

CARTOGRAPHIC ACTIVITIES IN BULGARIA, 2019 - 2023

**NATIONAL REPORT
BULGARIAN CARTOGRAPHIC ASSOCIATION**

19th General Assembly of the International Cartographic Association (ICA),
Cape Town, South Africa, 2023

by Silvia Marinova and Temenoujka Bandrova

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1. Bulgarian Cartographic Association (BCA)

Bulgarian Cartographic Association (BCA) was established on 8th of April, 2011 by Bulgarian cartographers and specialists in cartography and GIS. 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 was strongly supported by the National Geodesy, Cartography and Cadastre Agency, a lot of private GIS and cartographic companies, various institutes of Bulgarian Academy of Sciences and several Universities.

The BCA members are cartographic companies, map publishers, academics, researchers, map curators, individual cartographers, GIS specialists, geographers with special interest in maps. The members of BCA take active roles in the ICA Commissions and the Executive Committee. They frequently participate in international cartographic conferences and exhibitions.

The executive board consists of 7 members: Prof. T. Bandrova – President BCA, head of Department of Photogrammetry and Cartography, University of Architecture, Civil Engineering and Geodesy (UACEG), Sofia; Col. G. Gladkov – Vice-president BCA, Ministry of Transport, Information Technology and Communications; Prof. R. Vateva – Vice-president BCA, Geological Institute, Bulgarian Academy of Science; Dr. A. Angelov - manager of Geodetect Ltd.; Ms. E. Karadjova – General Manager ESRI-Bulgaria; Prof. P. Penev, UACEG; Dr. S. Marinova – Secretary BCA, Head Laboratory on Cartography and GIS, UACEG; KartGeo Ltd.

In June 2011 BCA became a national representative of Bulgaria in the International Cartographic Association.

All information about BCA can be found at the web page - <https://cartography-gis.com/> and Facebook.

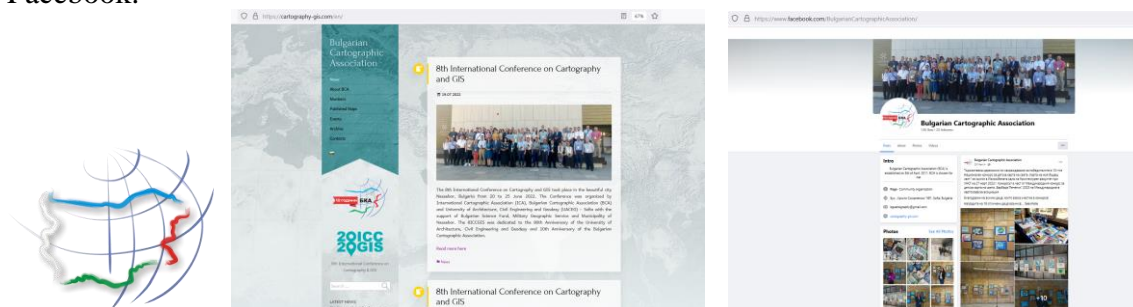


Fig. 1.1 Logo, Website and Facebook page of BCA

2. Celebrating 10 Years of Bulgarian Cartographic Association

On April 8, 2021, Bulgarian Cartographic Association (BCA) celebrated 10 years since its establishment. The members of BCA - individuals and legal entities - have made a huge contribution to the development of Bulgarian cartography and raising its prestige at the international level. On October 14, 2021, the jubilee gathering of BCA members was held on the occasion of the 10th anniversary of the Association's founding. Certificates of contribution to the development of Bulgarian cartography were presented at the event. The main founders of the company were present at the celebration in Sofia. The event was also honored by Prof. Milan Konecny - President of the International Cartographic Association (2004-2007).

A number of cartographic conferences, exhibitions and other events were dedicated to the anniversary of the Bulgarian Cartographic Association.



Fig. 2.1. Celebrating the 10th Anniversary of BCA

3. 8th International Conferences on Cartography and GIS in Bulgaria

One of the main aims of BCA is to assist in further training young cartographers and to organize national and international conferences and other events. Bulgarian Cartographic Association organizes International Conference on Cartography and GIS (ICC&GIS). The ICC&GIS is a biannual conference, endorsed by ICA and supported by University of Architecture, Civil Engineering and Geodesy – Sofia. The Conference started in 2006 on the idea of prof. Temenoujka Bandrova, BCA President and Prof. Milan Konecny, ICA President (2003-2007) and since then it welcomes scientists from all over the world to its events. For those 17 years of experience, the Conference had attendees from more than 60 countries and published more than 750 scientific papers in its proceedings. A Seminar on Disaster Risk Reduction is organized in cooperation with ICA Commission on Cartography in Early Warning and Crisis Management and Department of Geography, Masaryk University, Brno, Czech Republic.

8th International Conference on Cartography and GIS

The 8th International Conference on Cartography and GIS took place in the beautiful city Nessebar, Bulgaria from 20 to 25 June 2022. The Conference was organized by the International Cartographic Association (ICA), the Bulgarian Cartographic Association (BCA) and the University of Architecture, Civil Engineering and Geodesy (UACEG) - Sofia with the support of the Bulgarian Science Fund, the Military Geographic Service and Municipality of Nessebar. The 8ICCGIS was dedicated to the 80th Anniversary of the University of Architecture, Civil Engineering and Geodesy and 10th Anniversary of the Bulgarian Cartographic Association.

The main topics of the conference were:

- 3D Cartographic Modelling
- Cartographic Concepts in Big Data Environment
- Cartographic Visualization
- Cartography and GIS in Education
- Geoinformation for Smart Cities
- Geospatial Analysis and Data Mining
- Geospatial Information Semantics
- Geospatial Information Ontology
- GIS for Geology, Natural Sciences and Ecosystems
- GIS Technologies and Related Disciplines
- GNSS Technologies in Cartography
- Map Design and Production
- Map Projections and Geodetic Coordinate Systems
- Remote Sensing Technologies for Cartographic Purposes
- UAV Applications and New Trends
- Volunteered Geographic Information
- Web Cartography and Digital Atlases

In these years, marked by pandemic, social and natural crisis, these topics allow us to outline the hunger of our users for cartography achievements. They also show the need of business, government representatives and scientists for real time cartographic representations and better SDI, GPS and GIS solutions.

The organizers are proud to announce that the following leader companies in geoinformatics and cartography domains participated as **sponsors** of the event: ESRI - platinum sponsor, HERE,

DataMap-Europe. GeoConnexion, ISPRS International Journal for Geo-Information, Remote Sensing Journal, Coordinates were media partners.

The main international organizer was the **International Cartographic Association (ICA)** with the exclusive support of the ICA President Mr. Tim Trainor who was not able to attend in person due to unforeseen circumstances, but sent a video greeting to all participants, the ICA Vice-Presidents Prof. László Zentai and Prof. Temenoujka Bandrova, the past Presidents Prof. Milan Konečný (ICA President 2003- 2007) and Prof. Georg Gartner (ICA President 2011-2015), the Chairs and Vice-chairs of ICA Commissions – Prof. José Jesús Reyes Nunez, Dr. Otakar Čerba, Dr. Zdeněk Stachoň, Eng. Stefan Bonchev. This cooperation provoked interest among 130 attendees from 20 countries and 250 authors from 35 countries.



Fig. 3.1 Participants in 8ICCGIS

Opening Ceremony

Dr. Silvia Marinova – President of the 8ICCGIS Scientific Committee welcomed all participants to the 8th International Conference on Cartography and GIS in Nessebar.

Prof. Dr. Temenoujka Bandrova - President of Bulgarian Cartographic Association, ICA Vice-President welcomed the attendees to Bulgaria and noted that scientists, geo-specialists, and researchers from 20 countries gathered to report, present, discuss, and teach cartography and GIS.

On behalf of Mr. Nikolay Dimitrov - Mayor of Nessebar Municipality greetings to all 8ICCGIS participants were addressed by Mr. Victor Borisov – Deputy Mayor of the municipality. Personal greetings were addressed by Prof. Dr. Slaveyko Gospodinov - Vice-Rector of University of Architecture, Civil Engineering and Geodesy, Prof. Dr. Milan Konečný - President of International Organizing Committee of 8ICCGIS, Czech Republic, Dr. Alessandro Annoni - President of International Society for Digital Earth, Italy and Mr. Nick Land - ESRI Europe, UK.



Fig. 3.2 Opening ceremony – greetings from Prof. Bandrova



Fig.3.3 Opening ceremony - greetings

The attendees enjoyed the greetings from Folklore Dance Group "Nezabravka" led by Andiopa Tsvetkova and choreographer Desislava Chervenкова and singers and bagpipers from United Municipal School of Arts, Nessebar, teachers: Petko Stoyanov and Neli Taneva.



Fig. 3.4 Opening ceremony – folklore program

The Vice-Chair of the ICA commission on Cartography and Children Prof. José Jesús Reyes Nunez handed a diploma and a prize to Ivayla Lazarova whose drawing “My Favourite Planet” was awarded (1st place in the category Ages under 6) at the Barbara Petchenik Children’s World Map Competition during the 30th International Cartographic Conference in Florence, Italy.



Fig. 3.5 Barbara Petchenik Competition award

A **Seminar on Disaster Risk Reduction – Solutions and Innovations** was organized by Prof. Dr. Milan Konecny, Vice-Chair of the Commission on Cartography on Early Warning and Crisis Management and former ICA President. The Department of Geography, Masaryk University, Brno, Czech Republic was a co-organizer of the Seminar.



Fig. 3.6 Moments from the Seminar on Disaster Risk Reduction – Solutions and Innovations

A **Workshop: Spatial information for Virtual Environments** was organized by ICA Commission on User eXperience and aroused interest among many participants.



Fig. 3.7 Moments from the Workshop: Spatial information for Virtual Environments

A **Special ISDE Session Digital Earth for Smart Solutions** was organized and supported by International Society for Digital Earth.



Fig. 3.8 Moments from the Special ISDE Session Digital Earth for Smart Solutions, 8thICCGIS

ICA commission meetings

As usual, several commissions of the International Cartographic Association held their annual meetings during the conference: Commission on Cartography and Children, Commission on Cartography in Early Warning and Crisis Management; Commission on Maps and the Internet. The commission meetings led to development of guidelines for future work of their members.



Fig. 3.9 Participants in the ICA commission meetings, 8thICCGIS

Keynote speakers

The conference keynote speakers inspired a great interest in the participants and set a positive direction for the rest of the conference sessions. Four keynote speeches were given by:

- Prof. Milan Konečný, Czech Republic - The UN Challenges for SDGs and Sendai Framework: The Role of Cartographers;
- Dr. Alessandro Annoni, ISDE President, Italy - Digital Earth: Yesterday, Today and Tomorrow;
- Prof. Georg Gartner, Austria - Maps+ The Evolution of LBS;
- Mr Nick Land, ESRI, United Kingdom - Geospatial Infrastructure for an Interdependent World.



Fig. 3.10 Keynote speakers, 8thICCGIS

Publication

More than 70 oral presentations were given in 11 plenary sessions, a seminar session and a special ISDE session and 10 posters were presented in 4 poster sessions. The papers are published in the e-Conference Proceedings: Vol. 1 and Vol. 2, entitled “8th Conference on Cartography and GIS”, Publisher: Bulgarian Cartographic Association, ISSN: 1314-0604.



Fig. 3.11 8ICCGIS Proceedings, Vol. 1 and Vol. 2

Young Scientist Awards

During the 8ICCGIS, the jury members of Award Scientific Committee Prof. Lyubka Pashova, Prof. Dariusz Dukaczewski and Prof. José Jesús Reyes Nunez had the difficult task to evaluate the papers and presentations of young scientists.

The Young Scientist Award was presented to Pál Márton, Hungary for his paper “Geodiversity Assessment of the Eastern Styrian Prealps and its Surroundings (Austria-Hungary)”.

The Jury presented also Award Certificate to an Ambassador of Cartography & GIS to Katerina Bortlova, Czech Republic for her paper “GIS in Real Estate Investment”.



Fig. 3.12 Awards for young scientists, 8thICCGIS

Networking events

All participants were invited to a Welcome reception after the opening ceremony and the keynote speeches. This was a great opportunity to meet each other and share initial inspirations for the event.

The Gala dinner gathered the participants again. It was a perfect opportunity for the attendees to get to know the local cuisine and traditions through the rich entertainment program and to celebrate the accomplished work. The attendees got to know national costumes from the different ethnographic regions along with everyday items from the Bulgarian way of life. The programme took the participants on an unforgettable journey through genuine acts including a diverse selection of national dance, a variety show and Nestinarstvo fire-dancing.



Fig. 3.13 Welcome reception, 8thICCGIS

The attendees had also the opportunity to explore the Ancient Nessebar that was included in UNESCO list of World Heritage Sites in 1983.

The Venue

The 8ICCGIS took place in the Nessebar - a **World cultural heritage** city located 30 km north of the city of Burgas. It is one of the major seaside resorts on the southern Bulgarian Black Sea Coast. The conference venue was Artium - Center of Culture and Education, Nessebar which won a prize Building of the year (2018) in the category “Buildings of culture and monuments of culture”.

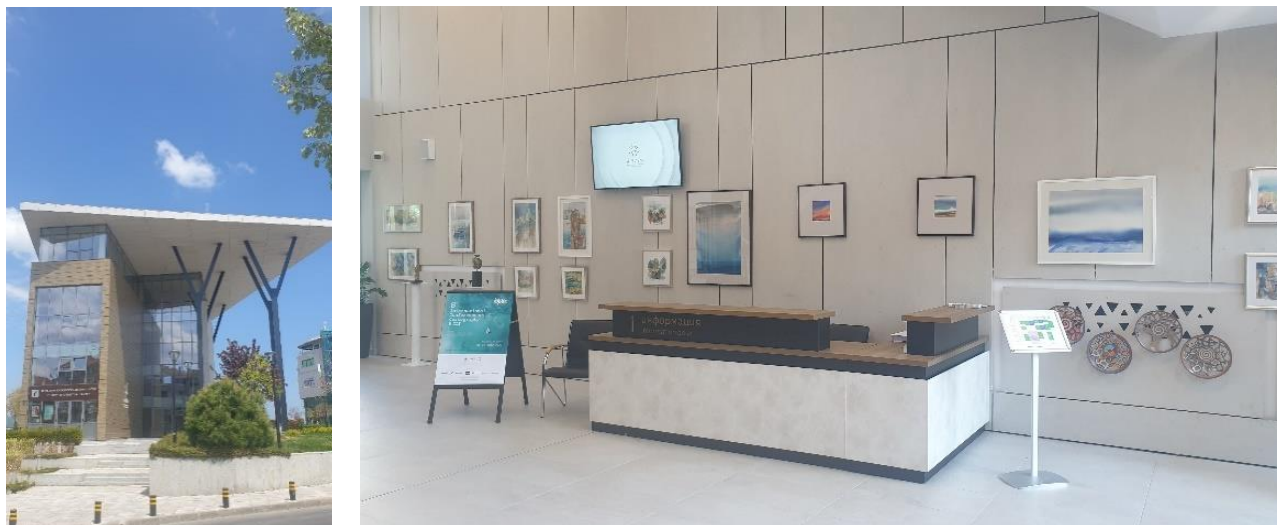


Fig. 3.14 Artium Center – the venue of the 8thICCGIS

The organizers of 8th International Conference on Cartography and GIS express their gratitude to all presenters, chairs, reviewers, authors, sponsors, attendees and distinguished guests!

4. National Competitions for Children World Map “A Map of My Future World”

Bulgarian Cartographic Association (BCA) organized the 12th and the 13th National Competition for Children's World Map, which were held according to the theme and rules provided by the ICA.

Co-organizer of the competition was the University of Architecture, Civil Engineering and Geodesy, Sofia.

Support was provided by DataMap Europe Ltd. and ESRI Bulgaria. The contest was announced at the BCA web page: <https://cartography-gis.com/>.

Barbara Petchenik Children's World Map Competition 2021

12th Bulgarian Competition for Children's World Map "A Map of My Future World"

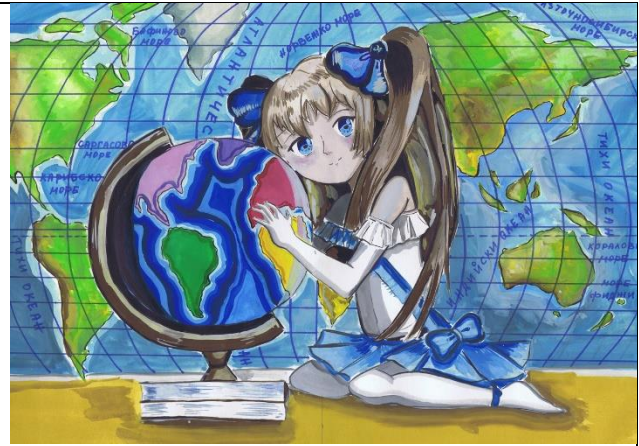
Participants

98 drawings of children between 3 and 15 years of age from 16 towns in Bulgaria took part 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.

The drawings that received the first prizes of the 12th Bulgarian Competition for Children's World Map "A Map of My Future World" 2021 are as follows:



TITLE: My Favorite Planet
NAME: Ivayla Lazarova, AGE: 5
ADDRESS: “Slaveyche” kindergarten, 29 str. №1,
Village of Lesnovo, Bulgaria



TITLE: Dreaming
NAME: Rayan Kупenov, AGE: 12
ADDRESS: Children's ART School “Zhivopis”, 8
Rozova Dolina Blvd. Military Club, town of
Kazanlak, Bulgaria



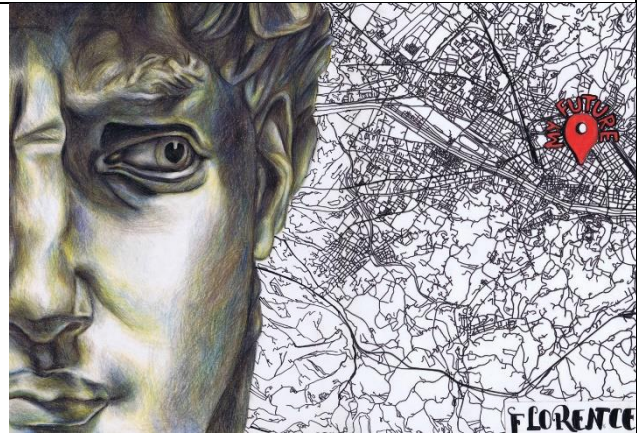
TITLE: Ready to Travel
 NAME: Victoria Govedarova, AGE: 14
 ADDRESS: Children's ART School "Zhivopis", 8
 Rozova Dolina Blvd. Military Club, town of
 Kazanlak, Bulgaria



TITLE: My Interactive World
 NAME: Viara Pencheva, AGE: 11
 FROM: ADDRESS: Preslav street №10, town of
 Gabrovo 5300, Bulgaria



TITLE: Save me
 NAME: Sofia Mateova, AGE: 13
 ADDRESS: Children's ART School "Zhivopis", 8
 Rozova Dolina Blvd. Military Club, town of
 Kazanlak, Bulgaria



TITLE: My arrival in the future
 NAME: Stella Bozhkova, AGE: 12
 ADDRESS: 25 Bulgaria Blvd., town of Pazardzhik
 4400, Bulgaria

Fig. 4.1 Awarded drawings, 12th Bulgarian Competition for Children's World Map "A Map of My Future World", 2021

The Evaluation Committee

A jury of five cartographers at Department of Photogrammetry and Cartography, UACEG, independently evaluated the drawings according to a special point system. National coordinator for Bulgaria was Eng. Stefan Bonchev.

The commission awarded 6 first prizes, 4 second, and 5 third prizes. The drawing "My arrival in the future" by Stella Bozhkova, 12, from the town of Pazardzhik, which received the big prize - a graphic tablet for drawing, was highly evaluated.

Awards

The names of the winners who received the first prizes of the 12th Bulgarian Competition for Children's World Map "A Map of My Future World" 2021 are as follows:

1. **Ivayla Lazarova**, AGE: 5
Address: "Slaveyche" kindergarten, 29 str. №1, Village of Lesnovo, Bulgaria
Drawing title: "**My Favorite Planet**"
2. **Viara Pencheva**, AGE: 11
Address: "Preslav street №10, town of Gabrovo 5300, Bulgaria
Drawing title: "**My Interactive World**"
3. **Rayan Kупenov**, AGE: 12
Address: Children's ART School "Zhivopis", 8 Rozova Dolina Blvd. Military Club, town of Kazanlak, Bulgaria
Drawing title: "**Dreaming**"
4. **Stella Bozhkova**, AGE: 12
Address: "25 Bulgaria Blvd., town of Pazardzhik 4400, Bulgaria
Drawing title: "**My arrival in the future**"
5. **Sofia Mateova**, AGE: 13
Address: Children's ART School "Zhivopis", 8 Rozova Dolina Blvd. Military Club, town of Kazanlak, Bulgaria
Drawing title: "**Save me**"
6. **Victoria Govedarova**, AGE: 14
Address: Children's ART School "Zhivopis", 8 Rozova Dolina Blvd. Military Club, town of Kazanlak, Bulgaria
Drawing title: "**Ready to Travel**"

The drawings that won the six first awards participated in the Barbara Petchenik Children's World Map Competition 2021 where the drawing "My Favorite Planet" by Ivayla Lazarova won a first prize.

Barbara Petchenik Children's World Map Competition 2023

13th Bulgarian Competition for Children's World Map "A Map of My Future World"

Participants

140 drawings of children between 4 and 15 years of age from 16 settlements in Bulgaria took part in the competition. Some schools and art studios participated for the first time but many art schools participated by tradition. Most of the drawings are of very high quality in the meaning of cartography and art.

The drawings that received the first prizes of the 13th Bulgarian Competition for Children's World Map "A Map of My Future World" 2023 are as follows:



TITLE: Child planet
NAME: Polin Slavcheva
AGE: 4
ADDRESS: "Slaveyche" kindergarten, 29 str. №1,
Village of Lesnovo, Bulgaria



TITLE: Children around the world
NAME: Stefan Vasilev
AGE: 4
ADDRESS: "Az sam balgarche" (I am Bulgarian)
private kindergarten, 6 Radko Dimitriev Str., Town
of Varna, Bulgaria



TITLE: The human actions
NAME: Nikol Tsvetkova
AGE: 6
ADDRESS: 68th kindergarten Ran Bosilek, 5 Ivan
and Stiliyana Paraskevovi Str., Sofia City, Bulgaria



TITLE: My childhood dream of a peaceful world
NAME: Gergana Chucheva
AGE: 11
ADDRESS: 88th High School Dimitar Popnikolov,
7 Dimitar Popnikolov Str., 1632 g.k. Ovcha kupel
1, Sofia City, Bulgaria



Fig. 4.2 Awarded drawings, 13th Bulgarian Competition for Children's World Map "A Map of My Future World", 2023

The Evaluation Committee

A jury of 14 cartographers independently evaluated the drawings according to a special point system.

National coordinator: Silvia Marinova, PhD

Jury Members: *Prof. Temenoujka Bandrova* – President of Bulgarian Cartographic Association (BCA); University of Architecture, Civil Engineering and Geodesy (UACEG)
Prof. Stanislav Vasilev - UACEG
Prof. Rumyana Vatseva – Institute of Geology, Bulgarian Academy of Sciences
Prof. Georgi Zhelezov – National Institute of Geophysics, Geodesy and Geography at the Bulgarian Academy of Sciences (NIGGG – BAS)
Prof. Margarita Mondeshka - UACEG
Assoc. Prof. Lyubka Pashova - NIGGG – BAS
Assoc. Prof. Sia Veleva - UACEG
Dr. Eng. Georgi Gladkov – BCA
Chief Assist. Prof. Yana Lipiyska - UACEG
Violina Atanasova – UACEG
Gergana Petrova – UACEG
Kristina Nikolcheva – UACEG
Magdalen Boyadzhieva – UACEG
Lazar Lyaskov - UACEG

The commission awarded 6 first prizes, 4 second prizes, 3 third prizes and 5 encouragement awards.

Awards

The names of the winners who received the first prizes of the 13th Bulgarian Competition for Children's World Map "A Map of My Future World" 2023 are as follows:

1. NAME: **Polin Slavcheva**
AGE: 4
ADDRESS: "Slaveyche" kindergarten, 29 str. №1, Village of Lesnovo, Bulgaria
DRAWING TITLE: **Child planet**
2. NAME: **Stefan Vasilev**
AGE: 4
ADDRESS: "Az sam balgarche" (I am Bulgarian) private kindergarten, 6 Radko Dimitriev Str., Town of Varna, Bulgaria
DRAWING TITLE: **Children around the world**
3. NAME: **Nikol Tsvetkova**
AGE: 6
ADDRESS: 68th kindergarten Ran Bosilek, 5 Ivan and Stiliyana Paraskevovi Str., Sofia City, Bulgaria
DRAWING TITLE: **The human actions**
4. NAME: **Gergana Chucheva**
AGE: 11
ADDRESS: 88th High School Dimitar Popnikolov, 7 Dimitar Popnikolov Str., 1632 g.k. Ovcha kupel 1, Sofia City, Bulgaria
DRAWING TITLE: **My childhood dream of a peaceful world**
5. NAME: **Rayan Kупenov**
AGE: 14
ADDRESS: Children's ART School "Zhivopis", 8 Rozova Dolina Blvd. Military Club, Town of Kazanlak, Bulgaria
DRAWING TITLE: **Curiosity**
6. NAME: **Sofia Mateova**
AGE: 15
ADDRESS: Children's ART School "Zhivopis", 8 Rozova Dolina Blvd. Military Club, Town of Kazanlak, Bulgaria
DRAWING TITLE: **World through lenses**

These six drawings will participate in the Barbara Petchenik Children's World Map Competition 2023 in Cape Town, South Africa.

Exhibition and award ceremony

The exhibition and the award ceremony were held on March 27th, 2023 at the University of Architecture, Civil Engineering and Geodesy, Sofia.



Fig. 4.3 Exhibition and award ceremony at the University of Architecture, Civil Engineering and Geodesy, Sofia

5. Bulgarian Cartographic Products at the International Cartographic Exhibitions

BULGARIAN CARTOGRAPHIC PRODUCTS AT THE INTERNATIONAL CARTOGRAPHIC EXHIBITION 2021, FLORENCE, ITALY

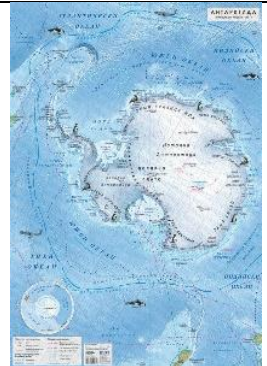
MAPS ON PANELS (MP)


MP1	<i>Strandzha – Petrova niva</i>	
Type of material	paper	
Scale (if relevant)	1:110 000	
Dimensions (mm)	700x1000	
Author(s)	KartGeo Ltd. and Geopan Ltd.	
Published by	KartGeo Ltd. and Geopan Ltd.	
Date published	10 August 2021	
Language(s) of the legend	Bulgarian and English	
Abstract/Description	<p>A detailed tourist map of Strandzha mountain with the Western Blacksea coastline from cape Phoros to Igneada. It represents a territory of 7356.8 square km. The map covers the whole geographic boundaries of Strandzha Mountain on the territory of the Republic of Bulgaria and part of the mountain on the territory of the Republic of Turkey. It represents road network, trekking routes, protected areas, tourist chalets and shelters, hotels, archaeological sites, shipwrecks, waterfalls, springs and other natural landmarks and places of interest. The historical area Petrova niva and its adjacent territories are presented in detail on the reverse, scale 1:40 000.</p>	




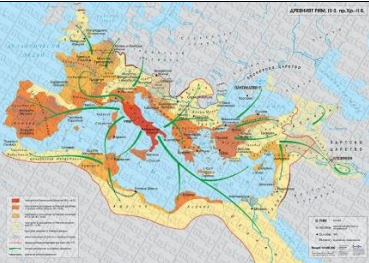
MP2	<i>Rhodope Range of Alabak</i>	
Type of material	paper	
Scale (if relevant)	1:40 000	
Dimensions (mm)	700x1000	
Author(s)	KartGeo Ltd. and Bikearea	
Published by	KartGeo Ltd., Bikearea, Alabak	
Date published	20 September 2021	
Language(s) of the legend	Bulgarian and English	
Abstract/Description	<p>A detailed tourist map presenting up-to-date information about the range of Alabak located in the beautiful Rhodope Mountains. The focus is on the tourist locations Varvara, Velingrad and Yundola. It includes a huge amount of information about tourist chalets and shelters, protected areas, natural landmarks, historical sites, etc. The map shows all marked trekking and bike routes with colours and numbers (for the bike routes). All routes are described in detail on the reverse.</p>	




MP3	Antarctica Nature Map		
Type of material	paper		
Scale (if relevant)	1:10 000 000		
Dimensions (mm)	700x1000		
Author(s)	DataMap-Europe Ltd.		
Published by	DataMap-Europe Ltd.		
Date published	1.September 2020		
Language(s) of the legend	Bulgarian		
Abstract/Description	The map is designed on the base of the newest researches of the region. The shade relief is used for good representation of the relief. The polar stations are checked for the actual information by scientists from Bulgarian Antarctic Institute. The map is used mainly for education in Bulgarian schools.		


MP4	Political Map of the World		
Type of material	paper		
Scale (if relevant)	1:24 000 000		
Dimensions (mm)	1400x1000		
Author(s)	DataMap-Europe Ltd.		
Published by	DataMap-Europe Ltd.		
Date published	1.August 2020		
Language(s) of the legend	Bulgarian		
Abstract/Description	The map is double-sided laminated, with plastic strips and cord on the top strip for hanging. The newest data for country borders and capital names is used. The flags of all counties of the world are presented on the south part of the map.		

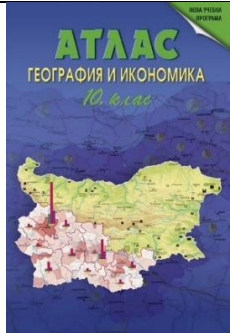
MP5	Early era in Italy. Roman Republic III-II century BC		
Type of material		paper	
Scale (if relevant)		1:1 500 000	
Dimensions (mm)		1400x1000	
Author(s)		DataMap-Europe Ltd.	
Published by		DataMap-Europe Ltd.	
Date published		15.October 2020	
Language(s) of the legend		Bulgarian	
Abstract/Description		The map is designed for the education in the Bulgarian schools. The historical content is represented by appropriate cartographic technics and methods of representation. The symbols and labels are in calculated readable sizes. The rich historic information is represented by readable and understandable way for students.	

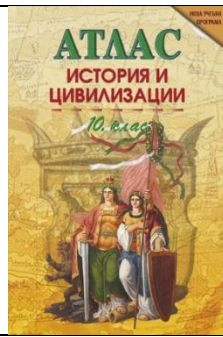
MP6	Ancient Rome, 3rd century BC - II c.		
Type of material	paper		
Scale (if relevant)	1:4 000 000		
Dimensions (mm)	1400x1000		
Author(s)	DataMap-Europe Ltd.		
Published by	DataMap-Europe Ltd.		
Date published	15.October 2020		
Language(s) of the legend	Bulgarian		
Abstract/Description	The map is designed for the education in the Bulgarian schools. The historical content is represented by appropriate cartographic technics and methods of representation. The symbols and labels are in calculated readable sizes. The rich historic information is represented by readable and understandable way for students.		

MP7	Unification of Italy, 1859-1870 Unification of Germany, 1866-1871		
Type of material	paper		
Scale (if relevant)	1:1 600 000		
Dimensions (mm)	1000x1400		
Author(s)	DataMap-Europe Ltd.		
Published by	DataMap-Europe Ltd.		
Date published	15.October 2020		
Language(s) of the legend	Bulgarian		
Abstract/Description	The map is designed for the education in the Bulgarian schools. The historical content is represented by appropriate cartographic technics and methods of representation. The symbols and labels are in calculated readable sizes. The rich historic information is represented by readable and understandable way for students.		

EDUCATIONAL PRODUCTS (EP)

EP1	Atlas Geography and Economics for 5., 6. and 7. grades		
Author(s)		Temenoujka Bandrova	
Type		Atlas	
Dimensions (mm)		240x310	
Published by		DataMap-Europe Ltd	
Date published		1 September 2021	
Language(s) of the product		Bulgarian	
Abstract/Description		The Atlas contains more than 100 maps made by modern technologies, some of which are combined with shadow relief and satellite images. It is designed for the secondary school stage. The first section - 5th grade, covers Geographical information; Planet Earth; Nature of the Earth; Geography of society and economy and Africa. The section for 6th grade, includes the rest of the continents. The third section - 7th grade, deals with Europe, the Balkans and Bulgaria. It provides information on nature, water and soil, climate, flora and fauna, population, economy, transport, trade and tourism, other topics covering the full curriculum.	

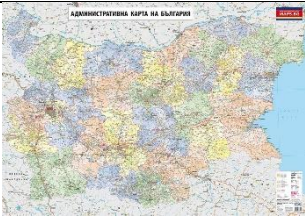
EP2	Atlas Geography and Economics for 10. grade		
	Author(s)	Temenoujka Bandrova	
	Type	Atlas	
	Dimensions (mm)	155x240	
	Published by	DataMap-Europe Ltd	
	Date published	1 August 2019	
	Language(s) of the product	Bulgarian	
Abstract/Description		The Atlas is designed for detailed study of the nature, population, settlements and economy of Bulgaria. Geographic information systems and the latest statistical data for the mapping of the studied material were used. It contains many additional graphs and diagrams that show visually and summarized the information in the various sections. The topics are presented in 90 maps. The atlas is made on the basis of the curriculum approved by the Ministry of Education and Science and the state educational requirements for 10th grade.	

EP3	Atlas History and Civilizations for 10. grade		
	Author(s)	Nikola Djulgerov and Temenoujka Bandrova	
	Type	Atlas	
	Dimensions (mm)	155x240	
	Published by	DataMap-Europe Ltd	
	Date published	15 August 2019	
	Language(s) of the product	Bulgarian	
	Abstract/Description	The atlas contains 76 maps presenting the rich Bulgarian history. Its content fully covers the curriculum approved by the Ministry of Education and Science for 10th grade. The maps have been developed on the basis of the latest historical research and data using Geographic Information Systems. Geographical base is presented accurately and reliably, and for easier orientation in orography a shade relief obtained on the basis of a 3D model on the territory is presented.	


BULGARIAN CARTOGRAPHIC PRODUCTS AT THE INTERNATIONAL CARTOGRAPHIC EXHIBITION 2023, CAPE TOWN, SOUTH AFRICA

MAP PRODUCTS (MP)

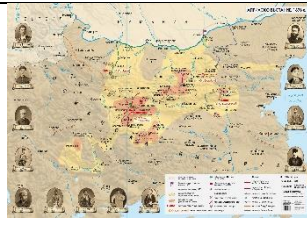
MP1

Title (in English)	<i>Administrative map of Bulgaria</i>	
Author(s)	DataMap-Europe Ltd	
Published by	DataMap-Europe Ltd	
Date published	February 2023	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this publication may be reproduced for any purpose, in any form, by any means, or translated into another language without the written consent of DataMap-Europe Ltd.	
Dimensions (mm) if relevant	1400 x 1000	
Scale (if relevant)	1:380 000	
Abstract/Description	Administrative division represented by background coloring, district and municipal boundaries, district and municipal centers. Over 5100 settlements depicted with areas and classified into categories according to number of inhabitants. Road network with detailed division by type and with distances between settlements. A detailed legend. Double-sided laminated, with plastic strips and cord on top strip for card hanging, weight: 0.483 kg. http://maps.bg/	

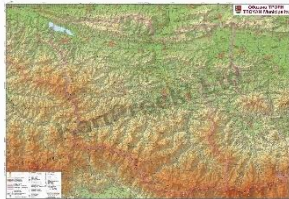
MP2

Title (in English)	Wall Physical map of Bulgaria	
Author(s)	DataMap-Europe Ltd	
Published by	DataMap-Europe Ltd	
Date published	August 2022	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this publication may be reproduced for any purpose, in any form, by any means, or translated into another language without the written consent of DataMap-Europe Ltd.	
Dimensions (mm) if relevant	2000x1400	
Scale (if relevant)	1:270 000	
Abstract/Description	Contains: graticule; shade-relief represented by hypsometric coloring, contour lines and isobaths; hydrography; state borders; road and railway network; capital, regional centers, towns and villages, classified by number of inhabitants; tops; passages; breaches; min springs; caves; rock formations; border checkpoints; airports; ports; monasteries, resort complexes; holiday villages; tourist centers; inscriptions of hydrography, orography, etc.; a legend. Suitable for long-term use. Readable from afar! http://maps.bg/	

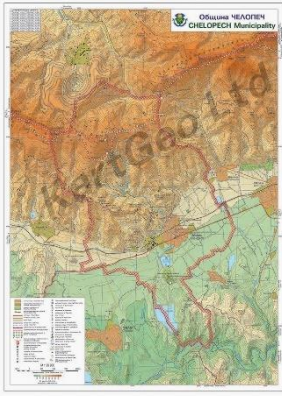
MP3

Title (in English)	<i>April Uprising, 1876</i>	
Author(s)	DataMap-Europe Ltd	
Published by	DataMap-Europe Ltd	
Date published	January 2022	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this publication may be reproduced for any purpose, in any form, by any means, or translated into another language without the written consent of DataMap-Europe Ltd.	
Dimensions (mm) if relevant	1400x1000	
Scale (if relevant)	1:450 000	
Abstract/Description	Contains: graticule; hydrography; territory of the Ottoman Empire and its dependent states, as well as areas covered by the preparation of the uprising and areas of mass participation in the uprising (represented by color tone on shade-relief); centers of revolutionary districts; numbers and names of apostles of revolutionary districts, the meeting in Oborishte, the outbreak of the uprising; actions of the "Flying Squad", as well as the route of the squads; major rebel battles; places of mass slaughter of Bulgarians; legend; portraits of main participants and organizers of the uprising with years of birth and death. http://maps.bg/	


MP4

Title (in English)	<i>Troyan – The Balkan Heart</i>	
Author(s)	KartProekt Ltd.	
Published by	KartProekt Ltd.	
Date published	January 2022	
Language(s) used on legend	Bulgarian and English	
Copyright notice	All rights reserved. No part of this map may be reproduced for any purpose, in any form, by any means or translated into another language without the written permission of KartProekt Ltd.	
Dimensions (mm) if relevant	700x1000 (two-sided)	
Scale (if relevant)	1:60 000	
Abstract/Description (100 words max in English)	It presents detailed information about one of the most beautiful parts of Central Stara Planina - the Troyan Balkan. The combination of contour lines, hypsometric coloring and relief shading gives a three-dimensional perception of the relief forms. The map represents roads, cart tracks, paths, protected areas, caves, waterfalls, springs, hotels, huts, shelters, ski areas, cross-county trails, biathlon range, motopolygons, other landmarks and all marked trekking routes. The map gives an idea to the lovers of historical adventures to cross the Troyan Pass along the route of the Roman road Via Traiana and admire the preserved sections almost 2000 years old.	

MP5


Title (in English)	<i>Chelopech Municipality</i>	
Author(s)	KartGeo Ltd.	
Published by	KartGeo Ltd. and Chelopech Municipality	
Date published	September 2022	
Language(s) used on legend	Bulgarian and English	
Copyright notice	All rights reserved. No part of this map may be reproduced for any purpose, in any form, by any means or translated into another language without the written permission of KartGeo Ltd.	
Dimensions (mm) if relevant	700x1000 (two-sided)	
Scale (if relevant)	1:25 000	
Abstract/Description (100 words max in English)	A detailed tourist map of the Chelopech Municipality which represents, residential, industrial, business and villa areas, roads, foot paths and marked tourist routes. It depicts natural and antropogenic points of interest – protected areas, rocks, springs, waterfalls, fishing spots, sport complexes, tourist chalets, archaeological sites, picnic areas, mines, and others. It includes points with GPS navigation data. The reverse side includes information and pictures of the most popular and interesting landmarks. http://cartgeo.com/	

MP6


Title (in English)	<i>Dunav Ultra</i>	
Author(s)	KartGeo Ltd.	
Published by	KartGeo Ltd. and Dunav Ultra	
Date published	May 2023	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this map may be reproduced for any purpose, in any form, by any means or translated into another language without the written permission of KartGeo Ltd. and Dunav Ultra	
Dimensions (mm) if relevant	400x700 (two-sided)	
Scale (if relevant)	1:800 000	
Abstract/Description (100 words max in English)	The map represents the Dunav Ultra cycling route – the longest tourist cycling route in Bulgaria (740 km along the Danube to the Black Sea). It depicts both a classic and an adventure version of the route along the Danube River, the 100 Dunav Ultra Highlights, including cultural and historical sites, fortresses, archaeological sites, temples, museums, natural phenomena, areas of birds, local customs, and food, representing the identity of the Dunav Ultra route. The map includes a route profile and useful information for cyclists. Useful and interesting information about the area is presented on the reverse side. http://cartgeo.com/	

EDUCATIONAL CARTOGRAPHIC PRODUCTS (EP)


EP1

Title (in English)	<i>Tourist Route “El Camino in The Balkans - Stara Planina”</i> <i>Perspective realistic interactive map</i>	
Author(s)	autor: Foundation for the integration of unequal groups in society Cartographer: Emil Simeonov	
Published by	Foundation for the integration of unequal groups in society	
Date published	March 2023	
Language(s) used on legend	English and Bulgarian	
Copyright notice	Foundation for the integration of unequal groups in society exclusive rights	
Abstract/Description	The tourist route "El Camino" is a natural continuation of the E3 route, passing through 11 European countries. "El Camino Kom - Emine", is the longest marked tourist route in Bulgaria. The main aim of the educational map is to present interactive art-realistic model of Stara Planina mountain. The map is developed in 5 parts. Each part is painted by tempera. Artistic realism is achieved through art-perspective methods of depicting spatial reality in a two-dimensional coordinate system. The visualization of the terrain is based on central projection and the mathematical basis. Point Objects: 435. Linear objects: 42 paths and ecopaths. www.elcamino.bg	

ATLASES (AT)**AT1**

Title (in English)	<i>Atlas History of Bulgaria</i>	
Author(s)	Nikola Djulgerov and Temenoujka Bandrova	
Published by	DataMap-Europe Ltd	
Date published	May 2023	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this publication may be reproduced for any purpose, in any form, by any means, or translated into another language without the written consent of DataMap-Europe Ltd.	
Dimensions (mm)	159x243, pp.96	
Number of pages		
Abstract/Description	The Atlas contains detailed, professionally made maps, illustrating the history of the Bulgarian lands from ancient times to the present day. It contains 80 maps with detailed legends, and a chronology of "100 important events". The content is grouped into 9 topics: - Today's Bulgarian lands during the prehistoric era - Today's Bulgarian lands during Antiquity - Bulgaria and Bulgarian lands IV- XII century - The Bulgarian state, end of XII-XIV centuries - Bulgarian lands under Ottoman rule, XV- XVII centuries - Bulgarian revival, XVIII-XIX centuries - Bulgaria from 1878 to 1945 - Bulgaria after the Second World War. http://maps.bg/	

AT2

Title (in English)	Atlas of the World	
Author(s)	Temenoujka Bandrova	
Published by	DataMap-Europe Ltd	
Date published	May 2023	
Language(s) used on legend	Bulgarian	
Copyright notice	All rights reserved. No part of this publication may be reproduced for any purpose, in any form, by any means, or translated into another language without the written consent of DataMap-Europe Ltd.	
Dimensions (mm) Number of pages	159x243, pp.96	
Abstract/Description	The Atlas contains rich information about the Solar System, the Earth as a planet, the Moon, Time Zones. Detailed 48 maps (nature, climate, population, country maps, statistical maps); the continents (nature and country map); natural geographical maps of regions of Europe and the world; natural and administrative map of Bulgaria. Comparative graphs and tables. Schemes of map sheets of Europe and the world. Information about countries: flags, area, population, language, religion, currency, status. Alphabetical index of names from the atlas. The atlas is designed by modern technologies, GIS satellite images and the newest statistical information. http://maps.bg/	

6. Education

The Bulgarian Cartographic Association (BCA) supports educational courses organized in cooperation of GI companies or colleagues from ICA and as well as of Erasmus teachers exchange frame.

LECTURES GIVEN BY REPRESENTATIVES OF THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)

The Bulgarian Cartographic Association supports and promotes among its members lectures by representatives of the International Cartographic Association. In the past year, students and lecturers at the University of Architecture, Civil Engineering and Geodesy (UACEG), members of the BCA, representatives of the National Academy of Sciences - BAS, etc. had the opportunity to attend lectures in the field of cartography and GIS presented by:

- Prof. Milan Konecny, President of the International Cartographic Association (ICA) in the period 2003-2007 and lecturer at Masaryk University, Czech Republic. Prof. Konecny was a guest of the UACEG under the Erasmus+ program and on February 17, 2023 he delivered a lecture on "Digital Transformation, Digital Earth and Disaster Risk Reduction".
- Dr. Karel Stanek, member of the ICA Commission on Cartography on Early Warning and Crisis Management and lecturer at Masaryk University, Czech Republic. On November 28, 2022, Dr. Stanek delivered Erasmus+ lectures on: Czech civil topographic maps (history and contemporary situation); Automated cartographic map generalization overview; Automation of the cartographic generalization in the Czech state civil maps; Implementation of generalization procedures into ArcGIS Pro.
- Eng. Pavel Spulak - member of the ICA Commission on Cartography on Early Warning and Crisis Management. He visited UACEG twice in 2022, delivering a lecture on "GIS and emergency events from the Fire and Rescue Service of the Czech Republic point of view" on June 9, 2022, and a lecture on "The Development of Dynamic Web Application for Canine Search and Rescue Attestation Management with Spatial Data Processing on Client and Server Side" on November 7 2022.

EDUCATIONAL COURSES

The HERE company (a BCA member) annually supports the cartographic education in UACEG. After working in the field and filling in the map of HERE Mr. Alexander Todorov, Head of the regional unit of the company, every year awards the students of the specialization Cartography and GIS, Faculty of Geodesy, UACEG for their professional contribution to the renewal of HERE map.



Fig. 6.1. Cartography and GIS specialization students, UACEG, on practical training with HERE

7. Promotion of Cartography

REPRESENTATION IN ICA

The members of BCA take active roles in the ICA Commissions and the Executive Committee. They frequently participate in international cartographic conferences and exhibitions.

The BCA President Prof. Temenoujka Bandrova was elected as Vice president of the International Cartographic Association (ICA). The election was held during the 18th General Assembly of the ICA on July 20, 2019 in Tokyo.

Eng. Stefan Bonchev, technical secretary of ICCGIS, is a Vice chairman of the ICA Commission on Maps and the Internet for the period 2019-2023. The Commission promotes cartographic research and development concerning web-based cartography. The Commission's goal is to improve cartographic education related to the Internet.

CONGRATULATORY LETTER FROM THE NATIONAL ASSEMBLY PRESIDENT

Bulgarian Cartographic Association received a congratulatory letter from the National Assembly President of the Republic of Bulgaria, Ms. Tsveta Karayancheva, on the occasion of the election of Prof. Bandrova as Vice President of the International Cartographic Association in Tokyo. The letter gives an assessment of the place of the Bulgarian cartographic community in the modern development of geospatial sciences. Mrs. Karayancheva is convinced that the new position will actively continue the good cooperation of the BCA with the Bulgarian Parliament.

PLAQUE FROM THE RECTOR OF THE UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY (UACEG)

On September 19, 2019, the Rector of UACEG Prof. Ivan Markov awarded the President of BCA Prof. Temenoujka Bandrova with an honorary plaque of UACEG on the occasion of her election as Vice President of the International Cartographic Association, as well as for her long-term work to raise the authority of the university. The plaque was handed over by the Dean of the Faculty of Geodesy at UACEG, Prof. Elena Peneva, together with a congratulatory address from the management and colleagues in the faculty.



Fig. 7.1 The Dean of the Faculty of Geodesy at UACEG handed a plaque to the President of BCA, 2019

PLAQUE FOR BCA FROM THE FACULTY OF GEODESY OF THE UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY (UACEG)

The Bulgarian Cartographic Association was awarded a plaque by the Faculty of Geodesy, UACEG for cooperation and support in the development of higher geodetic education. The plaque was presented to the President of BCA Prof. Temenoujka Bandrova by the dean of the Faculty of Geodesy Prof. Elena Peneva during a solemn session "80 years of higher geodetic education in Bulgaria", which took place on November 10, 2022 as part of the celebrations on the occasion of The 80th anniversary of the University of Architecture, Civil Engineering and Geodesy.



Fig. 7.2 Plaque for BCA from the Faculty of Geodesy handed to Prof. Bandrova, UACEG, 2022

WORLD GIS DAY

Traditionally, in mid-November, Bulgaria celebrates the World Day of Geographical Information Systems, a celebration of the GIS society around the world and in the country. As an official partner of the event, the Bulgarian Cartographic Association (BCA) supports GIS Day, organized by ESRI Bulgaria. In the last editions of the event international and Bulgarian experts presented the new developments, solutions and good practices in geospatial technologies and their application for the needs of various industries - from geodesy and engineering infrastructure, through the environment, prevention and emergency management, to smart cities, transport safety, security and many others.

CELEBRATING THE 130TH ANNIVERSARY OF THE ESTABLISHMENT OF THE MILITARY GEOGRAPHIC SERVICE

On September 20, 2022, the Military Geographical Service of the Ministry of Defense of the Republic of Bulgaria celebrated 130 years since its foundation. With a congratulatory address to Col. Eng. Ivan Inkovski, head of the Military Geographical Service (MGS), Prof. Bandrova and the Management Board of the Bulgarian Cartographic Association congratulated the management and the entire team of the MGS for the high professionalism and efforts they make for the development of geodesy and cartography in Bulgaria. In the last ten years, the Bulgarian Cartographic Association and the Military Geographical Service have successfully cooperated, especially strongly expressed in the organization of the International Conferences on Cartography and GIS.



Fig. 7.3. Celebrating the 130th anniversary of the establishment of the Military Geographic Service

CELEBRATING 75 YEARS OF THE GEOLOGICAL INSTITUTE OF BULGARIAN ACADEMY OF SCIENCES

The "Strashimir Dimitrov" Geological Institute of the Bulgarian Academy of Sciences (BAS) celebrated its 75th anniversary with a celebration held on November 15 in the "Prof. Marin Drinov" Hall of the BAS. The director Prof. Radoslav Nakov presented the main aspects of the activity of the institute and recalled the mission of the scientists - to study the geological systems and georesources of the territory of Bulgaria and the Balkan Peninsula. The Geological Institute is the only national complex geological organization that systematically acquires knowledge on the geology of Bulgaria, Prof. Nakov also said. Prof. Bandrova congratulated the director and employees of the institute, presenting a congratulatory address on behalf of BCA during the solemn ceremony on the occasion of the 75th anniversary. Prof. Vatsева, Vice President of the BCA is a scientist at the Geological Institute.

CARTOGRAPHIC EXHIBITION IN STRANDZHA MOUNTAIN

A congratulatory letter from the BCA President Prof. T. Bandrova was sent to a cartographic exhibition organized in an open place in Strandzha mountain. 30 years ago, under the leadership of the world-famous Bulgarian trachologist Prof. Alexander Fol, a valuable cartographic collection called "The cartographic image of Strandzha through the ages" was created in the town of Malko Tarnovo. It contains nearly 100 cartographic images of the mountains and the region of Macedonia, Mysia, Thrace, including the Strandzha Black Sea (2nd to 20th century). The collection aroused great interest and was presented in the town of Malko Tarnovo and in the House of Wittgenstein - Vienna. It was later donated to the National High School for Ancient Languages and Cultures. The information and invitation is from Dr. Stefan Peykov.

EXHIBITION "NESEBER IN CARTOGRAPHIC ARCHIVES AND COLLECTIONS - II-XXI CENTURIES"

On June 6, 2022, at the National Library "St. St. Cyril and Methodius" exhibition "Nessebar in cartographic archives and collections - II-XXI centuries" was opened. The exhibition was organized by the National Library "St. St. Cyril and Methodius", Nessebar Municipality and International Trade and Cultural Center "Geopan" in partnership with the Bulgarian Cartographic Association.



Fig. 7.4 Exhibition opening

BCA'S ACTIVITIES IN THE MEDIA

In the past 4 years, the activities of Bulgarian Cartographic Association were reflected in a number of Bulgarian media – Bulgarian News Agency, Bulgarian National Radio, National BTV television, Geomedia magazine, numerous printed and electronic publications, as well as in the journals of the International Cartographic Association.

The last years were very dynamic and full of various cartographic events. Bulgarian Cartographic Association continues its work to consolidate and legitimize its members to various institutions; to represent and protect the interests of its members to the public administration and provide support for its activities; to participate in and organize national and international events and conferences and to represent the Bulgarian cartographic society to international organizations.