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A Line Through the Sacred Lands of the Altai Mountains: Perspectives on the Altai Pipeline Project

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In 2006 preliminary plans were made public showing that Gazprom intended to construct a pipeline through the Altai republic (Russia, south-west Siberia). Unfortunately, there was almost no attention to integrating the conservation of cultural heritage (both archaeological and landscape) into the planning of the pipeline, though the Altai is well-known for its rich cultural heritage. Hitherto, no assessment has been made of the potential impact of the project, nor did Gazprom release detailed information about the exact course of the route. The present article aims to illustrate the potential impact of the pipeline based on a detailed study of a small segment of the route, using remote sensing images and data gathered during fieldwork. This assessment underlines the need for a well-thought-out strategy, which is required if sustainable integration of heritage conservation into the construction plan is to be realized. If such a balance is not found, thousands of archaeological monuments could disappear, which would result in a huge cultural and scientific loss. As a possible solution, an integrative strategy founded on a desk-based study of remote sensing images and a well-directed field survey is suggested.

Keywords: Cultural heritage; archaeology; landscape; Altai pipeline; heritage management; Altai Mountains.

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Introduction

The Altai Republic is located in the heartland of the eponymous Altai ridge (southwest Siberia). The rich cultural heritage and ecological diversity of the area has a long history of inspiring scholars and travelers (Collins 2002; Buttimer 2010). Archaeological monuments lie scattered across the Altai and are a silent witness to the important role they have played since the late Neolithic period (3200 BC). As well as its environmental importance, the cultural landscape of the Altai has a unique historical and spiritual significance for the indigenous Altaian population. Furthermore, ever since the post-Soviet ethnocultural revival, local customs, traditions, beliefs, habits, and religions have been reinstated. This presents anthropologists with a rich and unique source of information (Halemba 2006).

However, tourism, globalization, and urbanization are putting increased pressure on the cultural heritage of the Altai. There are numerous known examples of destroyed monuments and landscapes, which, in some cases, have already led to tension and displeasure among the indigenous population (Halemba 2006, 2008b).

Another more recent and far-reaching threat is the installation of a gas pipeline which will run from the Siberian gas fields to China across the Altai (Figure 1). Although some studies have been performed to assess the environmental impact of

this project (Greenpeace 2007; Schwartz 2008), little research has been published on the potential impact of this pipeline on the cultural heritage of the Altai. This article aims to give a concise and integrated overview of the expected effects of both the construction work and the pipeline itself on the cultural heritage of the Altai, mainly focusing on the area around the Karakol and Ursul valleys (Ongudai district), which comprises 32.5 km of the total length of the pipeline. Furthermore, it will also make some recommendations for sustainable integration of heritage research into the planning of the pipeline project.

Archaeological, cultural landscapes, and perspectives heritage of the Altai

For thousands of years, the Altai Mountains have been an important transitional region between the Mongolian and Kazakh steppes. The region has an extraordinary number of archaeological monuments that can be assigned to different cultures. Importantly, the specific climatic conditions of the Altai often allow for extremely good preservation of organic materials. For example, some of the burial sites, dating mainly from the Scythian period (800–200 BC), are located in frozen ground, which has resulted in exceptionally good preservation of wooden objects, textiles, leather ornaments, and the remains of sacrificed animals and mummified humans. The excavations

FIGURE 1 Overview of the Altai pipeline project and localization of the study area. (Map by the authors)



in Pazyryk, Shibe, Tuekta, and Bashadar, for instance, attracted worldwide interest and are much discussed in both popular and academic circles (Griaznov 1928; Rudenko 1960). More recent discoveries of 2 intact mummies (Figure 2) on the Ukok plateau (Polosmak 1995) have highlighted cultural monuments even more.

The Karakol and Ursul valleys demonstrate the rich heritage of the Altai, with 3 of the most famous Scythian burial sites (Bashadar, Tuekta, and Shibe) being located in

this region. In 1950, the archaeologist Rudenko excavated 2 big frozen burial mounds in Bashadar, yielding magnificent discoveries. The very rich Tuekta site, situated along the Ursul river, has a total of 197 burial mounds, 2 of which were excavated in 1954 (Rudenko 1960). The Shibe site was excavated in the 1920s and yielded important discoveries in the late Scythian period (Griaznov 1928). The huge burial mounds in the area are unique to the Altai, and archaeologists have suggested that the region was specifically selected

for “royal” burials of the Scythian elite. In addition to these large sites, there are thousands of smaller monuments spread over the entire valley, dating from different cultures between the fourth millennium BC and the present.

From 2007 to 2009, Ghent University and Gorno-Altaiisk State University made a detailed inventory of the Karakol Park (an area which comprises the Karakol valley and a part of the Ursul valley) and digitally recorded 5400 archaeological monuments. The structures range

FIGURE 2 The Princess of Ukok during excavation.
(© IAE SBRAS)



from large burial mounds and ritual enclosures to smaller man-made structures such as sculptured standing stones and rock art sites. The resulting “Altari” database is linked to a geographic information system (GIS) (Figure 3).

The monuments not only have great scientific relevance but also have a religious meaning for the Altaians. This became apparent after the discovery and subsequent removal of the “Ukok Princess” in the 1990s (Polosmak 1995). The fact that the so-called princess was moved from the Altai to Novosibirsk led to a dispute with the locals; her removal was cited by the local population as an explanation for a severe earthquake in 2003 (Halemba 2008a). Recent interviews with the local population have revealed that people still believe that these graves have cosmic energy and that destruction of monuments (eg by excavation) disturbs the balance between nature and man and can lead to catastrophes.

With respect to the cultural landscape, a large number of past and present human processes have left an imprint on the landscape, and

studying these processes can provide insight into the evolution of human society, economic organization, and settlement over time. There are different types of heritage/cultural values involved with cultural landscapes, defined as the result of the interaction between man and his environment (ICOMOS 2009). Two categories of cultural landscapes as defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) are present in the Altai.

First, the landscape is a typical organically evolved landscape that contains much evidence of its evolution through time. Numerous archaeological monuments provide insight into the human occupation of the landscape through time, and by studying their implantation in the landscape, the cultural significance of landscape over time can be understood.

Secondly, the landscape has an intrinsic meaning for the local population, which underlines its intangible aspect. Recent fieldwork and studies by Halemba (2006) illustrate how the Altaians perceive landscape around them as a spiritual entity. The landscape is the center of worship and ritual practices; mountain passes, rivers, snowy peaks, prominent ridges, forests, and sources have a sacred meaning and should be treated with respect for local customs and beliefs (Halemba 2006).

Recent fieldwork in the Karakol valley by the University of Ghent in 2010 confirms the importance of the landscape in the Altaian noninstitutionalized religion. Thirty different households were interviewed and asked about their perception of the landscape in order to integrate local habits and perceptions into the touristic management plan of the Karakol Park. Together with data from the founder of the Karakol natural park, Danil Mamyev, an understanding of the perception of the Karakol valley by the local population became

possible, and insight was provided about which places could be designated as holding a sacred significance.

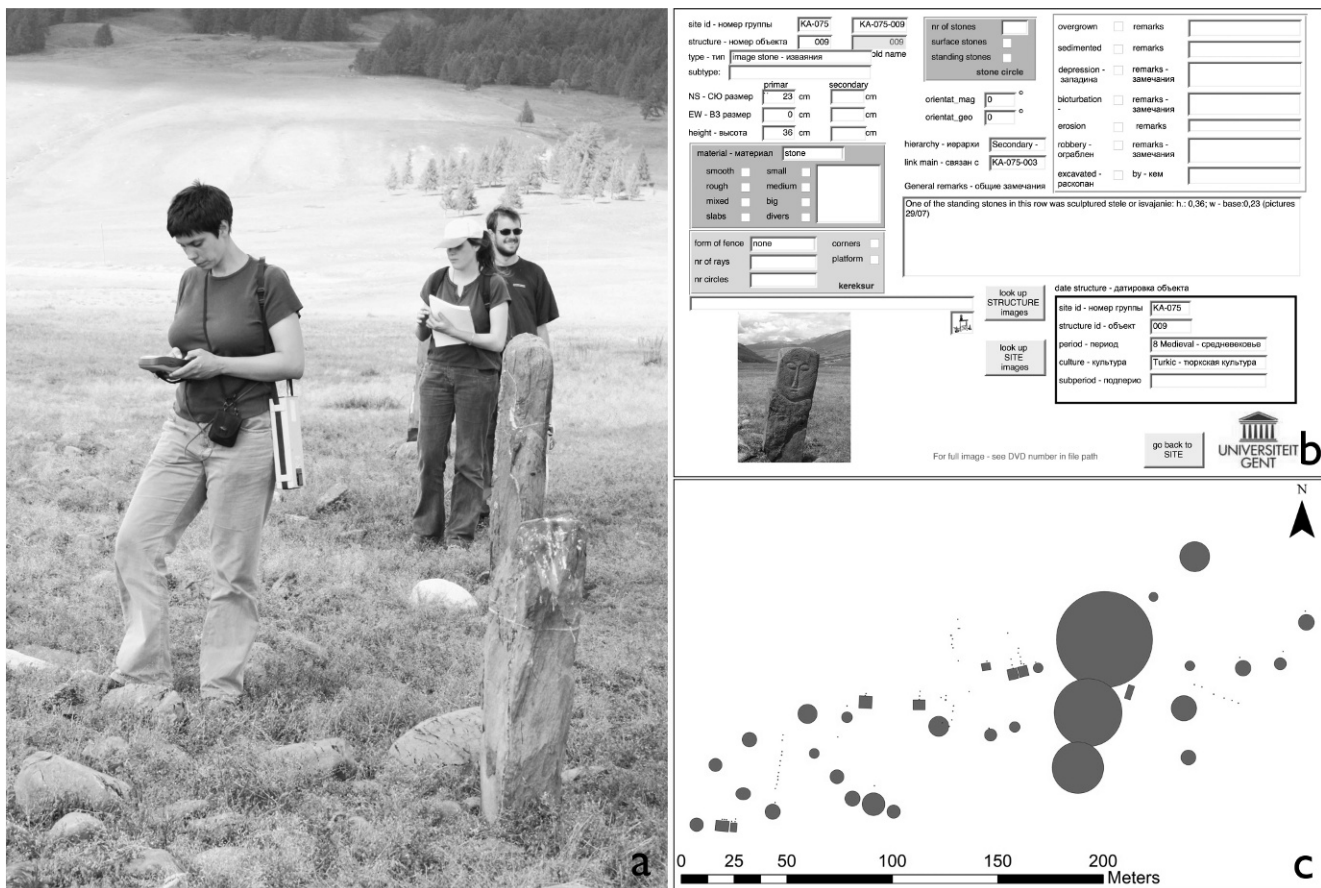
Increasing pressure from agriculture, urbanization, and tourism has already led to degradation of the cultural heritage of the Altai. Numerous cases are known of archaeological sites destroyed by plowing, villages that have been built over the sacred burial grounds, and sacred landscapes despoiled by tourists. Some international initiatives and research projects have tried to look into a sustainable development model for the Altai Mountains (Foley et al 2006; FSDA 2006). Although all efforts to tackle the development problems of the Altai should be applauded, most of these projects have not included cultural heritage. Recent local initiatives (eg the Karakol park and the cultural board of the Telengits of Kosh-Agasch) show great potential for well-directed heritage management. However, lack of money and scientific support prevents the initiatives from going beyond the planning stage.

Our goal is to scientifically support such initiatives. Specifically, the aim of our research is to develop and maintain sustainable heritage management for some of the ethnonatural parks in the Altai mountains. First, this management is community based, showing respect for the cultural and economic interests of the local population. Secondly, the possibilities and restrictions of sustainable tourism are implemented in the management plan.

The Altai pipeline

The proposal of a pipeline from Siberian Gazprom sites to China through the Altai was made in 2006 (Barabanov 2003: 21). When president Putin made an official visit to China, he declared his intention to construct 2 pipelines to China to satisfy the growing demand for gas.

FIGURE 3 Workflow of the survey. (A) First, all the monuments are located with a differential GPS, and their most important characteristics (tentative dating, morphological characteristics, preservation, etc) are noted; (B) then, everything is integrated into the Altari database; (C) finally, the database is linked with the GPS measurements.



The deal for the Altai pipeline was made in July 2006, when the Coordinating Committee for the Altai project was established. In September 2006 an agreement on construction was signed between Gazprom and the Altai Republic (Anonymous 2006b) with the goal of beginning deliveries by 2011, followed by an annual transport of 30–40 billion m³ of gas transported to China (Shoichi 2006: 8). In spite of the initial planning, construction still has not begun and the first deliveries are not expected until late 2015. According to Gazprom, the export contract will be signed in mid-2011 and construction will start shortly after (Gazprom 2011a, 2011b).

The pipeline will stretch from the west Siberian gas fields to the Russian-Chinese border in the Altai, where it will connect with one of the major Chinese pipelines (Gazprom

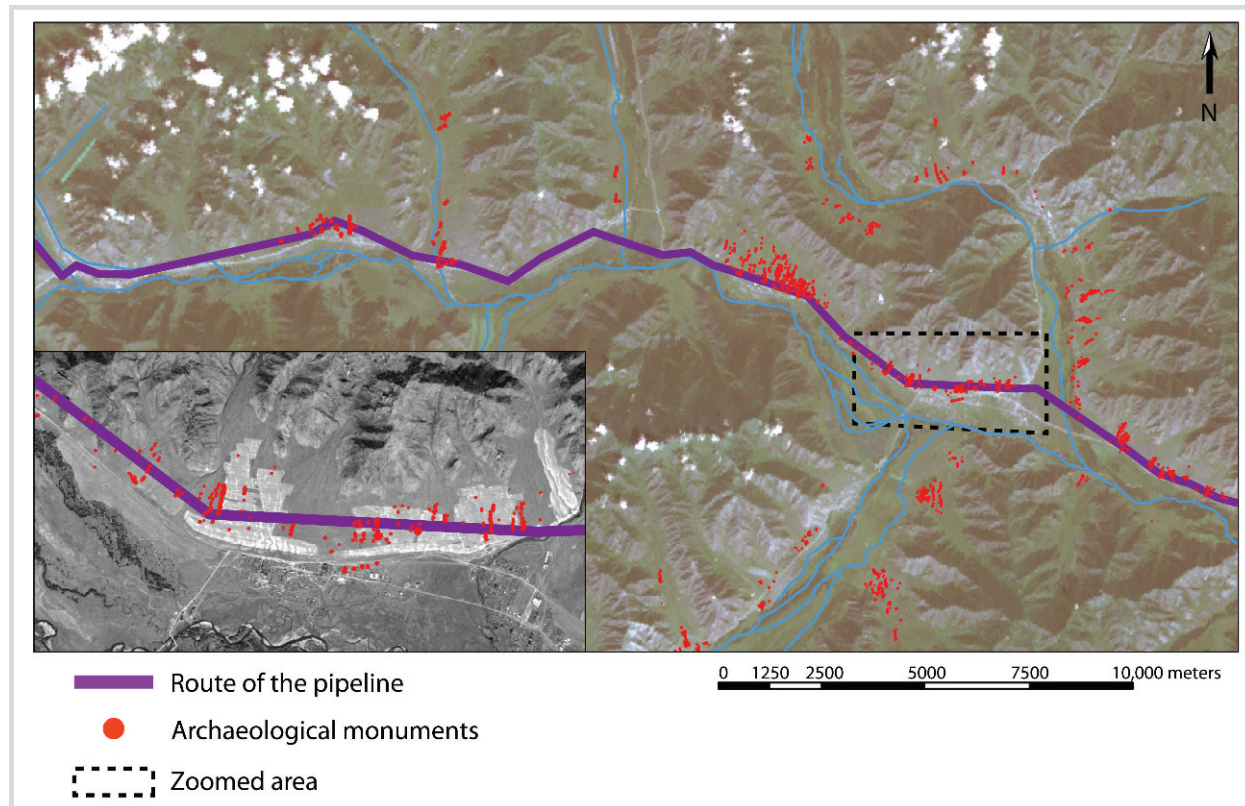
2011a). It will have a projected length of 2600 km, 591 km of which will run through the Altai Republic (Figure 1).

When the preliminary plans were made public in 2006, opposition from scholars, the local population, and ecologists arose (Nyiri and Breidenbach 2008: 138–139). One of the major discussion points was the planned crossing of the nature reserve “Quiet Zone of Ukok,” a UNESCO-protected area rich in permafrost and endangered fauna and flora (Greenpeace 2007; Schwartz 2008). Furthermore, as observed during fieldwork in 2010, pessimism about the project among the indigenous population of the Karakol valley was apparent. People there were especially troubled by the potential impact on the environment and sacred burial grounds.

To win over the hearts and minds of the inhabitants of the Altai Republic, a promotional campaign was set up. Gazprom invested a lot of money in the infrastructure of the Altai; money for a new football stadium, airport, and national museum was donated. In addition, money was invested to link the villages of the republic to the domestic gas network (Anonymous 2006a), a big step forward for the local population, who nowadays still depend on wood and coal to get through the Siberian winters. More importantly, the people of Gazprom made it possible to return the culturally significant “Ukok Princess” from Novosibirsk to Gorno-Altai.

The general pipeline route, described above, has been publicly known since 2007 (Anonymous 2007), but this gives little insight into the exact route through the Altai. If a

FIGURE 4 Route of the pipeline through the study area. (Map by the authors)



long-term policy for preservation of cultural heritage is to be developed, more-detailed information about the route will be necessary. Although attempts have been made since 2010 to obtain this information from Gazprom, no details were ever received. However, local contacts have supplied us with a detailed, preliminary route on a 1:100,000 topographic map. On this map, the pipeline follows the higher lying terraces of the rivers, the only route to pass through the often rough landscape.

We integrated a small segment (32.5 km) of the alleged route in a GIS (Figure 4). This allowed visualization and analysis of the possible impact of the route. To study the impact on the archaeological heritage, the course was compared with our geographic database of monuments (compiled between 2007 and 2010) and remote sensing images. To study the impact on the cultural landscape, the route

was compared with the geodatabase of sacred places.

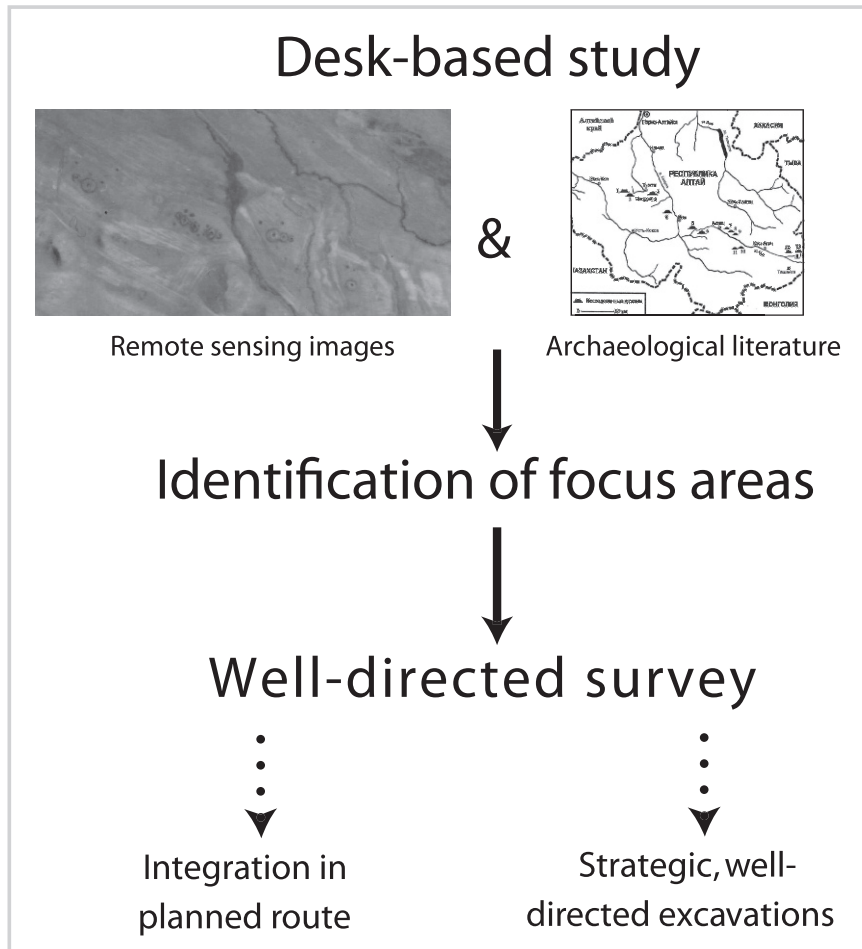
Unfortunately, the most suitable position for the pipeline corresponds to the places that were the most suited for the ancient inhabitants of the Altai to build their monuments. Very detailed information is available only for the monuments between Tuekta and Shashikman. For the area between Tenga and Tuekta, all monuments visible on remote sensing and Russian aerial images were documented. A comparison between these data sets clearly shows that when remote sensing images are used, only large and medium-sized (>10 m) monuments can be located and no information about smaller stone settings between Tenga and Tuekta can be retrieved.

Similar rescue research has illustrated that a corridor of 30–50 m along the route needs to be studied to include all areas of destruction associated with the construction of

the pipeline and the maintenance road and the use of heavy construction machinery (De Clerq and In 't Ven 2005; Museyibly 2010). Comparing this with both data sets shows that a total of 318 monuments in this small study area could be affected. However, the exact number will be higher because of the less detailed database for monuments between Tenga and Tuekta. If the plans are unchanged, these monuments will have to be excavated, as all information will be lost otherwise.

When focusing on the impact on the intangible importance of the landscape for Altaians, 3 scales of the sacredness of landscape should be taken into account. In the first instance, on a local scale, this includes everything around the residence (village or farm), except for recent human alterations; this landscape should be treated with respect, and human activity should

FIGURE 5 Proposed strategy to integrate a proactive heritage policy into the planning of the pipeline.



not be intrusive. On a regional scale, there are certain well-defined places that are very sacred to the inhabitants of several villages. These places should not be visited too frequently, and human impact should be minimal. Many confluences of rivers, springs, prominent mountains, or archaeological monuments have a sacred meaning. On a third scale, the national scale, there are a few places that are sacred to all Altaians such as Altai's highest mountain, the Belucha.

Concerning the local scale, it is difficult to assess the impact, because perceptions vary from one person to another. The impact on the regional scale is easier to quantify, as there is greater agreement about which areas are important to the inhabitants of a certain region. For our study area, 4

of these places will be directly or indirectly affected by the pipeline. Three of them are archaeological sites, and the other one is the sacred mountain of Bai Tul, a prominent marker in the landscape situated near the confluence of the Karakol river and the Ursul river. For the Altaians of the Ursul and Karakol valleys, this is one of the most important places of worship. Finally, there are no landscape entities of national importance in the study area. However, the planned pipeline will bypass one of the most sacred places of the Altai, the Ukok plateau.

Discussion

The impact of the pipeline on the Altai region will be enormous. However, this article aims only to

provide insight into the potential impact on a small segment (5.5%) of the entire project. The total impact on cultural heritage will be much greater; it is difficult to quantify the exact number of affected sites and sacred landscape entities. But it is expected that thousands of monuments and several important culturally significant places in the landscape will be affected. The further route of the pipeline project mainly follows the Chuya River, which is characterized by a deep, incised valley. The only appropriate position for the pipe is on the narrow terraces. Extensive inventory work by Kubarev and Shulga (2007) shows that these narrow terraces are filled with archaeological sites and rocky outcrops with petroglyphs. Furthermore, the project will cross

other regions (Ukok Plateau and Tarkhata Valley) of potential archaeological richness, as already illustrated by previous research (Molodin et al 2004).

In the best case, Gazprom will be confronted with the costly excavation of thousands of archaeological monuments. But excavation of monuments on this scale over a limited period is highly unrealistic. Furthermore, it will be virtually impossible to excavate so many monuments in a thorough, scientific way. It is likely that only known and important sites will be excavated, and that more than half of the other monuments, mainly less visible and unknown types, will not be studied and vital information will be lost.

Colleagues at the Institute of Archaeology and Ethnography of the Siberian Branch of the Russian Academy of Sciences (IAE SBRAS) will be responsible for archaeological guidance with respect to the pipeline. However, when we visited them in February (2011), they had not received any new information from Gazprom and were waiting for more specific details on the final route and the timing of the construction of the pipeline. We would suggest that the IAE SBRAS and other archaeological and anthropological institutes in the broader region be involved in the planning as soon as possible. As there will probably be only a limited time frame for excavations, a well-thought-out strategy is necessary. It would be advisable to take certain key steps (Figure 5). First, a desk-based study of both archaeological literature and remote sensing images should be conducted. Searching the literature would make it possible to identify and locate known sites. A similar search of the literature has already been conducted (Soenov 2003) for some areas that will be intersected by the pipeline. On the other hand, a study of remote sensing images could facilitate the positioning of larger monuments (>10 m). Furthermore, this would make it possible to identify areas that

are not suitable for the construction of monuments (eg steep slopes or wet riverbeds). By combining these results, it will be possible to indicate areas that should be surveyed in more detail. The outcome of this survey will be twofold: first, the route could be changed, bypassing dense areas with a lot of monuments; second, the results of such a survey could provide insight into the different types of monuments along the route, enabling archaeologists to set up a sound excavation strategy and begin pre-excavation work.

With regard to the cultural landscape, if construction takes place with little attention to integration in the landscape, the view and consequently the sacredness of the landscape will be polluted. Halemba (2006: 73) describes what happens when a sacred place is not treated with respect, citing a sacred spring that was frequently visited by tourists. However, inappropriate behavior on the part of tourists (leaving rubbish behind and wanting to imitate the rituals of the Altaians) destroyed its sacred value for the Altaians. Unfortunately, such stories are not unusual and lead to tensions with the local population, as part of their culture is destroyed and their customs and needs are not respected. To avoid similar scenarios, it is important that cultural boards, local administrations, and anthropologists be involved in the pipeline project and the needs of local inhabitants be met.

Conclusion

We have aimed to present the Gazprom Altai pipeline project and its potential impact on the cultural heritage of the Altai Mountains. As an example of this, we studied the effect of the construction plan on a part of the Ursul valley (Ongudai, Altai Republic), an area for which there is a detailed inventory of both archaeological monuments and cultural landscape. When comparing both data sets with the route of the

pipeline, it became apparent that the impact will be enormous, even for just a small part of the route. There is a fundamental need for archaeologists, ethnologists, and landscape scientists to be involved in the planning phase of the project. Moreover, the need for a detailed inventory of the monuments in areas through which the pipeline will pass should be emphasized.

Unfortunately, we were not able to get a reply from Gazprom about further detailed information regarding the timing, route, and extent of the project. Nor have they expressed their position on the cultural heritage of the Altai and how they plan to integrate it in their planning. Sadly, if the construction starts soon and heritage specialists are not involved in the project as soon as possible, the Altaians will be faced with a further loss of their cultural heritage, and an increase in ethnic tensions cannot be ruled out.

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