

Curriculum Vitae



Personal information

First name(s) / Surname(s) **Mariyana Lyubenova**

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E-mail ryann@abv.bg, ryana_l@yahoo.com

Nationality Bulgarian

Date of birth 06.09.1955

Gender Female

Work experience

Dates	2000 – Present
Occupation or position held	Professor
Main activities and responsibilities	Lecturer, manager of scientific research and teams
Name and address of employer	Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
Type of business or sector	Science and Education
Dates	1993 - 2000
Occupation or position held	Chief Assistant
Main activities and responsibilities	Lecturer, manager of scientific research
Name and address of employer	Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
Type of business or sector	Science and Education
Dates	1989 - 1993
Occupation or position held	Senior Assistant
Main activities and responsibilities	Teacher, member of scientific teams, responsible for carrying out scientific research tasks
Name and address of employer	Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
Type of business or sector	Science and Education
Dates	1986-1989
Occupation or position held	Assistant
Main activities and responsibilities	Teacher, member of scientific teams
Name and address of employer	Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
Type of business or sector	Science and Education

Dates 1981 - 1986
 Occupation or position held Biologist
 Main activities and responsibilities assistance in teaching and research
 Name and address of employer Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
 Type of business or sector Science and Education

Dates 1979-1981
 Occupation or position held Biologist
 Main activities and responsibilities assistance in research in the area of phytoecology – structure and function of plant communities, forestry ecology.
 Name and address of employer Institute of Botany and Microbiology, Bulgarian Academy of Science, Sofia
 Type of business or sector Science and Education

Dates 1978 - 1979
 Occupation or position held Biologist
 Main activities and responsibilities assistance in researches in the area of mineral nutrition of hydro sprout and crops
 Name and address of employer Institute of Plant Physiology, Bulgarian Academy of Sciences, Sofia
 Type of business or sector Science and Education

Teaching experience

Dates 1986 - Present
 Name and address of employer Department of Ecology and Environmental Protection, Sofia University st. "Kliment Ohridski"
 Courses
 For the Bachelor's Degree:
 "Ecology and environmental protection"
 "Bioresources and their protection "
 "Methods of ecological research"
 "Ecological monitoring"
 For the Master's Degree:
 "Functional biocoenology"
 "Phytoecology"
 "Ecotoxicology"
 "Chronoecology"
 "Natural ecosystems"
 Academic Advisor of 42 Master's graduate students
 Tutor and Academic Advisor to four PhD students

Education and training

Dates 1984-1988
 Title of qualification awarded *Doctor*
 Principal subjects/occupational skills covered Title of Dissertation Thesis : "Primary biological production and energy reserves of *Quercus frainetto-Quercus cerris* forest ecosystems in Vakarelska mountain"
 Scientific Advisor : Prof. Dr. I.A.Bondev
 Field and Laboratory study of the species composition and dominant species structure of plant communities, structure and amount of overhead and below ground biomass and primary production, efficiency, energy flow, intensity of the biological cycle in oak forests.
 Name and type of organisation providing education and training Institute of Botany and Mycology, Bulgarian Academy for Sciences, Sofia

Dates	1973-1978																				
Title of qualification awarded	Doctor of biological sciences																				
Principal subjects/occupational skills covered	Title of thesis: "Influence of water-soluble bioactive substances from <i>Nicotiana tabacum</i> L. on the quantity and quality of hamazulen oil of <i>Matricaria hamomilla</i> L." Scientific Advisor : Prof. Dr. I.A.Bondev Field and laboratory research in connection with the introduction of chamomile as a second crop in seytbodyrashtenie with <i>Nicotiana tabacum</i> L.																				
Name and type of organisation providing education and training	<i>Sofia University, Department of Biology</i>																				
Personal skills and competences																					
Mother tongue(s)	Bulgarian																				
Other language(s)																					
Self-assessment <i>European level (*)</i>																					
English																					
Russian																					
	<table border="1"> <thead> <tr> <th colspan="2">Understanding</th> <th colspan="2">Speaking</th> <th>Writing</th> </tr> <tr> <th>Listening</th> <th>Reading</th> <th>Spoken interaction</th> <th>Spoken production</th> <th></th> </tr> </thead> <tbody> <tr> <td>B2</td> <td>B2</td> <td>B2</td> <td>B2</td> <td>C1</td> </tr> <tr> <td>B2</td> <td>B2</td> <td>B2</td> <td>B2</td> <td>B2</td> </tr> </tbody> </table>	Understanding		Speaking		Writing	Listening	Reading	Spoken interaction	Spoken production		B2	B2	B2	B2	C1	B2	B2	B2	B2	B2
Understanding		Speaking		Writing																	
Listening	Reading	Spoken interaction	Spoken production																		
B2	B2	B2	B2	C1																	
B2	B2	B2	B2	B2																	
	(*) Common European Framework of Reference for Languages																				
Social skills and competences	Participated in international seminars of non-government organizations on environmental problems in Turkey, Macedonia and Austria. Referee of doctoral theses, research works to specialized scientific councils and scientific books Reporter in the Scientific Commission on Agronomy and Forestry, Higher Attestation Commission for discussion of awarding scientific degrees and academic degrees. Good communication skills																				
Organisational skills and competences	Member of: Balkan Ecological Federation Balkan Academy of Science and Culture International Association of Plant Sciences (IAVS). Member of the editorial board of Journal of Balkan Ecology. President of NGO "Europe for all." Participant in advanced specialized commissions for presentation of research theses . Member of the MC of COST Actions: ES0805b/2008-2013: The Terrestrial Biosphere in the Earth System, ES1101-2014 "Harmonizing Global Biodiversity Modelling (HarmBio) and FP1106 -2015" STReESS - Studying Tree Responses to extreme Events: a SynthesisS "																				
Technical skills and competences	Working with water bomb calorimeters, ecotoxicological tests and Lintab apparatus.																				
Computer skills and competences	Good computer skills and experience in working with Microsoft Office as well as statistical packages Excel and Statgraphics.																				
Artistic skills and competences	HOBBY – WRITING																				
Other skills and competences	Replace this text by a description of these competences and indicate where they were acquired. (Remove if not relevant, see instructions)																				

Additional information

1. List of publications
2. List of participations in national and international projects (see attached lists)

Annexes

List any items attached. (Remove heading if not relevant, see instructions)

SELECTED PUBLICATIONS

Prof. Dr Mariyana Ivanova Lyubenova - ERCEA/SNE/055/2012; E-mail: ryana_l@yahoo.com

About: Applying for a seconded national expert to the European Research Council

BOOKS

Mirchev, St., **M. Lyubenova**, A. Chikalanov, N. Simeonova. 2000. Dendrochronology. Short course. Pensoft Publishing House, Sofia-Moskow, 198 p.

Lyubenova, M. 2004. Phytoekology. Academic Publishers M. Drinov, Sofia, 574 pp.

Lyubenova, M. 2006. Chronoecology. Dee-Ann Publishing, Sofia, 183 pp.

Lyubenova, M., Sv. Bratanova –Doncheva, V. Dimitrova, N. Chipev. 2007. Research of some functional parameters of the chestnut (*Castanea sativa* Mill.) communities on the Belasitza mountain. - In: Sustainable Management of Sweet Chestnut Ecosystems. Bratanove-Doncheva (ed.). Publishing House Petekston, 53-59.

Lubenova, M., Zsv. Stoimenov, Sv. Bratanova –Doncheva. 2007. Dendroecological investigations of *Castanea sativa* Mill. in Belasitza mountain. - In: Sustainable Management of Sweet Chestnut Ecosystems. Bratanove-Doncheva (ed.). Publishing House Petekston, 77-82.

Lyubenova, M. 2009. Manual functional biocoenology. Dee-Ann Publishing, Sofia, 209 pp.

Lyubenova, M., R. Kalchev. 2009. Ecotoxicology – short practicum (Second revised edition). Dee-Ann Publishing, Sofia, 305 pp.

Lyubenova, M. 2009. Functional biocoenology. Dee-Ann publishing, Sofia, 368 pp.

Lyubenova, M., Sv. Bratanova - Doncheva, V. Dimitrova, M. Grozeva. 2010. Main characteristics of biological turn-over in *Castanea sativa* Mill. communities from Belasitza mountain, Bulgaria. Ed. G. Bounous, ISBN 978906605 414 1, Acta Horticulture No 866, p.275-285.

Любенова, М. 2010. 9260 *Castanea sativa* woods – In: Zingstra, H., A. Kovachev, K. Kitnaes, R. Tzonev, D. Dimova, P. Tzvetkov. 2009. GUIDELINES FOR ASSESSING FAVOURABLE CONSERVATION STATUS OF NATURA 2000 SPECIES AND HABITAT TYPES IN BULGARIA. Sofia, 25 p.

http://www.natura2000.biodiversity.bg/images/FCS_N2_Guidelines_ExeSummary_EN.pdf.

Lyubenova, M., V. Dimitrova, S. Bratanova-Doncheva. 2011. Ecosystem Assessment of Chestnut Forests in Belasitsa mountain. Dee-Ann Publishing, Sofia, 112 pp.

Lyubenova, M., A. Shikalanov. 2011. SPPAM. User Guide. EFEO Publishing, Sofia, 18 pp.

Lyubenova, M. 2012. Plant functional types of trees (PFTs) according to the characteristics of the periods of low growth (stress periods). AN-DI Publishing, Sofia, 134 pp.

OTHER PUBLICATIONS

Lyubenova, M., R. Nedelchev. 2002. Phytocoenological Description of Common Yew Find in National “Central Balkan” Park, Bulgaria. Journal of Balkan Ecology, v.5, N1, 26-30.

Lyubenova, M., A. Asenova. 2003. Indicatory significance of the early and late wood of *Quercus rubra* L. in dendroecological research in Sofia region. Phytologia Balcanica 9(1), Sofia: 53-58.

- Roumenina, E., **M. Lyubanova**, V. Dimitrov. 2003. Ecological risk assessment of spruce vegetation in biosphere reserve "Chuprene" with space mould in GIS.- In: Proceeding «International Scientific Conference» – 75 years Institute of Forestry, Bulgarian Academy of Sciences», 1-5 October, 2003 y., volume I, 61-64.
- Lyubanova, M.**, A. Asenova. 2005. Indicators Significance of Early and Late Wood of *Pinus sylvestris* L. and *Pinus nigra* Arn. Located in Sofia Region, Bulgaria. Journal of Balkan Ecology, vol. 8, N 1, 47-55.
- Ganeva, Y. **M. Lyubanova**, L. Chipilska, P. Hadjieva. 2006. Biological Active Components of *Rosemarinus officinalis* L. Journal of Balkan Ecology, Vol. 9, No 3, 283-288.
- Dimitrova V., **M. Lyubanova**, Sv. Bratanova – Doncheva. 2006 Aboveground phytomass and production in the shrub layer of the chestnut (*Castanea sativa* Mill.) communities in the Belasitsa mountain. – In: Proceeding "Balkan Scientific Conference of Biology", May 19-20, 2005, Plovdiv, Bulgaria. Gruev, B., M. Nikolova, A. Donev (ed.).
- Lyubanova, M.**, Y. Ganeva, L. Chipilska, P. Hadjieva, Ch. Chanev. 2006. Biological Active Components of *Chenopodium botrys* L. Phytomass. Journal of Balkan Ecology, Vol. 9, No 3, 289-295.
- Mirtchev, S., **M. Lyubanova**, A. Shikalanov. 2008. Climate reconstruction from oak tree-ring records in Southwestern Bulgaria for the last 200 years. Journal of Balkan Ecology, Vol. 11, No 4, 419-427.
- Lyubanova, M.**, M. Sokolovska, Sv. Bratanova – Doncheva, M. Radonova. 2008. Content of macro- and micro elements in sweet chestnut phyto mass in Belasitsa Mountains, Bulgaria. Silva Balkanica, 9(1), 41-58.
- Mirchev St., **M. Lyubanova**, V. Dimitrova, Sv. Bratanova – Doncheva. 2009. Dendrochronological investigation on *Castanea sativa* Mill. in Belasitsa mountain and Western Balkans (Berkovitsa). Biotechnol. & Biotechnol. EQ 23/SE. p.377-380.
- Lyubanova, M.**, R. Tzonev, K. Pachedjieva. 2009. Floristic Investigation of *Quercus cerris* and *Quercus frainetto* Communities in Bulgaria. Biotechnol. & Biotechnol. EQ 23/SE, pp. 314-317.
- Parvanova, P., N. Tzvetkova, Sv. Bratanova-Doncheva, R. Fikova, **M. Lyubanova**. 2009. Active biomonitoring of ecotoxicological effects from tropospheric ozone impact on representative tree species. Biotechnol. & Biotechnol. EQ 23/SE, pp. 333-336.
- Dimitrova V., **M. Lyubanova**, K. Slavova. 2009. Investigations of some functional parameters of the beech (*Fagus sylvatica* L.) communities. Biotechnol. & Biotechnol. EQ 23/SE, p.p.426-429.
- Lyubanova, M.**, A. Chikalanov. 2010. Software implementation for stress period studies applied to dendrochronological analyses of *g. Quercus* L. Comptes rendus de l'Academie bulgare des Sciences, t.63,3, 409-418.
- Chikalanov, A., **M. Lyubanova**, St. Stoyanov. 2010. [Classification Oriented Databases for Facilitating Plant and Terrestrial Modelling](#). Comptes rendus de l'Academie bulgare des Sciences, t.63,9, 1327-1334.
- Lyubanova, M.**, A. Chikalanov, R. Fantucci. 2010. Studies of stress periods as PFTs variables for climate assessment and prognostics. COST ES0805 Workshop "Going beyond Plant Functional Types: Next-Generation Concepts In Plant Ecological Modelling", Bulgaria, Varna, 23-25, 06. 2010.
- Chikalanov, A., **M. Lyubanova**. 2010. Application of Neural Networks, Genetic algorithms and Multivariate statistics for Ecosystem Classification and Modeling. COST ES0805 "Modelling in plant ecology", Spaine, Madrid, 17-19, 11.2010.
- Lyubanova, M.**, R. Tzonev, K. Pachedjieva. 2011. The diversity of *Quercetea pubescentis* (Oberd. 1948) Doing Kraft 1955 in Bulgaria. Comptes rendus de l'Academie bulgare des Sciences, t.63, 565-580. **IF=0.204**
- Lyubanova, M.** 2011. Ecological fundaments of new generation DGVMs. *Comptes rendus de l'Academie Bulgare des Sciences. Biologie, ecologie*, 1591-1602.
- Lyubanova, M.**, V. Dimitrova. 2011. Chemical Elements in Mulch and Litterfall of Beech Ecosystems and Their Total Turnover. *Ecologia Balkanica*, 11106: <http://web.uni-plovdiv.bg/mollov/EB/OF/eb.11106.pdf>
- Tzonev, R., **M. Lyubanova**, G. Hinkov, T. Karakiev. 2011. Syntaxonomy of Sweet chestnut (*Castanea sativa* Mill.) forests in Belasitsa mountain, Bulgaria. Journal of Balkan Ecology, 2, 171-186.

Lyubenova, M., R. Nedkov, I. Ivanova, A. Chikalanov, N. Georgieva, M. Zaharinova, M. Dimitrova, E. Ivanova, V. Yanchev, K. Radeva, N. Stankova, R. Tsoneva. 2011. Study on ecological dynamics of forest vegetation in the region of East Rhodope on the base of satellites and terrestrial data. *Ecological engineering and Environmental protection*, 1, 45-50.

Lyubenova, M., R. Nedkov, I. Ivanova, A. Chikalanov, N. Georgieva, E. Ivanova, V. Lyubenova. 2012. Ecological Space Modeling as a Pattern for Forest Vegetation Investigations (Example with Belasitsa Mts., BG). *Comptes rendus de l'Academie Bulgare des Sciences. Biologie, ecologie*, 65, N 4, 481 - 488.

Lyubenova, M., S. Dineva, N. Georgieva, T. Georgieva, I. Karadjova, P. Parvanova. 2012. Ecotoxicology Assessment Model of Plant-soil Complex Treated with Radomir Metal Industries Waste Waters. *Biotechnology&Eq.*

Lyubenova, M., A. Chikalanov, S. Stoyanov. 2012. Functional Types of Trees (PFTs) as Traits of Low Stem Growth Periods (Stress Periods). –In: Abstract Book “Modelling the terrestrial biosphere: From Ecological Processes to Remote Sensing Observations”, 2nd TERRABITES Symposium ESA/ESRIN, Frascati, Italy 6-8 February, 28 p.

Lyubenova, M., R. Nedkov, A. Chikalanov, I. Ivanova, N. Georgieva, V. Lyubenova. 2012. Ecological Space Modeling of Forest Ecosystems and their Dynamics in three Mountains of Bulgaria. –In: Abstract Book “Modelling the terrestrial biosphere: From Ecological Processes to Remote Sensing Observations”, 2nd TERRABITES Symposium ESA/ESRIN, Frascati, Italy 6-8 February, 38 p.

Chikalanov, A., V. Sergey, **M. Lyubenova**. Application of Neural Network and SOM for Oak Ecosystems Classification by Structural and Functional Parameters. 2012. –In: Abstract Book “Modelling the terrestrial biosphere: From Ecological Processes to Remote Sensing Observations”, 2nd TERRABITES Symposium ESA/ESRIN, Frascati, Italy 6-8 February, 39 p.

Baudena, M., C. Reick, V. Brovkin, S. Higgins, S. Scheiter, V. Lehsten, S. Sitch, S. Dekker, M. Rietkerk, B. Guesta, M. Zavala, P. van Bodegom, **M. Lyubenova**, J. Penuelas, D. Sylvain. 2012. Tree-grass Dynamics in Savannas: Connecting Ecological Theory with Dynamic Global Vegetation Models. 2nd TERRABITES Symposium ESA/ESRIN, Frascati, Italy 6-8 February, 5-7.

http://www.terrabites.net/fileadmin/user_upload/terrabites/PDFs/2nd_TERRABITES_Symposium/Talks/S4.Baudena.pdf

PROJECTS

Prof. Dr Mariyana Ivanova Lyubenova - ERCEA/SNE/055/2012; E-mail: ryana_l@yahoo.com

About: Application for a seconded national expert to the European Research Council

International Projects

1. COST Action FP1106 -2015 “STReESS - Studying Tree Responses to extreme Events: a Synthesis” – **position:** participant in MC and national coordinator.
2. COST FP Action ES1101-2014 „Harmonizing Global Biodiversity Modelling (HarmBio) – **position:** participant in MC, Working Group 2”Standardized datasets of biodiversity and environment” and national coordinator.
3. COST Action ES08056/2008-2013: The Terrestrial Biosphere in the Earth System - **position:** participant in MC, Working Group 3”Modeling Plant Ecology” and national coordinator.
4. EP „Environment“/„Natura Bulgaria” Consortium. Д-30-38/21.03.2011 – 25.03.2013. “Mapping and identifying of the environment – protected state of habitats and species – 1st fase”; Lot 6 - Mapping and identifying of the environment – protected state of vascular plants, mosses and habitats – **position:** key expert.
5. № BG 0031– EEA FM (2009-2011)“State and prospects of the *Castanea sativa* population in Belasitsa mountain: climate change adaptation, maintenance of biodiversity and sustainable ecosystem management”. National coordinator - Tz. Zlatanov- [Forest Research Institute, BAS](#) & [Icelandic Forest Research](#); [EEA Norway Grants](#) - **position:** expert .
6. Contract No 4-25-2008, Funding organization AustrianScience and Research Liaison Office, 2008 - 2009. A science based approach to understand biodiversity driven functions and services for improving wetland management; R. Kalchev (national coordinator), Institute of Biodiversity and Ecosystem Investigations, BAS - **position:** expert.
7. BBI/MATRA Project № 2006/014 Alterra –Wageningen/Green BalkansWildlife Society/Bulgarian Foundation of Biodiversity/2006-2008. “Favourable Conservation Status of Nature - 2000. Habitats and Species in Bulgaria”. Zinstra, H. (manager). I. Marin (national coordinator) Task: Development of Criteria for Favourable Conservation Status of Species and Habitats – **position:** key expert. (Inventory of conservation important regions and species in following districts – Osogovo Mountain, “Gabra” district, Dospat ravine).

8. Phare Aid/120600/D/SV/BG2007 – 2008 “Strengthening of administrative capacity at local level for implementation of environmental legislation” – **position:** key expert.

Bilateral Projects

9. Bulgarian National Scientific Fund/France/2005 – 2007 “Estimation of dynamics of structure and functions of Chestnut communities (*Castanea sativa* Mill.) – Belasica in condition of global climatic changes”. Manager S. Bratanova, Institute of Biodiversity and Ecosystem Investigations, BAS - **position:** consultant.

10. Bulgarian National Scientific Fund/France/2005 – 2007 “Plant biomonitoring of pollutants O₃, NO_x и SO₂ in natural and urban environment. Initial studies in Bulgaria and comparison with the situation in France”. Manager S. Bratanova, Institute of Biodiversity and Ecosystem Investigations, BAS – **position:** consultant.

11. Institute of Botany and Mycology, BAS/University of Sofia/Sweden, Lund University/IMES/1997-2000/IEDA PROJECT: Integrated environmental diagnosis and assesment: Ecological systems at risk in Bulgaria- Montane and coastal forest communities. **Position:** consultant.

National Projects

12. Bulgarian National Scientific Fund /ДДВУ0253/20.12.2010/2010-2012 “Role of the underground plant mass in the annual fixation of CO₂ from forest ecosystems of main tree species in Bulgaria”. Manager V. Dimitrova, Forest University, Sofia – **position:** consultant <http://belowground-phytomass.com>

13. Bulgarian National Scientific Fund/№ДК07РП02/21 - „Application of information technologies for modelling of forest ecosystems as an approach for the development of dynamic global vegetation models ”. – **position:** manager.

14. Bulgarian National Scientific Fund/YS-BG/12.07/2002-2006, № 2354 “Phytocoenological investigations in reserve “Kamenshtiza”, Central Balkan Mountain”. Manager K.Pachedjieva, Department of Ecology and EP, SU – **position:** consultant.

15. Bulgarian National Scientific Fund/YS-BG/ 2007-2008 “Research on environmental characteristics of chestnut forests for use as a model for multifunctional forest management”. Manager V. Dimitrova, University of Forestry, Sofia - **position:** consultant.

16. Bulgarian National Scientific Fund/ № BY- AH- 4 /2005-2009 “Dendroclimatic Analysis for Changes of Air Temperature and Precipitation in South-Western Bulgaria”. Manager St. Mirchev, University of Forestry, Sofia - **position:** key expert.

17. Bulgarian National Scientific Fund/ Ministry of regional development, Bourgas Municipality/1992-1996 “The complex investigations about the structure and functions of the xerophytes /forest/ ecosystems in Bulgaria”. Manager: I. Bondev, SU – **position:** regional expert.

18. Bulgarian National Scientific Fund/ Ministry of regional development, Bourgas Municipality/1987-1990 “ The complex ecological investigations in the region of III-th Metallurgy base – Bourgase before start of exploitation”. Manager: I. Bondev, SU – **position:** regional expert.

Institutional Projects

19. University of Sofia Scientific Fund/N025/2009 “Investigations about connection between production and energetical level of water state in *Zea mays* L. agroecosystem at the conditions of “Dragalevtzi” Study – Experimental Base” – **position:** manager

20. PUDOOS/2006-2008: Red Book of Bulgaria, t. 3 – Nature habitats. Chief redactor N. Chipev. – **position:** expert.

21. University of Sofia Scientific Fund/№351/2001-2002/№ 3356 “Ecological assessment of the *Juniperus excelsa* L. state in “Tisata” Reserve and the influence factors on the species decline” – **position:** manager.

22. University of Sofia Scientific Fund/2001 – 2002 “Investigations about biological active substance in the *Chenopodium botrys* phytomass and ecological factors”. Manager: D. Dimitrov, Depadtment of Botany, SU– **position:** key expert. .

23. University of Sofia Scientific Fund/358/2001-2002(N3360) “Ecological assessment of the *Piceeta excelsa* L. formation state and the influence factors on the Norway spruce decline in the “Tchuprene” Biosphere Reserve, Western Balkan Mountains” – **position:** manager.

24. University of Sofia, Faculty of Biology, Department of Ecology/ Ministry of regional development , Etropole Municipality/1992-1994" The complex ecological and nature-protection investigation about biotopes and biocoenoses of natural and agricultural ecosystems in the region of Etropole district". Manager: R. Doichev, SU – **position:** regional expert.