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IGCP No. 442 concluded

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Already in 1972 International Union of Geological Sciences (IUGS) in cooperation with the UNESCO established the International Geological Correlation Programme (IGCP). In the last International Geological Congress in Rio de Janeiro in 2000 new heading of the Programme has been accepted as International Geological Cooperation Programme. So abbreviation IGCP is still in use.

Individual projects during the first years after the programme acceptation have been concentrated on correlation of topical geological phenomena, i. e. stratigraphy, magmatism/volcanism and ore forming processes. During the last decades of the 20th century namely environmental aspects became leading ones in the frame of the IGCP. The end of the 20th century is simultaneously characterized by the recession of geosciences in the worldwide dimensions. One of possible solution is penetration of the geosciences into the other fields of human activities: into the historical sciences (archaeology), technical sciences and various technologies, and namely into the environmental problematics. So at present IUGS declared leading logo of geoscientists' activities in the 21st century as "Geoscience in Service of Society".

One of the firsts really interdisciplinary/crossectorial (archaeology and geosciences) IGCP projects has been that of No. 442 "Raw materials of the Neolithic/Aeneolithic polished stone artefacts: their migration paths in Europe" realised during time period 1999-2002. In the frame of the projects archaeologists opened their deposists and geoscientists, using standard laboratory methods, tried to identified and located raw materials of polished implements made during the Neolithic/Aeneolithic time-period. As the results of this unified geoscientists/archaeologist's effort papers on stone raw materials used in the Neolithic/Aeneolithic in various parts of Europe were published in scientific journals and as special monothematic issues of Krystalinikum 26 (2000), Slovak Geological Magazine 7, 4 (2001) as well as this issue of above journal.

Interdisciplinary collaboration of scientists of above mentioned fields of activities is expressed, among others, also by the term "petroarchaeology" (mostly used in the central Europe, or in the German speaking countries, as well), and/or "archaeometry" (used mostly in the USA). Both above terms are more-or-less synonyms, though later one has broader meaning. To this category belongs also IGCP No. 442 project.

Meanwhile during the Older Stone Age (i. e. Palaeolithic) chipped implements ("chipped industry") was made from obsidian, various cherts, radiolarites and radiolaria shales, hydroquartzites and the other silica-rich inorganic materials, during the Neolithic progresivelly more-and-more raw matetrial types were used. For all three main genetic groups of rocks (i. e. sedimentary, magmatic as well as metamorphic ones) some common physical properties are characteristic: homogeneity, hardness but simultaneously elasticity, fine-grained character, low amount, but the most often absence of sheet silicates (chlorites, micas), absence of volcanic glass and xenoliths in effusive rocks, ao.

Though systematic and the whole area covering studies of the raw material types used in the Neolithic on the Old Continent have not been realised yet, it seems that the leading raw materials types in the Neolithic/Aeneolithic were various varieties of greenschists. Locally also amphibolites, antigorite (never lizardite-chrysotile) serpentinites, (mostly) alkali basalts and in the lower amount also the other aphyric or fine-phyric effusives served as the raw materials for stone implements construction as well. Above rock types (and locally also many others) used skilfull individuals for making gradually more and more complicated (first non bored, later on bored) implements: weapons, tools of daily life use, but also ornamental and symbols representing stone made implements.

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During the Neolithic changing style of living (human tribes settled and agriculture starts to be the main type of the food provide) developed also ceramic production. So archaeologists applying results of ceramic studies are able to date also stone artefacts, occurring in just identical cultural horizons as ceramic fragments.

Studying paleoceramic fragments leading laboratory methods are those ones of geosciences as well.

Material artefacts from praehistoric period as well as from the early history, among which stone implements and ceramic wessels represent irreplaceable part of the mankind cultural heritage, offer relics of tremandeous value which ought to be studied in their complexity. The identification of raw material types used, together with their occurrences in nature, help us to understand prehistoric tribes material level, their style of living, migration paths of raw material or ready made implements used ao. Geosciences in this field of research have broad possibilities.