



Slovenski nacionalni odbor
Mednarodnega programa za
vede o Zemlji in geoparke

REPORT OF THE SLOVENIAN IGGP NATIONAL COMMITTEE FOR 2017

Ljubljana, December 2017

UNESCO-IUGS-IGCP**7 place de Fontenoy****75352 Paris 07 SP****France**

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E-mail: nina.zupancic@ntf.uni-lj.si**REPORT OF THE SLOVENIAN IGGP NATIONAL COMMITTEE FOR 2017****1. IGGP NATIONAL COMMITTEE MEMBERS**

1. Dr. Mirka Trajanova, Senior Research Associate, Geological Survey of Slovenija (GeoZS), Chairperson NC IGGP
2. Assoc. prof. dr. Nina Zupančič, UL, NTF, Dept. for geology, secretary NC IGGP
3. Dr. Miloš Bavec, senior research associate, GeoZS
4. Dr. Katica Drobne, sci. advisor, collaborator of the Paleontological Institute Ivan Rakovec, ZRC SAZU, honorary member
5. Mag. Suzana Fajmut Štrucl, univ. dipl. ing. geol., Geopark Karavanke/Karawanken
6. Asist. prof. dr. Luka Gale, sci. assistant, UL, NTF, Dept. for geology and GeoZS
7. Asist. prof. dr. Špela Goričan, sci. advisor, Paleontološki inštitut Ivana Rakovca, ZRC SAZU
8. Asist. prof. dr. Mateja Gosar, sci. advisor, GeoZS
9. Marjutka Hafner, general manager of the UNESCO Office in Slovenia
10. Assoc. prof. dr. Martin Knez, sci. advisor, Institute for karst research, ZRC SAZU
11. Asist. prof. dr. Tea Kolar-Jurkovšek, sci. advisor, GeoZS
12. Asist. prof. dr. Marko Komac, senior research associate, Marko Komac s. p.
13. Prof. dr. Jože Pezdič, sci. advisor, research organisation GEORIS
14. Emeritus prof. dr. Simon Pirc, retired collaborator of the UL, NTF, Dept. for Geology, honorary member
15. Bojan Režun, univ. dipl. ing. geol., Geopark Idrija

2. IGGP PROJECTS IN 2017

Work on IGGP projects was carried out in parallel in the IGCP and UNESCO Geoparks programs, like in the past year.

The topics treated within the IGCP projects have followed the priorities of UNESCO. All of them were involved in international cooperation, popularizing geosciences and transferring knowledge through direct or indirect cooperation with geoparks, schools and the general public. Research topics covered a wide field of geosciences, comprising basic research, as well as research-applicative projects. At the same time, data and collected geological materials were used to complement national archives and databases for the needs of the state administration and decision makers.

Table 1 shows the ongoing projects, leaders of individual parts of projects and involved institutions.

Table 1:

| No. | IGCP projects and UNESCO Geoparks | Leader, institution |
|-----|---|-------------------------------------|
| 1. | IUGS/IAGC Geochemical Baselines | Gosar, GeoZS |
| 2. | IGCP 661: Structure, Substance Cycle, and Environment Sustainability of the Critical Zone in Karst Systems | Knez, ZRC SAZU |
| 3. | IGCP 610: From the Caspian to Mediterranean: Environmental Change and Human Response during the Quaternary | Celarc, GeoZS |
| 4. | | Dolenec, NTF |
| 5. | IGCP 600: Metallogenesis of Collisional Orogens | Dolenec, NTF |
| 6. | IGCP 609 : Climate-environmental deteriorations during greenhouse: Causes and consequences of short-term Cretaceous sea-level changes | Drobne, ZRC SAZU |
| 7. | IGCP 630: Permian-Triassic climatic and environm. extremes and biotic response | Kolar-Jurkovšek, GeoZS |
| 8. | IGCP 632 - Continental Crises of the Jurassic | |
| 9. | IGCP 637: Heritage Stone Designation | Jarc, NTF |
| 10. | IGCP 637: Heritage Stone Designation | Novak, GeoZS |
| 11. | IGCP 649: Diamond and Recycled Mantle | Vrabec Mi., NTF |
| 12. | IGCP 618 - Palaeoclimate information obtained from past-recharged groundwater | Rman, GeoZS |
| 13. | IGCP 643 - Water Resources in Wet Tropics of West-Central Africa | Janža, GeoZS |
| 14. | Geopark Idrija | Režun, Center za idrijsko dediščino |
| 15. | Geopark Karavanke, Slovenija-Austria | Fajmut Štrucl, Podzemlje Pece |
| 16. | Chairing the IGGP | Trajanova, GeoZS |
| | <i>Excursion of the Slovenian Commission for UNESCO</i> | |

3. SUMMARY OF ACTIVITIES ON IGGP PROJECTS IN 2017

This year, the IGGP activities were even livelier than in the past year. IGCP NC played an active connecting role between NO IGGP and research projects involved on the one hand, and SNCU and international geoscientific organizations such as the International Federation of Geological Sciences (IUGS), the European Geoscience Association (EGU), and the Carpathian-Balkan Geological Association (CBGA) on the other hand. Therefore, it was important to provide timely information on events and trends in the field of geo-sciences, which was carried out via e-mail. Similarly, contacts with individual researchers in connection with the preparation of annual reports and work plans for 2018 were conducted. Two meetings of IGGP NC were organized, where we briefly reviewed the

results of work in this year and harmonize the work plan for the coming year. One application for a new member to IGGP projects was received and was accepted. An other interest for cooperation was expressed, and we agreed with the applicant to postpone it till the following year. The projects proposal was sent to the Slovenian Office for UNESCO on December 6, 2017.

In the last few years, a significant shift in research themes towards the environmental geochemistry is noticed in the IGCP projects. Hydrogeology has a constant importance, though cooperation in IGCP began only two years ago. Activities in the field of mineral resources, geohazard and natural heritage, which relates to cultural heritage and thus directly to archeological and indirectly on social sciences topics, are intensified. All topics are joined in the activities of geoparks. The boundaries between individual research areas are continuously being erased; their interweaving reflects an interdisciplinarity, which is no longer just on paper, but has been fully realized in practice. One of the indicators of the opening of the research sphere as a whole is also cooperation with neighbouring countries and also wider. With this, the geoscience gained on the recognition and the meaning in society. In addition to social and economic implications, the linking role of the IGCP program and within the framework of UNESCO / IUGS of the current IGGP, have contributed greatly to this recognition.

The work was carried out on ten IGCP research projects, in which separate tasks were guided by 11 national project leaders and two representatives of the geoparks. The dominant topics were environmental issues and geohazard, which were covered in a broad context by six projects (IACG, IGCP 598 prolonged by the newly-accepted project 661, IGCP 609 and 610, 630, and 632). Chemical and physical indicators represented their basis, but were founded on geological contents and had emphasized interdisciplinarity. They include research on past climate change, which is reflected on organisms (IGCP 609) and in very sensitive karst systems (IGCP 661). In the latter area, prof. dr. M. Knez is a co-proposer of the international project 661. Projects 618 and 643 address the issue of water resources and the provision of drinking water, while providing information on past climate change. For the last three decades, the field of research of mineral resources has been undernourished in Slovenia. This is reflected also in the fact that the subject is only addressed by one project, IGCP 600. In the light of sustainable development, this gap will have long-term consequences both in research capability and in the economy.

The project IGCP 649, Diamond and Recycled Mantle, is primarily of fundamental importance. The results have a long-term impact. In particular, they are important for the reconstruction of the geodynamics of the Eastern Alpine domain, which is reflected in geological models of this area. Finally, the correctness of the models governs planning of further research, and applicative activities.

The projects of synthesizing nature in the field of acquired geological knowledge or in the broad interdisciplinary field, where geology is the basis, are IGCP 637 and UNESCO Geoparks (Idrija and Slovenian-Austrian cross-border geopark Karavanke/Karawanken). Representatives of the Slovenian UNESCO geoparks participated in the 14th EGN conference in Ponta Delgada in the Azores and organized an excursion to Austria. As an example of good practice in interpretation of geological and natural heritage, they visited two centres opened to public: the first one in Mittersill, in the centre of the Hohe Tauern natural park and the other in Bischofshofen, in the UNESCO Global Geopark Ore of the Alps. The visits are important both for the enrichment of own offer, and for planning successful marketing of the entire heritage of the two geoparks.

The researchers successfully completed their role of informing and educating in the IGCP program and geoparks. They made efforts to raise awareness of wide audience of the fragile balance in nature, which is being rapidly destructed by humans. This was one of the aims of educational workshop at the Science festival (Znanstival) in Ljubljana, prepared by the co-workers of the IGCP projects.

The results of the research findings were presented at conferences and published in a number of domestic and foreign internationally recognized scientific journals. In both geoparks, they took care

of the transfer of knowledge about natural and cultural heritage to visitors. International activities have largely been facilitated by financial support from the Slovenian National Commission for UNESCO. This ensured a greater recognition of the achievements of national IGGP projects.

A summary of the results of IGGP projects for 2016 was sent to the 45th Open Session of the Scientific Board of the International Geoscience Program (IGGP) in Paris on 10 February 2017. In addition, the IGGP National Committee organized a trip to the Karavanke / Karawanken cross-border geopark for members of Slovenian NC for UNESCO. The purpose of the excursion was to inform the members about the activities of the IGGP NC and the comprehensiveness of the topics covered by geosciences. A very positive response has stimulated us to furtherly make even stronger efforts in educating public, especially young people, of the wide significance of geosciences for society.

With the aim of cooperation and sharing good practices, we participated in a professional excursion to the Cinque Terre Nature Park in Italy, the world-renowned marble mine in Carrara with surface and underground extraction. Getting to know good practices in related environments abroad is important for introducing new activities in the development of our geoparks.

A summary report on the activities of the Slovenian IGGP Committee is yearly submitted to the IGCP Committee in Paris for consideration at the General Assembly.

The report prepared by:

Dr. Mirka Trajanova

Chairperson of the Slovenian NC IGGP

Ljubljana, Dec. 26th 2017

