PERSONAL INFORMATION

Vitalie DILAN

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Sex male | Date of birth 25/11/1972 | Nationality Republic of Moldova

WORK EXPERIENCE

August 2015 – present

Assist. Prof. MSc

"Ion Creangă" State Pedagogical University in Chisinau, Faculty of Geography

- Research activity in the field of (1) flood risk management, flood vulnerability, flood hazard, modelling and spatial analysis of flood risk/ (2) open spatial data, open spatial infrastructure, environmental data (3) protected areas
- Education and teaching/methodic activity: course notes for students, using the project methods during the teaching process – main subjects: Physical Geography, Web GIS, GIS Project, GPS, Remote sensing, Introduction to GIS etc.

EDUCATION AND TRAINING

September, 2019 – June, 2021

MSc in Geoinformatics

Tiraspol State University, Faculty of Geography, Chisinau, Moldova, Republic of

- GIS, Research activities

September, 2005 – September, 2006

MSc in Geography - Diploma

Tiraspol State University, Faculty of Geography, Chisinau, Moldova, Republic of

- Geography, Research activities

1999 – 2003

Part - time doctoral student

"Al. I. Cuza" University, Iasi, Romania

- Environment Protection and rational using of natural resources; Physical Geography, Environmental protection, GIS, Remote Sensing

September, 1990 – June, 1995

Bachelor Diploma in Geography and Biology

Tiraspol State University, Faculty of Geography, Chisinau, Moldova, Republic of

- Studies in Geography and Biology field

May 11 – June 13, 2020

Certificate of Achievement – Echoes in Space: Introduction to Radar Remote Sensing MOOC

EO College, European Space Agency

- History of Radar technology
- Image acquisition Geometry of airborne and space borne Radar systems
- Land applications of Radar remote sensing
- Application of Radar remote sensing for Hazard management.

April 15 – May 27, 2020

Certificate of Completion – Cartography MOOC

Esri, Esri Training

- Mapping wirh ArcGIS Pro, ArcGIS Online,
- Projections and data classification methods on thematic maps,
- Typography, label placement and map composition,
- 3D Maps.

March 9 – May 28, 2020

Certificate of Achievement – Copernicus MOOC: Learn to harness the power of space data

Copernicus, University of Luxembourg Competence Centre, European Commission

- Copernicus Data and Services,
- Security and emergency management Services,
- AI and Machine Learning,
- Ideation, Prototyping and Developing the product and services.

August 26 – August 30, 2019

Certificate of Participation - Free and Open Source Software for Geospatial, FOSS4G

geo-spatial.org, the OSGeo Local Chapter of Romania, Bucharest, Romania

- Free and open source software for geospatial storage, processing and visualization,
- https://2019.foss4g.org/
- Open Source geoCommunity,
- the latest developments, new innovative product or services.

February 25 – March 2, 2018

Certificate of Participation

Technical University of Braunschweig , Germany - Euro SDR EduServ16

- Oblique Aerial Camera Systems for Mapping Purposes
- Open Spatial Data Infrastructures
- Topographic Maps through Description and Classification of Remotely Sensed Imagery and Cartographic Enhancement

November 18 – November 19, 2016

Certificate of Participation - Open geodata using open source tools workshop

geospatial.org, Bucharest, Romania, at: West University from Timisoara, Timisoara, Romania

- QGIS,
- Open geodata, environmental datasets,
- Open source tools, application of open source tools, its advantages vs commercial source tools

November 14 – November 15, 2014

Certificate of Completion - Post Disaster Needs Assessment and Post Disaster Recovery Framework

UNDP, The Civil Protection and Emergency Situations Service, Moldova

- Quantitative and qualitative assessment,
- Post Disaster Needs Assessment,
- Post Disaster Recovery Framework

November 14 – November 15, 2014

Diploma - QGIS, Open geodata using open source tools

geospatial.org, Bucharest, Romania/ West University from Timisoara, Timisoara Romania

- QGIS
- Open geodata, environmental datasets
- Open source tools, application of open source tools, its advantages vs commercial source tools

May 22 – -May 23, 2013

Certificate of Participation - ERRA Regional Workshop

Civil Protection and Emergency Situations Service, Chisinau, Republic of Moldova

- Analysis, Planning and managing databases

November 07- November 18,

Certificate of Training - Advanced Training Course on GIS

2011

HFT Stuttgart University, Stuttgart, Germany/ Yerevan State University Architecture and Construction, Yerevan, Armenia

- Advanced GIS training, modelling and analysis tools, application of different tools in real case studies, including field work

PERSONAL SKILLS

Mother tongue(s): romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Russian	C2	C2	C2	C2	C2
	Replace with name of language certificate. Enter level if known.				
English	C1	C1	C1	C1	C1
	Replace with name of language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Team leader; good ability to adapt to multicultural environment (involved in international projects); good communication skills gained through my experience as National Focal Point, Project manager and GIS Consultant in international projects

Organisational / managerial skills

- Good experience in international and national projects management as a Local Coordinator, Project Manager; Team Leader

DIGITAL SKILLS

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user
Digital competences - Self-assessment grid

- *Software: Microsoft Office (Word, Excel, PowerPoint, Front Page);*
- *GIS: Intergraph GeoMedia 5.x, ArcView GIS 3.x, ArcGis Desktop (8.x, 9.x), TNTMips, ERDAS IMAGINE 8.x;*
- *System: Windows, Windows NT;*
- *Internet browsers: Internet Explorer, Opera*

ADDITIONAL INFORMATION

Publications

[1] CASTRAVEȚ, T.; CĂPĂȚÎNĂ, L.; AVANZI, A.; FRANK, E.; **DILAN, V.;** BEJAN, I. Estimating hydropower potential of small rivers of Republic of Moldova using GIS. În: *Geographia Napocensis*, Anul XI, nr. 1, 2017. Pag. 35-44 ISSN 1843-5920

[2] GRAMA, V.; AVANZI, A.; CĂPĂȚÎNĂ, L.; FRANK, E.; **DILAN, V**. Flood vulnerability usage for flood risk assessment in the Republic of Moldova. În: *RevCAD Journal of Geodesy and Cadastre*. 21/2016, 51-58 ISSN 1583-2279

[3] CASTRAVEȚ, T.; **DILAN, V.** Modelarea scurgerii de suprafață utilizînd SIG. Materialele Conferinţei ştiinţifice cu participare internaţională „Mediul și Dezvoltarea Durabilă", IInd ed., May 22-24, 2014, Tiraspol State University, Chisinau, 2015. 216-222. ISBN 978-9975-76-157-4.

Projects

LAST 10 YEARS PROJECTS, RELEVANT FOR MAPS ELABORATION AND DATA COLLECTING

Project : "Assistance in elaboration of the Flood Risk Management Plans" - Contract Nr. IFSP/CS-33/C.14./C.2/1.9/Loc Project (for the Nistru, and Danube-Prut and the Black Sea River

Basin Districts)

Name of employer: Swiss Agency for Development and Cooperation and the Austrian Development Agency

Period: August, 2018 – June 1, 2019

Position: GIS Expert

Activities and tasks:

1. To carefully study all available materials (reports, other flood risk and flood hazard related information and maps, master plan, investment plan, etc.) prepared by BETA Studio and HR Wallingford under the "Management and Technical Assistance Support to Moldova Flood Protection" Project, and select and collate available information, including cartographic material, as per Nistru, and Danube-Prut and the Black Sea River Districts according to national requirements to the Flood Risk Management Plan (refer to Regulation no. 887 of November 11, 2013).

2. To verify whether information, data and cartographic material regarding preliminary assessment of the flood risks and flood hazards is complete and complies with national requirements. In case of absence of required flood risk assessment and/ or flood hazard information and data for the Nistru, and Danube-Prut and the Black Sea River Basin Districts, to produce it for further inclusion in the Flood Risk Management Plans for both districts. In case if available data/ information does not comply with national requirements to information to be provided in the Flood Risk Management Plans, to bring it in compliance (including with use of available national data, reports etc.).

3. To elaborate annotated outline/ detailed content of the Flood Risk Management Plan and coordinate it with the MoARDE and other key stakeholders.

The Plans shall contain but not limited to next information tentatively structured as follows:

- *Background*
- *Conclusions on the preliminary risk assessment*
- *Flood hazard maps and flood risk maps, and conclusions made on the basis of these maps*
- *Management Objectives*
- *Measures with indicating of terms of implementation, responsible, and funds needed for measures implementation*

4. To verify whether cartographic/ geospatial data developed by BETA Studio SRL and HR Wallingford Ltd was handed over to the Cartographic Fund of the Agency for Land Relations and Cadastre as per requirements of national legislation, and if not - to assist MoARDE to hand it over including those developed under current assignment, if any.

Project : "Management and TA Support to Moldova Flood Protection"

Name of employer: European Investment Bank

Period: October, 2013 – March, 2016

Position: GIS Expert

Activities and tasks:

1. Conduct Preliminary Flood Risk Assessment (PFRA)

With reference to task 1 of the Principal Services, the Expert will perform the following activities:

• Data collection, analysis and processing:

to collect, analyse and catalogue all data necessary to the study (a list will be prepared by the 4 key Experts and experts from the Consultant) together with junior GIS expert and senior and junior hydraulic modeller experts;

to support the KE4 in the design and implementation of the GIS for the project;

• Identification of potential areas for reforestation:

to process data within the GIS for identification of potential areas of reforestation (using the methodology defined by KE4 together with the Soil and Land Use Specialist);

• Contribution to the preparation of the Preliminary Flood Risk Assessment Report:

to prepare the overview maps and tables resulting from task 1 activities under the supervision of the KE4 and in collaboration with the junior GIS expert;

• Organisation of task's data and results in the GIS.

2. Conduct Hydraulic Modelling and preparation of Flood Hazard Maps

With reference to task 2 of the Principal Services, the Expert will perform the following activities:

• Data collection and organisation:

to collect and to organise data on receptors (including land use, properties, people, infrastructure, agriculture, etc.) and on damage costs including historic floods in the geodatabase under the supervision of the KE4 and in collaboration with the junior GIS expert;

• Estimation of potential for small hydropower:

to process data within the GIS to provide and overall estimate of hydropower potential for all the rivers in Moldova using the methodology defined by KE4 and working together with the senior hydraulic modeller expert;

• Preparation of task's output:

to organise data and results of task 2 in the geodatabase in collaboration and under the supervision of the KE4 and in collaboration with the junior GIS expert;

3. Conduct Flood Risk Assessment (FRA) and preparation of Flood Risk Maps

With reference to task 3 of the Principal Services, the Expert will perform the following activities:

• Data collection and organisation:

to collect and organise in the geodatabase, together with the junior GIS expert, the damage and vulnerability data needed for flood risk assessment;

4. Implementation of a GIS based River Management and Monitoring System

With reference to task 8 of the Principal Services, the Expert will perform the following activities:

to incorporate the TA maps and data into the Promoter's GIS and to hand over the other GIS tools developed in the TA, together and under the supervision of the KE4.

Project: "The prevention and protection against floods in the upper Siret and Prut River basins, through the implementation of the modern monitoring system with automatic stations" Project- EAST AVERT (MIS ETC 966)

Name of employer:: Joint Operational Programme "Romania – Ukraine – Republic of Moldova 2007-2013"

Period: November, 2013 – June, 2017

Position: GIS Expert

Activities and tasks:

1. The identification of the historical flooded areas and mapping of historical flood events and determining the prevention measures for the identified flood risk areas

• geo-morphometric analysis of watershed topography and other relevant geospatial data; documentation on the description of extreme events in specific studies and historical documents;
• designing of a questionnaire to identify relevant areas and the consequences of extreme events produced, and carry out them in the localities located in the floodplain of main rivers;
• analysis of satellite images achieved during the last extreme floods along Siret and Prut;
• selection of relevant historical events, based on existing hydro-meteorological data;
• developing and application of a simplified methodology based on GIS for the demarcation of areas flooded by the great floods recorded in the hydro-meteorological databases of the partners;

2. Flood hazard mapping and the vulnerability/risk mapping using an adequate digital terrain model (DTM) and the high-resolution spatial data

• production of the hazard maps using a digital terrain model resulting from the detailed land survey (lidar data, orthophotograms or from the high resolution satellite images);
• collecting data for vulnerability/risk maps using both terrain cover data in compliance with EU CORINE LANDCOVER System, in order to estimate the losses/vulnerability and high resolution data in cities areas;

Project: "Improving the performance of environmental information in Republic of Moldova to comply with European standards"

Name of employer: GEF SGP Moldova

Period: January, 2014 – March, 2015

Position: Project Coordinator

Activities and tasks:

• Assurance mechanisms of facilitation for environmental data collection,
• Processing and their distribution by NGOs in the field through Public Environmental Data System (PEDS);
• Web Portal Development based on GIS technologies for secured upload and download of environmental data by NGOs in the field of environment and all people interested in;
• Assurance of ONGs' training and knowledge exchange for using System.

Project: "Developing the Concept and Structure of Water Geographic Information System"
Name of employer: World Bank, Water Supply and Sanitation Project Implementation Unit

Period: May, 2013 – September, 2013

Position: Project Manager

Activities and tasks:

This project aims to develop the Concept of Water Geographic Information System of the Republic of Moldova, which would establish a legal framework to deliver up-to-date, accurate and comprehensive assessment and reasoning of decisions and increase the effectiveness of a water management at all levels of authority - central, regional and local.

The Consultant shall be responsible for:

• Analyzing the existing information system and current information needs (data flow, information and how are existing information systems operated, etc.);

• Develop WGIS Concept to provide users, researches and decision makers with up-to-date, and comprehensive geospatial information about surface and underground waters. The Concept shall include necessary details for implementation of the appropriate WGIS;

• General design of the WGIS system (defining entrances and exits to/from the system, basic components, interconnections between components, etc.);

• Detailed design and implementation of WGIS (defining the structure of new system at the class level, detailed structure of the database, ways of interconnections between components at a lower level, etc.).

Project: "Moldova Disaster and Climate Risk Reduction"

Name of employer: United Nations Development Programme Moldova

Period: January, 2013 – August, 2013

Position: National GIS Consultant for establishment of NDO's network in Moldova

Activities and tasks:

1. Design and development of the NDO (National Disasters Observatory) disaster database

• In close consultation with GRIP experts and the NDO working group, design and develop the NDO disaster database, through the implementation of the following activities:

a. NDO database design;

b. systematic disaster registration;

NDO database shall consist of these modules: An integrated database; Modules for the general public; Modules for the decision makers.

Import of site coordinates from ESRI and MapInfo format. Coordinate import from GPS devices.

2. Database Migration

• Database migration from existing '1C Contabilitate 7.5' Informational System to PostgreSQL Server format;

• Functionality assessment of the Informational System after database migration;

• Adjustment of the Informational System '1C Contabilitate 7.5' for PostgreSQL Server functionality.

3. Data sharing mechanism for the NDO in Moldova

• In consultation with NDO local experts review and assess existing reporting mechanisms agreeable to the national and international standards;

• In coordination with the working group and the NDO expert, suggest data sharing mechanisms for the NDO network;

• Prepare the technical specifications for the acquisition of WEB GIS software and hardware for NDO under UNDP competitive bidding procedures;

• Prepare cost estimates. The consultant should determine the financial resources required for implementation. The statement of resources should include: Cost estimate of hardware, software and network customization costs; Installation costs;

4. Organize on job trainings for NDO staff

• Provide trainings on systematic disaster registration, GIS and web map services; All the work should be done in close consultation with Civil Protection and Emergency Situation Service relevant staff and PPRD East GIS expert. Design of the whole package should be presented to and consequently cleared and approved by the UNDP and CPESS staff.

Project: "National Biodiversity Planning"

Name of employer: Biodiversity Office, Ministry of Environment

Period: October, 2012 – December, 2013

Position: National GIS Consultant

Activities and tasks:

The key objective of this assignment includes:

• Development of the National Biodiversity Information System (NBIS);

• Installation & configuration of the system,

• Development of WEB application for NBIS and preparation and delivery of tailor made training for biodiversity data management and maintenance of the software.

Project: **"Strengthening the National Statistical System"**

Name of employer: United Nations Development Programme Moldova

Period: December, 2012 – May, 2013

Position: National GIS Consultant

Activities and tasks:

1. Desk review:

• The consultant will have to review the available technical guides on the contemporary methods, tools and best practices that would enable NBS statisticians to better articulate their needs and deal with census-mapping operations more efficiently;
• Get acquainted with the results of previous activities undertaken so far by the NBS and involved stakeholders in the area of concern for the present assignment;
• Analyze international and European standards and best practices on the use of GIS for statistical purpose, in particular for census activities;
• Review and evaluate the resources and materials available at the moment related to GIS at the national level (in Cadaster, and other similar organisations) which could be relevant for statistical/Census purpose;
• Consultations with the staff of NBS will be undertaken to determine more details on the actual use of geographic materials for statistical works and activities, needs for new improvements/updates;
• Propose own approach for the expected activities and detailed work plan that encompasses the above- mentioned objectives and discuss them with Project stakeholders;

2. Undertake an analysis on GIS resources available in/for the country's context:

A envisaged revision of available resources will consist of, but not be limited to:
• The situational analysis of the field of Geographical Information System at the national level, including the examples of country best practices, relevant experiences available within other national institutions (Agency for Land Relations and Cadastre and its subordinated specialized entities, Institute of Geography, etc.), in the application of GIS, GPS and digital mapping;
• On the basis of this, the NBS will need to evaluate how available mapping options fit into the context of its own census programme and national statistics planning;
• Such issues as existing geographic resources in the country, technology resources and staff, available funds and the time frame allocated to complete the geographic tasks for the census will determine the best mix of technology and approaches for the NBS case;
• The envisaged analysis of GIS resources will serve as a basis for formulation of GIS concept and strategic note for NBS (see next activity);

3. Formulate a concept and strategic note on creation and use of GIS in NBS's activities, in particular for the purpose of Population and Housing Census 2014.

A GIS concept for NBS will be formulated on creation, development and use of GIS within the statistical processes and activities, in particular censuses.
• The concept will be designed to envisage an optimal implementation scenario using the GIS resources available in the country;
• The report will describe the role of geospatial technology in each step of the census process, will show how these/GIS technologies would improve efficiency in the preparatory, enumeration, processing and dissemination phases of the census, potential costs and benefits of investment in geospatial technology by NBS.
• The concept will address managerial, organizational and institutional issues that the NBS management should consider when implementing/applying the geospatial infrastructure within the organization to permit the full use of it;
• This concept will also include a strategic note, or roadmap, containing the recommendations and follow-up activities on further implementation of GIS technologies in statistical processes by NBS, including: descriptions of main stages to be passed by NBS, activities to be carried out, estimation of needed efforts and relevant resources (personnel, financial costs, etc.) to ensure the successful implementation of GIS;
• In addition, suggestions for GIS map sets utilization for sampling activities will be made and recommendations to overcome the existing/eventual gaps in the appropriate legislation or policy-making framework will be provided;

Project: **"Irrigation Sector Reform Activity (ARSI), River Basin Management Sub-Activity"**

Name of employer: MCA "Compact" Program

Period: March, 2012 – August , 2012

Position: National GIS Consultant

Activities and tasks:

1. Detailed Institutional Review and requirements for the Common Platform (CP)

• Make a detailed list of the institutions and departments (at central, regional and local levels) which are part of the common platform and document their current IT and database specifications and capabilities;

• For each of these institutions/departments, the consultant will:

a) Provide detailed documentation on the current data-flows and work-flows for the data management process;

b) Evaluate the data and database technology currently used for the data management (size of the databases, importance in the whole workflow of the institution, current data automation, current data storage formats, current data management, current backup methods etc);

c) The consultant will describe formats of available digital data in the different sections: stations, parameters, frequency of observations, format of data etc. Gaps in these data time series (daily, monthly etc.) will be documented as well.;

d) Describe the requirements on how to import these existing digital data into RDBMS and the resources required for achieving this;

e) Detailed description of requirements of data conversion needs: amount of data to be digitized, current format of data, feasibility of using OCR for the conversion.

2. Sourcing of data

• The consultant will document sources of the required data in the platform (river basin modeling, groundwater modeling, flood modelling). Details should include: data source, data format, scale or resolution, data quality, any available metadata, availability and possible cost to obtain a copy of the data.

3. Conceptual schema of RBM common platform

• Create a general technical conceptual scheme and logical design document (draft, proposal only) describing the institutions involved and representing all processes, data flows and workflows for the CP. It is recommended to use modern CASE tools for developing this scheme;

4. Staffing plan

• The consultant will assess the required staffing to run the common platform. In collaboration with the management of the participating institutions and ISRA staff, the consultant will define staffing needs. Details should include name, qualifications, experience and number of years employed for each proposed staffing. Missing staff should be listed as well.

5. Training plan

• The software procured under the MCC/MCA tender will be delivered with introductory training from the supplier. These training sessions for “Hydrometeorological data management”, “Geographic Information Systems” and “River Basin Modelling” will focus on the use of the software;

• Additional training and on-the-job learning will be required. The consultant will assess the needs for additional training sessions and provide a training plan;

5. Implementation plan

The common platform requires the integration of temporal databases, geographic information analysis, and river basin modelling in four different physical locations. The consultant will propose a detailed implementation plan covering the following issues:

• Activities/Tasks (setup of the databases, training, GIS setup) and resources required taking into account the current situation in the participating institutions;

• Data and analysis integration issues (integration of databases in the four institutions, without detailing the technical implementation);

• Schedules, milestones, timing of outputs and outcomes of the CP taking into account the general project planning defined in ISRA documentation

Project: “Improving Coverage and Management Effectiveness of the Protected Area System”

Name of employer: United Nations Development Programme Moldova

Period: September, 2009 – June, 2012

Position: National GIS Consultant

Activities and tasks:

Investigation of the protected area (specification of the locality names, area etc.):

• Taking GPS coordinates of the area;

• Marking the borders of the area in the context of the locality, describing the area, development of a digital map with specification of the areal of dominant species of plants and animals (in

cooperation with other experts);
• Working with information from the cadaster office for the investigated locality (cadastral and ortho-photo plans), preparing the relief isolines and DTM at scale 1:10 000;
• Contribute to the development of the recommendations for management for the protected area specifying the abiotic data, pedological, geological, climate description, geographical location, taking into consideration the existing problems;
• treats, possibilities for development in the area. Work with local authorities for changing the status of the land use, coordinating with cadastre (if needed);
• Provide the Team leader for Orhei National Park establishment with all field notes, GPS information and photographs within one week following each expedition.

Project: WASTE GOVERNANCE

Name of employer: ENPI EAST Project

Period: Mart, 2010 – December, 2010

Position: GIS Expert

Activities and tasks:

• Develop a GIS database of Solid Waste Disposal Sites of the South region area:
• training the beneficiary specialist how to use and update database:
• organize a roundtable to discuss the recommendations with key national stakeholders.

Project: "Information Management and GIS Expert Group"

Name of employer: International Commission for the Protection of the Danube River (ICPDR)

Period: August, 2006 – October, 2010

Position: National focal point

Activities and tasks:

1. ICPDR Information System:

• support the further development and operation of the ICPDR Information System;

• organise, if necessary, training workshops in order to ensure the usability of the ICPDR Information System by delegates and members of the ICPDR Expert Bodies.

2. Danube River Basin GIS:

• guide the development of cartographic and GIS-related tools necessary for the implementation of DRPC requirements and implementation of the WFD in the Danube River Basin District;

• explore both the potential for a closer cooperation and the technical implications of enabling inter-operability of the Danube GIS and the Water Information System for Europe (WISE) and to identify concrete steps for making it operational;

• assist in the production of reports and maps required by ICPDR Expert Bodies.

Conferences

FOSS4G Conference 2019 (Bucharest, Romania);
International GIS Symposium (every year is organized by the representatives from Romania or Republic of Moldova);
Present Environment and Sustainable Development (organized in Iasi, Romania) etc.

Memberships

NGO "OIKUMENA"
Moldavian Ecotourism Association
Intergraph GeoSpatial Users Community
The Moldavian Geographical Society (Member of the Board)
University Consortium for GIS Research and Education (Member of the Board)