

## RECLAMATION MONITORING AND MAP DEVELOPMENT USING THE AEROSPACE METHOD

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**Abstract:** *In the article today's in the day amelioration monitoring and map development using the aerospace method technical aspects , advantages and disadvantages showing passed .*

**Key words :** *Aerospace , GAT , ArcGIS , geoinformation , geodetic tools , computer technologies , digital tools , electronics total stations , modern innovative technologies , digital technologies .*

Monitoring the change of irrigated lands and meliorative condition by aerospace methods, it consists, first of all, in determining the salinity lands and determining the periodical change process of salinity. Determination and monitoring of soil salinity in modern methods depends on data processing and analysis methods obtained from the satellite system.

In aerospace methods, the reclamation state is studied in two directions: by direct or indirect methods, and environmental factors affecting salinity are analyzed in the GAT program based on the criteria of correlation with regional and periodic changes. Spectral data and field survey data of the meliorating state were modeled using aerospace methods, and a method of analyzing the characteristics of environmental factors by area was developed.

In recent years, many other types of data have been collected from satellite images, and this data can be used for purposes such as environmental pollution, natural resource status, and urban planning. In this context, satellite data is of great importance, which in turn allows us to quickly learn useful and necessary information about a large area. Most of the aerospace data is images, that is, the digital form of an object in the form of a photograph. The process of reading aerospace data with the naked eye and special tools is called decoding (reading the image). Remote sensing data can be obtained not only in the form of pictures, but also with the help of numbers, passwords and codes. After receiving them on the ground, they are read (decoded) using special devices, some of them are also made into card form.

The aerospace method is widely used in geographical research. By reading aerospace data, it is possible to know and analyze the components that make up landscapes and their secondary features. Depending on the appearance of the landscape, it is considered a natural territorial complex with the same geomorphological, geological, climate, groundwater and soil, flora and fauna.

From this point of view, we have researched existing irrigated lands and irrigation networks in the research object based on the aerospace method. To this end, we initially started with aerospace data collection. Aerospace data collection is primarily the art of collecting or extracting data without direct contact with a space object.

Aerospace data collection. This process includes everything from collecting data to bringing it to a table or a system.

The following works are carried out in the aerospace method of updating melioration status cards:

when renewing cards, the necessary materials are collected, organized and the level of their use is determined;

changes in the area are identified;

a technical project is developed when updating cards;

Before deciphering the images taken from space, the expert in the preparatory stage first collects the necessary literature about the place, purposefully analyzes, organizes and evaluates the data.

Secondly, depending on the purpose and task of the work, the specialist performs space data collection. The main focus is on the generalization scale (generalization) of remotely sensed materials, spectral ranges, season and time of day.

Decryption is the most complicated process when renewing cards. For this, it is necessary to evaluate the indicators of the levels of changes, which are required to be included in the geographical and topographic bases, in terms of quantity and quality.

Space photography differs from aerial photography in that it has limited maneuverability. Since the orbit and speed of the spacecraft are known, the spatial position can be determined at the time of the photograph.

In recent times, the aerospace method has been widely used to create cards. We are aware of the potential of aerial photography in the study of irrigated lands. Space photographs show the irrigated lands, allowing to study the area's collector-drainage networks, canals, ditches and the natural conditions of the area in general. It is necessary to use the aerospace method to create a map of the special areas and irrigated lands in the Kashkadarya region. Because this method costs less money. Therefore, in the current era, it is appropriate if mapping is carried out on the basis of aerospace data.

In the process of creating cards using the aerospace method, the visual structure, symbols, type, geometric shape and size of objects are very important in

decoding pictures. Objects in the Kashkadarya region are seen in a very deformed and degraded state in aerial photographs.

Aerial and space-based maps allow to study landscape types, contours, levels of anthropogenic impact on landscapes, natural and anthropogenic processes, vegetation, degradation, surface water pollution, and other natural processes. This proves the appropriateness of assessment using this method.

In addition, modern GIS technologies are widely used to transform spatial data into a cartographic form, draw various conclusions, and perform monitoring work.

As part of the GIS project, some photogrammetric work can be carried out simultaneously with the preparatory work in the aerospace method. This includes preparatory work on the composition of the project; scanning of aerial photographs; creating a photogrammetric project; placement of source data in EHM memory; includes phototriangulation work.

It is no exaggeration to say that this data is one of the most important features of GIS. Spatial data can be collected by the GIS implementer in tabular or photographic form. This collected spatial data is combined with other collected spatial data and analyzed.

In this dissertation work, evaluation of irrigated lands and irrigation networks in Kashkadarya region using the aerospace method and aerospace monitoring were carried out ( Fig. 1 ). As a result of assessment and monitoring, changes in the irrigated lands and irrigation networks of the region were determined.

According to the data obtained as a result of monitoring, the area of irrigated land is increasing, and the main, inter-farm collector-drainage networks are decreasing, and most of them are not working at the required level.

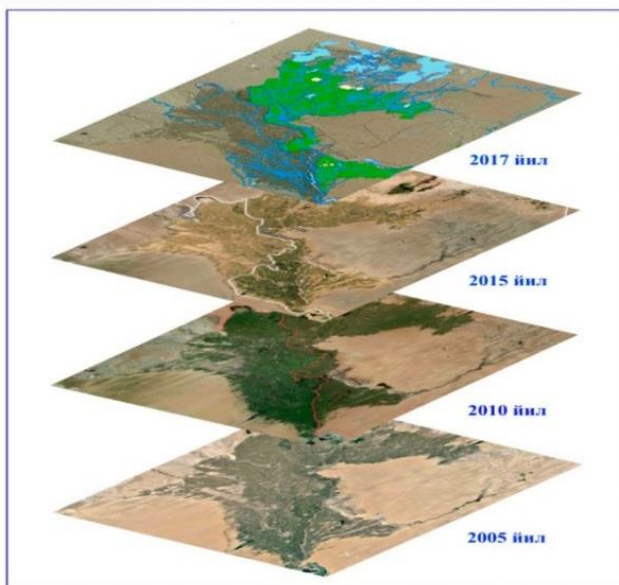
1 . Aerospace monitoring of irrigated lands and irrigation networks

It was determined that the following measures should be taken in order to prevent and improve the above changes.

1. Cultivated lands have varying degrees of salinity, and require full implementation of agrotechnical and amelioration activities.

2. All district land of the object Due to the proximity of the groundwater level

to the ground surface and the presence of saline soils, the hydromelioration systems must be completely cleaned every 2-3 years, and the groundwater level is at the "critical depth" (2 .5-3.0 m) should be maintained, additional ditches should be dug if necessary.



3. Moderate use of irrigation water, technical re-equipment and high-quality repair of canals, irrigation networks and tray systems in order to prevent the rise of groundwater and related secondary salinization processes, irrigation of crops Taking into account the depth of groundwater and other factors during irrigation, it is important to correctly determine the duration, number and standards of irrigation, and to strictly follow the irrigation regimes.

4. Washing of soil salt from irrigated lands is one of the most basic and important measures among melioration measures, and it is extremely important to carry it out on time and with high quality.

Currently, the problem of salinity of irrigated lands in the territory of Kashkadarya region is considered one of the important, researched and solved issues. Therefore, in-depth analysis of the salinity and salinity of the Kashkadarya region , its sustainable development in general and the specific problems of salinity in an integrated manner, aerospace methods and thus their solution The creation of melioration maps of this area is of urgent importance in the development of necessary scientific and practical proposals and measures.

The use of aerospace materials in the creation of the map "Irrigated lands of research objects" and the creation of a map using GAT technology are carried out in the following order:

1. Preparatory work. Processing of aerospace materials , use of digital data from field research, comparison, collection of copyright originals and existing stock cards. Aerospace and cartographic materials, i.e. raster images to the same scale and storage in computer memory.

2. Compilation of thematic layers of the created map and their corresponding tables, their analysis and creation of a database.

3. Development of conditional sign system.

4. Placing thematic layers of the map, creating a cartographic image and editing them.

5. Development of the composition of the card and its preparation for publication.

6. Publish the card.

At each of these stages, various operations are carried out in a specific sequence. Usually, the work of creating cards begins with the preparatory work according to the general method. After the preparatory stage, i.e., the necessary material and data are collected and entered into the computer memory, the database is created, and the next stage of work is also carried out in the given sequence.

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