



“FORMATION OF THEMATIC STRUCTURES OF SMALL AREA FACILITIES DEVELOPING DANGEROUS HYDROMETEOROLOGICAL EVENTS ZONES OF HIGH NATURAL RISK”

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Abstract

The Republic of Uzbekistan is a high-risk geo-information system that allows a huge amount of information and documents connected to activities to be collected in a central database in regions and across the country. A user's guide for developing procedures for enumerating high-risk areas and presentations for their development, as well as a summary and description of interface usage, geographical information, thematic layers, working with high-risk area inventory subsystem labels, map visualisation and detailed instructions for finding information, industrial use, and health and environmental procedures and measures, as well as developing cost and workforce estimates for these activities.

Аннотация

Республика Узбекистан представляет собой систему геоинформатизации территорий повышенного риска, которая позволяет собирать большой объем информации и документов, связанных с деятельностью Центральной базы данных по регионам и стране в целом. для его разработки краткая информация и описание операций интерфейса, географическая информация, тематические слои, работа с метками кадастровых подсистем зон повышенного риска, подробные инструкции по визуализации карты и поиску информации, промышленному использованию и процедурам охраны труда и окружающей среды и меры, а также процесс разработки сметы затрат и оплаты этих работ.



The legal framework for environmental protection has been one of the most significant changes since independence. The Nature Conservation Act was passed on December 9, 1992. This law establishes the legal, economic, and organizational foundations for the rational use of natural resources in order to preserve the natural environment, develop the human-nature relationship smoothly, protect natural ecosystems and individual objects, and ensure people's right to improve their living conditions. In addition to the Constitution and the Nature Conservation Act, Uzbekistan's environmental relations are currently governed by the Law on Specially Protected Natural Areas. (May 7, 1993). This law establishes a legal, environmental, economic, and organizational framework for the conservation of national treasures such as natural complexes, resorts, cultural, scientific, economic, environmentally unique, and special places on the Republic's territory. Also, the Law of the Republic of Uzbekistan "On Sanitary Control" (July 3, 1992). On June 20, 1989, the Law of the Republic of Uzbekistan "On Land" was adopted. On November 20, 1991, May 7, 1993 and September 23, 1994, the Oliy Majlis of the Republic of Uzbekistan amended and supplemented this law to regulate land use, rational use and protection of land, increase soil fertility, natural ensuring the right to perform tasks such as maintaining and improving the environment.

The Republic of Uzbekistan is a geo-informatization system for high-risk areas that allows for the collection of a huge quantity of data and documents relating to operations carried out in the Central Database in the regions and across the country.

Formation of thematic layers of objects of small zones where dangerous hydrometeorological phenomena develop

-State cadastre of high risk areas (SCHRA) «The Law of the Republic of Uzbekistan "On State Cadastres", the Regulation on the procedure for creation and maintenance of the Unified System of State Cadastres (USSC), approved by the Cabinet of Ministers of the Republic of Uzbekistan dated February 16, 2005 No 66, and other regulations of June 30, 2005 According to the Resolution No. 152, the zones of high natural danger are maintained in accordance with the Regulations on the procedure for maintaining the state cadastre.

SCHRA is an integral part of USSC and is based on a set of unified descriptions and images of high-risk areas (HRAs) prepared on the basis of systematic observations,



surveys and data collection, which are continuously updated and, where necessary, identified.

The following are the main types of cadastral documents:

cadastral work of the object (passport of the high risk zone);

cadastral maps (1: 25000 scale accounting maps, 1: 200000 scale cadastral maps, seismic zoning (OSR, DSR) and 1: 1000000, 1: 500000, 1: 200,000 scale maps of seismogenic zones);

cadastral book (forms of primary cadastral information);

report on the status of cadastral objects.

cadastral documents are compiled in paper, electronic and other sources.

3. SCHRA is conducted in order to ensure the registration of cadastral objects, their condition and assessment of the consequences of dangerous natural (geological, hydrometeorological) processes (events).

Regularly updated and supplemented information on the registration of cadastral objects, annually - on the occurrence of hazardous natural processes, their quantitative and qualitative characteristics, the consequences of the following hazardous natural processes (events), forms the basis of the SCHRA:

in areas where dangerous geological processes occur —ADGPO (earthquakes, landslides, slumps, subsidence, mudslides, strangles, karsts, etc.);

in areas at high risk of hydrometeorological events —AHRHE(floods, mudslides, avalanches, strong winds, heavy rains, droughts, inundations, etc.).

The following are the objects of SCHRA:

According to EXODGP— elements of the zone of occurrence of dangerous geological processes (river basin) – small zones (river basins), plots where dangerous geological processes develop;

According to in areas with high seismic risk —seismic zones (seismogenic zones) and different types of seismic zones;

According to In areas at high risk of hydrometeorological events — zones of occurrence of dangerous hydrometeorological events (river basins), elements - small zones of development of dangerous hydrometeorological events.

The following is the initial territorial unit of accounting;

According to Гидрометеорология ҳодисалари хавфи юқори бўлган зоналарда — zone of hazardous hydrometeorological events, river basin (upstream, middle, downstream), mountain massif (slope exposure). Cartographic materials to reflect



hazardous hydrometeorological zones are drawn on a scale of 1: 1000000 or 1: 500000 and 1: 200000 (for some areas) using the appropriate symbols.

SCHRA data includes accounting and valuation information, which includes::

According to In areas at high risk of hydrometeorological events:

cadastral object (high-risk zones of hydrometeorological events, river basins, ridges, ditches), name of the elements of the cadastral object (small zone - river basin, slope location, site of occurrence of hydrometeorological hazards);

cadastral number (river and river basin, ridge slope, basin);

location (administrative address, site of dangerous hydrometeorological event);

types (description) of dangerous hydrometeorological phenomena);

the main reasons for its appearance;

list of objects located in the zone of occurrence of dangerous hydrometeorological events;

information on damage caused by dangerous hydrometeorological events;

1: 25000, 1: 200000 scale cadastral maps of hazardous hydrometeorological events in paper and electronic sources.

The “Uzhydromet” Center for in areas at high risk of hydrometeorological events provides the State Committee for Geodesy and Cadastre with the following summary information on the areas where dangerous hydrometeorological events may occur for inclusion in the USSC database:

the name of the danger zone;

location (region, district);

the most common type of hydrometeorological phenomena;

the zones of occurrence of dangerous hydrometeorological events and the volume of the area that may be damaged;

1: 200,000 scale cadastral maps (calculation of zones where dangerous hydrometeorological events may occur);

list of objects located in the zone affected by dangerous hydrometeorological events.

Formation of thematic layers related to USSC GAT and their submission to the Unified System of State Cadastres

Thematic layers related to USSC GAT are formed in ArcGIS software (* .shp, * .gdb, * .mdb formats) by object types and types of information (registration, accounting, evaluation) using the basic cartographic basis for each type of state cadastre.



7. The basic cartographic basis of the USSC GAT consists of the following thematic layers corresponding to a map at a scale of 1: 200 000.:

Thematic layer "Mathematical basis";

Thematic layer "Hydrography";

Thematic layer "Place relief";

Thematic layer "Settlements";

Thematic layer "Ways of communication";

Thematic layer "Soil-vegetation cover";

Thematic layer "Political and administrative boundaries".

Data of state cadastres belonging to the Unified System of State Cadastres shall be submitted by the competent authorities for the maintenance of state cadastres to the National Center for Geodesy and Cartography of the State Committee for Geodesy and Cadastre within the following periods:

according to the state cadastre of zones of high natural risk (occurrence of dangerous geological processes and parts of zones of high seismic risk) - in April each year.;

Attribute data tables in the forms of the state cadastre of zones of high natural risk according to appendix 1 to the present Provision are created and consist of the following thematic layers:

Thematic layer "Number of days with heavy precipitation in the form of rain of 30 mm and more for 12 hours and less" (Table 2);

Thematic layer "Number of days with heavy precipitation in the form of snow 20 mm and more for 12 hours and less" »thematic layer (table 3);

Thematic layer "Number of days with heavy rainfall in the form of rain for half a day." (table 4);

Thematic layer "Number of days with heavy precipitation in the form of snow for half a day" »(table 5);

Thematic layer «Map-scheme of location of hydrological posts»(table 6);

Thematic layer "Hydrological characteristics of water content and percentage supply during the growing season of the reporting year » (table 7);

Thematic layer "Heavy rain" (table 8);

Thematic layer "Avalanches" (Table 9).

«Thematic layer "Map-scheme of flood, flood risk distribution";

«Avalanche distribution map-scheme »thematic layer.