## **RESUME**

**1. Family Name:** Bakradze

2. First Name: Elina

3. Date of Birth: 9.12.19824. Citizenship: Georgia

**5. Tel.:** 591404064; 599500884

6. Education:

Educational Institution	Technical University of Georgia, for the
	Doctoral Study – "Geo-Ecological
	Monitoring of the Rivers Mashavera
	and Poladauri Catchment Areas'' (PhD)
Period: from (month/year) to (month/year)	2009 -2014
Degree or Diploma	Diploma – Doctoral Academic Degree
	Doc № 000530

Educational Institution	The Ivane Javakhishvili state
	University in the specialty of chemical
	Expertise
Period: from (month/year) to (month/year)	2004-2006
Degree or Diploma	Diploma -Master's Academic Degree
	in Organic chemistry and the
	qualification of Chemical Expertise;
	M № 000096

Educational Institution	The Ivane Javakhishvili state
	University in the specialty of chemical
	Expertise
Period: from (month/year) to (month/year)	2000-2004
Degree or Diploma	Diploma – Bachelor's Academic
	Degree in Chemistry, the qualification
	of Chemist-Expert; B № 11454

Educational Institution	INTERNATIONAL HOUSE WORLD ORGANISATION
Period: from (month/year) to (month/year)	1999-2000
Degree or Diploma	Diploma - TOEFEL

# 7. Other training:

Educational Institution	TAIEX Workshop on Persistent Organic Pollutants Waste Management	
Period: from/to	Slovakia April 20-23 2016	
Description of studies:	multi country meeting Providing an overview of the EU legislation related to HBCD and BDEs	
Educational Institution	Bratislava Water Research Institute	
Period: from/to	Slovakia December 17-24 2016	
Description of studies:	Analyses of Current monitoring activities in Slovakia	
Educational Institution	National Environmental Agency	
Period: from/to	Georgia, January 2016	
Description of studies:	Training on Ion Chromatography IC 2100	
Educational Institution	Thermo	
Period: from/to	Georgia, October , 2015	
Description of studies:	Training on Ion Chromatography	
Educational Institution	Estonian Ministry of Environment in co operation with the Estonian Centre of Eastern Partnership, supported by SIDA	
Period: from/to	Georgia, 2-3 November , 2015	
Description of studies:	Seminar '' reforming Georgian environmental sector''	
Educational Institution	Norsk Energi	
Period: from/to	2015 July	

Description of studies:	Knowledge Sharing Workshop in the frame of the program Sustainable Hydropower Development in Georgia. workshop on Environmental and Social Planning for Management of Hydropower Projects.
Educational Institution	MILESTONE
Period: from/to	2015 May
Description of studies:	Microwave Extraction System
Educational Institution	Strengthening of the Metrology and Standardization Infrastructure According to the Best Practices in the EU Member States"
Period: from/to	January 15-16, <b>2014</b>
Description of studies:	Introduction into the audit methodology according to ISO 19011: 2011 "Guidelines for Auditing Management Systems"
Educational Institution	EPIRB and Human Dynamics
Period: from/to	2013
Description of studies:	Introduction to the procedures and techniques required for international accreditation and quality control for water laboratories ISO 17025
Educational Institution	Training for Legal and Administrative Capacity Strengthening in pesticide site investigation, risk assessment and management options, UNDP; REC Caucasus; GEF; Ministry of Environment Protection.
Period: from/to	2012
Description of studies:	in pesticide site investigation
Educational Institution	Environmental public Health
Period: from/to	August 2012
Description of studies:	University Minnesota school of Public Health
Educational Institution	Assessment of Traceability of Measurements, Internal Quality Control, Proficiency Testing and

	Measurement of Organic Compounds	
Period: from/to	FINNLAND 2012	
Description of studies:	QA QC Organic Compounds	
Educational Institution	University of MINNESOTA, of Public Health Division of Environmental Health sciences	
Period: from/to	August 2012	
Description of studies:	Environmental public health training	
Educational Institution	Assessment of Traceability of Measurements, Internal Quality Control, Proficiency Testing and Measurement Uncertainties in Testing Labs (ISO/IEC 17025)	
Period: from/to	26-28 of march 2012	
Description of studies:	(ISO/IEC 17025)	
Description of studies.	(ISO/ILC 17023)	
Educational Institution	UNDP/GEF Project	
Period: from/to	27-30 March 2012	
Description of studies:	Rapid Ecological Assessment- Environmental Flows-Bio-Monitoring	
Educational Institution  Period: from/to	University of MINNESOTA, of Public Health Division of Environmental Health sciences  2-3 September 2010	
Description of studies:	Environmental Health	
Description of simulation		
Educational Institution	Environmental Institute	
Period: from/to	6 – 13 June Slovakia 2010	
Description of studies:	"General requirements for the competence of testing and calibration laboratories" ISO 17025 QA/QC	
Educational Institution	Georgia by the Slovak experts	
Period: from/to	2010	
Description of studies:	ISO 17025 QA/QC	
Educational Institution	Federal Ministry of Economic Cooperation and Development (BMZ) on behalf of the Government of the	

	Federal Republic of Germany.	
D : 1 C //	1	
Period: from/to	5-6 July, 2010	
Description of studies:	Communication management	
Educational Institution	University of MINNESOTA, of Public Health Division of Environmental Health sciences	
Period: from/to	March 31 – 3 April, 2009	
Description of studies:	Environmental Characterization (Ground Water & surface water) and risk Assessment at hard rock mine sites	
Educational Institution	European school of Management ESM-Tbilisi.	
Period: from/to	27.02.08 – 2.04.08	
Description of studies:	Program on management and have proper certificate.	
Educational Institution	2nd Biannual and Black Sea SCENE EC project joint conference, Sofia, Bulgaria	
Period: from/to	2008	
Description of studies:	Reporting	
Educational Institution	Tourism and Resort Department	
Period: from/to	27, 2008	
Description of studies:	"Tourism and climate changes".	
Educational Institution  Period: from/to	Georgian Finnish Project Development of Environment monitoring and Management Systems in Georgia  18 – 20 March, 2008	
Description of studies:	Quality management for Environmental Laboratories	
Educational Institution	EUROPEAN CSHOOL OF MANAGMENT ESM- TBILISI	
Period: from/to	February 27 – 2 April, 2008	
Description of studies:	Program in management	
Educational Institution	SYKE Study tour "Water resources management"	
Period: from/to	2- 16 June 2008 Estonia and Finland Developing of the Environmental	
Description of studies:		

	monitoring and management systems	
	THEN COA DOEDD	
Educational Institution	UNEP, GPA, BSERP	
Period: from/to	12- 13 June, 2007	
Description of studies:	National Workshop for Georgia in	
	Support of Capacity – Building of	
	National and Local Authorities	
	responsible for the Implementation of	
	the Revised Black sea Protocol Against	
	Pollution from Land-Based Sources and	
	Activities to the Bucharest Convention	
Educational Institution	The SPAMGO training centre	
Period: from/to	21 -27 May 2007	
Description of studies:	PROJECT MENEGMENT	
Educational Institution	The SPAMGO training centre	
Period: from/to	29 November, 2007	
Description of studies:	Environmental Management Systems	
Educational Institution	The SPAMGO training centre	

## 8. Membership in Professional Organizations:

Period: from/to

Description of studies:

- Technical assessor depending on ISO 17025 of the LEPL "The Unified National Body of Accreditation - Accreditation Centre" of Georgia;

14 -27 May 2007

Water and Sanitation

- Associate Member of European consulting network;
- Member of the European Geosciences Union.

## **9. Language skills:** (1 to 5 scale with 5 the highest grade)

Language	Reading	Speaking	Writing
Georgian (native)	5	5	5
English	5	5	5
Russian	5	5	5
Spanish	2	3	2

- **10. Computer Skills:** Operating systems Windows, MS Word *XP*, MS Excel *XP*, Access, PowerPoint, Internet and E-mail; MS Project, EMS Electronic management system, etc;
- 11. Current position: Ministry Of Environment and Natural resources Protection of Georgia The LEPL National Environmental Agency, Head of the Atmospheric Air water and soil analyses laboratory.

#### 12. Years of Experience at current employment: 10 years (since 2005 till present)

#### 13. Key Qualification:

- Coordinates the activities of the laboratory;
- Carries out methodical management of the chemical analysis;
- Provides international methods for chemical analysis assimilation, translation;
- Experience in the surface, precipitation, atmospheric air and other matrices analyses by Chromatography, spectrometer and other equipments, determination, subsequent data Processing and reporting;
- Ensures quality control Depending the ISO 17025 in the laboratory of the Department;
- Experience in river monitoring: Analyses sampling, data management and reporting;
- Academic Education in field of Chemistry (master's academic Degree, Doctor's academic degree (PhD);
- Experience in Participation in international projects;
- Experience in Participation in international projects as an National Expert;
- Experienced in the field of in the field of Environment, Water, the Soil atmospheric air and atmospheric sedimentation pollution, also plants essence of an anthropogenous origin, research of their processes of migration and absorption;
- Has Experience in Assessment of the Black Sea Pollution, Assessment of environmental pollution by the statistical analysis;
- Has developed and tested new advanced methodologies for determination of concentration of hazardous substances in water depending on International standards;
- Has prepared the QC manual Depending on the ISO 17025 and Standard operation procedures for the laboratory purposes, Quality plan;
- She is familiar with modern sampling techniques for analysing organic contaminants including POPs in water, sediments, particles and organisms; clean-up methods and high resolution determination and risk assessment. She spent his last 12 years with a group of environmental analytical chemists.
- Is invited in National Accreditation Body as a technical assessor depending on ISO 17025.
- Has received Deferent Kind of certificates of performance of laboratory interlaboratory comparisons tests on: "Trace Inorganic and Organic Analysis"
- Regional Consultant in Development of fresh water strategy in the Caucasus Ecoregion (Georgia, Armenia, Azerbaijan).

- Invited in LEPL "The Unified National Body of Accreditation Accreditation Centre" of Georgia as Technical assessor depending on ISO 17025 (General requirements for the competence of testing and calibration laboratories);
- Co-author of the WWF Freshwater Strategy for the South Caucasus Region addressing Armenia, Azerbaijan and Georgia 2013;
- Has experience working as a lector in field of chemistry;
- Water quality expert in the project of Regional Cooperation for Black Sea River Basins Environment Protection from Agricultural Polluters, REPAIR- 2013.
- Country research assistance -REC Caucasus, members of a team contracted by Florida International University as part of the USAID-funded Global Water for Sustainability Program (GLOWS). GLOWS is working here in Georgia on water resources management (WRM) and water supply, sanitation, and hygiene (WASH) programming in the Alazani basin Kakheti region 2014.
- December 17, 2015 won grant competition announced by the Shota Rustaveli National Science Foundation for young scientists (Grant Agreement N YS15\_1.2.1.5\_57) " Study of the pollution level of Alazani valley artificial reservoirs and their adjacent area" project manager.
- Co author of the report 'Rioni River Environmental Action program' 2015 May in the frames of the project REPAIR.

### 14. Experience:

Period: from	2011 – now	
(month/year) to		
(month/year)		
Location:	Tbilisi, Georgia	
Name of Organization:	National Environmental Agency, of Ministry Of	
	Environment and Natural Resources Protection of	
	Georgia	
Title:	Head of the Atmospheric Air water and soil analyses	
	laboratory (Division) of the Department of	
	Environmental pollution Monitoring.	
Responsibilities:	Coordinates the whole technical activity of the	
	laboratory;	
	<ul> <li>Checks, elaborates/modifies and signs the test reports;</li> </ul>	
	Carries out methodical management of the chemical	
	analysis provided by the staff;	
	• Provides for the accreditation requirements in terms of	
	chemical analysis;	
	<ul> <li>Provides international methods for chemical analysis -</li> </ul>	
	assimilation, translation;	
	• Ensures quality control Depending the ISO 17025 in	
	the laboratory;	
	<ul> <li>Participates in international projects;</li> </ul>	
	Develops and updates the Quality Manual;	
	Develops and checks the general and system	

procedures;
• Responds to the implementation, maintenance and
upgrading of the quality system of the laboratory;
<ul> <li>Proposes the quality objectives of the laboratory;</li> </ul>
<ul> <li>Controls the quality documents and quality records</li> </ul>
developed at the laboratory level;
• Trains personnel in the quality system requireements
and documentation;
• Maintains the evidence of nonconforming work at the
level of the laboratory;
<ul> <li>Produces the internal audit report;</li> </ul>
• is involved in cause of analysis, and are responsible for
efficient implementation of corrective actions;
• Participates in the management review of the quality
system.

Period: from	2008- 2011
(month/year) to	
(month/year)	
Location:	Tbilisi, Georgia
Name of Organization:	National Environmental Agency, of Ministry Of
	Environment Protection and Natural Resources of
	Georgia
Title:	Chief Chemist of the Department of Environmental
	pollution Monitoring.
Responsibilities:	Quality Control Quality assurance,
	<ul> <li>inculcation of new methodologies regarding</li> </ul>
	surface water;
	Determination of the Biojenic elements by
	Chromatography in surface waters, rivers, lakes,
	seas, atmospheric sediments;
	Implements quality control protection, provides
	complete documentation;
	<ul> <li>Participates in sampling in water sector;</li> </ul>
	<ul> <li>Participates in international projects;</li> </ul>

Period: from	2006 - 2007
(month/year) to	
(month/year)	
Location:	Tbilisi, Georgia
Name of Organization:	The Centre of the Monitoring and Prognostication of
	Ministry Of Environment Protection and Natural
	Resources of Georgia
Title:	Main Specialist of the Department of Environmental
	pollution Monitoring
Responsibilities:	<ul> <li>Performs chemical analysis in surface waters, lakes,</li> </ul>
	seas and atmospheric air;

Works in chromatography;
<ul> <li>Implements quality control protection;</li> </ul>
• inculcation of new methodologies regarding surface
water;
<ul> <li>Is responsible for device and the room;</li> </ul>
<ul> <li>Performs other duties assigned by the head of the</li> </ul>
laboratory;

Period: from	2007
(month/year) to	
(month/year)	
Location:	Tbilisi, Georgia
Name of Organization:	the Centre of the Monitoring and Prognostication of
	Ministry Of Environment Protection and Natural
	Resources of Georgia
Title:	Senior Specialist of the Department of Environmental
	pollution Monitoring
Responsibilities:	<ul> <li>Performs chemical analysis in surface waters, lakes, seas and atmospheric air;</li> </ul>
	<ul> <li>Works in chromatography;</li> </ul>
	<ul> <li>Implements quality control protection;</li> </ul>
	<ul> <li>participates in the international projects;</li> </ul>
	<ul> <li>Performs other duties assigned by the head of the laboratory;</li> </ul>

Period: from	2005 -2006
(month/year) to	
(month/year)	
Location:	Tbilisi, Georgia
Name of Organization:	The Centre of the Monitoring and Prognostication of
	Ministry Of Environment Protection and Natural
	Resources of Georgia
Title:	Probationer of the Department of Environmental
	pollution Monitoring
Responsibilities:	Acquaintance of the Environmental monitoring issues

## 15. Participation in International Projects:

Support to the trans-boundary management of the Kura river basin Phase I 2004-2006

TACIS – EU Project: Trans-Boundary River Management Phase II for the Kura River basin – Armenia, Georgia, Azerbaijan (2008);

ENPI Project: Trans-Boundary River Management for the Kura River basin Phase III – Armenia, Georgia, Azerbaijan (2012-2013)

NILU Norsk institute: Convention on Long -range Trans-boundary Air Pollution;

"Support of the Improvement of Quality Management System of Water Quality Monitoring and Information System as tool for the Decision Making Process in Water Policy in Georgia"

"THE BLACK SEA ENVIRONMENT RECOVERY PROJECT"

'DEMMS'' Georgian Finnish Project Development of Environment monitoring and Management Systems in Georgia;

NATO science program – "South Caucasus River monitoring project №977991SFP"

"Support of the Improvement of Quality Management System of Water Quality Monitoring and Information System as tool for the Decision Making Process in Water Policy in Georgia"

Georgian-Railway Investigation of Soil Pollution – COWI (A/S), Denmark, 2011.

KuraAras FSP/ 70228 UNDP- GEF Project, "Reducing Transboundary Degradation of the Kura Aras River Basin" – water quality expert at national level.

Georgian waters – Capacity building on the water monitoring and management in Georgia, 2010-2013 (Georgia Waters)

WWF Caucasus Programme Project for development Fresh water strategy in the Caucasus Ecoregion (Georgia, Armenia, Azerbaijan) 2012 – Regional Expert.

(INRMW) Integrated Natural Resources Management in Watersheds of Georgia 2011- 2014. Meeting - Seminar on "Surface Water Researches in laboratory conditions "for the eco camp Eco - Club Alliance, in the Mtirala National Park Areas.

Integrated Natural resources Management in watersheds (INRMW) of Georgia Program –provision of Environmental Quality screening Consulting services March 10.2012- September 30.2012

PIMS 2271 Reducing Transboundary Degradation in the Kura Aras river basin, Demonstration Project 2012-2013 - Expert on Hydrochemistry.

Project # 00076584: Title: Disposal of POPs Pesticides and Initial Steps for Containment of Dumped POPs Pesticides in Georgia 2012 - Key expert; Chemist/Chemical expert;

Reducing Transboundary Degradation in the Kura Aras river basin 2013;

Environmental Protection of International River Basins 2013-2014;

Regional Cooperation for Black Sea River Basins Environment Protection from Agricultural Polluters, REPAIR 2013-2014;

2014 - Creation of Measures to Mitigate the Alazani Valley Saline Soil Degradation on the Background of Modern Climate Change - Shota Rustaveli National Science Foundation N AR 136/9-110/11.

2014 -country research assistant USAID-funded Global Water for Sustainability Program (GLOWS) - Water Resources Management Sustainability Index Tool (WRM SIT) for Alazani river basin – Kakheti region."

2014-2016 expert -"Strengthening of the water protection through the controlling system of the effluent quality and monitoring of the water bodies at risk in Georgia" Grant Co-operation agreement; project SAMRS/2014/VP/01/06.

2015 expert -Review and update of the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Georgia.

2015 expert on water column chemistry QA/QC direction - EMODnet Chemistry;

2015 water expert - The UNECE Strategic Environmental Assessment (SEA )Pilot Project on National Waste Management Strategy and Action Plan in Georgia.

2016- 2018 years - Scientific head of the Grant (Grant Agreement of 17 December 2015 N YS15\_1.2.1.5\_57) for Young Scientists "Study of the pollution level of Alazani valley artificial reservoirs and their adjacent area" Grant was announced by Shota Rustaveli National Science Foundation.

2013- 2016 Water Quality Expert - in The project REPAIR Regional Cooperation for Black Sea River Basins Environment Protection from Agricultural Polluters).

2014-2016 - expert – (data gathering, processing, quality control / quality assurance) of the project "Creating a database" program, the EU representative is the European Commission (Directorate-General for maritime affairs and fisheries).

#### 16. Publications and Conferences:

Has published more than -36 scientific articles and papers: (basics of them are)

2005 13-14 December - The VI Scientific Conference of young Chemists of Georgia which was published by the Chemical Society of Georgia in the State University of Tbilisi. (Pages 47-48);

2006 – International Conference – Enikolopov's readings, 4-6 October 2006 erevan Armenia New carbofunctional siliconorganic oligomers./Samakashvili S., Baqradze E., Sanshiashvili N., Lekishvili N.,

2008 - ''Some Aspects of Changes of The Black Sea Water Pollution'' /G.Kuchava/, /M.ArabiZe/, /E.Bakradze/ National Environmental Agency CONFERENCE: ''SOME ASPECTS OF CHANGES OF THE BLACK SEA WATER POLLUTION INGEORGIA'' (2000-2008)(Elina Bakradze, Marine Arabidze, George Kordzakhia, Gulchina Kutchava Elina Bakradze — The Centre for Monitoring and Prognostication 150, David Agmashenebeli av., 0112, Tbilisi, Georgia page 38-42;

2nd BIENUAL AND BLACK SCENE EC PROJECT JOINT CONFERENCE SOME ASPECTS OF CHANGES OF THE BLACK SEAWATER POLLUTION IN GEORGIA(2000-2008) (Elina Bakradze, Marine Arabidze, George Kordzakhia, Gulchina Kutchava, Sofia, Bulgaria 6-9 October;

2010 - "The modern Ecological characteristic of the river Liakhvi basin" - /N.Buachidze, /L.Intskirveli, E. Bakradze, G.Kutchava/ Journal "Scientific and Technologies, Georgia" 2010 N 10 - 12;

"Some Aspects of Changes of the Black Sea Pollution" - /E. Bakradze, G.Kuchava, M.Arabidze /Works of Georgian Technical University Hydro meteorological institute vol. 116, 2011 year;

Hydrochemical Monitoring of the Liakhvi River. /Buachidze, K.Bilashvili, L.Intskirveli, G.Kuchava, E.Bakradze, N.Beglarashvili, L.Shavliashvili/. - Collected Papers, New Series №3 (82) "Environment and Global Warming", Proceeding of International Conference, Tbilisi, p.330-334, 2011.

G.P.Kuchava, E.M.Bakradze, M.A.Arabidze, M.G.Chigitashvili About modern a condition of monitoring of river. Hens for 2007-2008. Works of Technical University #3 (481), Art. 12-18, Tbilisi 2011

The modern condition of monitoring of the river Kura for 2007-2008. /G.Kuchava, E.Bakradze, M.Arabidze, M.Chigitashvili/ - Georgian Technical University, №3(481), p.12-17, 2011.

L. Intskirveli, N.. Buachidze, M.. Arabidze, c. Kuchava, E.. Bakradze, N.. Dvalishvili, M.. Tabatadze "Water quality determination in the Kura River basin using of the integrated of hydro-chemical parameters" the Technical University, Institute of Zoology of Hydrometeorology, vol.# 117, 128-131 2011

Papers of the International Conference Determination of the Quality of River Kura Basin Waters Using Integral Hydrocamical Indexes. /L.Intskirveli, N.Buachidze, M.Arabidze, G.Kuchava, E.Bakradze, N.Dvalishvili, M.Tabatadze/. - Transactions of the Institute of Hydrometeorology at the Georgian Technical University, vol.117, "Pressing Problems in Hydrometeorology and Ecology", Tbilisi, p.128-130, 2011.

International Scientific - Technical Conference Proceedings ISSN1512-0902, Technical University, Institute of Hydrometeorology the river. Kura basin water quality parameters using the integrated hydrochemical indicators / - L. Intskirveli, N. Buachidze, M. Arabidze, G. Kuchava, E. Bakradze, N. Dvalishvili, M. Tabatadze / Tbilisi 2011

GTU Student -80 open international Scientific conference, section Geology, Field of the theme:"River Mashavera and Poladauri Modern Geo-Ecological Characterization" Awarded by Diploma of III place, 2012 may;

Hydrochemical investigations of the Mashavera River and their results. /E.Bakradze, G.Kuchava, M.Arabidze, N.Buachidze, E.Shubladze/ - Georgian Engineering News #2 (62), p.106-108, 2012.

The modern geochemical characteristic of the rivers of Mashavera and Poladauri taking into account anthropogenic impact. /E.Bakradze, G.Kuchava, M.Arabidze, N.Buachidze, E.Shubladze/ - Georgian Engineering News #3 (63), p. 86, 2012;

The thesis - on the "Modern Geo- Ecological Characteristics of the rivers Mashavera and Foladauri" published in Georgian Technical university collected articles students 80-th International Scientific Conference page 78, 2012 year;

Clinoptilolite Use in Non-Irrigated Soils of Alazani Valley. /L.Shavliashvili,G.Kordzaxia, N.Naskidashvili, N.Tughushi, G.Kuchava, E.Bakradze/ - Georgia Chemical Journal, Vol.12, № 2, Tbilisi, p.186-188, 2012;

Co-Author: of Study towards the Development of a WWF Freshwater Strategy for the South Caucasus Region addressing Armenia, Azerbaijan and Georgia 2013;

GEORGIAN MAJOR TRANSBOUNDARY RIVERS ECO-BIO-CHEMICAL CONDITIONS AND THEIR CLASSIFICATION. N.BUACHIDZE, L. INTSKIRVELI, G. KUCHAVA, E. BAKRADZE, N.BEGLARASHVILI, L.GVERDTSITELI.. TRANSACTIONS OF THE INSTITUTE OF HYDROMETEOROLOGY AT THE GEORGIAN TECHNICAL UNIVERSITY vol. №119, p.238-243 2013;

THE CHEMICAL COMPOSITION OF AN ARTIFICIAL RESERVOIR IN SALINE SOILS OF ALAZANI VALLEY./Shavliashvili L.W., Kordzakhia G.I., Kuchava G.P., Buachidze N.S., Bakradze E.M., Talakvadze V.V./Transactions of the Institute of Hydrometeorology, Georgian Technical University. -2013. -V.119. -pp.253-256 2013:

Alazani field of artificial reservoirs chemical composition of the soils / L. Shavliashvili, G. Kordzakhia, G. Kuchava, N.Buachidze, E.Bakradze, V.Talakivadze / - Hydro-meteorology Institute of Zoology, the anniversary edition, Georgia vs. .119, p. . 285-289, **2013**;

The overall ecological status of the water quality of rivers Mashavera, Khrami and Debed / E.Bakradze, G.Kuchava, M.Arabidze, N.buachidze, I.Kordzaia, L.Papachashvili / Georgian Engineering News N3, page 38- 40, 2013.

International Scientific Journal "ANNALS OF AGRARIAN SCIENCE" Use of Klinoptilolith in Agriculture L.Shavliashvili1, G. Kordzakhia1, N. Naskidashvili1, N. Tugushi1, G. Kuchava, E. Bakradze – page 36-28, vol. 11, No.3 -2013

Характеристики загрязнения прибрежной зоны Черного моря Грузии в 2011 году, Арабидзе М.А., Кучава Г.П., Бакрадзе Э.М., Барамидзе И.Н. Национальное Агентство по Окружающей Среде, Министерство Охраны Окружающей Среды и Природных Ресурсов Грузии - в печати 2013

Ежегодный отчет глава - ЧЕРНОЕ МОРЕ Коршенко А.Н, Кочетков В.В., Панченко А.В., Любимцев А.Л., Клименко Н.П., Шибаева С.А., Мезенцева И.В., Коновалов С.К., Кондратьев С.И., Троценко Б.Г., Щерева Г., Арабидзе М.А., Барамидзе И.Н., Кучава Г.П., Бакрадзе Э.М. - в печати 2013

Technical University of Georgia, International Scientific - Technical Conference on Current Problems of Hydrometeorology and ecology, Alazani field of artificial reservoirs chemical composition of the soils / L. Shavliashvili, G. Kordzakhia, G. Kuchava, N.Buachidze, E.Bakradze, V.Talakivadze / May 28-30, 2013, Tbilisi.

Tbilisi State University Works N5 [84] migration of the easily soluble salts in The Alazani Valley soils in conjunction with climate / L. Shavliashvili, G. Kordzakhia, N.Tughushi, G. Kuchava, E. Bakradze / p. :189-193, 2013.

International Conference "Modern Problems of Geography" migration of the easily soluble salts in The Alazani Valley soils in conjunction with climate Tbilisi State University, November 7-9, 2013

Co-author of the book -" Problems of Ecology", Tbilisi 2014year.

Determination of water quality of the Kura River Basin Autors: N. Buachidze, l. Intskirveli, G. Kuchava, E. Bakradze. – The Georgian Nature researcher's Union "Orqisi". N1, 2014 year.

Determination of Agricultural crops Productivity by Squares Method – L. Shavliashvili, G. Kordzakhia, E.Elizbarashvili, G. Kuchava, E. Bakradze / Reports presented at the scientific Conference Dedicated to the 80<sup>th</sup> Anniversary of M. Nodia Institute of Geophysics. Advanced Problems in Geophysics, International Conference, Tbilisi page 125-128, 2014.

L.Shavliashvili, G.Kordzakhia, E.Elizbarashvili, G.Kuchava, E. Bakradze Determination of Agricultural crops Productivity by squares Method Institute of Geophysics "Advanced problems in Geophysics Tbilisi p.125-128 2014.

Reports presented at the International scientific conference dedicated to the anniversary of M.Nodia 80 years, Institute of Geophysics "Advanced problems in Geophysics" Tbilisi, Georgia 2014.

The results of monitoring of pollution of the river Kvirila and his vicinities with heavy metals 2010-2015 the period, Bakradze E.M., Kuchava G.P. and Arabidze M.A. *GEORGIAN ENGINEERING NEWS*, No. 3, 2015 pages 65-69.

Study of contamination of Alazani Valley surface and ground waters. /E.Bakradze, L.Shavliashvili, G.Kuchava, E.Shubladze/ - International scientific-practical conference LXIX Herzen readings Dedicated to the 115th anniversary of Stanislaw Vikentievich Kalesnik; Geography: Development of science and educa¬tion, part II, p. 21-25, **2016**.

#### 17. Contact Information

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