

**Institute of Water Management
Scientific Report**

2014

* Scientific-Research Works Planned and Implemented in 2014 Funded by the State Budget of Georgia

#	Planned and Implemented work with the indication of scientific field and direction	Work Supervisor	Work Performers
1.	<p>Hydroelectric Survey of Duruji Waterfall Basin For the effective protection of Kvareli population from mudflow</p> <p>Stage : Elaboration of the short-run programs for the protection of Kvareli population from the Duruji river mudflow</p> <p style="text-align: center;"><i>Scientific Field: Nature Sciences</i></p> <p style="text-align: center;"><i>Direction: Earth science and environment</i></p>	<p style="text-align: center;">G. Gavardashvili</p> <p style="text-align: center;">PhD of Technical Sciences, Professor</p>	<p style="text-align: center;">G. Chakhaia L. Tsulukidze T. Supatashvili N. Sukhishvili I. Iremashvili</p>
2.	<p>Determination of sensitive sites caused by disasters on the territory of Georgia and their classification according to the expected risk</p> <p>Stage: Determination of sensitive sites caused by disasters on the territory of Georgia and their classification according to the expected risk</p>	<p style="text-align: center;">R. Diakonidze</p> <p style="text-align: center;">Head of Department of Natural Disasters, senior scientific worker, Acad. Doctor of Geographical Sciences, Associate Professor</p>	<p style="text-align: center;">Z. Charbadze, Q. Dadiani N. Nibladze,</p>

	<p><i>Scientific Field:</i> <i>Nature Sciences</i></p> <p><i>Direction: Earth science and environment</i></p>		
3.	<p>Examination of shaped massives for abrassive sections of water reservoirs</p> <p>Stage: AElaboration of the methods of wave resistance and sustainability calculation for new types of shaped massives.</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction: Engineering Sciences and High-Tech Materials</i></p>	<p>I. Iordanishvili</p> <p>Senior scientific worker at the at the Department of Seas and Water Resources, PhD of Technical Sciences</p>	<p>E. Khosroshvili D. Potskhveria M. Shavlakadze L. Bilanishvili K. Iordanishvili</p>
4.	<p>Elaboration of surface irrigation technologies</p> <p>a) Elaboration of the selected model of rolling furrower</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction: Agricultural Sciences</i></p>	<p>E. Samkharadze</p> <p>Senior scientific worker at the Department of Mellioration, Acad. Doctor of Technical Sciences</p>	<p>V. Shurghaia L. Kekelishvili I. Kechkhoshvili</p>
5.	<p>Development of modern engineering and ecological measures against exogenous processes caused by global climate change</p> <p>Stage: Evaluation of modern means against snow avalanches and development of new effective measures</p>	<p>G. Chakhaia</p> <p>Head of the Department of Environment Protection and Engineering Ecology, Senior scientific worker, Acad. Doctor of Technical Sciences, associate professor</p>	<p>L. Tsulukidze G. Omsarashvili T. Supatashvili I. Khubulava N. Sukhishvili O. Okriashvili</p>

	<p><i>Scientific Field:</i> <i>Nature Sciences</i> <i>Direction: Earth science and environment</i></p>		
6.	<p>Conservation of water resources of Georgia in consideration with the requirements of the international strategy for natural disaster reduction (Hiogo Framework Agreement)</p> <p>Stage: Black Sea water laboratory research in river basins</p> <p><i>Scientific Field:</i> <i>Nature Sciences</i> <i>Direction: Earth science and environment</i></p>	<p>G. Gavardashvili</p> <p>PhD of Technical Sciences, Professor</p>	<p>G. Chakhaia L. Tsulukidze T. Supatashvili N. Sukhishvili I. Iremashvili</p>
7.	<p>Regional characteristics of mudflows, their wave nature and elaboration of complex methods</p> <p>Stage: Mudflows movement and their interaction with buildings</p> <p><i>Scientific Field:</i> <i>Nature Sciences</i> <i>Direction: Earth science and environment</i></p>	<p>O. Natishvili</p> <p>Senior scientific worker at the Department of Natural Disasters, Academician</p>	<p>R. Diakonidze Z. Charbadze, Q. Dadiani N. Nibladze,</p>
8	<p>Probabilistic evaluation of flood</p> <p>Stage: Probabilistic calculations on the Rioni river</p> <p><i>Scientific Field:</i> <i>Nature Sciences</i> <i>Direction: Earth science and environment</i></p>	<p>D. Kereselidze</p> <p>Senior scientific worker at the Department of Environment Protection and Engineering Ecology, PhD of Geographical Sciences</p>	<p>R. Diakonidze Z. Charbadze, Q. Dadiani N. Nibladze,</p>

9	<p>Assessment of the condition of the reservoirs and dams of Georgia and justification of the reliable conditions of exploitation</p> <p>Stage: Study of the conditions of water reservoirs and their concrete dams functioning</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Engineering Sciences and High-Tech Materials</p>	<p>I. Iordanishvili</p> <p>Senior scientific worker at the at the Department of Seas and Water Resources, PhD of Technical Sciences</p> <p>T. Tevzadze</p> <p>Scientific worker</p> <p>PhD of Geology and Mineralogical Sciences</p>	<p>E. Khosroshvili D. Potskhveria M. Shavlakadze L. Bilanishvili K. Iordanishvili</p>
10	<p>Development of new hydro-insulating and anti-filtration technologies using local materials</p> <p>Stage: Development of mechanical mechanism for receiving hydro-insulating and anti-filtration materials from local raw materials</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Engineering Sciences and High-Tech Materials</p>	<p>L. Itriashvili</p> <p>Senior scientific worker at the at the Department of Seas and Water Resources, Acad. Doctor of Technical Sciences</p>	<p>E. Khosroshvili D. Potskhveria L. Bilanishvili M. Shavlakadze</p>
11	<p>Irrigation systems and hydraulic water flow to the plant using computer simulation and other methods of processes</p> <p>Stage: Main elements of irrigation systems, their tasks</p>	<p>R. Kiladze</p> <p>Senior scientific worker of the Department of Mellioration, PhD of Technical Sciences</p>	<p>Z. Lobzhanidze L. Kkelishvili</p>

	<p>and ways of solving these tasks</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Engineering Sciences and High-Tech Materials</p>		
12	<p>Evaluation of vulnerability of ecological systems for the regions of Georgia towards the current and expected change of climate</p> <p>Stage: Implementation of adaptation measures in climate change vulnerable regions</p> <p><i>Field:</i> <i>Nature Sciences</i></p> <p><i>Direction:</i> Earth science and environment</p>	<p>L. Purtseladze</p> <p>Scientific worker of the Department of Mellioration, Acad. Doctor of Technical Sciences</p>	<p>V. Shurghaia S. Kiknadze</p>
13	<p>Development of new measures on the principle of underground and surface runoff to create the optimum moisture regime for cultural plants in the Kolkheti lowland</p> <p>Stage: Analysis of hydrological activity of existing drainage network</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Agricultural Sciences</p>	<p>V. Shurghaia</p> <p>Head of the Department of Mellioration, senior scientific worker, Acad. Doctor of Technical Sciences</p> <p>V. Zakaidze</p> <p>Scientific worker, Acad. Doctor of Technical Sciences</p>	<p>L. Kekelishvili S. Kiknadze L. Maisaia</p>

14	<p>Development of safety issues of hydraulic structures for meliorative purposes</p> <p>Stage: Mathematical description of mudflow processes in hydraulic structures and irrigation systems zones</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Engineering Sciences and High-Tech Materials</p>	<p>T. Gvelesiani</p> <p>Senior scientific worker of the Department of Mellioration, PhD of Technical Sciences</p>	<p>L. Purtseladze</p> <p>L. Kekelishvili</p>
15	<p>Methods for designing modern melioration systems in Georgia</p> <p>Stage: Designing of drip irrigation systems</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Agricultural Sciences</p>	<p>Sh. Kupreishvili</p> <p>Head of the Department of Mellioration Systems Projecting and Expertise,</p> <p>Acad. Doctor of Technical Sciences, Associate Professor</p>	<p>P. Sichinava</p> <p>Z. Varazashvili</p> <p>K. Iordanishvili</p> <p>K. Bziava</p> <p>I. Kechkhoshvili</p> <p>J. Kakhadze</p> <p>Ph. Lortkipanidze</p>
16	<p>Socio-economic efficiency of rehabilitation of irrigation systems of Georgia</p> <p>Stage: Processing the calculation of the effectiveness of capital investments</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Economic Sciences</p>	<p>MM. Vartanov</p> <p>Senior scientific worker at the Department of Mellioration Systems Projecting and Expertise, PhD of Economics</p>	<p>K. Bziava</p> <p>I. Kechkhoshvili</p> <p>Ph. Lortkipanidze</p>
17	<p>Research of the technical species of the plant "Pavlonia" in the soil salinity conditions for the purpose of obtaining industrial</p>	<p>J. Kakhadze</p> <p>Specialist at the Department of Mellioration Systems Projecting</p>	<p>J. Kakhadze</p>

<p>timber</p> <p>Stage: Identification of the conditions for the selection of the areas to cultivate plant "Pavlonia"</p> <p><i>Scientific Field:</i> <i>Applied Sciences and Technologies</i></p> <p><i>Direction:</i> Agricultural Sciences</p>	<p>and Expertise</p> <p>G. Kakashvili</p> <p>Head of the Alazani Testing-Mellioration Ecological Unit, Scientific worker</p>	
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