



Natural and anthropogenic impacts on historical heritage along the north Bulgarian Black Sea coast

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Bulgaria is rich in the remains of past human settlements and activity. For example, along northern part of the Bulgarian coast, numerous underwater and coastal archaeological sites from different periods have been discovered – Prehistory, Antiquity (ancient Greek, Hellenistic, Roman), Mediaeval (Early Byzantium, Bulgarian). The most significant of them are: Durankulak archaeological complex with the largest Prehistoric necropolis in the world, Prehistoric necropolis at the area of Lake Shablenksa Tuzla, Antique settlements Caron Limen and Bizone, archeological reserve Yalata, Antique and Medieval castle at Cape Kaliakra etc. As, this north part of Bulgarian coast has a huge archaeological potential there is a ground for thinking that the remains of other periods as well as a brand new, previously unknown sites can be discovered in the near future. This does not exclude the probability of being randomly found individual objects that largely can be prevented from archaeological contexts. Therefore it is important that these archeological sites are protected properly and preserved for future generations. In Bulgaria such sites and monuments are legally protected under the Law of cultural heritage and managed by the Ministry of culture and local authorities. However, today most objects and sites, as part of common European historical and cultural heritage are posed to a variety of potential impacts and treats, both natural and human-induced. This study discusses the implications of natural factors, (such as climate change, extreme waves, erosion and shoreline changes) and human contributions (coastal infrastructures, tourism and insufficient management by decision-makers) to coastal and underwater cultural heritage along the north portion of Bulgarian coast. Major natural processes that seriously affect on coastal and maritime heritage environment are direct physical impact by global climate changes, sea level rise and caused increase of waves and storms, acceleration of erosion and coastal landslides. Among human activities that might have direct or indirect adverse impact on cultural heritage the main are coastal and underwater developments and infrastructures. These are building of coast- and shore-protection structures, roads, placing different types of pipeline (a recent case from Bulgaria is envisaged construction of gas pipeline "South Stream"). Other categories of anthropogenic impacts, such as coastal tourism and expansion of settlements, etc. are less negative factors, but locals and visitors can accidentally damage monuments, or in most of the cases by not being aware of the presence and importance of a archeological site. Finally, insufficient decision-making and management of coastal and underwater cultural heritage can also have potential adverse impact. Recommendations for mitigation and protection measures are also outlined in the end.

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