

Cultural Heritage vs. Mining on the New Silk Road? Finding Technical Solutions for Mes Aynak and Beyond

Cheryl Benard
Eli Sugarman
Holly Rehm

CONFERENCE REPORT
December 2012



*Central Asia- Caucasus Institute
Silk Road Studies Program*

Cultural Heritage vs. Mining on the New Silk Road? Finding Technical Solutions for Mes Aynak and Beyond

June 4-5, 2012
SAIS, Johns Hopkins University
Washington, D.C. 20036

sponsored by Ludus and ARCH Virginia

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Cheryl Benard
Eli Sugarman
Holly Rehm

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A Joint Transatlantic Research and Policy Center
Johns Hopkins University-SAIS, 1619 Massachusetts Ave. NW, Washington, D.C. 20036
Institute for Security and Development Policy, V. Finnbodav. 2, Stockholm-Nacka 13130, Sweden
www.silkroadstudies.org

“Cultural Heritage vs. Mining on the New Silk Road? Finding Technical Solutions for Mes Aynak and Beyond” is a Conference Report published by the Central Asia-Caucasus Institute and the Silk Road Studies Program. The Silk Road Papers Series is the Occasional Paper series of the Joint Center, and addresses topical and timely subjects. The Joint Center is a transatlantic independent and non-profit research and policy center. It has offices in Washington and Stockholm and is affiliated with the Paul H. Nitze School of Advanced International Studies of Johns Hopkins University and the Stockholm-based Institute for Security and Development Policy. It is the first institution of its kind in Europe and North America, and is firmly established as a leading research and policy center, serving a large and diverse community of analysts, scholars, policy-watchers, business leaders, and journalists. The Joint Center is at the forefront of research on issues of conflict, security, and development in the region. Through its applied research, publications, research cooperation, public lectures, and seminars, it functions as a focal point for academic, policy, and public discussion regarding the region.

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ISBN: 978-91-86635-55-8

Printed in Singapore

Distributed in North America by:

The Central Asia-Caucasus Institute
Paul H. Nitze School of Advanced International Studies
1619 Massachusetts Ave. NW, Washington, D.C. 20036
Tel. +1-202-663-7723; Fax. +1-202-663-7785
E-mail: caciz@jhu.edu

Distributed in Europe by:

The Silk Road Studies Program
Institute for Security and Development Policy
V. Finnbodavägen 2, SE-13130 Stockholm-Nacka
E-mail: info@silkroadstudies.org

Editorial correspondence should be addressed to Svante E. Cornell, Research and Publications Director, at either of the addresses above (preferably by e-mail).

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Summary

As the United States and NATO prepare to scale down their mission in Afghanistan, and with it the massive international funding that has subsidized the country and its government for the last ten years, how does Afghanistan keep afloat economically? The country possesses rich mineral resources. But due to its ancient history, these typically lie intertwined with priceless archeological remains. And mineral extraction carries serious ecological risks, which a country emerging from decades of conflict is only now gaining some experience in managing.

Mes Aynak, where the Chinese company China Metallurgical Group (“MCC”) obtained the contract to mine one of the world’s largest copper deposits, fully embodies these dilemmas. Copper is extremely lucrative for both the company and potentially for Afghanistan, the hope being that mining can catalyze development for the country. But project as currently planned foresees the destruction of a 5,000-year-old buried city at the same location, containing multiple monasteries and settlements believed to go back to the Bronze Age, a site at least as significant as the tragically lost Buddhas of Bamiyan. And mining copper, especially in such proximity to a densely populated capital city, and even more especially when the deposit is on top of the country’s two principal aquifers, is very risky. In such a situation, mistakes are consequential and some decisions are irreversible.

When the issue was first brought to our attention, we expected and anticipated that the domestic and international agencies in charge either had already, or were imminently preparing to, conduct a systematic study, i.e. that they would first make a thorough determination regarding the extent and value of the cultural heritage site; that they would next and on this basis review the available mining technologies; that they would then make a determination of the technical options and their respective pros, cons and costs; and lastly, that the findings would be shared with the local population and the concerned public. Equally, we anticipated the sharing of substantive

information about the environmental hazards and the methods chosen to mitigate them. We discovered, however, that none of the above had occurred. Resources had not been made available for the kind of survey appropriate to a site of this magnitude. Even more alarmingly from a public health standpoint, mere months before mining was due to begin, there was yet no sign of an environmental impact plan. In the meantime, major and irreversible decisions were being made on the basis of two untested assumptions: first, that the heritage site would have to be sacrificed because the mining would necessarily destroy it; second, that the benefits to the country would make this worthwhile. As for the vast looming ecological dangers, these did not appear to have been taken note of at all.

In full understanding of Afghanistan's pressing need for revenue, and the hoped-for role of minerals in providing funds for the country's development, ARCH therefore endeavored to provide the missing step in this process: to convene a meeting of neutral, world-class experts to objectively study the facts and identify the options for weighing and if possible reconciling mining, heritage and environmental safety.

Specifically, ARCH International and the Central Asia Caucasus Institute's (CACI) Silk Road Program at SAIS/Johns Hopkins, invited a group of prominent experts to study the situation in Mes Aynak. On June 4 and 5, 2012, the experts met at SAIS in Washington, D.C. to develop strategies to ensure real economic benefit to the Afghan population, safeguard their environment and health, consider livelihoods during and after the mining, and preserve the cultural treasures at Mes Aynak. The meeting was co-chaired by ARCH's President Dr. Cheryl Benard and CACI Silk Road Program Chairman, Fred Starr.

The participating experts included geologists; archeologists with a range of sub-specializations including emergency archeology, high tech ground penetrating survey technology, pre-historic and early mining archeology, and the restoration and management of heritage sites; mining engineers with field experience as well as academic credentials; historians and art historians specialized on pre-Islamic, Buddhist and Central Asian history; a documentary film-maker working on a report about Mes Aynak; a

photographer engaged in a Silk Road project; development economists; and political scientists with regional expertise.

The group identified a very positive way forward. They found that the archeologists would be able to continue their work not just for the three year run-up that still lies ahead before mining can commence, but throughout the entire life of the mining project, without unreasonably impeding the mineral extraction; that the preservation of significant portions of the site is possible; and that the economic gain to the local population and to the country from an explored and developed heritage site will be significant in the future, providing revenue and jobs.

Their greatest concern was for the environmental risks, especially in light of the fact that no discernible serious measures to mitigate these are presently apparent. They stressed the need for absolute transparency on the part of the mining company and the project, and for project oversight centralized at the highest level of the Afghan government through a tripartite body of officials and stakeholders; independent experts; and the affected populace and civil society.

On the basis of these findings, ARCH International sees the necessity for a major public campaign to prevent the needless decimation of ancient Buddhist temples and ancient metal foundries at Mes Aynak, to educate and inform the local citizenry about the facts of the situation, and to create effective safeguards against an environmental disaster and the devastation of Logar province's economic future.

As the subject is controversial, it is perhaps necessary to state that it is neither the purpose nor the outcome of this conference to oppose mineral extraction either in general or for the particular instance of this copper mining project. Rather- because Mes Aynak is only one of many current and future mining projects that threaten antiquities and the environment – the collective goal and purpose is to work with engineers and other experts to find the means of balancing new methods of mining with the careful preservation of cultural heritage, the safety of public health and ecology, and the mid and long term economic future of local populations.



Photo by Cheryl Benard: Stupa at Mes Aynak

A summary of the conference and the group's key findings and recommendations follows below.

This Conference Report will be made available to the World Bank, MCC, the Afghan government, UNESCO and other heritage organizations, and other interested parties. It should be of interest to mining companies active or considering future investment in the region, governmental institutions dealing with mining, ecology and cultural preservation, to technical

professionals working on new ways to mine responsibly through modern technology, and to civil society groups dealing with issues of environmental protection, heritage preservation, and mining in politically vulnerable states.



Photo by Cheryl Benard: Kabul Museum, Exhibition "Buddhism in Afghanistan"

Acknowledgements

Many colleagues and experts gave generously of their time and knowledge during the preparation for this conference and in the context of our broader research about Mes Aynak, mining, and heritage preservation.¹ Special thanks are owed to our counterparts at ICOMOS Paris, ICOMOS Washington, the World Heritage Fund, the Global Heritage Fund and the World Monument Fund, to Professor John Grubb of the Colorado School of Mines, Professor Wolfgang Neubauer of Archeo-Prospections, and Professor Moser of the Mining School of Leoben.

Primary funding for the conference was generously provided by LUDUS. LUDUS is a Miami-based lifestyle brand of eco-conscious athletic wear for women. Additional information about LUDUS's philanthropy is available at: www.ludusathletics.com.

Members of the ARCH Virginia Group and the Afghan-American-owned restaurants Current Sushi and Café Bonaparte contributed material support to the conference.

¹ For more background information on Mes Aynak, see Appendix 2

About Us

The Alliance for the Restoration of Cultural Heritage (“ARCH”)

ARCH International is a 501(c)3 non-profit research and advocacy organization dedicated to the promotion and defense of cultural heritage in situations of crisis and war, its repair after a conflict, and the utilization of cultural values both tangible and intangible to help rebuild fractured societies after conflict. Our main goals include:

- The defense and restoration of cultural treasures and monuments threatened or destroyed by violence and war;
- The support of our fellow cultural activists especially in areas of crisis – poets, artists, writers and ordinary citizens who share our purpose; and
- The dissemination of stories and historical narratives that emphasize creative cultural achievements and universal values of civilization as a counter-force to chauvinism, sectarianism, and hate.

More information about ARCH’s activities is available at: www.archinternational.org.

The Central Asia-Caucasus Institute (“CACI”)

CACI is a primary institution in the United States for the study of the Caucasus, Central Asia and the Caspian Region. The Institute, affiliated with Johns Hopkins University-SAIS, forms part of a Joint Center with the Silk Road Studies Program, affiliated with the Stockholm-based Institute for Security and Development Policy.

Additional information about the Joint Center, as well as its several publications series, is available at www.silkroadstudies.org.

Overview and Conference Objective



Photo by Cheryl Benard: *Seen from the top of the mountain, this shows the extent of the ancient city, note at least three separate "neighborhoods" that have been partially uncovered so far. One of them is a commercial area with workshops and jewelry stores.*

Mes Aynak: A Bridge to the Future or a Looming Environmental/Cultural Tragedy?

Aynak is one of the largest copper deposits in the world. It is located 40 km south of Kabul in Logar Province. In November 2007, a 30-year lease was granted for the copper mine to the state-owned Metallurgical Corporation of China ("MCC") for \$3 billion, making it the largest foreign investment and private business venture in Afghanistan's history. There are high hopes it will soon become a major source of revenue for the Government of Afghanistan (GoA) and a driver of the country's much-needed economic growth.

However, atop the mine sit a vast array of over twenty ruin sites, including several 4th to 8th century Buddhist monasteries, residential and commercial areas, and ancient fortifications – an area of ancient settlement known as Mes Aynak. Experts believe that the site may include rare Bronze Age remains. Archeologists from around the world agree that Mes Aynak

represents a cultural heritage site of immense importance. In the words of Professor Deborah Klimburg-Salter, “The site contains a larger diversity of media than hitherto known at any site in Afghanistan: metal objects, glass, coins, mural paintings, wooden artifacts and sculptures. Because of the vast archeological area that is uniquely accessible – no modern city having been built on top of it – the excavation promises to provide much new information about both secular and religious life during this region’s past, and to document the close cultural and economic ties along the entire extent of the Silk Road encompassing China, India and Iran.”

In addition, Mes Aynak also sits atop two major aquifers and abuts agricultural areas and population centers, most notably Afghanistan’s capital and most populous city, Kabul.

Mes Aynak’s unique cultural sites coupled with its environmental characteristics and vast mining potential make it a complex project with huge potential but also huge risks. The stakes at Mes Aynak are hard to overstate – if the mine is not properly planned and managed, it could become a human and environmental disaster and result in the permanent loss to the nation’s wealth-generating potential, instead becoming an expensive liability.²

² In the US, serious attention to the consequences of industrial and commercial pollutants followed the discovery, in the 1940’s, that the areas surrounding certain mining and construction sites were experiencing highly elevated instances of cancer, mental retardation, and birth defects. Mitigation was completely beyond the abilities of local government or industry, so the national government established a Superfund Trust. According to estimates, the cleanup of just the most egregious sites carries a price tag of about 35 billion dollars. One of the most prominent Superfund Sites is in Butte, Montana, where the since abandoned Berkeley open pit copper mine left behind an enormous open pit filled with an estimated forty billion gallons of acidic, metal-contaminated water. Persons needing to visit the site must first complete a 40-hour training session on hazardous materials, and workers must enter the water in fiberglass boats because the water can dissolve aluminum.

Everyone wants Afghanistan to obtain revenue. No one wants an ecological disaster to result. Nobody wants to be remembered in history alongside the Taliban as having presided over the destruction of priceless world heritage. Therefore, an optimized solution is in everyone's best interest, and such an optimized solution can only be found on the basis of an exhaustive review of the facts and all possible options.

As shocking as it might sound, none of the involved parties has as of yet fully studied and assessed the environmental and cultural impacts of proposed operations at Aynak. Certainly, no one wants Mes Aynak to become Afghanistan's Butte, Montana – formerly the U.S.'s most valuable hill, now turned into its most costly environmental cleanup effort at a price tag of billions of dollars. But how can risks be mitigated and the benefit to Afghanistan maximized?

To fill this void and focus expert attention on this pressing crisis, ARCH International and the Central Asia Caucasus Institute's ("CACI") Silk Road Program at SAIS/Johns Hopkins, convened a group of highly experienced experts in the fields of geology, mining engineering, archeology, history and economic development to study the specific situation in Mes Aynak. On June 4 and 5, 2012, the experts met at SAIS in Washington, D.C. to develop realistic strategies to ensure real economic benefit to the Afghan population, safeguard their environment and health, consider livelihoods during and after the mining, and preserve the cultural treasures at Mes Aynak. The meeting was co-chaired by ARCH's founder Dr. Cheryl Benard and CACI Silk Road Program Chairman, Prof. Fred Starr.

Conference participants embraced not only the importance of protecting Afghanistan's cultural heritage, but also economic development for Afghanistan, and the use of its natural resources to advance that development.

After extensive discussion and review of the available information, they expressed strong concern that Mes Aynak is on a troubling path. They also identified clear steps that can prevent a negative outcome and create the conditions for this site to instead become a model.



Photo by Cheryl Benard: Mes Aynak

The essential prerequisite for a positive outcome is for all parties to approach it in a spirit of constructive and collaborative intent. This should be achievable because their goals are not inevitably in conflict. Everyone wants Afghanistan to obtain revenue. No one wants an ecological disaster to result. Nobody wants to be remembered in history alongside the Taliban as having presided over the destruction of priceless world heritage. Therefore, an optimized solution is in everyone's best interest, and such an optimized solution can only be found on the basis of an exhaustive review of the facts and all possible options.

Unfortunately, this is not the approach that so far has been pursued by the key parties, including the GOA, MCC, and World Bank. The archeologists at Mes Aynak have been ordered to engage in salvage archeology and to remove whatever they can take from the site, because they will be ejected and the mining will commence in six months time. Yet the experts were clear on three points: the site is far too valuable to justify salvage archeology; salvage archeology is not necessary because conventional archeology will not obstruct the mining; and there is absolutely no way that mining can begin in six months, anyway. It is one thing to face an actual decision point, and to be obliged to make a painful choice between culture and commerce. But to make

this decision without first checking your facts and your options, and to sacrifice cultural treasure when it is objectively not necessary, is blameworthy in the extreme.

If archeologists had been given a realistic timeline from the start, they could have planned accordingly and accomplished much more. Yet even today, they are under orders to depart the site at the end of the year, and this in spite of the fact that in the universal opinion of the conference experts, actual mining cannot possibly begin at the Aynak location before the end of 2015 because none of the necessary preparatory surveys and work have been completed or in many cases, even initiated.

In sum, the experts believe that the interests of different parties involved in this project can be reconciled, but if the project continues on its current course, a real disaster is also possible. With adequate planning and control mechanisms, Mes Aynak can become a bridge for Afghanistan's future and a model for other sites throughout Afghanistan and the region at large; in their absence, it may become a mining case study of human and environmental tragedy.



Photo by Cheryl Benard: Mes Aynak

Key Conference Assessments

Global Mining Background

Mining for precious resources dates back to antiquity. Today, mining is an immense global industry. Each year, billions of tons of metal and ore are mined from the earth. Unfortunately, along with the metal, mining also creates billions of tons of waste, some of it toxic. A delicate balance must be struck between mining for the resources needed to sustain and fuel the global economy, and mindfulness regarding the ecological impact and, as in the case of Mes Aynak, co-located heritage sites. Conference participants stressed that critical new thinking is called for in the area of heritage sites and mining.

There are examples, guidelines, international and national standards and multiple other resources available for the enlightened management of mining operations. In the past, there was often little or no effort made to consider the needs of environmental and ecological management, sustainable development, or preservation of heritage sites in mining operations. Unfortunately, it often took a catastrophe to draw public and political attention to irresponsible commercial and industrial practices such as the dumping of toxic wastes. However, the last decades have witnessed a considerable development towards responsible and regulated mining. This important new emphasis on sustainable development includes reduction of resource consumption, waste and pollution as well as the enhancement of health, economic opportunity, and quality of life for both miners and the communities affected by their work. This includes the responsibility to avoid compromising the land or cultural heritage for future generations.

Conference mining experts conclude that Mes Aynak will be both a long-term mining and archeological project. Contrary to expectations held in some quarters, mining and cash will not and cannot begin flowing immediately. Assuming a mine capacity of 200,000 tons, where mining has not yet begun but is still in the block-model phase, it will take at least three

and probably five years to begin mining, and ten years to reach peak capacity.³

This has been further complicated by recently emerging infrastructure and security issues. A new study sheds doubt on the practicality of rail connections for the transport of ores.⁴ The costs are assessed as prohibitive, with some experts citing a figure of \$54 billion for the construction and maintenance of a railway network. MCC is expected to conduct its own feasibility study and may come to a more optimistic conclusion; however, documents made public on Wikileaks seem to indicate that China does not seriously intend to move forward with railway construction in Afghanistan at least in the short term.⁵ Transport by trucks has its own problems both technical – the weight/load limit will almost certainly be an issue – and security-related, with trucking having proven particularly vulnerable to Taliban attacks and banditry.

³ For a general introduction into the complexities of launching a mining operation see Kuipers, James R. “Characterization and Monitoring During Different Phases of Mining: Characterizing, Predicting and Modeling Water from Mine Sites.” *Kuipers & Associates*. URL: http://www.waterboards.ca.gov/academy/courses/ard/day1/day1_sec4f_5a_characterizationphases_jk.pdf

⁴ LeVine, Steve. October 5, 2012. “The Itty-Bitty, \$54 Billion Railroad Network Needed to Export Afghanistan’s Mineral Wealth.” *Quartz*. URL: <http://qz.com/12443/the-itty-bitty-54-billion-railroad-network-to-export-afghanistans-mineral-wealth/>; Nissenbaum, Dion. October 3, 2012. “Doubt Cast on Afghan Mining: U.S. Says High Cost of Railway May Quash a Pillar of Kabul’s Economic Strategy.” *The Wall Street Journal*. URL: <http://qz.com/12443/the-itty-bitty-54-billion-railroad-network-to-export-afghanistans-mineral-wealth/>

⁵ Lawrence, Quil. April 4, 2012. “Dreams of a Mining Future on Hold in Afghanistan.” *NPR*. URL: <http://www.npr.org/2012/04/04/149611352/dreams-of-a-mining-future-on-hold-in-afghanistan>; see also the cable in question at Embassy Beijing. October 21, 2009. “PRC/Afghanistan: MCC on the Aynak Copper Mine Project.” *Wikileaks*. URL: <http://www.cablegatesearch.net/cable.php?id=09BEIJING2918>



Photo by Cheryl Benard: Watch towers surround the perimeter of Mes Aynak

The security situation is of serious concern and appears to have deteriorated since 2009. At that time, MCC officials described it as “better than expected,” and constructed a large residential and administrative compound. Since the spring of 2012, in response to increasing security incidents, all Chinese employees with the exception of a small skeleton staff have been evacuated. Obviously, this represents a further delay of mine site preparation.

With this in mind, there is time for exploration and ground penetrating study of the heritage site at Mes Aynak, and no need for salvage or emergency archeology. Even once the mining has begun, the experts concluded, archeology can work in parallel. There should be an archeological presence throughout.



Photo by Cheryl Benard: The Chinese compound in the distance. There is another excavation inside which can no longer be worked on because the compound is closed.

The sequential approach favored by MCC, in which an emergency archeology phase concludes, the archeologists depart, the heritage site is shut down and mining commences, is neither advisable nor necessary – nor, given the enormous value both material and intangible that will be lost through such a proceeding, is it defensible.

Significance of the Mes Aynak Site

Mes Aynak's history is believed to span from the Bronze Age through the Buddhist era, and up to the early Islamic period. This continuity of habitation across millennia is virtually unparalleled. In Central Asia, the Bronze Age is dated at 2300 – 1700 BC. During this epoch, many foundations of human civilization were developed: the ability to smelt iron ores such as copper, as well as the invention of writing, agriculture, trade and early systems of law and social stratification. Accordingly, this is a site where early technology and society unfolded for over 5,000 years. The site is

known to contain coins, glass, wooden elements, tools, Buddhist monasteries and many artifacts, including manuscripts that may date from the time of Alexander the Great.

Recent excavations inside one of the monasteries found the walls covered in early paintings. These paintings are invaluable illustrations of ancient life, including styles of dress from which conclusions can be drawn about patterns of migration and cultural influence. Many images and statues were found to be painted in gold, an indication of the wealth of the Mes Aynak area. Additionally, a large number of stupas, the dome-shaped monuments usually containing Buddhist relics, were discovered. Those on the surface had been previously looted of the relics inside, but the archeologists believe that many more remain underground, still intact.



Photo by Cheryl Benard: Mes Aynak

Geographically, Afghanistan and Mes Aynak represent a central point of the ancient Silk Road, whose culture was shaped by three ancient civilizations - China, India, and Iran. This location provides great value in terms of ancient art and architecture and the influences of these great cultures. During antiquity, Mes Aynak and greater Afghanistan were already centers for both copper and silver mining. In addition to the precious coins, jewelry and metal works recoverable at Mes Aynak, this site also presents a significant opportunity to learn about the development of ancient mining technologies.

All of this historical material is in imminent danger of destruction by the mining endeavor, which is allowing for only minimal salvage archeology. The plan will destroy

the site and everything still buried beneath it, either directly or as a consequence of vibrations from the detonations, allowing only for the removal of whatever statues and artifacts can be carried away by a small archeological team supported by DAFA, the French archeological mission to Afghanistan.

The experts are in full agreement that this plan is not sufficient, not reasonable and most importantly, not warranted by the objective circumstances. If properly planned and coordinated, a full exploration and excavation of the site need not conflict with the mining project. This however requires certain steps and measures, which the experts articulated in two working group sessions that generated a set of specific recommendations.

The recommended approach designed by the expert group foresees an overall vision wherein the mining activities are consistent with Afghanistan's economic and social development in the near, mid and long-term. This model increases the probability of livelihoods and jobs throughout the entire mining process, which can be expected to go on for four to six decades. It includes a plan for the closing of the mine and for what the province should look like once that closing has occurred. In this vision, the mine becomes a bridge to the future, not just a pit to be excavated and then abandoned. This is clearly better for the country, but it is also in the best interest of the mining

company, as it minimizes conflict, avoids recrimination and reduces the risks of a disastrous outcome.

The recommended approach designed by the expert group foresees an overall vision wherein the mining activities are consistent with Afghanistan's economic and social development in the near, mid and long term.

Environmental Assessment of the Mes Aynak Site



Photo by Cheryl Benard: Fertile landscape around Mes Aynak

While assessments are not fully complete at the Mes Aynak site, it is beyond doubt that the ecological impact of mining will be severe. The greatest subject of concern is water use, water depletion, and water pollution. Massive quantities of water are needed for copper mining operations. This can deplete the groundwater. Rivers and wells can dry up, impacting irrigation and farming networks. In addition, to mine one ton of copper, 100 tons of soil need to be removed from the land. This will distort the meteorological

balance of the area and increase the risk of landslides, reduce soil fertility, and expose to the air heavy minerals and naturally occurring radioactive metals. Heavy metals can leach into ground and surface water, endanger nearby fisheries and make the water toxic for human consumption.

The sequential approach favored by MCC, in which an emergency archaeology phase concludes, the archaeologists depart, the heritage site is shut down and mining commences, is neither advisable nor necessary – nor, given the enormous value both material and intangible that will be lost through such a proceeding, is it defensible.

In addition to these environmental effects, which elsewhere, in some instances, have proven to be irreversible, there is also a real concern that mining activities could contaminate water, air, and food for nearby populations. The increase in heavy minerals and metals can lead to increases in asthma, lung disease, brain damage, and cancer as well as increased rates of mortality and morbidity particularly among children and the elderly.

Due to Mes Aynak's location adjacent to the country's most dense population center, these devastating health problems could affect the over three million inhabitants of Kabul. The people of Afghanistan have not been properly informed of the risks that accompany the benefits of mining. The fact that no Environmental Impact Plan for Mes Aynak has as of yet been developed and published is contrary to mining standards, and is of extreme concern.



Photo by Cheryl Benard: Vegetation and orchards around the Mes Aynak site

The expert group strongly feels that it is essential for the citizenry to be made fully aware of environmental and health impacts, and to have the opportunity to learn about and review the mitigation plans, before any mining commences.

Specific Mes Aynak Mining and Contract Information

The experts group believes that the goal for Mes Aynak should be to achieve a partnership of cultural conservation, economic interests, and national development that can become a model for the many projected future situations in Afghanistan and elsewhere, where archeological remains and mineral deposits share the same physical location. In the words of one of the participating expert, “[i]f mining is the only game in town, at least make it a winning game.”

For Mes Aynak, the prerequisite for a positive outcome is absolute openness. Transparency has been completely lacking until now. All involved parties – the World Bank, the Afghan Government, and MCC – need to make information available to the public immediately. It is unconscionable to leave the public in the dark regarding the schedule and plan for the mining operation, the measures that have or have not been included for public safety, the feasibility studies that have or have not been conducted to responsibly explore all options for mining so that the plan of least negative impact can be selected, the funds that have or have not been set aside for the relocation of displaced communities, the plans for avoiding an environmental disaster and for dealing with one if it should nonetheless occur, and the plan for closing and rehabilitating the site at the conclusion of mining. And the MCC contract needs to be released immediately.

The experts unanimously warned that if handled incorrectly, Mes Aynak could put both people’s lives and the country at risk. The legal context requires that international standards be met, everyone must be clear about the direness of the consequences if things are handled poorly, and everyone must cooperate fully in ensuring that this does not occur.

Proper heritage preservation requires resources. The experts believe that in the context of a potential 110 billion dollars in mining revenue, putting aside some millions for heritage preservation would be reasonable. The Malta Convention can serve as an orientation; ratified in 1992 it lays out methods for determining the presence of archeological remains prior to construction and other commercial projects and requires funding to preserve them if they are found to be present. In Aynak, such funding could go towards training locals as archeologists, preservationists, tour guides and to provide other skills that, if the country preserves its heritage, can provide economic opportunities, jobs and revenue for the indefinite future.

There should also be put into place a trust fund or letter of credit to ensure that the mine winds down properly. As the experts noted, the closing of a mine is if anything, even more important than how the mine is opened.

As can be seen, this complex project will likely have a very significant impact on Afghanistan, positive or negative. In order to monitor and manage all aspects of the project throughout the multi-decade life of the mining project, and to ensure the collaborative sharing of information and the joint and coordinated development of solutions, a committee of officials, experts and civil society should be established immediately under the direct authority of the President.

Recommendations

The experts agreed upon a set of specific recommendations, which are summarized below:

- I. Openness, transparency, and information sharing amongst all parties is absolutely critical.
 - With the current dearth of information and secrecy, it will not be possible to implement a constructive plan that encompasses mining operations, environmental protection, and respect for cultural heritage sites.

- Much necessary information required by Afghan laws and international norms is not publicly available at this time and needs to be released immediately.



Photo by Cheryl Benard: Kabul Museum, Exhibition "Buddhism in Afghanistan," this head of a Buddha shows remnants of paint pigment on the face (pink) and hair (black)

- This includes the mining contract itself as well as various other operational and environmental assessment plans.
 - Maintaining transparency and complying with legal and regulatory requirements is the only way to ensure that all environmental and other dimensions of Mes Aynak are taken into account and that the interests of the Afghan people are protected.
 - The conference should be repeated in Kabul with broader participation and with Afghan experts, in order to launch a collaborative discussion among experts and to help inform and bring in the Afghan public.
2. A realistic timetable for mining operations, environmental impact assessment, and protection of heritage sites is needed.
- A timetable is needed that clearly spells out MCC's plan on infrastructure, opening blocks of the site, etc. This can then be coordinated with plans for conserving all other resources, particularly the heritage sites.
 - The immense size and complexity of the Mes Aynak deposit means that it cannot and will not be exploited except through a phased mining approach.
 - Candor on this front – not repeated statements about an imminent start to mining – will open up the possibility of responsible archeology without impeding progress of the mining.
 - Mes Aynak is a long-term mining project, and it requires a long term plan for ongoing collaboration between mining, environmental and heritage experts throughout the entire life of the mine.
3. New coordination mechanisms are needed. Ideally, a standing management group would be placed directly under the authority of the President. It would be a tripartite group consisting of the relevant administrators from the GOA and the mining company; neutral

subject matter experts with the relevant scientific background in mining, geology, heritage preservation and ecology; and representatives of the citizenry and civil society.

- At present, the mechanism to coordinate is the Inter-ministerial Commission (IMC) of the Government of Afghanistan and the Aynak Authority under the Ministry of Mines.
 - The IMC is responsible for overseeing all minerals projects in the country and does not have the bandwidth to give adequate specific attention to Mes Aynak. The Aynak Authority and the IMC do not involve all stakeholders. Given the global scale of this project and its potential to break new ground in terms of modern mine management, these need to be included.
 - An overarching and integrative body is needed and we seek the urgent attention of the President of Afghanistan on this matter; we encourage him to propose how to coordinate MCC, GOA ministries, EPA, international cultural experts, etc.
 - This body needs a standing secretariat to support its activities.
 - Only by this coordinating body having the highest level of authority, will its conclusions reflect compromises on all sides that are implemented in a collaborative way.
 - The participating Citizen Group can serve as an active intermediary to the Afghan public. This group should obtain and disseminate information about the mining effort, the heritage preservation work, and the environmental plan and represent the interests and concerns of the affected local population.
4. Greater engagement by MCC
- It is also crucial that MCC play a more active role engaging with different stakeholders, especially those focused on the environmental and cultural dimensions of this project.
 - This includes MCC dedicating long-term financial resources to the effort to protect cultural heritage sites. It also includes similar long-

term financial support to establish archeology, heritage and tourism as an income stream for the local population.

- Such funding represents a very small percentage of overall revenue expected to flow from this immense mining project and reflects international best practices.

The scale of the project, the security and infrastructure complications inherent in the location, and a host of other circumstances specific to Mes Aynak, undeniably make this a challenging endeavor. The expert group, however, saw a positive way forward. Its principle requirement is an open, collaborative and transparent process, which is not currently in place but which should be instituted immediately in the interest of a good outcome.



Photo by Cheryl Benard: CACI's Fred Starr in conference session at SAIS, Johns Hopkins University

Participant Biographies

Paul Craddock is an expert on prehistoric archeology and on early mining, extractive metallurgy and metalworking. His PhD is in bronze metallurgy of the classical period. He joined the British Museum in 1966, and has conducted excavations and surveys at early mines and smelters around the world, including Bronze Age copper mines in Israel, King Croesus' gold refinery at Sardis in western Turkey, copper mines in Nigeria, Roman silver mines at Rio Tinto in southern Spain and in Serbia, zinc in India and China and crucible steel production sites in Central Asia and southern India. He has been Secretary of the Early Mines Research Group since its inception. Dr. Craddock has produced over 400 papers. Recent books include *Early Metal Mining and Production*, *2,000 years of Zinc and Brass*, *King Croesus' Gold*, *Mining and Metal Production Through the Ages* and most recently *Scientific Investigation of Copies, Fakes and Forgeries*. He is currently completing books on Indian metallurgy.

Hans Curvers is an archeologist and heritage site expert with a strong background in fieldwork and numerous publications. He has 18 years experience in public and private heritage planning and urban design in Western Asia. He has a long-standing connection to the University of Amsterdam and since 1994 has worked with Solidere, the Lebanese company in charge of the reconstruction and development of Beirut's City Center. He recently completed the implementation of the Beirut Heritage Trail and continues to advise on the integration of archeological sites in public gardens of the Beirut City Center and the Beirut City History Museum. For seven months he coordinated the Mes Aynak Archeology Project in Afghanistan (2011-2012). Earlier excavations include Tell Hammam et-Turkman (1981-1986), Tell al-Raqa'i (1986-1993), Tell Umm el-Marra (1994-to present) in Syria, and excavations and heritage planning at Tibnin Castle (1999-2002) in Lebanon.

Sabour Ferozan is an Afghan-American professor of geology and a regular contributor to professional and popular journals. After obtaining a degree in geology from Kabul University, Sabour first worked as a field geologist in Afghanistan, focusing on the study of seismic and tectonic plates, and participating in oil and gas exploration and geological survey research. Until 1992, he was professor of geology at Kabul University. Upon moving to the U.S. he became a professor at Raritan Valley College. His publications include *The Geology of Uranium*, *The Geological Development of Kabul Block*, and *Seismo-Tectonic Properties of Katawaz Basin*. Professor Ferozan

has a strong interest in adult education and in publishing about environmental issues for lay audiences.

John Grubb holds a PhD in Mining and Earth Systems Engineering from the Colorado School of Mines. He is adjunct professor with the Colorado School of Mines, teaching classes on mine management, mineral resource development, mine planning, risk management and ethics. He is the primary investigator for a research program funded by NIOSH (National Institute for Occupational Safety and Health). Over the course of his professional life, he has been President, COO and Mining Director of a range of companies including New Mexico Coal, BHP Minerals, Ok Tedi Mining, Sierra Coal and others, and has set up, managed or closed down mining operations in New Mexico, Kentucky, Brisbane, Melbourne and Harare. For a copper and gold mining project in Papua New Guinea, Grubb oversaw the resolution of serious environmental problems.

Brent Huffman is assistant professor at the Medill School of Journalism, Northwestern University, and a filmmaker. His work ranges from documentaries aired on The Discovery Channel, The National Geographic Channel, NBC, PBS and Al Jazeera, to Sundance Film Festival premieres, to films made for the China Exploration and Research Society. Huffman has been making social issue documentaries and environmental films for more than a decade in Asia, Africa, and the Middle East. These films have gone on to win numerous awards including a Primetime Emmy, Best Conservation Film-Jackson Hole, Best Documentary-Fresno, three Cine Golden Eagle Awards, a College Emmy, and a Grand Jury Award at AFI's SILVERDOCS. He is currently completing a film about Mes Aynak, a site he has visited on five occasions.

Deborah Klimburg-Salter is Professor for Asian Art History at the Department of Art History and Director of the Research Platform CIRDIS (Center for Research and Documentation of Inner and South Asian Cultural History) at the University of Vienna. She also directs the National Research Network (S98) "Cultural History of the Western Himalaya" a program of the Austrian Science Fund. She received her PhD from Harvard University and her Habilitation from the University of Vienna. She has been a Fellow at the Institute of Advanced Studies, Princeton; the Wissenschaftskolleg Berlin; and Magdalen College, University of Oxford, among others. She has been Visiting Professor at the University of Pennsylvania, The Ecoles Pratiques des Hautes Etudes, Paris, and was the Mary L. Cornille Distinguished Visiting Professor in the Humanities at Wellesley College

(2009-2010). She is an Associate of the Oriental Institute, University of Oxford and has served as President of the European Association for South Asian Archaeology and Art (2007-2010). Since 2003 she has been a member of the UNESCO coordinating committee for the Cultural Heritage of Afghanistan. Since 2004 she has directed a joint program between the National Museum of Afghanistan, Kabul, and the University of Vienna, providing training for the curatorial staff of Kabul Museum. In addition to numerous scientific articles, her books and catalogs include *Tabo Monastery. Art and History; Buddha in Indien. Die frühindische Skulptur von König Aśoka bis zur Guptazeit; The Kingdom of Bāmiyān: The Buddhist Art and Culture of the Hindu Kush* and *The Silk Route and the Diamond Path: Esoteric Buddhist Art on the Trans-Himalayan Trade Routes*.

Philippe Marquis is an archeologist with DAFA, the French government's Archeological Mission in Afghanistan. He has worked on numerous sites across the country including in Bamiyan and Balkh. In recent years most of his time has been spent on the ground in Mes Aynak, where he conducted the official site survey and continues to take part in the ongoing excavations.

Said Mirzad holds degrees in applied geology and engineering geology. In the 1970's he was Director of the Afghan Geological Survey. Emigrating to the U.S. in the wake of the Soviet invasion, he was hired by the U.S. Geological Survey and presently works in their offices in Reston, Virginia. He was instrumental in the recent publication of a much-discussed data report regarding the projected extent of Afghanistan's mineral wealth.

Marla Mossman is an artist and photographer and founder of the nonprofit art project, The Peace Caravan. Since 1996, she has been traveling along segments of the Silk Road, recording places of historical and religious significance along that path, including a photo documentation of the Dalai Lama and the Buddhist traditions in the Himalayas. Besides a number of exhibits in Berlin, Moscow, Beijing, New York and elsewhere, she has published three photography books about this project, and created a documentary, "The Peace Caravan Project – Journey Along the Silk Road, Xinjiang, China."

Wolfgang Neubauer studied Prehistoric Archeology, Mathematics, Archaeometry and Computer Science at the University of Vienna and at the Vienna University of Technology. He specialized in archeological prospecting, digital documentation and virtual reality visualization of

archeological heritage. He obtained a Ph.D. at the University of Vienna based on his thesis “Magnetic Prospecting in Archaeology”.

Wolfgang Neubauer has conducted archeological research at sites all over the world for over 25 years. Together with the team Archeo Prospections® he developed equipment, logistics and software for the high-resolution geophysical prospecting of archeological sites, and directed more than 200 archeological geophysical field surveys in Austria and abroad. The main developments are in multisensor cesium-gradiometry, 3D processing and interpretation of ground penetrating radar. His most recent research focused on the applications of terrestrial 3D laser scanners in archeology and the complete digital recording of stratigraphic archeological excavations. He directed the “Scanning of the pyramids project 2004” focusing on the Great Pyramid and the Sphinx at Giza and over 30 national and international archeological documentation projects and 3D laser scanner surveys. Neubauer provided a video presentation to the conference.

Jack Medlin is the Afghanistan Project Lead at USGS, the U.S. Geological Survey. Before joining the USGS, Jack was a tenured Associate Professor of Geology at West Georgia College. He spent over five years there. He has received both his B.S. and M.S. degrees from the University of Georgia, his PhD, from Pennsylvania State University.

Hamid Naweed received his MA from State University of New York at Buffalo in Arts & Humanities. He was a Professor of Art History at Kabul University. He is also a Fulbright scholar and researcher. Currently he is a guest lecturer at academic institutions and universities, with frequent appearances on V.O.A Dari Service, Ariana Afghanistan TV Network and Zarin TV. He is the author of numerous scholarly articles on the schools of art from classical Greek to post impressionism, but his specialty is in the Art History of Afghanistan and its neighboring countries. Hamid Naweed is also a poet and a novelist and member of “Arch International” as well as other cultural societies, such as “Sham-i-Erfan” and “Seven Cities of Arts.”

Raja V. Ramani is Emeritus Professor of Mining and Geo-Environmental Engineering at Penn State. He has held a range of academic positions including Chairman of the Mineral Engineering Management Section and Department Head of Mineral Engineering, and was elected to the National Academy of Engineering. He is a certified mine manager and mine safety professional and has led mining projects in the Subcontinent, as well as assessing mining operations in over 35 countries during the course of his research. He has been co-director of three research centers, Generic Mineral

Technology Center on Respirable Dust, National Mined-Land Reclamation Research Center and the Standard Oil Center of Excellence in Longwall Mining. At Penn State, he directed the Miner Training Program and taught courses on underground and surface mining, mineral engineering management, mine operations analysis, mine systems engineering, exploration, geostatistics, and more. His research areas include innovative mining methods, simulation and mathematical programming, human resource development, environmental monitoring, land use planning and environmental site planning for underground and surface mining. He has published over 200 research papers and contributed to 25 books, encyclopaedias and handbooks. Dr. Ramani has served on a large number of technical and regulatory advisory groups for the U.S. government, international organizations and corporations including the World Bank, the United Nations, the U.S. Department of Energy and many others.

Douglas D. Walker, Ph.D., PH, is the Senior Advisor for Resource Management for the Offices of Afghanistan and Pakistan, in the Bureau of South and Central Asia, and has served at the State Department since 2010. He tracks and analyzes information and policy regarding water resources, agriculture and mining issues for the Offices of Afghanistan and Pakistan and provides on-call technical expertise in science and technology. He earned a B.S. in Watershed Science (1983), an M.S. in Civil Engineering (1986), and a Ph.D. in Agricultural Engineering (1994), all from Colorado State University. He is a registered Professional Hydrologist, the author or co-author of over 60 publications, and has over 25 years experience conducting groundwater studies and evaluating nuclear fuel and waste repositories in Sweden, Japan, and the United States. He was a member of the Peer Review Panel for studies of contamination resulting from underground nuclear weapons tests at the Nevada Test Site. He has been an American Association for the Advancement of Science (AAAS) Science and Technology Diplomacy Fellow, a Fellow at the National Center for Supercomputing Applications, an Associate Editor of the journal *Ground Water*, a member of the numerous national committees on water resources. He has served with the American Red Cross for nearly a decade, supporting six national-level disaster relief operations.

Mark Weber joined the World Monuments Fund in 1998 and is currently the Senior Field Projects Director for its Programs Department. Mr. Weber manages a range of WMF's field projects in regions including Central and Eastern Europe and South Asia; assists with the planning and review of WMF's country-wide initiatives in India and Turkey; and monitors the work of building conservation specialists on WMF projects. Prior to joining

WMF, Mr. Weber worked for the Technical Preservation Services Center, the major public outreach program at the New York Landmarks Conservancy, New York, NY. Previously, Mr. Weber worked for the Preservation Society of Newport County, Newport R.I., and the Newport Restoration Foundation. While in Newport he co-authored the book *Newport Houses*, Rizzoli International Publications, New York, N.Y., 1989. Mr. Weber has a M. A. in Historic Preservation from Boston University's Preservation Studies Program and a B.A. in Economics from the Whittemore School of Business and Economics at the University of New Hampshire.

Hosts

Dr. Cheryl Benard is the President of ARCH, the Alliance for the Restoration of Cultural Heritage (www.archinternational.org). After undergraduate studies in International Relations at the American University of Beirut, Lebanon, she received her doctorate and later her Habilitation from the University of Vienna, Austria, where she subsequently taught for some years before becoming Research Director of the Boltzmann Institute of Politics. In 2001 she became a senior analyst and program director at the RAND Corporation, specializing in nation building and a range of issues related to societies in conflict and post-conflict. She directed the RAND Initiative for Middle Eastern Youth and the Alternative Strategies Initiative. Her current focus is on the role of cultural heritage in supporting stability and a positive national identity. Benard has published over thirty books and numerous scientific articles, as well as two novels. She is a board member of the Afghan American Chamber of Commerce, where she leads a working group on Culture and Tourism.

Dr. S. Frederick Starr is Chairman of the Central Asia-Caucasus Institute and Silk Road Studies Program. He is a Research Professor at the Paul H. Nitze School of Advanced International Studies, Johns Hopkins University. His research, which has resulted in twenty books and 200 published articles, focuses on the rise of pluralistic and voluntary elements in modern societies, the interplay between foreign and domestic policy, and the relation of politics and culture. Starr holds a Ph.D. in History from Princeton University, an MA from King's College, Cambridge University, and a BA from Yale University. He was appointed President of Oberlin College in 1983, a position he held for eleven years. In 1994-96, he served as President of the Aspen Institute.



Photo by Cheryl Benard: Mes Aynak

About Mes Aynak⁶

Introduction

The presence of important and large archeological remains at this location has been well known since at least the 1960's and small-scale excavations were conducted over the years by Afghan, Russian and French archeologists.⁷ Nonetheless, the mining contract initially made no mention of archeological finds. Indeed, some of the initial reporting falsely stated that while conducting the initial mining exploration, engineers were surprised to

⁶ This chapter is taken from the White Paper published by ARCH in December 2011 and provided here as background about the heritage site Mes Aynak. The full version of the White Paper may be accessed online at www.archinternational.org. The conference fulfilled one of the recommendations of the White Paper.

⁷ Nicolas Engel, of the French archaeological association DAFA, dates the first exploration of Mes Aynak at 1963. "The Buddhist Monasteries and Settlement at the Mes Aynak Copper Mine, Logar Province," in ICOMOS, *Heritage at Risk 2008-2010*, Berlin 2010. Later, work was conducted there by Tarzi and by the renowned Russian archaeologist Viktor Sarianidi, and others.

happen upon these ruins. This is incorrect and indeed, impossible. Significant portions of the ruins were clearly visible at all times; their presence was known to inhabitants who in fact had been engaging in extensive looting over the years; the international archeological community knew of this site and many famous archeologists had worked there and published on the subject.

When their existence was finally acknowledged in the context of the mining effort, a plan was developed to utilize the run-up to mining operations – i.e. the time period during which exploratory digging takes place, facilities are built, infrastructure is established etc. – to save some of the artifacts by removing them.

This approach is known as “salvage archeology,” “rescue archeology” or “mitigation.” In archeology, this method is only chosen when there is no alternative.

It consists of limited documentation of the currently visible portions of the site and the removal of whatever artifacts can be taken away for conservation or placement in a museum – Kabul Museum – and a yet-to-be-built storage facility. The site itself, along with the still undiscovered and unexplored bulk of the historic remains – the buildings and structures themselves, the deeper layers of earlier habitation, the artifacts too large or too fragile to be moved, and most of those made in the locally typical manner from unbaked clay – would be sacrificed under this plan.

Experts consider Mes Aynak “one of the most intriguing ancient mining sites in Central Asia, if not the world;” they point out that the finds include “monumental statues of the Buddha that will have to be left in situ” (i.e. that cannot be moved); and that excavations would “almost certainly document” continuous habitation and economic activity over a period of many centuries, indeed millennia.⁸

⁸ Zemeryalai Tarzi and David Stronach. “The Copper Mine at Mess Aynak.” *New Channel Media*, undated online publication. Professor Tarzi is an Afghan-French archaeologist who conducted three official explorations in Mes Aynak in the 1970s.

The Mining Contract

Mes Aynak holds a very significant deposit of copper – an estimated six million tons. In 2007/2008, the Chinese company MCC won the mining contract for this site from the Afghan government. This was preceded by an elaborate bidding process overseen by international reviewers; nonetheless, allegations have persisted that corruption was involved and that the since-replaced minister may have received as much as 30 million dollars.⁹

At optimal extraction, 200,000 tons of copper are anticipated per year, which would generate an income of 450 million dollars for Afghanistan. There also are associated hopes for jobs, a railway, and a power plant.

Independent observers and NGOs question these expectations. Integrity Watch Afghanistan is concerned that the contract lacks binding timelines, and sees indications that despite contrary promises, MCC intends to largely employ Chinese workers. Doubts have also been expressed about the railway. Afghan authorities continue to hope for one, but there appears to be some uncertainty as to whether MCC has entered into a contractual obligation to build it or has only undertaken to explore its feasibility.¹⁰

⁹ See for example Dan Rather's report: HDNet. April 11, 2011. "Dan Rather Reports' Looks at Afghanistan's Largest Foreign Investment Project - A Copper Mine, Now Controlled by the Chinese Government." *PR Newswire*. URL: <http://www.prnewswire.com/news-releases/dan-rather-reports-looks-at-afghanistans-largest-foreign-investment-project---a-copper-mine-now-controlled-by-the-chinese-government-119612414.html>

The rumors have been sufficiently persistent that the Ministry of Mines, now under a different minister, took the unusual step of posting a reference on its official website. "Note: In 2009, there were some media reports of possible corruption in the form of bribes being taken for the award of the Aynak contract, although until now, any types of evidence in this regard has not been found but the position of the government and the new management of the Ministry of Mines is that in case of any evidence found in this argument the government will seriously deal with the issue accordingly to country's laws and other anti-corruption regulations." *Ministry of Mines, Islamic Republic of Afghanistan*. "Executive Summary Regarding Tender Process of Aynak Copper." Accessed on: August 3, 2011. URL: <http://mom.gov.af/en/page/1392>

¹⁰ This is according to cables from the U.S. embassy in Kabul and in Beijing, published by Wikileaks: Embassy Beijing. October 21, 2009. "PRC/Afghanistan: MCC on the



As always with a mining project of this magnitude and nature, environmental concerns are an issue. Copper mining carries risks to groundwater and to the long-term topography of the site. Some question whether Afghan authorities, given the overall uncertainties of their governance and the persistent instability in the country and in Logar in particular, are in a position to put adequate environmental safeguards in place and maintain oversight.¹¹ The likelihood of self-regulation by the Chinese company is also in some doubt.¹² To help with these issues, the World Bank has given the Afghan government a grant of over 50 million dollars to expand its capabilities for oversight and management of the project.

Aynak Copper Mine Project.” Wikileaks. URL: <http://www.cablegatesearch.net/cable.php?id=09BEIJING2918>; Embassy Kabul. October 5, 2009. “Security and Social Issues at Aynak Copper Mine.” Wikileaks. URL: <http://www.cablegatesearch.net/cable.php?id=09KABUL3101>

¹¹ “Gold, platinum, chrome and copper mining, pose a direct risk to groundwater pollution. The extraction of minerals requires blasting and, often, dewatering of mines. Mining wastes from underground activities pollute ground water. Pollutants are spread through the aquifers of the region. The de-watering of mines can transport these wastes to the surface and facilitate the spreading of the wastes.” http://www.nwpg.gov.za/Agriculture/NW_ENVIRONMENTAL_OUTLOOK/chapter.asp?CHAPTER=11&PAGE=2&TITLE=Part%202. In the case of surface mining, hazardous chemicals are used.

¹² Conflicts and issues have arisen in Peru and Zambia, to name just two examples. These have involved large scale riots in protest of poor working conditions and low pay: Bosshard, Peter. October 20, 2010. “Conflict at Zambian Mine Casts a Shadow on Chinese Labor Practices.” *The Huffington Post*. URL: <http://chinadigitaltimes.net/china/copper>.

In the judgment of subject matter experts, Mes Aynak is a location with the potential to be declared a World Heritage Site. A request to this effect has been initiated by the renowned Afghan archeologist Zemaryalai Tarzi; his action is symbolic, because such requests must come from a national government.¹³ To garner attention, he has launched a signature campaign with over 10,000 signatories to date.

Significance of the Site

A site of this caliber¹⁴ merits thorough mapping and exploration. This is a prerequisite for an informed decision on how, where, and when to conduct the mining operation. Such a survey was not carried out.¹⁵ Small-scale surveys have taken place but in the view of subject matter experts, these were not comprehensive or adequately resourced and did not make use of available technological resources.

The scientific, historic and touristic value of Mes Aynak, as well as its potential qualification as a World Heritage site and segment of a World Heritage route (the Silk Road) have not been assessed. Options for mining in a way that preserves the site or at least its most valuable portions, have not been discussed or developed. Consequently, the relative costs and benefits have also not been explored, i.e., on the basis of present levels of information it is not possible to weigh the pros and cons of different mining outcomes against the possible advantages and disadvantages of leaving portions of the site intact for scientific and touristic use.

Instead, what is happening at present is “salvage archeology.” Experts have been given funding to document and remove as many items as they can in the time allotted. This is better than nothing. But as the terms “salvage

¹³ UNESCO can only make such a designation at the request of a national government. Professor Tarzi has launched an online signature campaign, presumably to attract attention as a public relations method.

¹⁴ See for example Christoph Machat, Michael Petzet and John Ziesemer (eds.), “Heritage at Risk,” *ICOMOS World Report 2008-2010 on Monuments and Sites in Danger*, ICOMOS, Berlin 2010.
http://www.scotsman.com/news/international/afghanistan_s_ancient_jewels_finally_see_the_light_of_day_1_1973845

¹⁵ DAFA has published a two part mini-survey. “Mes Ainak, Archaeological Assessment Report, Transitory Document,” *DAFA Assessment 15/XI/2010*.

archeology” and “rescue archeology” indicate, this is a path of last resort, not a desirable or good outcome. This is especially true given the magnitude and importance of the site:

Experts believe that layers of habitation, including towns and commercial complexes from varying periods of history lie beneath the surface of this site.



Pompeii, Italy

In Pompeii, Italy, visitors can tour the ruins of the ancient city. Tourists bring in US\$20 million each year just at this one site alone.

Fragments of ancient statues, jewelry, coins and portions of murals have value and deserve to be exhibited in a museum, if they are all that remain of an ancient site. But, as many UNESCO conventions and experts¹⁶ attest, cultural heritage preservation is not a matter of just collecting and displaying

¹⁶ See for example UNESCO documents “Recommendation Concerning the Preservation of Cultural Property Endangered by Public or Private Works” (1968); “UNESCO Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas” (1976); and the World Heritage Convention (1972) which states that setting is an attribute of authenticity and needs protection through the establishment of buffer zones. See especially also the “Xi’An Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas,” adopted in Xi’An, China by the 15th General Assembly of ICOMOS, October 2005.

individual remnants and artifacts. It is their context that gives them meaning. The forum in Rome, or the city of Pompeii, convey the texture and the details of life and culture in a different era. The value would not be the same if one just removed the statues and some pottery shards from those two sites and put them in a museum. In sites that have historic continuity and where the remains are especially noteworthy, intact and extensive, the real value lies in keeping them in their historical placement.

It is fair to say that the stakeholders, for whatever reasons, have downplayed the archeological and heritage aspects of this site. For example, the World Bank document “Mineral Resource Tenders and Mining Infrastructure Projects Guiding Principles, Case Study: The Aynak Copper Deposit, Afghanistan,” notes on page 51 that “the Aynak project area includes one of the most prominent new archeological sites in South Asia, Mes Aynak.” Yet the table of contents – a full three pages long - does not contain a single entry for Mes Aynak or archeology; instead, the sentences about this acknowledged major site are subsumed under “Regulatory, Cultural and Social Issues at Aynak” and the text itself conveys the impression that the matter has been successfully resolved and there are no outstanding concerns or issues.¹⁷

However, mismanagement of Mes Aynak can have negative consequences for all parties involved. The procedures and the outcome will be judged by the international expert community in the decades to come, with potential fallout if it appears that due diligence was not applied for the protection of cultural heritage.

Afghanistan is a signatory to international conventions obligating it to protect such sites. Analogies to the Taliban’s destruction of the Bamiyan Buddhas are already being drawn in the press reporting.¹⁸ Commendably,

¹⁷ World Bank, Extractive Industries for Development Series 22, September 2011.

¹⁸ Writing in *Science Magazine*, Andrew Lawler notes that “A decade after the Taliban destroyed the famous Bamiyan Buddhas...archaeologists are warning that Afghan antiquities are again at risk. This time the threat comes from a venture blessed by the Western-backed Afghan government.” “Copper Mine Threatens Ancient Monastery in Afghanistan,” *Science Magazine*, Vol. 329, July 30, 2010. See also: Vogt, Heidi. November 14, 2010. “Chinese Copper Mine in Afghanistan Threatens 2,600 Year-Old Buddhist Monastery.” *The Huffington Post*. URL: http://www.huffingtonpost.com/2010/11/14/chinese-copper-mine-afghanistan-mes-aynak-_n_783315.html; November 15, 2010. “Afghan Buddhist Relics:

China is spearheading an effort to have the Silk Road declared a World Heritage Route – pro-active steps to conserve portions of a Silk Road site such as Mes Aynak would contribute positively to this effort. This ancient site could potentially become a cutting edge model for mining that preserves antiquities.

Recommendations

- First, an independent group of Afghan and international experts should conduct a proper assessment of the site, horizontally and vertically, to determine exactly what it holds and where its more important substrata are located. It should follow standard, state of the art procedures for a site of this importance and magnitude. This should culminate in the development of a master plan for the site.
- Until this is completed – and in line with international standard practice - no further extractive action should be taken at the site. Bearing in mind that both the destruction of heritage objects, and their removal to a storage facility, are irreversible, neither should occur before the assessment is completed and a responsible plan has been formulated.
- Next, a technical and engineering committee should be convened to meet with the archeologists and discuss and develop options for mining that allow for the preservation of the site or the most important portions of the site.

Archaeologists Issue Warning,” *BBC News South Asia*; Marlowe, Ann. September 17, 2010. “Rescuing Afghanistan’s Buddhist History.” *The Wall Street Journal/ www.wsj.com*. URL: <http://online.wsj.com/article/SB10001424052748704644404575482251955785046.html>;

Rodriguez, Alex. July 12, 2011. “Teams Scramble to Save Afghan Artifacts Before Copper Mining Begins.” *Los Angeles Times*. URL: <http://articles.latimes.com/2011/jul/12/world/la-fg-afghan-archeology-20110712>;

Foust, Joshua. July 12, 2011. “How Chinese Mining is Destroying Afghanistan’s Historic Ruins.” *The Atlantic*. URL: <http://www.theatlantic.com/international/archive/2011/07/how-chinese-mining-is-destroying-afghanistans-historic-ruins/241808/>

- Fourth, a joint group consisting of members of the above two committees should oversee the mining project during all phases and be available for advice and consultation.
- The approach should be documented with a view to creating a model for future comparable cases. The intersection of economic, social development, technological and cultural preservation goals is not unique to this site.

Conclusion

Ideally, Mes Aynak could become a model case with a win-win outcome, pioneering methods for the extraction of resources in a way that is ecologically, culturally and historically responsible while meeting the needs of social development and the global economy.



*Photo by Cheryl Benard: Kabul Museum, Exhibition "Buddhism in Afghanistan,"
this artwork was taken from the Mes Aynak site*