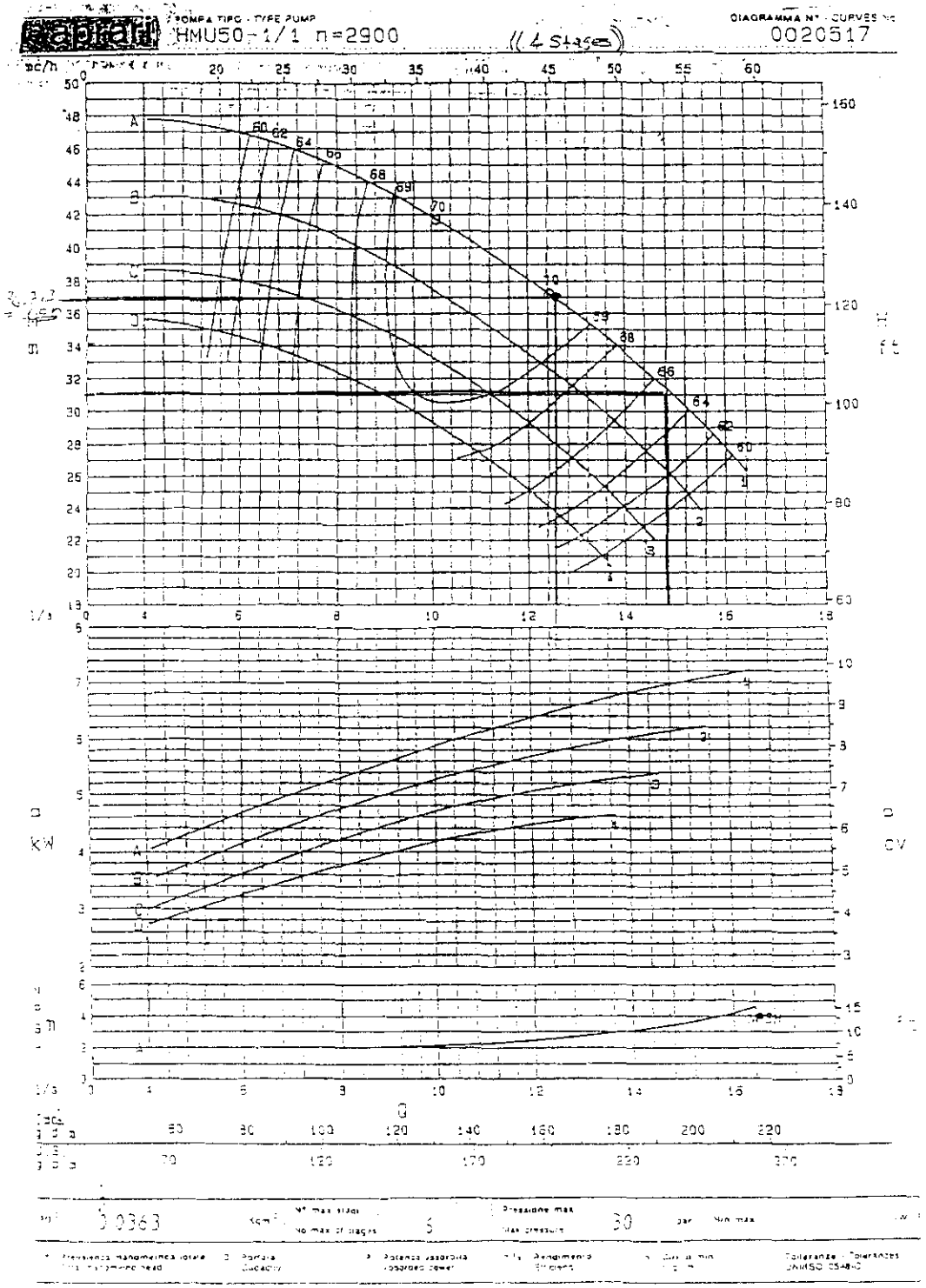
DISCHARGE :	**15 L / S**
Number of stages :	**4**
POWER :	**30 KW**
Speed :	**2900 rpm**
Type :	**Centrifugal horizontal multistage**
Brand :	**CAPRARI**
Origin :	**Italy**

Document no.1

POTABLE WATER SUPPLY TO WAZZANI VILLAGE

Booster Performance

PROJECT YEAR 2001



Document no.2

ANNEX 3

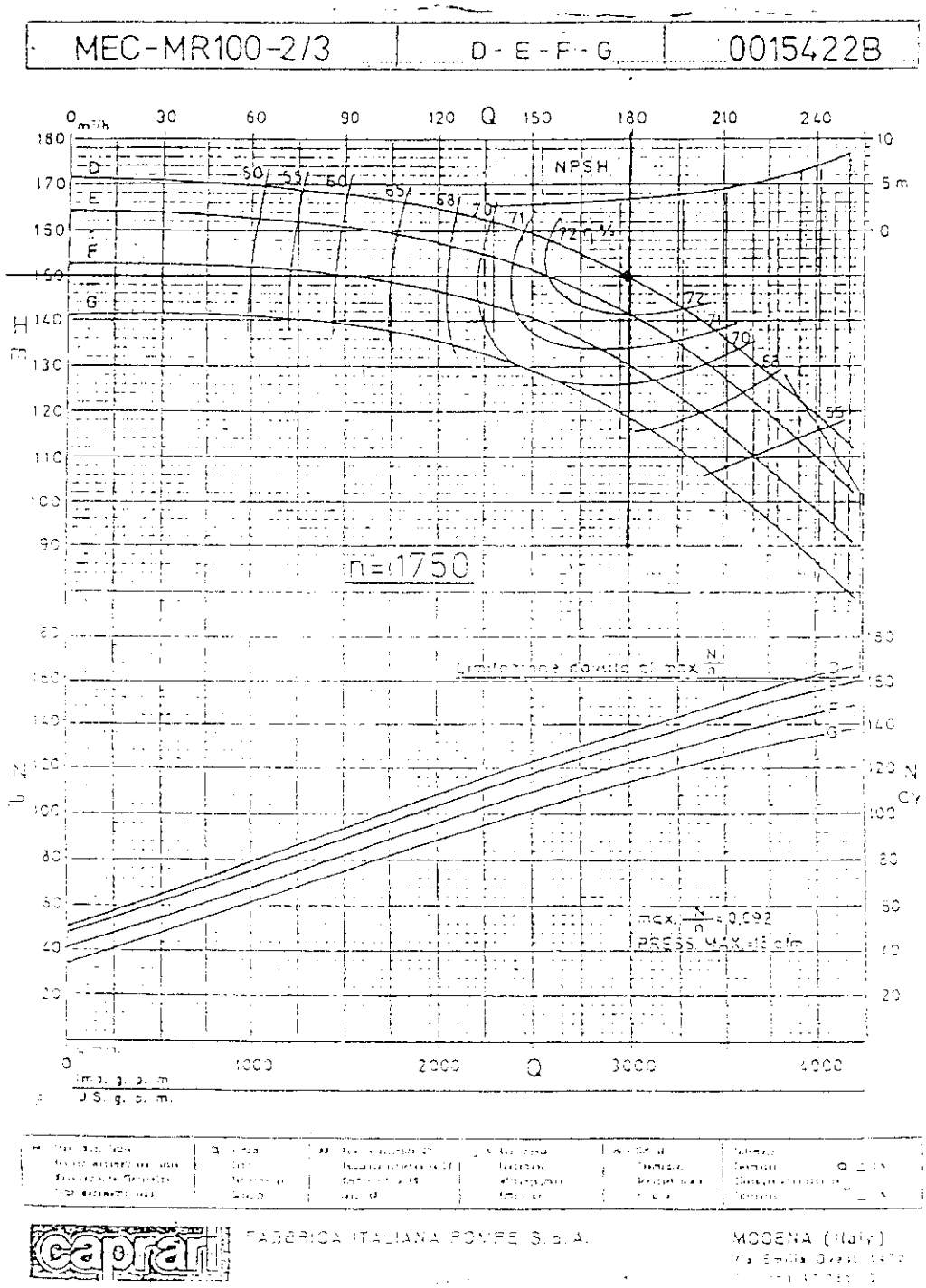
Private Irrigation Pump

DISCHARGE :	50 L / S
Number of stages :	3
POWER :	100 KW
Speed :	1750 rpm
Type :	Centrifugal horizontal multistage
Brand :	CAPRARI
Origin :	Italy

Document no.3

Private Irrigation Pump

Booster Performance



Document no.4

ANNEX 4

WAZZANI WATER SUPPLY PROJECT

Project Under Implementation – Part I

PROJECT YEAR 2002

1 BOOSTER OPERATING AND 1 BOOSTER STANDBY

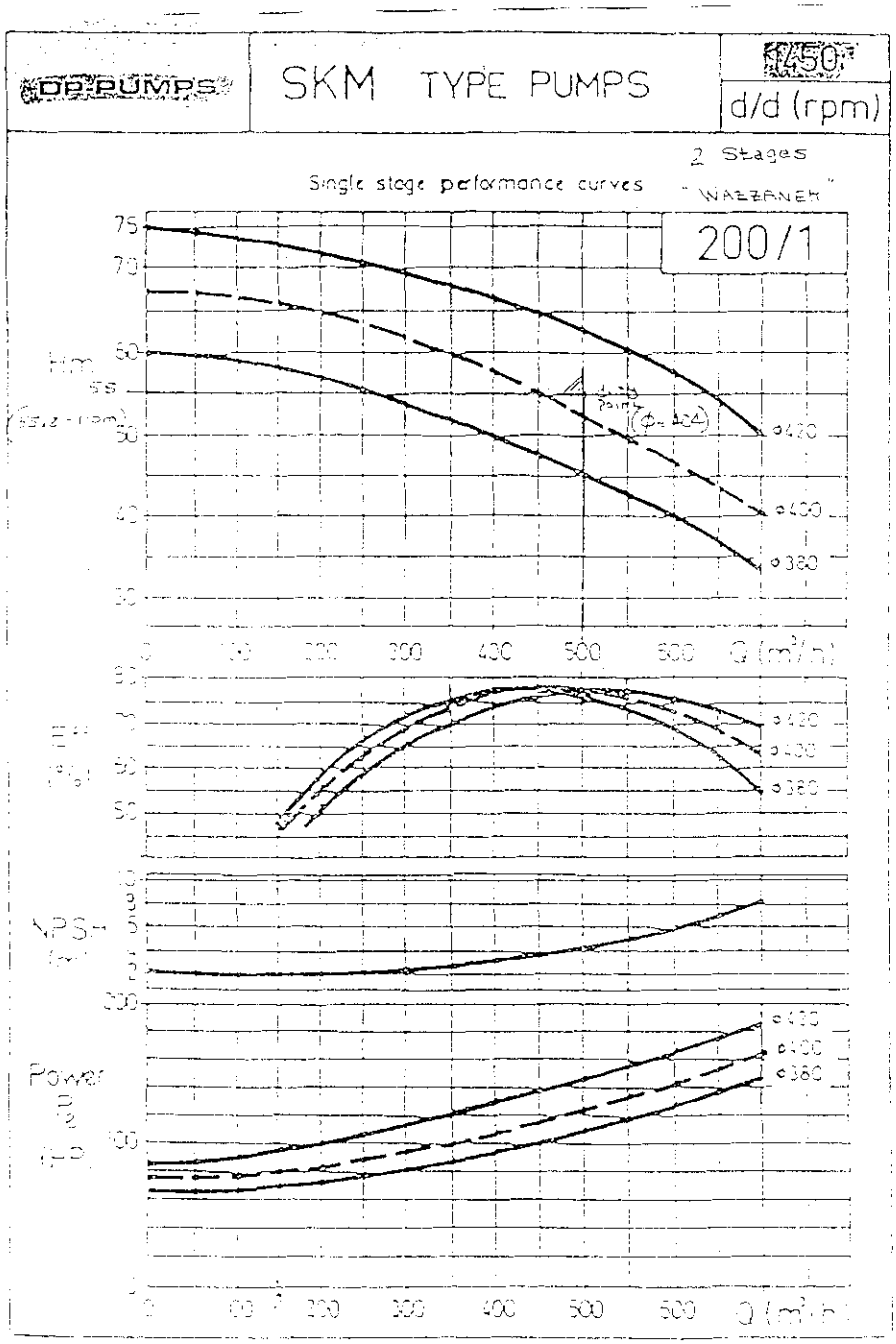
DISCHARGE :	140 L / S
Number of stages :	2
POWER :	250 KW
Speed :	1450 rpm
Type :	Centrifugal horizontal multistage
Brand :	DP Pumps
Origin :	Holland

Document no.5

WAZZANI WATER SUPPLY PROJECT

Project Under Implementation – Part I - Booster Performance

PROJECT YEAR 2002



Document no.6

WAZZANI WATER SUPPLY PROJECT

Project Under Implementation – Part I

PROJECT YEAR 2002

4 BOOSTERS OPERATING AND 1 BOOSTER STANDBY

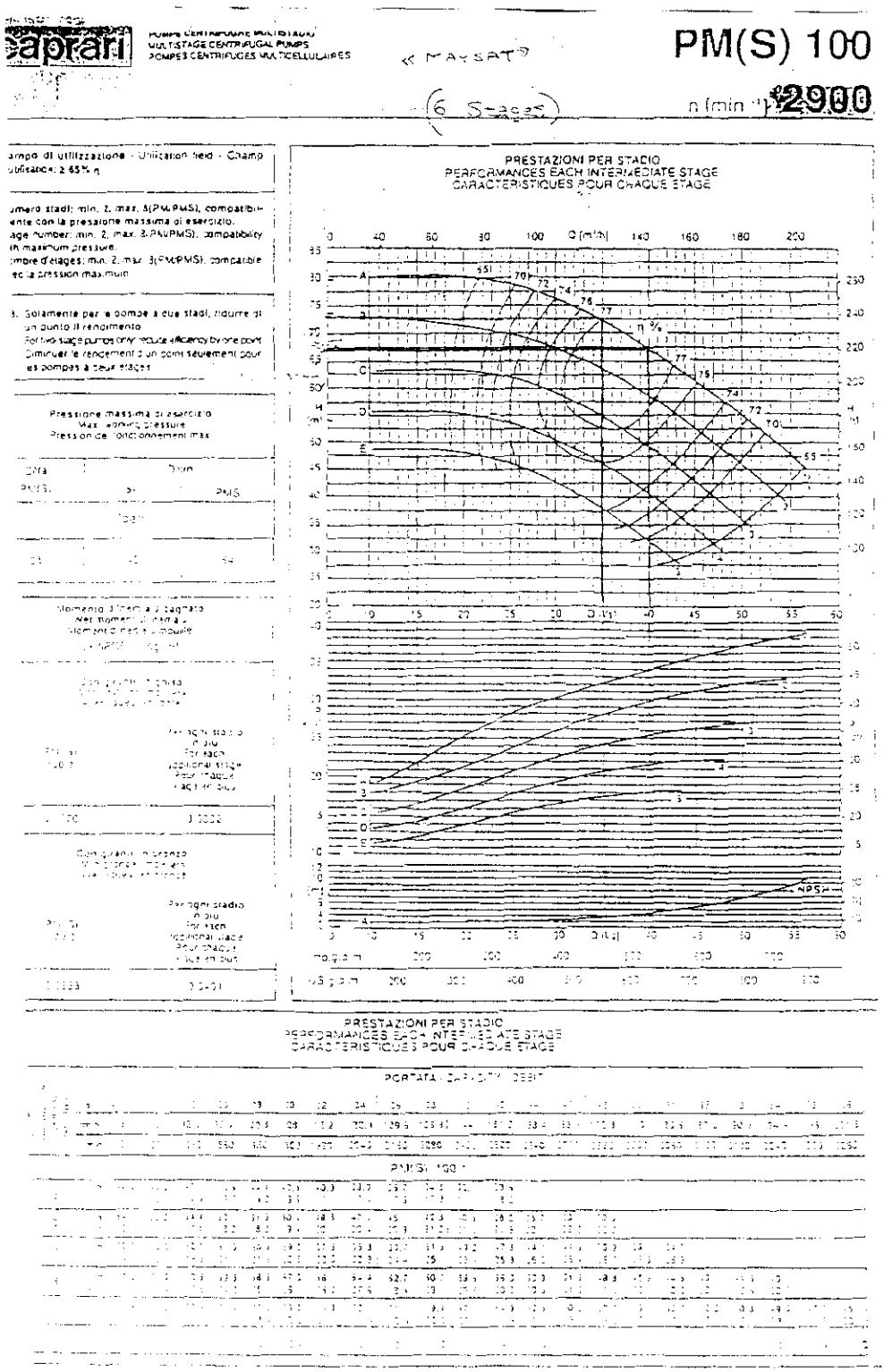
DISCHARGE :	35 L / S
Number of stages :	**6**
POWER :	250 KW
Speed :	**2900 rpm**
Type :	**Centrifugal horizontal multistage**
Brand :	**CAPRARI**
Origin :	**Italy**

Document no.7

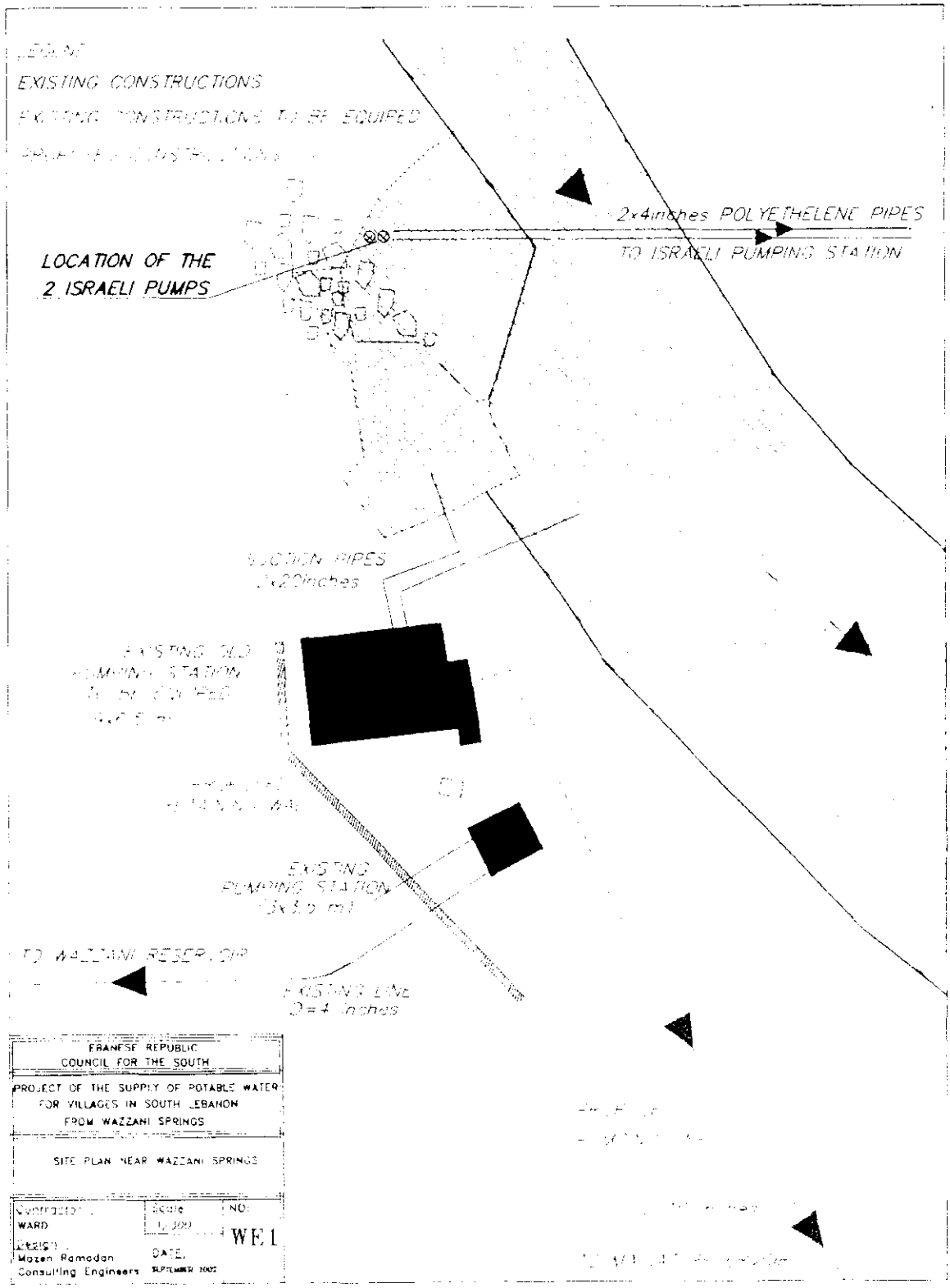
WAZZANI WATER SUPPLY PROJECT

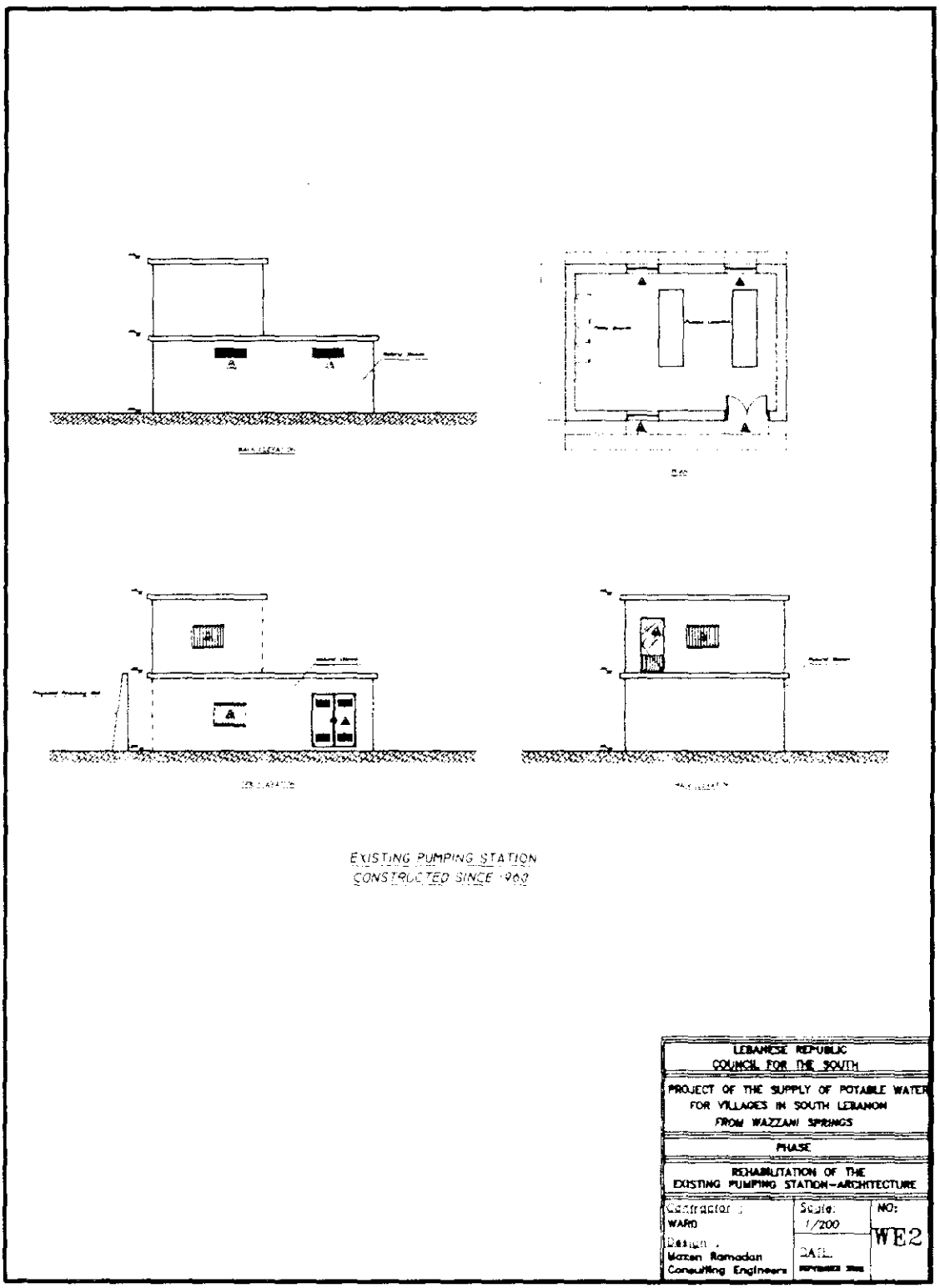
Project Under Implementation – Part I - Boosters Performances

PROJECT YEAR 2002

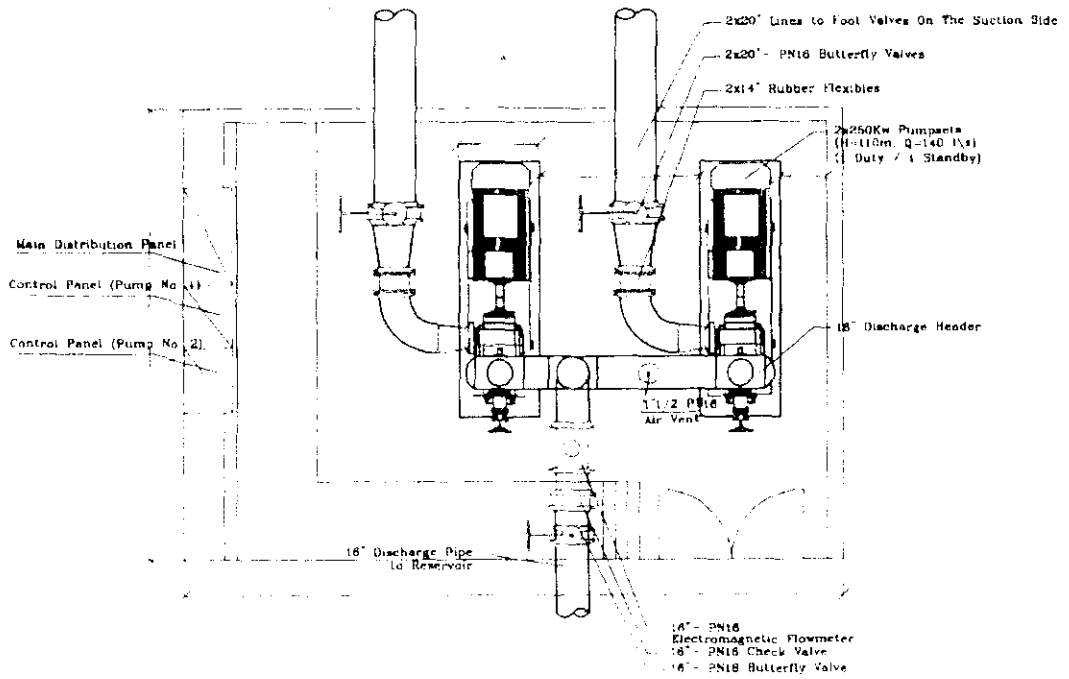


Document no.8

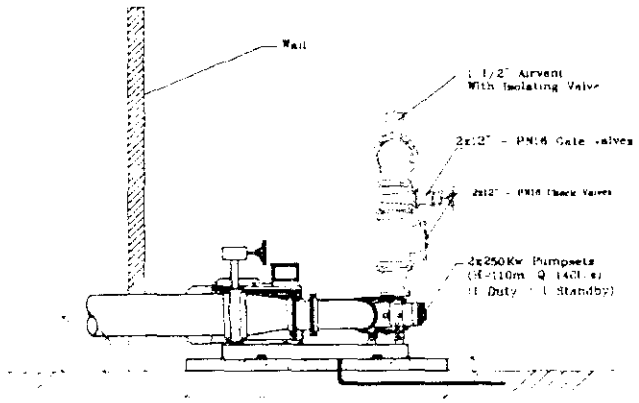

EXISTING CONSTRUCTIONS
2x4inches POLYETHELENE PIPES
TO ISRAELI PUMPING STATION
LOCATION OF THE
2 ISRAELI PUMPS
EXISTING
PUMPING STATION
EXISTING LINE
FRANESE REPUBLIC
COUNCIL FOR THE SOUTH
PROJECT OF THE SUPPLY OF POTABLE WATER
FOR VILLAGES IN SOUTH LEBANON
FROM WAZZANI SPRINGS
SITE PLAN NEAR WAZZANI SPRINGS
Scale
NO:
WARD
WE1
DATE
Mazen Ramadan
Consulting Engineers


EXISTING PUMPING STATION
CONSTRUCTED SINCE 1960
LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH
PROJECT OF THE SUPPLY OF POTABLE WATER FOR VILLAGES IN SOUTH LEBANON FROM WAZZANI SPRINGS
PHASE
REHABILITATION OF THE EXISTING PUMPING STATION-ARCHITECTURE
Contractor :
WARD
Design :
Marzen Ramadan
Consulting Engineers
Scale:
1/200
DATE:
NO:
WE2

2x250kW PUMPS
H=110m - Q=140l/s
1DUTY - 1STAND BY

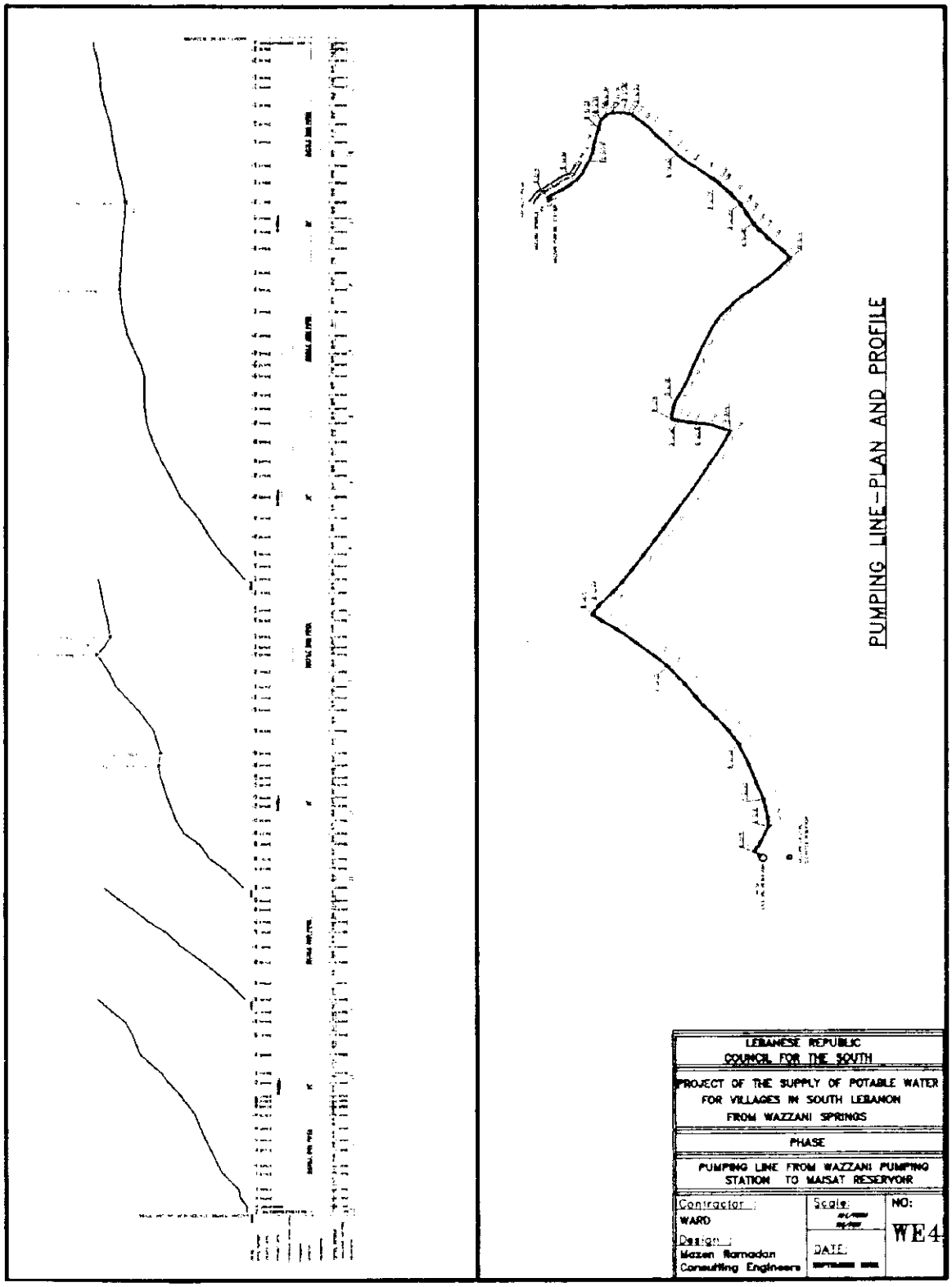


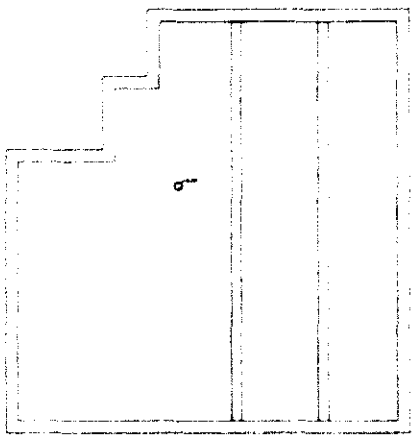
MECHANICAL LAYOUT



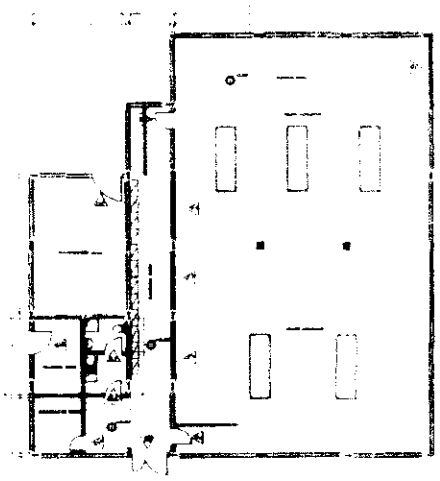
Section A-A

LEBANESE REPUBLIC COUNCIL FOR THE SOUTH		
PROJECT OF THE SUPPLY OF POTABLE WATER FOR VILLAGES IN SOUTH LEBANON FROM WAZZANI SPRINGS		
PHASE		
ELECTROMECHANICAL EQUIPMENT OF WAZZANI PUMPING STATION		
Contractor : WARD	Scale: 1/75	NO: WE3
Design : Mazen Ramadan Consulting Engineers	DATE:	


PUMPING LINE-PLAN AND PROFILE
LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH
PROJECT OF THE SUPPLY OF POTABLE WATER FOR VILLAGES IN SOUTH LEBANON FROM WAZZANI SPRINGS
PHASE
PUMPING LINE FROM WAZZANI PUMPING STATION TO MAISAT RESERVOIR
Contractor:
WARD
Design:
Mazen Ramadan
Consulting Engineers
Scale:
DATE:
NO:
WE4



ROOF PLAN



GROUND FLOOR PLAN

LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH

PROJECT OF THE SUPPLY OF POTABLE WATER
FOR VILLAGES IN SOUTH LEBANON
FROM WAZZANI SPRINGS

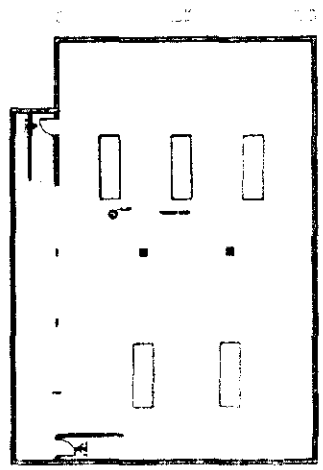
PHASE

ARCHITECTURE PLANS OF
NAISAT PROPOSED PUMPING STATION

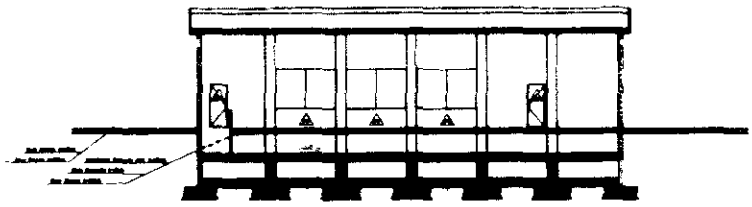
WARD 1/100

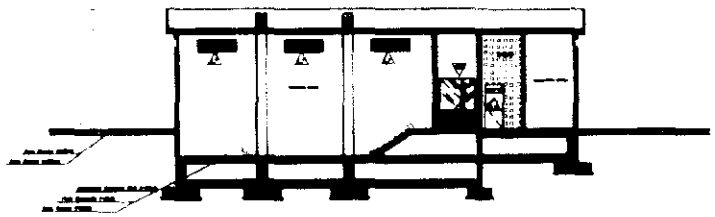
NO: WP 1

Mazen Ramadan
Consulting Engineers



UNDERGROUND PLAN





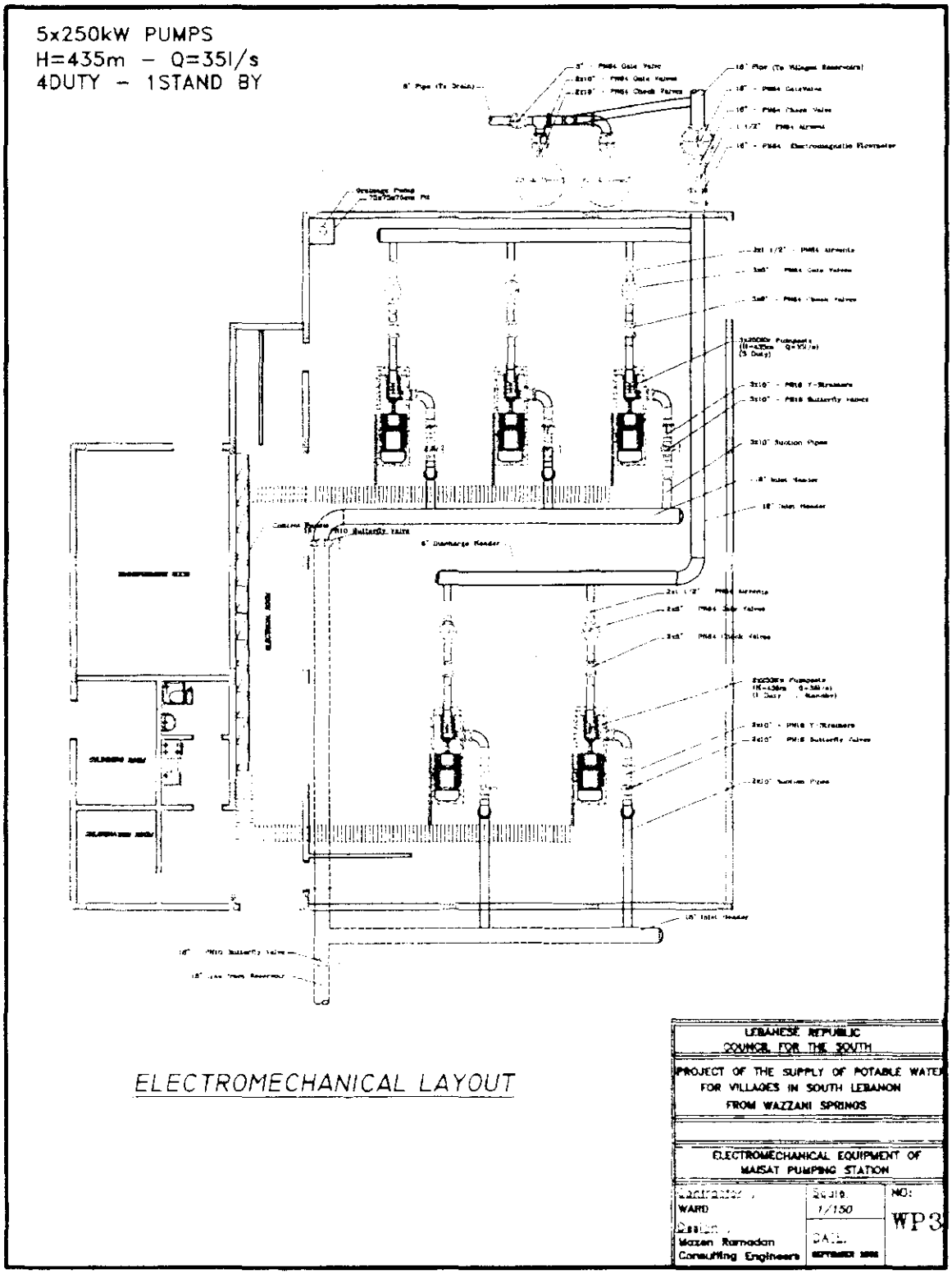
SECTION A-A

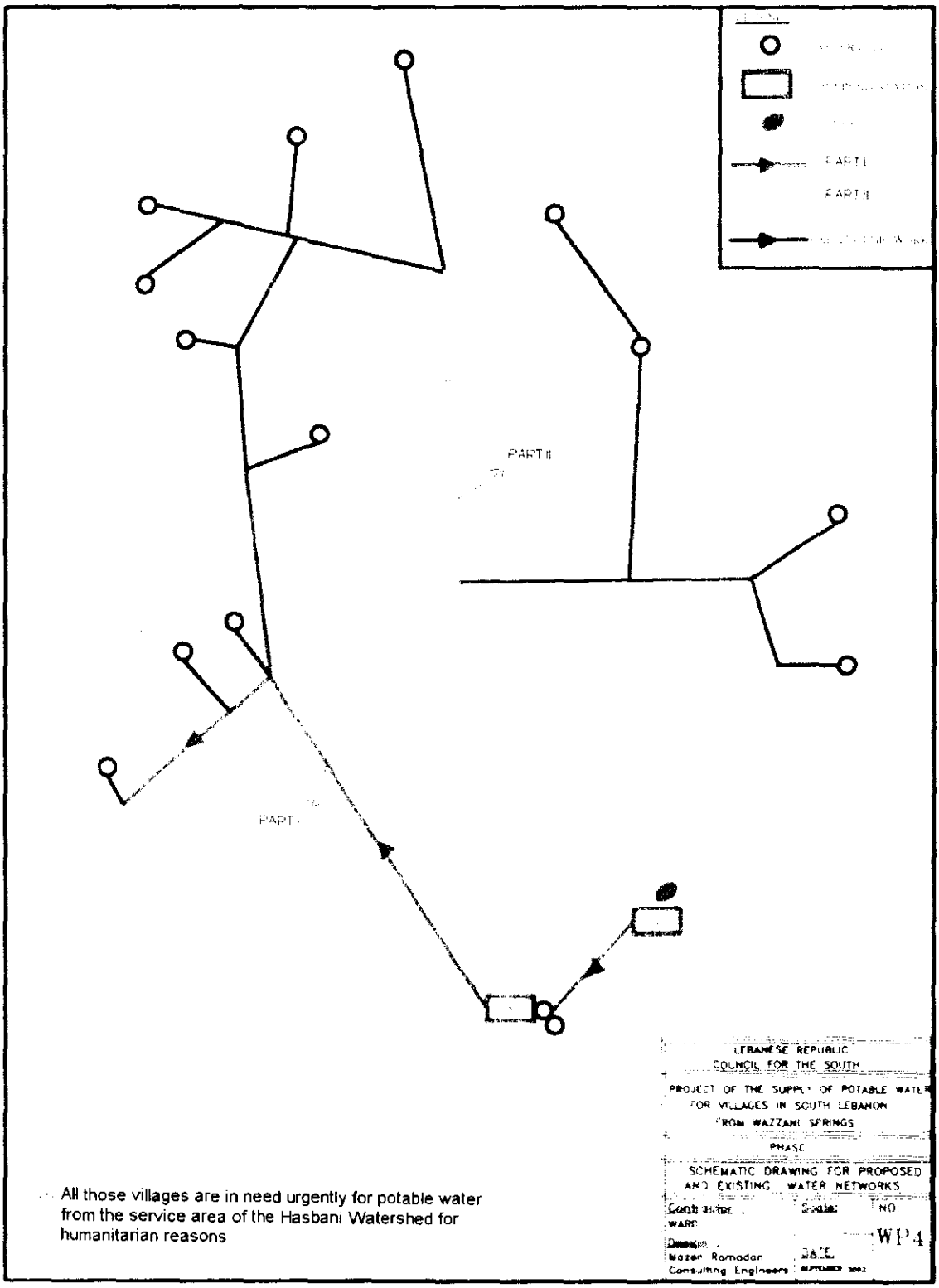
LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH

PROJECT OF THE SUPPLY OF POTABLE WATER FOR VILLAGES IN SOUTH LEBANON FROM WAZZANI SPRINGS

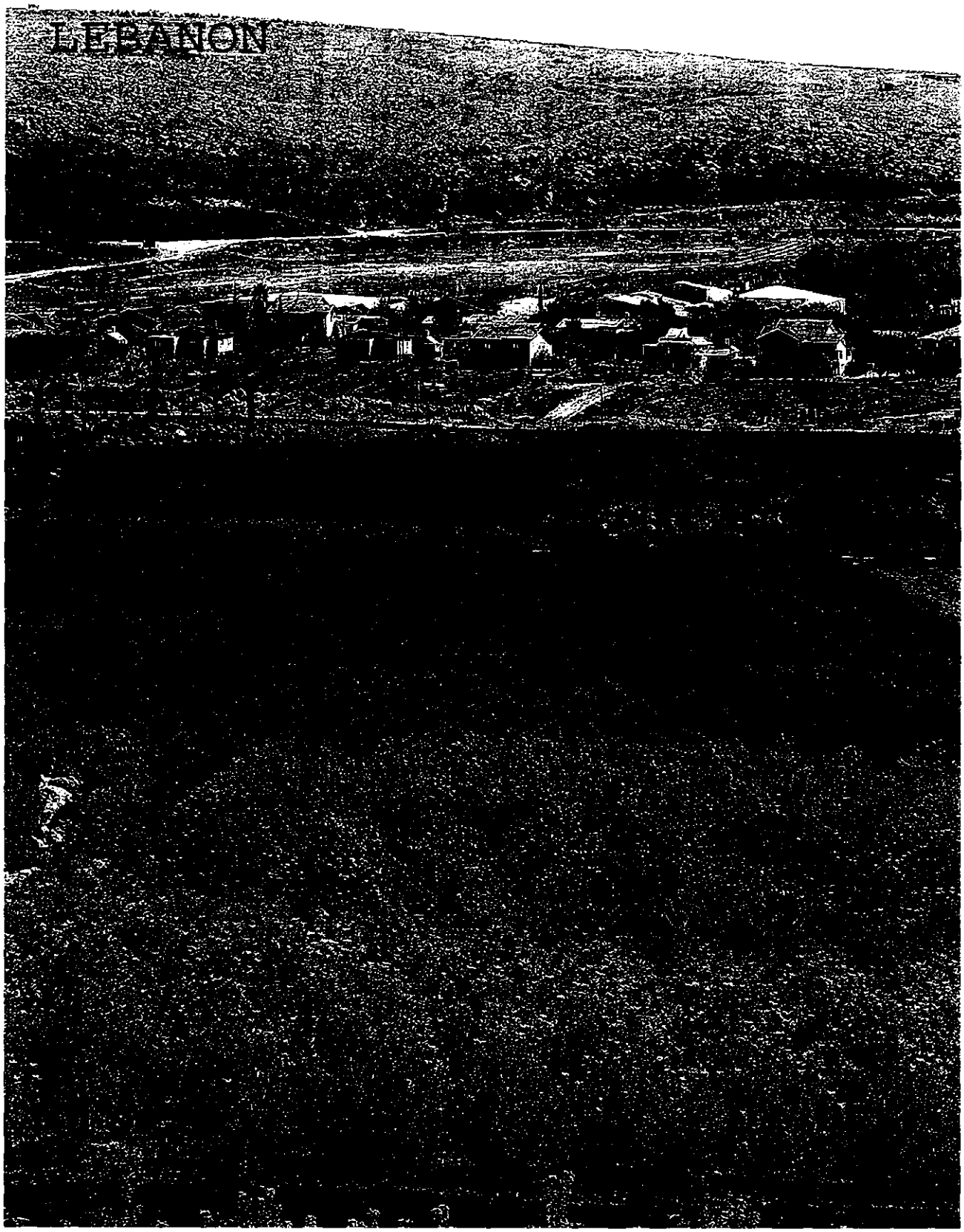
ARCHITECTURE PLANS OF MAISAT PROPOSED PUMPING STATION

Contractor: WARD	Scale: 1/300	NO: WP2
Design: Mazen Ramadan Consulting Engineers	DATE:	


5x250kW PUMPS
H=435m - Q=35l/s
4DUTY - 1STAND BY
ELECTROMECHANICAL LAYOUT
LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH
PROJECT OF THE SUPPLY OF POTABLE WATER
FOR VILLAGES IN SOUTH LEBANON
FROM WAZZANI SPRINGS
ELECTROMECHANICAL EQUIPMENT OF
MAISAT PUMPING STATION
WARD
SCALE
1/150
NO:
WP3
Mazen Ramadan
Consulting Engineers
DATE:
SEPTEMBER 2002

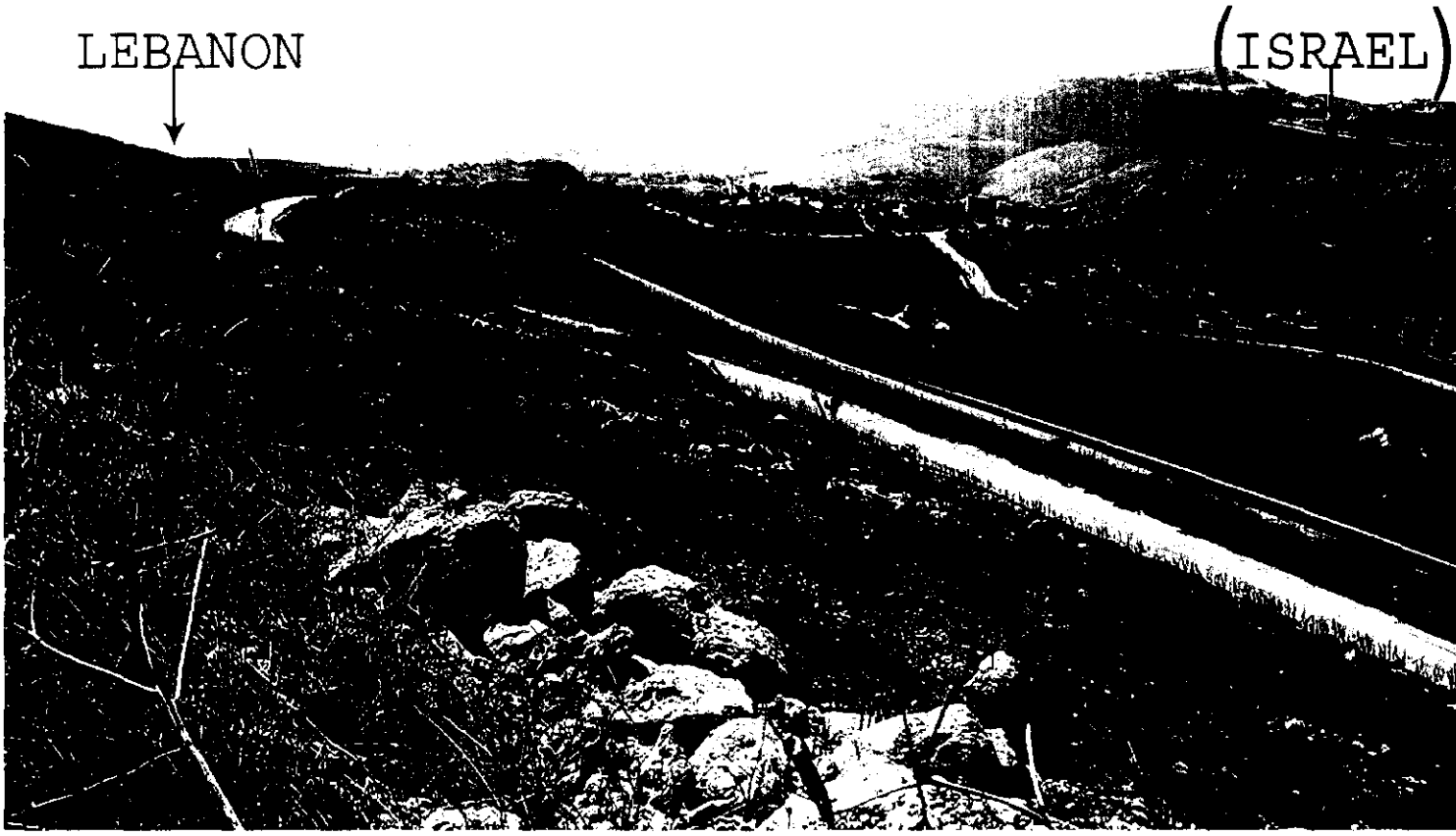

PART I
PART II
PART
All those villages are in need urgently for potable water from the service area of the Hasbani Watershed for humanitarian reasons
LEBANESE REPUBLIC
COUNCIL FOR THE SOUTH
PROJECT OF THE SUPPLY OF POTABLE WATER FOR VILLAGES IN SOUTH LEBANON FROM WAZZANI SPRINGS
PHASE
SCHEMATIC DRAWING FOR PROPOSED AND EXISTING WATER NETWORKS
WARE
WP4
Mazen Ramadan
Consulting Engineers

ANNEX 5



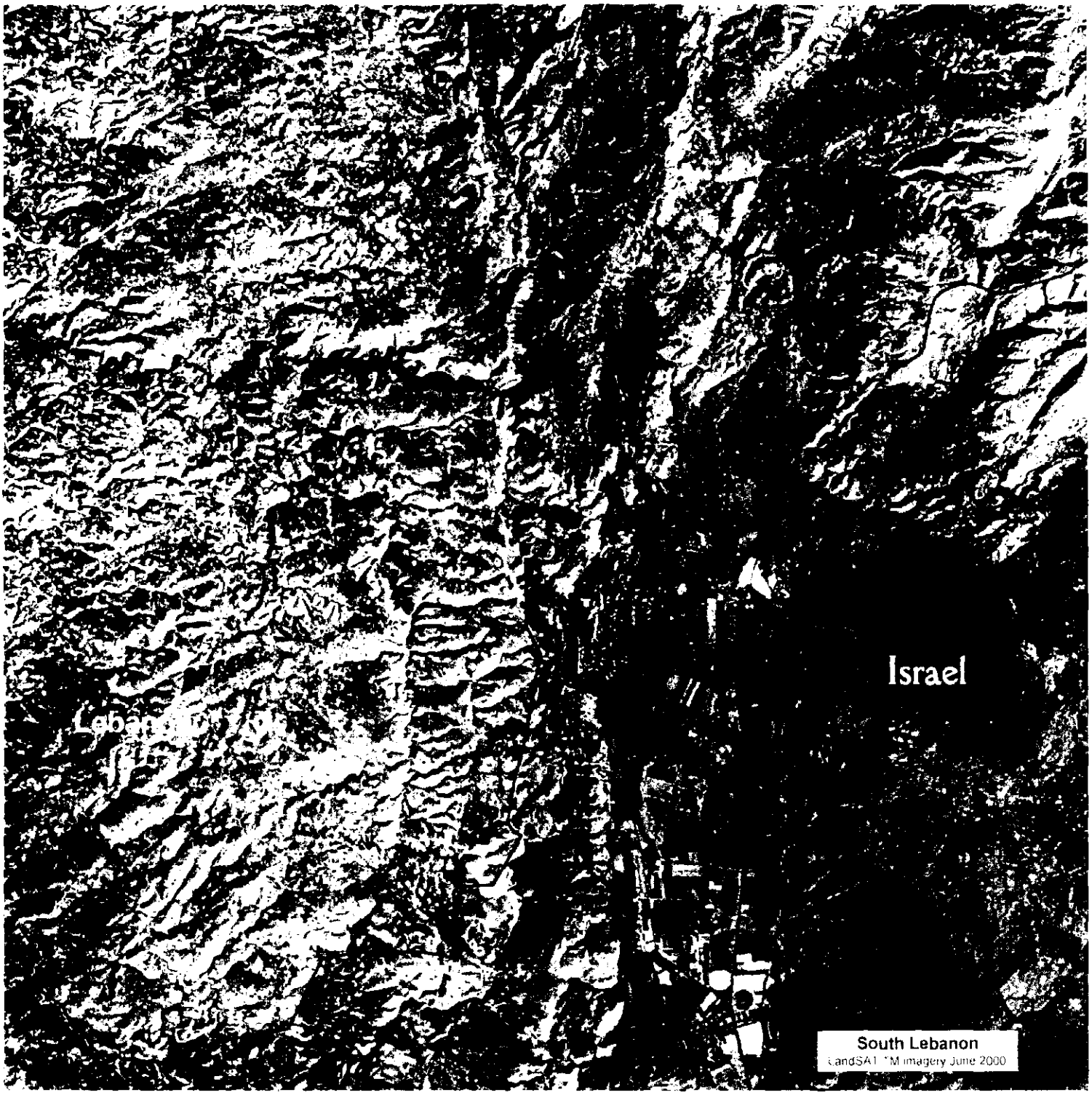
Reuters , oct. 2002

View from Israel towards Lebanon showing the abundant agriculture of Israeli land and the dryness and aridity of Lebanese land.



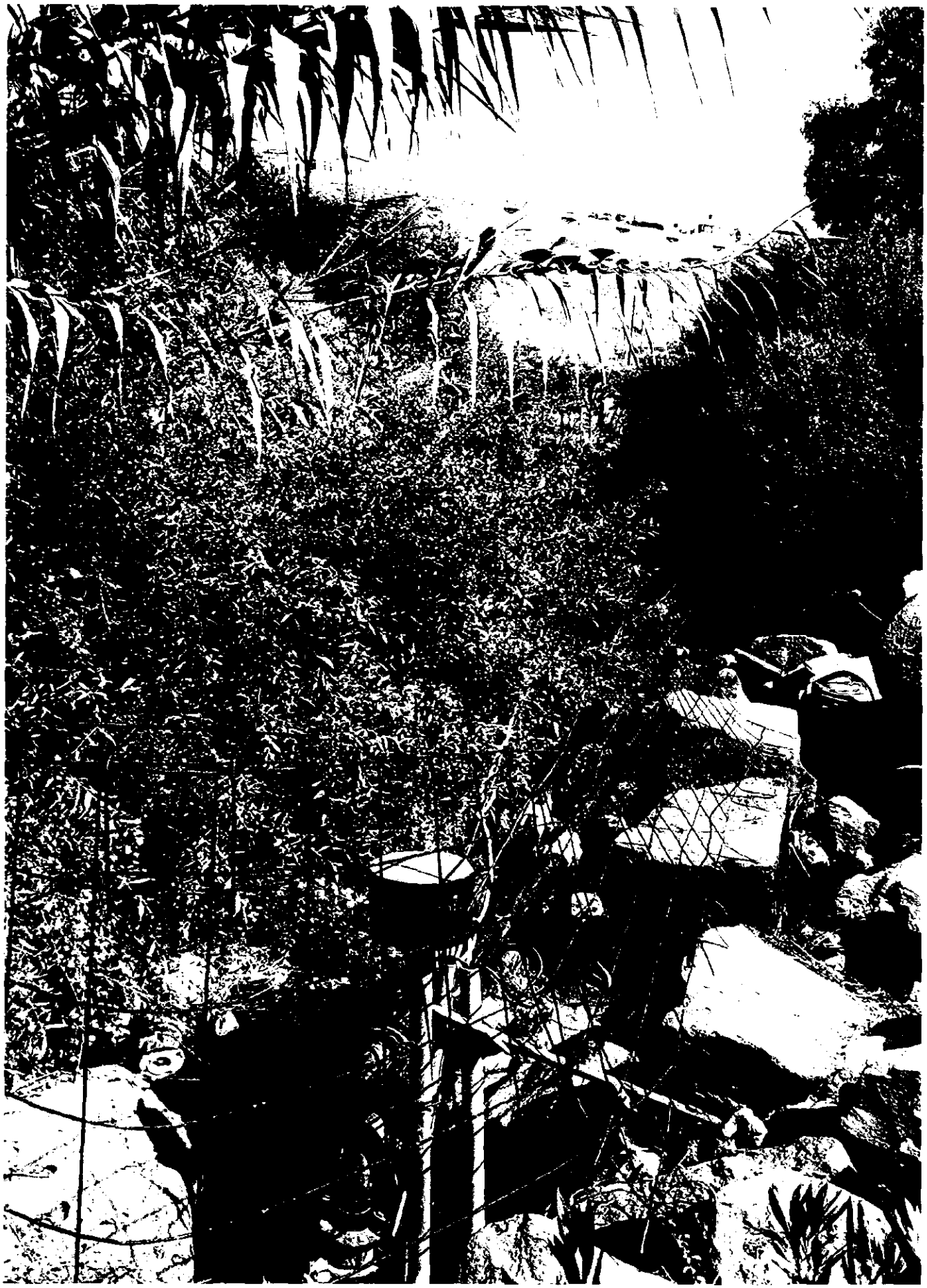
Reuters , oct. 2002

The blue line separates the arid land of Lebanon from the richly cultivated land of israel



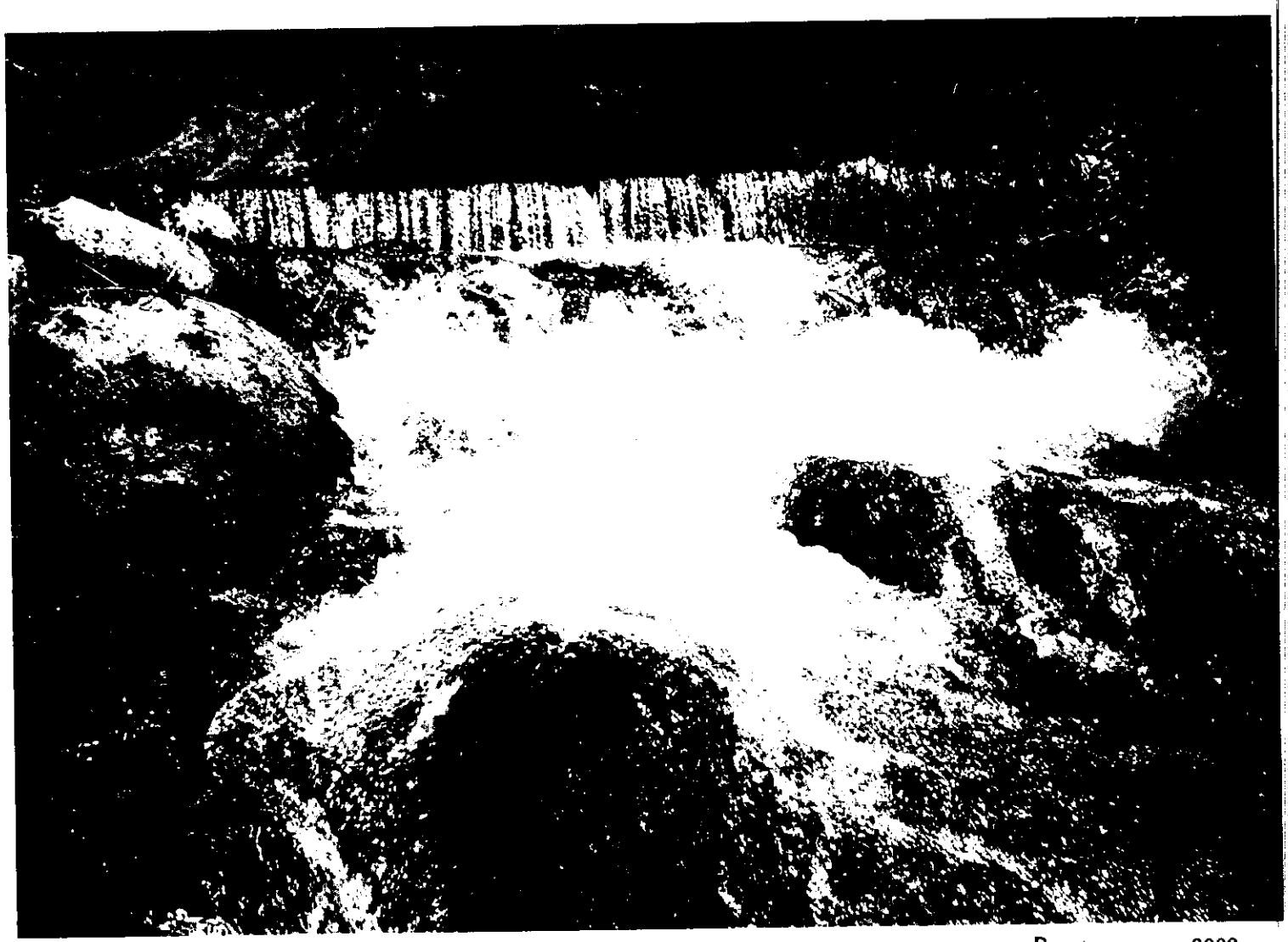
Reuters , oct. 2002

Aerial pictures bring to light the huge difference in green areas between Lebanon and Israel.



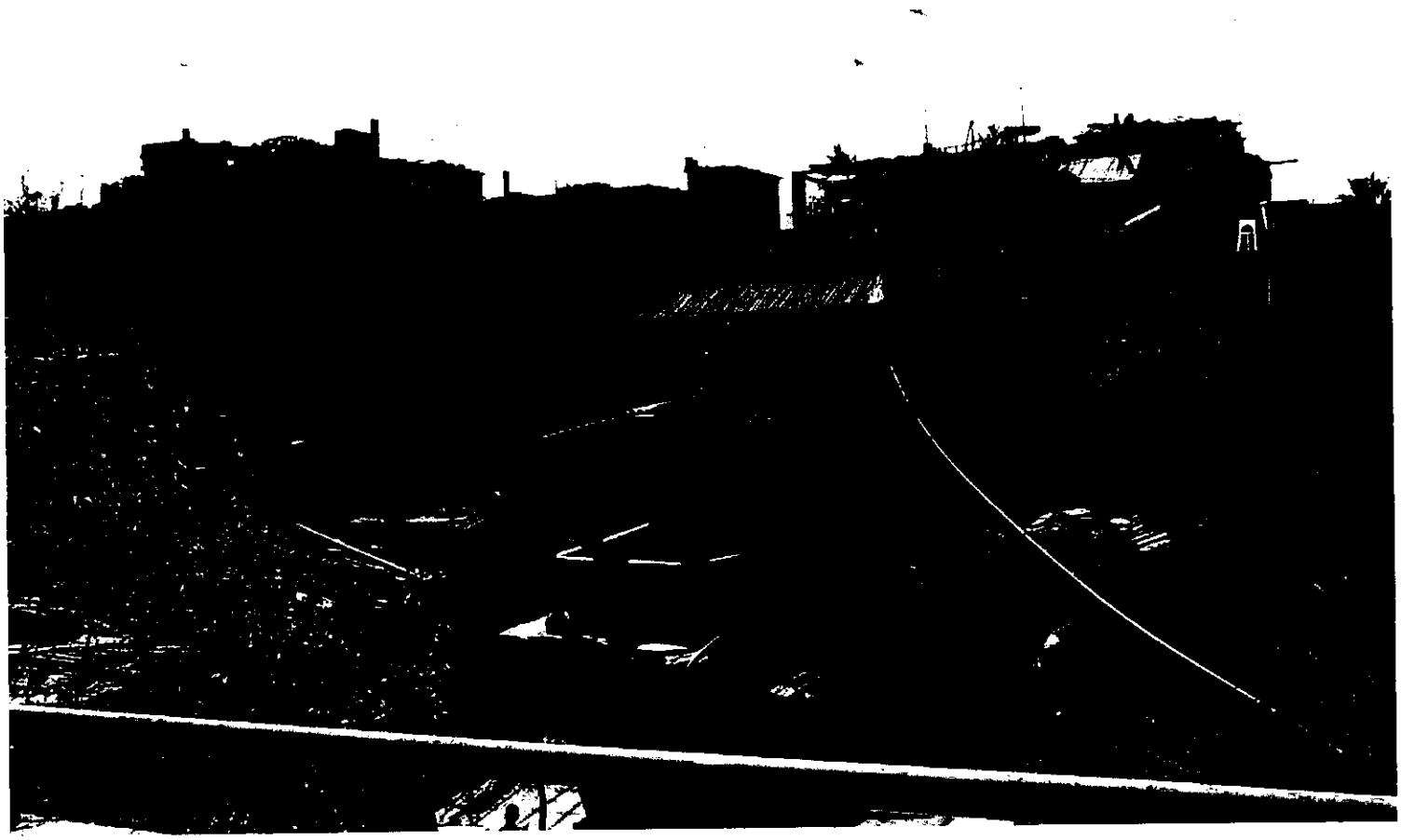
Reuters , oct. 2002

Water flows directly from the Wazzani river into Israel via an Israeli water pump.



Reuters , oct. 2002

The Wazzani river flowing towards Israel.



Reuters , oct. 2002

People of South Lebanon. Deprived of water, they have moved to the suburbs of Beirut

Republic of Lebanon

Office of the Minister of State for Administrative Reform

Center for Public Sector Projects and Studies

(C.P.S.P.S.)

Reuters , oct. 2002

People of South Lebanon. Deprived of water, they have moved to the suburbs of Beirut

Reuters , oct. 2002

The people of South Lebanon storing water from the United Nations vehicles.

Last page of the position report service area of Hasbani Watercourse
October. 2002