

REVEALING THE DERELICT LANDS OF THE APSHERON PENINSULA BY
CARTOGRAPHY-AEROSPACE METHOD

Kerimov G.A., Babaev, R.A., Talybov, A.T.
Baku State University, The Azerbaijan Republic

ABSTRACT

In this article, ecological conditions of Apsheron peninsula have been studied. Topographic maps, aerial and space photos were used in a large scale in this study. In the result, a mapping was made as to how much derelicted because of various industries, together putting forth their causes. In the article, a diagram, a table and a map were given.

Comprehensive study of the natural conditions caused the influence of anthropogenic factors is the main direction of present cartography. The intensive influence of economic activities of man on the environment brings too more considerable changes, and frequently even destroying of natural complexes.

The Apsheron Peninsula of the Azerbaijan Republic is an example of negative influence of anthropogenic factors on all component of the nature. The main part of oil-extracting oil processing and the petrochemical industry of the Azerbaijan is concentrated mainly here, in densely populated territory of the Apsheron Peninsula.

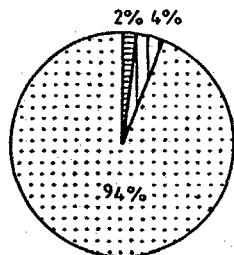
The area of the Apsheron Peninsula together with Apsheron and Baku archipelagos (Pirallahi, Chilov Neft Dashlary and oth.) occupies 7972 km., but almost 28% of total population of the Azerbaijan Republic is concentrated in this territory (without taking into account refugees during the last 6 years in connection with Garabag problem).

The Ecological disastrous state of the given region has predetermined the investigation in this direction with the utilisation of aerospace photographs, large-scale topographic, economic, soil and landscape maps, consequently compiling of an ecological map of Apsheron Peninsula. In this article we consider the derelict lands as ones which as a result of industrial activities of man have became unfit state and can not be rationally utilised without preliminary renewal (soil cover, hydrological regime and relief are destroyed).

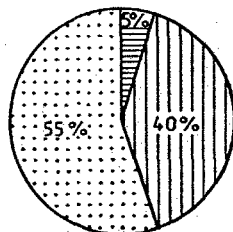
The cartographo-aerospace method with subsequent statistic processing has been used for obtaining of the reliable data of the ecological state. Works on the compiling the ecological maps were carried out according to the followings stages: a) collection of the ecologic statistic information;

	The Name of Region	Total square (km ²)	Square derelict land (km ²)	Derelict land oil industry (km ²)	Derelict land metalurging industry (km ²)	Derelict land chemical industry (km ²)	Derelict land excavations (km ²)	Other derelict land (km ²)
1	Karadag	1083.7	211.4	200.0	-	-	5.1	6.3
2	Binagadi	157.8	18.3	10.0	-	-	1.0	7.3
3	Sabunchu	244.3	27.2	16.5	-	-	2.6	8.1
4	Azizbekov	403.6	17.9	14.7	-	-	2.4	0.8
5	Surahani	121.1	25.4	16.6	-	-	-	8.8
6	Sabail	28.0	7.0	6.7	-	-	-	0.3
7	Sumgait	71.0	13.2	-	2.2	2.6	-	8.4

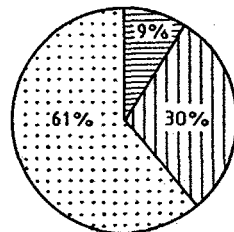
A DIAGRAM OF DERELICT LANDS DUE TO VARIOUS BRANCHES OF INDUSTRY



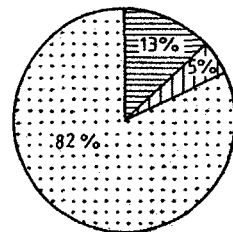
KARADAG



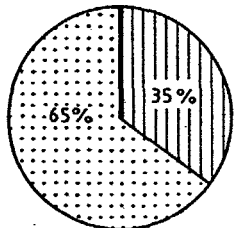
BINAGADI



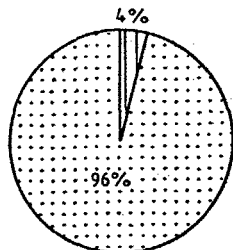
SABUNCHU



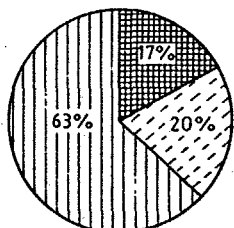
AZIZBEKOV



SURAHANI








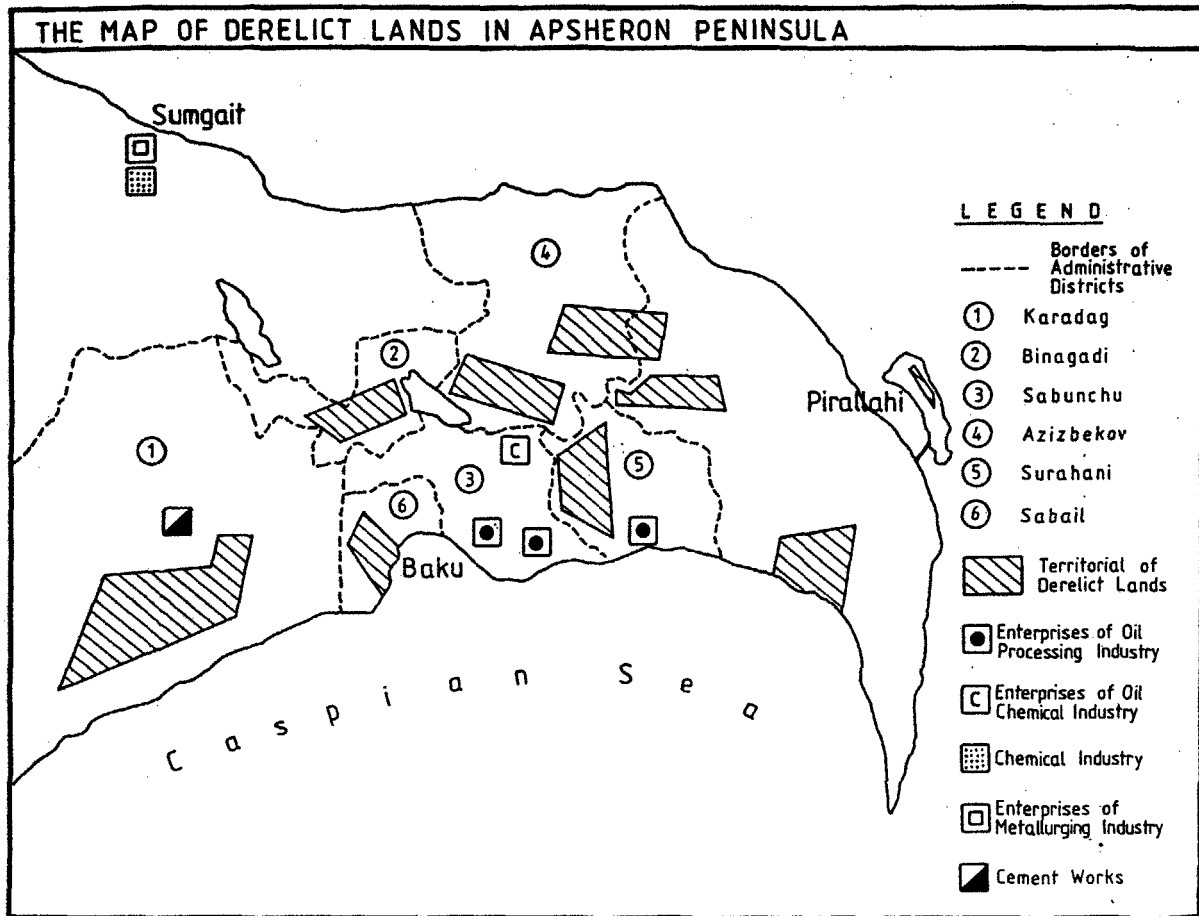
SABAIL



SUMGAI

LEGEND

-  Oil Industry
-  Other Derelict Land
-  Derelict Land Excavations
-  Metallurgic Industry
-  Chemical Industry



b) interpretation of aerial and space photographs; c) analysis and systematisation of the collected materials; d) morphometric investigation of the territory; e) definition and classification of the pollution sources; f) compiling a map of derelict lands.

The results of investigation have showed that the main reasons the pollution of the peninsula including the shelf of the Caspian sea is the extracting of oil and gas, their transportation, oil refining, petro-chemical and chemical enterprises distributed in this territory. The industrial and the every day wastes created by the municipal services enter from to principal sources: from refining constructions the form of the sediment of sewage waters and from heating power stations in the form of ashes.

More than centennial destructive exploitation of oil and gas fields has brought to an absolute unfitness large areas of lands in the districts of OGEA (oil-gas extracting administration)-Garabag, Binagadi, Sabunchu, Sabail and oth. (Table 1).

A serious threat of pollution for the aquatorium of the peninsula presents the extraction of oil fuel in the sea fields. The oil thrown into the sea (losing while extraction and transportation) forms oil pellicle to shores and it causes a considerable damage to biota of the coastal landscapes. The presents level rise of the Caspian sea (at present level of the Caspian sea has raised about 1.8m) redoubled ones more the ecological state of the coastal zones of the Apsheron Peninsula.

On the aerial photographs with high quality it is not difficult to distinguish the heavily polluted areas. According to these photographs with using of topographic maps and observation directly at places it has became possible to compile a map of derelict lands of the Apsheron Peninsula.

Depending of the degree on pollution the following types of derelict lands have been distinguishes by the authors: very weak, weak, middle and heavily derelict. Besides this, objects being the causes of pollutions (see Fig. 1 for details) have been determined and marked on the compiled map which gives us possibility to compose subsequently special large-scale ecologo-topographic maps, using them in various branches of the national economy.