

MONTENEGRIN ACADEMY OF SCIENCES AND ARTS

DEPARTMENT OF NATURAL SCIENCES
COMMITTEE ON AGRICULTURE AND FORESTRY



GEA International Scientific Conference

GLOBAL CHALLENGES AND LOCAL SOLUTIONS IN NATURAL RESOURCE MANAGEMENT

PROGRAMME

MAY 29–30, 2025, MASA, PODGORICA

ORGANIZERS:

- **MONTENEGRIN ACADEMY OF SCIENCE AND ARTS, PODGORICA, MONTENEGRO;**
- **GEA (GEO ECO-ECO AGRO) INTERNATIONAL SCIENTIFIC RESEARCH PLATFORM;**
- **WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION (WASWAC), BEIJING, CHINA.**

CO-ORGANIZERS:

- MINISTRY OF AGRICULTURE, FORESTRY AND WATER MANAGEMENT OF MONTENEGRO
- WATER ADMINISTRATION;
- MINISTRY OF ECOLOGY, SUSTAINABLE DEVELOPMENT AND NORTHERN REGION DEVELOPMENT
- ENVIRONMENT PROTECTION AGENCY OF MONTENEGRO — EPA MONTENEGRO;
- MINISTRY OF CULTURE AND MEDIA;
- CENTER FOR CONSERVATION AND ARCHAEOLOGY OF MONTENEGRO, CETINJE, MONTENEGRO;
- UNIVERSITY OF MONTENEGRO, PODGORICA, MONTENEGRO;
- ADRIATIC UNIVERSITY BAR, FACULTY OF BUSINESS ECONOMICS AND LAW, BAR;
- BIOTECHNICAL CENTER, BIJELO POLJE, MONTENEGRO.

ORGANIZING COMMITTEE:

- **IGOR ĐUROVIĆ**, Chair of the GEA Organizing Committee, Montenegrin Academy of Science and Arts, Podgorica, Montenegro
- **VELIBOR SPALEVIĆ**, Chair of the GEA Scientific Committee, GEA international scientific research platform, WASWAC Counsellor, Podgorica, Montenegro
- **DUIHU NING**, Chair of the GEA Honorary Committee, President of the World Association of Soil and Water Conservation (WASWAC), Beijing, China
- **MIODRAG ZLATIĆ**, Vice president of the World Association of Soil and Water Conservation (WASWAC), Belgrade, Serbia
- **GORAN ŠKATARIĆ**, World Association of Soil and Water Conservation (WASWAC), Podgorica, Montenegro
- **VLADIMIR JOKOVIĆ**, Ministry of Agriculture, Forestry and Water Management of Montenegro
- **VESNA BAJOVIĆ**, Water Administration, Montenegro
- **DAMJAN ĆULAFIĆ**, Ministry of Ecology, Sustainable Development and Northern Region Development of Montenegro
- **MILAN GAZDIĆ**, Environment Protection Agency of Montenegro — EPA Montenegro
- **TAMARA VUJOVIĆ**, Ministry of Culture and Media
- **ŽELJKO KALEZIĆ**, Center for Conservation and Archaeology of Montenegro, Cetinje, Montenegro
- **MILIVOJE RADOVIĆ**, University of Montenegro, Podgorica
- **RAJKO NOVIĆEVIĆ**, Adriatic University Bar, Faculty of Business Economics and Law, Bar, Montenegro
- **DEJAN ZEJAK**, Biotechnical Center, Bijelo Polje, Montenegro

PROGRAMME

- **VENUE:** Montenegrin Academy of Sciences and Arts, Rista Stijovića 5, 81000 Podgorica

THURSDAY, MAY 29, 2025

17.00–17.30 **OPENING OF THE CONFERENCE**

WELCOME ADDRESS

CHAIRS: IGOR ĐUROVIĆ AND VELIBOR SPALEVIĆ

- **LJUBIŠA STANKOVIĆ**, *President, Montenegrin Academy of Sciences and Arts*
- **IGOR ĐUROVIĆ**, *Chair of the GEA Organizing Committee, Montenegrin Academy of Sciences and Arts*
- **DUIHU NING**, *President of WASWAC, Chair of the GEA Honorary Committee*
- **VLADIMIR JOKOVIĆ**, *Minister of Agriculture, Forestry and Water Management of Montenegro*
- **TAMARA VUJOVIĆ**, *Minister of Culture and Media of Montenegro*
- **DAMJAN ĆULAFIĆ**, *Minister of Ecology, Sustainable Development and the Development of the Northern Region of Montenegro*
- **VELIBOR SPALEVIĆ**, *Chair of the GEA Scientific Committee, Advisor to WASWAC*

17.30–18.30 COCKTAIL RECEPTION, MASA CLUB

18.30–19.40 **YOUNG SCIENTISTS PRESENT THEIR RESEARCH PAPERS**

CHAired BY GORDAN KARAMAN, SEYED HAMIDREZA SADEGHI, JOSÉ LUIS RUBIO

- 18.30–18.45 • **FILIP VUJOVIĆ** (*Montenegro*)
MAPPING URBAN HEAT ISLANDS IN MONTENEGRO USING LANDSAT 8 AND GOOGLE EARTH ENGINE
- 18.45–19.00 • **CHANGHONG LIU** (*China*)
SEDIMENT CHRONOLOGY AND DIATOMS OF BLACK LAKE IN MONTENEGRO
- 19.00–19.15 • **OLGA ERGUNOVA** (*Russia*)
APPLICATION OF NEURAL NETWORKS IN GREEN URBAN POLICY: FORECASTING SOCIO-OCCUPATIONAL RISKS
- 19.15–19.30 • **LUKA SABLJIĆ** (*Bosnia and Herzegovina*)
REMOTE SENSING-BASED DROUGHT DYNAMICS — CASE STUDY OF THE UKRINA RIVER BASIN
- 19.30–19.40 DISCUSSION AND QUESTIONS

FRIDAY, MAY 30, 2025

08.00–08.30 PARTICIPANTS REGISTRATION

08.30–08.35 **OPENING REMARKS**

IGOR ĐUROVIĆ (*Montenegro*), Chair of the GEA Organizing Committee, Montenegrin Academy of Sciences and Arts

08.30–10.15 **SESSION I — OPENING SCIENTIFIC SESSION**

GLOBAL INSIGHTS AND LOCAL CHALLENGES IN ENVIRONMENTAL PROTECTION

CHAired BY VELIBOR SPALEVIĆ, MIODRAG ZLATIĆ AND MILAN GAZDIĆ

- 08.35–08.50 • **SLOBODAN B. MARKOVIĆ** (*Serbia*)
PALEOCLIMATIC AND PALEOENVIRONMENTAL RESEARCH AND BIO CONSERVATION
- 08.50–09.05 • **SEYED HAMIDREZA SADEGHI** (*Iran*)
WATERSHED HEALTH ASSESSMENT: A NEW APPROACH
TO NATURAL RESOURCE MANAGEMENT
- 09.05–09.20 • **JOSÉ LUIS RUBIO** (*Spain*)
NATURE-BASED SOLUTIONS AND THE FUTURE OF URBAN LAND
- 09.20–09.35 • **PHILIP D. HUGHES** (*UK*)
GLACIERS IN MEDITERRANEAN MOUNTAINS AND CLIMATE CHANGE
- 09.35–09.50 • **GRZEGORZ POREBA** (*Poland*)
RADIOISOTOPES AND LUMINESCENCE DATING
- 09.50–10.05 • **JELENA BOŠKOVIĆ, VERA POPOVIĆ** (*Serbia*)
THE USE OF GENETIC ENGINEERING IN AGRICULTURE: OPPORTUNITIES AND RISKS
- 10.05–10.15 DISCUSSION AND QUESTIONS
- 10.15–10.30 COFFEE BREAK
- „KALEIDOSCOPE”: DIGITAL POSTER DISPLAY AND INTERACTION WITH AUTHORS

10.30–12.10 **SESSION II — REGIONAL DIALOGUE: FROM PAST TO FUTURE**

NATURE, MEMORY, FUTURE: A REGIONAL DIALOGUE ON SUSTAINABILITY

CHAired BY VESNA BAJOVIĆ, GORAN ŠKATARIĆ, SLOBODAN B. MARKOVIĆ

- 10.30–10.40 • **GORDAN KARAMAN** (*Montenegro*)
AMPHIPODS (*CRUSTACEANS*) AS BIOINDICATORS OF ENVIRONMENTAL QUALITY
- 10.40–10.50 • **DRAGUTIN ĐUKIĆ** (*Serbia*)
MICROBIAL INDICATORS OF SOIL CONTAMINATION
- 10.50–11.00 • **SVETIMIR DRAGOVIĆ** (*Serbia*)
IRRIGATION AND DRAINAGE IN VOJVODINA
- 11.00–11.10 • **IVAN SIMUNIĆ** (*Croatia*)
HISTORY OF LAND RECLAMATION IN CROATIA
- 11.10–11.20 • **RADOVAN PEJANOVIĆ** (*Serbia*)
CLIMATE CHANGE AND AGRICULTURE: THE NEED FOR ADAPTATION

- 11.20–11.30 • OTILIJA SEDLAK (*Serbia*)
THE AGRICULTURAL SECTOR, EMPLOYMENT, AND DEMOGRAPHIC TRENDS
- 11.30–11.40 • DŽENAN BEĆIROVIĆ (*B&H*)
FORESTS: MONITORING NATURE'S CONTRIBUTION
- 11.40–11.50 • MIODRAG ZLATIĆ, STANIMIR KOSTADINOV (*Serbia*)
NATURE-BASED APPROACHES TO DISASTER RISK REDUCTION
- 11.50–12.00 • IVAN BLINKOV (*North Macedonia*)
MAPPING SOIL EROSION IN NORTH MACEDONIA
- 12.00–12.10 DISCUSSION AND QUESTIONS

10.30–12.10 **PARALLEL SESSION 2:**

COMMUNICATION — SCIENCE AND MEDIA

- 12.10–12.30 COFFEE BREAK
„KALEIDOSCOPE”: DIGITAL POSTER DISPLAY AND INTERACTION WITH AUTHORS

12.30–14.10 **SESSION III**

CONNECTING CONTINENTS: JOINT GEOECOLOGICAL RESEARCH

CHAired BY JOSÉ LUIS RUBIO, ALEKSANDAR RADIVOJEVIĆ, SEYED SADEGHI

- 12.30–12.45 • LUO WANG (*China*)
MELTWATER PULSE-1A & ABRUPT COOLING, SOUTHERN CHINA
- 12.45–13.00 • QINGZHEN HAO (*China*)
EAST ASIAN WINTER MONSOON DURING MIS 8
- 13.00–13.15 • BINGGUI CAI (*China*)
STALAGMITES AS INDICATORS OF EROSION, YUNNAN, CHINA
- 13.15–13.30 • JIANHUI JIN (*China*)
COASTAL DUNES AND SEA LEVEL DURING THE LATE HOLOCENE
- 13.30–13.45 • GUOLIANG LEI (*China*)
STABLE ISOTOPES IN SHELLS — CLIMATE RECONSTRUCTION
- 13.45–14.00 • MIAOFA LI (*China*)
SPELEOTHEM RECORD OF JET STREAM VARIABILITY, SERBIA
- 14.00–14.10 DISCUSSION AND QUESTIONS
- 14.10–15.00 LUNCH, MASA CLUB
„KALEIDOSCOPE”: DIGITAL POSTER DISPLAY AND INTERACTION WITH AUTHORS

15.00–17.00 **SESSION IV**

THE HERITAGE OF NATURE AND HUMANITY

CHAired BY ŽELJKO KALEZIĆ, DOBRILA VLAHOVIĆ, SLOBODAN B. MARKOVIĆ

- 15.00–15.10 • MILOŠ ŽIVANOVIĆ (*Montenegro*)
THE GEOARCHAEOLOGICAL IDENTITY OF MEDUN

- 15.10–15.20 • **DUŠAN BORIC** (*Italy*), **NIKOLA BOROVINIĆ** (*Montenegro*)
MOBILITY AND RESOURCES IN PREHISTORY
- 15.20–15.30 • **RASTKO MARKOVIĆ** (*Serbia*)
DEPOPULATION AND ITS IMPACT ON EROSION
- 15.30–15.40 • **MILICA RADAKOVIĆ** (*Serbia*)
OXYGEN ISOTOPES IN SNAIL SHELLS
- 15.40–15.50 • **MILICA FILIPOVIĆ** (*Montenegro*)
EROSION MODELING AND LAND USE
- 15.50–16.00 • **VLADIMIR PEJANOVIĆ** (*Serbia*)
SMART AGRICULTURE: APPROACHES TO ADAPTATION
- 16.00–16.10 • **MILEVA BRAJUŠKOVIĆ POPOVIĆ** (*Montenegro*)
DEMOGRAPHIC CONSEQUENCES OF POPULATION AGING IN MONTENEGRO TODAY
- 16.10–16.20 • **OLGA KOPITOVIĆ JOKANOVIĆ** (*Montenegro*)
SAFETY OF DAIRY PRODUCTS
- 16.20–16.30 • **MILICA MARIĆ** (*B&H*)
BEAMING: BIOECONOMY FOR THE GREEN TRANSITION
- 16.30–16.40 • **MILO RADOVIĆ** (*Montenegro*)
IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE IN MONTENEGRO:
STEPS TOWARD SUSTAINABLE WATER RESOURCE MANAGEMENT
- 16.40–16.50 DISCUSSION AND QUESTIONS
- 16.50–17.00 **OFFICIAL CLOSING OF THE CONFERENCE AND CONCLUSIONS**
DUIHU NING, JOSÉ LUIS RUBIO, SEYED HAMIDREZA SADEGHI,
SLOBODAN B. MARKOVIĆ, MIODRAG ZLATIĆ, GORAN ŠKATARIĆ,
RADOVAN PEJANOVIĆ, IGOR ĐUROVIĆ, VELIBOR SPALEVIĆ