Name of Personnel	Hristev Elena
Position for this assignment	Specialist in charge of Urban Functional Cadaster, Water Metering, Waste Management modules
Nationality	Republic of Moldova, Romanian
Language proficiency	Native language – Romanian / Russian – fluent / English - fluent
Education/ Qualifications	*[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]'* 8/2000 - 05/2002: Indiana University, The O'Neill School of Public and Environmental Affairs, Bloomington, IN, USA: MPA: Master of Public Affairs with concentration in : Geographic Information Systems and Environmental Policy Analysis(GPA 3.8 out of 4.0) 9/1994 - 05/1999 North-West Academy of Public Administration Saint-Petersburg, Russia; Bachelors degree in State and Municipal Administration(Distinction)
Professional certifications	*[Provide details of professional certifications relevant to the scope of services]* **Certified trainer in GIS**
Employment Record/ Experience	*[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]* From 2020 To present Employer: Academy of Economic Studies of Moldova (ASEM) Position held: Associate Professor, Lead GIS Expert From: 2008 To present Employer: IM Trimetrica SRL Position held: Project Manager in IT/GIS Projects, GIS Department From 2008 To 9/2010 Employer: IM Trimetrica SRL Positions held: Team Leader, GIS Department From 8/2005 To 3/2006 Employer: IM TRIMETRICA SRL Positions held: Project Coordinator and Lead Technical Consultant, GIS Department From 2003 To 2004 Employer: USAID Positions held: Senior GIS Consultant From 2002 To 2002 Employer: The World Bank, Washington DC, USA Positions held: Consultant

	Key skills and areas of expertise: Requirements analysis; Architecting and deploying comprehensive GIS Systems, Development of GIS monitoring systems; Implementing GIS using Desktop/Enterprise/Mobile/Cloud solutions and related technologies; Geodatabase management; GIS mapping, analysis and modelling; Intelligent mapping and Big Data, Spatial Imagery&UAV; Data Collection and Processing; Data Quality Control and Assurance (QA&QC). Scripting Python/Arcade, GIS System documentation; System technical support (integrity, security, backup); Training support and Technical consultancy.
References	*[Provide names, addresses, phone and email contact information for two (2) references]* Reference person 1: Corneliu Gutu, deputy rector ASEM, 060535517, Reference person 2: Andrei Cantemir, IREX, 060502025, acantemir@irex.org

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe myqualifications, my experiences, and other relevant information about myself.

HRISTEV Elena

*Work undertaken that best illustrates capability to handle the tasks assigned:

Name of assignment or project:	**GIS Data Hub for raion Cahul**
Year:	2021
Location:	Rep. of Moldova
Organization:	SIA Technology
Main project features:	"GIS Data Hub for raion Cahul" is a unique and open geospatial data Portal that was launched to assist Cahul regional authorities and respective administrative departments to deliver essential public information for wide use. Portal is considered as an important part of the raion's vision and implementation of transparent governance and smart community. Developed "GIS Data Hub for r. Cahul" is a complex information system that support decision making at the local level. External part of GIS Data Hub via set of digital maps and interactive GIS Web applications offer citizens efficient data visualizations and robust geospatial analysis on regional statistics for demography, finance, agriculture. Internally Data Hub provide regional officials convenient means to manage regional geodata and metadata, create GIS models and implement GIS applications. Portal is implemented on a Cloud-based ArcGIS platform and can be found at: https://gisportal-cahulraion.hub.arcgis.com
Position held:	GIS Project Manager

Activities performed:	• Technical requirements and design of GIS Data Portal. • Development of the "GIS Data Hub for r. Cahul" as set of interactive web GIS applications with public access and internal administrative part. • Geodata modeling and QA/AC. • Training support for GIS solution in organization. • Technical GIS consultancy.

Name of assignment or project:	**Atlas of Organic Agriculture**
Year:	2020
Location:	Rep. of Moldova
Organization:	NGO Ecovisio
Main project features:	In 2020 "Atlas of Organic Agriculture" in the Republic of Moldova has been launched within "Rural Agroecological Resilience Hub " project supported by GEF SGP Program and UNDP. "Atlas of Organic Agriculture" is a robust and interactive Web GIS application that offers comprehensive information on certified producers of organic (ECO) agricultural products in Moldova. Cloud-based ArcGIS platform with rich GIS analytical toolset allows to locate producers that support sustainable agriculture practices and provide up to date information for state institutions, civil society and citizens. The atlas can be found at: https://experience.arcgis.com/experience/c9e40f5d2376449ca0293178eaaf319f
Position held:	GIS Project Manager
Activities performed:	• Design and development of the Integrated Geospatial System. • Development of the "Atlas of Organic Agriculture" as a Web GIS Portal with public access upon customer requirements. • Geodata processing and Quality Control. • Training support for GIS solution in organization. • Technical GIS consultancy.

Name of assignment or project:	**GIS Platform for Agriculture Information Center (CIA)**
Year:	2010 -2017
Location:	Rep. of Moldova
Organization:	Agriculture Information Center (Centrul Informational Agricol), Ministry of Agriculture of Moldova
Main project features:	Agriculture Information Center (CIA) implementation of GIS technology to deliver statistics on basic indicators in agriculture (livestock, land, crops.etc.) The project involved development and delivery of the Cloud GIS solutions, GIS technical consultancy and conceptual analysis,

	technical and training support for the customer.
Position held:	Lead GIS Specialist
Activities performed:	• Requirements Analysis • GIS System Design (technical specifications). Defining concept and architecture of the scalable GIS for organization. • Application Design. Creating ArcGIS Online web GIS application and other GIS instruments to visualize and map livestock, land, crops indicators at national and local level. • Geodatabase structuring. • Set up secure access to GIS applications and geodatabase • Technical and operational support for organization GIS. • System documentation and training support.

Name of assignment or project:	**Interactive GIS Portal** for the National Association of berries and fruit producing companies (Pomusoarele Moldovei)
Year:	2017
Location:	Rep. of Moldova
Organization:	National Association of berries and fruit producing companies (Pomusoarele Moldovei)
Main project features:	Interactive GIS Portal and central geodatabase was developed and launched to deliver Association members advanced management system of proprietary information on produce, lands, and other relevant statistics. At the same time Portal ensured citizen open access and proper logistics to the needed locations. The project involved development and delivery of the Cloud and Desktop GIS solutions, GIS consultancy, technical and training support for the customer.
Position held:	Lead GIS Specialist
Activities performed:	• GIS System Design. • Geodatabase structuring. • Data Collection and automatization. • GIS Mapping • Web GIS application development to visualize locations and main indicators at national and local level • Security and open standards set up for GIS applications and geodatabase. • Technical support • System documentation and training

Name of assignment or project:	**"Moldova Soils" - GIS Mapping Application for Institute of Soil, Pedology and Agrochemistry N. Dimo of R. of Moldova**
Year:	2010
Location:	Rep. of Moldova
Organization:	Institute of Soil, Pedology and Agrochemistry of R. of Moldova (Institutul de Pedologie, Agrochimie şi Protecţie a Solului N. DIMO)
Main project features:	"Moldova Soils" - interactive GIS Portal to monitor soil variation, agrochemical indicators, soil quality index is launched to support project stakeholders on soil data management. GIS Mapping application to be found at https://ipaps.md/sol/ GIS portal is offering modern geospatial tools to provide comprehensive web soil survey and visualize main soil parameters in Moldova. The resource will assist land planners and agriculture specialists for proper soil management and recovery as well allow careful planning for regional development projects.
Position held:	GIS Expert
Activities performed:	- GIS data automation and GIS mapping. - Web map configuration to visualize soil agrochemical indicators and soil quality index at national level - Technical support and system documentation - GIS training

Name of assignment or project:	**Identification of POPs Residuals and Mapping of Polluted Areas, under WB/GEF funding, Ministry of Environment**
Year:	2008 – 2010
Location:	Rep. of Moldova
Organization:	Minsitry of Environemnt/ WB/ GEF
Main project features:	The project assumes supply of consultancy and development of the software and data support services to the Ministry of Ecology and Natural Resources on comprehensive MIS system
Position held:	Team Leader
Activities performed:	The objective of this consulting assignment is to identify and survey the areas polluted with POPs (Persistent Organic Pollutants) and to develop and establish a comprehensive geo-database. The goal was to model POPs areas' regarding their environmental and health impact. The modelling was done based on sampling, analyses and mapping of these areas using GIS technology. GIS system was integrated in a broader IM&RS system maintained by the Ministry. Web mapping and analysis application was a key instrument for decision makers in the Ministry to plan appropriate actions on the POPs problems.

	• As Team Leader supplying expertise in logical and physical system architecture; geodatabase development and quality control. GIS Mapping and risk modelling.

Name of assignment or project:	**Land Privatization Support Project**
Year:	2003-2004
Location:	Republic of Moldova
Organization:	USAID
Main project features:	Design and implementation of Internal Project LPSP Land Management GIS system for tracking errors made during privatization in R. of Moldova. Desktop GIS Reporting and mapping modules designed. Training sessions for project staff.
Position held:	Senior GIS Consultant
Activities performed:	Develop and deliver LPSP.GIS system with the aim to manage projects workflows when correcting for survey and legal discrepancies in Moldova land cadastre. During the course of the project, a number of "tailored to the system" training courses were designed and executed. In addition, consolidation of the GIS project that reveals the trends of the land market in Moldova was elaborated. The project encompassed delivery of the logical and physical architecture, data development and modeling to streamline LPSP operations and management.

Scientific Research and Teaching

Name of assignment or project:	**Associate Professor for Academy of Economic Studies of Moldova (ASEM) and Lead GIS Expert for the Institute for Economic Research and European Studies**
Year:	2020 to present
Location:	Rep. of Moldova
Organization:	ASEM
Main project features:	Bachelor Program for Faculty "Economic Cybernetics, Statistics and Informatics". Elena Hristev is the author and professor for the following courses: Geographic Information Systems, Intro in GIS, Technology for Data Processing, IT Application Packages. „MAPGEO Covid19" Project is implemented by Institute for Economic Research and European Studies within Academy of Economic Studies of Moldova (ASEM) in collaboration and support of Ministry of Education Culture and Research of Moldova and Ministry of Health, Labour and Social Protection. The project provides GIS Analysis and spatial modeling in the context of Covid19 pandemic in Moldova.
Position held:	Associate Professor, Lead GIS Expert
Activities performed:	As an Associate professor for the courses with GIS/IT focus Elena Hristev performs the following: • Design and Development of the courses (concept and educational materials). • Lecturing and delivering laboratory and seminar activities. • Research and Development within ASEM. As a main GIS Expert Elena Hristev is tasked to lead elaboration of the geospatial model for analysis and forecast of COVID-19 pandemic in the context of socio-economic factors in Moldova. Elena is responsible on: • Building comprehensive GIS database aggregating big data on COVID-19 from various sources as well as offer efficient solutions for geospatial data visualization and analysis. • Elaborating geospatial model for COVID-19 epidemic information on incidence rates, confirmed cases, tracking their behavior and development in space and time. Undertaking multi-factor analysis and prediction of the pandemic on the regional scale, spatial segmentation, creating risk analysis. The resulting model will serve as basis for coordinated response and recovery measures and for better decision making on the local and national levels. • Documentation and technical training to the Project beneficiaries and parties. Technical support for the elaborated model and GIS database.
Name of assignment or project:	**Technical Trainer for Comrat State University (KDU), Course: "Precision agriculture using Drone technology"**
Year:	2019

Location:	Rep. of Moldova, UTA Gagauzia
Organization:	Comrat State University (KDU)
Main project features:	In 2019 specialized course on use of UAV technology for precision agriculture was delivered for KDU "InnoCentru" within its Innovation Incubator Project. Course participants gained valuable knowledge on modern practices in field data collection and mapping using drones. Course features use of GIS technology and applied methods on capturing orthomosaics, processing drone imagery to deliver DSM/DTM models and further spatial and prediction analytics using geoprocessing models. The project promotes efficient practices in agriculture and precision farming for vineyards of the south region.
Position held:	Technical Trainer, GIS Expert
Activities performed:	Elena Hristev performs the following activities: • "Precision agriculture using Drone technology" course development and implementation • Drone field activities • GIS laboratory and seminars using ArcGIS and Pix4D platforms
Name of assignment or project:	**Associate Professor for State Agrarian University of Moldova, Course: "GIS application for sustainable agriculture and land management"**
Year:	2006 -2007
Location:	Rep. of Moldova
Organization:	State Agrarian University of Moldova
Main project features:	Course "GIS application for sustainable agriculture and land management" at the Faculty Cadastre and Law.
Position held:	Associate Professor
Activities performed:	Elena Hristev performed the following activities: • "GIS application for sustainable agriculture" course development and implementation • Educational materials development