

SOCIETY OF AFGHAN ENGINEERS

QUARTERLY
eNEWSLETTER



*CELEBRATING
10 YEARS OF
CONTINUOUS
SUCCESSFUL
PUBLICATION*

SAE MISSION

TO PRESENT A FORUM FOR AFGHAN ENGINEERS, ARCHITECTS AND SCIENTISTS IN THE SHARING OF EXPERIENCES AND KNOWLEDGE AND FOSTER THE PROMOTION OF SCIENTIFIC, ARCHITECTURAL AND ENGINEERING ETHICS IN OUR QUESTS TO ENHANCE AFGHAN CAPACITIES IN THESE FIELDS FOR THE SERVICE OF AFGHANISTAN AND THE WELL BEING OF THE PEOPLE.



THE WATER OF HOPE, SALMA DAM

SAE eNEWSLETTER

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Note From the Editor-in-Chief, SAE eNewsletter



Technology and Wellbeing of a Nation

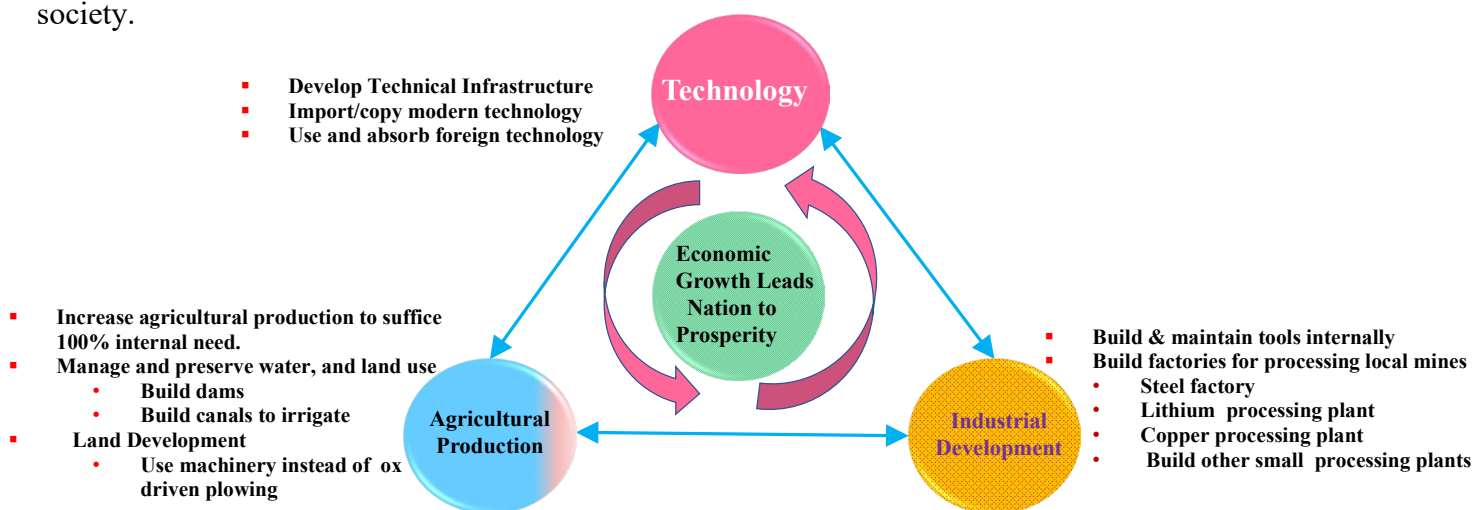
I am hearth broken adding this sad news at the start of my editorial note. It is a time of grief and sadness, knowing the tragic losses and destruction in our beloved home country of Afghanistan due to recent earthquake in Paktika and Khost Provinces. The tragic news has been heartbreaking. Our prayers are for those affected during this terrible time, Jenatul-Ferdous to those who lost their lives, and Sabre Jameel to the survivors. More than thousand residents have lost their lives and several thousand houses have been demolished.

The Society of Afghan Engineers (SAE) have always stood by our beloved country in such time of calamity, it is extending help and support again during this terrible time. SAE leadership has instructed it's representative (Mr Walid Howaida) in Kabul to visit the affected areas, assess the situation and distribute the allocated fund to the needy in those two provinces.

I wish each one of you and your respected family a happy, joyous, healthy, and prosperous upcoming Eid-el-Adha.

Use of technology drives **economic growth**, it generates opportunities/well-paying jobs, reduces poverty, transforms a society, and **leads a nation to prosperity**. **Economic growth** does not occur instantly, it is a process that requires a workable strategy, and that takes time.

A workable strategy is the use of modern technology. **T**echnology can be copied and/or imported from nations who are the early starter of it, but the receiving nation must have infrastructure of knowledge, and technical capacity - there should be existence of scientific knowledge to absorb and assimilate the imported technology so it can succeed. In general, economic growth creates jobs that leads to the development of a society.



Economic developments are a continuous process and takes time, where traditional technology is transformed by using knowledge of science and modern engineering.

If we look at countries where technology was transferred or copied from the early starter nations, it took them several decades to absorb foreign technology for reaching the stage of self-sufficiency. First, they adopted the technology for their own need, and later brought innovations and industrialized their nation.

Technology is not just machinery and equipment. There are more to it, such as supporting technical know-how, skills and overall knowledge that supplement technology. Equipment and machine-based technology needs maintenance, and repairs. **Afghanistan** needs to adopt science, engineering, and modern technology, and it must follow similar process to achieve sustainable economic growth that can lead to prosperity.

Poverty can't be removed by giving cash money or loaves of bread at the bakery to the poor, so they will stop being poor. Poverty is more than just a lack of money, poverty can be reduced by providing poor households health care, educational resources, and access to financial system to exit poverty. This in return transpire groups of entrepreneurs, that further leads to economic growth. We see no/or slow economic growth in **Afghanistan**, and there is a decline of human development that have further contributed to the economic decline. A large group of professionals are selling vegetable, fruits, and fast food, etc. on four-wheeler carts in the bazar or looking for simple labor work.

The first area that **Afghanistan** must import foreign technology is to increase agriculture productivity it needs to serve 100 % of the country demand .

Food supply is paramount to the survival, thus making agriculture priority. The population of **Afghanistan** is on the increase, ways and means must be found to increase agricultural productivity. Use of Technology is the way to feed the growing population. The vast scientific knowledge that has been developed by the developed nations can be imported and implemented

Traditional Way



Plowing field for crop



Water trickling out of a Karez (Village of Mohammad Quli, Jaghatoo Wardak Province)



Cleaning of local Karez for water (Village of Mohammad Quli, Jaghatoo Wardak Province)

Technology Based



Making field ready for planting crop



Salma Dam



Kamal Khan Dam

Water gushing out from a Dam

The development of modern farming tools such as plough, tractor, planter, harvester, etc. to replace old simple tools such oxen or animal driven tools have become possible with science and technology. This has made farming easier, less labor, and faster.

To improve agricultural productivity, management of water, irrigation and efficient land use is required. **Water preservation, building dams, and canals and land development** must move at faster pace. **Afghanistan** main source of water is rivers, where dams need to get build, so water can be stored and made available when it is needed. Even a drop of water should not get wasted.

The traditional technology now must transform into modern technology that is based on scientific and engineering knowledge, where the quality and quantity of production can increase. Since a large sector of the population is involved in agriculture, increase in agricultural productivity will become a catalyst for further growth. Once the nation become self-sufficient from its own agricultural products it then can move to industrialization phase.

The second area that **Afghanistan** must import technology and use it is to bring to surface the hidden wealth, that Allah has given to the Afghan nation, build factories to **process the mineral deposits** in the **country** that will create well-paying jobs to citizens and then sell the processed products to the world market. The country must realize the role of engineering and the importance and value of technology and pay attention to **engineers , scientists, and technologists**. The mines are well known such as Haji-Gack iron ore mine, Aynak copper mine, Lithium mines and several more. This way the country can move to industrialization.

Traditional Way of Mining



Local Method of Mine Extraction , transport & tool making

Technology Based Mining & Processing



Iron ore mine extraction & transport to steel factory



factory processing

With Best Regard
Hafizullah Wardak
Editor- in- Chief SAE eNewsletter and Chairman - SAE eNewsletter Subcommittee
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SAE Society of Afghan Engineers

Message From the President of SAE July 2022

Members of the Society of Afghan Engineers



“ May you have a happy 4th of July and a happy and prosperous upcoming Eid-el-Adha.”

As we entered the summer of 2022, it is almost a year since regime changed in Afghanistan which resulted in the closure of some universities for a while and the unfortunate departure of some faculties and students. With the good news of reopening of the universities, the Society of Afghan Engineers developed some positive initiatives to reach out our colleagues in universities in Afghanistan.

I am pleased to report that the Society of Afghan Engineers’ Architecture Subcommittee completed the schedule and program of a very important international students design competition, aimed to re-house the current cave dwellers of Bamiyan, located in Central Afghanistan. Consistent with the mission of the Society, the aim is to improve education and the practice of architecture and design in our beloved country, Afghanistan. Architecture and urban planning design schools and departments in various Afghanistan’s universities including Kabul University, Polytechnic University, Herat, Paktia, Khost, Kandahar and Nangarhar Universities will be invited to participate in this competition. A number of selected US universities like MIT, Harvard, Washington State, and Hartford universities will also be invited to enter to this competition. The first three winners will be selected by a jury and cash prizes will be given to the winners. Also, the Society intends to support Afghan students financially by providing material and equipment to design the project and compete.

The Society of Afghan Engineers’ General Annual Assembly Meeting is one of the major events of the Society each year. Last year, the General Assembly took place virtual on October 16, 2022 and it was a successful one. Over 60 members and colleagues from around the world attended the meeting and there were 13 presenters including the Keynote Speaker and the Guest Speaker. This year’s SAE General Assembly Meeting is decided to take place virtual via zoom on Saturday, September 7, 2022. A task force team consisting of three qualified members of the Society will be selected to prepare the agenda and schedule of this year’s General Assembly.

I am also please to announce the approval and appointments of two new Chairpersons of the Society’s Membership Committee, Ms. Donya Amiri, and the Water Resource Subcommittee, Mr. Hadi Rakin. I once again congratulate both of them and look forward to their contribution to the Society’s effort in the respected areas.

The Society's Website is under construction. A task force consisting of five (5) qualified members of the Society was selected on April 21, 2022. The task force team met virtual via zoom numerous times to design the new SAE Website. A contract was signed with GoDaddy.com within the Society's budget and we are expecting that the new website will soon be launched. Once again, thanks to all members of the team working on the new website and particularly to Ms. Donya Amiri leading the team and working so hard to organize the meetings a compiling all the new information for the new website.

Communications and discussions are underway with Eng. Feda of the Afghan Education for Better Tomorrow (AEBT) to re-open the SAE joint effort began in May 2021 for a Feasibility Study of a Renewable Energy pilot project in Herat University. Meetings have taken place between AEBT and the Herat University new head of Engineering department and the Society of Afghan Engineers is invited to join the discussion. We are re-evaluating our position and I am in the process of forming a task force team consisting of the members of the Society previously involved and took part in the discussions and meetings concerning the Renewable Pilot project in Herat University.

Currently, we are focusing more on establishing communications with Afghan and American Universities, Professional Institutes, and other International Professional Communities to collaborate in professional activities in Afghanistan. We are also carefully evaluating options to establish contacts with US government agencies involved in helping and supporting development and humanitarian programs and activities in Afghanistan.

With Regards,

Najim M. Azadzoi, AIA

SAE President

Message From the Chairman, SAE Board of Directors

Dear readers of the SAE eNewsletter,

For this issue of the ENewsletter, in lieu of the usual reporting of the activities of the Board of Directors, I would like to provide you with a little history of Engineering and Architecture. It was due to my own curiosity and also, that discussion of whether egg was first or the chicken. In reality, it does not matter, as both disciplines are complimentary to each other. Those of you that are graduates of the Faculty of Engineering know that parallel with different disciplines of engineering, there was that good department of architecture.



To start with, let's look into the origin of these vital disciplines. Etymological research indicates that the word "Architect" comes from the Latin word of "*architectus*" which comes from the Greek word of "*architéktōn*". "*Architéktōn*" is composed of two parts: "*archi*" which means "*master*" and "*tekton*" that means "*builder*". As for Engineering and Engineer, there are many different etymologies. It most probably came from the Latin word of "*ingeniare*" which means to "*devise*." At their origin in ancient times, there was no distinction. Those known as architects also did the engineering, and those known as engineers equally performed as architects. It has been said that "The first engineers were irrigators, architects and military engineers...".

We think of an engineer as someone who designs some structure or machine, or who directs the construction of it. We also know those who operate or maintain structures and machines as engineers. In practice, ancient engineers were inventors, and the inventors were also classified as engineers. Accordingly, in ancient times, the innovators and designers were lumped together and were all known as "engineers."

The profession kick started with the kings who ruled early cities, and desired houses larger and more comfortable than the huts of stone and clay. So, they called the professionals of those days known as architects to build them palaces. The architects did both the planning and the engineering. Next came the polytheistic priests who insisted that gods will be offended if they were not housed as splendidly as the kings. For that, architects planned and built temples, containing statues of the gods and other works of art. To protect the wealth of the gods and the kings, military engineers were born. They built walls and dug water filled ditches (also known as moats) around the cities.

Irrigators were also engineers who laid out the canal systems, on which the early river valley civilization was based. This in turn enabled the population to grow food and to herd animals.

These professionals simply used material that were strong and abundantly available. Prior to the invention of mortar, walls were simply made of stones. Those made with small stones stood up to weather, but could not stand up to enemies. Then came the idea of very large stones that were trimmed to fit roughly together. Safety came with the shear weight of these stones. The term "cyclopean walls", still in use, was coined then.

Engineers laid the foundation of technology, and thereby that of civilization. Despite that, early history does not tell much about them. The earlier historical records were made by priests praising their gods and poets flattering the powerful and the kings. Technology in their mind was a mundane matter. Looking back at the progress, and the technological wonders of the twenty first century, there cannot be any denial of their importance and their unique role in the robust civilization of our times.

Go engineers go... Go architects go!

Stay safe and be well.

Sincerely,

Abdul Manan Khalid, P.E., LEED (BD+C)

Chairman, SAE Board of Directors

Sincerely



SAE

Society of Afghan Engineers

SAE Executive Action No. 17, SAE CONTRIBUTION TO VICTIM OF JULY 2022 EARTHQUAKE IN PAKTIKA AND PAKTIA, AFGHANISTAN.

The Society of Afghan Engineers transferred \$10,000 from Society's Bank account via Western Union to SAE representative, Mr. Walid Howaida, in Kabul on June 28, 2022. The purpose of this transaction is to help and to provide assistance to the victims of the July earthquake in Paktika and Paktia provinces of Afghanistan. The amount of \$10,000 will need to be replenished from the donations and contributions to be made by the Society members and friends.



Mr. Walid Howaida, SAE representative in Afghanistan will travel to areas affected by the earthquake and will survey and document areas most affected and will identify qualified victims and the type of assistance needed to be distributed to the earthquake victim. A full report with videos and photos will be submitted to the Society for the records.

Any amount collected over \$10,000 will also be used and distributed to the earthquake victims.

Yours,
Najim Azadzoi, SAE President

SAE Executive Action No. 13, May 20, 2022

SAE Executive Action No. 13, April 21, 2022 SAE 2021 NEW WEBSITE

Per Executive request on 03/31/2022, the Board of Directors approved the design and construction of a new Website for the Society. I am pleased to announce that the SAE Executive Committee assigned a Task Force comprised of the individuals listed below to review the current SAE Website and propose a new design.:

1. Ms. Donya Amiri, Team Leader
2. Mr. Rafaat Ludin
3. Mr. Jalal Masumi
4. Mr. Mahmoud Samizay, and
5. Mr. Hamayoun Ibrahim

Progress

The Task Force team met on Saturday, April 16, 2022, and shared their thoughts and ideas and explored options to proceed. A second meeting will be scheduled soon to discuss the design of the new SAE Website.

On behalf of the SAE, I sincerely appreciate those who participated in the meeting. We understand many of our SAE members and colleagues may have ideas about the website and please feel free to contact Ms. Donya Amiri and share your thoughts and ideas.

With Regards,
Najim M Azadzoi, SAE President.

SAE Executive Report No. 15, May 20, 2022

SAE Executive Action No. 15, SAE GENERAL ASSEMBLY MEETING, 2022

May 20, 2022

In a meeting of the SAE Board of Directors on 5/5/2022, it was decided that the upcoming **SAE General Assembly Meeting** to be convened virtually on September 17, 2022.

As per SAE Bylaws, Section 9, Article 9-1, the Society shall hold an annual face-to-face general Membership assembly meeting, video, or teleconference for the transaction of its business in a place fixed by the **Board of Directors**. The meeting shall be held in the month of **July or August**, unless changed with the approval of the Board of Directors. Article 9-2 states that "All Members shall be notified by e-mail or other types of written notices about the agenda, date, time and place of annual meeting at least 90-days prior to the date of the scheduled meeting.

Yours,

Najim Azadzo,
SAE President

SAE Society of Afghan Engineers

SAE Executive Action No. 16, INTERNATIONAL STUDENTS DESIGN COMPETITION, REHOUSING THE CAVE DWELLERS IN BAMMIYAN, AFGHANISTAN.

Consistent with our mission: to improve, educate, and sustain the practice of the architecture and design in our country, this year we are planning to launch an “International Student Design Competition to rehouse the displaced families who occupy the caves at the historically known cliffs of Bamiyan where the remains of the Statues of famous Buddha are located,” hosted by SAE, Architecture/ Urban Design sub-committee. Among the participant universities will be various architecture and urban planning programs in Afghanistan, in partnership/collaboration with few invited foreign universities. The education goals are to encourage collaboration, interchange and learning between the participant Afghan/foreign universities. The assigned team, “International Housing Competition Team,” for this task is diligently working on the following.

1. Scope of the competition – The international housing design team had several meetings during past months on the preparation of the document, and currently the final draft is prepared and is ready to be released. The document defines the design program components such as: the scope and goals of the competition, detailed space and site programs, timelines, submission requirements, eligibility, evaluation criteria, jury composition, and awards.

2. Participant universities – Invitation letters are prepared to be sent to the selected Afghan/foreign universities, architecture, and urban design programs to participate in the housing design competition. Possible Afghan universities will be: the Kabul University, Kabul Polytechnic, Herat University, Kandahar University, Paktia, Khost and Nangarhar universities. Among the foreign universities, currently we are considering inviting MIT, Harvard University, Washington State University, and Hartford University. Other interested qualified institutions may be added to the list with the approval of the team.

3. Funding and expenses - Fundraising possibly among SAE members and other donor organizations will be held to help the Afghan students with costs related to the design production, equipment, materials, and other related expenses. Prizes will be decided accordingly when funding becomes available. A fundraising flyer/poster is prepared to be circulated among the possible donors for this purpose soon.

4. Timelines –We are targeting to advertise, and release the housing competition program to the selected universities by June 2022 – Registration will be open to universities between July 15 and September 30th, 2022, through our website electronically at www.afghanengineers.org. Competition submission deadline will be on December 15, 2022, and selection of the winners, Jury reviews/ announcement of the winners will be held on January 15-30, 2023

5. Website for the competition – The SAE website which is already approved by the board of directors is near completion. The site will exhibit the competition materials, a

data bank, and related information to the competitors for easy access. Also, the site will aid the jurors to access the final project submissions for their evaluation.

Keeping in mind that at this point the competition is aimed to improve the quality of design education in Afghan universities - however, we are hoping that the outcome of the student design competition to rehouse the displaced families of Bamiyan, will become a catalyst for helping the communities in the Afghan cities with their acute housing problems.

Yours,

Najim Azadzoï, SAE President

Bashir Kazimee, SAE Architecture Subcommittee Chairperson

BUILDING FOR PEACE:

Re-housing the Cave Dwellers of Bamiyan, An International Students Design Competition

CONTEXT

The Society of Afghan Engineers (SAE), Architecture and Planning Division host an International Student Design Competition to provide sustainable housing and infrastructure for the war displaced families of Bamiyan, who occupy the caves at the historically known cliffs of Bamiyan where the remains of the Statues of famous Buddha are located. The sandstone cliffs of Bamiyan are most famous for the giant 6th century Buddha statues carved out of the rock, which were destroyed in 2001. Historically, these caves on the side of the cliff were dug out by monks and used for meditation and retreat.

Since the 1990s, about 150 native families (1000 people) sought refuge in these caves for safety and protection. There is ample evidence that these historic sites are transforming significantly to accommodate the growing family meek living space needs. There is a growing fear that the cliffs at the important world heritage site will become structurally unstable and will be lost altogether due to misuse.

*"The caves are our **historical heritage**," says Ghulam Ali Wahdat, the governor of Bamiyan. "They must be preserved and open for tourists to come and visit." *The longer the caves are occupied by families, the more damage is done to the site*, as families install front doors and windows, build makeshift extensions, and rig up satellite dishes and solar panels.*

1. The Purpose

The design challenge will propose a viable and affordable housing solution for the low-income displaced families of cave dwellers at Bamiyan City. The Competition proposal must adhere to two interrelated critical components, the development of a sustainable small and manageable community with its related infrastructure and the affordable housing zone

The re-settlement of these approximately 150 displaced families would have a noticeable impact on the living condition of Bamiyan residents. This housing proposal will inevitably need to be supported and funded by outside sources for land acquisition, infrastructure development and housing construction. The achievement of this goal will have far-reaching environmental, social and economic benefits for the Bamiyan city.

2. Product and Process

- **Community:** The proposals should consider the competing interests of the environment in the city of Bamiyan; its land use planning, environmental impact, contextual appropriateness, compatibility with the existing infrastructure, and employment opportunities, in order to invigorate the socio-economic and cultural qualities of the residents. Considerations should be given to the provisions of basic infrastructure and its long-term maintenance, and potential tourism benefits to contribute to the city economy. Construction of necessary infrastructure and municipal services such as water, sewer, paved roads/ walkways, schools, health facilities, mosque and community center and etc., can be formulated in gradual manner and time periods of 5-, 10-, or 15- year intervals as suitable to the availability of funds. The competition proposal envisions the residents' collective efforts through a self-help approach, availability of microfinance schemes, participation of NGO's and social institutions is expected to help in the implementation process.
- **Housing:** must adhere to the traditional practices and cultural norms of privacy of family and neighborhood. The housing units should consider flexibility and incremental growth to absorb the changing needs of the families' structures. It should be noted, Afghan families tend to retain multi-generation members such as children, parents, and gran-parents, close relatives in some instances, in one household. Several options should be proposed for different family sizes. (A typical family size ranges between 3 - 6 people per household). Employing traditional and sustainable strategies for climate control, use of renewable energy, rainwater retention, natural cross ventilation, proper solar orientation, shading strategy, and natural daylight in the residential units are good practice considerations and sustainable approach for this project.

3. The Site

The proposed Competition site attached is located on the north side of the Bamiyan valley along the Charikar – Band-e Amir highway. It is located 5.5km east of the Buddhas and 4km from the City Center. It is a south-facing site with a slight slope of 10-20%. An 18m right of way is planned around the periphery of the site with two entries from the high way. All internal roads and circulation system will be part of the competition design.

Total area of the site is approx.4 hectare. Future expansion for more low-income housing can take place to the north and west of the site.

Bamiyan City has two distinct topographical characteristics: The lower valley areas and the upper north cliff.

- The lower riverine valley area is the historic area where the old bazaar is located with some existing indigenous houses, and where the lush green farming fields lies.
- The upper area above the north cliff, is where the airport is located. Through time the administrative sector, commercial zone, and residential buildings gradually expanded. The official Master Plan shows the city centre and most of the urban growth proposed in this area,

The 150 families relocation of the current cave dwellers to the new site requires sustainable land value assessment in the context of the current private agricultural zone. The design competition proposals should have a clear description of the site accompanied with a real or idealized site drawing/map. The site drawing, at minimum, should show the existing boundaries and main features of the site. The competitors are encouraged to refer to the Bamiyan's master plan maps and aerial photos that can be helpful for the site location information details.

4. Submission requirements

The competition goal is to encourage collaboration and exchange of ideas between foreign and Afghan university students (male and female). Therefore, it is ~~intended~~ required that the final submission should be a collaborative partnership between foreign and Afghan institutions.

- Project brief: one-page text and graphics for distribution.
- Presentation boards: should illustrate, A: immediate strategy, B: long term development.
- Community site plan: A textual description of the concepts and strategies, sketch/plan stressing relationships to the surrounding sites. Housing group plan showing relationships between units, interior and exterior spaces, etc. A site section.
- Housing: typical unit plans, sections and elevations, 3-D views, and other physical features.
- YouTube video (audio/video) in power-point format of the competition to be viewed by the jury for evaluation.

5. Eligibility

The Competition invites architecture, urban planning, and engineering students from selected institutions in Afghanistan and the USA to apply their collaborative efforts and innovative talents in developing achievable housing solutions which to help and integrate the current cave dwellers population (approx. 150 families) into the fabric of the community and to fully include them in all social, cultural, and productive activities.

6. Deadlines

Registration should be completed electronically through website at www.afghanengineers.org.

Contact: Najim Azadzoi, AIA - azadarch@aol.com

Prof. Bashir Kazimee, AIA - bkazimee@wsu.edu

- Competition Registration Deadline Date: July 15-September 30th, 2022
- Competition Submission Deadline date: December 15, 2022
- Jury reviews/ announcement of the winners: January 15-30, 2023

7. Evaluation criteria:

The competition evaluation will be based on the thoroughness, achievability and outcome quality of work, including but not limited to:

- Sensitivity and respects to tradition's privacy needs, family structure, community, and others in design solutions, implementation and construction.
- Supports self-sufficiency and employment, economic growth and improve living quality of Bamiyan residents.
- Minimize dependency on the outside support (agency and materials)
- Considers ways and means of active, and meaningful process of participation by the villagers and dwellers in building achievable peace.

8. Awards:

The final winners will receive:

- First Prize US \$ 2500.00,
- Second Prize US \$ 1500.00,
- Third Prize US \$ 1000.00,
- And, at the discretion of the jury there will be Honorable Mentions. All project submissions will be recognized with an acknowledgement certificate of participation after each phase.

9. Jury:

- Selected SAE representative(s)
- Selected Development/NGO representative(s)
- Selected local Bamiyan resident representative(s)
- Selected University representative(s)
- Selected Professional representative(s)

10. Exhibitions:

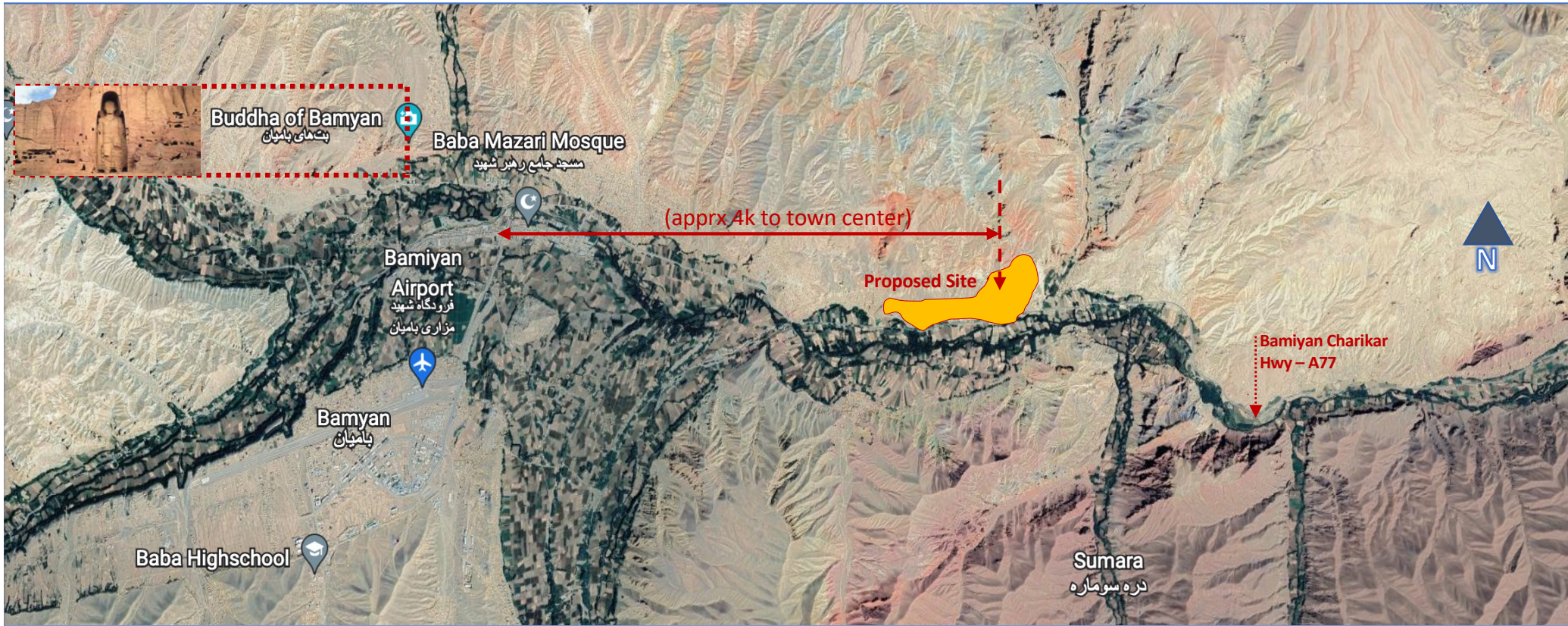
The Finalists are invited to present their projects online on YouTube and the physical place will be TBD

- Poster/panel exhibition, location TBD.
- Online digital presentation on YouTube (audio/video)



BAMIYAN CITY CONTEXT PLAN

Re-housing the Cave Dwellers of Bamiyan, An International Students Design Competition



North Orientation

South Orientation

West orientation

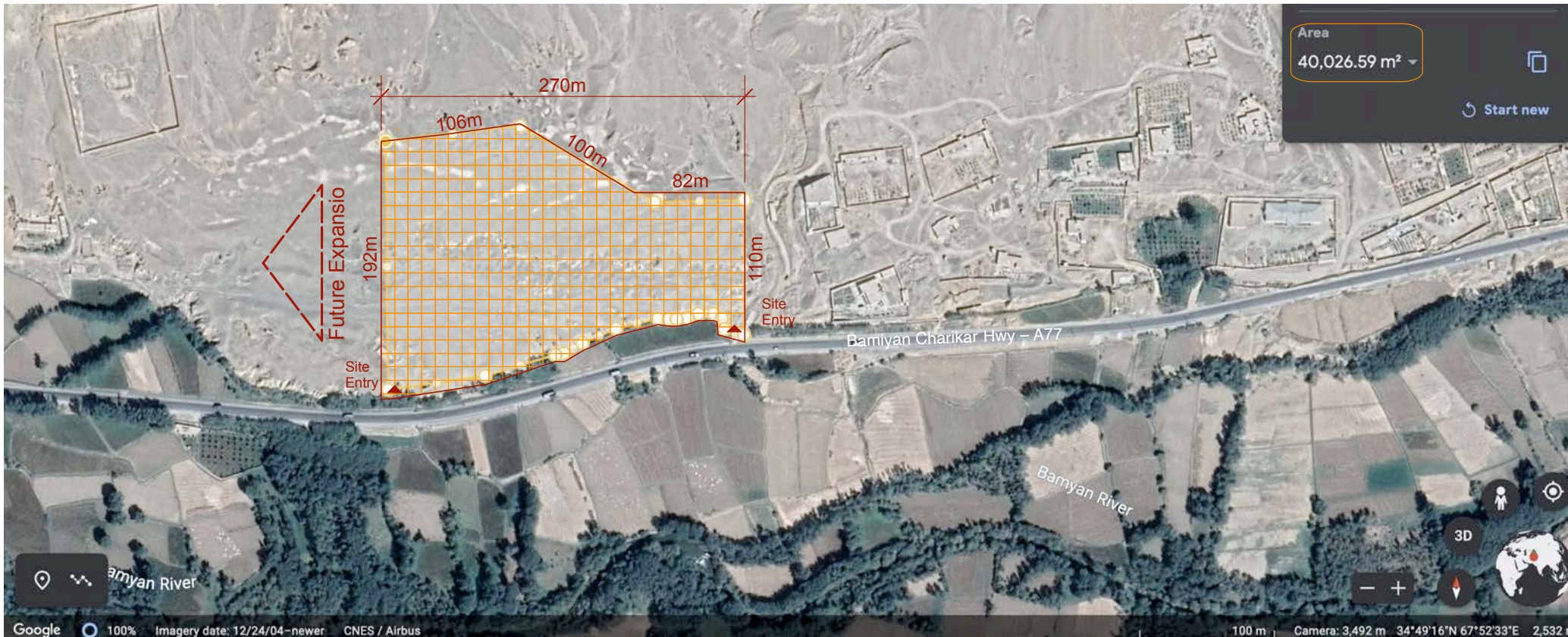
East orientation





PROPOSED RE-HOUSING COMPETITION SITE PLAN

Re-housing the Cave Dwellers of Bamiyan, An International Students Design Competition



“The Bamiyan Valley is an outstanding example of a cultural landscape which illustrates a significant period in Buddhism” (UNESCO- Criterion (iv)). Lying along the historic Silk Road trading route, it was a meeting point of Indian, Chinese and the Greco-Roman-inspired Gandhara cultures, as well as a place where Buddhism coexisted peacefully with Hinduism and, later, Islam. The statues, categorized stylistically as Indo-Greek, spring from that cultural mingling (<https://sacredland.org/bamiyan-valley-afghanistan/>).

The proposed Competition site is located on the north side of the Bamiyan valley along the Charikar – Band-e Amir highway. It is located 5.5km east of the Buddhas and 4km from the City Center. It is a south-facing site with a slight slope of 10-20%. An 18 m right of way is planned around the periphery of the site with two entries from the highway. All internal roads and circulation system will be part of the competition design. Total area of the site is approx. 4 hectare. Future expansion for more low-income housing can take place to the north and west of the site. Extensive related researched information can be retrieved from the following sources.

- “The importance of index fossils in age determination of the geologic age of strata: A case of Band-e-Amir of Bamiyan province, central Afghanistan”
- The Future of the Bamiyan Buddha Statues Heritage Reconstruction in Theory and Practice (SBN 978-92-3-100419-3)
- <https://www.khanacademy.org/humanities/ap-art-history/west-and-central-asia-apahh/central-asia/a/bamiyan-buddhas>
- Geology, Water, and Wind in the Lower Helmand Basin, Southern Afghanistan - By John W. Whitney

Re-housing the Cave-dwellers of Bamiyan – an International Student Design Competition

S.A.E. invites support from the potential community donors to fund this worthy competition



Sponsored by the Society of Afghan Engineers (S.A.E.), Architecture and Planning Division

The international academic design competition focus is to rehouse the current displaced cave-dwellers at the historical cliffs of Bamiyan valley where the remains of the notable Buddha Statues are located. The competition is open to Afghan universities and selected US institutions of architecture, urban design and engineering programs for the Fall 2022. The competitors must register electronically between July 1st through September 30th on our website: www.afghanengineers.org.

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Prof. Bashir Kazimee, AIA - bkazimee@wsu.edu



Kabul City Groundwater Aquifer Storage and Recovery

By

Amanullah Mommandi, M.S., P.E.

(Part Two of Four)

Abstract

This article is the continuation of the articles published in April 2020, and April 2022 issues of the SAE eNewsletter.

Rapid population growth, excessive pumping of ground water for commercial use, and the reduction of groundwater aquifer recharge due to droughts and other factors have led to drastic reduction of groundwater table for Kabul City

In the first part of this article, published in April 2022, the author has discussed the planning history of Kabul City and the implementation of Aquifer Storage and Recovery (ASR) programs to provide adequate water to Kabul City water users.

In a simplistic term the ASR program is to inject water into aquifer when there is adequate surface water available and then extracting it back when needed.

The Author recommends using the two dams that are currently under construction and proposes the construction of four new dams to provide direct drinking water as well as to support the ASR Program for Kabul City's municipal water need. Following is a short segment of Tolo News related to Kabul groundwater for the readers information.

A Tolo News reporter in her Bazar Program of December 11, 2019, asked the Ministry of Energy and Water's Head of the Groundwater Department questions related to Kabul City groundwater issues and concerns. The full interview can be accessed from the following link:

<https://www.youtube.com/watch?v=YTXgZ9UI0w4&t=823s>

Minster of Energy and Water 's Groundwater Department representative stated the following:

- Kabul City with current population of five million need 150 million cubic meters of water per year based on the consumption of eighty liter per person in 24-hours.
- It is estimated that 95- 100 million cubic meter of water is pumped out of the Kabul Groundwater Basin by the city and private sector per year.
- Recharge capacity from rain, snow, Paghman River, Kabul River, and Logar River is about sixty million cubic meter per year
- The deficit is about 35-40 million cubic meter water per year. This deficit contributes to the drawdown of the groundwater about 3-5 meter per year in Khair Khana, but unnoticed in Bagrami area.

The city must investigate new sources to augment the current deficit as well as future demands.

The author has identified the current and future sources for Kabul City drinking water as well as for the implementation of the ASR program implementation.

Following are the main sources of water for current and future development need of Kabul City:

- Qargha Dam (existing)
- Shah -wa-Arus Dam on Shaker Dara River (under construction)
- Shatoot Dam on Kabul River above Reshkhoo on Kabul River (under construction)
- Sangi Naweshta Diversion Dam on Logar River at Sangi Naweshta (new)
- Tangi Gharu Dam on Kabul River at the mouth of Tangi Gharu on Kabul River (new)
- Sayyad / Tagab Gorge Dam on Panjshir River (new)
- Ghoorband Dam on Ghoorband River upstream from Jabil Siraj

Due to the eNewsletter space limitation, the author will be discussing the Shah-wa-Arus and Shatoot Dams providing direct drinking water as well as water for ASR Program. The importance of other dams will be discussed in the coming issues of SAE eNewsletter .

Followings are the two dams that are currently under constructions. Both dams will play key role in providing drinking water directly to Kabul City residents as well as to future ASR Program

1. The Shah-wa-Arus Hydropower Dam

The Shah-wa-Arus dam is currently under construction across the Shakardara River North of Kabul. This dam is a 75-meter-high concrete gravity dam.

After the completion of the dam, it will produce 1,200 MW Hydroelectric Power, irrigate 2,700 hectares of land and it will provide five million cubic meter of drinking water annually for 100,000 residents of Kabul. This dam will also serve as flood control and recreation. The total estimated cost of the project is 48 million US dollars.

The dam will also provide adequate water to support Kabul City Aquifer Storage and Recovery (ASR) Program

Shah-wa-Arus Dam will also provide excellent recreation area for the visitors.

Following is the link to the video prepared by Ministry of Energy and Water on Shah-wa-Arus Dam for your information.

Reference 6: <https://www.youtube.com/watch?v=wyRcLcKSfqQ>



Figure 1. Shah-wa-Arus Dam under construction

Photo: YouTube. Ministry of Water and Energy documentary

There are numerous gauge stations across Kabul River and its tributaries. In a simple language, gauge stations are water meters, measuring Streamflows. For construction of any dame over a river, the long-term stream flow data is necessary.

4 Estimated Monthly Streamflows for the Kabul and Logar Rivers, Aynak area, Afghanistan

Table 1. Mean monthly streamflows for water years 1962–1980 for the streamgaging stations Kabul River at Maidan, Kabul River at Tangi-Saidan, Logar River at Shekhabad, and Logar River at Sangi-Naweshta, Afghanistan.

Month	Kabul River at Maidan	Kabul River at Tangi-Saidan	Logar River at Shekhabad	Logar River at Sangi-Naweshta
	Mean monthly streamflow, in cubic meters per second			
October	1.08	0.44	5.48	3.82
November	1.63	1.05	7.17	10.9
December	2.12	1.61	7.67	14.4
January	2.50	2.48	7.39	15.8
February	2.65	2.67	7.70	15.8
March	6.65	6.15	10.4	17.4
April	20.7	17.2	23.3	22.9
May	14.4	11.1	14.2	10.3
June	5.71	4.38	4.10	1.58
July	1.72	1.00	3.17	1.55
August	1.09	0.40	2.93	0.80
September	0.92	0.31	3.65	0.75

Figure 2. Kabul River streamflow at various locations.

USGS Scientific Investigations Report 2014–5157



Figure 3: Hydrological Gauge Station on Kabul River at Tangi-Saidan.

Gage stations record the stream flow 24 hour year-round and Managed by the Ministry of Energy and Water

Photo: Courtesy of Aziz Rahman May -2021

2. Shatoot Dam in Tangi Saidan

The Shatoot Dam is currently under construction and located south-west of Kabul City at Tanghi Saidan across Kabul River. The estimated cost of the dam will be about \$236 million dollars and will take about three years to complete.

Once completed, the dam will hold 146 million cubic meters of potable water for two million people in Kabul as well irrigation water for the farmland.

This dam will provide a new recreation are for Kabul Residence.

This project is a joint project between various ministries. The Ministry of Energy and Water will be responsible for the construction of the dam, The Urban Development and Land Ministry will start the construction of the water supply network simultaneously.

This announcement of the construction of this dam comes after the National Disaster Management Authority (ANDMA) recently warned that underground water reserves in Kabul will dry up within the next 10 years amid increasing demand and the overuse of water in city. This dam will provide adequate water to support Kabul City Aquifer Storage and Recovery (ASR) Program.



Figure 4. Shatoot Dam under construction at Tangi Saidan

YouTube. TOLONews. Ministry of Water and Energy

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The Author of this article, Amanullah Mommandi M.S.P.E. bio was published at the end of Part One of this article in SAE eNewsletter of April 1, 2022. related to Kabul City Aquifer Storage and Recovery (ASR) Program.

KABUL URBANIZATION

History, Planning and Propagation of Informal Settlements

Prof. Bashir Kazimee, AIA

Professor Emeritus, Washington State University

Introduction

It is widely believed that in coming decades the Afghan-built environment will transform into predominantly urban economies as the trends of urbanization move forward. Therefore, the central role of the Afghan cities will be crucial in fostering prosperity and social progress for its citizens. There is much evidence that well-planned cities vested in efficient social and environmental infrastructure are the drivers of the economic activities and increased entrepreneurial wealth that have led to their remarkable growth in many parts of the world. In a globalizing world, the role of the cities is even more critical to foster economic and cultural prospects for the world's population. Therefore cities have the potential for innovative and dynamic transformation to increase efficiency and economic productivity, at the same time promote higher forms of cultural expression.

Kabul, the capital city of Afghanistan, had noticeable urban growth in the last two decades, which puts it among the fastest growing cities in the world. Its urban population growth is surpassing the globally recognized premier cities in the region, such as Karachi, Delhi, Tehran, and Bangkok, marking 5.5 million as of 2021. [1-Sadat, 2015] It is projected, that by the year 2030, the population of the city will increase to 7 million inhabitants, which is a much larger share of the country's projected urban population. It is remarkable that this figure will represent 41% of the total urban population of the country as a whole.

What is significant is that the speed of urbanization in the city of Kabul has produced a distinctive urban environment, which is marked by vast scale of uncontrolled urban development and a haphazard concentration of urban population. We are witnessing extreme polarization in the distribution of the socio-economic resources, provision of urban facilities and services in the city; where the richer segment of population benefit the most, while increasing masses of poor population struggle for shelter, jobs, and security. Rural-urban migration has been the dominant urban force with informal and slum settlements that provide the only reality of shelter for the majority of the urban poor in the city.

Like many developing countries, the proliferation of informal settlements in Kabul is triggered due to the forced rural-urban migration. In addition, the process of migration and urban growth substantially prompted due to the years of conflict and war. In particular, the arrival of internally displaced persons (IDPs) to the city deteriorated the already strained urban systems. It is estimated that informal settlements in 2004 constituted 70 % of the total city's population and this figure increased to 80 % by the year 2010. [2-Sadat, Page | 26

2015]

This article examines the history of planning and managing the urban growth in the capital city of Kabul. It argues that the urbanization in the city, over the past decade, has largely been due to the growth of informal settlements without effective planning to provide lawful access to the land and housing security. It then proposes strategies for upgrading and integrating the informal developments lawfully under the city's jurisdictions.

Urbanization overview: history of planning and proliferation of informal settlements

Located in the western plateaus of Hindu-Kush mountains at 1,780 meters above sea level, geographically, Kabul is considered to have the highest elevation of any capital city in the world. Being located on the major network of ancient trade routes, connecting India and China to the Persia and beyond to the west, the city was favored by many rulers and sultans to establish their administrative headquarters in the city. In the year 1502 AD, Zahiruddin Mohammad, later known as Babur Shah the Mughal emperor, established Kabul as his capital. Babur Shah was very fond of Kabul and commissioned several public construction projects including public buildings and beautiful gardens. [3-Arifi, 20001] Other Mughal princes like Shahjahan and Aurangzeb built structures and mosques in the city. While ruling in India, they favored Kabul's suited climate and attractive surroundings for their summer capital.

In the rein of King Ahmad Shah, founder of modern Afghanistan, 1747; Kabul maintained its strategic importance while he ruled Khurasan from Kandahar, the capital of his administration. Later, Timur-Shah, his crowned son, moved the capital from Kandahar to Kabul in 1775, recognizing its centrality and being located at the crossroad of major trade routes. [4-Dupree 1988] Being the capital of the Kingdom, during this period, Kabul grew in population and prosperity. Many commercial bazaars and Series were the hub of the city life. The cross-regional trade exchange, as well as strong commerce within the city, improved the livelihood of the inhabitants.

It was in the later part of the 19th century that the implementation of a modern city planning scheme was sanctioned by the rulers outside the Old City boundaries. During the rule of Amir Abdur Rahman, the new city expanded to the northwest and he commissioned the building of several opulent palaces and mansions, including the Arg. (the citadel), Baghi-Bala, and Chilsotoon palaces. During his time, for the first time, a public water supply system was built for the city. The water was diverted from an upstream Kabul River, channeled by an underground tunnel system for the use of the city inhabitants. Later, during the reign of his son King Habibullah (1901-1919), a modern piped water supply system was introduced for the city.

The source of water was channeled from a reservoir located in the region of Paghman, at the southern slopes of Hindu Kush mountains about 17 miles to the west of the city. Habibulah also introduced electricity to the city and built several public buildings, such as the Dilkusha palace, the Arg. complex expansion, the Eidgah mosque and more importantly the Habibia College. During this period, the population of Kabul was estimated to have been around 160,000 people and the city continued to grow to the west.

During King Amanullahs era, in the early 20th CC, a comprehensive master plan was envisioned for

the modernization of Kabul, persistent with his rigorous reform agenda for the country's socio-economic development. He invited French architects and German engineers in consultation with Afghan professionals to develop a plan for the new city. The plan called for a policy and implementation guide designed to help the city with a broader vision on land use development and provision of modern urban facilities. A railway was built to improve the transportation of goods, and people from the city center to newer neighborhoods. The capital was connected to the outside world via air traffic and modern communication systems. [5-Chua, 2014]

King Nader Shah and his son King Zahir Shah tracked King Amanullah's modernization project for the city later, in the 1930's and 1940's. The city continued to grow in the 1950's and 1960's. It developed to a larger cosmopolitan center with modern western style residential subdivisions, commercial, educational, and health facilities. Kabul became the largest city in the country with population reaching 380,000 inhabitants.

Under a national economic development plan in 1962, a team of planners was invited, from the Soviet Union Central Scientific and Research Design Institute for Town Construction, in close collaboration with Afghan experts, to prepare a new master plan for the city of Kabul. [6-Gopalakrishnan, 1982] The plan called for a total of 800,000 inhabitants on 23,780 hectares of land to be implemented in segments of 5 years, for a 25-year period. A revised master plan in 1978 projected the number of inhabitants to grow to 2 million with an area of 32,340 hectares, considering the factor of population growth and migration from rural areas.

The master plan implementation responsibility was given to the Municipal City Council. A number of laws and policies were established to carry on the proposed land use development goals and the provision of necessary urban facilities and services. According to the master plan, most of the proposed housing prototypes were multi-storied apartment blocks similar to those constructed by Soviet-style four story prefabricated housing blocks, given the nomenclature of 'Micro-Ryan' familiar all across the Soviet Union.

The past forty three years of prolong war that was imposed, first by the hegemonies of Soviet Union in 1978, resulted in utter destabilization of the country and triggered a civil war of an unimaginable scale. The outbreak of war inflicted a heavy blow to the properties and infrastructure of the city. The implementation of master plan during this period was derailed all together. The war accelerated the exodus of vast numbers of internally displaced persons (IDPs), as well as the arrival of several hundred thousands of refugees from other provinces and rural areas to the city suburbs during the conflicts of the 1980's and 1990's. Most of these refugees sought settlements outside the provision of master plan areas, illegally occupying the hills, publicly owned lands, and the green belt areas continuously. According to the UN Population Survey Project of Kabul, 2001 the population of the city in 1999 expanded to 1.78 million people, which included mostly the migrants and IDPs. [7-UN Project, 2001]

With the aftermath of the 2001 military campaign in Afghanistan, an ambitious reconstruction program was formulated by the Government of the Islamic Republic of Afghanistan with the cooperation of international organizations for rebuilding the war-torn towns and cities in the country. New Master Plans were devised by the municipalities and administration centers to regulate the development needs of their own provinces and cities.

Recognizing the urgency of urban agenda, the Ministry of Urban Development (MUDH) with the support of the government of Japan (Japan International Cooperation Agency) created the Kabul Metropolitan Area Urban Development Master Plan (KMAUD Master Plan), in 2009. The master plan is backed by extensive research and data collection to formulate a regional development plan for the existing city and oversee its expansion possibilities. The master plan target, which was for the year 2025, covered the entire Kabul Municipality and divided the city into 22 districts, covering a land area of about 1023 sq.km with the old city being district one. [8-Kabul City Master Plan, 2011]

Under the provisional goals of the master plan and in order to mitigate the housing shortages, the MUDH spearheaded the creation of the new towns of Deh-Sabz and Barikab with modern subdivisions and community facilities in the north-east outskirts of the city. The new districts cover 722 sq.km of land and was planned to provide 600,000 housing units for 3 million people. The Barikab district covering 120 sq km area with 54 existing villages intended to provide agricultural economic zone for the city. [9- Hamidi, 2020] Studies show, despite much enthusiasm that went into it's creation, the development soon became a struggle between powerful land speculators, conflict with existing land owners and weak municipal governance that hindered its progress.

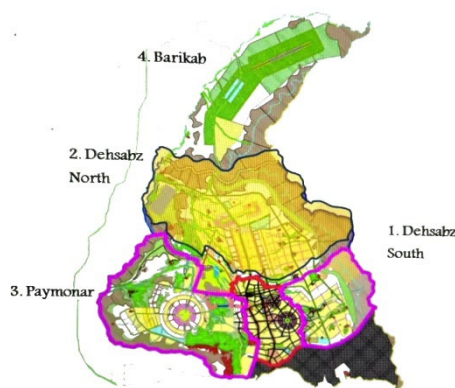
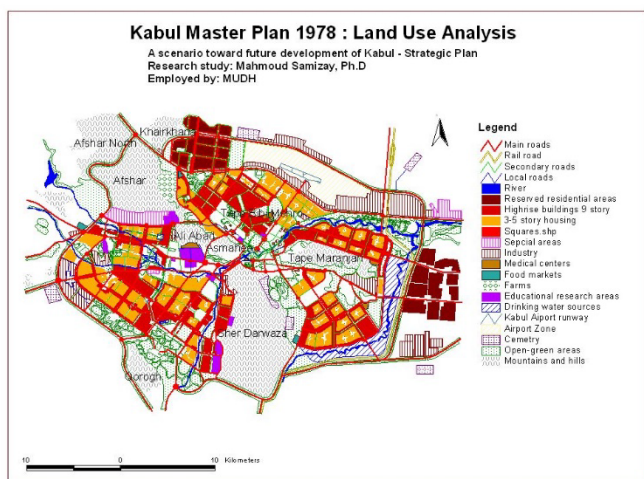


Figure 1: Kabul Master Plan 1978. Source: Dr. Mahmood Samizay

Figure 2: Kabul new Master Plan, including Dehsabz and Barikab districts. Source: Mustafa Habibi.

Informal settlements

The period of reconstruction program initiated by the Government of the Islamic Republic of Afghanistan in 2001, marked high hopes for peace and economic opportunities, it also attracted the return of vast numbers of Afghan refugees from the neighboring countries of Pakistan and Iran. It is estimated that about 5.7 million refugees have returned home since the beginning of the new government in 2002 and the majority of the migrant returnees chose to live in the informal areas of Kabul. This number triggered the rapid growth of urban areas in Kabul. Price of urban land in the city climbed rapidly and affordability of shelter of any

magnitude for the lower economic sector became a dream. Land grabbing by the powerful, that had halted during previous administrations became trendy again. Privatization and unregulated growth, created enormous urbanization pressure on the city. The squatter settlements, on the hillside and the periphery of the city, expanded further without control. Camps of internally displaced persons (IDPs) and refugee returnees from Pakistan and Iran grew in many parts of the city and the city grew in all directions. The population of Kabul increased to 4.22 million in 2008, and the municipality area expanded 4.1 times to 1022.7 sq.km. [10- Majidi, 2001]

According to a study by USAID the informal settlements in Kabul is identified those areas that are in violation of the Kabul master plan, built on lands that are acquired informally. These sites are classified into four types (1) settlements on the privately owned land, (2) settlements built on the public land, (3) settlements by the land grabber, and (4) settlements without legal status.

While each of these settlements have their unique characteristics, despite widespread slum conditions in most informal settlements, we can also observe pockets of some well planned areas usually built on the private land that are in better conditions and properly managed by the residents. These areas can easily be brought under the jurisdiction of the municipality and incorporated in the city master plan. [11- Bismill, 2014]

Settlements developed by the land grabber and influential entrepreneurs are converted to residential use through political chains. These places are affordable to a limited few and those that have strong influence both politically and economically. Settlements without legal status are usually acquired by the IDP (internally Displaced Person) and immigrants. These areas are built mostly on public land without any legal status.

Since most of the informal settlements are built without any conventional planning measures, therefore these settlements can pose complications in the implementation process of municipal planning and construction to improve and upgrade these areas, such as providing the necessary infrastructure and provision of municipal services, which will require site-specific solutions. The chart below identifies a comparative population of the informal settlements by the built up area in Kabul in 2008.



Figure 3: Newer informal settlements on the rugged hills of Shir-Darwaza mountain.

Figure 4: Older consolidated informal housing on the mountain slopes of Shir-Darwaza.

Type of settlement	Flat Area	Hillside Area	Total
Planned area	1,101,117		1,101,117
Informal	2,502,430	577,835	3,080,265
Old City	23,943	14,935	38,874
Total	3,627,497	592,766	4,220,256

Source: Kabul City Master Plan, RECS International Inc. Yachiyo Engineering Co., Ltd. 2001.

Despite some decimal progress to guide the urban development in the last decades, it is evident that there have been insufficient municipal governance and management to ensure the effective delivery of equitable urban services and tackling the acute housing problems in the city. The city grew haphazardly with limited access to affordable housing. The informal settlement expanded and consolidated with considerable socio-economic division and exclusion.

Steps to improve the informal settlements

The task of providing adequate housing is challenging for both developed and developing societies. The scale of the problem is difficult to deal with and the solutions are few. The reality however is that the informal areas in the city will continue provide affordable shelter for the majority of the urban dwellers in the city. The proliferation of informal settlements was significantly accelerated during the years of war and conflict. This was due to the migration of the citizens from remote and unsafe areas of the country, especially to the capital city of Kabul, which provided relative security and livelihood.

The following planning policies and regularity tools can mitigate the provision of affordable housing and helps towards the effective implementation of the master plans. [12-L&Z Kazimee, 2018]

- **Tenure security.** Legalization of land and properties in the informal areas are legitimate steps to improve housing and living conditions. Ownership of shelter and access to city infrastructure and services are considered one of the primary development goals of Afghanistan National Development Strategies “ANDS”. Home ownership is a powerful citizenship right that will heighten the status and pride of the population and guarantees their active participation in the urban duties and responsibilities. [13- Satterthwaite, 2009].
- **Improve infrastructure and services.** Construction of necessary infrastructure and municipal services such as water, sewer, paved roads, schools, health facilities and etc., can be formulated in gradual manner in intervals of 5, 10 and 15 years intervals when the funds become available. Utilizing the resident’s workforce through self-help mechanism, availability of micro finance schemes, participation of NGO’s and social institutions can be helpful at the implementation process.
- **Affordable financing:** provide micro-financing schemes and loans over long period of time, secured by land and property values to help people improve their shelter needs. Affordable housing cooperatives, and lending organizations that are guaranteed by government securities can effectively assist the inhabitants with their affordable financial needs. Securing tenure and improving these areas will transform the properties to a tangible asset and encourage economic productivity such as home-based enterprise, borrowing power and refinancing to leverage their income generating potential. [14-Taher, 2014]

- **Self-help and participatory method:** The tradition of user participation in planning and building process is now widely appreciated across the developing world and this method is used in many societies to improve the availability of shelter for low-income communities. Government authorities must recognize the self-help labor force and resources that already exist in the skill and determination of people. Taking advantage of self help approaches make the provision of shelter to low income population much economical.
- **Site and service:** Supply the beneficiaries with a small parcel of land and minimum infrastructure, with the intention to mobilize their “sweat-equity” and self-help energies to construct their own houses. [15-Taher, 2014] The goals of the site and service projects is intended to bring the cost of the development down to an affordable level with minimum infrastructure that can be upgraded in stages when funds become available. When possible a small room or shell with minimum space and facility can be provided on the lot in order to secure the initial settlement, with the goal that the room can be expanded and improved in the future. [16-Mayo & Gross, 1987].
- **Community participation.** Encourage community participation at the outset of upgrading process. Include representatives from the informal areas, so their voices are heard and their needs are given a priority in the planning process. Offer educational workshops, and circulate the important goals of planning decisions to broader community base representatives. It is evident that the purpose of the master plan is the upward mobility and improvement of standards of living of the majority of citizens, and a democratic course of decision making should be taken into account, so that the disfranchise and unprivileged segment of the population is not deprived from their citizenship rights.

The goals of upgrading the informal housing in the urban planning process shouldn't be mistaken for the approval of unlawful expansion and propagation of these settlements in future. The primary purpose of upgrading is to bring these areas under the lawful and orderly municipal planning framework so that they can be administered and integrated lawfully under the city’s jurisdictions.

Conclusion

The recommended strategies will improve significantly the intended urban priority action plan for the city, by tracking the associated comprehensive sustainable urban programming process. Specific policies and strategies will vary with local conditions, collaboration, civic organizations and grass root participation. All planning decisions should be negotiated through a democratic decision making process with community leaders and the inhabitants. Clear definitions and realistic measures by the planners and policy makers can determine the effectiveness of the above strategies. The implementation process should be enhanced by grass root efforts, demonstration projects, and negotiation with government and community leaders.

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- Affordable housing
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Prof Bashir A. Kazimee is an award-winning professor emeritus at the School of Design and Construction at Washington State University. His area of research is the traditional built environment and development of sustainable communities. He has contributed more than **seventy scholarly national and international publications** on this subject. He is the author of **four books** and his latest book "**SUSTAINABLE URBAN FORM: theory, Design and Application,**" **First Edition**, published by Cognella Academic Press Inc., California, USA, January 2016.

Kazimee gained an international reputation in the field of sustainable design with his collaborative proposed plan for the city of Pullman, which was awarded one of the three **Global IAA/UN Gold Medals** given internationally at the UN City Summit, the Habitat-II convention in Istanbul, Turkey 1996.

Kazimee is a licensed architect in the USA, a member of the **American Institute of Architects, and an active member of the Society of Afghan Engineers**. He has practiced and taught architecture prior to USA, in Afghanistan, Saudi Arabia and Pakistan. He is currently the chairperson of the architecture and urban design division of the Society of Afghan Engineers and actively contributing as an educator, consulting architect, and urban designer on several ongoing reconstruction projects for his native home country Afghanistan.

FAMOUS WORLD ARCHITECTS

By

Dr. Said Sharif Hossainy

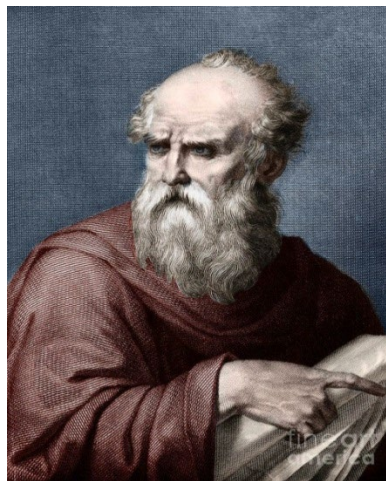
Introduction:

This article provides information about intellectuals, who have taken unbreakable steps in the long path of architectural art for more than two thousand years, by presenting the lasting images and innovations of these great men in the history of architectural art. The article is written in a concise format so that young architects and engineers benefit from it. The article provides summary of the historical and academic information about the creations of the art works of the pioneers of world architects. Hopefully, architectural collegians and other fine art enthusiasts will also find it useful.

The intent of the article is to encourage the architects and engineers of the young generation to do more research on each of these graceful, creative and ingenious personalities who have worked hard to provide creative architectural design models. This article is dedicated e to young Afghan engineers and architects and those interested in the beautiful art of architecture.

The article provides brief biographies of the world-famous architects based on the year of their birth, who, of course, differ in their artistic creations in each style and period.

Marcus Vitruvius Pollio



Marcus Vitruvius Pollo, Roman architect who lived in the 1st century BC

Marcus Vitruvius Pollio (born 70-80 BC) was a Roman writer, architect and engineer who worked in the first century BC. He was also an artillery officer and several specialists were

working under his command. He believed that all buildings should be built in perfect proportion with the necessary strength, comfort, and beauty so that there are no obstacles to their use. He is also known as the father of architecture. Leonardo da Vinci is said to have benefited from his discussion of perfect proportion in architecture.

Leonardo-da-Vinci



Leonardo-da-Vinci, was an Italian Architect and Painter in heyday of the Renaissance-“1452-1519”

Leonardo da Vinci was born in the city of Vinci near the city of Florence, Italy. He studied Latin, geometry and mathematics in a private school.

He is a multitalented figure, mathematician, engineer, architect and painter, lived in the heyday of the Renaissance.

Leonardo da Vinci had infinite human compassion and generosity, and was extremely curious and creative. Most of Leonardo's achievements were discovered in the late nineteenth century, and they were found in the archives of major European libraries. Leonardo is often regarded as a genius and a prominent example of a Renaissance man.

Da Vinci is best known for his paintings of “Mona Lisa” and the “Last Supper”, but the Smile of Jaconde (Mona Lisa) is Da Vinci's most prominent work and a masterpiece of art, and is rightly considered his greatest achievement. There has been a lot of talk about this mysterious smile, Leonardo himself enjoyed the amazing effect of this work and it was his favorite painting. The Last Supper is Leonardo's painting on the wall and is still one of his most fascinating works of art.

Da Vinci was the first aircraft designer and had a special interest in flying, which shows his creativity in engineering. Undoubtedly, the Wright Brothers in the USA used his invention to design aircraft.

Da Vinci spent the rest of his life in the Vatican City, Italy. He assisted one of the famous architects of the time, Bramante, in designing the St. Peter's building in the Vatican, where Da Vinci's architectural knowledge is also evident.

Leonardo da Vinci had great skills in the anatomy of the human body and his anatomical achievements were used by medical professionals for a long period of time.

Leonardo da Vinci also discovered, the rings that appear on tree trunks for a long time represent the life of the tree.

Leonardo da Vinci was buried in Amboise, France on 12 August 1519 in the church of St. Florentine,

Michelangelo



Michelangelo was an Italian sculptor, painter, architect and poet, March 6, 1475, Caprese Michelangelo, Italy - February 18, 1564, Rome, Italy

Known as Michelangelo, but his real name is (Michelangelo di Lodovico Buonarroti Simoni) who was an Italian sculptor, painter, architect and poet of the Renaissance flourishing period. Michelangelo had no formal architectural education. His architectural style was very unusual. He

Believed, that understanding the human body was essential to successful architectural design, and that he was planning to build a building as if he was planning a new sculpture. Eventually, Michelangelo adapted the processes he had previously used as a sculptor and artist, combined them with his needs as an architect. As a sculptor, his design has a multidimensional aspect, this means that it can be viewed from any angles. Undoubtedly he succeed in designing St. Peter's Church using this method. Throughout his life, Michelangelo worked on several impressive architectural designs throughout Italy, but one of the extravagant building was the world-famous Dome of St. Peter in the Vatican City. For this work, he and

other artists such as Donato Bramante and Raphael the unparalleled genius of architecture took on this task of completing the project upon the death of their predecessor. They collaborately created and ands completed this amazing work of art.

Before his death, Michelangelo inspired the work of his contemporaries. Then a later generation received more attention from the Baroque followers. His designs have been repeated many times, including the iconic dome of St. Peter's Church has been copied for the building of St. Paul's Cathedral in London, England.

Raphael



Raphael was painter and architect, 1483, Urbino, Italy - April 6, 1520, Rome, Italy

Raphael, an Italian painter, architect and poet, was born in 1483 in the city of Orbino, Italy. (The exact date of his birth is unknown, March 28 or April 6) his real name is (Raffaello Sanzio or Raffaello Santi). He was trained at the Perugino Studio in 1500 he became known as a well-trained master. He worked in several cities in northern Italy until 1508 when he went to Rome at the invitation of the Pope to pursue an artistic career in the Vatican. Raphael with Michelangelo and Leonardo da Vinci makes the list of the three greatest artists of the entire superior Renaissance era.

Raphael's fame was in wall paintings, as well as Sistine Madonna, also known as Madonna di San Sisto. It was one of the last Madonna, which was painted in 1513-1514 by Raphael and it is an extraordinary piece of art. Raphael also had thorough knowledge of architecture. He worked with well-known architects such as Donato Bramante and Michelangelo in the creation of the historic monument of St. Peter's Church (Dome of St. Peter located in the Vatican, Rome - Italy), which is one of the most famous and largest churches in the world. located in the Vatican City, Italy. They created and completed this amazing building with unparalleled architectural genius and special attention as they took over after their predecessor's death. Construction of this monument began in 1506 and lasted until 1626.

Raphael died untimely on April 6, 1520 in Rome, Italy, with amazing and remarkable innovations while at the height of his fame.

Sinan Agha



Sinan Agha was the chief Turkish (Ottoman Empire) architect and engineer, 1488/1490, Karaman Eyalet, Turkey - July 17, 1588, Istanbul, Turkey

Architect Sinan or Sonan Agha, known as Sinan (His full name is Sinaneddin Yusuf), was born in 1490/1490 in the village of Agirnas, Karaman Province - Turkish Ottoman Empire. After some training, he became a military architect. He took part in various campaigns, sultans *Suleiman the Magnificent*, *Selim II*, and began to build bridges and fortifications, such as the Sokolovic Bridge, built in 1577 by him in Visegrad, Bosnia and Herzegovina. It is a UNESCO World Heritage Site, and then he began building numerous mosques and various public buildings.

Architect Sinan, the architect of the Ottoman Empire had access to virtually unlimited resources to express his talent. This was due to the efforts he made during his lifetime of achievements and perfection, followed by many innovations in building design.

He really culminated the classical architecture of the Ottoman Empire with his genius talent. Thus, Sinan was later able to combine Ottoman classicism with the creative imagination of unparalleled richness, and during a life of almost a hundred years ruled by several Sultans, created many architectural masterpieces. The simple and clear use of the dome made the most important historical architectural element of that time the core of architecture.

Sinan gradually built many mosques, with a complex of intricate domes, and succeeded in creating very bright interior space by pushing more and more columns back to the exterior. Istanbul school marks the pinnacle of Ottoman architecture. He often built his mosques as part of a building complex including schools, bathing facilities and hospitals. Beautiful architectural domes and tall, slender pen-like minarets that overlook the skies are the architectural features of Ottoman mosques. However, one of the most beautiful mosques is the Selimiye Complex in Edirne, designed by Sinan Agha, the greatest Ottoman architect between 1569 and 1574, for Sultan Salim II, which is visually stunning and is significant from the point of view of Islamic architecture. Sinan Agha implemented the original dome on an octagonal plan supported by eight large pillars. He made the load-bearing columns thinner, expanded the dome by thirty-one meters, and made it the most important element in determining the building space. In fact, Sinan Agha,

this great man, highlighted all his genius with the building of the Salimiya complex, which is among the most important works in the history of Ottoman Empire and the world architecture.

Author's Biography

Said Sharif Hossainy, Eng. Arch. PhD.

Former deputy minister,

Ministry of Urban Development (MoUD)

Senior advisor to the Minister (MoUDH)

Canadian Architectural Registration No: 2280 `

Member board of Directors of the Society of Afghan

Engineers (SAE)

Member of the Society of Afghan

Architects & Engineers (SAAE) ID No: 0018

Member in the Roster of CANADEM No: 2808 - CANADEM is an Ottawa based non-profit, government related organization, originally designed as Canada's national roster of civilian experts.

Received an award from the Speaker of the House of Parliament, January 12, 2016 (22-10- 1394 HS)

The following weblink includes Author's Biography and interview with Editor of the SAE eNewsletter in April 2018:

<http://www.afghanengineers.org/wp-content/uploads/2018/04/SAE-eNewsletter-April-2018>



MEMBERSHIP NEWS

SAE is pleased to announce that many professional engineers and architects in the United States, Canada and Afghanistan have shown their interests becoming SAE team members since January 2021. SAE has received most of new members' membership applications and fees as required by the SAE bylaw. We welcome everybody and looking forward working together in future projects by providing professional services to Afghan Government and agencies. We publish new members' names and their short biography in each SAE quarterly eNewsletter as provided the information.

We welcome our newest high quality members and look forward to their contribution to the purpose and mission of the Society of Afghan Engineers as set forth in the bylaw of the society.

SAE New Members

SAE New Members July, 2022

Society of Afghan Engineers (SAE) Membership Fees-2022 USD

Active Members

No	Last Name	First Name	2021			2022			2023		
			Membership	Donation	Total	Membership	Donation	Total	Membership	Donation	Total
1	Rossi	Steve	60	200	260	60	440	500	60	200	260
2	Roshan	Tooba	60	0	60	60	440	500			0
3	Yamayee	Zia	60	200	260	60	200	260			0
4	Azadzoï	Najim	60	140	200	60	140	200			0
5	Mujtaba	Ghulam	60	140	200	60	140	200			0
6	Masumi	Jalal	60	40	100	60	130	190	60	0	60
7	Corcoran	Edward	60	0	60	60	92.75	152.75			0
8	Afshar	Reza M.	60	40	100	60	90	150			0
9	Baha	Zarjan	120	0	120	60	60	120			0
10	Kazimee	Bashir	60	40	100	60	40	100			0
11	Mommandi	Amanullah	60	0	60	60	40	100			0
12	Samizay	Mahmoud	60	40	100	60	40	100			0
13	Atayee	Tamim	60	0	60	60	40	100			0
14	Hossainy	Said Sharif	60	40	100	60	40	100			0
15	Mujtaba	Bahaudin	60	40	100	60	40	100			0

No	Last Name	First Name	2021			2022			2023		
			Membership	Donation	Total	Membershi p	Donatio n	Total	Membershi p	Donatio n	Tota l
16	Saleh	Gul Afghan	60	40	100	60	40	100			0
17	Zaca	Zabiullah	60	40	100	60	40	100			0
18	Amiri	Donya	0	0	0	60	40	100			0
19	Baluch	Hashem	60	0	60	60	0	60	60	0	60
20	Hassani	Abdul Waheed	60	0	60	60	0	60			0
21	Khalid	Manan	60	40	100	60	0	60			0
22	Mahmood	Amin	60	40	100	60	0	60			0
23	Panjshiri	Atiq	60	0	60	60	0	60			0
24	Rakin	Hadi	60	0	60	60	0	60			0
25	Sidiqi	Nadir	60	0	60	60	0	60			0
26	Wardak	Hafizullah	60	0	60	60	0	60	60	0	60
27	Wardak Hassan	Wazma	60	0	60	60	0	60			0
28	Abdulrahimzai	Mushtaq	0	0	0	60	0	60			0
29	Keshawarz	Saleh	60	0	60	60	0	60			0
30	Sabet	Mehdi	60	0	60	60	0	60			0
31	Ibrahim	M. Hamayon	60	0	60	60	0	60			0
32	Ahmady	Ahmad Jawid	0	0	0	60	0	60			0
33	Sarfraz	Zabiullah	0	0	0	60	0	60			0
34	Samizay	Rafi	0	0	0	60	0	60			0
35	Babacarkhial	Abdul Nazeer	0	0	0			0			0
36	Ebadi	Yar M.	60	40	100			0			0
37	Ghani	Aziz	60	140	200			0			0
38	Ludin	Rafat	60	90	150			0			0
39	Noorzad	Abdullah	60	0	60			0			0
40	Paya	Najib M.	60	200	260			0			0
41	Rayek	Hashim	0	0	0			0			0
42	Sattari	Masood	0	0	0			0			0
43	Shekib	Sohaila	60	0	60			0			0
44	Shirzay	Ahmad Wali	0	0	0			0			0
45	Abdullah	Ehsan	60	0	60			0			0
46	Afghan	Fazel Ahmad	60	0	60			0			0
47	Baidariwal	Fazal	0	0	0			0			0
48	Goethert	Reinhard	0	0	0			0			0
49	Levrat	Fred	0	0	0			0			0
50	Mehrzaei	Jan	60	0	60			0			0
51	Miller	Hamida	60	0	60			0			0
52	Naimi	Qaseem	60	40	100			0			0

No	Last Name	First Name	2021			2022			2023		
			Membership	Donation	Total	Membershi p	Donatio n	Total	Membershi p	Donatio n	Tota l
53	Omarzad	Mustafa	60	0	60			0			0
54	Qadir	Abdullah	0	0	0			0			0
55	Taraky	Yar Mohammad	60	40	100			0			0
56	Abdul Qayum	Abdul Rauf	60	0	60			0			0
57	Zahori	Sayed	0	0	0			0			0
58	Farooqi	Najib M.	60	140	200			0			0
59	Durnai	Ahmad Shah	0	0	0			0			0
60	Baha	Abraham	60	60	120			0			0
61	Hassan	Islamudin						0			0
					\$4,270	\$4,133			\$440		

Afghanistan SAE Members

1	Zhakfar	Zabihullah									
2	Kamran	Matiullah									
3	Momand	Mohammad Ishaq									
4	Momand	Mohammad Fazil									
5	Zahid	Hasibullah									
6	Saberi	Safi									
7	Asim	Arif									
8	Naimi	Kazim									
9	Hmadard	Sahar									
10	Howaida	Ahmad Walid									
11	Maihan	Regina									
12	Alizoi	Mohammad Azim									
13	Hussaini	Muzhda Sahadat									
14	Sattari	Mashhood									
15	Qadery	Qadria Shewa									
16	Nazarian	Tayebeh									
17	Ezzat	Abdul Mobin									

SAE New Members

No	2021 New Members		Membership	Donation	Total
1	Abdullah	Ehsan	60		60
2	Afghan	Fazel Ahmad	60		60
3	Atayee	Tamim	60		60
4	Baidariwal	Fazal	0		0
5	Goethert	Reinhard	0		0
6	Levrat	Fred	0		0
7	Mehrzai	Jan	60		60
8	Miller	Hamida	60		60
9	Naimi	Qaseem	60	40	100
10	Omarzad	Mustafa	60		60
11	Qadir	Abdullah	0		0
12	Roshan	Tooba	60		60
13	Taraky	Yar Mohammad	60	40	100
14	Abdul Qayum	Abdul Rauf	60	0	60
15	Zahori	Sayed			0
16	Farooqi	Najib M.	60	140	200
17	Durnai	Ahmad Shah			0
18	Wardak Hassan	Wazma	120 (2021 and 2022)		120
19	Baha	Abraham	60	60	120
20	Corcoran	Edward	60	0	60
21	Sabet	Mehdi	60	0	60
			660	220	1120
Grand Total			\$2,520.0	\$1,770	\$4,530

SAE New Members (Residing in Afghanistan and Turkey)

No	2021 New Members		Residence	Donation	Total
1	Zhakfar	Zabihullah	Afghanistan		
2	Kamran	Matiullah	Afghanistan		
3	Momand	Mohammad Ishaq	Afghanistan		
4	Momand	Mohammad Fazil	Afghanistan		

No	2021 New Members		Residence	Donation	Total
5	Zahid	Hasibullah	Afghanistan		
6	Saberi	Safi	Afghanistan		
7	Asim	Arif	Afghanistan		
8	Naimi	Kazim	Afghanistan		
9	Hmadard	Sahar	Afghanistan		
10	Howaida	Ahmad Walid	Afghanistan		
11	Maihan	Regina	Afghanistan		
12	Alizoi	Mohammad Azim	Afghanistan		
13	Hussaini	Muzhda Sahadat	Turkey		
14	Sattari	Mashhood	Turkey		
15	Qadery	Qadria Shewa	Afghanistan		
16	Nazarian	Tayebeh	Afghanistan		

Members Can Send Their Fees And Donations To The Following Account

SAE Bank Account Information:

Account Name: **Society of Afghan Engineers**
Bank Name: **BB&T**
Routing # **051404260**
Account # **0005139262982**

Bank Address:
7915 HENESKA LOOP
ALEXANDRIA, VA 22315-0000 USA

SAE New Mailing Address

The SAE president, Najim Azadzo, and the Afghan Academy President Mr. Hassan Shirdle, met in Virginia on January 7, 2021, to discuss the possibility of future activities between the two non-profit organizations. As part of mutual relationships, the Afghan Academy provides an office for SAE and sharing the mail address.

As of June 1, 2021, the Society of Afghan Engineers will have a new physical address. The new SAE address is:

The Society of Afghan Engineers
P.O. Box 151584, Alexandria, VA 22315, USA.

Please make changes to the address of the SAE in all correspondences including by not limited to the SAE Application Forms, Bylaws, and Stationeries.

COMMENTS AND SUGGESTIONS

The Editorial Board of the SAE eNewsletter welcomes comments and suggestions from the respected Society members and readers of the Newsletter. Your comments and responses will be included for information of all readers of the SAE eNewsletter.

Sharif Hossainy

Fri, Apr 1, 1:14 PM
(16 hours ago)

Dear Ustad Mohtaram Eng., Hafizullah Wardak Editor-In-Chief SAE eNewsletter and Chairman of the Editorial subcommittee. Asallam-o- Alaikom,

I wish you and your respected family a happy New Year (1401) and happy Ramazan . I hope you will have a wonderful year ahead.

May God protect you and all your family members and entire people of the world from this pandemic Omicron. May God Almighty respond to Your prayers.

*I **acknowledge** receiving your email, regarding the **second quarterly issue** of the 2022 SAE eNewsletter.*

Thank you for your kind efforts and volunteering.

Best Regards

Dr. Said Sharif HOSSAINY

E-mail: sharifhossainy@hotmail.com

Tel: + 604 477 1232

iPhone + (778) 840 8280 (WhatsApp)

Editorial Response:

From: Hafiz Wardak <hafizwardak@gmail.com>

Sent: April 1, 2022 4:53 AM

Subject: SAE eNewsletter - April 2022

Hafiz Wardak <hafizwardak@gmail.com>

to Sharif, Najim, Abdul, Manan

Mohtarem Hossainy Sahib Salamm

On the behalf of the Editorial Board, thank you very much for your nice email. You have been very kind; I always enjoy reading your messages.

Allah keeps you in good health and has a pleasant and safe Ramazan.

Thank you again for your acknowledgment of receiving the SAE eNewsletter.

With regards

Hafizullah Wardak

Editor-in-Chief SAE eNewsletter

From: Baha, Zarjon <bahaz@purdue.edu>

Sent: Sunday, April 3, 2022 10:04 AM

To: hwardak@comcast.net

Subject: FW: SAE eNewsletter - April 2022

Dear Wardak sahib: Assalamu-alaikum

Thank you very much for sending me another new year, 1401 HS, gift.

I would like to express my gratitude to the leadership of our society for making every effort to help Afghanistan.

Regarding the newsletter, the editorial was outstanding to makes us feel good that Afghanistan has tremendous resources that could be explored in the future. The article by Mommandi sahib was another great contribution to address Kabul city survival in the drinking water issue in the future. I was also impressed by our representative work in Kabul, Walid Howaida.

Have a great day

Zarjon

Editorial Response:

From: hwardak@comcast.net <hwardak@comcast.net>

Sent: Sunday, April 3, 2022 1:11 PM

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To: 'Baha, Zarjon' <bahaz@purdue.edu>

Cc: 'Najim Azadzo' <azadarch@aol.com>; 'Manan Khalid' <manank10@gmail.com>; 'awhassani@gmail.com' <awhassani@gmail.com>

Subject: RE: SAE eNewsletter - April 2022

Dear Doctor Sahib Baha Walaikum Salam

Thank you for your kind email and your input on the April 2022 issue of the SAE eNewsletter. On the behalf of the Editorial Board I thank you for your kind comments about the Editorial of this issue, and the Technical Paper.

We always appreciate comments and input from members and friends of SAE who receive and read the SAE eNewsletter.

Please continue your comments and input with the Editorial Board.

Thank you again and with warm regards

Hafizullah Wardak

Editor-in-Chief of SAE eNewsletter

nadir sidqi

Mon, Apr 11, 12:05
AM (3 days ago)

Muhtaram Eng. Sahib Wardak: Assalam Alyaikum

I hope this message reaches you and your respected family are well during this blessed month of Ramadan InShaAllah.

Thank you for the hard work of your, SAE Editorial Board and for sharing the SAE eNewsletter in April edition 2022. I learn and enjoy your Editor's note, as well as other SAE, respected colleagues for their valuable information.

We ask Almighty Allah to grant us the ability to assist and contribute to the wealth of knowledge, including food production, economy, health, improvement of roads, schools, buildings, hospitals, sustainability, and prosperity of our beloved Afghanistan.

Best regards,

Nadir Sidiqi

Dr. Nadir Sidiqi Ph.D.

President/Dean of Academics

BioNatural Healing College (BNHC)

<http://www.bionaturalhealingcollege.org>

dr.sidiqi@bionaturalhealingcollege.org

Editorial Response:

From: hwardak@comcast.net <hwardak@comcast.net>

Sent: Thursday, April 14, 2022 6:35 AM

To: 'Hafiz Wardak' <hafizwardak@gmail.com>

Cc: 'Najim Azadzoi' <azadarch@aol.com>; 'Manan Khalid' <manank10@gmail.com>;
'awhassani@gmail.com' <awhassani@gmail.com>

Subject: RE: SAE eNewsletter - April 2022

Mohtarem Doctor Sahib Sidiqi Walaikum Salam

On the behalf of the Editorial Board of the SAE eNewsletter, thank you for your kind comments on the April issue of the SAE Newsletter. We always welcome comments from our readers, your comments help us to improve the quality of the newsletter.

We join and raise our hands with your dua to Almighty Allah to improve the quality of life, stability and to improve living conditions in our beloved Afghanistan- Ameen.

I would like to add that I enjoyed reading the BNHC E-Magazine April issue. May Allah give you rewards for helping us to increase our knowledge of how to keep ourselves healthy and enjoy the good food.

Thank you again for your input.

With regards

Hafizullah Wardak

Editor-in-Chief of the SAE eNewsletter

From: **Bahawodin Baha** <B.Baha@brighton.ac.uk>

Date: Sun, Apr 17, 2022 at 4:28 AM

Subject: RE: SAE eNewsletter - April 2022

To: Hafiz Wardak <hafizwardak@gmail.com>

Dear usatd Wardak salaamona,

I was delighted to receive the recent issue of SAE eNewsletter, many thanks for sharing this well-prepared document. I really enjoyed reading the whole document, especially the Editor's Note: ***Role of Engineer in Building a Nation*** and another excellent paper about **Kabul City Groundwater Aquifer Storage and Recovery**. I sincerely admire the courage of the authors for every piece of information included in that document.

I conducted some research about the history of establishing engineering societies in the UK and I would like to share some of my findings. I only considered the Institution which is dealing with Electrical and Electronic Engineering (EE) and there are similar institutions for other engineering disciplines. The main objective of the **Institution of Engineering and Technology (IET)** is as follows:

=====

The purpose of IET:

The IET **represents the engineering profession in matters of public concern and assists governments to make the public aware of engineering and technological issues**. It provides advice on all areas of engineering, regularly advising Parliament and other agencies.

https://www.google.com/search?q=What+is+the+mission+of+IET&rlz=1C1SQJL_enGB929GB929&oq=What+is+the+mission+of+IET&aqs=chrome..69i57j33i160l3.13159j0j7&sourceid=chrome&ie=UTF-8

Major functions of IET are as follows:

1. IET accredit all the curriculums for MSc, undergraduate degree and technician level courses which are offered by the universities and colleges in the UK.
2. IET organize professional conferences in various disciplines related to EE.
3. IET has high-level journals where researchers from all around the world can publish the results of their research which can demonstrate original contributions to knowledge.
4. IET provides standards and guidelines to industry about their products.
5. IET plays the role of bridge between academia and industry.

Hence to further improve the activities of SAE, I am making the following recommendations:

1. Members of SAE and other professional Afghans can help the Afghan government to create such institutions to improve the standard of technical education and research activities in Afghanistan
2. Similar institutions should be established by the Afghan government as the government will be facilitating the implementation.
3. Professional Afghans can share their experience in the following areas:
 - a. Academia
 - b. Governmental organizations
 - c. Well established global companies
 - d. Establishing small-scale engineering and other business.
4. Professional Afghans can help in the following areas:
 - a. Education including higher education
 - b. Health
 - c. Priority areas such as agriculture, mining, transportation, energy, telecommunication
 - d. Finance and economy.

Perhaps the SAE can consider the above recommendations and enhance their activities by integrating the changes in the SAE eNewsletter and work with Afghan government whenever possible.

Best wishes,

Bahawodin

Editorial Response:

Hafiz Wardak

8:44 AM (0
minutes ago)

to Bahawodin, Najim, Manan, Abdul

Dear Dr. Bahawodin Baha Sahib Walaikum Salam

On the behalf of the SAE, thank you for your input/comments regarding the April 2022 issue of the SAE eNewsletter. Your recommendation on how to improve SAE activities is appreciated and they will appear in the July 2022 issue of the eNewsletter. We always welcome comments/input from our members on how to improve the SAE organization.,

I have copied with this email, the president of SAE Azadzoï sahib, the Board Director A. Manan Khalid, as well as the Board member Dr. A. Wahid Hassani. All three are members of the Editorial Board too.

Please continue your input and recommendations in the future on how to improve the Society.

Thank you again for your input.

Hafizullah Wardak

Editor-in-Chief of the SAE eNewsletter.

THE 2022 SAE MEMBERSHIP RENEWAL

Dear Members of the Society:

The Management of the Society of Afghan Engineers (SAE) would like to remind all members that 2022 membership renewal and Annual fee of \$60 are due. Your membership fee collectively would enable us to pay for some basic needed services of the Society such as Website security monitoring, updating, and maintenance. Also, your membership fee would provide SAE's management, the financial means to organize and host events and seminars on relevant technical topics. The membership renewal application is attached to the Newsletter and also can be downloaded from our website at www.afghanengineers.org

Please visit the SAE Face book when you get the opportunity. We appreciate your kind attention to the membership due request.

Sincerely,

Najim M. Azadzoï, AIA, President

The Society of Afghan Engineers

SAE eNewsletter Regional Representatives

The positions of the SAE eNewsletter Regional Representatives are open. Please let us know if you are interested to volunteer for one of these positions or if you want to nominate other qualified members to serve in these positions. The representatives will inform the newsletter Editorial Board of any technical news in their regions and contact authors for their contributions in the activities of newsletter. For additional information please send an email to SAE eNewsletter Editorial Board: Hafizullah Wardak, E-Mail: hwardak@comcast.net; A. Wahed Hassani, Email: awhassani@gmail.com; and A. Manan Khalid, E-Mail: manank10@gmail.com;

The attached form includes application for the new members and membership renewal.

The application forms may be viewed at SAE website. The members are requested to take a few minutes of their time to inform the Society by sending their updated contact information.

The completed application/renewal forms may be mailed to:

THE SOCIETY OF AFGHAN ENGINEERS
P.O. Box 151584, Alexandria, VA 22315, USA.

Thanks to those who have updated their membership renewal and have paid their annual membership fees.

Thanks for their generosity.

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[Quality Assurance Representative \(Albuquerque, NM\)](#)
[Construction Manager \(Pittsburgh, PA\)](#)

For more information and if interested in the above positions please contact Planate Management Group at the address below:

Mapet D. Santos

Recruitment Manager

Planate Management Group

1800 Diagonal Road, Suite 600

Alexandria, VA 22314

daisy.villena@planate.com


(Telephone Number) +1-703-8791-740

(US Toll Free) +1-800-543-1989 ext 1

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 **Covid19 Protocol:** Due to the nature of work, the successful candidate will be required to comply with all Federal guidelines regarding vaccination for all employees and contractors. Please refer to Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors for more information.

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THE SOCIETY OF AFGHAN ENGINEERS ORGANIZATION

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Treasurer: Mahmoud Samizay, **Secretary:** TBA **Manager:** TBA Note:: TBA is acronym for (to be announced)

SAE Board of Directors-Officers: **Chairman:** A. Manan Khalid, M.S., P.E., LEED AP , **Vice-Chairman:** Jalal Masumi;
Executive Director: Gul Afghan Saleh

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SAE Chairpersons of Committees/Subcommittees:

- Hafizullah Wardak, Chairman -SAE eNewsletter Subcommittee,
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- Bashir Kazimee for the Chairperson of the Architecture and City Planning Subcommittees.
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- Mohammad Jan Mehrzai, Chairperson of SAE Corporation Committee.
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SAE Local Chapter Coordinators: A. Hamid Layan – Kabul, Afghanistan; M. Qaseem Naimi – Toronto, Canada; Najim Azadzoi – Massachusetts, Mohammad Najib Poya - Northern California; TBA - Southern California; A. Manan Khalid – New York and New Jersey, Amanullah Mommandi – Colorado; Atiq Panjshiri – Virginia and Washington DC

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Full Name: _____

Address: _____

Phone: Home: _____ Office: _____

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Degree Level: _____ Field of Expertise: _____ Years of Experience: _____

The active members of the Society of Afghan Engineers (SAE): Please mark (X) the appropriate box related to your address and other contact information.

- Yes, the above is a change in address or contact information.
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Please mark (X) the appropriate box if you are submitting this application to join as a new member.

- A Regular member: I have at least four (4) years of architectural or engineering education.
- Associate member: I have at least two (2) years of architectural or engineering education

The SAE is a 501(c) (3) non-profit organization.

Amount of Annual 2021 Membership: \$60.00

Donation: -----

Total: -----

Suggestion and comments: _____

Please send your check or money order payable to the Society of Afghan Engineers.

THE SOCIETY OF AFGHAN ENGINEERS
P.O. Box 151584, Alexandria, VA 22315, USA.

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MEMBERSHIP APPLICATION

(SAE Members Living in Afghanistan)

Full Name: _____

Address: _____

Occupation: _____

Place of Work: _____

Phone: Work: _____ WhatsApp: _____

Email: _____

Degree Level: _____ Field of Expertise: _____ Years of Experience: _____

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Associate member: I have at least two (2) years of architectural or engineering education

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Annual Membership: SAE Members Living inside Afghanistan are exempt of annual membership (**FREE Membership**).

Suggestion and comments:

THE SOCIETY OF AFGHAN ENGINEERS

P.O. Box 151584, Alexandria, VA 22315, USA.

Website: www.afghanengineers.org