Application of UNFC and UNRMS in Kyrgyzstan

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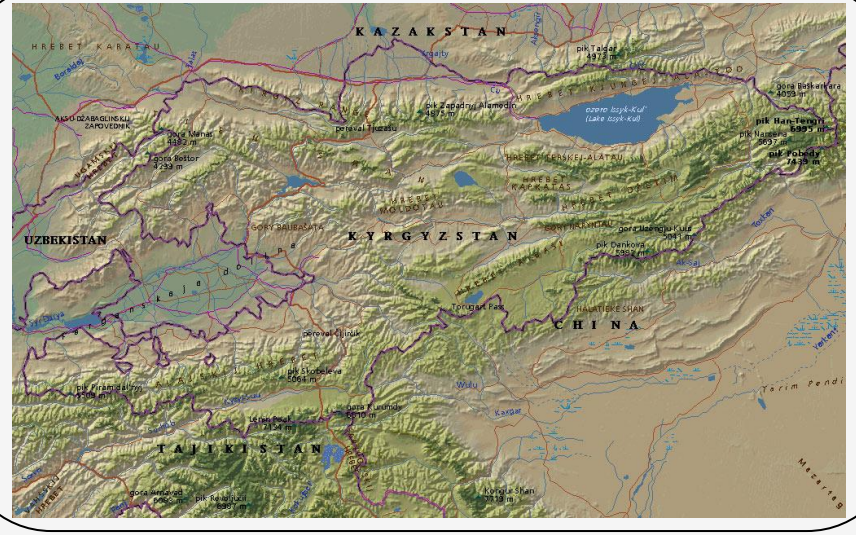
Development of the United Nations Resource Management System (UNRMS) for Expansion of investment potential of Central Asian and BRICS countries.

THE MAIN GOALS AND PRINCIPLES

The Kyrgyz Republic

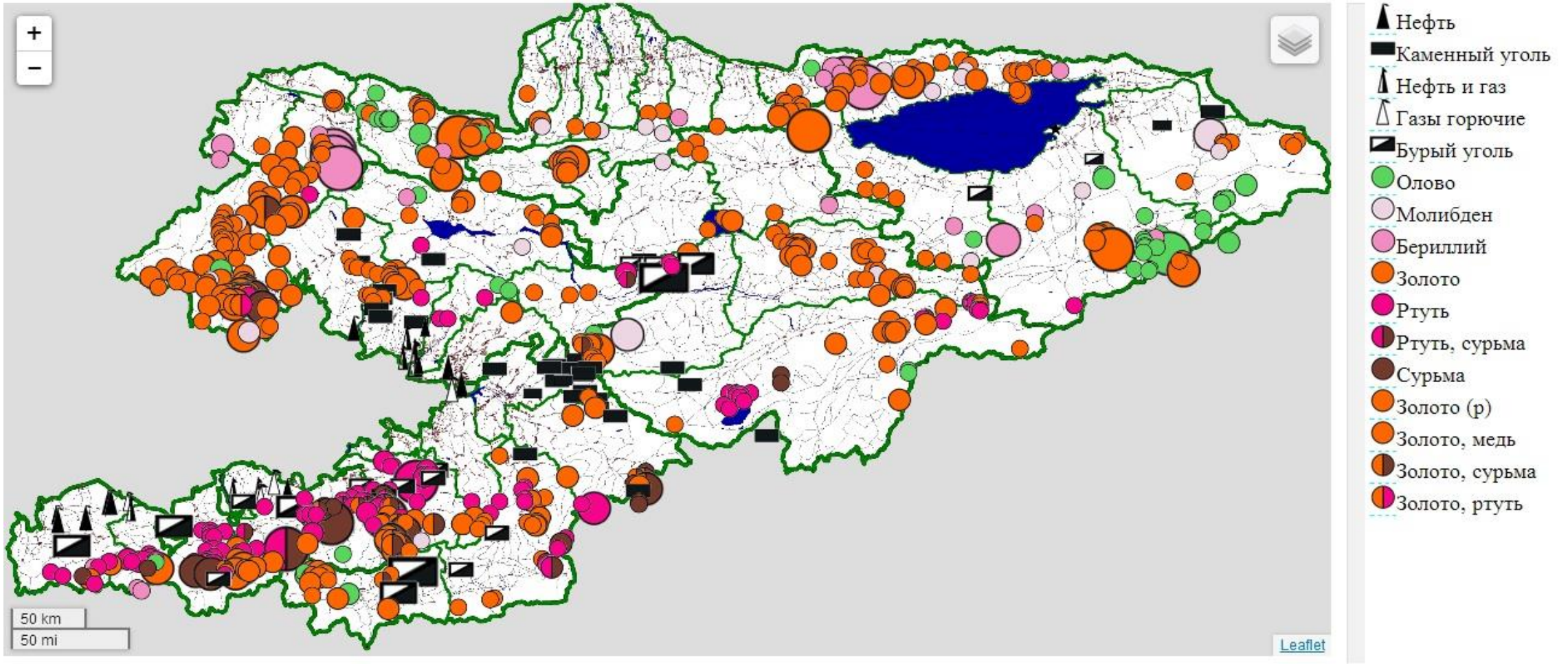
Overview

- Kyrgyzstan is the mountainous country with 94% of land being over 1000m above sea level and 43% over 3000 m.
- The highest point is Pik Pobedy at 7,439 m.
- The country's area is 199,951 sq km
- It is landlocked by 4 different countries – China, Tajikistan, Uzbekistan and Kazakhstan



Mining industry of the Kyrgyz Republic

Map of mineral resources occurrences and deposits



Mining industry of the Kyrgyz Republic

Description

The Kyrgyz Republic has significant potential for many types of mineral raw materials. For the almost 80-year history of geological research (since the formation of the Kyrgyz Geological Administration in 1938), about 20 thousand deposits and ore occurrences of more than 150 kinds of various mineral resources have been identified by geologists on its territory. The mining industry in the country has always been one of the leading industries.

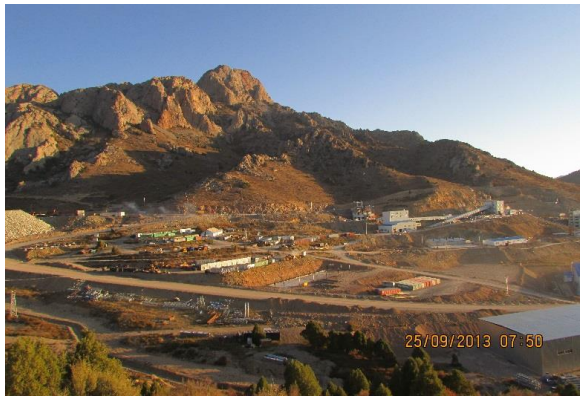
Division of deposits is used according to the prospects and quantitative reserves of deposits, according to national significance.

- Competitive objects are objects that have reliably estimated reserves (for example, gold in an amount of at least 10 tons) and prepared for industrial development;
- Auction objects - objects with prospects for further industrial development or geological exploration, in which preliminary estimated or reliable reserves have been identified;
- Objects that are issued at the request of subsoil users by direct negotiations. These objects must be free and not included in the list of competitive, auction objects and on the territory of other subsoil users.

Mining Industry

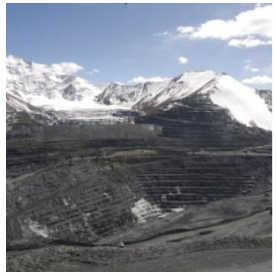
Economy impact

UNECE



22.6%
GDP

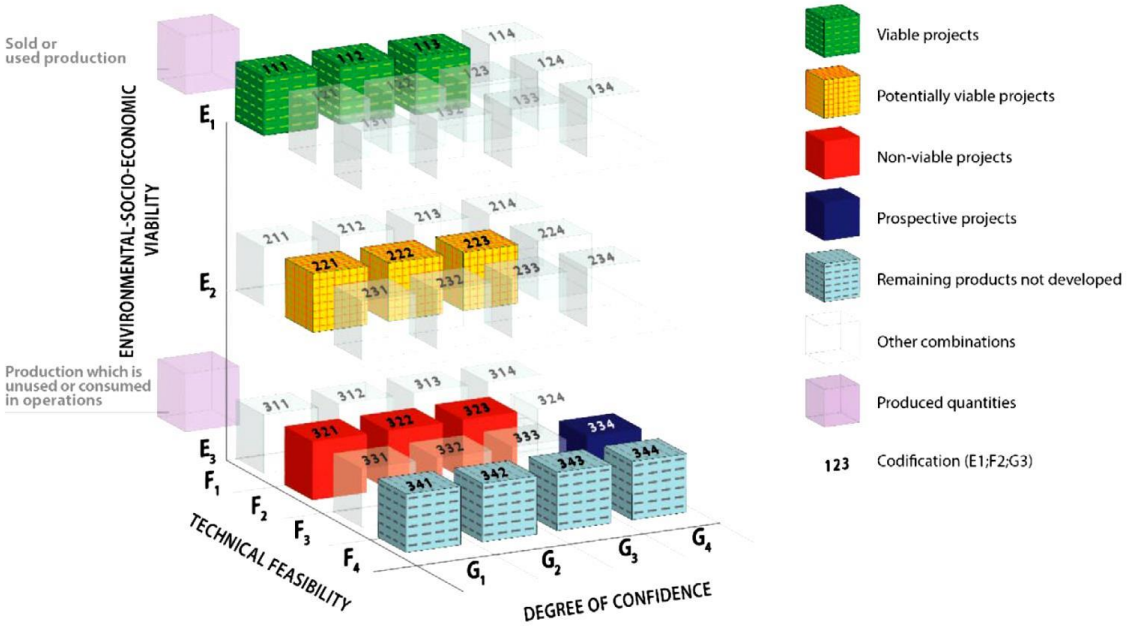
37%
direct foreign investments



55%
of total Industry

Comparison

Classification of the GKZ KR and the UNFC



Reserves category	Reserves characteristics
A	Category A includes explored mineral reserves with precisely defined boundaries of mineral bodies, their shapes and structures. Highlighted in the areas of detailing explored and developed deposits of the 1st group of geological complexity
B	Category B includes previously explored mineral reserves with roughly defined contours of mineral bodies, without an accurate representation of the spatial position of natural types of mineral raw materials. Category B reserves are allocated in the areas of detailed exploration and development of deposits of the 1st and 2nd groups of geological complexity.
C_1	Category C_1 includes reserves of explored deposits of the complex geological structure, as well as poorly explored reserves of minerals in new areas, taking into account extrapolation. Category C_1 reserves constitute the bulk of the reserves of explored and developed fields of the 1st, 2nd and 3rd groups of geological complexity, and can also be allocated in the areas of detailed fields of the 4th complexity group.
C_2	Prospective reserves are classified as C_2. Reserves of category C_2 are allocated during exploration of deposits of all groups of complexity, and in deposits of the 4th group of the complexity of geological structure, they constitute the bulk of the reserves involved in development.
P_1	Inferred resources of category P_1 take into account the possibility of expanding the boundaries of the distribution of minerals beyond the contours of C_2 reserves or identifying new ore bodies of minerals at ore occurrences, explored and explored deposits.
P_2	Inferred resources of the P_2 category take into account the possibility of discovering new deposits of minerals in the basin, ore region, node, field, the presumptive presence of which is based on a positive assessment of the occurrences of minerals, as well as geophysical and geological and geochemical anomalies, the nature and potential prospects of which are established by single workings.
P_3	Predicted resources of category P_3 take into account only the potential for the discovery of deposits of one or another type of mineral on the basis of favourable geological and paleogeographic prerequisites identified in the estimated area during medium-small-scale geological-geophysical and geological survey works, interpretation of space images, as well as analysis of results geophysical and geochemical research.

Bridging document

GKZ KR and UNFC

Class	Subclass	UNFC			KR classification	
		E	F	G	Degree of Completion and Profitability of Development (E and F)	Reserves Category (G)
Viable Projects	On Production	1	1.1	1, 2, 3	Balance reserves ready for development	A, B, C_1,C_2
	Approved for Development	1	1.2	1, 2, 3		A, B, C_1,C_2
	Justified for Development	1	1.3	1, 2, 3		A, B, C_1,C_2
Potentially Viable Projects	Development Pending	2	2.1	1, 2, 3	Promising for industrial development balance reserves	A, B, C_1,C_2
	Development On Hold	2	2.2	1, 2, 3		A, B, C_1,C_2
Non-Viable Projects	Development Unclarified	3.2	2.2	1, 2, 3	Estimated Reserves Requiring Additional Exploration	P_1, P_2, P_3
	Development Not Viable	3.3	2.3	1, 2, 3		P_1, P_2, P_3
Remaining products not developed from identified projects		3.3	4	1, 2, 3	Unprofitable for industrial development or unrecoverable	A, B, C_1, C_2
Prospective Projects [No sub-classes defined]	Prospective Projects [No sub-classes defined]	3.2	3	4	Not defined for this class	P_1, P_2, P_3
Remaining products not developed from prospective projects		3.3	4	4		P_1, P_2, P_3

Adoption of UNFC in the Kyrgyz Republic

Advantages

1. The UNFC serves as a global information exchange tool that can be applied across all mining activities, covering water, solid minerals and fossil energy resources, including coal.

2. According to the UNFC classification, many factors can be taken into account when evaluating deposits (especially solid minerals); it gives a multifactorial assessment, which is quite simple to understand, and does not lead to a double interpretation of the situation.

3. The UNFC classification system is good in that it can provide a well-linked characterization of the deposit with the SDG goals, and that allows project implementers (most often states) to develop good SDG practices and principles.

4. In the Kyrgyz Republic there is no single classification for energy and mineral resources, therefore, the adoption of the UNFC through Bridging Document to the respective energy and mineral classifications as a first step will provide an opportunity to unite the two largest industries, which will form a single picture of all reserves of mineral and hydrocarbon raw materials.

5. In addition, the adoption of the UNFC will provide an opportunity to obtain accurate information on the availability of all non-renewable resources and thereby assist in the development of appropriate long-term energy strategies.

Adoption of UNFC in the Kyrgyz Republic

Disadvantages

1. The UNFC works well with solid minerals, but there are some inconveniences with the assessment of the groundwater. So one deposit can fall into three areas with different degrees of readiness for development, with different geological, hydrogeological and specific knowledge. Then the field must be given 2-3 codes. Which leads to the "confusion" of the user by the subsoil.

2. The main focus of the UNFC is the economic indicators of the fields, while the geological feature of each object is unique and special in its own way. The current Classification of reserves of the Kyrgyz Republic distinguishes mineral resources based on the complexity of the geological structure, which determines, regardless of the degree of exploration, the direction of further development of the field.

3. Development of deposits entails a number of other not unimportant problems. In the Kyrgyz Republic, there are often protests of local residents against the development of deposits. This aspect has recently gained a regular character, which complicates further investment. Social part of UNFC should help to reduce this problem.

4. The implementation of the UNFC system should be consistent. It is not yet possible to completely abandon the current system of the GKZ KR. This will require an analysis of all geological and technical and economic materials left over from the times of the USSR, and this is a very large amount of geological materials.

Adoption of UNFC in the Kyrgyz Republic

Steps

(1) Formal decision to implement or implement the UNFC system initially through Bridging Documents;

(2) Memorandum of Understanding between UNECE and the Government of the Kyrgyz Republic;

(3) The transition to the UNFC, through Bridging Documents, should be carried out by the state department for geology and subsoil use of the Kyrgyz Republic;

(4) Order on the creation of a national group of experts on the harmonization of classification systems of Kyrgyzstan with the UNFC;

(5) Training of domestic professional staff on the implementation or application of the UNFC system;

(6) Professional training of government personnel (government, academy, a public company, etc.) in the implementation and application of the UNFC and UNECE framework.

Adoption of UNFC in the Kyrgyz Republic

Done activites

Currently Kyrgyzstan is finalizing "Mining Code", in which it is allowed to use the international systems of classification of reserves calculation and resources estimations. According to the latest version of Mining Code the system of subsoil usage in the Kyrgyzstan will gradually gaining weight, clearer rules of the "game" appear for the business community, which in turn will allow obtaining the necessary funding for the development of the whole range of the mineral resources in the Kyrgyzstan.

It takes time to adapt to the New Classification in Kyrgyzstan. The issue of adaptation and successful application of the UNFC in Kyrgyzstan requires optimal close interaction between the state and the subsoil user and the corresponding geopolitical, economic and technological platform.

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THE MAIN GOALS AND PRINCIPLES

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