

# **CARTOGRAPHIC ACTIVITIES IN BULGARIA, 2011 - 2015**

**NATIONAL REPORT  
BULGARIAN CARTOGRAPHIC ASSOCIATION**

16<sup>th</sup> General Assembly of ICA, Rio de Janeiro, Brazil, 2015

edited by Temenoujka Bandrova and Silvia Marinova

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# 1. Bulgarian Cartographic Association (BCA)

Bulgarian Cartographic Association (BCA) was established on 8th of April, 2011 by forty Bulgarian cartographers and specialist connected to cartography field. They met in Sofia for establishment of BCA. The main tasks of the Association are:

- To consolidate and legitimize its members to the public, state and municipal administration and institutions;
- To represent and protect the interests of its members to the public administration and provide support for its activities;
- To offer motivated and reasoned opinions about changes in legislation on cartographic activities;
- To collect and disseminate information on the development of cartographic activities in Bulgaria;
- To promote and disseminate information on international cartographic activities;
- To assist in further training and to stimulate young cartographers;
- To participate in and organize national and international events and conferences;
- To organize a network of institutions to take joint decisions on the development of cartography in Bulgaria;
- To represent the Bulgarian cartographic society to the international organizations.

The establishment of BCA is approved by Bulgarian law-court and strongly supported by the National Agency for Geodesy, Cartography and Cadastre, Association for Geospatial Information in South-East Europe, many private GIS and cartographic companies, different institutions of Bulgarian Academy of Science and several Universities.

Our members are mapping companies, publishers, academics, researchers, map curators, individual cartographers, GIS specialists, geographers and ordinary members of the public with an interest in maps.

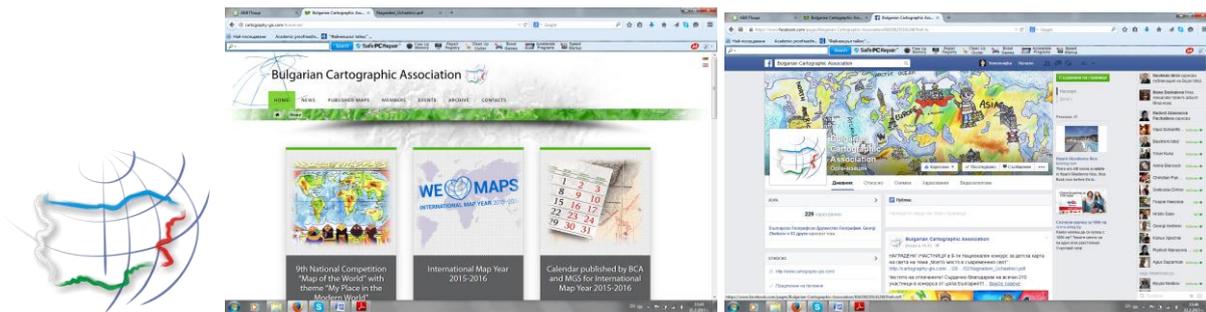
The executive board consists 7 members: Dr. Angelov, A.- manager of Geodetect Ltd.; Prof. Bandrova, T. – president BCA, head of Laboratory of Cartography, University of Architecture, Civil Engineering and Geodesy (UACEG); Col. Gladkov, G. – vice-president BCA, Ministry of Transport Information Technology and Communications; Ms. Karadjova, E. – General Manager ESRI-Bulgaria, Dr. Marinova S. – Secretary BCA, KartGeo Ltd.; Prof. Penev, P., UACEG; Prof. Vatseva, R.– vice-president BCA, National Institute of Geophysics, Geodesy and Geography, Bulgarian Academy of Science (Bandrova T. and Marinova S., 2011).

Bulgarian Cartographic Association (BCA) was chosen for national representative of Bulgaria in the International Cartographic Association in Paris, July 2011 and replaced the Union on Surveyors and Land Managers in Bulgaria (Fig.1).



*Fig.1. BCA becomes a national member in ICA, Paris, 2011*

All information about the Association can be seen in web page and Facebook (see Fig. 2).



*Fig.2. Logo, URL: [www.cartography-gis.com](http://www.cartography-gis.com) and Facebook of BCA*

*Temenujka Bandrova*  
President,  
Bulgarian Cartographic Association

## 2. 4<sup>th</sup> and 5<sup>th</sup> International Conferences on Cartography and GIS in Bulgaria

The 5<sup>th</sup> edition of the International Conference on Cartography and GIS (ICC&GIS) was organized in Riviera, June 2014 and the previous 4<sup>th</sup> one took place in Albena, June, 2012 (Fig. 3, Fig. 4, Fig. 5). The conferences are organized by BCA and UACEG, Sofia. The organizers' aim is to collect knowledge and information about the latest achievements of cartography combined with GIS in the region of the Balkan Peninsula, Europe by adding also global aspects. Another goal is to discover and offer decisions for satisfaction of the ever increasing demands for analyses and visualization of geo-spatial data in the area of science, economy, management, ecology, and crises situations in our modern times at a national, regional and global scale.



*Fig.3. Participants in the 4th ICC&GIS*



*Fig.4. Moments of the opening ceremony of the 4th ICC&GIS*



*Fig.5. Moments of the social events of the 4th ICC&GIS*

The main topics of the conferences are:

- GIS Technologies and Related Disciplines;
- Cartography and GIS in Education;
- Internet Cartography and Digital Atlases;
- Map Design and Production;
- Cartographic Visualization;
- Virtual Geographic Environment;
- GIS for City Traffic;
- GPS Technologies;
- Remote Sensing Technologies.

In these years, marked by social and natural crises, these topics allow us to outline the hunger of our users for cartography achievements. They also show the need of businessmen, government representatives and scientists for real time cartographic representations and better SDI, GPS and GIS solutions. To deliver them, we need support of domain specialists in different branches of the Earth sciences.

During the conferences, different ICA commissions have their annual meetings (Fig. 6):

- Cartography and Children,
- Cartography on Early Warning and Crises Management, and
- Map Projection.



*Fig.6. Participants in the ICA commissions' meetings*

Two-day Seminar with EU Cooperation on Early Warning and Disaster / Crises Management is organized by Prof. Dr. Milan Konecny, Chair of Commission on Cartography on Early Warning and Crises Management and ICA President (former) under the auspices of the Czech ambassador to Bulgaria His Excellency Mr. Pavel Vacek and with co-organizer Masaryk University, Brno, Czech Republic.

The conferences are supported by different ministries and government institutions that expect significant results to be achieved and many new projects to be started during the event. As EU member since 2007 and NATO member since 2004, Bulgaria welcomes all ideas for collaboration in the field of Earth sciences. An example for such cooperation is the above-mentioned Seminar that has acquired EU dimension built around the Bulgarian and Czech combined efforts. Among the members of the Local Organizing Committee, numerous universities that specialize in the field of Cartography and GIS can be distinguished. The organizers are proud to announce that the following leader companies in geoinformatics and cartography domains participate as sponsors of the event: ESRI, KB Panorama, Intergraph, Bulgarian Geoinformation Company, Chamber of Graduated Surveyors, DataMap-Europe.



*Fig.7. Group photo of participants at 5th International Conference on Cartography and GIS, Riviera, Varna, Bulgaria*

During the 5<sup>th</sup> Conference 170 scientists from 42 countries (Albania, Algeria, Armenia, Australia, Austria, Belgium, Brazil, China, Croatia, Czech Republic, Denmark, Egypt, France, Germany, Greece, Hungary, India, Indonesia, Iran, Israel, Italy, Kosovo, FYRoMacedonia, Malaysia, Mexico, Netherlands, Nigeria, Poland, Portugal, Romania, Russia, Saudi Arabia, Serbia, Slovakia, Spain, Sudan, Switzerland, Turkey, Ukraine, United Arab Emirates, USA, Bulgaria) participated (see Fig. 7).

The 5<sup>th</sup> Conference was accompanied by exhibitions. All participants and other guests of the hotel complex were enjoyed them. There was a very beautiful exhibition "Discovering Black Sea (II - XIX centuries)", implemented by the Sofia University, Primorsko Municipality, "Primorsko Club" Ltd., International Trade and Cultural Center GEOPAN – Burgas and others and project author Dr. Stefan Peykov. There was great interest to children retrospective exhibition map of the world, part of the national competition "Map of the world Barbara Petchenik." Military geographic service showed the latest published topographic maps of the Bulgarian territories. See more in Bandrova T., 2014a,b.

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

### 3. 26<sup>th</sup> International Cartographic Conference, Dresden, Germany, 2013

From 25th to 30th August in Dresden city, Germany, near the banks of river Elbe, the 26th International Cartographic Conference took place with over 1,400 participants from 81 countries. 800 papers and posters were presented in five consecutive days on 8 parallel sessions.

The traditional cartographic exhibition of more than 500 maps, atlases, globes and digital products from 35 countries was held. Bulgaria was represented by "GIS-Sofia" Ltd., "Datamap" Ltd., "KartGeo" Ltd., Cartographic studio "DavGEO", "KartProekt" Ltd., and "Geopan" Ltd. (Fig. 8). Bulgarian representatives at the conference (Fig. 9) took part in spoken and poster sessions, in chairing sessions, in a meeting of national representatives in the ICA with the Executive Committee, in meetings of the ICA commissions and in the jury for children map competition.



*Fig.8. Bulgarian maps on the International Cartographic Exhibition*



*Fig.9. Bulgarian delegation in Dresden*

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

## 4. 25<sup>th</sup> International Cartographic Conference, Paris, France, 2011

During the 25th International Cartographic Conference in Paris, France, Silvia Marinova, Ph.D Student, received a travel award for best report as a young scientist. The costs of her participation in the conference were covered by the International Cartographic Association (ICA).

Cartographic Studio “DavGeo” with a map of Sunny Beach was awarded first prize in the category “Maps for tourism, orienteering and parks” in the International Cartographic Exhibition at the 25th International Cartographic Conference in Paris, France (see Fig. 10).



*Fig.10. Bulgarian participation and an award in Map Exhibition, Paris, 2011*

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President,  
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## 5. Projects

### “Thematic Cartography for the Society” and Conference Proceedings

From 2006, every two years, Bulgarian cartographic society has a chance to meet colleagues from all over the world at home and make publications using the best papers from International conferences on Cartography and GIS, organized in Bulgaria.

On 26 September 2014 in Laboratory on Cartography “Prof. Benjamin Cohen” a celebration for newly published book „Thematic Cartography for the Society” by Springer was held (Kotseva V., 2014) (see Fig.11).

The book contains 357 paged and has 131 illustrations. It was published in printed version with hardcover and as an e-Book. It is available in [springer.com/shop](http://springer.com/shop)

Proceedings are available in printed or e-versions in [http://cartography-gis.com/archive\\_en/](http://cartography-gis.com/archive_en/) and from last two conferences are indexed in ISI Web of Science database maintained by Thomson Reuters and Scopus.

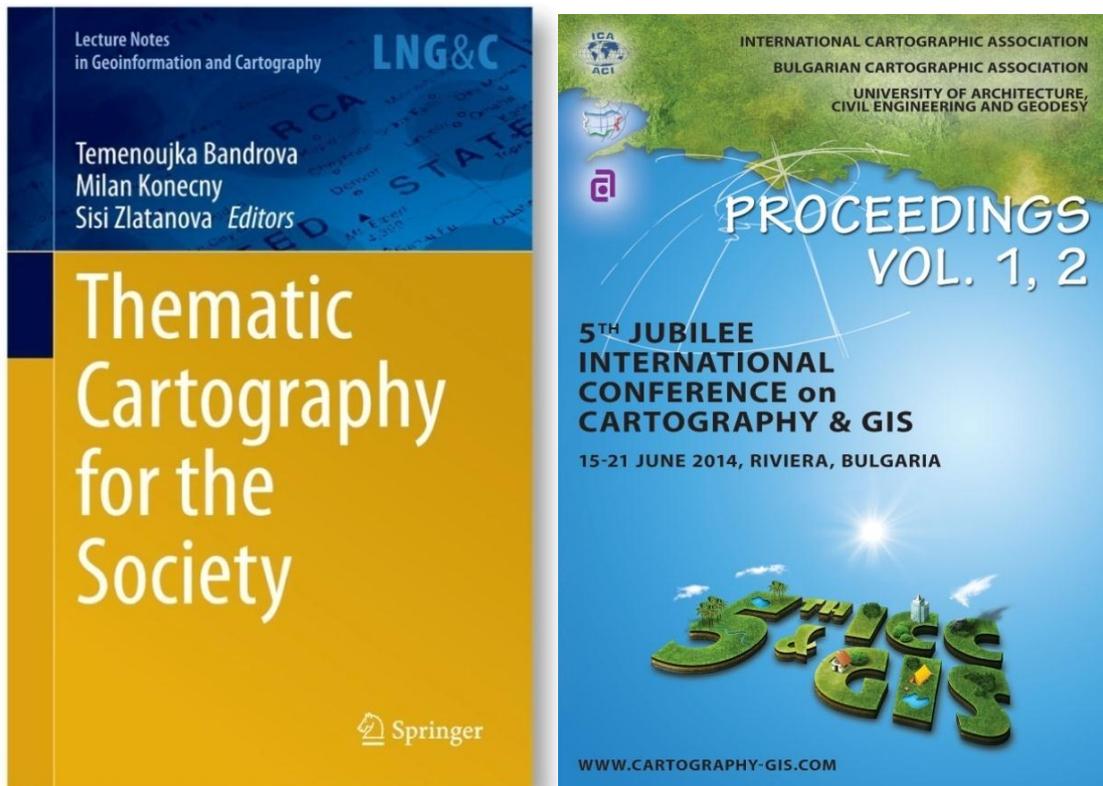


Fig.11. Book and Proceeding from 5<sup>th</sup> ICC&GIS (BandrovaT. et al., 2014)

### New map of Strandja Mountain

In implementation of the cross-border project „Strandja/Yildiz the Mountain is without Fires“ it has been designed and constructed a map in scale 1: 100 000 of over 13 100 km<sup>2</sup> forest area covering the area of the state border between the Republic of Bulgaria and the Republic of Turkey along 182 km.

The map depicts the relief, the hydrography, the settlements, the road network and the administrative boundaries of the territory of both countries. Its specific content indicates the boundaries of the Bulgarian and the Turkish forestry enterprises, the classes of fire hazard of the forest areas within the scope of the project, the specialized services and the constructed fire fighting infrastructure, the protected areas and the objects that attract a lot of visitors including migrants which increase the fire hazard in Strandja (ECOPAN, 2014).

*Temenoujka Bandrova*  
President,  
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## 6. Education

BCA supports educational courses organized in cooperation of GI companies or colleagues from ICA and as well as of Erasmus teachers exchange frame. Other support is directed to PhD students in cartographic field. As it was mentioned in point 4., in 2011, one of our PhD students received ICA travel award for her paper, presented in ICC, Paris.

### Educational courses

#### Bulgarian Cartographic Association: co-organizer of the training school on 3D Urban Visualisation. Open Web Technologies

In 2012, on the occasion of the 70<sup>th</sup> anniversary of the University of Architecture, Civil Engineering and Geodesy, University of Technology, Delft, the Netherlands, Bulgarian Cartographic Association and Laboratory on Cartography, organized a training school entitled: 3D Urban Visualisation. Open Web Technologies. The course lasted 40 hours and the keynote speaker was Assoc. Prof. Dr. Sisi Zlatanova, TU Delft (see Fig.12).



*Fig.12. Discussion during the Course with lecturer Sisi Zlatanova*

In this course Open Web Technologies have been presented to the students. They used City GML and gathered data for building of the University by evacuation plans and simple measurements. The constructed model was represented in LoD4. More information about technologies and software can be found in many of Zlatanova publications, for example (Zlatanova S et al, 2008). Students have been divided into groups by 3-4 people and worked together in different steps of model creation. Last group was responsible for visualisation.

#### GIS Panorama course

A course on GIS Panorama was held in Laboratory on Cartography, University of Architecture, Civil Engineering and Geodesy (Fig.13). Teachers and PhD students participated. The course tutors

were Yana Angelova and Angel Angelov from Geodetect Ltd.

The software was given free for educational needs to the Laboratory on Cartography, UACEG. More about the software can be found in Belenkov and Angelova, 2012.



*Fig.13. Students listening to the lectures of Angel Angelov*

#### Intergraph Geomedia Course at Laboratory on Cartography, UACEG

The course was organized by Bulgarian Cartographic Association, TechnoLogica and Hexagon on 15 – 16 December, 2014 at the Laboratory on Cartography, UACEG (Fig.14). The theme was “Analysis and processing of satellite images using Intergraph Geomedia software for cartographic purposes”.

The lecturer was Vladimir Filipov form TechnoLogica GIS department and the participants were students of Specialization of Cartography and young teachers.

BCA prepares certificates for all participants and lecturers of the organized courses.



*Fig.14. Participants in the course*

## **PhD theses**

There are several PhD students that studying cartography and master students in cartography is growing up every year. In the moment there are 26 students like Cartography specialization, coming from Geodesy field.

PhD students have modern topics on which they are doing their researches:

Denitsa Savova develops a PhD theses on the theme “Cartographic Modelling of Natural Disasters - modelling of forest fire phenomena”, Imer Kuka from Kosovo – “GPS and GIS techniques in cartographic analysis and applications”, Nadka Stoimenova – “Thematic mapping and visualization of climate changes”. All they and others are still in the process of researches and their defences will be happened next years.

Educational and scientific degree Doctor in Cartography was awarded to Silvia Marinova, General Secretary of Bulgarian Cartographic Association in January, 2015. Her topic was “Thematic Mapping and Visualization for Early Warning and Crises Management”.

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

## 7. International Map Year 2015-2016, Cartographic Exhibition and ICA Speaking Session, FIG Working Week, Sofia 2015

FIG Working Week 2015 was held with 1.000 participants from 68 countries from 17–21 May 2015 in Sofia. ICA was very visible at the event. President Prof. Georg Garter gave a keynote speech (Fig.15) in the plenary session entitled “Modern Cartography”. The conference also included an ICA session and a Cartographic Exhibition of Wall Maps – held in celebration of International Map Year (Fig.16).

### Cartographic Exhibition of Wall Maps

Many participants were delighted to see such an exhibition and congratulated ICA and the Bulgarian Cartographic Association for the organization.



*Fig.15. Keynote speech of Prof. Georg Garter*



*Fig.16. Cartographic exhibition, FIG Working Week 2015*

## Exhibition participants:

- Bulgarian Cartographic Association, Barbara Petchenik Competition - National level;
- Cartographic Studio DavGEO, Bulgaria;
- Croatian Cartographic Society;
- DataMap-Europe, Bulgaria;
- GEOPAN Ltd, Bulgaria;
- GIS-Sofia Ltd., Bulgaria;
- KartGeo Ltd., Bulgaria;
- Military Geographic Service, Bulgaria;
- University of Pristina;
- University of Tetovo, FYRO Macedonia.

The exhibitors received certificates for the participation and a special IMY calendar produced by the Bulgarian Cartographic Association and the Military Geographic Service.

**ICA Speaking session** (Fig.17)

Chair: Prof. Georg Gartner, President ICA, Austria

Rapporteur: Prof. Dr. Temenoujka Bandrova, President, Bulgarian Cartographic Association

A Short Note on the The International Map Year 2015/16 by Prof. Georg Gartner, President, ICA

Zbyněk Štěrba, Milan Konečný and Čeněk Šašinka (Czech Republic): Research on Usability Testing and Cognitive Issues of Cartographic Visualizations in the Context of Different Groups of Users

Georg Gartner (Austria): A Basemap for Austria

Silvia Marinova, Temenoujka Bandrova, Mihaela Kouteva-Guentcheva and Stefan Bonchev (Bulgaria): Thematic Mapping for Disaster Risk Assessment in Case of Earthquake

Bashkim Idrizi (Macedonia, FYROM), Ismail Kabashi and Atdhe Buzhala (Kosovo): Mobile Application Based on Android Platform for Referent Points of Third Order in the City of Prishtina

Philippe De Maeyer, K. De Coene, B De Wit, K Ooms and M Van den Berghe (Belgium): Development of a Tool Allowing the Elaboration of a Geographical Database of Early Modern Flanders and Brabant

Temenujka Bandrova (Bulgaria): Bulgarian Cartographic Association – Mission and Strategic Development



*Fig.17. ICA Speaking session, FIG Working Week 19 May 2015*

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

## 8. 8<sup>th</sup> and 9<sup>th</sup> National Competitions for Children World Map “My Place in Today’s World”

An exhibition of 103 and respectively 210 children’s drawings – maps of the world was held at the University of Architecture, Civil Engineering and Geodesy in 2013 and 2015. The drawings participate in the 8th and 9th National Competition for children’s world map “My place in today’s world“, organized by the Bulgarian Cartographic Association. The winners were rewarded in a special ceremony with cocktail and tricks show.

The competition is very popular in Bulgaria. Very often the regional schools organize their own competitions and later they send to National one the best drawings. BCA contributed to the International events with a poster (sponsored by ICA) for Barbara Petchenik Competition. The children drawings used for Poster design were scanned by Jeet Atwal, Canada. The poster designer is Aneliya Yotova, former BPC participant from Bulgaria (see Fig.18).



Fig.18. Poster and awarded children, participated in Barbara Petchenik Competition, 2015

### Barbara Petchenik Children's World Map Competition 2013

#### 8<sup>th</sup> Bulgarian Competition for Children's World Map "My place in today’s world"

##### Organization of the National Competition

The Bulgarian Cartographic Association (BCA) organized the 8th National Competition for Children's World Map which is held according to the theme and rules provided by ICA.

Co-organizers of the competition were National Institute of Geophysics, Geodesy and Geography at the Bulgarian Academy of Sciences and University of Architecture, Civil Engineering and Geodesy, Sofia.

Support was provided by the National Geographic KIDS Bulgaria, DataMap Europe Ltd. and ESRI Bulgaria.

Media support was provided by the National DARIK Radio.

The contest was announced also in BCA web page: [www.cartography-gis.com](http://www.cartography-gis.com)



**Photo: Stefan Bonchev**  
(*Note: All photos in this document*)

*Fig.19. Drawing by Yoana Yorgova, 5 years old from Yambol city, Bulgaria received I-st prize. The title is "The children of the world".*

## Participants

107 drawings of children between 5 and 15 years of age from 10 settlements in Bulgaria participated in the competition. Some schools participated for the first time and many art schools participated by tradition. All drawings are of very high quality in the meaning of cartography and art.



*Fig.20. Natali Georgieva, 8 years old from Pleven city, Bulgaria titled her drawing „Bulgaria – Land of Roses”, received I-st prize*



*Fig. 21. Ivana Todorova, 8 years old from Pleven city, Bulgaria, has I-st prize. The title is "The Song of the Continents"*



Fig.22. Tsvetomira Tsvetanova, 10 years old from Plevenskiy city, Bulgaria titled her drawing „The world is beautiful, the world is wonderful, the world needs my song”, received I-st prize

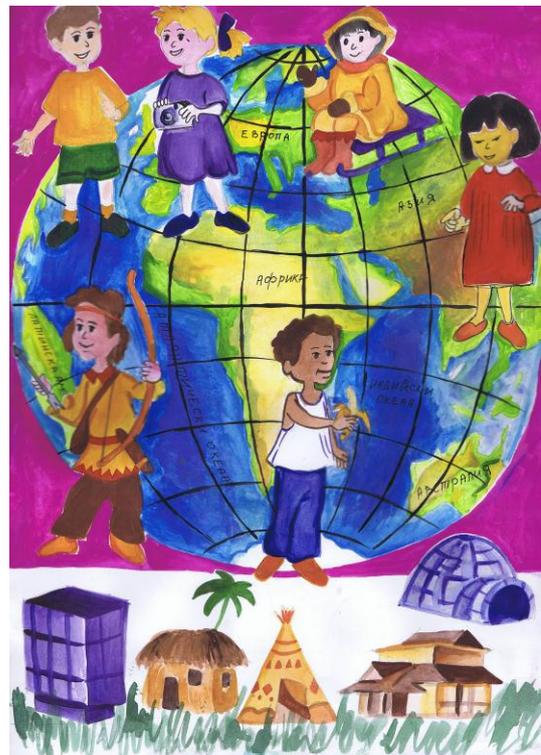


Fig.23. Natalia Kazieva, 12 years old from Kazanlak city, Bulgaria has I-st prize

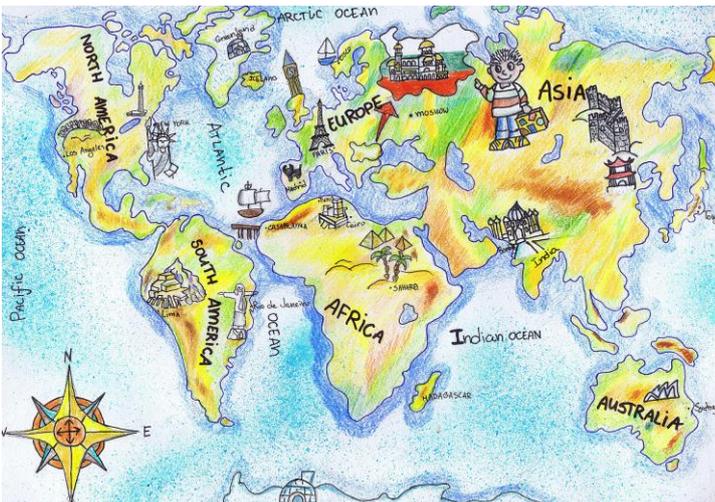


Fig.24. Drawing by Ivailo Ivanov, 12 years old from Sofia city, Bulgaria received I-st prize. The title is “My dream places”

### Commission of Evaluation

The members of commission of evaluation were:

1. Prof. Dr. Temenoujka Bandrova, Bulgarian Cartographic Association, University of Architecture, Civil Engineering and Geodesy
2. Assoc. Prof. Dr. Petar Penev, University of Architecture, Civil Engineering and Geodesy (UACEG)
3. Assoc. Prof. Dr. Georgi Zhelezov, National Institute of Geophysics, Geodesy and Geography at the Bulgarian Academy of Sciences
4. Assoc. Prof. Dr. Marian Varbanov, National Institute of Geophysics, Geodesy and

- Geography at the Bulgarian Academy of Sciences
5. *Stefan Bonchev*, UACEG
  6. *Emilia Karamincheva*, student on Cartography, UACEG
  7. *Ivan Dimitrov*, student on Cartography, UACEG
  8. *Mustafa Mustafa*, student on Cartography, UACEG
  9. *Petya Angelova*, student on Cartography, UACEG
  10. *Valentin Milanov*, student on Cartography, UACEG
  11. *Radi Dimitrov*, student on Cartography, UACEG
  12. *Krum Dimitrov*, student on Cartography, UACEG

The commission awarded 6 first prizes, 3 second, 2 third and 3 stimulating prizes.

The names of the winners received first prize in the 8th Bulgarian Competition for Children's World Map "My place in today's world" 2013 are as follow:

1. **Yoana Yorgova**, 5 years old;  
Address: Kindergarten "Bilyana", 48 Graf Ignatiev Str., 8600 Yambol, Bulgaria  
Drawing title: "*The children of the world*".
2. **Natali Georgieva**, 8 years old;  
Address: Peyo Yavorov School, j.k. Storgozia, 5800 Pleven, Bulgaria  
Drawing title: "*Bulgaria – Land of Roses*"
3. **Ivana Todorova**, 8 years old;  
Address: Peyo Yavorov School, j.k. Storgozia, 5800 Pleven, Bulgaria  
Drawing title: "*The Song of the Continents*"
4. **Natalia Kazieva**, 12 years old;  
Address: Art School Zhivopis, 3 Kokiche Str., 6100 Kazanlak, Bulgaria  
Drawing title:
5. **Tsvetomira Tsvetanova**, 10 years old;  
Address: Peyo Yavorov School, j.k. Storgozia, 5800 Pleven, Bulgaria  
Drawing title: "*The world is beautiful, the world is wonderful, the world needs my song*"
6. **Ivailo Ivanov**, 12 years old;  
Address: Art-School "Spektar", j.k. Ilinden" Bl. 127B, ent. A, fl. 6, 1309 Sofia, Bulgaria  
Drawing title: "*My dream places*"

### **Exhibition and award ceremony**

The exhibition and award ceremony was held on March 1st, 2013 in the University of Architecture, Civil Engineering and Geodesy, Sofia.

For the 8th National competition the Vice President of ICA Prof. Milan Konecny, DSc was invited. He took participation in the award ceremony and greeted the winners.

Other prizes were handed by Prof. Temenoujka Bandrova from UACEG, Assoc. Prof. Petar Penev, from UACEG, Mr. Chavdar Dinev from DataMap Europe Ltd, Mrs. Sara Koen, and Prof. Boris Kolev from NIGGG, BAS.

The NATIONAL GEOGRAPHIC KIDS Bulgaria will publish an article for the 8th Bulgarian Competition for Children's World Map "My place in today's world" 2013 in its edition in April 2013.



Fig.25. Winners in National level of BPC 2013 and a Cake for participants

*Rumiana Vatseva*  
National co-ordinator for Bulgaria

## **Barbara Petchenik Children's World Map Competition 2015**

### **9th Bulgarian Competition for Children's World Map "My place in today's world"**

#### **Organization of the National Competition**

The Bulgarian Cartographic Association (BCA) organized the 9th National Competition for Children's World Map, which was held according to the theme and rules provided by the ICA.

Co-organizers of the competition were the National Institute of Geophysics, Geodesy and Geography at the Bulgarian Academy of Sciences and the University of Architecture, Civil Engineering and Geodesy, Sofia.

Support was provided by the National Geographic KIDS Bulgaria, DataMap Europe Ltd. and ESRI Bulgaria.

Media support was provided by the National DARIK Radio.

The contest was announced also at the BCA web page: [www.cartography-gis.com](http://www.cartography-gis.com)

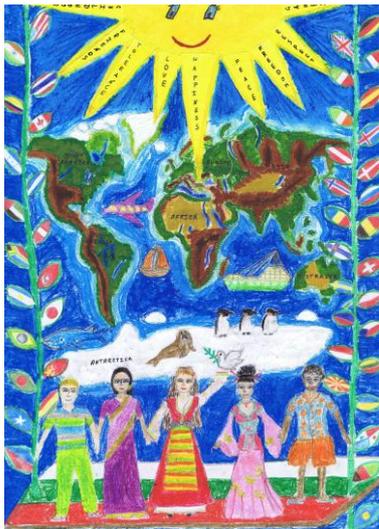
#### **Participants**

210 drawings of children between 5 and 15 years of age from 26 towns in Bulgaria participated in the competition. Some schools participated for the first time and many art schools participated by tradition. All drawings are of very high quality in the meaning of cartography and art.



**Photo: Stefan Bonchev**  
(*Note: All photos in this document*)

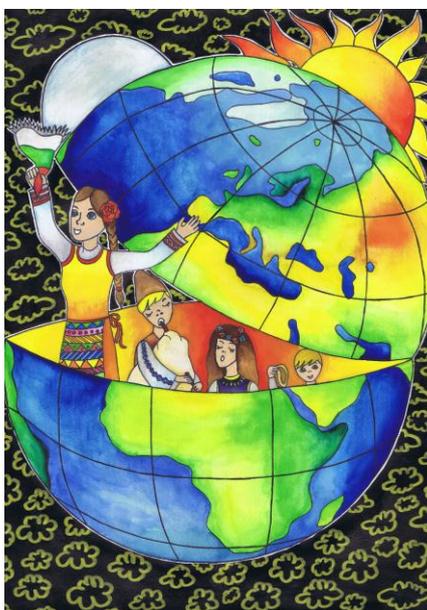
*Fig.26. Drawing by Aleksandra Garkova, 5 years old from Burgas town, Bulgaria received 1-st prize. The title is "The animals of the world".*



*Fig.27. Deya Evtimova, 8 years old from Burgas town, Bulgaria titled her drawing „ My place in today's world – where there is peace, tolerance, respect, friends, childhood, freedom, happiness, games, love...”, received 1-st prize*



*Fig.28. Elizabet Milkova, 11 years old from Sofia city, Bulgaria, has 1-st prize. The title is "Friends from all over the world visit Bulgaria"*



*Fig.29. Drawing by Desislava Dimitrova, 12 years old from Lovech town, Bulgaria received 1-st prize. The title is "The magic of the Bulgarian folklore".*



Fig.30. Luiza Toteva, 14 years old from Kazanlak town, Bulgaria titled her drawing „ Clean hands for the Planet”, received 1-st prize



Fig.31. Nina Achilova, 14 years old from Kazanlak town, Bulgaria has 1-st prize. The title is “Living Planet”

## The Evaluation Committee

The members of the evaluation committee were:

1. *Prof. Dr. Temenoujka Bandrova*, Bulgarian Cartographic Association, University of Architecture, Civil Engineering and Geodesy (UACEG)
2. *Assoc. Prof. Dr. Petar Penev*, University of Architecture, Civil Engineering and Geodesy
3. *Assist. Prof. Dr. Silviya Marinova*, UACEG
4. *Assist. Prof. Nikolay Naydenov*, UACEG
5. *Assist. Stefan Bonchev*, UACEG
6. *Assist. M. Moteva*, UACEG
7. *Assoc. Prof. Anton Filipov*, Sofia University “St. Kliment Ohridski”
8. *Prof. Dr. Boris Kolev*, National Institute of Geophysics, Geodesy and Geography at the Bulgarian Academy of Sciences (NIGGG – BAS)
9. *Assist. Prof. Dr. Emilia Tcherkezova*, NIGGG – BAS
10. *Assist. Prof. Poly Roukova*, NIGGG – BAS
11. *Assist. Prof. Juliya Kroumova*, NIGGG – BAS
12. *Assist. Ivanka Boteva*, NIGGG – BAS
13. *Atanas Kitev*, PhD student, NIGGG – BAS
14. *Velimira Stoyanova*, PhD student, NIGGG – BAS
15. *Stefan Genchev*, PhD student, NIGGG – BAS
16. *Denitsa Savova*, PhD student, UACEG
17. *P. Raeva*, student on Cartography, UACEG
18. *Anton Todorov*, student on Cartography, UACEG
19. *Iliandar Iliiev*, student on Cartography, UACEG

20. Alis Pacharazova, student on Cartography, UACEG
21. *Luisa Chavdarova*, student on Cartography, UACEG
22. *Kristina Kehayova*, student on Cartography, UACEG
23. *Boryana Baeva*, student on Cartography, UACEG
24. *Katerina Stefanova*, student on Cartography, UACEG
25. *E. Kicka*, student on Cartography (Erasmus), Poland
26. *E. Pawlikowska*, student on Cartography (Erasmus), Poland
27. *P. Popek*, student on Cartography (Erasmus), Poland
28. *M. Giljanovic*, student on Cartography (Erasmus), Croatia
29. *H. Dekyvere*, student on Cartography (Erasmus), Belgium

The commission awarded 6 first prizes, 4 second, 4 third and 5 stimulating prizes.

The names of the winners who received the first prizes of the 9th Bulgarian Competition for Children's World Map "My place in today's world" 2015 are as follows:

1. **Aleksandra Garkova**, 5 years old;  
Address: Art School Akvarel, Community Centre "Probuda", j.k. Bratya Miladinovi, Bl. 56, Ent. B, 8001 Burgas, Bulgaria  
Drawing title: "*The animals of the world*".
2. **Deya Evtimova**, 8 years old;  
Address: Primary School "Bratya Miladinovi", 8000 Burgas,, Bulgaria  
Drawing title: "*My place in today's world – where there is peace, tolerance, respect, friends, childhood, freedom, happiness, games, love...*"
3. **Elizabet Milkova**, 11 years old;  
Address: Art-School "Spektar", j.k. Ilinden" Bl. 127B, ent. A, fl. 6, 1309 Sofia, Bulgaria  
Drawing title: "*Friends from all over the world visit Bulgaria*"
4. **Desislava Dimitrova**, 12 years old;  
Address: Art School "Geya", Municipality Children Complex, 5500 Lovech, Bulgaria  
Drawing title: "*The magic of the Bulgarian folklore*"
5. **Luiza Toteva**, 14 years old;  
Address: Art School Zhivopis, Municipality Children Complex "St. Ivan Rilski", 3 Kokiche Str., 6100 Kazanlak, Bulgaria  
Drawing title: "*Clean hands for the Planet*"
6. **Nina Achilova**, 14 years old;  
Address: Art School Zhivopis, Municipality Children Complex "St. Ivan Rilski", 3 Kokiche Str., 6100 Kazanlak, Bulgaria  
Drawing title: "*Living Planet*"

### Exhibition and award ceremony

The exhibition and the award ceremony were held on February 27th, 2015 at the University of Architecture, Civil Engineering and Geodesy, Sofia.

The prizes were handed by Prof. Temenoujka Bandrova from UACEG, Prof. Svetoslav Simeonov from NIGGG – BAS, Mrs, Tatyana Grigorova from National Geographic KIDS Bulgaria, Mrs. Miglena Kuzmanova from ESRI Bulgaria, Assoc. Prof. Dr. Petar Penev, from UACEG, Mr.

Chavdar Dinev from DataMap Europe Ltd. and Assoc. Prof. Dr. Marian Vurbanov from NIGGG – BAS.

The NATIONAL GEOGRAPHIC KIDS Bulgaria published an article for the 9th Bulgarian Competition for Children's World Map "My place in today's world" 2015 in its edition in April 2015.

*Rumiana Vatseva,*  
National co-ordinator for Bulgaria

## 9. Promotion of Cartography

### Bulgaria became a member of Group on Earth Observations (GEO)

Bulgaria was officially accepted as a member of GEO during the XI Plenary Session held in Geneva, Switzerland (<http://earthobservations.org/members.php>). For this positive result, scientists from BCA, UACEG and AGCC (Agency of Geodesy, Cartography and Cadastre) worked and prepared the documents necessary for Bulgarian and GEO administrations.

A statement by the Republic of Bulgaria at Eleventh Plenary Session of GEO in Geneva, Switzerland, was presented by Assoc. Prof. Lyubka Pashova and Valentin Yovev.

### Young Scientist Award

BCA created the Young Scientist Award for the best paper, presented by young scientist during the 5<sup>th</sup> International Conference on Cartography and GIS. An independent jury (Dr. Lyubka Pashova, Bulgaria; Dr. Rufino Perez, Spain and Dr. Radosław Dukaczewski, Poland) made very precise estimation of full papers and presentations of 29 young scientists and PhD students from all over the world. The winners were announced – two PhD students: Naiara Aginako and Kremena Boyanova (Fig.32). This competition will be organized also for the future ICC&GIS conferences.



*Fig.32. Young scientist award given to Kremena Boyanova*

### Naming the Laboratory of Cartography to Prof. Dr. Benjamin Cohen – honorable Bulgarian scientist and professor of cartography (1930 – 2003)

The memory of Professor Benjamin Cohen (Fig.33) was honoured by Geodesy Faculty members (University of Architecture, Civil Engineering and Geodesy, Bulgaria) and representatives of the Bulgarian cartographic community. Special memorial plaque was presented in the Department of Photogrammetry and Cartography, UACEG, Sofia. The tribute to Professor Cohen was supported by a presentation of his life story and work achievements. Many members of the cartography and geodesy communities shared their memories and expressed gratitude to the remarkable scientist. Professor's Cohen family attended the event and invited the guests on a memorial cocktail.

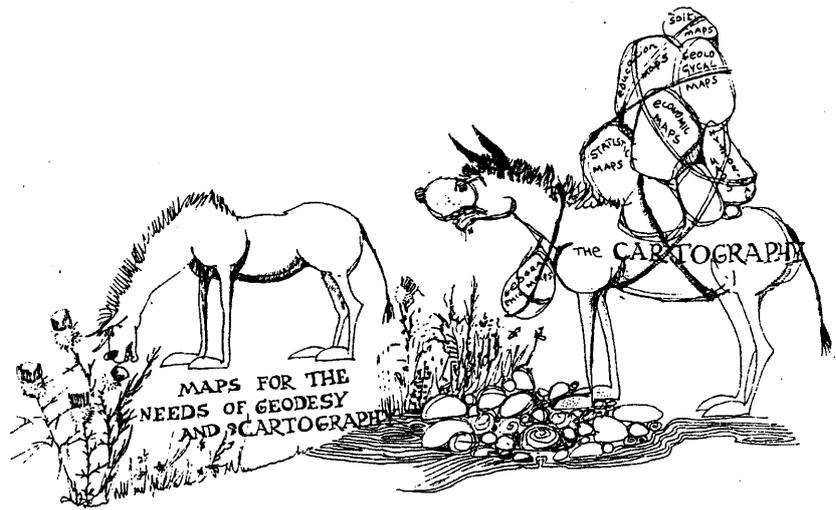


Fig.33. Prof. Cohen and one of his cartographic cartoons

### Calendar published by BCA and MGS for International Map Year 2015-2016

During the International Map Year 2015-2016 year each member of Bulgarian Cartographic Association receives as a gift a badge of belonging and a calendar – a special edition of the BCA and Military Geographic Service (MGS). The calendar is designed for 2015 and 2016 and contains 12 colourful children’s drawings participating in the national competition “Map of the World” and 12 unique maps of ancient Bulgarian territories supplied by MGS.

The calendar is designed by Stefan Bonchev, engineer at Laboratory of Cartography, UACEG and a member of BCA. It is published by BCA and printed by Military Geographic Service in Troyan city, Bulgaria (Fig.34).



Fig.34. Bulgarian Calendar published by BCA and MGS for International Map Year 2015-2016

### **BCA donation of Modern Bulgarian Maps and Cartographic Products for the UN Library**

In relation to the declared International Map Year 2015-2016 Bulgarian Cartographic Association (BCA) organized in June 2015 a donation to the UN Library in New York (Fig.35). The donation includes 37 cartographic products created by Bulgarian cartographic companies - DataMap-Europe Ltd., KartGeo Ltd., KartProekt Ltd., International trade and cultural center – GEOPAN, Cartographic studio DavGeo,. The donation will is to enrich the presentation of Bulgaria with the selected by BCA collection of contemporary maps and atlases.



*Fig.35. Donation of Bulgarian cartographic products to the UN Library in New York*

### **Exhibition on Occasion of International Map Year**

The Permanent Mission of the Republic of Bulgaria to the United Nation – New York and Diplomatic Institute, Ministry of Foreign Affairs of the Republic of Bulgaria organize and present Exhibition on occasion of International Map Year: “The Sea Brings All that is Distance Together” from 15 to 26 June, 2015, UN Headquarters, New York (Fig.36). The exhibition is compiled and designed by International Commercial and Cultural Center GEOPAN, Member of Bulgarian Cartographic Association.



*Fig.36. Exhibition “The Sea Brings All that is Distance Together”*

### Awards of Merit to the Bulgarian Cartographic Association

By the decision of the Executive Board of BCA Prof. Milan Konecny, Czech Republic and Prof. Miljenko Lapaine, Croatia were awarded by special bronze statuettes for their contribution to the creation and development of BCA and cartography in Bulgaria (Fig.37). They helped a lot during the establishment of the organization with their personal and organizational experience and ideas for promotion of cartography on national level.



*Fig.37. Bulgarian Cartographic Association awarded Prof. Miljenko Lapaine, Croatia and Prof. Milan Konecny, Czech Republic*

### Award for Successful Evacuation

At the end of the gala dinner of the 5<sup>th</sup> ICC&GIS, June, 2014, an unexpected natural disaster happened, which forcing all involved in the gala dinner the overnight and almost all day in this place. 19. 06. 2014 was a black day for Varna and Bulgaria. Big floods after a big storm and heavy rains led to the elevation of the level of the Batovska River by 5 meters. The Big wave and unceasing rain didn't allow us to go back to the hotel. The roads were destroyed. Nearly 100 people without life-saving medicines and necessary belongings for asthmatics, allergy and adult participants were isolated in this area. We had to save the insufficient food available to the restaurant. It was a crisis situation in practice in line with ongoing Seminar at the Conference. After repeated attempts to find a way to resolve the situation and to evacuate participants, Bulgarian army did this that nobody else could do. Two military helicopters came to the rescue people in this bad situation. We express extreme gratitude for this assistance to participants in the conference: Colonels Gladkov, Danchev and Markov from the Military Geographic Service and the Minister of Defense Mr. Angel Naydenov. The crews of both helicopters will be awarded by the Bulgarian Cartographic Association with certificates.

BCA President Prof. Bandrova and BCA Vice-president Col. Gladkov presented awards to the crew members of the helicopters from Krumovo military airbase (Fig. 38). 92 participants in the 5th International Conference on Cartography and GIS were successfully evacuated after spending a night in a flooded area near to Varna, Bulgaria (Fig. 39).



*Fig.38. BCA President Prof. Bandrova and BCA Vice-president Col. Gladkov presented awards to the crew members of the helicopters from Krumovo military airbase*



*Fig.39. Moments of the crisis situation*

### **Laboratory of Cartography, UACEG on YouTube**

YouTube channel of Laboratory of Cartography, UACEG was created in help of education on cartography (<https://www.youtube.com/user/CartographyLab>). The students are encouraged to create video-presentation on cartographical topics: Modern cartography, How to read and make orientation on topographic maps, Development of Cartography and others. The aim for students is to learn how to make a video and represent their work and on the other side the same videos can be used by younger students or students in schools, learning Geography. Video materials connected to the activities of BCA can be also found in the same channel.

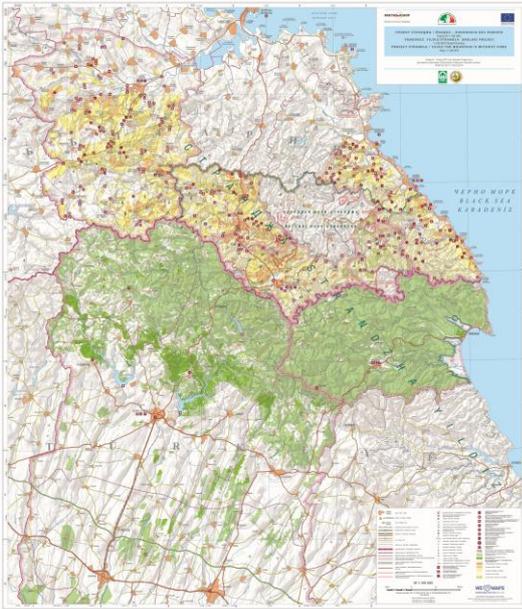
### **GIS day Anniversary**

Bulgaria celebrates the anniversary of GIS Day every last 16 years. Organizers of the event are ESRI Bulgaria with the cooperation of GIS Varna, Bulgarian Geoinformation Company and GIS-Sofia ([www.gisday.com](http://www.gisday.com)). BCA is also one of supportive organizations. During this day, map exhibitions are very often organized. Members of BCA are usually members of jury for estimations of the best maps in different categories.

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

## 10. Bulgarian Cartographic Products on International Exhibition, Rio de Janeiro, Brazil, 2015

- **Strandzha/Yildis the Mountain is Without Fires**



Scale – 1:100 000

Dimensions of the sheet - 1100/1280 mm

Authors – ECOPAN PLC and KARTGEO LTD

Published by ECOPAN PLC and KARTGEO LTD

Date published – January 2015

Language(s) of the legend – Bulgarian, English, Turkish

Brief abstract – The map of over 13 100 km<sup>2</sup> forest area was designed in implementation of the cross-border project "Strandzha/Yildis the mountain is without fires" covering the area of the state border between the Republic of Bulgaria and the Republic of Turkey along 182 km. Its thematic content represents the boundaries of the Bulgarian and the Turkish forestry enterprises, the classes of fire hazard of the forest areas within the scope of the project, the specialized services and the constructed fire fighting

infrastructure, the protected areas and the objects that attract a lot of visitors which increase the fire hazard in Strandzha.

- **Riviera Holiday Club**



Dimensions of the sheet - 1016/355.6 mm

Authors - Petya Angelova; Stefan Bonchev

Published by Bulgarian Cartographic Association

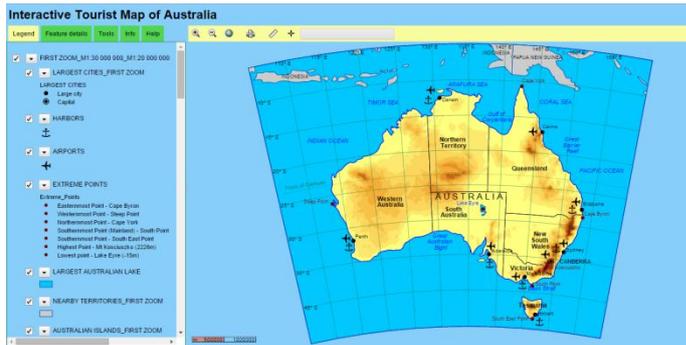
Date published - June 2014

Language(s) of the legend - English

Brief abstract - It's a map representing one of the most beautiful bulgarian summer resorts, created for touristic purposes.

## Digital Products

- **Interactive Tourist Map of Australia**



Type (vector map, image-map, sample or extract from a GIS, multimedia CD-ROM, web site, etc.) – web site  
 Format (file type, structure of coverages/themes, etc.) – XML, SVG, Javascript and HTML files structured as cartographic layers with information about Australian cities, airports, harbors, extreme points, nearby territories, large areas, mountains,

rivers, waterfalls, lakes, caves, significant rock features, best beaches, most popular golf courses, main roads, great train journeys, longest ferry line, world’s biggest weapon range, largest nature conservation reserves

Software platform in which it is managed – ArcGIS and Mappetizer for ArcGIS

Authors – Yoana Sandinska and Temenoujka Bandrova

Published by Bulgarian Cartographic Association

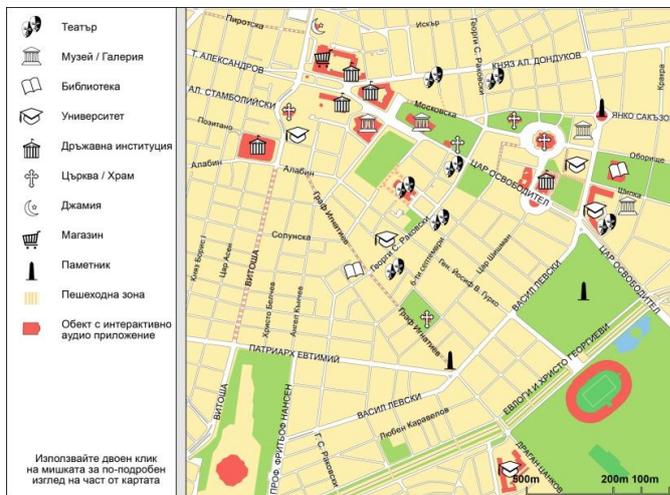
Date published or most recently updated – June 2014

Nominal scale – M1:1 000 000 – M1: 30 000 000

Language of the alphanumeric elements – English

Brief abstract – The map is created by collecting and integrating different types of data using ArcMap (where the most of the settings are performed) and Mappetizer for ArcGIS (for converting a data frame within ArcMap into SVG format and web publishing). It supports the following functionalities: map tips, numeric and linear scale, coordinate read-out, measurement tools, turn on and off individual layers, report object information, hot-links for e-mail and other URL-addresses (internal and external links for multimedia data such as images and video). This cartographic product could be used in the fields of tourism, education, public services, presentation and etc.

- **Tourist Map of the Center of Sofia with Interactive Audio Application**



Type: Web- site

Format: HTML file

Software platform in which it is managed (Any standart web browser: Internet explorer, Firefox, Google chrome etc.)

Authors: Radi Dimitrov, Silvia Marinova

Published by Bulgarian Cartographic Association

Date published or most recently updated: July 2014

Nominal scale 1:8 000, 1:4 000, 1:2 000

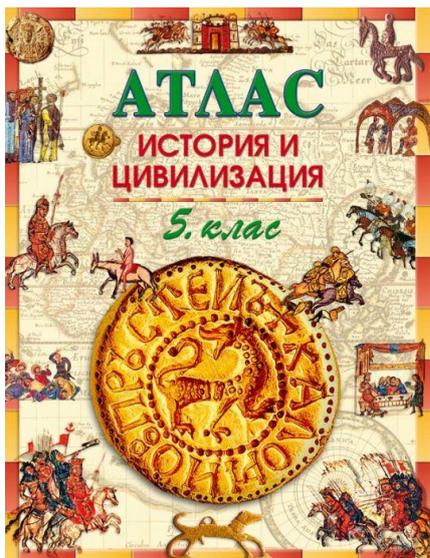
Language of the alphanumeric elements: Bulgarian

Brief abstract - Tourist map of the centre

of Sofia, which has three nominal scales. More information about each tourist site is available through audio files attached to every object.

## Educational Cartographic Products

- **Atlas on History and Civilization for 5. Grade**



Type: Atlas, Sizes: 24/31 cm, pages 32

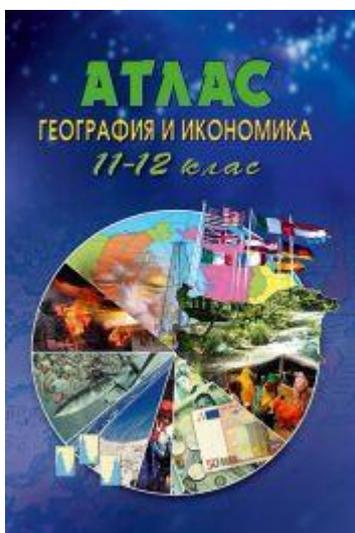
Authors: Matanov Hr. & Bandrova T.

Published by DataMap-Europe Ltd., Bulgaria

Date published: August, 2014

Brief abstract - The atlas contains 40 maps. It is compiled according to the state educational requirements and educational curriculum by the Ministry of Education. The content is presented in four sections: Ancient civilizations to IV cent. AD.; The Middle Ages, IV-XI cent.; Bulgaria in XI-XIV cent.; Bulgaria under Ottoman Imperia, XV-XVII cent. Pages are designed in different colored frames for better orientation in the content, and each chapter begins with a chronology of events during the period. For this purpose the time line is made. The pages are supplemented with photos that make Atlas informative, beautiful and interesting textbook.

- **Atlas on Geography and Economics for 11. and 12. Grades**



Type: Atlas

Authors: Bandrova T.

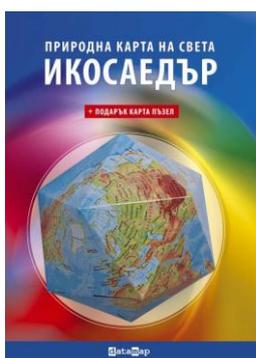
Published by DataMap-Europe Ltd., Bulgaria

Date published: August, 2014

Brief abstract - The Atlas is designed for a special training in Bulgarian schools and for those ones which have special interest in geography. The information is enough rich and updated, structured in 100 maps, classified into 8 sessions: Global geopolitics and geo-economics; Demographic change and globalization; Current trends in the world economy; Natural resources and potential of the Earth; Regions of the world in their diversity and specificity. Geography of Bulgaria is represented in 35 maps. Thoroughly developed topics allow detailed analysis, systematization of knowledge, evaluation of geographic and economic information, represented in the Atlas.

## Other Cartographic Products

- **Natural Map of the World Icosahedron plus free puzzle Countries Map of the World**



Material: paper

Authors: Bandrova T. and Valev G.

Published by DataMap-Europe Ltd., Bulgaria

Date published: October, 2013

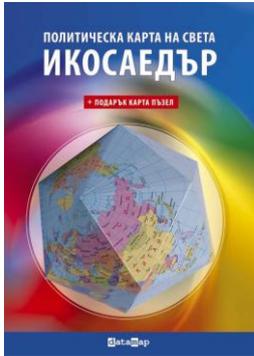
Brief abstract - Icosahedron - regular polyhedron with 20 identical equilateral triangles, 30 edges, height of assembled figure- 16 cm. Natural map of the world is represented in Gnomonic projections in scale 1:80 000 000. Contains: reticule; relief, represented by hypsometric coloring; hydrography; state borders; capitals and major cities; text of hydrography, orography.

puzzle - 20 identical equilateral triangles. You will get a country map of

the world in scale 1:100 000 000, in Gnomonic projections in 43,380 possible variants of arrangement.

Contains: reticule; countries are represented by the background color and borders; hydrography; capitals and major cities; text of seas and oceans.

- **Countries Map of the World Icosahedron plus free puzzle – Nature Map of the World**



Material: paper

Authors: Bandrova T. and Valev G.

Published by DataMap-Europe Ltd., Bulgaria

Date published: October, 2013

Brief abstract - Icosahedron - regular polyhedron with 20 identical equilateral triangles, 30 edges, height of assembled figure- 16 cm. Country map of the world is represented in Gnomonic projections in scale 1:80 000 000. Contains: reticule; countries are represented by the background color and borders; hydrography; capitals and major cities; text of seas and oceans.

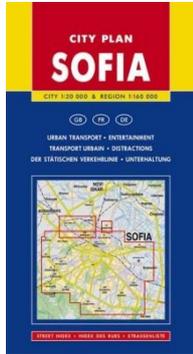
puzzle - 20 identical equilateral triangles. You will get a nature map of the world in scale 1:100 000 000, in Gnomonic projections in 43,380 possible variants of arrangement. Contains: reticule; relief, represented by hypsometric coloring; hydrography; state borders; capitals and major cities; text of hydrography, orography.

*Silvia Marinova*  
Secretary,  
Bulgarian Cartographic Association

## 11. DataMap-Europe Ltd. (2011-2015)

DataMap-Europe Ltd. was founded in 1991. Some of the cartographic products of DataMap-Europe for the period 2011 - 2015 are:

### City Plan Sofia 1:20 000 and region 1:160 000



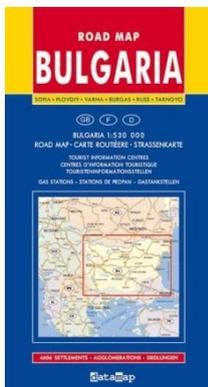
Description

Publication 2012; Size: 12.3/23 cm fold (100/70 cm unfolded)

- **Manufacturer:** [Datamap-Europe Ltd.](http://www.datamap-europe.com)
- **Weight:** 0.080 Kgs

Detailed index of names on street, schools, university, hospitals, police stations, parking, petrol and gas stations.

### Road Map Bulgaria 1:530 000



Description

Publication 2013; Size: 12.3/23 cm fold (100/70 cm unfolded)

- **Manufacturer:** [Datamap-Europe Ltd.](http://www.datamap-europe.com)
- **Weight:** 0.080 Kgs

Map include: national border, detailed road network with road distance in kilometer between settlement, petrol and gas stations. Maps of towns: Sofia, Plovdiv, Varna, Burgas, Ruse, Tarnovo and center.

### North Greece 1:350 000



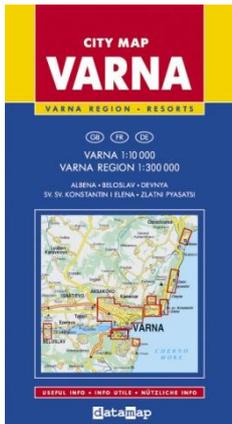
Description

Publication 2011; Size: 12.5/23 cm fold (100/70 cm unfolded)

- **Manufacturer:** [Datamap-Europe Ltd.](http://www.datamap-europe.com)
- **Weight:** 0.080 Kgs

Large scale road map of North Greece 1:350 000. This is the most detailed map that include north part of Greece and south part of Bulgaria. Map include: geographic network; hydrography; country border; towns and villages with area; detailed road network with road distance in kilometer between settlement, all frontier checkpoint between Greece and Bulgaria, holiday resorts, tourist sights, beach and camping sites, Index of Greece, index of Bulgaria, Special fold, easy for use.

## City Map Varna 1:10 000 and Region 1:300 000



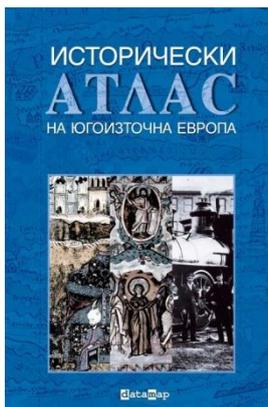
### Description

Publication 2012; Size: 12.3/23 cm fold (100/70 cm unfolded)

- **Manufacturer:** [Datamap-Europe Ltd.](#)
- **Weight:** 0.079 Kgs

Map of Varna, map of Varna region, Index of streets, one way streets, petrol and gas stations, urban transports, Maps of Albena, Golden Beach, Sv.sv. Konstantin i Elena

## Historical atlas of South-Easterly Europe



### Description

Publication 2012; Size: 15.5/24 cm (80 pages, 62 maps)

- **Manufacturer:** [Datamap-Europe Ltd.](#)
- **Weight:** 0.164 Kgs

The Atlas is intended for the historical community, students and all those interested in the history of Southeast Europe from the IV century to the present days. It is a valuable tool for the needs of Bulgarian education. The content is divided into the following sections: Middle Ages, IV-XV century; New time, XVI - XIX century; Balkans 1878.

The maps were compiled based on the latest historical research and data using Geographic Information Systems. They are rich in events and information presented in a way that does not make difficult the reading of the maps. The geographic basis is presented accurately and reliably. The Atlas is projected with modern design and high quality printing.

## Atlas Sofia and Region 1:13 000



### Description

Publication 2014; Size: 24/22 cm, 84 pages

- **Manufacturer:** [Datamap-Europe Ltd.](#)
- **Weight:** 0.288 Kgs

Actual map of Sofia - one way streets, urban transport, hotels, hospitals, schools, medical centers, museums, post offices, culture centers, theaters, galleries, airports, railway stations, bus stations, petrol and gas stations, parking, shopping centers, hypermarkets, sports halls, swimming pools, zoo. Maps of 38 statements of Sofia - region: maps of Vitosha mountain, Balsha, Bankya, Bistritza, Bozhurishte, Busmantzi, Buhovo, Vlodaya, Boynegovtzi, Voluyak, German, Gorni Bogrov, Dobroslavtzi, Dolni Bogrov, Dolni Pasarel, Zheleznitza, Zhelyava, Zhiten, Ivanyane, Kazichene, Klisura, Kokalyane, Kostinbrod, Krivina, Kubratovo, Katina, Lozen, Lokorsko, Malo Buchino, Mirovyane, Mramor, Marchaevo, Negovan, Novi Iskar, Pancharevo, Podgumer, Svetovrachane, Chepintzi, Yana.

*Temenujka Bandrova*  
Datamap – Europe Ltd.

## 12. KartGeo Ltd. (2011-2015)

KartGeo Ltd. is a modern, creative company founded in 2004. Its main activities include map design and publishing; design, development and maintenances of information systems, GIS, GPS and communication technologies; software applications development; survey; remote sensing.

The Company has the pleasure of working with a wide variety of clients on custom map projects. It provides services and products to the National Assembly of the Republic of Bulgaria, the Ministry of Environment and Waters of Bulgaria, the National Railway Infrastructure Company, the Geodesy, Cartography and Cadastre Agency, the Bulgarian Tourist Union, Bulgarian regional and local authorities; companies; tourist, geographic and sport societies.

In the field of cartography KartGeo Ltd. is specialized in tourist and mountain mapping, as well as mapping for Disaster Management. The company aims to design and create accurate, up-to-date, useful and attractive maps.

In the period 2011–2015 the company worked on the production of a wide range of high quality cartographic products. Some of the cartographic projects of KartGeo Ltd. are:

### Belasitsa and Ograzhden

A detailed tourist map covering the mountains of Belasitsa and Ograzhden. Scale: 1:70 000, size 70/100 cm, Languages of the legend – Bulgarian, English, Macedonian, Greek.

The map represents a cross-border area of 3 000 sq. km, covering territories of three countries - Bulgaria, FYR Macedonia and Greece. It includes railway lines and stations, detailed road network with classification, foot paths, protected areas, tourist chalets and shelters, hotels, archaeological sites, waterfalls, mountaineering sites, other natural landmarks and places of interest. The map shows all marked trekking routes with approximate hiking times. A list of tourist sites and important points with GPS data is also included. The map can be used for route planning and navigation.

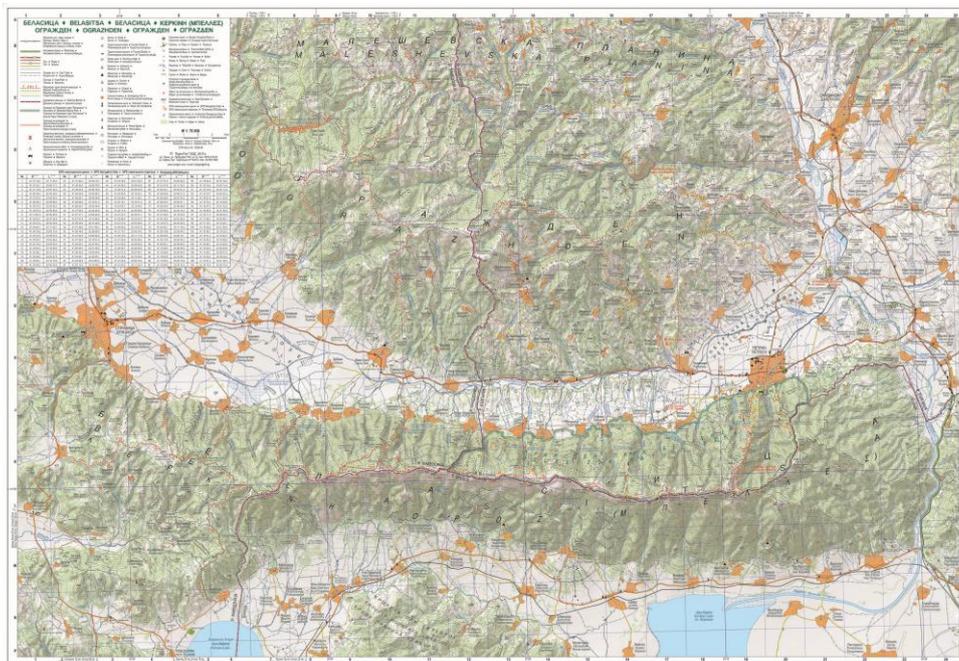
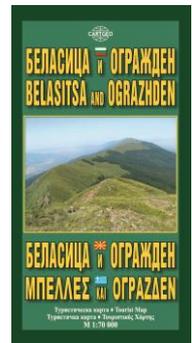


Fig.40. Belasitsa and Ograzhden – tourist map

## 100 National Tourist Sites of Bulgaria

Scale – 1:800 000, size: 50/70 cm.

A compact, pocket sized tourist map covering the whole of Bulgaria. It shows the most significant cultural, historic and natural landmarks of Bulgaria. The map aims to promote the National movement “100 National Tourist Sites”. It contains attractive individual paintings of all the sites. An index listing visitor information and contact details is included on the reverse. The map publishing is ordered by the Bulgarian Tourist Union.



Fig.41. 100 National Tourist Sites of Bulgaria – tourist map

## Rila Monastery Nature Park

Scale: 1:30 000.

A tourist map covering the territory of Rila Monastery Nature Park. It includes detailed road network, foot paths, lifts, protected areas, tourist chalets and shelters, hotels, forest lodges, churches, chapels, waterfalls, other natural landmarks and places of interest. The map shows all marked trekking routes.

## Strandja/Yildiz The Mountain is Without Fires

Publishers: KartGeo Ltd. and Geopan Ltd.

The map of over 13 100 km<sup>2</sup> forest area was designed in implementation of the cross-border project “Strandja/Yildiz the mountain is without fires“ covering the area of the state border between the Republic of Bulgaria and the Republic of Turkey along 182 km. Its thematic content represents the boundaries of the Bulgarian and the Turkish forestry enterprises, the classes of fire hazard of the forest areas within the scope of the project, the specialized services and the constructed fire fighting infrastructure, the protected areas and the objects that attract a lot of visitors which increase the fire hazard in Strandzha.

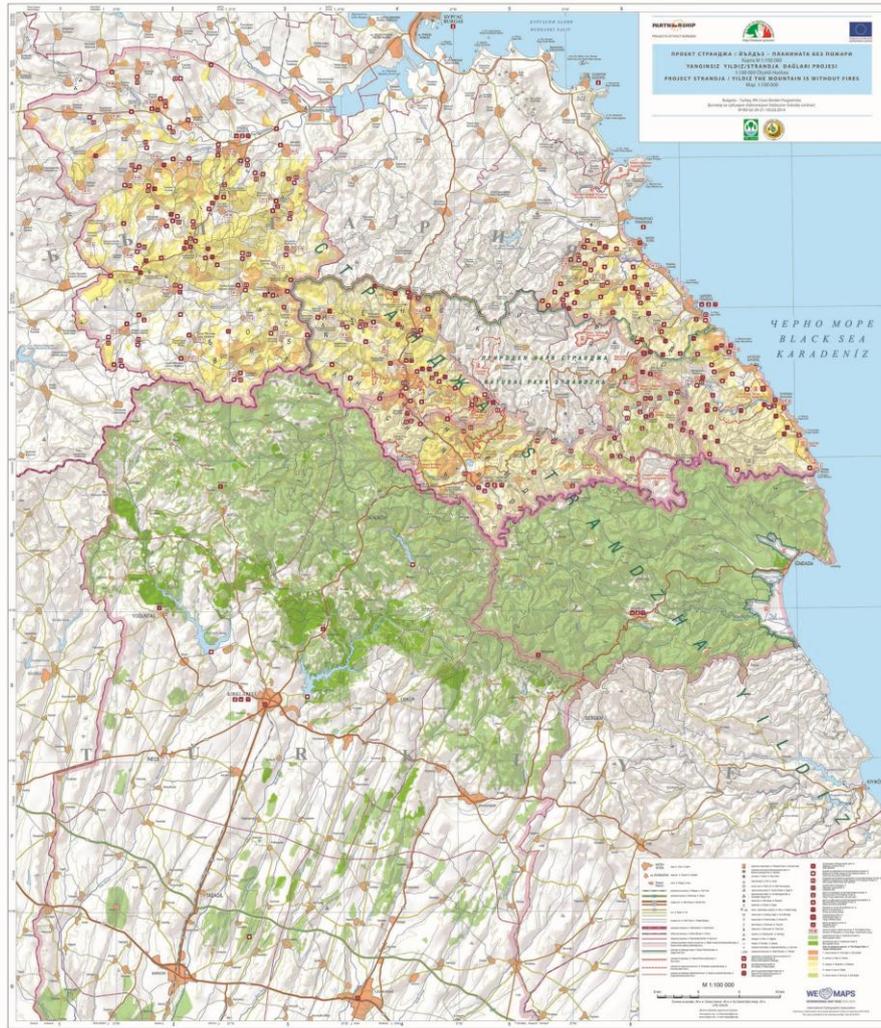


Fig.42. Strandja/Yildiz the mountain is without fires

Silvia Marinova  
KartGeo Ltd.

## 13. KartProekt Ltd. (2011–2015)

KartProekt Ltd. is a Bulgarian company established in 2001. The company provides a wide range of services in fields such as cartography, topography, survey, remote sensing, publishing.

In the field of cartography the company is specialized in: design, creating and publishing of a great variety of tourist maps; creating maps according to operational programmes; design, creating and publishing of custom maps ordered by regional and local authorities, companies, tourist, geographic and sport societies.

Some of the cartographic products that KartProekt Ltd. published in the period 2011-2015 are:

### The Coastal Part of Stara Planina - Kamchia - Tourist Map

Publishers: Ecopan Ltd. and KartProekt Ltd.

Scale: 1:70 000, size: 70/100 cm.

Languages: Bulgarian; English

A detailed tourist map covering the coastal part of the mountain of Stara planina. It includes railway lines and stations, detailed road network with classification, airports, ports, light-houses. The map depicts foot paths, marked trekking routes, tourist chalets and shelters, hotels, camping areas, archaeological sites and other places of interest. It shows a navigable route for water tourism on Kamchia river as well as dangerous rapids and bivouacs. The map presents 28 protected areas including 3 reserves, 18 protected localities, 7 natural landmarks. A map of the firth of Kamchia river (scale 1:10 000) is provided on the reverse.

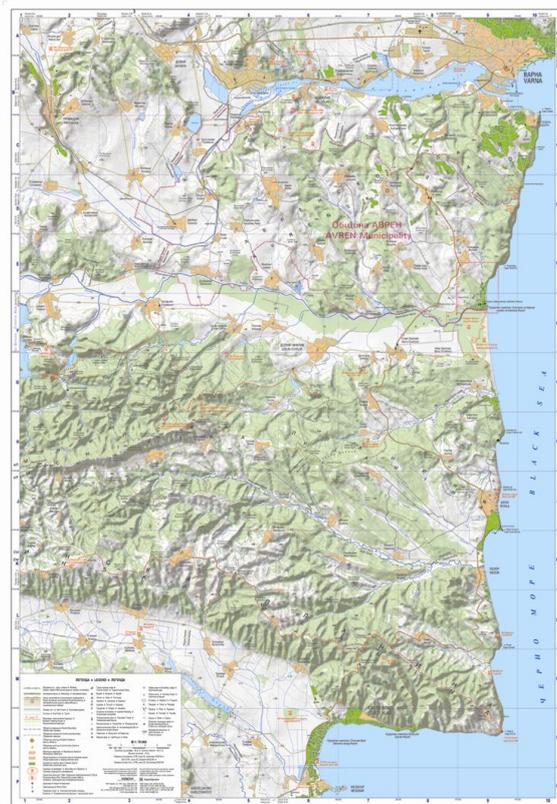


Fig.43. The Coastal Part of Stara Planina - Kamchia – tourist map

## Municipality of Primorsko, Ropotamo Rezerve - Tourist Map

Publishers: Geopan Ltd. and KartProekt Ltd.

Scale: 1:100 000, 1:23 500; size: 70/100 cm.

On the occasion of the 20th anniversary of the restoration of the reserve "Ropotamo" which is one of the most remarkable protected areas in the western Black Sea coast, Municipality of Primorsko, Primorsko Club, KartProekt Ltd. and International Trade and Cultural Center - Geopan issued a tourist map of the Municipality of Primorsko at scale M 1:100 000 and a detailed map of Ropotamo reserve at scale 1:23 500. The reserve is a part of a natural and cultural-historical complex composed of five protected areas, 3 old ports and one of the impressive megalithic temples in this part of the world. Both professionally produced maps and all the twenty-six information margins compose richly illustrated brochure. It presents the overall natural, cultural and historical heritage of the municipality of Primorsko and the Coastal region of Strandzha, which attracts a growing tourist interest. The issue promotes the development of ecological, cultural, scientific and educational tourism in the region and the preservation of the extraordinary abundance of Ropotamo Reserve.

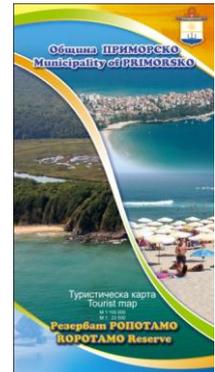


Fig.44. Municipality of Primorsko – tourist map

## Municipality of Byala - Tourist Map

Publishers: Geopan Ltd. and KartProekt Ltd.

Scale: 1:70 000, 1:10 000; size: 70/100 cm

Tourist map of the Municipality of Byala (thematically dedicated to the Municipality of Byala) at scale 1:70 000 and a modern tourist map of the town of Byala at scale 1:10 000. Area of nearly 9 square kilometers is pigeonholed. New names of streets and residential areas, recreation areas, parks and all the sights are represented. The map of the town of Byala allows solving many management, touristic and business problems of the town. Primarily the map at scale 1:10 000 is



an important and necessary step to create a modern interpretation infrastructure of Byala which is located at the Balkan coast of Varna.

### Troyan Municipality

A detailed pocket-sized map of the municipality of Troyan at scale 1:90 000. It depicts road network with its classification, cart tracks, foot paths, district and municipal boundaries, a boundary of Central Balkan National Park boundaries, boundaries of natural reserves, protected areas, tourist chalets and shelters, archaeological sites, museums, monasteries, churches and chapels, riding schools, ski centers, cross-country ski centers, swimming pools, etc. The map represents five categories sites – cultural and religious sites; accommodation; historical and archaeological sites, sport and touristic sites; natural sites and protected areas.

There is a detailed map of the town of Troyan at scale 1:12 500 on the reverse.

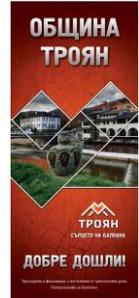


Fig.45. Troyan Municipality – tourist map

Toty Angelov  
Manager,  
KartProekt Ltd.

## 14. International Trade and Cultural Center – GEOPAN (2011–2015)

The activity of the International trade and cultural center – GEOPAN during the period 2011 – 2015 was accomplished in four aspects:

### A. Research and Scientific Applied Activities

#### 2011

##### 1. Participation in the creation of a Management Plan of Nessebar – World Cultural Heritage

Under a contract with the Ministry of Culture and NIICH, GEOPAN fulfill the following sections of the **Plan for the conservation and management of Nessebar – Old city**, November 2011:

- Nessebar at the cartographic heritage;
- Condition of the underground cadastre of Nessebar (archaeological heritage, underground structures and galleries);
- Condition of the information about the map of underwater archaeology (incl. Information on the activities at the time of the Club for scientific expeditions);
- Guidelines for cadastral readiness and information provision;
- Guidelines for creation of a map of the underwater archeology;
- Guidelines for a complete collection and research of the cartographic heritage of Nessebar;
- Preparation for a bilingual publication about Nessebar – World Heritage.

Accepted with high evaluation and included in the Plan for the conservation and management of Nessebar – Old city, which is presented in UNESCO and is an essential tool for managing the world cultural heritage to 2020.

#### 2012

##### 2. Elaboration of a Strategy for Developmet of Cultural Rhodopes as a Significant Destination in the Cultural Tourism

Under a contract with „Credo Bonum“ Foundation, GEOPAN performed in 2012 feasibility studies and strategy. **The first part** – *feasibility studies*, indicates key prerequisites for implementing the chosen strategy. Graded in accordance with certain criteria, these conditions are disclosed, justified in the existence of "the Rhodopean cultural area" (including the territory of 20 municipalities in the Eastern and Central Rhodopes).

**The second part** – *a Strategy for the development of cultural tourism in the Central Rhodopes*, examines the objectives, activities and conditions that would allow the „Credo Bonum“ Foundation to implement the selected mission in the area. Selected and considered are several major projects and guidelines that can provide an implementation of the selected strategy.

*The development is conducted by a team of authors led by Dr. St. Peykov and consultants: Assoc. Prof. Dr. Kr. Krastanova, Assoc. Prof. Dr. V. Vasilchina.*

### B. Development of the Digital Archive “Thrace – GEOPAN”

In the digital archive are tracked, digitalized and included old maps and engravings concerning Bulgaria and Bulgarian lands known to our science, which are kept in the world's archival and library repositories. Here they are gathered in one place, processed and digitalized with the quality achievable for the contemporary equipment. The collection is magnificent. But it is not just about collecting images. The products we offer are something new – digital copies of individual

specimens, exhibition collections in a variety of sections, thematic or cumulative editions facilitating various projects in the field of culture, research and education. These capabilities are illustrated in Section D of this information.

## 2012

1. Jointly with the maritime community media in Bulgaria – MORSKI VESTNIK (MARITIME NEWSPAPER), Varna, was created and maintain a **special section „Maps and Sailing Directions“** on [http://www.morskivestnik.com/mor\\_kolekcii/karti\\_i\\_locii/karti\\_i\\_locii.html](http://www.morskivestnik.com/mor_kolekcii/karti_i_locii/karti_i_locii.html). It presents 30 maps of the Black Sea. The section has a great visitors' interest.

## 2013

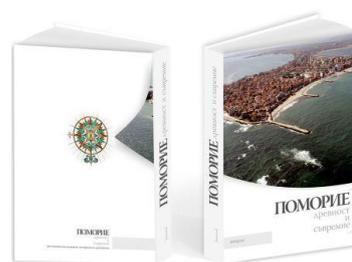
2. Jointly with Nessebar News is presented **the section „Nessebar and the Bay in old maps“** on [www.nessebar-news.com](http://www.nessebar-news.com), in which are presented 20 old maps and images of Nessebar.

## C. Publishing Activiy

### 2011

1. The edition **„POMORIE – ANCIENT AND MODERN TIMES“**, volume 1, is our biggest Black Sea publishing project. It is distinguished by its polygraphy, the comprehensive studies, the rich set of maps and photos and by the accessible way it presents the history of the city.

The authors and the compilers of the book **„POMORIE – ancient and modern times“** are: Prof. Elena Grozdanova, Acad. Vasil Gyuzelev, prof. Velko Tonev, Prof. Dr. Mihail Lazarov, Anton Karabashev, Dr. Atanas Orachev, Dr. Ventsislav Karavalchev, Elena Bancheva, Elena Yordanova, Dr. Krasimir Krastev, Dr. Stefan Peykov and Dr. Rumen Avramov. **„POMORIE – ancient and modern times“** has been ordered by almost all global partners of the National Library „St. St. Cyril and Methodius“ – through the international book exchange. Among these are: the Library of Congress – Washington; the National Library – Ankara; the University Library – Pittsburgh; the University Library – Seattle; the University Library – Leuven; the Russian State Library – Moscow; the National Library – St. Petersburg; the National Library – Minsk; the State and scientific library – Kiev and the National Library – Chisinau. The edition is also sent to the Ecumenical Patriarchate in Constantinople, donated to the University „Aristotle“ in Thessaloniki, State Museum – Hermitage in St. Petersburg and the British Library in London.



### 2. Bourgas Municipality – Tourist Map

Publisher: Geopan Ltd.

Scale: 1:54 000, size: 70/100 cm

Tourist map of the Municipality of Bourgas at scale 1:54 000, 5000 copies. The map covers the entire territory of the great sea municipality and represents its broad possibilities for realization of a modern tourist product. The cartographic base at scale 1:54 000 can support in the future the creation of thematic maps for cultural heritage, tourist attractions, protected areas of Bourgas. The map can support the design of interpretive infrastructure throughout the municipality.



2012

### 3. Municipality of Primorsko, Ropotamo Rezerve – Tourist Map

Publishers: Geopan Ltd. and KartProekt Ltd.

Scale: 1:100 000, 1:23 500; size: 70/100 cm.

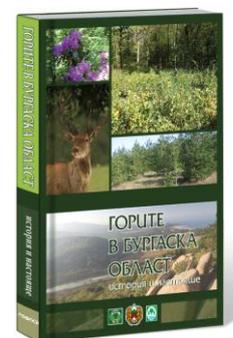
On the occasion of the 20th anniversary of the restoration of the reserve "Ropotamo" which is one of the most remarkable protected areas in the western Black Sea coast, Municipality of Primorsko, Primorsko Club, KartProekt Ltd. and International Trade and Cultural Center – Geopan issued a tourist map of the Municipality of Primorsko at scale M 1:100 000 and a detailed map of Ropotamo reserve at scale 1:23 500. The reserve is a part of a natural and cultural-historical complex composed of five protected areas, 3 old ports and one of the impressive megalithic temples in this part of the world. Both professionally produced maps and all the twenty-six information margins compose richly illustrated brochure. It presents the overall natural, cultural and historical heritage of the municipality of Primorsko and the Coastal region of Strandja, which attracts a growing tourist interest. The issue promotes the development of ecological, cultural, scientific and educational tourism in the region and the preservation of the extraordinary abundance of Ropotamo Reserve.



2014

### 4. The book „FOREST IN THE BOURGAS REGION – HISTORY AND PRESENT“

is encyclopedic edition, a work of 40 authors. The initiative is an anniversary project of the Executive Forest Agency, the Union of Foresters in Bulgaria, Southeast state enterprise – Sliven, Regional Forest Directorate – Bourgas and GEOPAN. The book is gorgeously formed and printed, it contains 320 pages with over 100 black and white and color illustrations and maps. In the edition for the first time is given detailed information about state and municipal forest areas, their contemporary maps and boundaries, forests of private individuals and legal entities, forests of the Ministry of Environment and Water and forests of religious organizations in the area. It is accentuated on the conservation of the cultural and historical and natural heritage in the Bourgas forests – a merit of generations of Bulgarian foresters.



The book was a special moment in the celebration of the 135th anniversary of the Forest Service in Bulgaria.

The edition „Forest in the Bourgas region – history and present“ became one of the most desirable Bulgarian books from the libraries worldwide. The initiative is of department "Acquisition of Collections Division" of the National Library „St. St. Cyril and Methodius“, whose demanding referees selected the Bourgas edition and recommended it to the numerous international partners of our national book depository.

*Compiler: Eng. Mitko MITEV*

*Scientific editor: Dr. Eng. Ivan P. KOSTOV*

*Reviewer: Prof. Dr. Ivan PALIGOROV*

*Cartography: Geopan & KartProekt – Troyan*

*Graphic design and preparation for printing: Vakolor Ltd. – Plovdiv*

*Print: „Taffprint“ Ltd., Plovdiv*

The encyclopedic edition „Forest in the Bourgas region – history and present“, was selected and presented at the International Exhibition „Cultural Tourism“ 2015 in Veliko Tarnovo and was awarded with one of the three prizes in the category „Most interesting tourist editions“. This is recognition for the publisher – Geopan, Bourgas, and its consistent policy to create a contemporary and richly illustrated scientific editions, work of a solid authors staff.

## D. Exhibitional, educational and Promotional Activities

2012

1. A permanent exposition „Nessebar and the Bay in old maps“, Ancient Nessebar – the Christ Pantocrator church. *Launched in May 2012.* It's open for visitors as well through season 2015. According to data from the management "Ancient Nessebar" – with which cooperation the project is implemented, until 2015 the exposition was visited by over 40,000 people. The exhibition is an example of a good practice – the management of a cultural monument, combined with a thematic exposition of a cartographic heritage.



2013

2. Part of the culmination of the celebrations related to the commemoration of 125th anniversary of the Sofia University "St. Kliment Ohridski ", became the international exhibition „The European discovery of the Black Sea“. It was approved on the oldest Bulgarian higher education institution as a main event throughout the 125th anniversary year of study. It was presented as a part of the initiatives for the anniversary in the National Museum of the Bulgarian visual arts, 25-26.11.2013.



2014

3. At the initiative of the State Diplomatic Institute and the Institute for Culture of the Ministry of Foreign Affairs, in the gallery „The Mission“ of the Ministry of Foreign Affairs, was opened the exhibition „**The sea brings all that is distant together**“, 24.01-16.02.2014, Gallery „The Mission“ – Sofia.



2014

4. The exhibition „**The European discovery of the Black Sea**“ was opened in the hall of the Consulate General in Thessaloniki under the motto „**The sea brings all that is distant together**“. The cultural event planned and conducted under the auspices of the the Bulgarian chairmanship of the Organization for Black Sea Economic Cooperation has enjoyed a great interest at the diplomatic and cultural circles of Northern Greece and Macedonia. It focused on better interaction and enhanced cooperation in the Black Sea region; **also attributed the recognition of the Greek Presidency of the EU and the 15th anniversary of the Black Sea Bank for Trade and Development.**



Момент от откриването на изложбата в Солун, източник: [www.mfa.bg/embassies/greece04](http://www.mfa.bg/embassies/greece04)

3 June 2014

2014

5. The exhibition „**The European discovery of the Black Sea**“ by invitation of the BCA was opened in Varna, on the occasion of the Fifth International Conference on Cartography and GIS. 15-21 June 2014, Varna – Riviera resort

**2015**

**6.** Exhibition: „**The sea brings all that is distant together**“, Istanbul, Republic of Turkey, Hotel Sheraton, Maslak borough – 3 March 2015, Valentin Hall. The initiative for the presentation of the exhibition in Istanbul as a part of the program on 3 March – National Holiday of the Republic of Bulgaria, was of the Institute for Culture of the MFA and the Consulate General of the Republic of Bulgaria in Istanbul. The exhibition in Istanbul was opened by a corresponding member of BAS prof. Ivan Ilchev – Rector of Sofia University „St. Kliment Ohridski“. After Istanbul, the exhibition passed into the category of „**traveling representative exhibitions**“ of the Ministry of Foreign Affairs of the Republic of Bulgaria.

**2015**

**7.** The exhibition „**The sea brings all that is distant together**“ was presented on the occasion of the International Map Year 2015-2016 during FIG Working Week 17-21 May 2015, Sofia.

**2015**

**8.** The Diplomatic Institute of the Ministry of Foreign Affairs, Burgas District Administration and Burgas Free University presented the exhibition „**The sea brings all that is distant together**“. The event was held on 22 May 2015 in Atrium Hall of BFU on the occasion of the International Map Year 2015-2016. The exhibition was opened by a corresponding member of BAS prof. Ivan Ilchev – Rector of Sofia University „St. Kliment Ohridski“.

**2015**

**9.** At the UN headquarters was opened Bulgarian exhibition of old maps and engravings of the Black Sea and the region, dating from the 2nd to the 19th century, under the slogan „**The sea brings all that is distant together**“. The exhibition was opened by Ambassador Stefan Tafrov, Permanent Representative of Bulgaria to the UN and by Tanya Mihaylova, Director of the Diplomatic Institute of the Ministry of Foreign Affairs. The event was attended by dozens of guests, including the permanent representatives of Germany, Ukraine, Italy, Belgium, Morocco, Romania and many others. Among the Bulgarians who attended the event was HRH Princess Marie Louise. The exhibition was greeted with a great interest and will stay in the UN until 26 June 2014, after which it will be shown in the other centers of the Bulgarian diaspora in the US as a part of the initiatives of the International Map Year 2015-2016 (16.06.2015-26.06.2015).

**2015**

**10.** Within the exhibition, together with the Bulgarian Cartographic Association was organized a presentation of a donation to the Library of the UN of contemporary Bulgarian maps. On our part were provided with the following editions:



*Maps from Geopan Ltd. to UN, New York*

**Dobrudzha / Albena – Tourist Map**

Publisher: Geopan Ltd.

Scale: 1:100 000, size: 70/100 cm

**Burgas Municipality – Tourist Map**

Publisher: Geopan Ltd.

Scale: 1:54 000, size: 70/100 cm

*Maps from KartProekt Ltd. and Geopan Ltd. to UN, New York*

**The Coastal Part of Stara Planina – Kamchia – Tourist Map**

Publishers: Ecopan Ltd. and KartProekt Ltd.

Scale: 1:70 000, size: 70/100 cm

**Municipality of Primorsko, Ropotamo Rezerve – Tourist Map**

Publishers: Geopan Ltd. and KartProekt Ltd.

Scale: 1:100 000, 1:23 500; size: 70/100 cm

**Municipality of Byala – Tourist Map**

Publishers: Geopan Ltd. and KartProekt Ltd.

Scale: 1:70 000, 1:10 000; size: 70/100 cm

**2015**

**11.** In implementation of the cross-border project „STRANDJA/YILDIZ THE MOUNTAIN IS WITHOUT FIRES“ is designed and constructed a map in scale 1: 100 000 of over 13 100 km<sup>2</sup> forest area covering the area of the state border between the Republic of Bulgaria and the Republic of Turkey along 182 km with dimensions 110/130 cm.

Contracting Authority: Regional Forest Directorate – Bourgas, Bulgaria

Considering the pioneer character of the project and its importance for the EU, the International Cartographic Association (ICA) approved the new map of „STRANDJA/YILDIZ THE MOUNTAIN IS WITHOUT FIRES“ to wear the sign of the announced by UN **International Map Year 2015-2016.**

*Executants: ECOPAN, PLC – Malko Tarnovo, KARTGEO, LDT – Troyan, GEOPAN, LTD – Bourgas, © 2015*

*Key expert on the project – Prof. Dr. Eng. Temenoujka BANDROVA – UACEG, Sofia.*



*Katya Radeva  
Manager,  
GEOPAN Ltd.*

## 15. Future Activities and Conclusions

### Advertisement of International Map Year

During the meeting of members of BCA, ideas about advertisement of International Map Year (IMY) were discussed. One of them was to mention IMY with the logo in every cartographic product published in 2015-2016. The ICA approved the idea with some special conditions like the publisher to be a member of BCA and others.

Other idea was for publishing of special thematic issue of a postage stamp. BCA send a request to responsible institutions. Ministry of Transport, Information Technology and Communications has a decision to make an issue of a postage stamp dedicated to the International Map Year 2015-2016 next year.

### Standards for Bulgarian Cartography

By the suggestion of Assoc. Professor George Zhelezov from Bulgarian Academy of Science, the 5th ICC&GIS adopted a Declaration on the integration of professional qualifications and experience to prepare the project for development of international cartographic standards to support initiatives INSPIRE, OGC and ISO management of spatial information.

In one of the main statements of declaration is declared the following: “We suppose that it will be a “long running” process, involving many different specialists. We hope that we will attract also other specialists for common cooperation. We have ten years of experience from integrated work in the conferences from Borovets (2006) to Riviera (2014). Our real forces are based on the good coordination and participation of a wide spectrum of specialists and enthusiasts who share similar interests in the cartography and GIS generally, and especially in the early warning and crises management”.

Other important topic is connected to the developing of “Strategy to development of geodesy and cartography in Bulgaria”. The project was organized by the National Agency for Geodesy, Cartography and Cadastre. BCA members participated in developing cartographical concepts.

One of the main tasks of BCA is to help the development of Bulgarian cartography as support of its members. Because of this a Declaration of Bulgarian Cartographic Association on copyright compliance for cartographic works was accepted. There is mentioned that “BCA will defend members’ rights - legal entities and individuals in violation of their copyrights to the various private, state and international institutions. Bulgarian Cartographic Association is ready to offer experts in every case occurred.”

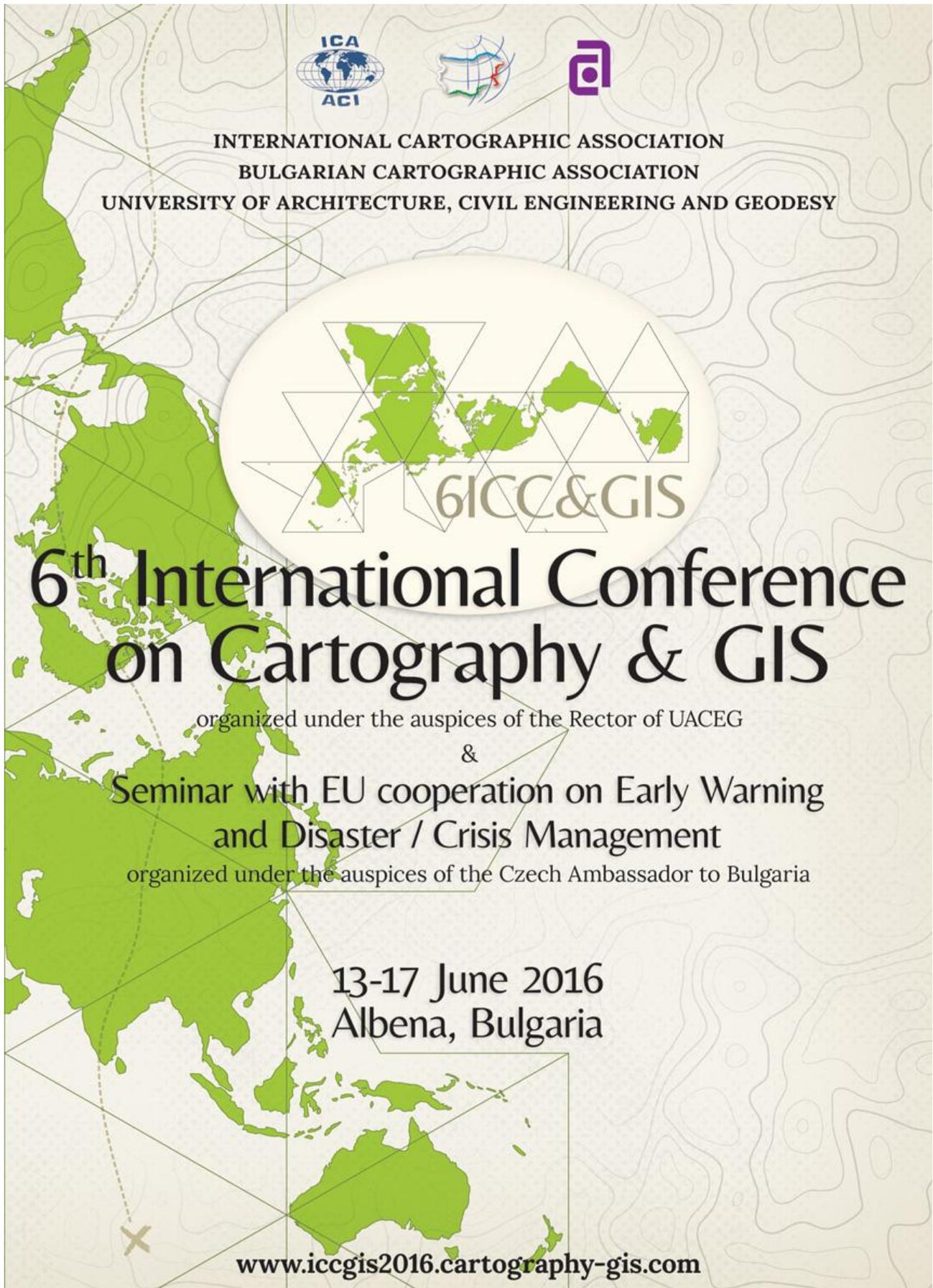
Another important activity is preparation of an opinion on the Bulgarian Cartographic Association on the draft Regulation on large scale topographic map (LSTM). In the text it is mentioned that “in the drafting of regulation for LSTM is not accepted approach for discussion in the professional community. A broad professional discussion would lead to clear the controversial texts. Our belief is that the LSTM should be linked to GIS and Bulgaria must comply with the requirements of the European directive INSPIRE. The idea is that LSTM should be made in a single coordinate system.”

We need standardization not only in LSTM but in different kinds of cartographic products. Our aim is step by step to achieve better products to our so large spectre users.

*Temenoujka Bandrova*  
President,  
Bulgarian Cartographic Association

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ICA  
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INTERNATIONAL CARTOGRAPHIC ASSOCIATION  
BULGARIAN CARTOGRAPHIC ASSOCIATION  
UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY

6ICCGIS

# 6<sup>th</sup> International Conference on Cartography & GIS

organized under the auspices of the Rector of UACEG  
&  
Seminar with EU cooperation on Early Warning  
and Disaster / Crisis Management  
organized under the auspices of the Czech Ambassador to Bulgaria

13-17 June 2016  
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[www.iccgis2016.cartography-gis.com](http://www.iccgis2016.cartography-gis.com)

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**STEFAN BONCHEV**  
 Laboratory on Cartography, University of  
 Architecture, Civil Engineering and Geodesy, Sofia  
**Technical Secretary**

## EXHIBITION

A special exhibition of maps, cartographic  
 products, GIS, hardware and software will be  
 hosted during the Conference.

## CONFERENCE TOPICS

- Cartography Concepts in BigData Environment
- GIS Technologies and Related Disciplines
- Web Cartography and Digital Atlases
- Map Design and Production
- Cartographic Visualization
- Volunteer Geographic Information
- Virtual Geographic Environment
- 3D Cartographic Modelling
- Cartography and GIS in Education
- GPS Technologies
- Geo-Spatial Analysis and Data Mining
- Contemporary problems using geodetic coordinate systems and map projections
- Geospatial data acquisition by remote sensing technologies for cartographic purposes
- GIS for Geology and Natural Sciences

## SEMINAR WITH EU COOPERATION ON EARLY WARNING & DISASTER / CRISIS MANAGEMENT TOPICS

- European, Asian and World Concepts for Crisis Management (CM) and Early Warning (EW)
- Visualization of Geodata and Geoinformation in CM and EW
- User Needs and Context Mapping
- From Discovery to Full Interoperability in CM and EW
- SDI and CM: INSPIRE Influence
- "Speaking the Same Language - Semantic Aspects of CM"
- Sensor Mapping for EW and CM
- Data loss collection and registration
- 3D laser scanning in EW and CM

## LANGUAGE

The official language of the Conference is English.

## IMPORTANT DATES

- 10 JANUARY 2016**  
Abstract submission
- 30 JANUARY 2016**  
Notification of acceptance
- 29 FEBRUARY 2016**  
Early registration fee
- 1 MAY 2016**  
Paper submission,  
Regular registration
- 13-17 JUNE 2016**  
Conference days
- 14-16 JUNE 2016**  
Seminar days

## REGISTRATION FEES

|                            | Until<br>29.02.2016 | From<br>01.03.2016 |
|----------------------------|---------------------|--------------------|
| <b>Full participant</b>    | <b>210 €</b>        | <b>250 €</b>       |
| <b>Five ICC&amp;GIS*</b>   | <b>180 €</b>        | <b>200 €</b>       |
| <b>Students</b>            | <b>150 €</b>        | <b>180 €</b>       |
| <b>BCA members</b>         | <b>150 €</b>        | <b>180 €</b>       |
| <b>Accompanying person</b> | <b>120 €</b>        | <b>140 €</b>       |

\* For those of you who have participated in all previous five ICC&GIS.

### Registration fee for participants includes:

Attendance to the Conference and the Seminar  
Conference documents, Bag, Badge,  
eISSN Proceeding, Certificate, Coffee breaks at  
the Conference venue.

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## CONFERENCE PLACE: Albena – The Pearl of Bulgarian Coast

The resort of Albena is situated 32 km north of Varna and just 12 km south-west of Balchik on a long sand stretch in the open northern part of Varna Bay. The resort's construction was started in 1968, which makes it one of the most modern holiday cities along the Bulgarian coast. The complex lies beneath a relatively high hill and is given particular charm by the nearby forest of Baltata, a part of which is declared a protected area. The latter is also called Batova Gora (Batova Forest) after the Batova river, in the valley of which it grows.

The Albena's architecture resembles one of Walter Gropius' urban models as most of the hotels have a terraced structure aimed at providing as much sun as possible in summer days. To the north the coast is steep, featuring yellow sandstone and limestone typical of the area. It is in fact this stone slope that was the main source of construction material for the resort.



Albena  
43° 22' 14" N  
28° 05' 05" E

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