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Theory and methodology of the Arctic tourism development

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Abstract. In order to study the ideas of development of the Arctic tourism the author offers: five levels of applied scientific research on studying the prospects of the Russian Arctic tourism, creation of regional innovative system of water resources in the Arctic zone of the Russian Federation, and also tourist recreational system in the Arctic as a model of the safe tourism in the Arctic.

Keywords: *Arctic, regions, tourism, innovation system, tourist recreational complex, model of the safe tourism, methodology of research, the water and ecological principle*

The development of tourism in the Arctic is a new theme in the public strategic planning, research, commercial activities in the Russian Federation. Embodiment of this idea in life gives hope for socio-economic development of the regions. However, tourism activities, as well as any economic sector depends on many political and economic factors. Accordingly, considering the large investment projects of tourism development as a long-term perspective plans, we stop only on the research methodology of the development of tourism in the Arctic. The development of a research methodology allows showing the depth of the target object and the subject. The object of the research is ideological and conceptual development of tourism in the Arctic. The subject of research is making safe tourism in the Arctic. The Russian Federation, as the winner of the big Arctic space, intended to become a platform for diverse nature tourism development. Because all available theories and practices for the study and exploration of the Arctic as a whole will help finding the best solutions to socio-economic development of the Arctic Zone of the Russian Federation (hereinafter — the AZRF) and thus contribute to the safe tourism in the Arctic.

In *methodology* development studies of the Arctic tourism we apply water-basin and water-land approaches, as well as water-land ecological principle within the integral representations of a single territorial natural complex Aqua Arctic. The choice of the aforementioned research approaches driven by environmental requirements of economic activities in the Arctic. Hydrographic studies remain the most sustainable collaborative research with people's economic planning in the far North and the Arctic. Considering the evolution of scientific methods based on aqua-territorial

approach and outgoing environmental principles, we use them as the main components of the transformation of modern decision-making process in the Arctic.

Water-basin approach, developed within the walls of the AARI, is based on the provisions of F.N. Milkov [1, p. 9—16] and developed by G.D. Richter [2, p. 5—17] natural (landscape) complex as the largest concentration of the ocean of three levels: air, water, mineral, or, if there is ice, four: air, ice, water, mineral. The principle of land-water device as the basis for development of the territory in the far North was applied during the preparation of the collectivization in Soviet Russia. "The situation" on the land-water device of the labour population of the Northern margins of the RSFSR consisted of "creating land and organizational conditions for the deployment of the cooperation of the local population and collectivization [3, p. 404—405]. The evolution of the water-basin and water-land of the principles we are seeing in diagrams and tables V.V. Ivanov" catchment Boundary basin of the Arctic Ocean, its parts, sub-basins, seas, bays, Straits [4, p. 139]. According to one of the author of the Arctic Ocean is divided into four parts: Arctic pool, North-European pool, sea of the Siberian shelf, as well as the sea, bays and Straits of the Canadian Arctic archipelago. The Arctic pool is divided into Eurasian and Amerazijskij subbascejny.North-European pool includes Greenland Sea, Norwegian, Barents and white. The Siberian shelf seas are sea Kara, Laptev, East Siberian and Chukchi and the seas, bays and Straits of the Canadian Archipelago— Beaufort Sea, Baffin and Lincoln, Canadian Straits pool Fox, Hudson Bay and Hudson Strait [4, p. 140].

Why you should access these research approaches? Water-basin approach shows the international oceanic and sea level of organization of the expedition and cruise tourism in the Arctic. The magnitude and the interest of the world community to the Arctic also involves the development of different ways of creating air and morskih routes. Water-central approach is designed to show the possibilities of the development of maritime and coastal tourism in the Arctic and in AZRF. In addition to maritime, air species move tourists; ground transport accessibility view may become a key area for research of test sites and overcoming the difficulties of river ice. Catchment approach in the Arctic Ocean (AO) shows the border sea, River Arctic tourism development zone in northern seas and estuarine areas of rivers, coastal parts of them (fig. 1). Combined principle of movement of tourist flow from land to sea and Arctic Ocean route through River ways, is the optimal solution when you create routes in all seasons.

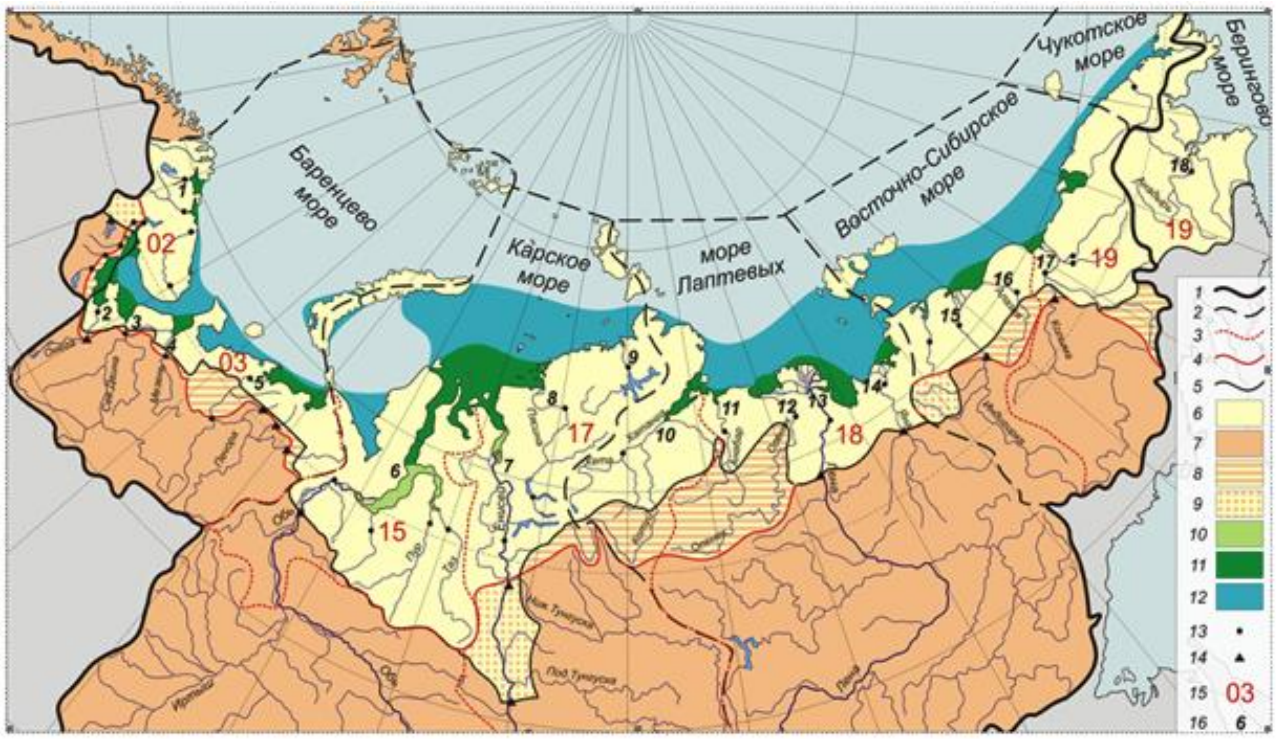

Figure 1. AZRF and its current administrative borders including water borders and mouth areas of the Siberian rivers (Ivanov V.V.,Tretjakov M.V.., 2015).

Legend: boundary 1 — the catchment basin of the Arctic Ocean, 2 — watershed basins, seas, 3 — catchment basins, seas, 4 — AZRF, 5 — waters of the AZRF. **Watersheds:** 6 — Russian Arctic rivers in its administrative and territorial borders, 7 — Russian Arctic rivers outside its territorial boundaries, 8 — Russian Arctic rivers within its boundaries 9 — Russian Arctic rivers outside its vodnoresursnoj borders. **Zone:** 10 — fresh water during the year, 11 — fresh water at maximum runoff a Russian and salinity with minimum runoff, 12 — distribution of river waters in the seas. **Gauging casements:** 13 — trailing hydrometric casements rivers 14 — border gauging casements rivers on the border of the Arctic zone of the Russian Federation. **15 — rooms of basin districts by the water code:** 02 — Barents-Belomorsky, 03 — Dvinsko-Pechorsky, 15 — Nizhneobsky, 17 — Yenisei, 18 — Lena, 19 — Anadyro-Kolyma. **16 — estuarine areas rooms rivers AZRF:** 1 — Tulomskaya, 2 — Kolsko-Onegskaya, 3 —Northern Dvina, 4 — Mezen and Kuloi, 5-6 — Pechora-Tazovski, 7 — Yeniseysk, 8 — Pasinskaya, 9 — Nizhne Taimyrskaya, 10 — Hatangskaya, 11 — Anabarskaya, 12 — Olenekskaya, 13 — Lenskaya, 14 — Yanskaya, 15 — Indigirskaya, 16 — Alazejskaya, 17 — Kolymskaya, 18 -Anadirskaya.

I have put forward a hypothesis based on the fact that the definition of the five levels of applied scientific research on the prospects of development of the Russian Arctic tourism shows the following practical possibilities: a) the establishment of regional innovation system of water resources in the Arctic zone of the Russian Federation, b) tourist-recreational systems as model creation safe tourism in the Arctic.

Drainage scheme of the Arctic Ocean must be taken as the main criterion for water-land ecological environmental requirements for conducting economic activity in the Arctic, including such industries as Arctic tourism. The AZRF in modern administrative boundaries, together with an indication of the specified border of water and land areas of the Siberian rivers [5, p. 151—160] is so far the only Arctic hydrometeorological card, designed to show: (a) water-use perspective) the ecological principle in evaluating investment projects of an economic nature; b) changing system of modern decision-making, coordination and regulation in the field of ensuring living safely. The main theoretical-methodological provisions of researched topics also include the idea of develop-

ment of tourism in the framework of the research the matrix on the fundamentals of tourism development in the Arctic, based on water-basin and water-land approaches. Identification of environmental requirements can be build on the basis of the principle of integral aqua-territorial Arctic natural complex. Scientific research and considerable matrix learning the basics of tourism development in the Arctic will identify: (a) forming border) tourist-recreational system in the Arctic,) the place and role of the development of the Russian Arctic tourism.

Table 1

Research matrix
for the basics of tourism development in the Arctic (compl. N. Kharlampeva)

	Levels of applied analysis	Bodies responsible for Arctic tourism destinations
1	International (Oceanic and nautical tourism)	The International Maritime Organization (IMO). Marine Operators Association cruise tours and individual companies
2	International Arctic (Sea tourism)	The Working Group of the Arctic Council for the protection of the Arctic Marine (PAME). Marine Operators Association cruise tours and individual companies
3	Interregional Arctic tourism (maritime tourism)	The Nordic Council of Ministers; The Council of Baltic Sea States; The Barents Euro-Arctic Council. Bering programmes and projects.
4	Regional innovation system AZRF (marine and riverine tourism)	Northwestern Federal District Urals federal district Siberian Federal District, far eastern Federal District. Arctic Chamber of Commerce. The Northern Forum.
5	Inside the actors AZRF (marine and riverine tourism)	Management and committees on culture and tourism, education

How to coordinate and regulate environmental requirements for tourist-and-recreational Arctic system

When designing the formation of the Arctic tourist-recreational system based on the principle of Aqua-territorial single natural complex of the Arctic, as well as to identify the boundaries of economic regional innovation system in the AZRF, it would be desirable to take into account the organizational and administrative system of water-land farming in the AZRF. This approach will help solve the main task: compliance with environmental requirements in all sectors of economic activity.

Table 2

Environmental principles in the formation of tourist-and-recreational systems
Arctic, Arctic zone of the Russian Federation

International (Oceanic and nautical tourism)	International Arctic (maritime tourism)	Interregional Arctic tourism (maritime tourism)	Regional innovation system AZRF (MOR and recz. camping, hiking)	Inside the actors AZRF (sea and River tourism, hiking)
Community with common environmental fate	Environmental safe tourism (2014)	Model sustainable regional tourism» (2006)	?	?

Water — land ecological principle and environmental requirements for the AZRF regional innovation system

Accounting watershed borders the Arctic Ocean as a basis for the elaboration of methods of water quality assessment criterion may become water-ecological environmental requirements when conducting economic activities in the Arctic, including such industries as Arctic tourism. Discussion on establishment of tourism and recreation system in the Arctic, in the AZRF, from a scientific point of view, will be the most compelling in the context of a comprehensive study, study and exchange of views, the two interdependent research directions: building the foundations of a safe tourism and environmental water-environmental activities. Accordingly, it is proposed:

1. Water resource integrated approach study was adopted as a basis for effective cooperation between the four sectors: States, NGOs, businesses and independent actors (volunteering, private donation) in the Arctic zone of the Russian Federation.
2. to develop the concept of regional innovation system (RIS) on water in the AZRF with a view to consolidating efforts to identify and the formation of the system of legal norms regulating social relations, conservation and restoration of water objects and create a model of the AZRF safe tourism during the formation of tourist-and-recreational of the Arctic System.
3. Water resource approach in natural zones of territorial and natural resources in the Arctic contributes not only to the development of economic activities in the Arctic, but will the basis for development of Arctic tourism. It can be assumed that this approach will address one of the priorities of the International Arctic regional cooperation to develop the foundations of environmental requirements studies on the ground between local self-government bodies of the AZRF, Regional Council of the Barents Euro-Arctic region, the Northern Forum and projects of indigenous peoples of the Arctic, research and other associations, as well as all types of businesses.

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