

特 集：ロシア科学アカデミー極東支部所属研究機関

今号ではロシア科学アカデミー極東支部所属研究機関をご紹介します。

ロシア科学アカデミー極東支部 (<http://www.febras.ru>) はウラジオストクに本部を構え、傘下に沿海（プリモルスク）研究センター（在ウラジオストク）、アムール研究センター（在ブラゴヴェシチェンスク）、ハバロフスク研究センター（在ハバロフスク）、サハリン研究センター（在ユジノ・サハリンスク）、カムチャッカ研究センター（在ペトロパヴロフスク・カムチャツキー）、北東研究センター（在マガダン）があり、各センターは複数の研究所を管轄しています。

ロシア科学アカデミー極東支部は環太平洋諸国ならびに欧州諸国の研究機関と協力関係をむすんでおり、200以上の国際プログラム・プロジェクトの実施、20以上の国際会議・シンポジウム・セミナーの主催、研究員の活発な交流が行われています。特に日本の大学・研究機関との交流は距離的に近いこともあり、最も盛んに行われています。具体的な交流内容は研究所ごとに記載されています。

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1 . ロシア科学アカデミー極東支部について

20世紀初頭よりロシア極東地方は多くの科学者の調査意欲を駆り立ててきた。クラシェニンニコフ、ネヴェルスコイ、プルゼヴァルスキー、コマロフ、アルセーニエフといった探検家の調査により極東地域の未知なる自然の多くが解明され、新しい知識がもたらされた。1912年に最初の気象観測所がウラジオストクに設置され、1920年代から30年代にかけて最初の研究所、実験所、自然保護区が設立された。さらに1929年にソ連科学アカデミーウラジオストク部門が太平洋調査の促進のため設置された。

アカデミー会員であるコマロフの提唱により、1932年にソ連科学アカデミー極東支部がウラジオストクに開設された。これはソ連国内東部において最初に開設された学術研究機関である。1930年代は鉱物、生物、海洋資源の基礎研究に重きが置かれた。

20世紀初頭にロシアの科学者は今日に匹敵する重要な研究成果を上げてきたが、この時期のロシア極東地域の科学者達は長い間世界の科学学界と接触する機会がなかった。しかし現在では、科学技術の促進、科学政策の策定、一般大衆の科学に対する理解を深めるといった目的のために、国内イベントならびに国際イベントが開催されている。

ロシア科学アカデミー極東支部の活動分野は自然科学、社会科学、工学等あらゆる主要分野にわたっており、最も重要かつ有望な調査研究分野は以下のとおりである。

- 極東および太平洋の鉱物・生物資源の効率的包括的開発 - エネルギー効率が良く資源節約型の鉱物・海洋原料加工技術の創出。
- 地質学および地球物理学 - 海陸境界地域の地殻変動および構造、火山活動ならびに地震、鉱物原料の予測、鉱業。
- 海洋学 - 海洋と大気の相互影響、全世界的気候の変化、器械計測。
- 陸地および海洋における生物の生産性と多様性、環境保護。
- 自動制御、専門システムの構築、情報の蓄積と伝達。

ロシア科学アカデミー極東支部で現在行われている調査研究は、原料主体経済から原料加工を伴う先端産業経済への移行を可能としており、これにより研究集約型ハイテク産業のための基盤形成が可能となる。また、研究者のレベルは研究成果および専門知識の双方とも世界的レベルにある。

ロシア科学アカデミー極東支部の構成

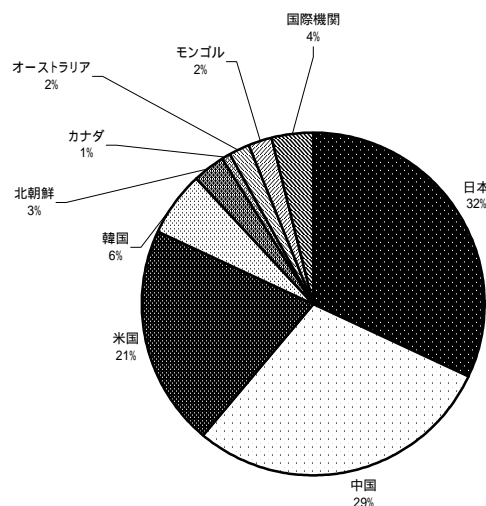
本部 (Presidium of Far Eastern Branch of the Russian Academy of Sciences)

- 沿海(プリモルスク)研究センター (Primorsky Scientific Center) : 所属研究所数 14
- アムール研究センター (Amur Scientific Center) : 所属研究所数 3
- ハバロフスク研究センター (Khabarovsk Scientific Center) : 所属研究所数 9
- サハリン研究センター (Sakhalin Scientific Center) : 所属研究所数 3
- カムチャッカ研究センター (Kamchatka Scientific Center) : 所属研究所数 4
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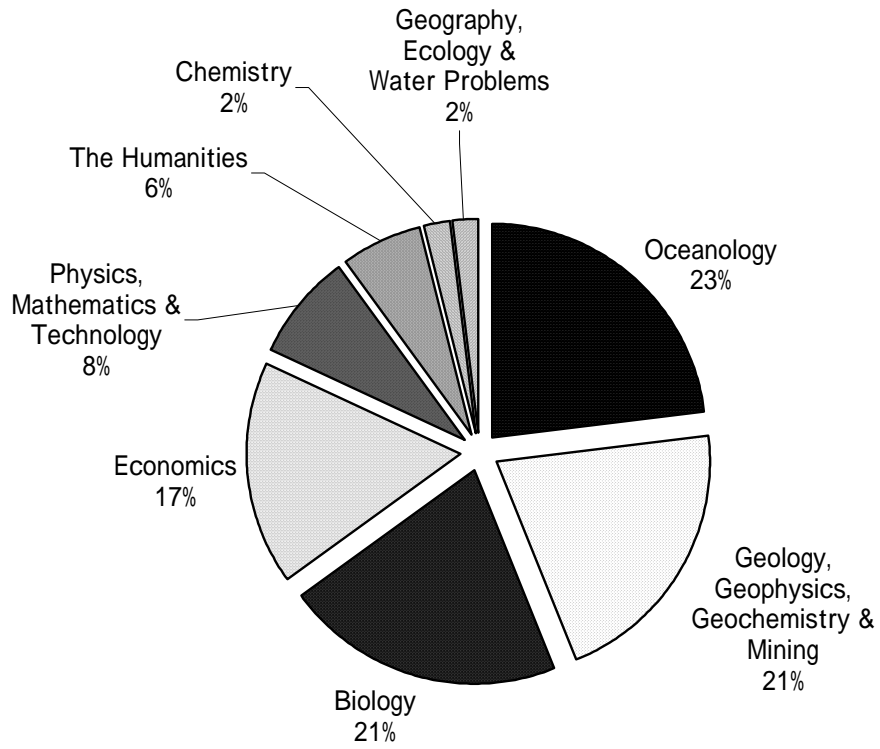
Long-term directions of scientific and technical international collaboration of Institutes
of the Far Eastern Branch, Russian Academy of Sciences
(各国研究機関との長期協力分野)

1. Complex processing of mineral raw materials.
2. Utilization of agricultural waste.
3. Obtaining of particularly pure organic contamination.
4. Sewage purification from organic contamination.
5. Purification from radioactive waste.
6. New information technology.
7. New biotechnologies.
8. Development of acoustical methods of resource monitoring and exploring of the South-East Asia Seas.
9. Innovation activity promotion in the sphere of R & D intensive production.
10. Rendering consulting services.
11. Research of biodiversity and protection of environmental in the North-East Asia.
12. Study of geological structure of the Pacific Ocean transition to the Eurasian continent.
13. Investigation of oil-gas content of the North-East Asia territory.

所属研究所の国別協力関係



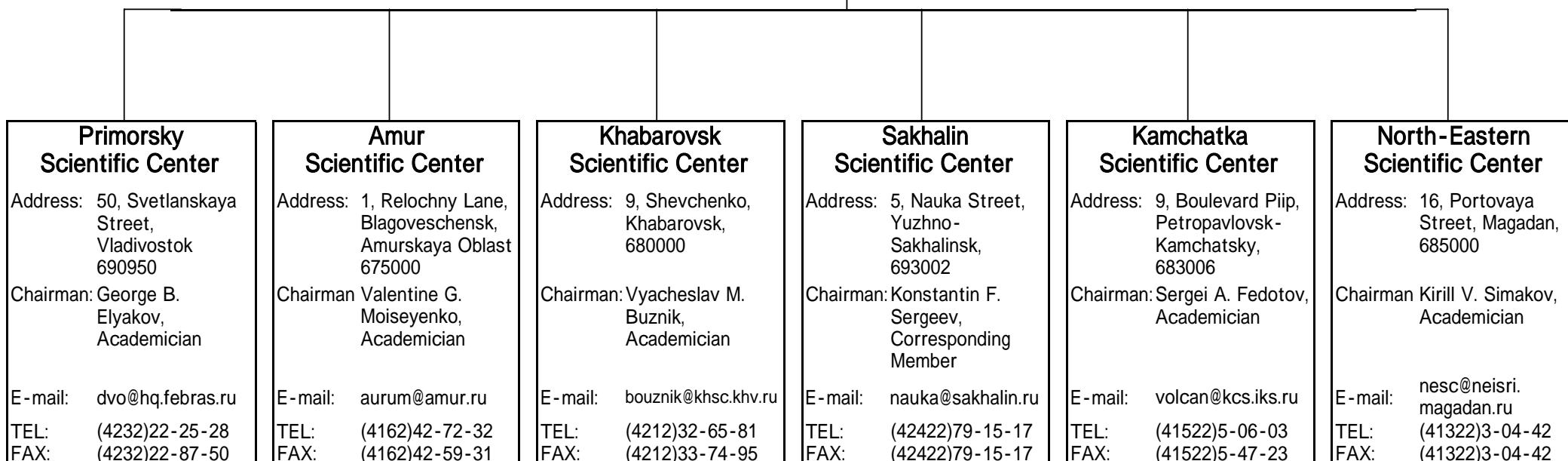
日本の研究機関との協力分野



ロシア科学アカデミー極東支部構成図

**Presidium of the Far Eastern Branch of
the Russian Academy of Sciences**

Address: 50, Svetlanskaya Street, Vladivostok, Russia 690950
 Chairman: Valentin I. Sergienko, Academician
 E-mail: sergienko@hq.febras.ru
 TEL: (4232)26-49-97
 FAX: (4232)22-21-57



2 . ロシア科学アカデミー極東支部所属研究機関

PRIMORSKY SCIENTIFIC CENTER

1. Institute of Automation and Control Processes

Russian Name	Институт автоматизации и процессов управления (ИАПУ)
Director	Veniamin P. Myasnikov, Academician
Address	5, Radio Street, Vladivostok 690041
Phone	(4232) 310439
Fax	(4232) 310452
E-mail	director@iacp.dvo.ru
URL	http://www.iacp.dvo.ru
Total staff	258
Research staff	119

The institute was founded in 1971 to conduct research on control theory, computer science, mathematical modeling and simulation, and in the field of high technology. The institute conducts research in the following areas:

- Expert system design: medicine expert systems, expert systems support tools.
- Research of control processes and reliability problems: control of reliability of complex systems, modeling and control of technological processes, reliability prediction of engineering systems, technical diagnostics, control and navigation.
- Mathematical simulation of complex systems: mathematical simulation of ecological systems, geoinformatics and simulation, mechanics of deformable solids, numerical analysis and operator equations.
- Surface physics and design of semiconductor systems; technology of two-dimensional micro-electronics, homoepitaxy technology, technology of metal-semiconductor systems, technology of semiconductors and dielectrics, theoretical physics of microstructures, optics and electrophysics.
- Development of new technologies: transport vehicles, electrophysics and electric power engineering.
- Information support for ocean and environment exploration: mathematical simulation of ocean phenomena, satellite monitoring, informational computer networks, computer graphics and information systems.

Laboratories 24

2001年の日本の大学・研究機関との交流

- ・ 研究員の九州大学工学部への派遣（助教授待遇）
- ・ 大阪大学との共同研究（表相形成時のシリコン原子の役割）
- ・ 東京大学との共同研究（ナノ構造）
- ・ 東北大学教授の衛星モニター研究室訪問

2. Institute of Applied Mathematics

Russian name Институт прикладной математики (ИПМ)
Director Nikolai V. Kuznetsov, Corresponding member
Address 7, Radio Street, Vladivostok 690041
Phone (4232) 311907
Fax (4232) 311856
E-mail admin@iam-mail.febras.ru
URL http://www.iam.dvo.ru
Total staff 112
Research staff 48
Founded in 1988.

The Institute conducts research on:

- theoretical mathematics, mathematical and theoretical physics, computer math, probability theory, mathematical statistics, and mathematical modelling of natural processes arising in industrial production in the Far East, fundamental problems of theoretical mathematics (theory of number, topology and algebra);
- mathematical analysis, differential equations;
- development of numerical methods of continuous media mechanics and hydrodynamics.

Laboratories 13

2001年の日本の大学・研究機関との交流

- ・ 北海道大学との共同研究

3. Institute of Marine Technology Problems

Russian Name Институт проблем морских технологий (ИПМТ)
Director Mikhail D. Ageev, Academician
Address 5a, Sukhanova Street, Vladivostok 690950
Phone (4232) 226416
Fax (4232) 226451
E-man imtp@marine.febras.ru
Total staff 166
Research staff 36

Founded in 1988. The Institute develops new methods and principles of creating automatized techniques for research and exploration of the world ocean. Facilities include about 2,000 square meters of laboratory rooms, CAD engineering, experimental production workshop, a high-pressure chamber for deepwater equipment tests, a small research vessel. Four main research trends of the institute: underwater robotics, hydrophysics, renewable energy resources and marine ecological systems monitoring. Scientists and engineers of the Underwater Robotics Department develop principles of autonomous underwater vehicles movement control, algorithms of their behavior and interactions with surroundings, improve functional structure of onboard systems. Experimental prototypes of autonomous (AUV), tethered (ROV) and towed vehicles,

navigation and positioning systems are designed at the institute. Department of Hydrophysics investigates a large-scale inhomogeneities of water medium (frontal zones, synoptic eddies, currents, etc.) and small-scale inhomogeneities of the water medium (suspensions, gas bubbles, sound scattering layers, turbulence, plankton, etc.) by acoustic methods. The towed acoustic sources and drifting receiving systems are developed and used. The institute estimates resources of renewable power sources (solar energy thermal power of ocean, energy of sea water, wind, biomass) and elaborates technology for their using as well as technical means of alternative energetics. Department of Ecological Systems Monitoring develops automatized systems of ecological research, monitoring of water medium and aquacultures.
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4. Institute of Chemistry

Russian Name Институт химии (ИХ)
Director Victor Yu. Glushchenko, Corresponding Member
Address 159, Prospekt 100-letiya Vladivostoka, Vladivostok, 690022
Phone (4232) 312590
Fax (4232) 311889
E-mail chemi@online.ru
Total staff 213
Research staff 108

Founded in 1971.

- New materials and technological development, technologies for environmental protection, recycling technologies;
- Mineral and plant resource processing, environmentally safe chemicals;
- Prediction, search, synthesis and application of new materials;
- Elaboration of technology for processing the Far East mineral and vegetable raw materials;
- Elaboration of methods for cleaning and processing of industrial waste materials; elaboration of ecologically clean technologies; ecological monitoring;
- Theoretical and experimental study of substances and materials by means of various physicochemical methods.

2001年の日本の大学・研究機関との交流

- ・ 国際シンポジウム「16th International Symposium on Nuclear Quadrupole Interaction」および「第3回アジア太平洋シンポジウム APES-01」(ともに広島開催)への参加

5. Pacific Institute of Bioorganic Chemistry

Russian Name Тихоокеанский институт биоорганической химии (ТИБОХ)
Director (Alternate Director) Valentine A. Sonik, Corresponding Member
Address 159, 100-letiya Vladivostoka Prospect, Vladivostok 690022
Phone (4232) 311651

Fax (4232) 314050
E-mail piboc@stl.ru, piboc@eastnet.febras.ru
Total staff 331
Research staff 160

The institute was founded in 1964.

- Studying on chemical structure and biological functions of basic classes of low molecular weight bioregulators;
- Synthesis of natural biologically active compounds;
- Chemistry and biochemistry of enzymes from marine organisms;
- Molecular immunology;
- Marine microbiology and biotechnology;
- Development of analytical and physicochemical methods of studying natural compounds.

The institute has a marine experimental station to collect and primary treat natural raw materials, pilot plant to produce (in small quantities) new biologically active compounds developed at the institute. The research vessel “Akademik Oparin” is specially equipped for chemical, biochemical, biological, microbiological and hydrobiological studies. Scientists of the institute and their colleagues from America, Japan, Australia, Vietnam and Korea have carried out 18 scientific marine expeditions aboard the vessel in various zones of the World Ocean.

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2001年の日本の大学・研究機関との交流

- ・ 東京大学での研究（海洋毒素から細胞を保護するための特殊ステリンによるバイオ薄膜の変異）
- ・ 海洋性天然化合物シンポジウムへの参加（於：沖縄）

6. Institute of Biology and Soil Sciences

Russian Name Биолого-почвенный институт (БПИ)
Director Yury N. Zhuravlev, Corresponding Member
Address 159, Prospekt 100-letiya Vladivostoka, Vladivostok 690022
Phone (4232) 311385
Fax (4232) 310193
E-mail ibss@eastnet.febras.ru
Total staff 400
Research staff 173

The institute was established in 1962. It is a complex scientific institution studying biodiversity, ecology and evolution of plants, animals as well as soils of the continental part of the Russian far east, developing the scientific bases and modern technologies for the rational use, conservation, protection and restoration of biological resources. Nowadays the major research trends are as follows:

1. Ecological - investigation of general and regional regularities of evolution and ecosystem laws and its elements;
2. Resources - studies of the far east biological and soil resources;
3. Technological - development of scientific bases and modern technologies for protection, restoration and rational use of biological resources (establishing the tissue cultures of rare medicinal and other valuable plants such as ginseng, *Aristolochiae* L., *Lithospermum* L., *Taxus* and others and creating medicines on the basis of the plant tissue culture).

The Institute consists of 20 laboratories and 3 groups united into 7 departments. The institute has 2 nature reserves, namely "Kedrovaya Pad" and "Ussuri Reserve", a library, experimental greenhouse, vivarium, zoological, paleontological and soil collections, herbarium as well as several seasonal stations and one constantly functioning station located in a zone of the broad-leaved coniferous forests of the Central Sikhote Alin.

Results of studies carried out by researchers are published in 170 monographs and 246 collected books. At present the institute is aimed at preparing the multi-volume edition. Such fundamental books as "Vascular Plants of the Soviet Far East", "Key of Insects of the Russian Far East" and "The Lower Plant, Fungi and mosses of the Far East" are being published. Within the studies under the Soviet-Japanese convention on bird protection a series of collected volumes was printed.

Laboratories 20

Research groups 3

2001 年の日本の大学・研究機関との交流

- ・ 北海道大学との共同研究（サハリン島の生物の多様性）
- ・ 富山県との渡り鳥調査

7. Institute of Marine Biology

Russian Name	Институт биологии моря (ИБМ)
Director	Vladimir L. Kasyanov, Academician
Address	17, Palchevskogo Street, Vladivostok 690032
Phone	(4232) 310905
Fax	(4232) 310900
E-mail	inmarbio@mail.primorye.ru
Total staff	437
Research staff	175

Founded in 1970. The Institute includes 20 labs covering all fields of marine biology from biophysics and genetics of marine organisms to population, community and ecosystem ecology, the Far East State Marine Reserve as well as the Regional Marine Sanctuary and 3 biological stations (in Peter the Great Bay, Kamchatka Peninsula and Sakhalin Island). Areas of interest include: marine ecology; studies on marine flora and fauna; biological productivity of shelf zones of the Far Eastern seas and adjacent waters of the Pacific; adaptation, ontogenesis and evolution of marine organisms; protection of marine fauna and flora. The institute is responsible for the publication of the All-Russia

Journal “Biologiya Morya” (“Russian Journal of Marine Biology”).
Laboratories 20
Research Stations 3

2001年の日本の大学・研究機関との交流

- 北海道大学水産学部との共同研究
- 山形大学との共同研究（海魚および軟体動物の進化と集団組織）

8. Mountain-Taiga Station

Russian Name Горнотаежная станция
Director Petr S.Zorikov, Doctor of Biological Sciences
Address Poselok Gornotaezhnoe, Primosky Kray, Ussuriisky Region 692533
Phone (241)91110, 91151
Total staff 94
Research staff 26

Founded in 1932. The station conducts research in the following areas:

- Introduction and reproduction of valuable species of trees and shrubs;
- Physiology and selection study of valuable species of forest plants, both wild and introduced; study of biological activity and medical qualities of Far East plants and detritus; fauna study, biology and ecology of rare insects of the Far East.
- Non-traditional forage resources and their use; medicinal value of some of the Far East plants; taxonomy, study of the rare insects of the Far East.

Laboratories 5

9. Botanical Garden

Russian Name Ботанический сад-институт (БСИ)
Director (Alternate Director) Nikolai I.Denisov, Candidate of Biological Sciences
Address 142, Makovskogo Street, Vladivostok 690038
Phone (4232) 330657, 331432, 331436
Fax (4232) 331436
URL <http://www.fegi.ru/PRIMORYE/SAD/sad.htm>
Total staff 87
Research staff 23

Founded in 1947.

Introduction, acclimatization and selection of the plants, anthropogenic impacts on local vegetation, protection of the Far East flora genetic pool.

10. Ussuriisk Astrophysics Observatory

Russian Name Уссурийская астрофизическая обсерватория (УАФО)
Director Alexander V. Baranov, Candidate of Physical and Mathematical Sciences
Address Poselok Gornotaezhnoe, Primosky Kray, Ussuriisky Region 692533
Phone (241)91121
Fax (241)91121
E-mail kram@ml.ussuriisk.ru
Total staff 35
Research staff 14

Founded in 1954.

Solar physics. Solar activity, magnetic fields in the active regions, solar flares and sunspots, radioemission of Sun. Monitoring of the solar activity. Regular monitoring of the variations in the Earth's magnetic field.

Laboratories 3

11. Far Eastern Geological Institute

Russian Name Дальневосточный геологический институт (ДВГИ)
Director Alexander I. Khanchuk, Corresponding Member
Address 159, 100-letiya Vladivostoka Pr., Vladivostok 690022
Phone (4232) 318323
Fax (4232) 318847
E-mail fegi@online.marine.su
Total staff 264
Research staff 110

Founded in 1959.

1. Stratigraphy, paleontology, sedimentology and tectonics of continental margins for the Phanerozoic.

1.1. Evolution and changes of biota at the major boundaries of the Phanerozoic (on the example of marine and continental biota of the eastern Russia),

1.2. Accretionary tectonics of the Sikhote-Alin and Koryak-Kamchatka regions,

1.3. Strike-slip geodynamic regime of the Amur-Ussuri region,

1.4. Phanerozoic sedimentation on continental margins (on the example of the Sikhote-Alin and Koryak-Kamchatka regions and West Pacific).

2. Petrology and ore content of magmatic and metamorphic complexes in representative units of continental margins.

2.1. Intrusive magmatism and mineralization of activation zones in cratons of the eastern margin of Asia continent,

2.2. Volcanic belts of the Mesozoic-Cenozoic activation zones in the eastern Asia, their nature and ore content,

2.3. Petrology and ore content of metamorphic formations in the Far East region,

- 2.4. Mineralogical and geochemical indicators of basic-ultrabasic complexes' petrogenesis and mineralization on continental margins,
- 2.5. Pre-accretionary hydrothermal metamorphism and ore formation of the East Asia and West Pacific paleoceanic and oceanic complexes,
- 2.6. Petrological and geochemical models of lithosphere in the northern and equatorial Pacific Ocean.
3. Types, conditions of formation, and regularities of distribution of ore deposits on continental margins.
 - 3.1. Experimental modeling of physical and chemical conditions of the precious metal deposits' origin,
 - 3.2. Isotopic and geochemical regularities in origin of ore-forming systems,
 - 3.3. Development of the theory of modern oceanic ore formation.
4. Correlation of geodynamic and metallogenic processes on continental margins.
 - 4.1. Geodynamic and metallogeny of the Pacific margin of Asia,
 - 4.2. Tin, lead and zinc metallogeny of the Sikhote-Alin foldbelt and adjacent territories,
 - 4.3. Ore-formation and metallogenic analysis of gold and silver deposits from different geodynamic settings of the Pacific margin of Asia.

Laboratories 20

2001年の日本の大学・研究機関との交流

・北海道大学とのシホテ・アリニ玄武岩層の共同調査

12. Pacific Oceanological Institute

Russian Name Тихоокеанский океанологический институт (ТОИ)

Director Victor A. Akulichev, Academician

Address 43, Baltiyskaya Street, Vladivostok 690041

Phone (4232) 312600

Fax (4232) 312573

E-mail pacific@online.marine.su

Total staff 614

Research staff 249

The institute was established in 1973. It is the biggest institute of the FEB RAS and its mission is to conduct comprehensive oceanographic research in the Pacific and Indian oceans including Asian marginal seas through the use of field measurements of research vessels, satellite remote sensing, computer-based modeling, as well as development of advanced instrumentation and techniques for oceanographic observations.

The institute focuses its activity on the following studies:

- ocean circulation, water mass structure and dynamics, heat and mass transport, physical mechanisms of water mass transformation and variability from fine structures through mesoscale processes up to climatic changes;
- peculiarities of acoustic waves propagation, acoustic means to study ocean structure and dynamics, underwater applied acoustics;

- physical processes in the atmosphere and ocean, air-sea interaction including typhoon studies on the base of modern physical experiment, remote sensing and numerical simulations;
- biogeochemical methods to assess marine ecosystem state and anthropogenic impact on marine environment, CO₂ fluxes and their relation to variations of global climate;
- fundamental geological and geophysical problems of the sea bottom origin and preliminary estimation for marine resources.

Laboratories 50

Research stations 2

2001 年の日本の大学・研究機関との交流

千葉大学理学部、東京大学地震研究所、北海道大学、金沢大学、九州大学理学部
宇宙開発事業団

13. Pacific Institute of Geography

Russian Name Тихоокеанский институт географии (ТИГ)
 Director Peter Ya. Baklanov, Corresponding member
 Address 7, Radio Street, Vladivostok 690041
 Phone (4232) 320672
 Fax (4232) 312159
 E-man pbaklanov@tig.dvo.ru
 Total staff 195
 Research staff 88

Founded in 1971. The institute conducts research in the following areas:

- Studies of the structure, function and dynamics of a variety of geographic system hierarchies in the Far East, developing modeling strategies for these systems.
- Approaches and methods for resolving land use and regional environmental problems.
- Studies of changes in territorial economic and population organization in the Russian Far East in the context of changing market relations, assessment of the environmental impact of urban and rural development on natural resources as a result of newly introduced economic activity.
- Development of small and intermediate scale regional Geographic Information Systems (GIS).

The institute's fundamental research focuses upon ecosystem dynamics. Geomorphic, geochemical, landscape, geophysical and bio-geographical studies are also important areas of research. The regions of research are the Russian Far East, Asia-Western Pacific region, Vietnam, China, North Korea.

Laboratories 19

Research stations 3

2001 年の日本の大学・研究機関との交流

- 国連環境計画 (UNEP) 提唱「北西太平洋地域海行動計画 (NOWPAP) 第 6 回政府間

会合」への研究員派遣

- ・ 国際シンポジウム「琵琶湖 2001」においてハンカ湖環境問題について報告
- ・ 大阪経済法律大学新技術研究所からの研究者の受け入れ（沿ハンカ低地における丈夫な米の品種の実験的植付調査）

14. Institute of History, Archaeology and Ethnography of the peoples of the Far East

Russian Name Институт истории, археологии и этнографии народов Дальнего Востока (ИИАЭ)

Director (Alternate Director) Anatoly T. Mandrik, Doctor of Historical Sciences

Address 89, Pushkinskaya Street, Vladivostok 690950

Phone (4232) 220507

Fax (4232) 268085

E-mail ihae@eastnet.febras.ru

Total staff 156

Research staff 93

Founded in 1971. The Institute conducts research in the following areas:

- Archaeology of the countries of East Asia, ethnic relations in the Asia-Pacific region, history of East Asia and the Russia's Far East in the 17th-20th centuries;
- Archaeology of the East-Asian countries: the reconstruction of Society and Culture;
- Ethnic relations in the Pacific;
- The East Asian countries: history and today;
- International relations in East Asia;
- Russia's Far East in the 17th-20th centuries: state, society, culture;
- Historical and cultural heritage of Russia's Far East: study and preservation.

Departments 20

2001年の日本の大学・研究機関との交流

- ・ 「第17回日口歴史家・経済学者シンポジウム」開催（9月5日～6日）
- ・ 「第5回ロシア極東考古学者・人類学者国際会議」開催（4月17日～20日、北海道大学教授報告「オホーツク文化における小熊の飼育」）
- ・ 北大スラブ研究センター主催シンポジウム「東欧とロシアにおける農村生活様式の変容と多角化」（7月8日～15日、於：札幌）参加
- ・ 天理大学での講義
- ・ アヌチンスク地区考古学調査への鳥取大学、旭川市教育委員会からの参加
- ・ ハサン地区考古学調査への青山学院大学からの参加
- ・ ハバロフスク地域少数民族を対象とした民族考古学の日口共同調査

AMUR SCIENTIFIC CENTER

1. Amur Integrated Research Institute

Russian Name	Амурский комплексный научно-исследовательский институт (АмурКНИИ)
Director	Valentine G. Moiseyenko, Academician
Address	1, Relochny Lane, Blagoveschensk 675000
Phone	(4162) 427232
Fax	(4162) 425931
E-mail	aurum@amur.su
Telex	154222 SCIENCE
Total staff	286
Research staff	66

Founded in 1980. The institute coordinates research in natural, physical and social sciences. Spheres of research include: geochemistry and physics of noble metals; the structure of the Earth's crust; location modeling and forecast of mineral deposits in the Amur region including BAM zone; development of advanced low waste and environmentally appropriate technologies for gold industry; coordination of activities with enterprises processing gold and other precious metals; transfer of know-how in extractive industry. Studies into economic mechanisms of the socio-economic development of the Far East region, including BAM zone. Studies and development of sophisticated technologies for obtaining wear-proof, heatproof and other composition materials. Astronomical observations.

Laboratories 13

2001年の日本の大学・研究機関との交流

- ・ 「地球環境汚染物質としての水銀に関する国際会議」(10月15～19日、於：水俣市)における報告(金選鉱工場による土壌・植物への水銀汚染、体内の水銀蓄積量が高い人々の生活の特性と予想される汚染源)

2. Branch of Regional Geology and Hydrogeology

Russian Name	Отделение региональной геологии и гидрогеологии (ОРГиГ)
Director	Anatoly P. Sorokin, Corresponding Member
Address	2 Khmelnitsky Street, Blagoveschensk 675000
Phone	(4162) 425522
Fax	(4162) 423454
E-mail	orgig@amur.ru
Telex	154222 SCIENCE

3. Amur Botanical Garden

Russian Name Ботанический сад амурского научного центра (БС АмурНИЦ)

Director Alexander V. Krylov, Doctor of Biological Sciences

Address 1, Relochny Lane, Blagoveschensk 675000

Phone (4162) 420108

Fax (4162) 425931

E-mail aurum@amur.ru

Telex 154222 SCIENCE

Total staff 8

Research staff 7

Founded in 1994 on the basis of Laboratory of Ecology of Amur Integrated Research Institute. Topics of research include: the study of Amur region flora and fauna, especially the rare, unique plants, monitoring of impact of human activity on ecosystems. Studies into inventory of nature protected territories. Botanical garden has published the monograph "Rare and Endangered Plants of Amur Region" in 1995.

KHABAROVSK SCIENTIFIC CENTER

1. Khabarovsk Branch of the Institute of Applied Mathematics

Russian Name Хабаровское отделение Института прикладной математики
Director Nikolai V. Kuznetsov, Corresponding Member
Address 9, Shevchenko, Khabarovsk, 680000
Phone (4212) 324676
Fax (4212) 325054
E-mail admin@iam.khv.ru

2. Computer Center

Russian Name Вычислительный центр (ВЦ)
Director Sergei I. Smagin, Corresponding Member
Address 65, Kim-Yu-Chen Street, Khabarovsk 680063
Phone (4212) 227267
Fax (4212) 227469
E-mail as@fe.ru
Total staff 78
Research staff 32

Founded in 1981.

- Producing the second phase of the academic network “Far East”;
- Theoretical-game methods of decision- making in complex systems;
- Information models of human adaptation in the Far East and extreme North conditions;
- Weight differential circuits and their application for the problems of electric elasticity and hydrodynamics;
- Mathematical modelling of physical processes in spatially heterogeneous and non-linear mediums;
- Mathematical methods of computing tomography in geophysics, seismology and oceanography.

3. Institute for Material Studies

Russian Name Институт материаловедения Хабаровского научного центра (ИМХНЦ)
Director Anatoly D. Verkhoturov, Doctor of Technical Sciences
Address 153, Tikhookeanskaya Street, Khabarovsk 680042
Phone (4212) 358896
Fax (4212) 358810
E-mail root@infarest.khv.ru
Total staff 51
Research staff 20

Founded in 1991.

- Development of construction, tool-making, reinforcing and other materials from raw minerals of the Far East region;
- Development of devices using concentrated energy flows, radiation and high pressure;
- Research into dependence of texture, structure and properties of materials under varied external impact.

Laboratories 5

4. Institute of Machinery and Metallurgy

Russian Name Институт машиноведения и металлургии (ИМиМ)
Director Valery I. Odinokov, Doctor of Technical Sciences
Address 1, Metallurgov Street, Komsomolsk-on-Amur 681005
Phone (42172) 45439
Fax (42172) 45439
Total staff 47
Research staff 13

Founded in 1988.

- Fundamental, theoretical and experimental developments for deformation and destruction of solid states;
- Mathematical modeling for behavior of construction and process of deformation in aviation, shipbuilding, machinery and metallurgy;
- Development of new arrangements, technologies in metallurgy and foundry production;
- Development of new construction and instrumentation materials.

Laboratories 6

5. Mining Institute

Russian Name Институт горного дела (ИГД)
Director Yury A. Mamaev, Doctor of Technical Sciences
Address 51, Turgenyeva St., Khabarovsk 680000
Phone (4212) 327927
Fax (4212) 327927
E-mail mamaev@igd.khv.ru
Total staff 96
Research staff 39

Funded in 1983. The Institute conducts research in the following areas:

1. Research into patterns of geological environment modifications, caused by mining activities in the Far Eastern region.
 - 1.1. Development of scientific basis and methods for geomechanical processes control during mining operations.

- 1.2. Research into patterns of mineral deposits structure and mining technologies.
 - 1.3. Research into regularities of mineral rocks unhardening processes.
 2. Research into patterns and processes of components separation during minerals processing in the Far Eastern region.
 - 2.1. Substantiation of finest grade mineral particles separation processes and their intensification based on combined physical and chemical effect.
 - 2.2. Updating the mining enterprises recycling and sewage waters conditioning processes.
 3. Creation of scientific basis for mining and minerals usage strategy development in the Far Eastern region.
 - 3.1. Development of theoretical basis for effective mining and minerals usage activities in modern economic conditions.
 - 3.2. Creation of scientific basis for ecologically safe mining processes.
- Laboratories 6

6. Institute of Water and Ecological Problems

Russian Name	Институт водных и экологических проблем (ИВЭП)
Director	Boris A. Voronov, Doctor of Biological Sciences
Address	65, Kim-Yu-Chen Street, Khabarovsk 680063
Phone	(4212) 227573
Fax	(4212) 227085
E-mail	dmitry@ivep.khv.ru
Total staff	134
Research staff	55

Founded in 1968.

The Institute conducts research in the following areas:

- Identification of ground water sources;
- Comprehensive evaluation of water resources; management of fresh water resources; utilization of biological resources; and ecological evaluation of anthropogenic influences on ecosystems.

The Institute comprises 11 laboratories. 3 labs deal with water resource quality and use. The other 8 operate under the ecology branch and deal with vegetation ecology, animal ecology, biogeochemical pollution, soil ecology, forestry, natural resource use, microbial conversion, and ecological and economic modeling. The Institute also comprises two field stations and a herbarium of vascular plants. Surface and ground water assessment and regulation, sustainable use of biological resources, human impact assessment and ecosystem management, ecologically sustainable economic development. Investigations of the nature of surface and deep water formation; development of research basis for comprehensive utilization and management of ground water resources; Studies of the Far Eastern ecological systems.

Laboratories 11

Field stations 2

Herbarium 1

2001年の日本の大学・研究機関との交流

- ・ 「国際渡り鳥シンポジウム」(8月27日～31日、於：日本)出席
- ・ 日本で開催された渡り鳥セミナーへの出席(11月5日～9日、捕獲と足環つけ方法、渡り鳥の生態と種の特性の教授)
- ・ 日本との共同プロジェクトへの参加
 コウノトリ、オオハクチョウ、鶴の衛星による追跡
 日本におけるコウノトリの再飼育

7. Economic Research Institute

Russian Name Институт экономических исследований (ИЭИ)
Director Pavel A. Minakir, Corresponding Member
Address 153, Tikhookeanskaya Street, Khabarovsk 680042
Phone (4212) 358137
Fax (4212) 358137
E-mail minakir@ecrin.khstu.ru
Total staff 91
Research staff 29

Founded in 1976.

- Economic reform problems in the Far East: development of business and financial structures; foreign investment and trade; comparative analysis of theory and practice; economic reforms in the north-east Asia; privatization and conversion.
- Problems of social and economic development: macroeconomic analysis; modeling and forecasting; population and living standard; sociological problems.
- Problems of natural resource use and infrastructure: rational use of natural resources; fuel and energy complex; transport problems; cartography.
- Economic development and international cooperation of Primorsky Territory.

Departments 4

Sectors 5

Groups 4

2001年の日本の大学・研究機関との交流

- ・ 第17回日ロ共同シンポジウムの開催(10月7日～10日、於：ハバロフスク、ロシア極東と日本との経済・安全・協力問題の討議)
- ・ ジェトロおよび北海道大学からの研究員の受け入れ

8. Institute of Complex Analysis of Regional Problems

Russian Name Институт комплексного анализа региональных проблем (ИКАРП)
Director (Alternate Director) Vladimir I. Zhurnist, Candidate of Technival
 Sciences
Address 4, Sholom-Aleyhem Street, Birobidzhan 682200
Phone (42622) 61362
Fax (42622) 64357, 61362
E-mail carpi@on-line.jar.ru

Total staff 58
Research staff 25

Founded in 1991.

Integrated study of the regional natural resources potential, formation of geoinformational systems (methodical and practical issues), modeling of interaction of economic, social, ecological systems in the region and their prognostication, complex analysis of international economic cooperation on regional level.

Evaluating natural resource potential of the Jewish Autonomous region.

Laboratories 5

9. Institute of Tectonics and Geophysics named after Yu. Kosygin

Russian Name Институт тектоники и геофизики им. Ю.А.Косыгина
Director Nikolay P. Romanovsky, Doctor of Sciences (Geology and Mineralogy)
Address 65, Kim Yu chen Steet, Khabarovsk 680063
Phone (4212) 227499
Fax (4212) 227684
E-mail tectonic@itig.fe.ru
Total staff 112
Research staff 41

Deep-level tectonics and geodynamics of continental and oceanic lithosphere; regional and applied tectonics with regard to forecast of mineral deposits; problems of theoretical tectonics: plate tectonics and geosynclinal theory, the nature of island arcs and deep-level processes connected with their development, the study of the boundary between oceanic and continental geoblocks, tectonic processes in deep fault zones.

The study of geophysical fields and their relations with the structures of the earth's crust and lithosphere; the development of methods of geophysical data analysis, the problems of the junction and geodynamics of continental and oceanic geoblocks, regional petrophysical investigations: data bank creation.

Evolution of magmatism during formation and development of tectonic structures, metallogenic specific character of granitoid and basite complexes; problems of formation and deep roots of ore-magmatic systems; forecast estimation of tin, gold, platinum and diamond potential of ore regions.

Recent movement of the earth's crust, and seismicity problems; the development of the system of forecast and prevention of strong earthquake consequences, problems of neotectonics and seismicity.

The structure and development of sedimentary basins with regard to estimation of their fuel and power potential.

Laboratories: 7

2001年の日本の大学・研究機関との交流

- ・ 北海道大学地震火山研究観測センターとのオホーツク海域の地震火山活動調査
- ・ アムール川流域での日ロ共同調査（ユネスコ・プロジェクトの枠内でのロシア最東端白亜層の断面調査）

SAKHALIN SCIENTIFIC CENTER

1. Institute of Marine Geology and Geophysics

Russian Name Институт морской геологии и геофизики (ИМГиГ)
Director Konstantin F. Sergeev, Corresponding Member
Address 5, Nauka Street, Yuzhno-Sakhalinsk 693022
Phone (42422) 791517
Fax (42422) 791517
E-mail nauka@sakhalin.ru
Total staff 222
Research staff 71

Founded in 1946.

- Geological structure and geodynamics of the Pacific Ocean and adjacent seas in connection with determination of disposition mechanism of useful mineral deposits;
- Development of methods for forecasting earthquakes and tsunami;

Laboratories 15

2001 年の日本の大学・研究機関との交流

- ・ 地震研究のため日本の研究者 3 名を受け入れ

2. Sakhalin Botanical Garden

Russian Name Сахалинский ботанический сад (СахБС)
Director Alexander A. Taran, Condidate of Biological Sciences
Address 25, Gorky Street, Yuzhno-Sakhalinsk 693013
Phone (42422) 550621
E-mail sbg@sakhalin.ru
Total staff 20
Research staff 4

Founded in 1990.

Studying of local flora, biology and ecology of rare and useful plants. Introduction and acclimatization of new plants into local environment. Producing of animate plants collections and lay-outs in open soil and indoors as well.

2001 年の日本の大学・研究機関との交流

- ・ 北海道大学植物園との交流

3. Special Construction Bureau of Means of Automation Researches

Russian Name Специальное конструкторское бюро средств автоматизации морских исследований (СКБ САМИ)
Director Mikhail L. Krasny, Doctor of Sciences (geology and minedalogy)
Address 25, Gorky Street, Yuzhno-Sakhalinsk 693013

Phone (42422) 554966
Fax (42422) 554966
E-mail SKB-SAMI@sakhmail.sakhalin.ru

KAMCHATKA SCIENTIFIC CENTER

1. Institute of Volcanology

Russian Name Институт вулканологии (ИВ)
Director Sergei A. Fedotov, Academician
Address 9, Boulevard Piip, Petropavlovsk-Kamchatsky 683006
Phone (41522) 50603
Fax (41522) 54723
E-mail fedotov@volcan.kamchatka.su
Telex 244213 VOLCANO
Total staff 234
Research staff 76

Founded in 1962, the institute's research focuses on present-day subaerial and submarine volcanism and related geological, geochemical, and geophysical processes; geothermics and geothermal resources in volcanic regions; seismicity and geodynamics; the prediction of earthquakes and volcanic eruptions.

Laboratories 15

Research stations 8

2001年の日本の大学・研究機関との交流

- ・ 日口長期研究への参加（オホーツク海周辺地域の気候・海洋・低温圏の相互作用）
- ・ 東京大学との共同研究（大地の割れ目の温度測定データと樹木の年輪データによるカムチャツカにおける古気候の変化）
- ・ 北海道大学・愛媛大学との共同研究（カムチャツカにおける過去と現在の低温圏・水量サイクル）
- ・ 研究員の日本の大学への一時派遣（地熱の鉱物形成システムの共同調査）

2. Institute of Volcanic Geology and Geochemistry

Russian Name Институт вулканической геологии и геохимии (ИВГиГ)
Director Boris V. Ivanov, Doctor of Sciences (geology and mineralogy)
Address 9, Piip Avenue, Petropavlovsk-Kamchatsky 683006
Phone (41522) 59195
Fax (41522) 59195, 59577
E-mail ivgg@svyaz.kamchatka.su
Telex 244213 VOLCANO
Total staff 78
Research staff 52

Founded in 1991.

The Institute conducts research in the following areas: complex geological and geophysical study of Pacific Ocean mobile belt volcanism and interrelations between volcanism and geodynamic process; volcanism in the history of the Earth; mechanisms of volcanic and seismic processes; methods of volcanic and seismic hazard assessment.

Laboratories 9

3. Institute of Cosmophysical Research and Radiowaves Propagation

Russian Name Институт космофизических исследований и распространения радиоволн (ИКИР)
Director Evgeny F. Vershinin, Doctor of Physical and Mathematical Sciences
Address 7, Mirnaya Street, Paratunka, Kamchatka region 684034
Phone (41531) 93193
Fax (41531) 69335
E-mail root@ikir.elrus.kamchatka.su
Total staff 113
Research staff 26

Founded in 1987.

- Physics of solar-terrestrial relationships;
- Investigation of statistical characteristics of superlong- and short-wave communication channels and adaptive (in frequency, space and polarization) communication systems;
- Study and control of electromagnetic field of natural sources in the frequency band of $10^{**(-5)} - 10^{**5}$ Hz under the different conditions of ionospheric-magnetic disturbances;
- Discovery and recognition of electromagnetic precursors to earthquakes and their manifestations in the ionosphere-magnetosphere plasma and in electrical characteristics of the crustal skinlayer;
- Compilation of the automatized heliogeophysical information system;
- Monitoring of variations in the geomagnetic field, ionosphere and cosmic rays in the Far East region;
- Investigation of variations of magnetic fields, cosmic rays, and Omega stations network phases and amplitudes.

Laboratories 4

2001年の日本の大学・研究機関との交流

- ・ 総務省通信総合研究所への研究員派遣（磁気測定施設の開発問題の検討）
- ・ 九州大学、東北工業大学、東海大学地震予知センター、千葉大学からの研究者受け入れ

4. Geotechnological Scientific Research Center

Russian Name Научно-исследовательский геотехнологический центр (НИГТЦ)
Director Yury P. Trukhin, Candidate of Sciences (geology and mineralogy)
Address 30, Severo-Vostochnoe Shosse, PO box 56,
Petropavlovsk-Kamchatsky 683002
Phone (41522) 92639
Fax (41522) 51323
E-mail nigtc@kcs.iks.ru
Total staff 66
Research staff 31

The Center conducts research in the following areas:

- Study of magma centers located close to the surface as natural chemical reactors to create ecologically clean chemical and energy complexes for industrial production of technically and chemically pure HF, CHI, H₂SO₄, H₃BO₃, Bi, Cr, Ag, Zn, Cd to produce ceramic, fluorine-polymer and other construction materials;
- Development of ecologically clean fuel production (hydrogen) on the chain of electric power stations in the straits of the southern part of the Kuril islands;
- Development of ecologically clean thermonuclear-magmatic liquidation of nuclear power stations and radioactive waste;
- Geochemistry of hydrothermal processes, non-polluting chemical technologies, geothermal heat utilization, microbial communities in geothermal vents.

Laboratories 7

NORTH-EASTERN SCIENTIFIC CENTER

1. North-Eastern Interdisciplinary Research Institute

Russian Name	Северо-Восточный комплексный научно-исследовательский институт (СВКНИИ)
Director	Vladislav I. Goncharov, Corresponding Member
Address	16, Portovaya Street, Magadan 685000
Phone	(41322) 30611
Fax	(41322) 30051
E-mail	director@neisri.magadan.ru
Total staff	263
Research staff	96

Founded in 1960.

- Geology, geophysics, economics, history, and archaeology;
- Regional metallogeny and studies of geochemical and mineralogical properties of mineral deposits using atomic absorption, X-ray fluorescence, spectroscopy, microprobing, fluid inclusion and experimental physicochemical methods;
- Detection of oil and gas presence in separate basins and prospect areas by virtue of pyrolysis and chromatography methods used to examine the total organic content including its solid, liquid and gas phases; conduction of geochemical survey; examination of underground (soil) water composition; studies of oil and gas accumulations;
- Studies of the Archean-to-Quaternary stratigraphic sequences using the method of determination of chronostratigraphic boundaries; making the monographic descriptions of various macro- and microfossils and spore and pollen assemblages; conduction of geochronologic studies using the isotope techniques as K-Ar and Rb-Sr datings; studies of paleomagnetic properties of rocks;
- Studies of the deep-seated structures of the Earth's crust, and metamorphic complexes and magnetic rocks using the methods applied in petrography, structural geology, isotopic geochronology (K-Ar and Rb-Sr methods), seismology gravimetry and geologic mapping;
- Studies of environmental changes occurring during Late Cenozoic using the stratigraphic and geocryologic evidences;
- Studies of recent geologic, geophysical, cryogenic and hydrogeologic processes, and prediction of their further development and environmental impacts caused by a total influence of cosmic-, endo-, exo-, and anthropogenic factors; the use for this purpose of the methods of seismology gas geochemistry, geothermometry, hydro-geochemistry, and also interpreting airphoto and space images, and making continuous on-site monitoring;
- A comprehensive approach to the problem of the mineral stock development in northeastern Russia, and providing for reasonable use of mineral resources in this area; making the expertise of new projects aimed at the development of the regional stock of minerals;
- Studies of the formation and development processes of the human society in

northeastern Russia from the old times till the present, and improvement of the socioeconomic forecast methods;

- The Museum of Regional Geology and Mineralogy.

Laboratories 17

2. Chukotsky Filial Branch of the North-East Complex Research Institute

Russian Name Чукотский филиал Северо-Восточного комплексного научно-исследовательского института (ЧФСВКНИИ)
Director Krivoschyokov V. Savvich, Doctor of Sciences (Geology)
Address 15, Energetikov Street, Anadyr, Russia 686710
Phone (42722) 26737
Fax (42722) 26737
E-mail nauka@anadyr.ru

3. Institute of Biological Problems of the North

Russian Name Институт биологических проблем Севера (ИБПС)
Director Felix B. Chernyavsky, Doctor of Biological Sciences
Address 18, Portovaya Street, Magadan, 685000
Phone (41322)34463
Fax (41322)34463
E-mail ibpn@ibpn.magadan.su
Total staff 155
Research staff 70

Founded in 1972.

- Functioning, community organization and ecosystem structure of the North;
- Adaptive strategies of biological systems on various levels in the northern environment;
- Development of a scientific basis for conservation, reproduction and sustainable use of biological resources in the North;
- Biogeography and ecology of arctic and subarctic parts of Beringia.

Laboratories 10

Research group 1

Research station 1

4. International Scientific Center "АРКТИКА"

Russian Name Международный научно-исследовательский центр "Арктика" (МНИЦ "Арктика")
Director Arkady L. Maximov, Doctor of Sciences (mineralogy)
Address 24, Karl Marx Streer, Magadan 685000
Phone (41322) 28482
Fax (41322) 20628

E-mail arkady@arktika.magadan.su
URL http://www.arktika.magadan.su
Total staff 33
Research staff 12

Founded in 1991.

- Comprehensive fundamental and applied investigations in the field of morphophysiology, human and animals' ecology; working out medical and social aspects of life activity of native and immigrant population in Arctic and Subarctic zones of the Asia-Pacific region.
- International scientific research in the fields of medical biology and socio-economic use of natural resources in Arctic.
- Elaboration of mathematical models of human functional states in the process of adaptation and life activity in the extreme conditions; creating data bases on human ecology.

The center has scientific station in Buenda which is situated in geographical center of Magadan region.

Laboratories 3

Research groups 3