**Composition of the research team conducting scientific research, including foreign scientists and young researchers**

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| Item  No. | Full name, education, degree, academic rank | Principal place of work, position | Hirsch index, Researcher ID, ORCID, Scopus Author ID | Role in the program, as well as the nature of the work performed | Brief justification for participation |
| 1. | Murtazin Ermek Zhamshitovich, higher education, KazPTI named after Lenin, major: Hydrogeology and Engineering Geology,  Cand. Sci. (Geol.-Min.) | Ahmedsafin Institute of Hydrogeology and Environmental Geoscience LLP (hereinafter referred to as the IHEG), Deputy Director of Research | **Hirsch index 3** (Scopus),  **Web of Science Researcher ID:** N-5608-2017 (<https://www.webofscience.com/wos/author/record/510305>),  **ORCID** 0000-0002-7404-4298  (<https://orcid.org/0000-0002-7404-4298>); **Scopus ID**: [57191839861](https://www.scopus.com/authid/detail.uri?authorId=57191839861) (<https://www.scopus.com/authid/detail.uri?authorId=57196279319>) | Program Scientific Supervisor. Scientific rationale and geoinformation support for management decisions on the development and protection of groundwater deposits in Kazakhstan explored for land irrigation. Preparation of publications and reports. | In different years he was the responsible implementer of the following programs: "Groundwater of Kazakhstan" (2012-2014); "Water Security of the Republic of Kazakhstan - Strategy of Sustainable Water Supply" (2015-2017); "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020); "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023); "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan" (2021-2023).  Experience in industrial, and scientific and organizational work on arid hydrogeology issues, participation in geological prospecting works on evaluation and reevaluation of exploitable groundwater reserves. |
| 2. | Sagin Janay (Sagintayev Zhanay, [Sagin Jay](https://www.scopus.com/author/submit/profile.uri?authorId=57204467637&origin=AuthorNamesList&offset=1&authorSt1=Sagin&authorSt2=J.&resultsKey=AUTH_1305189373)), higher, Western Michigan University (USA), PhD in Geosciences | Foreign scientist,  Professor, Western Michigan University (USA) | **Hirsch index 13,**  **Research ID:** F-7522-2013  **ORCID:** 0000-0002-0386-888X  **Scopus Author ID**: 57204467637 | Foreign consultant. Consultation and analysis of international experience in the use of groundwater in irrigation. | Research Professor, PhD in Geosciences at Western Michigan University (USA), University of Nebraska (USA). Works on cooperation programs under the Central Asian Regional Environmental Center https://carececo.org/en/main/, Transboundary Rivers https://www.ckrb.org/; Global Water Security Institute, https://water.usask.ca/.  Implementer - foreign scientist in the science and technology program "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan" ( BR10965134, 2021-2023). |
| 3. | Absametov Malis Kudysovich, higher,  KazPTI named after V.I. Lenin, major: Hydrogeology and Engineering Geology, Doctor of Sciences (Geol.-Min.), Professor, Academician of the NAS RK | IHEG, Director | **Hirsch index 3,**  **Researcher ID:**  ELN-4393-2022  **ORCID:** 0000-0003-2520-6294  **Scopus Author ID**: 56955769200 | **Scientific consultant**, scientific and organizational management of regional studies, laboratory work to assess the availability, status and prospects for the use of groundwater deposits with operational reserves to ensure sustainable irrigated agriculture in Kazakhstan; development and creation of geographic information and analytical subsystem of operational reserves of groundwater deposits of Kazakhstan explored for irrigation, assessment, forecasting and management decisions on their use and protection for sustainable irrigated agriculture.  Preparation of publications and reports. | Experience in managing scientific and technical programs/subprograms: "Groundwater of Kazakhstan" (2012-2014); "Development of clean energy sources of the Republic of Kazakhstan" (2013-2017); "Water Security of the Republic of Kazakhstan - Strategy of Sustainable Water Supply" (2015-2017); **"**Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664); "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  Experience in scientific/scientific and organizational work to expand the resources of complex use of thermal waters as a source of heat and electricity, extraction of rare earth elements from industrial and associated formation brines of oil and gas fields, hydrogeological and geoecological zoning of territories, the features of formation of the chemical composition of groundwater. |
| 4. | Rakhimov Timur Aytkalievich, higher, KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, PhD | IHEG, Head of the Laboratory of Regional Hydrogeology and Ecology | **Hirsch index 2,**  **ORCID:** 0000-0002-0976-4643  **Scopus Author ID:** 57159941600 | Implementer, Head of the laboratory Collection, analysis and processing of materials. Organization of field expeditionary works. Participation in laboratory work, text and graphic applications  Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the implementation of scientific and technical programs: BR10965134 "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan”;  BR10262555 "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads”.  Experience in studying the hydrogeochemical state of groundwater in natural and disturbed regimes,  -regional issues of formation of resources and reserves of groundwater,  -quantitative and qualitative assessment of operational groundwater reserves for various purposes,  -study of anthropogenic impact on the state of groundwater,  -issues of groundwater protection, including the minimization of the negative impact of anthropogenic factors on the state of groundwater. |
| 5. | Mukhamedzhanov Murat Abikenovich, higher,  Mining and Metallurgical Institute of Kazakhstan,  major: Hydrogeology and Engineering Geology, Doctor of Sciences (Geol.-Min.), Corresponding Member of the NAS RK | IHEG, CR of the Laboratory of Regional Hydrogeology and Geoecology |  | Implementer, CR. Scientific and methodological support for the collection, analysis and processing of materials. Participation in laboratory work, text and graphic applications,  Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the implementation of scientific and technical programs: BR10965134 "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan”;  BR10262555 "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads”;  Scientific supervisor of grant project AP05133721 "Assessment of changes in the hydrogeochemical conditions of groundwater deposits in Kazakhstan under climatic and anthropogenic impacts" (2018-2020)  Has extensive experience in regional geoecological studies of Kazakhstan related to groundwater contamination, formation of groundwater resources in various hydrogeological structures, assessment of groundwater supply, in the field of artificial groundwater recharge. |
| 6. | Toktar Aliya Toleubaykyzy, higher, S.Ordzhonikidze Russian State University for Geological Prospecting, Moscow,  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, Master's degree | IHEG, R  of the Laboratory of Regional Hydrogeology and Geoecology |  | Implementer, R. Collection, analysis and processing of materials. Participation in laboratory work, tabular applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads”.  Competent in the field of assessment of groundwater reserves and resources for utility and drinking, and technical water supply and land irrigation, author and co-author of projects of prospecting and exploration for groundwater, one of the work areas is conducting geoecological studies related to chemical pollution of groundwater. |
| 7. | Nurgazieva Asel Azatkalievna, higher,  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology | IHEG, R  of the Laboratory of Regional Hydrogeology and Geoecology | **Hirsch index 3**  **Researcher ID:** N- 9606-2017  **ORCID:** 0000-0001-8925-2391  **Scopus Author ID:** 57201743606 | Implementer, R. Collection, analysis and processing of materials. Participation in laboratory work, preparation of tabular applications.  Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555).  Has experience in regional studies of land irrigation, groundwater protection from depletion and pollution, and assessment of fresh groundwater reserves for drinking purposes. |
| 8. | Kiktev Valentin Aleksandrovich, higher,  KazPTI named after V.I. Lenin,  Major: Hydrogeology and Engineering Geology | IHEG, Leading Engineer of the of the Laboratory of Regional Hydrogeology and Geoecology | **ORCID:** 0009-0009-8556-9493 | Implementer, Leading Engineer. Analysis and processing of materials. Participation in laboratory work. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555).  Is a leading specialist in the field of groundwater monitoring, the head of the project on optimization of the State monitoring network, has extensive experience in the assessment of operational reserves and groundwater resources of large deposits and local water intakes. Author of projects of prospecting and exploration for utility and drinking, technical water supply and land irrigation |
| 9. | Sapargaliev Daniyar Serikovich, higher, KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, Master's degree, doctoral student | IHEG, Executive Secretary for Innovation |  | Implementer, R. Work on the practical use and commercialization of the program results. | Implementer in scientific and technical programs:  1. "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 10. | Kanafin Marat Utegenovich, higher,  KazPTI named after V.I. Lenin,  major: Hydrogeology and Engineering Geology | IHG, Leading Engineer of the of the Laboratory of Regional Hydrogeology and Geoecology |  | Implementer, Leading Engineer. Collection and processing of materials. Participation in laboratory work, tabular applications. | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 11. | Zheksembaev Erkebulan Shektibaevich, higher,  KazNRTU  named after K.I. Satbayev,  major: Geology and Exploration of Mineral Deposits, PhD | IHEG, SR of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 0,**  **ORCID:** 0000-0002-7510-2082  **Scopus Author ID:** 57191851610 | Implementer, SR. Analysis and processing of expeditionary survey materials. Participation in laboratory work, text, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 12. | Nurmukhambetova Bakhyt Isakhanovna, higher,  Al-Farabi KazNU, major: chemistry,  Candidate of Chemical Sciences | IHEG, Scientific Secretary |  | Implementer, LR, organization of chemical and analytical studies of groundwater. Scientific and methodological support of research. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 13. | Adilova Lyaila Maratovna, higher, Abai Kazakh National Pedagogical University, major: Chemistry-Biology | IHEG, Head of the Test Sector of the Laboratory of Chemical and Analytical Studies |  | Implementer, Head of Sector. Support of groundwater sampling during expeditionary surveys. Chemical and analytical support. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555).  Management of an accredited laboratory in the field of drinking water and soil quality |
| 14. | Itemen Nurbol Mergenbayuly, higher,  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology,  Master's degree, doctoral student | IHEG, R of the Industrial and Geothermal Water Laboratory | **Hirsch index 0,**  **ORCID:** 0000-0003-2551-9020  **Scopus Author ID:** 57195384407 | Implementer, R. Fieldwork. Participation in laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 15. | Chensizbaev Daniyar Borashuly, higher,  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, Master's degree, doctoral student | IHEG, JR of the Industrial and Geothermal Water Laboratory |  | Implementer, JR. Fieldwork. Participation in laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 16. | Iskanderov Rustam Ruslanovich, higher  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, Master's degree | IHEG, JRof the Industrial and Geothermal Water Laboratory | **Hirsch index 2,**  [**ORCID:** 0000-0002-7085-9334](https://orcid.org/0000-0002-7085-9334)  **Scopus Author ID:** 57196464978 | Implementer, JR. Fieldwork. Participation in laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs: "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (BR05236664, 2018-2020), "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 17. | Kulbekova Roza Abdizhapparovna, higher, Al-Farabi KazNU, major: chemistry, Master in Environmental Sciences. | IHEG, JR of the Laboratory of Chemical and Analytical Studies | **Hirsch index 2,**  **ORCID:** [0000-0003-4622-9823](https://orcid.org/0000-0003-4622-9823)  **Scopus Author ID**: 57210187928 | Implementer, JR. Chemical and analytical work. Participation in laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 18. | Nurpeisov Rauan Akhmetovich, higher,  KazNRTU named after K.I. Satbayev, major: Hydrogeology and Engineering Geology | IHEG, Leading Engineer of the Industrial and Geothermal Water Laboratory |  | Implementer, Leading Engineer. Fieldwork. Participation in laboratory work, text and tabular applications | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  Competent in the field of assessment of groundwater reserves and resources for utility and drinking, and technical water supply and land irrigation, author and co-author of projects of prospecting and exploration for groundwater. |
| 19. | Bagiman Orken, higher, Sofia University of Mining and Geology, major: Hydrogeology and Engineering Geology | IHEG, Leading Engineer of the of the Laboratory of Regional Hydrogeology and Geoecology |  | Implementer, fieldwork. Participation in laboratory work, text and tabular applications | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  Competent in conducting regional field studies, as well as special hydrogeological work (drilling, test-filtration, monitoring) and engineering and geological surveys (tunnelling, sampling, probing of soils) |
| 20. | Yusupov Marsel Nurmukhamedovich  Major: Electrical Engineer | IHEG, Equipment Engineer for the Laboratory of Chemical and Analytical Studies |  | Implementer, Equipment Engineer, maintenance of equipment and devices. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 21. | Koshpanova Kalamkas Eskatkyzy, higher,  KazNRTU named after K.I. Satbayev, major: Chemical Technology of Inorganic Substances, Master of Science in Engineering and Technology. | IHEG, Leading Engineer of the Laboratory of Chemical and Analytical Studies | **ORCID**: 0000-0002-5230-0545 | Implementer, Leading Engineer. Chemical and analytical work. Participation in laboratory work, tabular applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 22. | Ermek Ultu,  higher,  Kazakh National Agrarian University, major: Agroecology | IHEG, Category 1 Engineer for the Laboratory of Chemical and Analytical Studies |  | Implementer, Category 1 Engineer, Chemical and analytical work. Participation in laboratory work, tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 23. | Lee Bin-Chin Olga Sergeevna,  higher,  Kazakh National Agrarian University, major: Agroecology | IHEG, Category 1 Engineer for the Laboratory of Chemical and Analytical Studies |  | Implementer, Category 1 Engineer, Chemical and analytical work. Participation in laboratory work, tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555); |
| 24. | Baisakalova Perizat Asylbekovna,  higher,  KazNRTU named after K.I. Satbayev, major: Chemical Technology of Inorganic Substances, Master of Science in Engineering and Technology. | IHEG, Category 1 Engineer for the Laboratory of Chemical and Analytical Studies |  | Implementer, Category 1 Engineer, Chemical and analytical work. Participation in laboratory work, tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 25. | Umarov Timur Sadykovich, higher,  Kazakh Leading Architecture and Civil Engineering Academy, major: Construction, Master's degree in Oil and Gas Engineering | IHEG, Category 1 Engineer of the Industrial and Geothermal Water Laboratory |  | Implementer, Category 1 Engineer Fieldwork. Participation in laboratory work, tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 26. | Kirilova Vera Ivanovna, Tashkent Hydrometeorological Technical School  Major: Meteorologist | IHG, Category 2 Engineer for the Laboratory of Chemical and Analytical Studies |  | Implementer, Category 2 Engineer, Chemical and analytical work. Tabular applications | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 27. | Smolyar Vladimir Aleksandrovich,  higher,  KazPTI named after V.I. Lenin, major: Hydrogeology and Engineering Geology,  Cand. Sci. (Geol.-Min.) | IHEG, CR of the Laboratory of Regional Hydrogeology and Geoecology | **Hirsch index 1, ORCID:** 0000-0003-4790-339X  **Scopus Author ID**: 57216499331 | Organization of work on the analysis and assessment of trends in changes in the capacity and renewable resources of groundwater deposits in Kazakhstan explored for land irrigation, under the influence of climatic factors and anthropogenic loads. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 28. | Muratkhanov Dauren Bolatuly, higher,  KazNRTU named after K.I. Satbayev, major: Water Resources and Water Use, **Master of Agricultural Sciences** | IHEG, JR  of the Laboratory of Regional Hydrogeology and Geoecology | **Hirsch index 1,**  **ORCID:** 0000-0003-4825-7692  **Scopus Author ID:**  57221973916 | Implementer, JR. Fieldwork and laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs/subprograms: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  An experienced specialist in the study of the hydrogeochemical state of groundwater, the main scientific results are associated with studies of natural and anthropogenic factors affecting the hydrodynamic and hydrochemical balance of groundwater. |
| 29. | Rakhmetov Isa Kanatovich, higher,  KazNRTU named after K.I. Satbayev, major: Water Resources and Water Use, Master of Engineering in Hydrogeology and Engineering Geology | IHEG, JR  of the Laboratory of Regional Hydrogeology and Geoecology | **Hirsch index 2,**  **Researcher ID**: N-6775-2017  **ORCID ID**: 0000-0002-6269-7734  **Scopus Author ID:** 57203552328 | Implementer, JR. Fieldwork and laboratory work, tabular and graphic applications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience of participation in scientific and technical programs/subprograms: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  Is highly qualified in the field of protection of groundwater from depletion and pollution, competent in the study of anthropogenic impact on the state of groundwater. |
| 30 | Dzhabasov Abay Maratovich,  KazPTI named after V.I. Lenin, higher,  major: Hydrogeology and Engineering Geology  Cand. Sci. (Geol.-Min.) | IHEG, Head of the Groundwater Resources Laboratory | **Hirsch index 0,**  **Researcher ID:**  GSI-4322-2022  **ORCID:** 0000-0001-9660-2054 | Implementer, Head of the laboratory, Analysis and processing of materials. Management of laboratory work. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the science and technology program:  "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**)**  Experience in scientific, scientific and organizational work: has experience in studying the role of groundwater in land reclamation and its use for irrigation of major agricultural areas of Kazakhstan, assessment of features of formation, renewable and predictable groundwater resources under climatic and anthropogenic changes; assessment of availability, condition and prospects of use of groundwater resources. |
| 31. | Livinsky Jury Nikolaevich,  KazPTI named after V.I. Lenin, higher, major: Hydrogeology and Engineering Geology,  Cand. Sci. (Geol.-Min.) | IHEG, LR of the Groundwater Resources Laboratory | **Hirsch index 3, Researcher ID:**  N-6859-2017  **ORCID** 0000-0002-1268-6914  **Scopus Author ID**: 57196275305 | Implementer, LR. Assessment of availability, status and prospects of groundwater use for sustainable irrigated agriculture in Kazakhstan.  Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in participation in scientific and technical programs, subprograms: “Groundwater of Kazakhstan” (2012-2014);"Water Security of the Republic of Kazakhstan - Strategy of Sustainable Water Supply" (2015-2017); grant: “Identification of promising areas and assessment of groundwater resources in water-deficient areas of Northern and Central Kazakhstan for water supply of settlements” (2015-2017); “Development and substantiation of typical technological schemes for artificial recharge of groundwater deposits in various natural and hydrogeological conditions of Kazakhstan” (2017-2018); "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664); “Assessment of fresh groundwater resources as the main source and long-term reserve for sustainable drinking water supply for the population of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**).**  Has experience in studying the role of groundwater in land reclamation and its use for irrigation of major agricultural areas of Kazakhstan, assessment of features of formation, renewable and predictable groundwater resources under climatic and anthropogenic changes; assessment of availability, condition and prospects of use of groundwater resources; justification and possibility of using artificial groundwater recharge in different regions of Kazakhstan. |
| 32. | Ermenbay Aray Musakyzy, higher, KazNRTU  named after K.I. Satbayev  major: Hydrogeology and Engineering Geology | IHEG, R of the Groundwater Resources Laboratory | **Hirsch index 3,**  **Researcher ID:**  N-6782-2017  **ORCID:** 0000-0002-1751-0280  **Scopus Author ID**: 57196276334 | Implementer, R. Processing of materials. Participation in laboratory work. Preparation of publications. | Experience in participation in scientific and technical programs, subprograms: “Groundwater of Kazakhstan” (2012-2014); "Water Security of the Republic of Kazakhstan - Strategy of Sustainable Water Supply" (2015-2017); Grant: “Identification of promising areas and assessment of groundwater resources in water-deficient areas of Northern and Central Kazakhstan for water supply of settlements” (2015-2017); “Development and substantiation of typical technological schemes for artificial recharge of groundwater deposits in various natural and hydrogeological conditions of Kazakhstan” (2017-2018); "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664); “Assessment of fresh groundwater resources as the main source and long-term reserve for sustainable drinking water supply for the population of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**).**  Has experience in studying the role of groundwater in land reclamation and its use for irrigation of major agricultural areas of Kazakhstan, assessment of features of formation, renewable and predictable groundwater resources under climatic and anthropogenic changes; assessment of availability, condition and prospects of use of groundwater resources; justification and possibility of using artificial groundwater recharge in different regions of Kazakhstan. |
| 33. | Zhakibaeva Aygerim Zhanatovna, higher, KazNRTU named after K.I. Satbayev, major: Geology and Exploration of Mineral Deposits, Master of Science in Hydrogeology and Engineering Geology, doctoral student | IHEG, JR of the Groundwater Resources Laboratory |  | Implementer, JR. Processing of materials, tabular and graphical applications. Preparation of publications. | Experience in the science and technology program: "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**).** |
| 34. | Bazarbaeva Gulnara Orumbaevna, higher, KazPTI named after V.I. Lenin,  Major: Hydrogeology and Engineering Geology | IHEG, JR of the Groundwater Resources Laboratory |  | Implementer, JR. Processing of materials, tabular and graphical applications | Experience in participation in scientific and technical programs, subprograms: “Groundwater of Kazakhstan” (2012-2014); "Water Security of the Republic of Kazakhstan - Strategy of Sustainable Water Supply" (2015-2017); "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664); “Assessment of fresh groundwater resources as the main source and long-term reserve for sustainable drinking water supply for the population of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**).**  Experience in scientific, scientific and organizational work: has extensive experience in studying the role of groundwater in land reclamation and its use for irrigation of major agricultural areas of Kazakhstan, assessment of availability, condition and prospects of use of groundwater resources. |
| 35. | Sembaev Daulet Birzhanuly, higher, KazNRTU named after K.I. Satbayev,  major: Geology and Exploration of Mineral Deposits, Master of Engineering in Hydrogeology and Engineering Geology | IHEG, Leading Engineer of the Groundwater Resources Laboratory | **Hirsch index 0,**  **ORCID:** [0009-0000-5236-9772](https://orcid.org/0009-0000-5236-9772) | Implementer, Leading Engineer. Analysis of fieldwork and laboratory work, processing of materials, tabular applications. | Experience in the science and technology program: "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN: BR10965134**).**  Has experience in conducting regional field studies, as well as special hydrogeological work (drilling, test-filtration, monitoring) and engineering and geological surveys (tunnelling, sampling, probing of soils) |
| 36. | Onlasynov Zhuldyzbek Alikhanuly, higher, KazNRTU  named after K.I. Satbayev,  major: Hydrogeology and Engineering Geology, Master's degree | IHEG, Head of the Laboratory of GIS Technologies and Earth's Remote Sensing | **Hirsch index 1,**  **Researcher ID**: AAD-2790-2020,  **ORCID**: 0000-0002-3587-5996,  **Scopus Author ID**: 57211320123 | Implementer. Head of the laboratory management of the database formation. Analysis and processing of materials. Text, graphical and tabular applications, preparation of publications.  Performing fieldwork on spectrometry survey of irrigated fields to increase the accuracy of classification results of processed data from Earth's remote sensing. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in programs and projects:  1. "Development of a scientific and methodological framework for structuring hydrogeological maps using geographic information systems" (2018-2020, No. AP05131239).  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  3. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 37. | Rakhimova Valentina Stanislavovna, higher,  KazNRTU  named after K.I. Satbayev,  major: Hydrogeology and Engineering Geology, PhD | IHEG, SR of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 1**  **ORCID:** 0000-0001-5783-1081  **Scopus Author ID**: 57208584807 | Implementer. SR. Formation of a database. Analysis and processing of materials. Text, graphical and tabular applications, preparation of publications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 38. | Malau Rakhima Suleymanovna, higher, Kazakh National Agrarian University, major: Water Resources and Water Use, **Master of Agricultural Sciences** in Water Resources and Water Use | IHEG, R of the Laboratory of GIS Technologies and Earth's Remote Sensing | **Researcher ID**: AFH-9871-2022  **ORCID** 0000-0002-4874-2797 | Implementer, R. Replenishment of a database. Processing of materials. Tabular applications. | Is a leading specialist in groundwater monitoring. Author of projects and reports of prospecting and exploration for utility and drinking, technical water supply and land irrigation. |
| 39. | Akynbaeva Madina Zhakypzhanovna, higher, Al-Farabi KazNU,  Major: Geography,  Master of Science in Ecology | IHEG, JR of the Laboratory of GIS Technologies and Earth's Remote Sensing |  | Implementer, JR. Processing of materials, tabular and graphical applications | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 40. | Muratova Mira Muratovna, higher,  Almaty State University named after Abai, major: Chemistry-Biology | IHEG, Leading Engineer of the Laboratory of GIS Technologies and Earth's Remote Sensing | **Hirsch index 2,**  **Researcher ID**: AAD-2682-2020  **ORCID**:0000-0001-5489-6576  **Scopus Author ID**: 56950842000 | Implementer, Leading Engineer. Replenishment of a database. Processing of materials, sampling and processing of satellite information, calculation of spectral indices. Tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |
| 39. | Usenov Dosbol Nurkenuly, higher, Al-Farabi KazNU, major: Cartography, Master's degree | IHEG, Category 1 Engineer of the Laboratory of GIS Technologies and Earth's Remote Sensing | **ORCID**: 0000-0001-9814-0164 | Implementer, Category 1 Engineer, Replenishment of a database. Processing of materials.  Performing fieldwork on spectrometry survey of irrigated fields to increase the accuracy of classification results of processed data from Earth's remote sensing. | Experience in the science and technology programs/projects:  1. "Development of a scientific and methodological framework for structuring hydrogeological maps using geographic information systems" (2018-2020, No. AP05131239).  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555). |
| 40. | Sotnikov Evgeny Vladimirovich, higher,  KazNRTU  named after K.I. Satbayev,  major: Geology and Exploration of Mineral Deposits, PhD | IHEG, Head of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 1,**  **ORCID:** 0000-0002-3542-0983  **Scopus Author ID**: 57833982400 | Implementer, SR. Creation of the structure of geographic information and analytical subsystem of operational reserves of groundwater deposits of Kazakhstan explored for irrigation, filling the geographic information and analytical system with specialized data, analysis of groundwater regime on irrigated areas (levels, groundwater quality, etc.), preparation of publications and sections of the report. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the science and technology programs/subprograms:  1. "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  3. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134)  4. Implementer of the grant "Assessment of the prospects of flowing (self-spouting) operation of groundwater for sustainable development of rural areas of Zhambyl region" (2021-2023, No. AR09260877). |
| 41. | Trushel Lyudmila Yurievna, higher,  KazPTI named after V.I. Lenin,  major: Hydrogeology and Engineering Geology, Cand. Sci. (Geol.-Min.) | IHEG, CR of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 4,**  **ORCID:** 0000-0002-9171-2761  **Scopus Author ID**: 6504205318 | Implementer. Head of the laboratory. Creation of the structure of geographic information and analytical subsystem of operational reserves of groundwater deposits of Kazakhstan explored for irrigation, assessment, forecasting and management decisions on their use and protection for sustainable irrigated agriculture, filling the geographic information and analytical system with specialized attributive information, studying the relationship of groundwater in irrigated territories with environmental components, study and assessment of the hydrogeological and reclamation state of irrigated areas using the latest information technologies, preparation of sections of the report. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the implementation of scientific and technical programs/projects:  1. "Groundwater of Kazakhstan" (2012-2014); "Water Security of the Republic of Kazakhstan - Strategy for Sustainable Water Supply" (2015-2017); 2. "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  3. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  4. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134)  5. Grant "Assessment of the prospects of flowing (self-spouting) operation of groundwater for sustainable development of rural areas of Zhambyl region" (2021-2023, No. AR09260877). |
| 42. | Miroshnichenko Oksana Leonidovna, higher, KazNU named after S.M.Kirov, major:  Applied Mathematics,  Cand. Sci. (Engineering) | IHEG, LR of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 4,**  **ORCID:** 0000-0002-0057-6734  **Scopus Author ID**: 56835453500 | Implementer, LR. Creation of the structure of geographic information and analytical subsystem of operational reserves of groundwater deposits of Kazakhstan explored for irrigation, assessment, forecasting and management decisions on their use and protection for sustainable irrigated agriculture, filling the geographic information and analytical system with specialized data. Studying the relationship of groundwater in irrigated territories with environmental components,  preparation of publications and sections of the report. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the implementation of scientific and technical programs/projects:  1. "Groundwater of Kazakhstan" (2012-2014);  2**.**"Water Security of the Republic of Kazakhstan - Strategy for Sustainable Water Supply" (2015-2017); **"Scientific** and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  3. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  4. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134  5. grant "Assessment of the prospects of flowing (self-spouting) operation of groundwater for sustainable development of rural areas of Zhambyl region" (2021-2023, No. AR09260877). |
| 43. | Adenova Dinara Kiyzbaevna, higher,  KazNRTU  named after K.I. Satbayev, major: Hydrogeology and Engineering Geology, PhD | IHEG, SR of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 3,**  **ORCID:** 0000-0001-7973-811X  **Scopus Author ID**: 57191498571 | Implementer, SR. Creation of the structure of geographic information and analytical subsystem of operational reserves of groundwater deposits of Kazakhstan explored for irrigation, filling the geographic information and analytical system with specialized information on the deposits explored for irrigation and use of GIS technologies in hydrogeological mapping and assessment of the reclamation state of irrigated lands, preparation of publications. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Implementer in scientific and technical programs/subprograms:  1. "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  3. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134)  4. Head of the grant "Assessment of the prospects of flowing (self-spouting) operation of groundwater for sustainable development of rural areas of Zhambyl region" (2021-2023, No. AR09260877). |
| 44. | Tazhiev Sultan Rysniyazovich, higher,  KazNRTU  named after K.I. Satbayev, major: Water Resources and Water Use, **Master of Agricultural Sciences** in Water Resources and Water Use | IHEG, R of the Hydrogeological and Geoecological Processes Modeling Laboratory | **Hirsch index 1,**  **ORCID:** [**0000-0002-5920-7757**](http://orcid.org/0000-0002-5920-7757)  **Scopus Author ID**: 57931032900 | Implementer, R. Filling the geographic information system with specialized data. Preparation of scientific materials for publication and/or registration (scientific articles, monographs, intellectual property objects) | Experience in the science and technology programs/projects:  1. "Scientific and methodological, and geoinformation and analytical support of rational use and protection of groundwater of the Republic of Kazakhstan in conditions of climate and anthropogenic changes" (2018-2020, URN BR05236664);  2. "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  3. grant "Assessment of the prospects of flowing (self-spouting) operation of groundwater for sustainable development of rural areas of Zhambyl region" (2021-2023, No. AR09260877). |
| 45. | Myrzagaziyeva  Rashilya Mubarakovna  Higher education,  Kazakh National Research Technical University named after K.I.Satpayev  Specialty: Software for Computer Technology and Automated Systems | IHEG, Leading Engineer |  | Implementer. Leading Engineer. Formation of a database. Analysis and processing of materials.Text, graphical and tabular applications. | Experience of participation in scientific and technical program: "Thermal energy, mineral resources, and medical and recreational potential of thermo and mineral, and industrial groundwater of Kazakhstan. Assessment of the status and trends of changes in the hydrogeochemical parameters of groundwater under the influence of natural and climatic changes and anthropogenic loads" (2021-2023, URN BR10262555);  2. "Assessment of fresh groundwater resources as the main source and the long-term reserve of sustainable drinking water supply of the Republic of Kazakhstan” (2021-2023, URN BR10965134) |