### Modern Cartography and GIS in Bulgaria

Teminoujka Bandrova in conversation with Alexander Wolodtschenko & Florian Hruby

Volume 11 of meta-carto-semiotics opens the section "interviews" with Teminoujka Bandrova, well-known Bulgarian cartographer from the University of Architecture, Civil Engineering and Geodesy in Sofia. At the same time, volume 11 continues the gender series of interviews.

#### About the interview

This interview was undertaken via email in early 2018. The final version was authorized by Teminoujka Bandrova in February 2018.

### About Teminoujka Bandrova

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Prof. Dr. Teminoujka Bandrova heads the Laboratory on cartography at the University of Architecture, Civil Engineering and Geodesy in Sofia. She is founder and president of the Bulgarian Cartographic Association (since 2011) and Council member and chair of the Young Scientists Commission of the International Society for Digital Earth. Moreover, Dr. Bandrova is project manager at DataMap-Europe.

### 1. How did you become a cartographer, where and when?

When I studied Geodesy, Photogrammetry and Cartography (1983-1988) at the Faculty of Geodesy in Sofia, I understood that only as a cartographer I could be an author, creator, artist, and designer or simply a map-maker. Cartography is not only my profession, it is my love. By the end of my studies as a graduated engineer, my specialization was cartography. Beside scientific and educational work, I do my hobby to make atlases and maps. Now, I can be glad that students from 1<sup>st</sup> to 12<sup>th</sup> grades of Bulgarian schools study with the help of my atlases and maps on geography and history subjects, published by DataMap-Europe. Combining practical, educational and scientific work helps me a lot to understand maps and cartography. This gives me confidence, that I do my job in the right way.

### 2. Is it challenging to be a female cartographer in Bulgaria?

It becomes easier because more women are starting in our profession. When I was a student, the girls in the class were only 7 out of 40 students. Nowadays, we have two geodesy classes with about 50% female colleagues – and counting. In my opinion, the fast technology development in recent years helped women to strive more for this profession. However, I should be honest that from time to time, we, women, need to behave like men in some situations  $\textcircled{\odot}$  ...

### 3. When did you start your activities in the ICA?

I participated in a conference in 1998 in Wroclaw, Poland where 3 ICA commissions held their meetings. Back then, Prof. Jackie Anderson from Canada invited me to become a member of the WG on Cartography and Children. I met very nice people, working in a society as a family. It's extremely important for young scientists to find themselves in a positive working environment. ICA is a very good professional organization and most of the commissions have developed consistent and sustainable approaches to collaborate with colleagues from different countries, to exchange opinions and help each other. This is a real value of the ICA and never should be disturbed!

To work for and with children is a big challenge. In Poland, I presented one of my first atlases for young children. Later on, I worked for children in the Commission on Planetary cartography with Prof. Shingareva and now I'm still collaborating on this topic as part of the cartography profession and the Early Warning and Crises Management (EWCM) with Prof. Konecny.

Since 2006, the Bulgarian Cartographic Society organizes the bi-annual International Conference on Cartography and GIS. Every new edition of the conference gathers more colleagues and friends. This year we are expecting around 200 participants from 40 countries.

# 4. Compared with neighboring countries like i.e. Romania and Greece, Bulgarian cartography (take for instance the society and events you mentioned) seems to figure more prominently? Is this due to a particular infrastructure, personal initiative or just a misimpression on our side?

I have never thought on this way, and I do not see the Bulgarian cartography different from that of the neighboring countries. On the contrary, at the conference we are organizing, we have participants from all neighboring countries, presenting reports at a very high level. Romanian colleagues are extremely active, which unfortunately does not show up in the ICA. However, Greece has its own presence in several areas - quality scientific participation, cross-boarding projects, and all good cartographical events organized by our Greek friends. Prof. Evangelos Livieratos, ICA commission chair and former Greek Minister, organizes more than 10 events on the topic of Cartographic Heritage. His contribution to cartography can be assessed extremely high. We also work very well with colleagues from the FYR of Macedonia and Kosovo. What is surprising for us is that this year, most authors who will participate in the Conference on Cartography and GIS come from Russia. It seems that cartography in Eastern Europe still holds good positions in a prestigious profession.

## 5. Regarding events on GIScience: Bulgaria also hosts the annual SGEM conference. Temporal proximity between both events indicates that there is just little communication between SGEM and the Bulgarian Cartographic Society?

This is a true. The SGEM conference is a multidisciplinary conference and ICC&GIS is a narrow professional event. Another big difference is that our event is supported by an international professional organization - ICA. The evidence of the level we have is the patronage of the President of the National Assembly of Bulgaria Mrs. Tsveta Karayancheva, as well as the support of the Ministry of the Bulgarian Presidency of the Council of the European Union. This is an acknowledgment of the importance of our profession, which we are extremely grateful for.

## 6. How do you like the "Selected interviews after the ICC 2017" as an event-and/or photoatlases with opinions of selected participants of the ICC 2017?

Thank you very much, Dr. Wolodtschenko, for the idea and the realization of this project. To me, personally, it was a pleasure to participate and read the opinions of all participants. It is visible that all of us have ideas on very important topics and we all need broad discussions on our meetings and, more precisely, on the ICA General Assemblies.

## 7. What are the plans of the Bulgarian Cartographic Association concerning the upcoming ICC 2019 in Tokyo?

We plan to present our achievements for the past 4 years, highlighting all activities we did for the International Map Year 2015-2016. I want to believe that we will be sharing information about the 8<sup>th</sup> ICC&GIS to be hold in 2020, again in Bulgaria. It is a challenge to participate also in the cartographical exhibition in Tokyo and the Barbara Petchenic Competition.

8. The e-journal <meta-carto-semiotics> celebrated its 10<sup>th</sup> anniversary last year. As publishers, we were pleased to note that the January 2018 ICA News Letter included a reference to our journal. What do you wish for our theoryand semiotics-oriented journal?

A 10<sup>th</sup> anniversary marks a significant milestone for science. Compliments for good work! Please, accept my congratulations and wishes for many good quality articles! All the best to editors and editorial board!

### **Selected Publications**

- Bandrova T., M. Kouteva, L. Pashova, D. Savova, S. Marinova (2015) Conceptual Framework for Educational Disaster Centre "Save the Children Life". *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-3/W3, 2015 ISPRS Geospatial Week 2015, 28 Sep 03 Oct 2015, La Grande Motte, France. pp. 225-234
- Bandrova, T., Konecny, M., Zlatanova, S. (Eds.) *Thematic Cartography for the Society* ISBN 978-3-319-08180-9, Series: Lecture Notes in Geoinformation and Cartography, 2014, XV, 357 p. 131 illus. ISSN 1863-2246 ISSN 1863-2351 (electronic) ISBN 978-3-319-08179-3 ISBN 978-3-319-08180-9 (eBook) DOI 10.1007/978-3-319-08180-9. Springer Cham Heidelberg New York Dordrecht London
- Bandrova T.: Cartographic Response to Changes in Teaching Geography and History, Maps for the Future. *Lecture Notes in Geoinformation and Cartography*, 2012, Volume 5, 203-217, DOI: 10.1007/978-3-642-19522-8\_17 Springer, 2012
- Bandrova, T., Zlatanova S., Konecny M.: Three-Dimensional Maps for Disaster Management, *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci.*, I-4, 245-250, doi:10.5194/isprsannals-I-4-245-2012, 2012, Melbourne, Australia
- Bandrova, T. (2005). Innovative technology for the creation of 3D maps. *Data Science Journal*, 4, 53-58. Retrieved from https://www.jstage.jst.go.jp/article/dsj4/0/4\_0\_53/\_pdf