



Ștefan cel Mare  
University  
Suceava

Faculty of History and Geography

**Geography Department**

Romanian Geography Society, Suceava Branch  
Forestry Department RA Suceava  
Environmental Protection Agency Suceava  
Călimani National Park Administration  
EUDEMOS Suceava



**Centrul GeA**  
Centrul de Cercetări de Geografie Aplicată

**SGR**  
SOCIETATEA  
DE GEOGRAFIE  
DIN ROMÂNIA  
FILIALA SUCEAVA

THE INTERNATIONAL SYMPOSIUM

# "ENVIRONMENTAL QUALITY AND LAND USE"

„CALITATEA MEDIULUI ȘI UTILIZAREA TERENURILOR”



**EnQa\_LandUse2013**

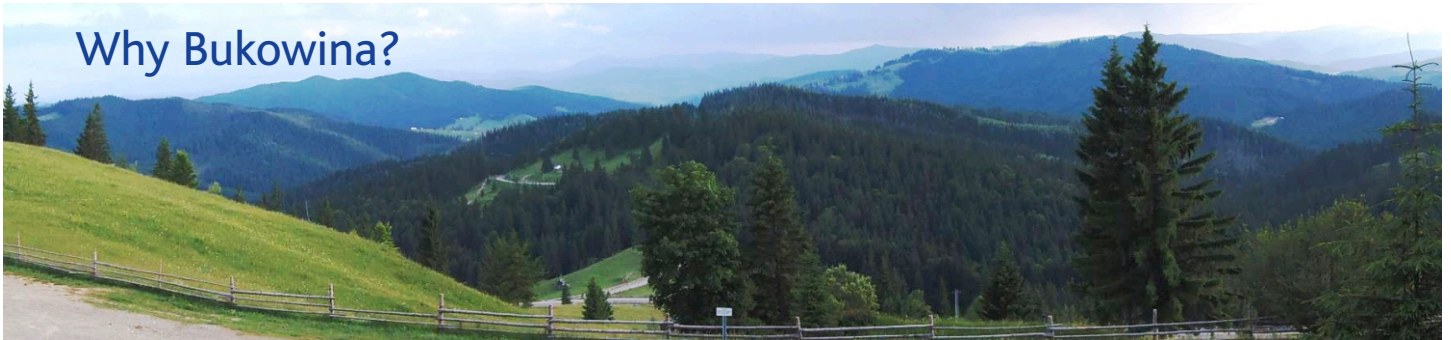
9<sup>th</sup> Edition

May 31<sup>st</sup> – June 1<sup>st</sup> 2013, Suceava

Symposium Theme:

**Geographic Space Organization from an Environmental Point of View**

## Why Bukowina?



For geographers and other actors involved in geographical space organization as well, the Bucovina area represents an entity marked by the contradiction between the rich and varied natural and cultural potential on the one hand and the recent negative impact brought about by the aggressive actions upon the forestry fund or by the territorial spreading of new-type buildings on the other hand.



Under these circumstances we invite you to an open debate meant to identify the territorial tensions and to propose solutions for the present situation.

Last but not least we intend to find a way to try to avoid such realities in the future.



## SCIENTIFIC COMMITTEE

Prof. PhD Ioan IANOȘ, Bucharest University  
Prof. PhD Irina Brândușa UNGUREANU, "Al. I. Cuza" University, Iași  
Prof. PhD Benjamin STECK, Université du Havre, France  
Prof. PhD Bruno LECOQUIERRE, Université du Havre, France  
Senior Scientist PhD Zita IZAKOVICOVA, Slovak Academy of Science, Slovakia  
Prof. PhD Pompei COCEAN, Babes Bolyai University, Cluj Napoca  
Prof. PhD Vasile SURD, Babes Bolyai University, Cluj Napoca  
Prof. PhD Alexandru ILIEȘ, Oradea University  
Scientist first degree researcher PhD Valentin-Mihai BOHATEREȚ,  
Romanian Academy, Iași Branch, "Gh. Zane" ICES  
Associate Professor PhD Viorel CHIRIȚĂ, "Ștefan cel Mare" University, Suceava  
Prof. PhD Vasile EFROS, "Ștefan cel Mare" University, Suceava  
Prof. PhD Maria RĂDOANE, "Ștefan cel Mare" University, Suceava  
Prof. PhD Liviu APOSTOL, "Al. I. Cuza" University, Iași  
Associate Professor PhD Ioan IOSEP, "Ștefan cel Mare" University, Suceava

## ORGANIZING COMMITTEE

Associate Professor PhD Viorel CHIRIȚĂ, "Ștefan cel Mare" University, Suceava  
Eng. Sorin CIOBANU, director of Forestry Department R. A., Suceava  
Eng. Basarab BĂRLĂDEANU, director of Călimani National Park Administration  
PhD Anca IONCE, Environment Protection Agency Suceava  
Prof. PhD Vasile EFROS, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Dumitru MIHĂILĂ, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Magdalena LUPCHIAN, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Despina VASILCU, "Ștefan cel Mare" University, Suceava  
Associate Professor PhD Dana POPESCU, "Ștefan cel Mare" University, Suceava  
Associate Professor PhD Liviu POPESCU, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Vasile BUDUI, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Mariana ȘOVEA, "Ștefan cel Mare" University, Suceava  
Lecturer PhD Elena Maria EMANDI, "Ștefan cel Mare" University, Suceava  
Assistant PhD Student Andrei BRICIU, "Ștefan cel Mare" University, Suceava

### *Organizing Committee Coordinator*

Associate Professor PhD Viorel CHIRIȚĂ, "Ștefan cel Mare" University, Suceava

## PROGRAMME / PROGRAM

- 8.00 – 9.00 Registration/Înregistrarea participanților (*E Building, first floor/Corpul E, parter*)
- 9.00 – 9.20 Opening address/Deschiderea oficială (*E Building, E 005 Amphitheatre/Amfiteatrul E005*)
- 9.30 – 11.45 Plenary Lecture /Comunicări în plen (*E 129 Amphitheatre/Amfiteatrul E 129*)
- IOAN IANOȘ**, University of Bucharest  
*The administrative region, product or tool in the organization of space?*  
*Regiunea administrativă, rezultat sau instrument în organizarea spațiului?*
- ION BOLD**, University of Agronomic Science and Veterinary Medicine, Bucharest  
*Territorial organization – purpose and role within sustainable development, integration and globalization*  
*Organizarea teritoriului – rol și funcții în condițiile dezvoltării durabile, integrării și globalizării*
- ZITA IZAKOVIČOVÁ**, Slovak Academy, The Ecology Landscape Institute  
*Changes of the Slovak rural landscape / Modificări ale peisajului rural în Slovacia*
- Pompei COCEAN, Gh. HOGNOGI, G. NICULA**, „Babeș-Bolyai” University, Cluj-Napoca  
*Morpho-hidrographic risks in the superior basin of the Ilișua valley*  
*Riscuri morfo-hidrografice în bazinul superior al Văii Ilișua*
- Discussion and debate**
- 12.00 – 13.30 Lunch break/Masa de prânz (*USV Restaurant*)
- 14.30 – 18.30 Paper presentations on sections

### SECTION ONE/SECȚIUNEA I

*Recent and future dynamics of the geographic landscapes and land use*  
*Geography didactics – mark of the conservative-creative education for (of) environment*  
*Dinamica recentă și de perspectivă a peisajelor geografice și utilizarea terenurilor*  
*Didactica geografică – reper al educației conservativ-creative pentru mediu*  
*(E 129 Amphitheatre/Amfiteatrul E 129)*

- 14.30 – 16.30 **Moderators/Moderatori:**
- ZITA IZAKOVIČOVÁ**, Slovak Academy, The Ecology Landscape Institute
- RADU CENUȘĂ**, “Ștefan cel Mare” University
- RADU CENUȘĂ**, “Ștefan cel Mare” University  
*The study of the early succession stage with pioneer trees in Moldova river bed*  
*Studiul stadiului pionier al succesiunii forestiere în albia majoră a râului Moldova*
- VALENTIN-MIHAI BOHATEREȚ**, “Gh. Zane” Institute of Economical and Social Researches, Romanian Academy, Iași Branch  
*The reassessment of the socio-economic importance of build-up areas in the rural environment*  
*Reconsiderarea importanței socio-economice a terenurilor intravilane din mediul rural*

**ZITA IZAKOVIČOVÁ**, Slovak Academy, The Ecology Landscape Institute

*New forms of the environmental education to the sustainable development in the Slovak republic*

*Forme noi ale educației pentru mediu în contextul dezvoltării durabile în Slovacia*

**ION BARBU, CĂTĂLINA BARBU**, ICAS, Câmpulung Moldovenesc, „Ștefan cel Mare” University

*Changes in the area occupied by forest in the 1775-2010 period in Bukovina*

*Schimbări în suprafața ocupată de păduri în Bucovina în perioada 1775–2010*

**ȘTEFAN GRĂMADĂ, GINA LAZURCĂ, DUMITRU MIHĂILĂ**, “Ștefan cel Mare University”

*Evolution of geographical landscape of Vatra Dornei, between 1778-2005, and future prospects*

*Evoluția peisajului geografic al municipiului Vatra Dornei, între anii 1778-2005, și perspective de viitor*

**VADIM CUJBĂ**, The Institute of Ecology and Geography of the Academy of Sciences of the Republic of Moldova

*Characteristics of land fund for small and medium cities in Republic of Moldova*

*Particularitățile fondului funciar al orașelor mici și mijlocii din R. Moldova*

**DINU OPREA, ADRIAN DONE, GEORGIANA BUTA**, „Ștefan cel Mare” University, Fundația de Speologie „Bucovina” Suceava

*Characteristics of endocarsts in Rarau Massif*

*Caracteristici ale endocarstului în Masivul Rarău*

#### **Discussion and debate**

16.30 – 17.00 Coffee break (*E Building, first floor/Corpul E, parter*)

17.00 – 18.30 **Moderators/Moderatori:**

**VALENTIN-MIHAI BOHATEREȚ**, “Gh. Zane” Institute of Economical and Social Researches, Romanian Academy, Iași Branch

**VIORIEL CHIRIȚĂ**, “Ștefan cel Mare” University

**IURII BEJAN, PAVEL ȚÎȚU**, The Institute of Ecology and Geography of the Academy of Sciences of the Republic of Moldova

*Assessment of Land Susceptibility to Landslides in the Ciulucurilor Hills by Frequency Ratio Method*

*Aprecierea gradului de susceptibilitate a terenurilor la alunecări de teren în Dealurile Ciulucurilor după metoda ratei de frecvență*

**NATAȘA VĂIDIANU, FLORIN IOSUB**, University of Bucharest, Team Net Bucharest

*Linking environmental conditions to accessibility degree in Danube Delta Biosphere Reserve*

*Corelarea condițiilor de mediu cu gradul de accesibilitate în Rezervația Biosferei Delta Dunării*

**MARIAN DRĂGOI**, “Ștefan cel Mare” University

*A theoretical model for assessing the contribution of land use change to flood control*

**VIORIEL CHIRIȚĂ, ANCA IONCE, DANIELA MATEI, MAGDA LUPCHIAN**, “Ștefan cel Mare” University, Environment Protection Agency Suceava, “Gh. Zane” Institute of Economical and Social Researches, Romanian Academy, Iași Branch, “Ștefan cel Mare” University

*Environmental operational perspectives regarding typology mining frisheses and regional development plan contained in the Strategy 2014–2020 in Suceava County*

*Perspective ambientale operaționale vizând tipologia frîșelor miniere și planul de dezvoltare regional cuprinse în Strategia 2014–2020 în județul Suceava*

**FLORIN OBREJA, IULIA OBREJA**, "Ștefan cel Mare" University

*The land use effect on sediment transport in the Siret Basin*

*Rolul utilizării terenurilor din bazinul hidrografic Siret asupra transportului de aluviuni*

**DINU OPREA, DANIELA POPESCU**, "Ștefan cel Mare" University

*Spatial distribution of the loess deposits on Suceava Valley and the morphology it has developed*

*Distribuția spațială a depozitelor loessoide pe cursul Văii Sucevei și morfologia dezvoltată pe acestea*

**VIOREL CHIRIȚĂ**, "Ștefan cel Mare" University Suceava

*The role of transportation corridors in organizing mountain area of Bukovina*

*Rolul coridoarelor de transport în organizarea spațiului montan bucovinean*

**VASILE MINDIRIGIU, DUMITRA MINDIRIGIU**, "N. Iorga" School Iași

*Formative nature of the primary environmental education*

*Natura formativă a educației primare ambientale*

**Discussion and debate**

## SECTION TWO / SECȚIUNEA II

*Habitat and cultural geography; The new rural economies and the rural space reorganization*

*Geografia habitatului și geografie culturală; Noile economii rurale și restructurarea spațiului rural (E 205 Room / Sala E 205)*

14.30 – 16.30 **Moderatori / Moderators:**

**LIVIU POPESCU**, "Ștefan cel Mare" University

**DESPINA VASILCU**, "Ștefan cel Mare" University

**LIVIU POPESCU, DANIELA POPESCU**, "Ștefan cel Mare" University

*The exploitation of some minerals from the Golden Bistrița valley and the upper Moldova Valley in 1770–1864*

*Exploatarea unor resurse minerale pe valea Bistriței Aurii și pe cursul superior al văii Moldovei în perioada 1770–1864*

**DUMITRU MIHĂILĂ, VALERIA DIȚOIU, PETRICĂ BISTRICEAN**, "Ștefan cel Mare University"

*The impact on the environment caused by the waste landfills in Suceava County*

*Impactul produs asupra mediului de către depozitele de deșeuri menajere din județul Suceava*

**DESPINA VASILCU**, "Ștefan cel Mare" University

*Aspects regarding the social and spatial health discrepancies in Suceava Municipality*

*Aspecte privind disparitățile sociale și spațiale de sănătate în municipiul Suceava*

**MIHAIL EVA, SIMONA CUCIUREANU**, "Al. I. Cuza" University

*Territorial structures described by accessibility to cultural services. A Case Study on North-East Region*

*Structuri teritoriale descrise de accesibilitatea la servicii culturale. Studiu de caz asupra Regiunii de Nord-Est*

**ELENA ACATRINEI**, "Ștefan cel Mare" University

*Huși Depression – Brief History of Research*

*Depresiunea Huși – scurt istoric al cercetărilor*

**Discussion and debate**

## SECTION THREE / SECȚIUNEA III

*Space Organization in the Context of the European Union Strategy 2020 / Conservative harnessing through tourism of environment potential*

*Organizarea spațiului în contextul Strategiei Uniunii Europene 2020; Valorificarea conservativă prin turism a potențialului mediului (E 206 Room/Sala E 206)*

14.30 – 16.30 **Moderators/Moderatori:**

**VASILE EFROS**, "Ștefan cel Mare" University

**DANIELA MATEI**, "Gh. Zane" Institute of Economical and Social Researches, Romanian Academy, Iași Branch

**VASILE EFROS**, "Ștefan cel Mare" University

*Harnessing the Tourist Potential in the North and South of Bucovina. Comparative Study*  
*Valorificarea potențialului turistic în nordul și sudul Bucovinei. Studiu comparativ*

**DANIELA MATEI**, "Gh. Zane" Institute of Economical and Social Researches, Romanian Academy, Iași Branch

*The economic evaluation of protected areas. Methodological aspects*  
*Evaluarea economică a ariilor protejate. Aspecte metodologice*

**MARIA-MAGDALENA LUPCHIAN, VIOREL CHIRIȚĂ, D. MATEI**, "Ștefan cel Mare University", "Gh. Zane" Institute of Economical and Social Researches, Romanian Academy, Iași Branch

*The development areas – between cohesion and disparities*  
*Regiunile de dezvoltare – între coeziune și disparități*

**COSMIN GABRIEL PORUMB-GHIURCO**, "Babeș-Bolyai" University

*The complementarity of Transylvania's tourist resources. Tessellation and personalization factor of the tourist image of a "fortified" geographical space*  
*Complementaritatea resurselor turistice ale Transilvaniei – factor de mozaicare și personalizare a imaginii turistice a unui spațiu geografic „fortificat”*

**VASILE EFROS, GEORGE CHEIA**, "Ștefan cel Mare" University

*Research methods in tourism. The Analysis SPSS*  
*Metode de cercetare în turism. Analiza SPSS*

**Discussion and debate**

16.30 – 17.00 Coffee break (*E building, first floor/Corpul E, parter*)

17.00 – 18.30 **Moderators/Moderatori:**

**MAGDA LUPCHIAN**, "Ștefan cel Mare" University

**GEORGE CHEIA**, "Ștefan cel Mare" University

**CĂTĂLINA MARIA BĂTEA**, "Babeș-Bolyai" University

*Preservation of natural values along the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties*  
*Protejarea valorilor naturale în zona de frontieră aferentă județelor Satu Mare și Szabolcs-Szatmar-Bereg*

**COSMIN GABRIEL PORUMB-GHIURCO**, "Babeș-Bolyai" University

*The castles and manors of Salaj County (noble edifices): their cultural and tourist representative component*  
*Castelele și conacele din județul Sălaj (reședințele nobiliare): componentă cultural-turistică reprezentativă*

**VASILE EFROS, GEORGE CHEIA**, "Ștefan cel Mare" University

*Ecotourism in Suceava county*

*Ecoturismul în județul Suceava*

**CONSTANTIN COCERHAN**, National College "M. Eminescu" Suceava

*The perception of the authorities and the population within Suceava River Basin on how to exploit the tourism potential*

*Percepția autorităților și a populației din Bazinul râului Suceava asupra modului de valorificare a potențialului turistic*

**Discussion and debate**

---

## POSTERS SECTION / SECȚIUNEA POSTERE

*(E building, first floor/Corp E, parter)*

**Moderator:** **DUMITRU MIHĂILĂ**, "Ștefan cel Mare" University

**LILIANA GURAN-NICA, ZENaida CHIȚU**, "Spiru Haret" University

*Natural amenity-driven development in the metropolitan areas*

*Rolul potențialului natural în dezvoltarea zonelor metropolitane*

**SORIN BĂNICĂ, FLORIN VARTOLOMEI, GH. HERIȘANU**, "Spiru Haret" University

*The General Urban Plan of Casimcea territorial administrative unit, map of natural and anthropogenic risk*

*PUG Casimcea – harta riscurilor naturale și antropice*

**ELENA GRIGORE**, University of Bucharest

*Urban patrimony, domains and functional area in Constanta. Current landmarks*

*Patrimoniu urban, domenii și zonare funcțională în municipiul Constanța. Repere actuale*

**SORIN GH. CARABLAISA**, University of Bucharest

*Climatic condition – modeling factors of the landscape dynamic in the Danube Corridor of the Iron Gates*

*Condițiile climatice – factori ai dinamicii reliefului în culoarul dunărean al Porților de Fier*

**ADINA JURJ**, "Babeș-Bolyai" University

*Tourism – an alternative of sustainable development in Roșia Montană*

*Turismul ca alternativă de dezvoltare durabilă în zona minieră Roșia Montană*

**CARMEN BĂDĂLUȚĂ, PETRICĂ BISTRICEANU, VIORICA NAGAVCIUC**, "Ștefan cel Mare" University

*The land use analysis of the river basin Solonet by the GIS techniques for the time period 1856-2011*

*Utilizarea tehnicilor SIG în analiza evoluției utilizării terenurilor din bazinul râului Soloneț pentru perioada 1856 - 2011*

**Discussion and debate**

18.30 – 19.00 **Conclusions / Concluzii (E 129 Amphitheatre / Amfiteatrul E 129)**

19.00 **Conference dinner / Cina festivă (USV Restaurant)**

Saturday, 1<sup>st</sup> of June 2013 **Field trip on the route Suceava – Sucevița – Moldovița – Vatra Dornei – Parcul Național Călimani – Ostra – Suceava**

## FIELD TRIP / APLICAȚIA DE TEREN, 250KM

### Field trip route / Traseul aplicației

8.00 Suceava – Rădăuți – Sucevița (Mănăstirea Sucevița) – Satul de vacanța Sucevița – Pasul Ciumârna – Vatra Moldoviței (Mănăstirea Moldovița) – Pasul Trei Movile – Sadova – Iacobeni – Vatra Dornei – Șaru Dornei – Centrul de Informare al Administrației Parcului Național Călimani – Mții Călimani – Șaru Dornei – Cheile Zugreni – Pasul Puzdra – Ostra – Stulpicani – Frasin – Gura Humorului – Suceava

### Field trip stops / Opriri în aplicația de teren:

1. Sucevița
  - Sucevița Monastery, a UNESCO monument, founded by Movilesti family, seventeenth century, famous for dominant iconography of green / Mănăstirea Sucevița, monument UNESCO, ctitorie a Movileștilor de secol XVII, renumită pentru iconografia de dominantă verde.
  - Holiday village Sucevița, at the bottom of the Obcina Mare - tourist pressure on the environment and specially land planning system generated by cultural and natural tourism potential of the area; the spatial association of forest and specific tourist facilities / Satul de vacanță Sucevița de la poalele Obcinei Mari - presiunea turistică asupra mediului și sistemul de organizare teritorială generat de valorificarea potențialului turistic cultural și natural al zonei; asocierea spațială a fondului forestier și amenajările turistice specifice.
2. The West perspective from Ciumârna pass way, on the Bukovina hills and mountains, ecotourism important insights / Perspectiva din pasul Ciumârna asupra Obcinelor Bucovinei, perspective ecoturistice importante.
3. Vatra Moldoviței
  - Moldovița monastery built by Petru Rareș in the sixteenth century, protected by UNESCO, the dominant red and yellow exterior iconography / Mănăstirea Moldovița, ctitorie a lui Petru Rareș de secol XVI, inclusă în patrimoniul UNESCO, dominantă roșie și galbenă în iconografia exterioară.
  - the complex communication axis Ciumârna-Moldovița, the geographic areas of the valley and ridge, additional dissociated and dispersed living areas / axa de comunicare complexă Ciumârna-Moldovița: organizarea spațiului geografic de vale și de culme; domeniile de locuire complementare disociate și disperse.
4. Sadova – perspective on the organization of geographical space mountain valley in Obcina Feredeului / Sadova – perspectiva asupra modului de organizare a spațiului geografic montan de vale, în Obcina Feredeului.
5. Vatra Dornei Resort of national interest, spa and climate, belonging to the green and white dominant geography space / Vatra Dornei- stațiune turistică de interes național, balneară și climaterică, aparținând Spațiului geografic de dominantă albă completat cu cel verde.
6. Șarul Dornei and Călimanilor Mountain Gate – which includes a common part of the National Park Călimani / Head National Park Administration Călimani / Șarul Dornei și Poarta Călimanilor - comună ce cuprinde o parte a Parcului Național Călimani, Sediul Administrației Parcului Național Călimani.
7. The Călimani National Park – landscape and biodiversity conservation main area in the Eastern Carpathians and an important ecological restoration area. / Parcul Național Călimani – între conservarea biodiversității și peisajului și reconstrucții ecologice.
  - specific relational association in organization of geographical space: the dispersal domain of housing and protected area / asocierea relațională complexă cu specificul de organizare a spațiului geografic: domeniul de dispersie de locuire și de arie protejată
  - perimeters of ecological reconstruction of disused sulfur mine since 1997, the area of the Negoiu Romanian Mountain – Pietricelu Mountain, at 1550-1750 m above sea level, framing features of the area in the National Park of Călimani with over 500ha of pits and dumps / perimetrele de reconstrucție ecologică a Exploatării miniere de sulf dezafectată din 1997, din perimetrul Negoiu Românesc - Pietricelul, 1550-1750 m; particularitățile de încadrare a arealului în Parcul național Călimani, cu peste 500 ha de cariere și halde de steril.
8. LUNCH at Șaru Dorna, Pension Carmina (14:30) / Masa prânz la Șaru Dornei, Pensiunea Carmina (ora 14,30)
9. Bistrița Valley and the narrows gorge at Zugreni - natural tourism potential and existing tourist facilities / Valea Bistriței și cheile de la Zugreni – Potențialul turistic natural și amenajările turistice existente.
10. Carpathians pass-way of Puzdra, in Stânișoara Mountains and Suha Valley/ Pasul Puzdra, Valea Suhăi
11. Mining at Ostra – Stulpicani area – economic and environmental consequences of destruction of frishes and mining ecological and social implications; types of pictures associated with them / Exploatări miniere de la Ostra - Stulpicani – consecințele ecologice ale destructurărilor economice și frizele miniere – implicații ecologice și sociale; tipuri de peisaje asociate acestora.
12. Moldova Carpathian Valley – organization of space mountain valley / Valea Moldovei carpatice – organizarea spațiului montan de vale.

21.00 Arriving in Suceava / Sosirea în Suceava.



## PARTICIPANTS LIST

|   |                              |
|---|------------------------------|
| ACATRINEI ELENA, PhD student<br><i>„Ștefan cel Mare” University, Suceava</i>  | emil_lena@yahoo.com          |
| BARBU ION, Senior Researcher, PhD<br><i>ICAS Câmpulung Moldovenesc</i>  | ionbarbu51@gmail.com         |
| BARBU CĂTĂLINA, Lecturer eng., PhD<br><i>„Ștefan cel Mare” University, Suceava</i>  |                              |
| BĂDĂLUȚĂ CARMEN, master's degree student<br><i>„Ștefan cel Mare” University, Suceava</i>  | carmensita_a@yahoo.com       |
| BĂNICĂ SORIN, Lecturer, PhD<br><i>„Spiru Haret” University, Bucharest</i>   | sbanica@gmail.com            |
| BÂTEA CĂTĂLINA MARIA, PhD student<br><i>„Babeș- Bolyai” University, Cluj-Napoca</i>   | batea.catalina@gmail.com     |
| BEJAN IURII, Senior Researcher<br><i>The Institute of Ecology and Geography of the Academy of Sciences of the Republic of Moldova</i>   | iurie.bejan@gmail.com        |
| BISTRICEAN PETRICĂ, meteorologist<br><i>Stația Meteorologică Suceava</i>  |                              |
| BOHATAREȚ VALENTIN-MIHAI, Senior Researcher I, PhD<br>honorable fellow of the Romanian Forestry and Agricultural Sciences Academy<br><i>“Gh. Zane” Institute of Economical and Social Researches, Romanian Academy, Iași Branch</i> | icesceris@yahoo.com          |
| BOLD ION, Professor eng., PhD, fellow of the Romanian Forestry and Agricultural Sciences Academy<br><i>University of Agronomic Science and Veterinary Medicine, București</i>   |                              |
| BUTA GEORGIANA, student<br><i>„Ștefan cel Mare” University, Suceava</i>   |                              |
| CARABLAISA GH. SORIN, Research Assistant<br><i>University of Bucharest</i>  | cgsorin@yahoo.com            |
| CENUȘĂ RADU, Professor eng., PhD<br><i>„Ștefan cel Mare” University, Suceava</i>  | raducenusa@usv.ro            |
| CHEIA GEORGE, Assistant, PhD student<br><i>„Ștefan cel Mare” University, Suceava</i>  | cheiageorge@yahoo.com        |
| CHIRIȚĂ VIOREL, Associate-Professor, PhD<br><i>„Ștefan cel Mare” University, Suceava</i>  | chirita@usv.ro               |
| CHIȚU ZENaida, Assistant Lecturer, PhD<br><i>„Spiru Haret” University, Bucharest</i>  |                              |
| COCEAN POMPEI, Professor, PhD<br><i>„Babeș- Bolyai” University, Cluj-Napoca</i>   | pompei@geografie.ubbcluj.ro  |
| COCERHAN CONSTANTIN, PhD<br><i>National College „M. Eminescu” Suceava</i>   | constantincocerhan@yahoo.com |



CUCIUREANU SIMONA, PhD student  
„Al. I. Cuza” University, Iași

CUJBĂ VADIM, PhD student  
University of Agronomic Science and Veterinary Medicine, București

vadim.cujba@yahoo.com

DIȚOIU VALERIA, PhD  
„Ștefan cel Mare” University, Suceava

DONE ADRIAN, eng. ecologist  
“Speolog” – Fundația de Speologie Bucovina

DRĂGOI MARIAN, associate-professor, PhD  
„Ștefan cel Mare” University, Suceava

dragoi@usv.ro

EVA MIHAIL, PhD student  
„Al. I. Cuza” University, Iași

e\_mihail@yahoo.com

EFROS VASILE, Professor, PhD  
„Ștefan cel Mare” University, Suceava

efros@atlas.usv.ro

GRĂMADĂ ȘTEFAN, master's degree student  
„Ștefan cel Mare” University, Suceava

stefan\_gramada@yahoo.com

GRIGORE ELENA, Assistant, PhD  
University of Bucharest

ela\_zigzag@hotmail.com

GURAN-NICA LILIANA, Associate-Professor, PhD  
„Spiru Haret” University, Bucharest

liliana\_guran@yahoo.co.uk

HERIȘANU GHEORGHE, Associate-Professor, PhD  
„Spiru Haret” University, Bucharest

HOGNOGI GHEORGHE, PhD student  
„Babeș - Bolyai” University, Cluj - Napoca

IANOȘ IOAN, Professor, PhD  
University of Bucharest

ianos50@yahoo.com

IONCE ANCA, PhD  
Environment Protection Agency, Suceava

IOSUB FLORIN  
Team Net Bucharest

IZAKOVIČOVÁ ZITA, Senior Researcher, PhD  
Institute of the Landscape Ecology, Slovak Academy of Sciences

zita.izakovicova@savba.sk

JURJ ADINA, PhD student  
„Babeș-Bolyai” University, Cluj-Napoca

adina\_jurj88@yahoo.com

LAZURCĂ GINA, master's degree student  
„Ștefan cel Mare” University, Suceava

LUPCHIAN MARIA-MAGDALENA, Lecturer, PhD  
„Ștefan cel Mare” University, Suceava

slmagda@hotmail.com

MATEI DANIELA, Senior Researcher III, PhD  
“Gh. Zane” Institute of Economical and Social Researches, Romanian Academy, Iași Branch

daniela\_matei2004@yahoo.com

MIHĂILĂ DUMITRU, Lecturer PhD  
„Ștefan cel Mare” University, Suceava

mihaila\_dum@yahoo.com



MINDIRIGIU DUMITRA, Prof.  
*„N. Iorga” School, Iași*

denisamindirigiu@yahoo.com

MINDIRIGIU VASILE, Prof.  
*„N. Iorga” School, Iași*

NAGAVCIUC VIORICA, master's degree student  
*„Ștefan cel Mare” University, Suceava*

NICULA G., Assistant Research, PhD student  
*„Babeș-Bolyai” University, Cluj-Napoca*

OBREJA FLORIN, PhD student  
*„Ștefan cel Mare” University, Suceava*

florin\_obreja@yahoo.com

OBREJA IULIA, Prof.

OPREA DINU, Lecturer, PhD student  
*„Ștefan cel Mare” University, Suceava*

dinuo@atlas.usv.ro

POPESCU DANIELA, Associate-Professor, PhD  
*„Ștefan cel Mare” University, Suceava*

danys@atlas.usv.ro

POPESCU LIVIU, Associate-Professor, PhD  
*„Ștefan cel Mare” University, Suceava*

livius@atlas.usv.ro

PORUMB-GHIURCO COSMIN GABRIEL, PhD student  
*„Babeș-Bolyai” University, Cluj-Napoca*

einstein\_cosminuc@yahoo.com

ȚÎȚU PAVEL, Researcher  
*The Institute of Ecology and Geography of the Academy of Sciences of the Republic of Moldova*

VARTOLOMEI FLORIN, Lecturer, PhD  
*„Spiru Haret” University, București*

VASILCU DESPINA, Lecturer, PhD  
*„Ștefan cel Mare” University, Suceava*

des\_pina2004@yahoo.com

VĂIDIANU NATAȘA, Researcher, PhD  
*University of Bucharest*

marianatasa.vaidianu@g.unibuc.ro

## ABSTRACTS

ACATRINEI ELENA

### *Huși Depression - Brief History of Research*

Depression Huși - is located at the northern end of the study area. Its range is in the north Mosna valley with Cuesta Pietrariiei, east of the Prut, south, Cuesta Draslavățului and west – Lohan valley Tabara Lohan Dobrina and then up in the northwest where the limit is given by interfluvie Tabara Pribasca (324.6 m), Camp Tabara and Hill Rotar (338.0 m) to Mosna – (NE of the village of Podolenii de Jos).

After the work has been written about depression Huși, they can be grouped into four periods:

- The first information;
- The first scientific research (1869-1908);
- The depth of field research (1908-1944);
- The theoretical and applicative research.

BARBU ION, BARBU CĂTĂLINA

### *Changes in the area occupied by forest in the 1775-2010 period in Bukovina*

Based on 72 maps at scale 1: 28,800 prepared by the Austrian army in the period before the annexation of Bukovina in the Habsburg Empire (1773-1776) were assessed forest areas using raster technique and vectorisation of polygons covered by forests.

Comparison with satellite images of the same area in 2010 represented by „Josefinian maps” allowed to assess the areas that were destroyed during the period for each map.

The authors analyze in detail the impact of socio-economic system on the forests in the three dominant landscapes of Bukovina: plains of Nistru, Prut and Siret rivers with altitudes between 200-400 meters; hilly - sub-mountainous region with altitudes between 500-800 meters and mountainous region with altitudes between 600-1800 meters.

Through case studies are analyzed impacts of deforestation on the evolution of geomorphological processes - landslide and erosion for different lithological substrates.

BĂDĂLUȚĂ CARMEN-ANDREEA, BISTRICEAN PETRUȚ-IONEL, NAGAVCIUC VIORICA

### *The land use analysis of the river basin Solonet by the GIS techniques for the time period 1856-2011*

Unreasonable use of land is a current problem both for the local authorities and the European Union as a result of to population growth and economic activity, which causes numerous changes in the geographical landscape. Whatever may be the cause, the extension or reduction of certain categories of land (residential, economic) have a major impact on the ecosystems.

The purpose of the study is to realize a spatial and temporal analysis of the usage of the land belonging to the river basin Solonet (tributary to the right side of the Suceava River, with an area of 211km<sup>2</sup>) by means of the digital mapping, in order to obtain results on the dynamics of the geographical landscape in the time period 1856 to 2011. In this regard, several maps have been used, such as the Austrian Cadastral maps (scale 1:2880) from 1856, the topographic maps of 1984 (scale 1:25000) and the ortophotos of 2011.

The comparative analysis performed for a certain bounded region has revealed that within the limits of this studied region, the geographical landscape has undergone significant changes over the past 150 years. The most important change is in the forest fund as, a consequence of the expansion of the agricultural areas and the increase in the constructions number. This modification may be also the primary cause of geomorphological, hidrological and climatical risks. It may be assumed that in the absence of preventive measures this irreversible process will continue to directly affect the land use structure through the extension of the construction surface to the detriment of the forest or arable land. In parallel, more and more acute becomes the problem of the land susceptibility to geomorphological, hidrological and climatical risks.

BĂNICĂ SORIN, VARTOLOMEI FLORIN, HERIȘANU GHEORGHE

### *The General Urban Plan of Casimcea territorial administrative unit, map of natural and anthropogenic risks*

The General Urban Plan represents the legal ground for any development action proposed. After endorsement and approval as required by law, GUP is act of authority of local government for the area in which it applies. The aim is to establish priorities regulations applied in land use planning and construction of structures.

In terms of geographical location, the administrative territory of Casimcea, Tulcea county, falls in the central Northwest Plateau Casimcei. This is the second unit of the Central Dobrogea Plateau.

Geographical location in southeastern Romania, climatic and relief conditions and anthropogenic pressure, expose the village administrative territorial unit Casimcea, permanent susceptibility to produce natural and anthropogenic risks. In this context, we identified the following categories of natural and anthropogenic hazards:

- natural risk phenomena (earthquakes, strong winds, heavy rains, floods caused by overflowing or precipitation, erosion of river banks and torrents, gravitational processes, rain droplet erosion and surface soil erosion).
- anthropogenic risk phenomena (overgrazing, chemicals use in agriculture, road transport infrastructure and electricity, wind turbines for electricity production, waste deposits, agro-zootechnical complexes, and human cemeteries).

Extending their surface was materialized by creating a map of natural and anthropogenic risk on Casimcea territorial administrative unit, explaining the share of potentially affected areas as territorial balance.

## BÂTEA CĂTĂLINA MARIA

### *Preservation of natural values along the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties*

The present study aims at emphasizing the importance of cross-border cooperation in protecting the natural values along the Romanian-Hungarian border and the way in which these resources can be exploited for tourism. The analysed area comprises the two adjacent counties of Satu Mare and Szabolcs-Szatmár-Bereg, with focus on the rich natural heritage and the shared effort made in order to ensure its conservation. The anthropic activities (agriculture, development of settlements, infrastructure investment) have gradually led to habitat reduction, having a negative impact on biodiversity.

The Natura 2000 network, initiated by the European Union, is a program launched with the objective to preserve natural habitat, plant species and wildlife in a unitary system. A number of ten Natura 2000 sites (Special Protection Areas for birds, Special Areas of Conservation and Sites of Community Importance) are located in the cross-border region of Satu Mare and Szabolcs-Szatmár-Bereg counties. In the present case, a study upon the natural values of the area cannot be limited by borderline. Moreover, a cross-border approach is being preferred in order to highlight the sites of special interest, the necessity to elaborate and implement joined strategies.

Natural values can become a part of the touristic offer but only to a certain extent, according to which only those forms of tourism should be developed which have a less impact on the environment, namely the practice of sustainable tourism, with emphasis on ecotourism. This type becomes viable in the context of a stricter organization of the tourist flow, the existence of a process with informative and training role for visitors regarding the importance of preserving biodiversity. To conclude, the paper draws attention to the fact that recreational activities can be developed in special protection areas provided that the sustainable aspect is always kept in sight.

## BEJAN IURII, ȚÎȚU PAVEL

### *Assessment of Land Susceptibility to Landslides in the Ciulucurilor Hills by Frequency Ratio Method*

Landslide susceptibility map for Ciulucurilor Hills was carried out using frequency ratio method. Its calculation is performed by the ratio of the percentage of landslide areas for each factor taken into account (lithology, elevation, drainage depth, slope, exposition, land use, distance from river and drainage network density) and the percentage of the total area corresponding to each factor.

Based on factor analysis of landslide susceptibility it was elaborated the synthesis map of susceptibility to landslides. Each factor consists of five susceptibility classes (very low, low, medium, high and very high).

Very low susceptibility land occupies 10.1% of the region surface and is the most common in the south-west and the Big Ciuluc and the Middle Ciuluc river valleys. There is 25.8% of the built surface on this area. Low susceptibility land occupies 40.3% of the territory, being the largest class of susceptibility. It holds 56.2% of the arable land and 47.6% of the built surface.

The average susceptibility is recorded on 22.9% of the territory and has a more compact distribution in Soloneț basin. This land holds 38.8% of the pasture surface and 28.5% of the perennial plantations. The land with high and very high susceptibility occupies 26.7% of the territory, with a high frequency in the south-west of the region, on interfluvium between the Big Ciuluc and the Middle Ciuluc rivers. These classes have 81.9% of forest surface and only 12.6% of the arable land. The length of the roads located on the land with high and very high susceptibility is 164.5 km.

The validation of obtained results shows that the highest incidence of landslides is recorded by the fifth class with a very high susceptibility. Frequency of landslides in this class is 64.2%. A high frequency is recorded in the class with high susceptibility (24.4%).

**BOHATAREȚ VALENTIN MIHAI**

*The reassessment of the socio-economic importance of build-up areas in the rural environment*

The development of the autochthon village, at present and in future conditions, requires a reassessment of the exploitation manner of the agricultural build-up areas in the rural environment.

The present way too concessive policy, regarding the extension of build-up areas, allows the speculative development of the landed market for the real estate sector. As a result, severe administrative, structural and environmental disturbances take place, such as: ineffective exploitation of agricultural build-up areas that can witness the doubling or even tripling of the buildings' density, in normal conditions, fact oftenly seen in rural areas; the expansion of build-up areas in the rural space without having proper specific infrastructure (roads, electric networks, water and sewage supplying); wasting of the high potential of agricultural landed areas due to the annual workforce retirement from the agricultural sector, thus leading to tens of thousands of abandoned and/or landed hectares to farmers from nearby villages; excessive clearing of rural settlements, having a severe impact on the overall environment, especially on natural ecosystems etc.

In this context, the limitation of the expansion of rural build-up areas' perimeters will have substantially positive effects: it will only develop at a higher level of present build-up areas that have an agricultural purpose, in the sense that mainly existing residential and certain farm adjacent buildings will witness further development; it will increase the level of usage of the social civilian infrastructure (roads, sidewalks, electric networks, water and sewage supplying, gas supplying, internet networks, shop network, schools, clinics, social services etc.); it will create conditions for intensive farming the environs of build-up areas, for self-sustainment, based on vegetable gardens, fruit-growing plantations, grape vine plantations, apiculture, for poultry breeding, as well as small sized animal husbandry for its fur; it will also increase the aesthetic aspect, specific for the traditional rural settlements by preserving and promoting the rural areas' specific architecture.

Thus, the economic and social functions in rural build-up areas will be developed in the future.

**BOLD ION**

*Territorial organization – purpose and role within sustainable development, integration and globalization*

The territorial organization topic – a historically traditional activity whose purpose is to use resources, the undiminished and balanced development from the economic and human point of view – is approached in sustainable development, integration and development era, as a whole synthetic improvement system designed to use the space, bearing in mind the present and future requirements of the society, by coordinating multiple interests from different fields – economic, social, cultural, environmental protection, ethnic, urbanism – in accordance with strategies, development politics and programs, in order to ensure the arrangement of territorial elements in a global solution to upgrade the spatial use regarding the present and future requirements of the society.

This should be done at the level of the knowledge and requirements of the society, characterized by a triple evolutionary development order – technical, economic and social, which conditions a rational and continuous coordination, which can be realized only by organizing the territory into a non-uniform system, from general to particular – from arrangement (territorial and areal planning), to territorial planning interunits through land agglomeration and boundary adjustment, to territorial planning for agricultural, sylvan harness units and finally territorial planning for use categories (arable, trees plantations, vineyard and hop, natural and cultivated grazing grounds, forests etc.). There are presented solutions for the improvement of designing activities in this field, which determines the spatial configuration, by applying the sustainable development strategies and programmes in optimum conditions.

**CARABLAISA, GH. SORIN**

*Climatic condition – modeling factors of the landscape dynamic in the Danube Corridor of the Iron Gates*

The purpose of the present work is to highlight the fact that the majority of the Earth surface modeling processes are not owed to climatic agents, where the alternation of rainy and droughty seasons lead to rock cohesion weakening.

While modeling and triggering diverse geomorphological processes, water is helped by some preliminary factors, like the declination of the ascent, the sublayer build etc. In the cleared areas where the ascent profile was anthropically modified, the actual modeling processes (erosion, caving, backlash etc.) were strongly intensified. There are presented areas where the geomorphological processes affect the anthropic activity, interrupting the railroad traffic and in two areas the national road traffic.

CENUȘĂ, RADU

*The study of the early succession stage with pioneer trees in Moldova river bed*

The paper analyzes the short term evolution of the forest vegetation on a human disturbed area from Moldova river bed. After the soil removal and the gravel storage of 1.2 m thickness, the terrain was abandoned, the conditions created allowing the study of forest vegetation installation, by means of some indicators as: number of individuals, multiplying rate, green biomass. There were delineated three areas which are distinguished by the installation rate, determined especially by the groundwater level. The study allowed the prognosis of the ecosystem both in the variant of the initial conditions preservation and the modified ones.

Viorel CHIRIȚĂ

*Corridors transportation role in organizing the geographic spaces in Bucovina*

Proposals for the establishment of pan-European transport corridors Carpathian cross, will have, both positive and negative regional various consequences. Transportation corridors are an effective way junction of the leading European by the geographical Carpathian context of the configuration Romanian territory.

Short and medium term effects of the creation of these transportation corridors appear for Romanian space as occur also through the role they play in the organization of human communities and protected areas in their neighborhood, as well as socio-economic features of the region of eastern Carpathian border, crossed administrative structures. So, beyond facilitating Carpathian links with national and regional role involvement and outlines a range of perspectives of development for protected areas established.

This paper aims to identify the optimal means of managing existing interference by developing the transcarpathian transport corridors of 3 ways:

1. Role of communication axes as linear elements of territorial development;
2. Mandatory role crossing points, the mountain passes (passway), the junction of local elements;
3. The role in the high mountain area of spreaded protected areas, such as national parks or natural and cultural landscapes of the release areas.

In this context, the paper aims to develop a typology of forms and types of impact, the immediate neighborhood, (proximity), the complex impact wider regional impact of polarization national relevance.

CHIRIȚĂ, VIOREL, IONCE, ANCA, MATEI, DANIELA, LUPCHIAN, MAGDA

*Environmental operational perspectives regarding typology frishes mining and regional development plan contained in the Strategy 2014–2020 of the Suceava County*

Mining activities over time in Suceava County, through their effects: physiognomic, structural-functional and dynamic, have complex features of the environmental analysis.

Among them, mining frishes (brownfields) resulting from mining sites exploitations and industrial processing abandoned ones, without a territorial plan or ecological restoration coservativ actions are, priority issues for the analysis of the geographic organizing space.

Set up the Development Strategy of Suceava County 2014-2020, mining frisheses should have an important role of enhancing the analysis and evaluation of natural resources, especially the impact on the environment in different Regions, especially maintaining of the Bucovina area.

Mining frisheses have been analyzed in the context of geographical and spatial organization of land use, as constant concern for ecologists and environmental assessors and state for territorial planners, geographers, geologists, economists, planners.

Through this issue we propose a re-evaluation of Bucovina typological mining frisheses, from the perspective of economic cycles each other in the last century, foreshadowing environmental approach on various criteria of approach from the classical (geosystem localization and impact on regional and local) , or at the planning perspective Environment (structural analysis, organization of space geographic coverage of specific functionality generated by continuous conversions). It also examines the socio-economic prospects of the environmental reconversions.

Manners of the typological structure of the Bucovinas` mining frisheses can generate differentiated strategic typologies and functional economic analysis correlated.

Mining and industrial frisheses recognition as elements of economic and social restructuring, enables a sustainable approach to their conversions rural and urban areas capabilities, including in terms of tourism potential associated with traditional forms.

COCERHAN, CONSTANTIN

*The perception of the authorities and the population within Suceava River Basin on how to exploit the tourism potential*

The research theme was chosen to emphasize the idea that, within Bucovina area, there is a combination of elements with certain values for tourism that, if turned to good account could provide economic development of the area, increasing the living standards of the inhabitants and the whole recognition of the specific values of the area beyond national borders.

The purpose of the research, based on direct field-based investigation based on questionnaires, computerized data processing and representation and geographical analysis, had the following parts: identifying the tourism potential of the area, stating the importance of the tourism strategy for the development of settlements within Suceava River Basin; illustrate possible courses of action in tourism development and marking the involvement of local authorities and people in tourism development in terms of resources and investment.

Research highlights the tourism potential of the area and the existence of forms of tourism that are practiced at present - cultural tourism, pilgrimage tourism, rural tourism, leisure tourism - with important implications in the development of the geographical area under analysis. The urban and rural local community represented either by authorities or by investors - individuals or businesses - or even locals admits the current tourism benefits or potential benefits of tourism development of the area investigated. They also admit that the tourism potential is exploited only to a small extent, compared to the existing possibilities in terms of the objectives of natural or man-made tourist destinations of the future. Assumptions confirm this reality, and the possibility of future investment. The economic analysis of the current situation as resulting from the questionnaire responses reveal a good report between cost - benefits on the short term, and prospects for substantial improvement in long-term tourism.

CUJBĂ, VADIM

*Characteristics of land fund for small and medium cities in Republic of Moldova*

The land fund represents whole terrains regardless destination and property within the administrative-territorial unit. Depending on its main destination, the city's land fund consists of the following categories of land: land on which are located buildings and other facilities, public land use, land for roads, rail and naval transport, transport via pipelines, telecommunications lines, electric transmission, for mining exploitations and other industries, forest land, land for agricultural purposes and other. Structure of urban land fund of the Republic of Moldova is determined by historical conditions of city development, economic functions and natural conditions. One of the main factors which obvious influences the way of land use is relief or town site. Its morphological characteristics contribute directly to the formation of the land fund structure, particular, concentration of agricultural land in relation the within city limits, respectively, other land categories.

According to morphometric parameters (altitude, degree of fragmentation and slope gradient) were differentiated following categories of urban settlements location: high terraces of River Dniester, Dniester's Lower Plain, Prut River Meadow, Raut River Meadow, Moldovan North Plateau, Codrii Plateau and Dniester Plateau, South Moldovan Plains, which involves a specific structure of the land fund.

DRĂGOI, MARIAN

*A theoretical model for assessing the contribution of land use change to flood control*

The paper scrutinizes the manner in which the ecosystem services provided by different land uses can be consistently appraised at landscape level as well as the economic meaning of opportunity cost, when it comes to the damages produced by floods. Being hinged on the opportunity cost of flood prevention services virtually provided by all types of land uses except the ones covered with concrete and buildings, the theoretical model proposed in this paper tried to address in a consistent manner the contents of the opportunity cost and a common feature of land uses, which is the run-off coefficient. The scalability of the new approach is also investigated in order to find out which is the geographical extent wherein a cost-benefit analysis of opportunity costs and revenues makes sense to be appraised.

EVA, MIHAIL, CUCIUREANU, SIMONA

*Territorial structures described by accessibility to cultural services. A Case Study on North-East Region*

The paper addresses the accessibility of localities of the Nord-East Region to cultural services provided by various private or public institutions. Unlike studies that see accessibility from a vertical perspective, depending on the differences between social classes, this approach is geographical and aims to identify the dysfunctions and problems at a territorial level. Combining deductive and inductive methods and using tools provided by statistics and Geographic Information Systems, the research delivers a typology of territories according to the degree of cultural development and highlights the causal relations involved.

EFROS, VASILE

*Harnessing the Tourist Potential in the North and South of Bucovina. Comparative Study*

The analysis of the supply and demand in Suceava county and Cernowitza Region plays a very important role in the future consolidation of the Bucovina tourist product. As well, the elaboration of some cross-border tourist programmes may contribute to increased tourist tides towards this central Europe area.

EFROS, VASILE, CHEIA, GEORGE

*Research methods in tourism. The Analysis SPSS*

The assimilation and correct use of research methods in the study of any scientific field is the starting element in any endeavor. Depending on the research hypotheses and data that will form the basis of research, there will be used different research methods, suitable to process such data and to provide scientific answers, that will be real and well argued. This presentation is a brief overview of the main methods / research instruments in human geography, as well as an example of SPSS analysis (Statistical Package for the Social Sciences) on the development of rural tourism accommodation capacity and the evolution of tourist flow in Suceava, range from 1996 to 2010.

EFROS, VASILE, GEORGE CHEIA

*Ecotourism in Suceava county*

Ecotourism, as a relatively new segment within the tourism phenomenon, knows an increasing development and official use, also supported by global efforts made to protect and preserve the environment. Present survey aims to highlight some of the most important theoretical issues related to ecotourism, but also offers a case study related to the size of touristic flow of Suceava, within the main categories of conduct ecotourism destinations. Data were analyzed in three segments of years: 1996-2001, 2002-2007, 2008-2011.

GRĂMADĂ, ȘTEFAN, LAZURCĂ, GINA, MIHĂILĂ, DUMITRU

*Evolution of geographical landscape of Vatra Dornei, between 1778-2005, and future prospects*

The proposed work is to reveal the differences of organization and development of the cultural landscape of Vatra Dornei in different historical, economic, demographic and social backgrounds.

From Austro-Hungarian occupation period (1775-1918) continued with the interwar period (1918-1939), the period of socialist government (1948-1989) and post-revolutionary period to date current Vatra Dornei, has gone through various stages of development, from fair city to town and now to municipality and balneary resort. In the geographical landscape evolution of Vatra Dornei city by the side of the political and social decision was highlighted the potential offered by the local environment, resources and mineral waters, peat sludge, livestock potential, subsoil resources (manganese) and forest resources. In conclusion, use of environmental elements for industrial, agricultural and tourism purposes have contributed to the current state of planning and spatial development of Vatra Dornei.

GRIGORE, ELENA

*Urban patrimony, domains and functional area in Constanta. Current landmarks*

Much of the existing cities, today, occurred due to favorable elements, such as: a natural resource, an intersection etc. Constanta by the geographical location is a harbor town, an administrative center, political and cultural, but which occupies a key position to transport routes and not least it is an important tourist center. To assess the current situation of the city is necessary a thorough analysis with the role: to show the actual chances of evolution and development, to highlight the main objectives which were the basis for solving the problems of the moment, objectives that can ensure increased living standards, but also the particularities of the analyzed area. This analysis is intended to be: a synthesis of the progress made in the development of the city, because despite remarkable number of special equipment the city has areas where the quantity and quality of services is poor; an accurate assessment of socio-economic variables; a synthesis of the results obtained through the application of different methods of intervention and change, actually, of concretely achievements at the completion of regional and local development strategies.

GURAN-NICA, LILIAN, CHIȚU, ZENaida

*Natural amenity-driven development in the metropolitan areas*

The metropolitan areas (MA) in Romania, defined as "intercommunity development association", are legally constituted as voluntary partnership between a city and the neighboring rural and urban settlements in the last decade. Each of them has as main goal the overcoming of the economic difficulties and the reduction of the spatial

disparities in the rural-urban fringe. In this context a better knowledge of the present situation of these areas is necessary. Our paper concentrates mainly on the natural amenities as important determinants of the demographic, economic and environmental changes mainly in the rural settlements. We intend to demonstrate the relations between the natural environment and the population change (rate of growth) using specific indicators (correlations and standardized regression coefficients).

IANOȘ, IOAN

*The administrative region, product or tool in the organisation of space?*

The ratio between the administrative region and the organisation of space is complex and dynamic, marked by the development of the territory, as well as by the strategic objectives of the communities. The multistage vision, but most of the time the temporal projection of this ratio may lead to the achievement of the targets fixed by the EU 2020 Strategy. The purpose of the communication is to check the assumption that the administrative region is partly the result of a self-organisation process, but also a fundamental tool in its organisation at the macro-scale level. In such a demonstration, the regional and pseudo-regional existing configurations, in their great majority, should be taken into consideration as a result of the territory's historic evolution. Both current development regions and counties may be considered as pseudo-regional structures: the first ones do not have a decision-making power, being the result of an association of counties, and the latter do not have a regional dimension. If an identity-historic dimension is added, then the resulting territorial configuration have only a sentimental value being far from providing tools for a space structuring, in accordance with the real needs of the regional communities.

How can the administrative regions become real tools in a future space structuring? Through them focusing on the great settlements systems where the national growth poles are able to provide regional services, and by diminishing the power of the Centre. Two dangers are readily ascertainable: one, that the new administrative centre of the region might lose power not in favour of the new structures, but of the next level (the counties), and the second, that the national centre-periphery imbalance might transfer to the regional level. The regional macrocephalia might represent a setback in the pursuit of the region's true role as tool in the organisation of space. This would be evident in the case of many current development regions, if they would become administrative regions, and this is why the adoption of a solution already experienced at national level, would be an interesting option in many countries. It is about increasing the capacity of the administrative regions in the optimal structuring of space by choosing as future residences of the regions medium sized towns with an important centrality and a development potential. Major regional cities would keep the economic functions and services, and would develop as true regional metropolises, without generating an increase in the intraregional gaps.

IZAKOVIČOVÁ ZITA

*Changes of the Slovak rural landscape*

In the last period the Slovak agricultural landscape went through vivid changes, which have conditioned in arising of new problems such as economic subjects decomposition, changes of agricultural structure, leaving the agricultural land, declining of the intensity of agricultural production, negative influences of leaving agricultural grounds on landscape biodiversity, overmultiplying of synantropic species, increasing pressure on occupation of agricultural soil as a result of increasing pressure on enforcement of particular invested contemplations, increasing of unemployment, difficulties with administering open labour force into operating market, deterioration of psychic and social conditions as a result of these processes, migration of population including emigration of people from villages seeking job opportunities as well as migration of town people to the rural communities as a consequence of preferring better quality of environment. These processes are consequently appearing as changes of demographical structure, as a changes of life style as well as the creation of new image of the Slovak rural landscape. It includes all scale of newly arising actual and till now not solved problems. The particular problems are often mutually connected – for example the change in land utilization influences in a considerable extent the biodiversity and landscape stability, the pollution of the separate parts of the environment requires investments into disposal of these effects and into implementation of new technologies, closing of industrial operations having negative impact on environment is often connected with increasing of social problems – growth of unemployment, growth of negative psychosocial issues etc. Based on the above information can be seen that the usage and management of landscape and its resources needs to be dealt the integrated approach needs to be applied. The paper will present analyses of the current problems of Slovak agricultural landscape and analyses of the basic drivers of these changes and their impacts.

## IZAKOVIČOVÁ ZITA

### *New forms of the environmental education to the sustainable development in the Slovak republic*

Environmental education in Slovakia cannot be evaluated positively because it is not systematically defined, frequently depends on the voluntarily and enthusiasm of the pedagogues. Pupils gain environmental knowledge in a limited form within single subjects mainly in biology, geography, natural history, chemistry, ethics, religion etc. There absents a synthesising subject – environmental or ecological education. Environmental and ecological education for the children in pre-school and school age are realized mainly by non-governmental organizations. Also the preference of the didactic methods concentrated on the verbal gain of new knowledge to creative ones appears as a problem. Pedagogues have not sufficient and suitable didactic tools and materials for environmental education. In the Institute of Landscape Ecology Slovak Academy of Sciences, we elaborated concept of environmental education to the sustainable development and we elaborated various effective tools for environmental education to the sustainable development. We would like to presents this concept and two modern tools for environmental education:

- **Environmental natural laboratory** - it is a good example how to give information on the natural and cultural-historical conditions of the area by interesting, effective monitoring and information system. Its significance is:
    - ✓ in the assessment of the features of landscape-forming compartments, investigation of the phenomena and processes (natural and cultural-historical or anthropogenic) appearing in the landscape
    - ✓ in obtaining or repeating not only ecological and environmental knowledge but knowledge from other subjects – geographical, geological, botanical, zoological
    - ✓ in possibility to confront the obtained knowledge about the landscape, human activities etc. with practice
    - ✓ in activation of pupils, inhabitants in the sphere of protection and formation of the human environment, support of the interest in environmental care
    - ✓ in support of creativeness, competitiveness, development of the team work
    - ✓ in gain the skill and knowledge in new techniques, possibilities of independent work creation of model situations, problem tasks, their solution by different methods (quizzes, competitions, riddles, ecological games etc.).
- The environmental natural laboratory can be used in practical training, excursions, trips to the surroundings within the lessons or extra school activities and school trips. It gives the pedagogue the possibility to choose the content, method, form of work. It offers the pupils a complex view on the given problem, deepens their thinking and simplifies the comprehension of the dialectic rules by integration of the knowledge from different subjects.
- Educational video – its basic goal is by interesting form advance individual themes of sustainable development not only pupils but also public. The video consists from the basic five thematic blocks

## JURJ, ADINA

### *Tourism – a alternative of sustainable development in Roșia Montană*

Roșia Montană is a locality situated in Alba county, famous for large mining exploitations which started in old times and lasted until nowadays. Roman conquest left here valuable archaeological remains such as mine galleries, votive and funerary monuments etc. Today, the company RGMC wants to exploit the silver and golden ores found here after researches. The issue is highly controversial, and one of the main problems is represented by the tailings pond to be built in order to hold residual cyanide and mine dumps resulted, and which may become a real serious risk to environment and human life and health. In this context, tourism is providing a great alternative of sustainable development, taking into account the value of tourism potential, represented both by human heritage and natural attractions, which belongs to Roșia Montană, and which can help it to develop in a more healthy way than mining exploitation.

## LUPCHIAN, MARIA-MAGDALENA, CHIRIȚĂ, VIOREL, MATEI, DANIELA

### *The development areas – between cohesion and disparities*

The current development areas are composed by counties with a very different development level, and the towns inside them are also characterised by different polarisation abilities. Among the Romanian development areas, created in order to fade the development discrepancies existing in Romania, there still are great differences. The compared analisys of some socio-economic development, atractivity and quality of life flags, between the beginning of these territorial constructions and the current times, wants to contour the proportions they've reached, not only inside the development areas from Romania, but also nationally, to a balance or, on the contrary, to accentuated disparities.

MATEI, DANIELA

*The economic evaluation of protected areas. Methodological aspects*

Currently, there is little information about the economic value of protected areas and they are given a diminished budgetary and economical priority. The public and private decision factors, which suffer greater financing difficulties, tend to allocate less financial resources to the protected areas than to other fields, which are considered more productive from the development point of view.

The current study tries to offer economic arguments in favor of the reality that the protected areas represent an important and productive good, which assures an intense flow of goods and valuable services from an economic perspective. The economic studies which show the importance of these services in monetary terms and their contribution to the local, regional and national economy, can be a credible way to demonstrate to the decision factors the importance of the protected areas.

It is known the fact that the economic evaluation concentrates upon "final advantages" or the "results" of the society from the services delivered by the ecosystems, not upon the services and functions that give these results. Even though these are fundamental for the final advantages, the advantages generated by adjacent services are not evaluated independently, because they are interjacent advantages that contribute to the final ones. Their value is bound into the evaluation of the final results, associated to the services they sustain. Among the adjacent services, there are the development and the retention of the soil, the primary production and habitat assurance.

MIHĂILĂ, DUMITRU, DIȚOIU, VALERIA, BISTRICEAN, P.

*The impact on the environment caused by the waste landfills in Suceava County*

Placing the urban waste in inappropriate places is a high risk for the quality of all environmental factors. These landfills can actually become significant sources of chemical pollution and biological contamination to soil, to aquifer and to surface waters, due to the high content of heavy metals and hardly biodegradable organic substances contained in. The emissions of toxic gases, derived from the anaerobic decomposition of organic waste, may also affect the air quality in these areas.

In our paper, the issues related to territorial distribution of the waste storage locations in Suceava County (landfill of Mirauti set on the bordering area of Suceava city, and the city landfills of Gura Humorului, Radauti, Siret, Campulung Moldovenesc and Falticeni) are presented. The issues are detailed in terms of quality, and quantity the effects caused by waste landfill of the main urban localities to landscape, to soil quality, to aquifer, to air composition.

MINDIRIGIU, VASILE, MINDIRIGIU DUMITRA

*Formative nature of the primary environmental education*

Maybe for each man on Earth, the word "home" has a different meaning and maybe it represents a place or a different space, but a fundamental truth, often ignored, is the fact that all of us, the approximately 6 billion people live on the same planet, in one big "home".

Unfortunately, in the last years, at the same time with the technological syndrome development, we've started adopting a careless attitude towards this home of ours and we are on the verge of becoming a major danger in the disturbance of the ecological balance of our own home, forgetting that our own life, the quality of the air, water and the vital food depend on the way in which we are taking care of the environment and respect it.

The protection of this *home* is a universal problem. The love for it must be an essential component of the human behaviour whose roots are in early childhood, in family and then in school. Only in this manner the children will know and defend nature, will love plants and animals, will have a proper behaviour towards the environment and will step up to the ones that destroy nature. Today this education is called *ecological education*, yesterday we called it respect for, mother nature, but we had it inside us, genetically. Nowadays, most of this genetic material has been lost in the modern life euphoria and commodity. It's time the bell rang, to get the children together and to teach them in class and home also, the supreme lesson of respect and responsibility towards life. The present work synthesizes the extracurricular types of activities utilised by the authors at the geography class.

OBREJA, FLORIN, OBREJA, IULIA

*The land use effect on sediment transport in the Siret Basin*

In the Siret Basin the types of land use are varied and influence in a different mater water discharge, production and sediment transport. The largest areas of Siret Basin is occupied by agricultural land at a rate of about 43% (29% - arable land, 10% - heterogeneous agricultural land, 1.4% - vineyards and orchards, 2.8 - pastures, etc. ) and forests at a rate of approximately 37%. Other types of land use occupy each lower surfaces but all combined represent

about 20% of the Siret Basin located in Romania.

One of the most aggressive human intervention in the Siret Basin was the reduction of area covered with forests. If the eighteenth century Romania's surface was covered with forests in 40%, now it was reduced to 27% (below the European average of 34%). Analyzing the CORINE Land Cover data set ([www.eea.europa.eu](http://www.eea.europa.eu)) for the study region, between 1990 and 2006, we can say that deforestation prevailed. Each main basin of the Siret tributaries lost between 1 and 5% of the area covered with forest. Exception is made by Putna basin which gained 3.6% in 16 years and Buzau where wooded areas did not change in the period considered. Locally (in the smaller basins), the evolution of forest areas was manifested by much higher values. The result of this situation was felt in the production of sediments: increases in river basins affected by deforestation and decreases the production of sediments in relation to water discharge in basins where forest area has increased.

POPESCU, LIVIU, POPESCU, DANIELA

*The exploitation of some minerals from Golden Bistrita Valley and the upper Moldova Valley in 1770-1864*

The exploration and later the exploitation of the diverse mineral resources was always the main source for the development of a certain area. In Southern Bucovina, especially in the Golden Bistrita Valley, in the Șesuri area – Vatra Dornei, and on Moldova Valley, in Benia area – Câmpulung Moldovenesc, the exploration and exploitation of lead, iron and silver ores in 1770 – 1864 is due to the first research conducted by Austrian geologists.

The most important ores were :

- loadstone at Cârlibaba, Runcu (Iacobeni);
- siderite and eagle stone at "Colaca Nouă", Butka Rea, Valea Stânii;
- bloodstone at Hundu Moldovei on Cailor brook;
- galena at Cârlibaba (Dealul Fluturica) and Benia.

The presence of silver galena dykes in the ores from Fluturica and Benia, increased the economic value of the exploitations thanks to the high silver content, which allowed the extraction of this noble metal.

From the old exploitations, only the one from Fluturica is still visible among a dirt-heap.

Every geological research on the mentioned ores have been valuable markers for the prospects, exploring and exploiting that followed after World War II. Most of the exploited areas finally led to the degradation of the geographical landscape through the dirt-heaps and the sludge beds (Fundu Moldovei)

The impact of the mineral exploitations upon the environment often results from the fact that the greening works required after such perimeters shut down are not finalized.

PORUMB-GHIURCO, COSMIN-GABRIEL

*The complementarity of Transylvania's tourist resources. Tessellation and personalization factor of the tourist image of a „fortified” geographical space*

The assertion of Transylvania's structural and physiognomic heterogeneity turned a long time ago into a truism. We are talking about the ex-province and the actual current geographical-historical region, that encompasses a maximum of 10 counties (Sălaj, Cluj, Bistrița, Mureș, Harghita, Covasna, Brașov, Sibiu, Hunedoara, Alba).

The favoured location of Transylvania in the geographical centre of the national territory, being provided with, taking into account the Intra-Carpathian Barring, the clasp of the Carpathian ring on its circumference (hence, the metaphor „fortified” space), makes out of this region the central place of Romania, “the heart of the country”. This region's condition of structural and functional heart is owed to the Choline Depression of Transylvania, a relief unit around which the whole morphology of the national macro-territory gravitates, „tethered” on the solid orographic frame disposed in the guise of the Carpathian range.

Why complementarity? The predominance of Transylvanian tourist resources is composed of the anthropic ones, which bear the mark of the 3 great cohabitant ethnic groups: the Romanians, the Hungarians and the Germans. The natural tourist resources assure a natural matrix background, authenticizing and complementarizing them.

PORUMB-GHIURCO, COSMIN-GABRIEL

*The castles and manors of Salaj County (noble edifices): their cultural and tourist representative component*

This study approaches a highly marginalized component of tourist potential located in Salaj county, in spite of its well-known attractive characteristics, which are the most important noble residences, castles and manors. The overwhelming majority of these noble houses have been built by the descendants of some 'blue-blood' families, most of which are Hungarian, and here we are talking about 'grofs', who had in their estate great surfaces of land, which still are renowned in the region of Transylvania (Wesselényi, Bélydy, Bathóry, Banffy). There have been taken into consideration 15 of these noble houses which pertain to Salaj county, all of them being introduced in the

Hystorical Monuments List and are either considered monuments of local and regional importance, or of national importance.

Throughout this study there is a special emphasis on the architectural design of the noble buildings undergoing analysis, the history and family tree of the aristocratic families whose bloodline provided the mentioned craftsmen, on the aesthetics of the arboretum parks and of the horticultural components associated with the castles and manors, but there is also an emphasis on the possibilities of conservation, renovation, tourist improvement and development. The aristocratic inhabitants of these buildings are the ones in charge with the organisation of the, contiguous grounds, the arboretum parks and the horticultural arrangements whose aesthetic and recreational role have imposed, since the beginning of the study, the self regulation of the syntagm aristocratic ensemble. The Wesselényi Castle located in Jibou, the biggest baroque edifice in Transylvania, in the vicinity of which there has been laid out the Vasile Fati botanical garden, had a different, richer approach, which is preferred throughout this study on objective grounds.

Unfortunately, in Romania, the studies on aristocracy and their legacies and the interest shown in these matters is under-developed. Nonetheless, there is a self-sustaining science (newly developed), which is in charge of the analysis of castles, 'casteologia'. The theme of this study falls naturally into place in the sphere of geography of tourism, and as a consequence the heterogenous, in-built condition of the tourist and geographic approaches remains untouched, undertaking concepts, as well as different methods and approaches from many other areas of interest that interfere with the already mentioned branch of study; all while consciously keeping the specific of its affiliation domain. Although the study resorts to a multidisciplinary methodology (which was by all means necessary) in order to complete the study, in the end the methodology that distinguishes itself as being specific of this line of study is the one that is found all throughout this document.

This geographic and tourist study of the noble edifices in the Salaj area is the first of its kind carried out in Romanian.

VASILCU, DESPINA

*Aspects regarding the social and spatial health discrepancies in Suceava Municipality*

The economic, social and political processes that Romania has experienced in the last years influenced the health of the population. The continuous degradation of the health condition of the inhabitants is the result of the economic downfall and its consequences: the down-grade of the standard of living, the rising of unemployment, poor financing of the health system, and low-quality health services etc. The social and spatial health inequalities are part of the most alarming matters taking into account the fact that these elements influence directly the existence of the individuals. These social inequalities rest upon the life conditions and emphasize important income, work, education, living and recreation discrepancies. They also influence individuals in terms of behaviour and personality. We can thus talk about the generation and regeneration of a type of inequalities that are even more obvious and critical at the same time in the case of groups with a precarious and vulnerable situation (long-standing unemployed individuals, old people, gypsy population). A better understanding of the economic, social and cultural elements that induce this kind of social and spatial discrepancies is necessary regarding the commitment to new counterpolitics.

VĂIDIANU, NATAȘA, IOSUB, FLORIN

*Linking environmental conditions to accessibility degree in Danube Delta Biosphere Reserve*

Accessibility and economic potential are associated with regional development. There are many factors influencing the local development and accessibility to the hospitals and to the markets are some of them. The aim of this research is to examine the potential for using accessibility methodology to assist decision making in sustainable social and economic development. In the Danube Delta, like in other restrictive areas in the world, accessibility is a key factor in understanding relationships between the physical and socioeconomic characteristics of the villages. The interactions between landscape conditions and natural resource management associated with different land use patterns are very important. We considered the role of public transport, respectively the fluvial transport. Survey carried out in a deltaic area at research site revealed strong relationships among transport system, development potential (especially poverty level, demographic conditions and touristic activities), land-use and biodiversity conservation. Our analysis also revealed that the villages are not equal in their potential for development, and it is important to recognize these inequalities. Development actions should take into consideration these differentiated development patterns in order to help the most marginalized villages transforming their production systems.

