AGA KHAN
HISTORIC CITIES PROGRAMME

GOOD PRACTICE IN VOCATIONAL TRAINING

October 2020
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Introduction

Established in 1992, the Aga Khan Historic Cities Programme (AKHCP) has over the years differentiated itself from other international programmes with similar broad objectives for the conservation and rehabilitation of cultural heritage. This has become most clearly visible in AKHCP’s thematic areas of interest and its modes of operation. The Programme seeks to combine the safeguarding and conservation of cultural heritage with improved local economic opportunities and skills development of local communities in the areas surrounding identified historic sites – thereby directly contributing to improving the local quality of life. Cultural heritage sites and nearby communities are thus both considered to be the prime beneficiaries of the Programme’s interventions.

Programme activities, in the conceptual and implementation stages, are predicated on the establishment of a local national field office through which professional teams are employed and services procured in support of projects of a cultural heritage nature. Projects are designed so as to contain not only physical conservation, restoration or urban redevelopment components but also socio-economic elements. As this publication shows, in urban settings physical and socio-economic redevelopment regularly become intertwined, with skilled work being planned and implemented in close collaboration with members of the local community.

AKHCP’s repertoire of site conservation and socio-economic redevelopment activities follows a trajectory whereby traditional skills, that are directly related to the rehabilitation and conservation of historic monuments, are revived or, if needed, reintroduced. The impact that conservation and restoration of cultural heritage sites has on the development of skills of members of the local community can be profound. It is for that reason that the Programme seeks to undertake projects whose scope of economic benefits far exceeds the short-term creation of employment in the sphere of restoration and related traditional crafts. Indeed, it is with an eye on the direct and indirect employment opportunities that arise from project implementation and future operation of
historical sites, that individuals are trained in a wide scale of professions – or in skills upgrading of those already engaged in a particular profession – through Technical and Vocational Education and Training (TVET).

This trend will be discernible in the essays concerning the TVET experience at several locations in Pakistan, Afghanistan and Mali, as well as in Cairo (Egypt) and New Delhi, India and Mali. The numbers of trainees who have gone through important training and project work in these different conservation locations number in the thousands, many of whom have been retained as skilled crafts persons and many others of whom have moved on to work elsewhere after completing their training.

The essays in this publication provide rich detail on many facets of traditional crafts that are both still essential vis-à-vis the continuous needs of cultural heritage in these countries, but that are not typically available on the local labour market. As this publication explains, one sphere for TVET is the cultural heritage sector itself, which requires a large number of diverse specialised skills – from ceramic tile fabrication, to decorative plaster and stonework and restoration of frescoes and earthen architecture. These must be nurtured and protected as community and public assets regardless of immediate commercial benefit. In these cases, the benefits are public and shared by humanity. The existence of skilled individuals who master these techniques and arts are critical to the conservation of our cultural heritage.
The second main sphere of vocational training has developed around close interaction with the communities in AKHCP’s project catchment areas. Initial baseline surveys are carried out to map demographic and quality of life data of defined areas of the community. This enables projects to consider ways to co-opt community members in the betterment of their neighbourhood environments, not only through improvement and maintenance of local public open space, but also as stakeholders and custodians of a rehabilitated historic environment and enhanced facilities within it. Where possible, TVET is expanded into the local community to include youth and women who are offered skills enhancement in view of market demands – thereby increasing employment opportunities. Such TVET training typically takes place in a school setting with master trainers, whereby a curriculum is followed that leads to graduation. In certain cases, the development of small and medium business enterprises has been encouraged and assisted with micro-credit, contributing to the creation of viable jobs.

These essays provide strong testimony to the multiple benefits of empowering disadvantaged elements of communities, improving the prospects of individuals, families and human capital at large. Done correctly, the array of training skills offered, as pointed out in numerous sections, needs to be based on Labour Market Intelligence surveys so that an investment in time and funds will result in acquired skills which are marketable and mobile.

As noted above, certain skills transmitted will derive from traditional crafts – with a view to improving materials, workmanship and standards, including fair trade practices – while others will take their cue from today’s technologies and applications – topographical surveying, GIS system management, e-learning and introduction to the now almost global systems of information technology. AKHCP’s experience with TVET has illustrated how vital a role in can play in local community development and the protection of cultural heritage while providing important numbers of the community with skills that can be refreshed and help them to face the future as well.

Acknowledgements

The essays on vocational training activities carried out in Afghanistan, India and Pakistan have been written by various staff members of the AKTC offices in those countries. The essay on Cairo has been prepared by AKTC consultant Seif El-Rashidi, in cooperation with the Cairo office; that on Mali by Jurjen van der Tas, Christophe Bouleau and AKTC consultant Francesco Siravo. The annotated bibliography has been prepared by Vijay Ramchandani, Senior Executive at the Centre for Heritage Management, University of Ahmedabad, India. We wish to extend our grateful thanks to them all.
In the foreground, conserved Baltit Fort (1990-96) with Rakaposhi (7,788 m) in the distance.
Pakistan

Background

The restoration of the eight-hundred year old Baltit Fort in Gilgit-Baltistan (the northernmost territory of Pakistan) launched in the early 1990s, was the first project undertaken by the Aga Khan Cultural Service in Pakistan (AKCSP) under the Aga Khan Historic Cities Programme (AKHCP). The restored edifice was inaugurated in September 1996 by Mr. Farooque Ahmed Khan Laghari, the then President of Pakistan, and His Highness the Aga Khan. Since then, AKCSP has pursued an integrated and innovative cultural development programme through the restoration and adaptive reuse of major monuments and the rehabilitation of historic settlements. Physical rehabilitation has gone hand in hand with sanitation works, the improvement of streets, common spaces and water supply, local capacity building, revival of arts and crafts and the creation of income earning opportunities. Vocational training has been a central ingredient of this mix.

The restoration of the Baltit Fort, which was the main fortified residence of the rulers of Hunza till 1945, was not an easy task, given the peculiar history, location, materials, construction techniques and skills, later additions to and maintenance requirements of the building. Major socio-political changes ensued after 1974, when the princely state of Hunza was abolished. In the following two decades, bereft of royal patronage, traditional construction skills, crafts skills, etc., the Fort experienced a sharp decline. This period also saw Hunza and its neighbouring valleys slowly emerge from their isolation as a result of new communication facilities, including the recently constructed Karakoram Highway (KKH). This lead to the gradual abandonment of subsistence farming life styles in favour of

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1) The territory of present-day Gilgit-Baltistan became a separate administrative unit in 1970 and was given the name ‘Northern Areas’. It was formed by the amalgamation of the former Gilgit Agency, the Baltistan district and several small former princely states, the largest of which were Hunza and Nagar. In 2009, it was granted limited autonomy and renamed Gilgit-Baltistan.
off-farm employment and other income earning opportunities. The region was also being transfigured into a tourist attraction.

All these developments had to be taken into account by AKHCP while promoting vocational training. The key objectives were to develop a local skill base to support conservation activities, enhance the sustainability of restored heritage assets, address rural poverty and make a positive impact on the fragile built environment. The extension of the AKCSP cultural heritage development programme into the city of Lahore in 2007 led to further strengthening of its vocational training and local capacity-building approaches. It is important to note that conservation skills are not part of the curriculum developed and approved by the National Vocational and Technical Education Commission (NVTEC) of Pakistan. No technical school or college offers such courses. In fact, in Gilgit-Baltistan there is no vocational and technical education at all in skills such as carpentry or traditional stone masonry. This lacuna made it necessary for the AKCSP to develop conservation and related skills inhouse in order to meet its own technical requirements.

To date, AKCSP has provided vocational training opportunities to more than 700 young people of Gilgit-Baltistan and Lahore in over 20 trades. These trades have been related mainly to conservation but also to other areas such as crafts, music, project management, communication, finance and hospitality. In the case of Gilgit-Baltistan, an informal on-the-job vocational training programme was
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launched during the restoration of Baltit Fort. It focused on reviving traditional handicrafts, embroidery and wood-carving under the Karakoram Handicrafts Development Project and trained more than 3,000 women in embroidery and handicrafts. Similarly, during the restoration of Shigar Fort, a project called ‘Baltistan Enterprise Development and Arts Revival’ (BEDAR) was launched to revive and promote traditional skills in woodcraft, local textile making, gemstone and apricot oil extraction. During the restoration of Altit Fort in Hunza, young people, particularly women, were trained in heritage inventory, topographic and building documentation, masonry, carpentry, wood carving, electrification, plumbing and later on in crafts, hospitality, project management finance and traditional music. This skills development project has evolved into a social enterprise called Ciqam (the word means ‘wellbeing’, ‘prosperity’ or ‘green’ in the local dialect), which is being registered as an independent private for-profit limited company in 2020. Ciqam trains young women in survey work, carpentry, construction, and also has provided opportunities in hospitality related skills as tourism has made a major comeback in the region after improvements in security have been made. This on-the-job vocational training is aimed at developing competency in a broadly defined occupational area, acquired over a three to four-year period of training. In Gilgit-Baltistan generally, most of those who benefited from these trainings were school drop-outs, low performers at school or school leavers because of financial constraints or household level poverty.
Since 2007, AKCSP has also been working under a Public-Private Partnership (PPP) with the provincial government of Punjab to provide technical assistance to the Walled City of Lahore Authority (WCLA) in urban heritage conservation. The partnership plan outlines strategies for strengthening re-use through the rehabilitation of the historic neighbourhood and building stock. Pilot interventions have aimed at integrating infrastructure upgradation, façade improvement and historic home improvement, enhancing active participation of communities through training of young people in spatial mapping, construction skills and technical support to home owners. An inventory of 22,800 heritage properties, a socio-economic survey of 1757 households across the city and a Geographic Information System (GIS) for the entire city have helped both AKCSP and WCLA to pursue multi-year urban rehabilitation, conserve landmark monuments and build technical and professional capacity to manage and maintain these assets. The restoration of the 400 year old Mughal public bath (Shahi Hammam) and the incremental restoration of Wazir Khan Mosque and Lahore Fort (Picture Wall, Summer Palace and the completed Royal Kitchens) all required expertise and skills in a wider variety of fields. This prompted the establishment of local technical teams supported by international and national experts. By the end of 2019, more than 300 young people were trained in 19 trades mostly related with conservation and restoration.
Conservation and Construction Skills

*Hunza, Gilgit-Baltistan*

In the case of the Baltit Fort, AKHCP sought to attain three basic goals: first, stop further deterioration of historic buildings; second, use conservation as a catalyst for upgrading traditional housing and promote healthier physical environments and third, train local inhabitants and professionals in building skills. Conservation work thus became part of an all-embracing strategy based on community participation, training of local skills and building local institutional capacity. Young local architects, engineers, draft-person, masons, carpenters and carvers were trained under the supervision of international experts and by having experienced carpenters come in from Swat to revive carpentry skills. The training effect achieved in the restoration of Baltit Fort and the rehabilitation of Karimabad settlement, made new projects more cost-effective and efficient.

Between 1991 and 1996, 12 masons, 7 carpenters and 3 carvers were trained. The paving of a nearly five hundred metre access road to the Fort was carried out using semi-dressed stone and stone slates for the first time in the history of Hunza. Similarly, streets and common spaces within the settlement were upgraded and historic houses were improved structurally. The introduction of a sanitation system replacing ancient and unhygienic dry latrines and the provision of piped water within the settlement made a significant impact on conservation as a process as well as an outcome. The revival of traditional construction techniques including cator and cribbage (timber-frame walls within stone and mud in-fill), dry masonry walls with mud plaster, lathe-walls, and timber roofs supported by wooden columns rendering walls non-load bearing during the Fort restoration once again helped promote natural local materials and, more importantly, local craftsmanship.

The restoration of the Fort and the upgrading of the settlement were followed by the introduction of stone banking, the establishment of a wood-carving centre and of the Karakoram Handicrafts Development Project (KHDP) in Hunza. These initiatives aimed at promoting traditional construction skills, heritage crafts and local materials as an integral part of the conservation programme. The training of a small local technical team enabled communities in neighbouring Karimabad, including the historic villages of Ganish and Altit, to engage in combined planning, infrastructure upgrading and housing rehabilitation projects. Skills developed through these initiatives helped rehabilitate and upgrade historic Ganish *khun* – including a historic water reservoir, four historic mosques and a private house.

In Hunza, the skills development programme gained momentum in 2003. A noteworthy aspect of this work was the topographic survey carried out by young women, who were trained by AKCSP in plane table survey and computer digitisation. This led to the development of inhouse capacity to carry out condition assessment of historic buildings as the first step towards physical conservation and restoration. More than 30 young women worked as trainee surveyors and draft-persons while documenting Altit Fort under the direction of Richard Hughes, an AKTC structural consultant, setting a unique
example for women’s participation in conservation projects. This provided an opportunity to engage young girls in physical restoration and adaptive re-use works such as masonry, carpentry, electrification, plumbing and hospitality. Around 2008, when the restoration of Altit Fort was near completion, the skills development programme was re-organised under the name ‘Women Social Enterprise (WSE)’ (generously supported by the royal Norwegian Embassy) aiming to promote women’s economic empowerment through heritage-based skills. Now called Ciqam, the programme has trained more than 170 women in different skills and trades. The survey team has so far documented over 1,500 historic structures and sites, including Khorog city in Tajikistan; the Bagh-e-Qazi and the Stor Palace in Kabul; Faizabad village; the Pir Nasir Khusraw shrine; 19 historic monuments of Multan; Lahore Fort and over 600 government and AKESP schools, 60 health centres, not to forget 73 Jamatkhanas in Gilgit-Baltistan and Chitral.

Baltistan

A detailed feasibility study on the cultural heritage of Baltistan was carried out in 1997 and led to a broad-based conservation programme. The study focussed on monuments, whether khanqahs (meditation and prayer halls), astanas (mausoleums), mosques, forts or palaces, highlighting the unique architecture of Baltistan, which bears the imprint of strong influences from Iran, Kashmir and Tibet. To demonstrate the merits of heritage conservation and to
engage local communities, AKCSP undertook pilot restoration projects on the Amburiq mosque in Shigar (1998-99) and the astana of Syed Mir Muhammad in Khaplu (1999-2000). The pilot projects resulted in increased awareness of the importance of conserving cultural heritage, of reviving dying traditional skills and crafts and the role of collective action at the community level to reclaim heritage. The establishment of the Shigar Town Management and Development Society (STMDS) and the Baltistan Culture and Development Foundation (BCDF) during this early period was aimed at developing local capacity as well as an institutional framework to conserve and manage cultural heritage. AKCSP helped BCDF to initiate ‘Baltistan Enterprise Development and Arts Revival’ (BEDAR) to revive a wide range of skills, as will be mentioned in detail below.

AKCSP further strengthened its technical and implementation team by undertaking rehabilitation work in the settlements around Shigar Fort, including the small bazaar, before physical conservation of Shigar Fort actually began. Restoration and skills development went hand in hand. The restored Fort was opened for visitors in 2005 and the surrounding villages were improved with paved streets, rehabilitated common spaces and washing areas for women. By the end of 2005, the benefits of restoration and re-use of Shigar Fort and its initial impact on local economy and skill development had become clearly visible. This created the necessary conditions for the restoration of Khaplu Palace, the rehabilitation of typical traditional houses and the upgrading of historic settlements, using locally trained skilled manpower. The documentation and emergency stabilisation of Khaplu Palace was initiated in 2006 and it was opened to the public in 2011.

Since the completion of the Baltit Fort conservation project in 1996, AKCSP has documented over 1,000 sites in Gilgit-Baltistan, restored 5 landmark monuments and 21 religious buildings, carried out 130 initiatives to support heritage conservation, supported 2,000 households through up-gradation of settlements, established 3 social enterprises and a music centre. While implementing these projects, AKCSP has trained over 100 craftsmen in traditional building construction, 2,000 women in embroidery and 170 women in surveying and build a critical mass of skills important for sustainability of cultural heritage of Gilgit-Baltistan. AKHCP initiatives have won 12 UNESCO Asia-Pacific Awards (the Royal Norwegian Embassy has been a partner in almost all of these, having provided consistent support for over 25 years for cultural heritage conservation) in Gilgit-Baltistan alone. The re-use of Baltit and Altit forts in Hunza as cultural centres and Shigar Fort and Khaplu Palace in Baltistan as heritage hotels gives jobs to more than 300 local employees, including over 100 young women annually, not counting the many indirect local beneficiaries. In 2019, more than 43,000 visitors each visited Altit and Baltit forts, generating gross revenues of USD 200,000 and USD 150,000 respectively. Altit Fort, with its Kha Basi Café run by women, the Leif Larsen Music Centre (LLMC) which provides school-children training in traditional music and the Ciqam workshop, has become a ‘must visit’ destination for tourists and dignitaries alike.
Lahore

In 2007 and on the request of Government of Punjab, AKTC signed a ‘Public-Private Partnership Agreement’ to provide technical and financial assistance for the Walled City of Lahore project and to build capacities in urban heritage conservation. AKTC had initially provided strategic planning services for the entire historic city of Lahore and had extended professional assistance for a pilot urban rehabilitation scheme, the Gali Surjan Singh Rehabilitation Project (2009 -2012). Training of local young people in the Walled City began with baseline surveys comprising 276 hectares of topographic survey, the inventory of over 22,800 properties, a socio-economic survey of 1,757 households and the identification of 2,000 buildings for conservation. New technologies such as EDM/CAD real-time surveying and documentation with photo-orthorectifying software were introduced and young people residing in the project area were provided access to on-job skill enhancement programme.

The Gali Surjan Singh Rehabilitation Project provided on-the-job training to 41 young people in masonry, carpentry, brick tile flooring, scaffolding, lime plastering, electrification, plumbing and in related trades over a period between 6 to 18 months. The training resulted in the upgrading of over 100 metres of residential street and the conservation of 13 dwellings equipped with modern sanitation facilities. This project won UNESCO’s Asia-Pacific Heritage Award in 2013. The success of the project led to the conservation in 2013-15 of the
17th century Mughal period bathhouse (Shahi Hammam) with funding from the Royal Norwegian Embassy. The 1,000 square metre complex was rehabilitated through interventions that included the exposure, conservation and display of the original waterworks, drainage and heating networks as well as the historic floor level, restoration of the original entrance, internal chambers and architectural features including provisions for internal and external illumination. The restoration of the original Mughal frescos was a major challenge, primarily because of the lack of local fresco conservation skills. Hence a murals conservation consultant, and two mural conservators, were brought from Sri Lanka to train 12 young artists, a local fresco artist, photographers, electricians, masons and scaffolding support staff. In recognition of the quality of the conservation work and its impact, the Shahi Hammam project was given the UNESCO Asia-Pacific Award of Merit in 2016.

The conservation of the seventeenth-century Wazir Khan Mosque and the rehabilitation of its Chowk (square) under the larger area development project were initiated with the restoration of the square’s 135 metre long north façade (2014-15) with Norwegian funding, followed by rehabilitation of the 800 sq. metre Chowk Wazir Khan (2015-17) to its original level during 2015-17. The project aimed at urban regeneration and the economic uplift of the communities and offer lessons and capacity building. The conservation of the north façade involved archaeological excavation to expose hujras (spaces historically used for accommodation and as shops) and the original floor level, drainage for rain water and the construction of a retaining wall to provide a buffer between the mosque and the road. More than 40 young people were trained, mainly in reconstruction and related trades, which has further strengthened the conservation teams deployed for the rehabilitation of the Chowk, for documentation and for the conservation of the 470 metre Picture Wall, one of the largest murals in the world.

The Chowk Wazir Khan operation also sought to reclaim urban public space by lowering the Chowk to its historic level, conserving the eastern façade punctuated by hujras, the calligraphers’ bazaar inside the main entrance and an ancient well. The project was implemented with financial assistance of USD 1.2 million from the US Ambassador’s Fund for Cultural Preservation (AFCP). It brought to light the Mughal period historical floor, the steps of the main entrance and involved the structural consolidation and conservation of 22 shops and hujras along the eastern façade and the restoration of an ancient well. The project trained 94 young people and craftsmen in more than 16 different conservation, construction, lighting and landscaping trades. The objectives of the project were twofold: first, to improve the historic urban fabric that surrounds the Wazir Khan Mosque and second, to conserve the Wazir Khan Mosque itself. The modular conservation of Wazir Khan Mosque and its historic neighbourhood will end with the rehabilitation of historic houses next to the Mosque and of its western façade. Conservation and Rehabilitation of 3 historic houses south of Chowk Wazir Khan has been initiated. Finally, restoration of the core of the mosque is also in progress with Government of Punjab funding.

Building a multi-disciplinary professional and technical team competent in all major conservation and restoration skills, notably as regards the Mughal
Heritage, was the main motivation for undertaking the challenging task of conserving and restoring the historic Lahore Fort, which is distinguished by its incremental growth and strong Persian stylistic influences. Like the Agra and Delhi forts, the Lahore Fort also exhibits Hindu architectural influences in its earlier phases. The Emperor Akbar’s successors Jahangir, Shah Jahan, and other Mughal, and later Sikh, rulers would make revisions, replacing many of the original buildings, but the main scheme seems to have been preserved. There are 21 monuments remaining in the present day Fort complex, which showcase the architectural characteristics of each ruler’s time and the brilliance of its artistry and workmanship.

Unfortunately, these monuments have also suffered from long periods of inadequate management and neglect. AKTC was invited in 2015 by the Walled City of Lahore Authority (WCLA) to oversee and implement appropriate conservation interventions. The conservation of this complex with its massive footprint, which was inscribed on the World Heritage List in 1981 together with the Picture Wall, was a very complex and intricate undertaking. Extensive studies and detailed digital documentation of the entire Fort contributed to the preliminary condition assessment for the elaboration of a comprehensive conservation and re-use plan. The Picture Wall, with all its extensive embellishments, including tile mosaic and fresco panels, brick imitation and filigree work, represents the exceptional craftsmanship of the Mughal period. Unfortunately, the tile mosaic and frescoes had been severely damaged by disruptions of the original water drainage systems. }

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**Above:** Master craftsmen restoring the muqarnas (stalactite vaulting) located inside the deep-vaulted Shah Burj gateway, Lahore Fort.

**Below:** Reintegration of tile mosaic panels at the western façade of the Picture Wall.
system and by exposure of the exterior façade to extreme weather conditions. The Picture Wall was identified as the first component of the Fort that needed to be conserved. Prior to the actual conservation of the deteriorated mural, a prototype section (11mx16m) was selected to test the conservation principles that would set standards for the subsequent conservation. The selected area revealed a broad range of visual, chemical, physical and structural problems as well as former interventions that can be seen all across the wall. Detailed studies and controlled experimentation made it possible to develop a prototype which covered all aspects of the decoration that was likely to be encountered. This was followed by an International Workshop, held in January 2018, which reviewed the prototype work and charted ways ahead.

Table 1: Summary of trainings carried out by AKCSP in Lahore

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<tbody>
<tr>
<td></td>
<td>Months</td>
</tr>
<tr>
<td>Fresco Conservators</td>
<td>16</td>
</tr>
<tr>
<td>Brick Masonry</td>
<td>60</td>
</tr>
<tr>
<td>Brick Tile Flooring Masons</td>
<td>32</td>
</tr>
<tr>
<td>Lime Plaster / Ghalib kari</td>
<td>40</td>
</tr>
<tr>
<td>New Tile Work</td>
<td>12</td>
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<tr>
<td>Mosaic Tile Work (Kashi Kar)</td>
<td>20</td>
</tr>
<tr>
<td>Plumbing</td>
<td>28</td>
</tr>
<tr>
<td>Electrification</td>
<td>48</td>
</tr>
<tr>
<td>Steel Works</td>
<td>14</td>
</tr>
<tr>
<td>Carpenters</td>
<td>33</td>
</tr>
<tr>
<td>Oiling / Painting</td>
<td>32</td>
</tr>
<tr>
<td>Scaffolding</td>
<td>44</td>
</tr>
<tr>
<td>Archeological Excavation</td>
<td>36</td>
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<tr>
<td>Stone/Marble Work (Skilled)</td>
<td>21</td>
</tr>
<tr>
<td>Retaining Wall Concrete</td>
<td>17</td>
</tr>
<tr>
<td>Glass Fixing</td>
<td>3</td>
</tr>
<tr>
<td>Washed Terrazzo Finish</td>
<td>10</td>
</tr>
<tr>
<td>Glazed Lime Plaster / Pucca Qalai</td>
<td>4</td>
</tr>
<tr>
<td>Lime Concrete</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>465</td>
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</tbody>
</table>

As mentioned earlier, conservation in Pakistan is not yet recognized as a professional field nor given priority in the educational system. By providing a platform for young graduates in various disciplines to work under international
conservation experts the project set in motion the process of training young professionals in the conservation of decorated facades. It is important to note that the Picture Wall prototype project was a first of its kind in Pakistan – an instance where intensive scientific research and analysis was conducted before conservation techniques were applied. The entire process included removal of latterly added plaster, treatment of biofilm on the surfaces, re-integration of fresco and brick imitation work, consolidation of tile mosaic and glazes, and application of new plaster to create a visual order for the viewers. This project was also instrumental in conserving and reviving traditional construction practices. The ground below the prototype area was also excavated to expose the original proportions of the Mughal era wall and to unearth the original seventeenth-century ground level.

Based on the prototype experience, the focus of the Picture Wall conservation project is largely on ‘freezing’ its existing condition and enhancing its aesthetic beauty to embrace the original exquisite craftwork. On the other hand, considering the need for supporting and reviving the traditional crafts, reconstruction will also be carried out, but according to very precise guidelines. This exercise is also helpful in training young restorers and moreover will encourage the traditional crafts by employing local craftsmen. After the completion and unveiling of the western section (87 meter length and 18% of total length) of the Picture Wall in May 2019, the remaining portion (101 meter length and 22% of total length) in the Shah Burj area is expected to be completed by May 2020.
These efforts have already benefited over 451 individuals in 19 different technical skills, mainly related with conservation and restoration of heritage, revival of traditional crafts and construction in Lahore. Out of the total, more than a hundred young men have been trained in masonry skills such as brick, brick tile flooring and concrete wall construction. Other important conservation skills in which both young men and women have received extensive on-the-job training include fresco, lime plaster (Ghalib kari), glazed lime plaster (Pucca qalai), lime concrete, stone/marble work, washed terrazzo finish, archaeological excavation, carpentry, steel work, electrification and plumbing. In addition to these skills a large number of architects, engineers and site supervisors of WCLA have also been trained. See Table 1.

With a view to creating awareness among science students about the role chemistry plays in conservation and the possibility of a career in the field, AKCSP has also presented these efforts at various higher educational venues in Lahore. AKCSP now provides high quality vocational training in conservation and restoration skills that can cater not only its own human resource requirements, but also provide crucial capacity building support to its partners such as the WCLA, the Department of Auqaf and Archaeology and the Departments of Tourism, both in Gilgit-Baltistan and Lahore. These government departments are in turn managing landmark monuments, heritage assets and areas of special value. The building of local technical capacities is also making a significant impact on the revival of traditional crafts, thus contributing towards the protection and promotion of cultural diversity in sustainable ways.

Impact of Conservation and Training

The restoration and re-use of landmark monuments and rehabilitation of historic ensembles in Gilgit-Baltistan have highlighted ‘cultural heritage’ as a unique form of cultural capital that can be harnessed to promote sustainable development in mountain areas. The restored monuments have played a critical role in promoting tourism in Gilgit-Baltistan. AKCSP-restored landmark monuments have become local economic engines. The revival of traditional skills, crafts and promotion of local construction materials through consistent efforts and initiatives have raised public awareness of the challenges of development and how heritage conservation contributes to addressing these challenges, particularly in relation to the physical environment and climate change. Growing demand on the part of local, provincial and national governments for AKCSP to play a larger role in this regard is a clear indication of the tangible impact its implementation of the AKHCP conservation programme had had.

Under discussion currently is greater engagement with the Government of Punjab to conserve landmark monuments, such as the tombs of Emperor Jahangir and Empress Noor Jahan and the Sheikhupura Fort, and to replicate the urban rehabilitation programme in other historic cities including Multan and Bahawalpur. A public-private partnership proposal has been prepared on an enlarged scope for Lahore Fort and its Buffer Zone to be funded by the French Agency for Development (AFD). More recently, the Ministry of Climate Change has set-up a Working Group to develop a “Silk Route Ecologically Responsible Tourism and Preservation of Natural Resource Programme”, with AKCSP acting
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As the Secretariat. The Asian Development Bank has made a request to AKCSP for carrying out survey of a section of a main road in Karachi which still has extant colonial era buildings.

Construction Skills in Gilgit-Baltistan

Until the Shigar, Atit forts and Khaplu Palace restorations were carried out, purely traditional construction practices were being almost entirely replaced by so-called ‘modern’ approaches using non-local materials such as cement and steel, and generally with poor quality standards. The experience of restoring these major landmark monuments amply demonstrated to the AKCSP technical team the efficiency of traditional architectural methods, particularly in terms of function but also form and performance of local construction materials in relation to geography and climatic conditions. Thus restoration projects in Gilgit-Baltistan not only resulted in re-use of abandoned forts and structures but also led to enhanced pride and public debate on the comparative benefits of traditional construction practices. In particular, after the earthquakes of 2001 and 2005 these monuments showed themselves to be earthquake resistant structures, as they suffered little or no damage.

In the light of these outputs and the clear benefits of using of local or, more precisely, natural construction materials, further studies, experiments and tests

Above: A conservator carrying out material tests, Lahore Fort.
were carried out into the specific properties of traditional construction designs and local materials. Laboratory testing of a prototype traditional house (Ha) was also conducted at NED University, Karachi using the Shake Table Test (STT)\(^2\). Shake Table Testing is most realistic way to determine if how a building will behave by having a scaled down model of the building shaken under controlled environment representing various earthquake intensities. Based on these findings and the experience of restoration and rehabilitation accumulated, AKCSP constructed the Ameen Khan House (2005) using a cator-cribbage frame filled with stones using lime mortar before restoration of Altit Fort in the historic Kha Basi (royal garden). In the following years and after technical review and assessment of the Ameen Khan House, the Altit Gallery was constructed by women trainee masons and carpenters at the entrance of historic Altit khun (settlement) using mud mortar instead of lime and in the 2009 Golden Jubilee Mulaqaat lounge, constructed in Aliabad Hunza for His Highness’s Golden Jubilee celebrations. Other structures which have used traditional building materials using traditional construction techniques include: Model House (2007) in Karimabad, Karimabad View Point (2011), Leif Larsen Music Centre (2015) at Altit Fort garden and the Abruzzi Higher Secondary School in Shigar (2010). New structures with different traditional designs for residential and commercial functions using local materials, particularly Greenwood, constructed by young men and women at three locations in Hunza, were effective in reflecting on, analyzing and questioning time-tested construction practices rooted in heritage in relation to modern construction types, which are sometime called kuchha or pukka – the two binaries that arbitrarily define traditional construction as a low quality output.

Through this small-scale approach, 46 masons, carpenters, electricians, plumbers and paint and polishers were trained. Most of them were women. The project also tested traditional design and materials along with the introduction of some of modern techniques that could upgrade the traditional model. All new buildings were constructed using timber frame construction, with improvements such as stabilised mud mortar, lime, or vertical steel bars to enhance structural strength. The aim was to develop this improved traditional construction model as an alternative solution, capitalizing on its tested qualities that include energy efficiency, re-usability, relatively better performance in case of earthquakes and low maintenance costs when compared to modern materials with a rigid frame structure.

In Baltistan, the restoration of Shigar Fort and Khaplu Palace by 2011 and the development of traditional construction skills translated into a rapid increase in community-based restoration of small but culturally significant buildings through BCDF and the two Town Management Societies (TMDS) of Shigar and Khaplu. In Shigar alone, over 400 private houses and commercial structures were built

\(^{2}\) STT is one the different experimental techniques used to test the response of structures to verify their seismic performance. This experiment is carried with a device by shaking structural models or building components with a wide range of simulated ground motions, including reproductions of recorded earthquakes time-histories. Shake table typically consist of a rectangular platform of various sizes that is driven by actuator.

Above: Ciqam carpenters working on wooden wall panelling.

Below: Ciqam carpenters work on upholstering a wooden sofa.
using traditional materials and construction techniques. The construction of the 20,000 square foot double-storey Jamia Mosque built in timber frame and the 13,000 square feet Abruzzi School are major achievements of the Shigar TMDS in promoting traditional construction and skills, apart from the restoration of two historic khanqahs, two imambargahs and an astana (shrine). In Khaplu, the extension of a 350-year old 16,000 square feet timber structure building, Khanqah Muallah, was carried out by the Khaplu TMDS. This is one of the largest single storey buildings in Gilgit-Baltistan. Thus, BCDF together with the TMDSs, have emerged as the leading civil society agencies for protecting cultural heritage and promoting skills development and traditional construction. In a nutshell, conservation, restoration and re-use of heritage assets in Gilgit-Baltistan by AKCSP and its local partners have yielded significant tangible results by building a robust local skill base in construction and tourism, strengthening the local economy and positively impacting the physical environment.

Ciqam – A Women’s Social Enterprise

Ciqam, a pilot skills development initiative, was launched in 2004 in order to encourage young women from marginalized families to be trained in non-traditional skills and thereby be able to earn a small regular income. Its role as a social enterprise is to generate sufficient annual revenues and support its core mandate of providing young women access to certified vocational training.
in construction and tourism trades. The project began with basic training in plane-table surveying techniques. This was followed by training in carrying out inventories of traditional settlements under the supervision of Professor Yasmin Cheema of the Conservation and Rehabilitation Centre (CRC), Lahore. The immediate results of this pilot activity were very positive: the young women were highly motivated to learn, they appreciated the additional income they could earn and more and more of them began to apply. This encouraged AKCSP to launch a multi-year formal skills development programme adding other trades – mainly heritage-based and those that are in high demand locally.

The programme, funded by the Royal Norwegian Embassy in Islamabad from 2008 to 2017, allowed AKCSP to formalise and organise much-needed training in traditional construction and its related trades, surveying, crafts, tourism and hospitality, heritage management and folk music. More than 200 young women were trained in skills such as topographic and building surveys, digitisation and drafting, carpentry, paint and polishing, masonry, plumbing, electrification, hospitality, craft and music instrument making and folk music. Ciqam has established one of the largest greenwood carpentry workshops in Hunza, led by trained women carpenters. Five women and one male carpenter received 2 weeks of training in drawing based carpentry products manufacturing at the Godalen Vocational School, Stavanger, Norway in 2014. This helped Ciqam to develop traditional carpentry into a formal trade based on design and suitable for mass production, particularly in construction carpentry and furniture making. A group of 30 young women carpenters and two male master carpenters received furniture making training at Mohkam Furnishers, Lahore for two consecutive years during 2015 and 2016. As a result, Ciqam has developed more than 13 construction carpentry products, including pre-fabricated doors and windows, skylights, staircases, columns, beams, trusses and wooden floors, apart from more than 20 furniture items.

Currently, Ciqam is in the process of being registered with the Security Exchange Commission of Pakistan (SECP) as a Private Limited Company. With its over 30 women and 6 men surveyors, carpenters, masons, tourist guides and hospitality staff, Ciqam has developed a critical mass of trained people in skills critical for effective participation in two top growing sectors of tourism and construction in Gilgit-Baltistan and Chitral.

Crafts Skills

Soon after the restoration of the Baltit Fort in 1996, AKCSP launched its first pilot project for crafts revival through skills development in Hunza in cooperation with the Swiss-funded Karakoram Handicrafts Development Programme (KHDP). The aim was to revive the traditional art of embroidery. This project allowed three thousand women, working from home, to enhance their incomes through the production of embroidery products which were further processed into different final finished souvenirs. KHDP later evolved into an independent entity called the Karakoram Area Development Organisation (KADO). More than 20 women trained by and working for KHDP during the project period are now running small independent businesses in Hunza and their products are sold as souvenirs in
Gilgit-Baltistan and other parts of the country. Other KADO activities include *Sharma* (local goat wool carpet) production (30 men and women trained) and the Hunza Environmental Committee (HEC) which looks after the collection and disposal of solid waste in Hunza. KADO also initiated the Hunza Arts and Cultural Forum (HACF) to revive and promote music and other performing arts through apprenticeships of young students with masters in these traditional callings. Currently, KADO is also working in IT and gemstone cutting and polishing and provides vocational training to young people at the regional level.

During the restoration of Shigar Fort in Baltistan a similar organisation, the Baltistan Enterprise Development and Arts Revival (BEDAR), was set up by the then Baltistan Culture Foundation (BCF), which is now called the Baltistan Culture and Development Foundation (BCDF), and AKCSP. Its purpose was to enhance employment and income generating opportunities in Baltistan through enterprise development and skill enhancement. BEDAR has already trained over 200 young people in carpentry, wool fabrication, spinning, apricot oil processing and gemstones cutting and polishing. BEDAR has its own carpentry workshop in Skardu, with 22 core staff fully trained in traditional carpentry skills such as carving, lattices, furniture and construction carpentry. The BEDAR woodcraft centre has trained over 80 men in different carpentry skills and 20 women in wood carvings and souvenir making. BEDAR woodcraft is the largest supplier of school furniture, doors and windows and lattices in Baltistan. It has introduced a wood seasoning plant to season Greenwood especially, poplar and walnut,
that has been replicated in the Shigar and Khaplu valleys. Under the apricot oil project, BEDAR trained 22 women, 10 millers and 12 in production process and developed 6 products under the brand name of ‘Mountain Gold’.

Ciqam craftswomen manufacture traditional music instruments including Rubab, sitar, zighini, Pamiri Rubab and duf. Under the crafts revival project, Ciqam has trained more than 20 young women from Chitrals and Gilgit-Baltistan in Greenwood crafts and weaving using traditional motifs. Since the opening of the Leif Larsen Music Centre (LLMC) in 2016, AKCSP has trained over 32 local school and college students in traditional music and has nurtured a core group of 8 students, 4 boys and 4 girls, who now teach traditional music skills to others and also perform for visitors at Altit Fort. LLMC provides stipends to students to support the cost of formal education (tuition fees, cost of books and transportation). The AKCSP craft model has been replicated in different districts of Gilgit-Baltistan and Chitrals by other development organisations and public sector departments.

**Management and Service-related Skills**

The re-use of restored heritage assets and the revitalisation of historic settlements in Hunza and Baltistan required new technical and management skills if the desired outputs and outcomes were to be obtained and sustained. The opening of Baltit Fort for visitors as a cultural centre and museum and the up-gradation of the historic settlement called for two different institutional frameworks. As regards the Fort, the Baltit Heritage Trust hired young tourist guides, curators, security and support personnel. The up-gradation of the adjoining settlement carried out at the same time sought to provide sanitation and water to its permanent inhabitants, ensure regular maintenance of sanitation and water distribution lines, the cleaning of storage tanks, the repair and replacement of blocked lines scattered over a relatively large physical area and the collection of a monthly user fee to support these functions. A two-tier approach was envisaged to manage both the landmark monuments and the rehabilitated heritage ensembles: the former through professional staff and for the latter, community-based services provision projects.

In the absence of municipalities in Gilgit-Baltistan, the Karimabad Town Management Society was registered under the country’s Societies Act as an alternative framework to manage basic services in Karimabad town. This model was extended later to Ganish, Altit in Hunza and Shigar and Khaplu in Baltistan. These community institutions have played a pivotal role in heritage conservation. During 1996 – 2011 AKCSP organised regular exposure visits of TMSs to develop shared understanding on heritage, enhance community participation in development, to engage young people, particularly women, in project activities and to sustain conservation outcomes.
Rehabilitation and Services Skills

Right from the start, AKCSP has aimed to build the capacity of local partners through institution-building and training in order to ensure the sustainability of conservation and rehabilitation projects. For example, the up-gradation of historic settlements in Hunza and Baltistan was implemented by the communities themselves with technical supervision from AKCSP. This strategy also enabled them to learn about various technical and management aspects of the completed projects. In Hunza, the communities of Karimabad, Ganish and Altit under the respective Town Management Societies (TMS) laid over 100 kilometres of primary and secondary sanitation lines with the help of AKCSP technical staff and provided over 3,000 households and institutions access to sanitation facilities. Similarly, the implementation of clean drinking water projects for three historic settlements was also implemented by community institutions. In Baltistan, Shigar and Khaplu, communities played the lead role in community development projects after the restoration pilot projects were completed. This improved the governance and management of both community resources and the services required to operate and maintain projects based on local skills development.

AKCSP has trained over 30 local young people in Hunza to operate, maintain and collect a monthly user-fee for sanitation and water supply projects and the smooth functioning of TMS. Trained individuals include, linemen, operators, tourist guides, supervisors, fee collectors and accountants. The three community-based institutions in Hunza provide municipal services to historic settlements that form the core of tourist district. For instance, the Altit Town Management Society (ATMS) generates PKR 2 million (USD 14,286) from visits to the historic settlement, PKR 1 million (USD 7,142) against water supply and sanitation services and another PKR 1 million (USD 7,142) from music and festival activities annually with the help of 10 trained paid staff. Thus the three TMS in Hunza own and operate all the up-grading related projects and are responsible for management and maintenance of historic settlements. These institutions are governed by regularly elected representatives with 30% of female representation.

In Baltistan, AKCSP has been working with the local communities through BCDF and its local chapters to promote community-led development through capacity-building in project management, skill enhancement and training. Governance and management capacities were AKCSP’s priorities from the beginning and through donor-funded BEDAR, BCDF’s strength as a regional institution has increased. The success of BEDAR in developing and promoting traditional skills and heritage-based local enterprises has provided a solid foundation for BCDF to function as the lead civil society organisation in attracting donors, implementing public sector projects and mobilising resources.

The Shigar TMDS registered in 1999 represents 12,000 people spread over 20 villages and is responsible for managing assets such as the seven centuries old Amburiq Mosque (the first pilot restoration project in Baltistan), khanqahs, the new Jamia mosque and the Abruzzi School as well as a water supply project, improved common spaces and a small basic health unit in Shigar. The main source of funding is its 20% share of the Shigar Fort net annual profits.
The Shigar TMDS has made very valuable use of these funds, not only has the Abruzzi Mosque been rehabilitated, but a multi-use hall for examinations and gathering is being built in the Abruzzi School grounds. The Shigar TMDS staff and its representatives work closely with the Shigar Fort and AKCSP technical team for implementation of community-based projects – the clean drinking water supply unit has been rehabilitated as well.

Khaplu TMDS is a representative organisation of over 15,000 people living in 25 villages. Since its establishment in 1998, it has played key role in implementing rehabilitation and up-gradation projects. Recently, the Khaplu TMDS has successfully restored and extended the 350 year-old timber framed Khanqah Moallah, which occupies 16,000 square feet in covered area. Khaplu TMDS receives 20% of the Khaplu Palace net annual profits and looks after community heritage assets including Khanqah Moallah, the UNESCO awarded Astana Syed Mir Muhammad, a water supply project and common spaces.

Management of Landmark Monuments and Visitors

Activities to restore and re-use Baltit Fort have been reviewed and made more economically viable and historically appropriate – this applies also to adaptive re-use plans for Shigar Fort, Altit Fort and Khaplu Palace. A flexible strategy has been adopted so as to assign multiple re-use functions of accommodation and visitation at the same time and ensure authentic exhibition. Shigar Fort was restored as exclusive heritage guesthouse with 13 rooms inside the main fort and 7 new rooms in the historic garden attached to it. AKCSP commissioned Shigar Fort in 2005 with support from Tourism Promotion Services Pakistan (TPSP), another AKDN organisation, which manages the Serena Hotels chain. The experience of managing the Fort as a boutique hotel proved a challenge, however, hence in 2007 it was decided to transfer these operations to TPS. This allowed AKCSP to focus on conservation and restoration without overstretching itself in a totally different field and trade. In 2011 Khaplu Palace was handed over to TPSP for management as a hotel.

Altit Fort on the other hand was restored without the addition of modern services, as the fort is used for ceremonial purposes rather than as a residence. The restored fort, its historic garden and a small summer house have all been used for historic festivals, to experience traditional food and folk music and to house displays of arts and crafts. The Altit Fort complex was operated and managed by Ciqam under AKCSP supervision as a tourist asset. In 2020, Serena is taking on responsibility and is constructing an additional 11 tented rooms to go with the leased house which provides 5 rooms, and of course will manage the café as well. Its function is as an engine for small-scale local economic activities, providing visitors’ access to services and cultural goods in one place.

Moreover, the networking of the production of cultural goods and services is creating increased demand for the supply of materials and related services. It is thus helping augment different value chains in the area, impacting the local labour market very positively. AKCSP has developed a plan for Altit Fort and its historic context – the entire settlement around it - in order to provide the local
community and tourists an enhanced experience of well being in a responsible tourism manner. More than 45 small businesses have been established over the last 2-3 years around the Fort, selling mostly local products and services to visitors. These include 10 cafes, of which 6 are operated by young women trained by Ciqam and Altit Fort and 4 Greenwood crafts, dry fruit, embroidery and souvenir shops.

Communication Skills

Under Ciqam, AKCSP organised training in basic language skills in English, internet and computer skills for over 100 women during 2013-15. In 2018, 23 trainees in traditional music, mainly students of local schools and colleges were also taught English. AKCSP has recently hired 6 young women as trainee tourist guides at Altit Fort. It has also initiated an internship program for Karakoram International University (KIU) local campus students, the purpose of which is to provide practical exposure to visitors with different backgrounds, experiences and orientations and at the same time to give the students tools and techniques for ascertaining visitors’ needs, preferences, level of willingness to buy and understanding of local issues. Tourism as a factor inducing climate change has also been a topic covered.

Twenty-one KIU students from two departments, tourism and development studies, were given a three month internship in July – September 2018. The students were divided into groups based on their areas of interest and after two weeks of orientation three groups conducted different surveys. The first group interviewed over 2,500 visitors to Altit Fort and presented their findings to different stakeholders. This survey raised a number of questions related to the absence of basic public services such as public parking and washrooms resulting traffic jams, overcrowding of public spaces disturbing normal routine of locals, generation of solid waste and litter and shrinking public spaces for local women. The other two groups carried out surveys of upcoming commercial projects through outside investment and on the likely impact of tourism on local heritage resources, particularly land and water. During these internships, KIU students were supported by senior student interns from reputed colleges such as the National College of Arts Lahore (NCA), the National University of Science and Technology (NUST), Islamabad, the Lahore University of Management Sciences (LUMS) and the Indus Valley School of Arts (IVS) Karachi. The immediate feedback from students and faculty was very encouraging. Interns stated that working with AKCSP improved their research skills and understanding of the tourism industry, as well as the costs and benefits of tourism for local economy, society and environment. Subsequently, AKCSP agreed with KIU and the local administration to formalise the internship program for its Hunza campus and contribute to the promotion of sustainable tourism development in Gilgit-Baltistan through research and collection of data and information on visitors.
Cross-cutting Issues

Stakeholder Relations

AKCSP has developed robust functional relationships with a wide range of stakeholders. Partners include communities and ultra-poor households, young people, professional and technical colleges, AKDN institutions, government departments such as tourism, sports and culture, grassroot local institutions, hotel associations, tour operators, donor agencies and parents groups. The majority of these stakeholders also function as social partners, playing a decisive role in establishing and maintaining close linkages between the training programme and the labour market.

In Gilgit-Baltistan, the restoration of landmark monuments, upgrading of historic settlements and development of heritage-based skills promoting traditional architecture and construction and tourism have together strengthened the relationship with the Government of Gilgit-Baltistan (GoGB). As a result, culture and heritage have gradually been recognized as capital assets that are critical for local development at the provincial government level, as reflected in higher annual funding for conservation, skill development and tourism promotion projects. This growing partnership with GoGB also helps AKCSP to influence public policy, particularly for sectors like culture and heritage, construction, tourism, skill development and women’s participation in market based economic activities.

Some of the important outcomes of this partnership include a detailed inventory of built heritage of Gilgit-Baltistan covering all 10 districts, the development of a database from the inventory and the publication of two volumes with the financial support of GoGB. Based on the inventory, the latter is allocating funds for restoration and re-use of heritage assets transferred to AKCSP as grant-in-aid through a Memorandum of Understanding (MoU). One of the ongoing public funded projects under implementation is the installation of signage following international standards and the publication of selected folktales of Shina, Balti, Burushaski, Khuwar and Wakhi dialects spoken in Gilgit-Baltistan. GoGB has signed more than 4 such MoUs with AKCSP so far and there are 6 additional conservation and tourism promotion projects in the pipeline. It has also requested AKCSP technical support in development building codes and tourism management plans for three destinations. AKCSP has thus become the partner of choice of GoGB. The successful conservation of heritage and community-based rehabilitation in Gilgit-Baltistan were also instrumental in inducing the Government of Pakistan to request AKTC technical support in 2007 for the conservation of historic Walled City of Lahore, details of which have been described earlier.

Since then, AKCSP has been working with the Punjab authorities through the Walled City of Lahore Authority (WCLA). AKCSP had played a lead role in drafting the legislative framework for establishment of the WCLA. The partnership has achieved significant outcomes that include physical conservation projects, capacity-building, legislation on heritage and urban regeneration and management of cultural heritage. Currently there are two MoUs with a total

Above: Balitit Fort
Below: Khaplu Fort
grant in aid from the government of Punjab of PKR 578 million for five years (2017 -2021) for the restoration of Wazir Khan Mosque and Lahore Fort. A more comprehensive Collaboration Agreement with an increased and higher level of engagement is under active consideration.

Recent experience of working with Karakoram International University’s Hunza Campus shows promising results as well. Students of Development Studies and Tourism were provided three month internships to carry out surveys of visitors to Altit Fort and tourism related developments. The survey was supervised jointly by AKCSP and two fresh graduates from Habib University Karachi and Forman Christian University Lahore (FC). This internship helped more than 20 KIU students to learn basic research skills, improve their understanding of major development issues of the region and visitor perceptions and preferences. This experience also suggests that partnership between AKCSP and KIU is crucial to improving the quality of learning and teaching at KIU and developing research capacity locally.

One of the most important stakeholders of AKCSP in over two decades of conservation and restoration in Gilgit-Baltistan and Lahore has the Royal Norwegian Embassy in Pakistan. The Embassy has been an ongoing partner for the last 25 years, offering generous financial support for a range of different initiatives. Other donors include the embassies of France, Germany, New Zealand Spain and the United States of America, the Swiss Development Corporation (SDC), the World Bank, Habib Bank Limited and Jubilee Insurance. At the local and grassroots level TMSs, BCDF, KADO and art and culture associations are the most effective institutions managing and operating rehabilitation projects, skills development initiatives and cultural activities to serve local communities and building a strong civil society. AKCSP also values the important role of local suppliers, parents groups, schools and musicians, hotel association and tour operators, who contribute actively to tourism and revenue generation.

**Labour Market Intelligence, Jobs and Employment**

In Gilgit-Baltistan, outside the public sector, the labour market operates largely in an informal manner. The fledgling private sector is involved mainly in construction, tourism and transport; it is highly unregulated and partly seasonal. However, a marked increase in visitor flows since 2015 and improved communications and infrastructure resulting from the creation of the China Pakistan Economic Corridor (CPEC), have led to rapid growth of employment in the construction and transport sectors. Continuous growth in these sectors is increasing demand for skills and is creating additional jobs.

In addition to demand for the specialized professional expertise of AKCSP, there is high demand for trained people in domains such as construction, tourism and hospitality, finance and craft-related trades in the local market as well as in CPEC related projects. At the moment, both construction and tourism are struggling with the shortage of skills and there is still no formal vocational training and education facility, apart from the limited opportunities provided by a few NGOs in selected fields other than tourism and construction. Out of the
700 individuals trained over the years by AKCSP, 380 in Gilgit-Baltistan and 451 in Lahore, over 290 now have regular jobs. The rest are seasonally employed in Gilgit-Baltistan. In Lahore, over 80% are employed, while the remainder are pursuing further studies in tertiary or higher technical education.

The number of visitors to the Lahore Fort doubled in 2018 (almost 5 million) compared to 2017 figure of 2 million visitors. Additionally, a number of activities such as night tourism an example of which is the now very popular Walled City of Lahore“history by night” tour, are resulting in new revenue sources. Inauguration of the Picture Wall western façade by PM Imran Khan in 2019 along with increased interest of people and donors opened new horizons of revenues and interest for heritage. This has reinforced the government’s and donors attention to cultural heritage restoration for tourism development.

In Gilgit-Baltistan, the AKCSP restored forts are the main sources of employment, providing 500 fulltime and seasonal jobs for locals trainees apart from on-job training and internship opportunities annually. Thus the majority of young people trained in conservation skills have remained with AKCSP, WCLA and government line departments.

Women’s Empowerment

Women’s empowerment has been one of the priority strategic areas for AKCS, particularly after 2003 when it gave 12 young girls and boys with basic school education in Hunza. This experiment proved to be a turning point for AKCSP to pursue women’s empowerment and make this domain an integral part of its programme. Boys were dropping out after a couple of months, whereas girls stayed, showing extraordinary motivation in improving their skills. This also led to the hiring of the first female engineer as a staff member of AKCSP. Young women studying in different professional colleges were given internships in rehabilitation and up-gradation projects in fields such as environmental sanitation, water supply, street and common space improvement and the restoration of small individual buildings in Hunza.

Since 2007, AKCSP has been promoting women’s participation at three levels: i) formal skill development through Ciqam and on-job conservation projects: ii) six-month internships in Gilgit-Baltistan and Lahore and ii) through the hiring of women as employees. More than 20 young graduates including 15 women, mainly architects and engineers, were provided employment opportunities on different AKCSP projects in Gilgit-Baltistan and Lahore, which helped them to secure international scholarships for their advanced studies after within two years of employment. The model remains highly efficient in developing trained human resource in different geographic locations. For example, there are 4 women architects and 5 conservators in the AKCSP technical team in Lahore that is made up of 19 architects, engineers and conservators. Naturally, the launching of Ciqam has had a significant impact on women’s participation in market driven economic activities, particularly in rural areas. More than 200 women from Gilgit-Baltistan and Chitral have been trained. Young women from marginalised household with basic education and restricted or no access to
higher education were trained in groups/teams. The focus on team-based learning and project work enables trainees to acquire soft skills concentrating on competencies from the very beginning. The team-based training and learning also helped to overcome cultural barriers to women working in public spaces, and in non-traditional skills. It also improved their self-confidence through the sharing of their personal experiences. At the same time, training in groups proved effective to ensure enabling conditions for learning and to allay parents’ concerns for the safety of their daughters, as well as head off and social mis-perceptions.

Working with a multi-disciplinary team of male consultants, architects, engineers, conservators and project staff, trainee women were encouraged to participate in on-site discussions so as to improve their social and communication skills and enhance their self-confidence. Exposure to visitors such as donor representatives, dignitaries, government functionaries and technical missions also has also allowed young women trainees to experience interactions with people of different backgrounds, cultures and profession. To strengthen the impact of on-the-job training, national and international level exposure and learning opportunities have also been given to women. The women carpenters have benefited from national and international visits made with a view to improving design and manufacturing of products but also to creating synergies and enhancing Ciqam’s scope and impact. For example, as mentioned earlier, 5 women and 2 men carpenters attended a two week carpentry training at Godalen Vocational School Stavanger Norway in 2014 – this encouraged women trainee carpenters to take up design based manufacturing of carpentry products. Visits to high-tech wood industries such as window production, staircase making, prefabricated timber chalet production and wood crafts manufacturing were organised for the group. Staying with host families and experiencing daily life in a society with minimal gender inequality further deepened the women carpenters’ resolve.

Recognising the role of Ciqam as an efficient vehicle to address rural poverty and women’s participation in economic activities and public life, in December 2015 the Embassy of France in Pakistan invited four women carpenters and a surveyor to attend the Paris COP21. This provided an opportunity for the Ciqam team to make a presentation at the Ministry of Foreign Affairs in Paris. The team also visited tourist destinations in southern France in order to observe methods that could maximise the tourism potential of Gilgit-Baltistan.

In 2015 and 2016 women carpenters were offered three months’ training in furniture making at Mohkam Furnisher factory in Lahore, along with 200 men. The training was amply covered by the national media. Internationally Ciqam has been represented at the One Planet Summit held in France in 2017, and at the NGO Conference on Intangible Cultural Heritage held in November 2018 in Vietnam, highlighting the role of women in the revival of intangible cultural heritage of Gilgit-Baltistan. Ciqam’s impending registration will be an important additional step forward.

Finally, the internship and apprenticeship model introduced by AKCSP in its programmes benefits college and university graduates in acquiring practical
knowledge of conservation and restoration projects. Since 2014, AKCSP has engaged 84 fresh college graduates under various projects in Gilgit-Baltistan and Lahore out of which 58 were young women (see p. XX above).

**Finance and Business-related Skills**

AKCSP regularly provides basic training in finance, human resource management, IT and business-related skills both in Gilgit-Baltistan and Lahore. In Gilgit-Baltistan finance graduates from local colleges and new start-ups were encouraged to participate in three month training courses at Altit Fort, particularly during the winters. Till now 7 members of the Ciqam management team, 8 Kha Basi Café women and 4 housekeeping women, together with 17 local businesswomen, have been trained in basic accounting, book-keeping, daily sales recording, visitor handling and guesthouse management. Similar annual trainings are also organised at Shigar and Khaplu forts by Serena Hotels for local community organisations, small businesses and local hotels. A formal training plan is under development for homestays in collaboration with the Aga Khan Rural Support Programme (AKRSP) and the Tourism Promotion Service, Pakistan (TPS, P) which include basic skills in IT, business, finance, housekeeping and food handling.

Above: Altit Fort
Conclusions

It is worth stressing once again the absence of vocational training facilities in Gilgit-Baltistan and the lack of emphasis on quality vocational training and education at the national level. These factors have impeded young people’s access to technical education and the acquisition of intermediate skills, preventing economic growth and perpetuating high poverty rates. Efforts have been made recently in the vocational training and education field across the country, but these appear to be overly theoretical and do not inculcate practical skills. It is obvious, as AKCSP experience suggests, that the purpose of vocational training is to impart the intermediate skills required in occupations for which tertiary education is not required. These intermediate skills are pivotal for the sustainability of small enterprises and the creation of income-earning opportunities.

It is also evident that the end goal of the training process is competency in a particular occupational area. It takes 3 to 4 years to achieve such competency. The AKCSP experience of training of conservators in Lahore clearly demonstrates that acquiring competencies in such trades requires extensive involvement over a sustained period of time. As mentioned earlier, the IT-based training of Ciqam women in AutoCAD and EDM has transformed the manufacturing of carpentry products and the availability of topographic and building documentation services.

The AKCSP training and capacity-building programme, although small in scale, informal and primarily designed to cater to inhouse needs, has generated significant results. These include not only meeting its own needs for intermediate skills, achieving high quality conservation outputs and supporting its partners, but also providing marginalised young people access to income-earning skills, empowering young women, promoting environment-friendly small businesses and conserving heritage.

The AKCSP approach has also enhanced awareness on the key role of vocational training in contributing to sustainable heritage protection both at local and national level. Its vocational training activities have also strengthened AKCSP itself, improving its performance in conservation and restoration, leading it to innovate and causing it to grow.
Egypt (Cairo)

Introduction

The Aga Khan Trust for Culture (AKTC) has been engaged in Cairo for nearly twenty years, most prominently in the creation of the 74-acre Al-Azhar Park. In parallel, using the restoration of cultural assets as a catalyst to alleviate poverty, AKTC has also implemented the Al-Darb Al-Ahmar Revitalization Project, a multi-input socio-economic development programme. As the project expanded, AKTC has partnered with other agencies of the Aga Khan Development Network, namely The Aga Khan Agency for Microfinance (AKAM), and the Aga Khan Foundation (AKF).

Al-Darb al-Ahmar (ADAA), in the southern half of Historic Cairo, is home to a closely-knit community of approximately 150,000 residents, many of whom have lived in the area for generations (39% of residents have lived in the area for over 40 years), and value its central location, and the strong social and business network that permeates all aspects of personal and professional life. Indeed, a 2003 baseline survey found that 73% of residents wanted to remain living in the area. ADAA’s economy is comprised of small family-owned workshops, typically focused on crafts such as carpentry, leather products including shoemaking, metalwork, and crafts related to the tourist trade such as inlay and appliquework (khayamiyya).

AKTC’s 2003 baseline survey showed that average annual income per capita in the area was EGP 1,200 (USD 76.00 as of April 2020). The survey found that more than 50% of people’s incomes were spent on food items, and unemployment was at 16%, higher than the national average. The illiteracy and school drop-out rates were also found to be higher than the national averages, as children often leave school to support their families. The 2003 baseline survey also found that 24% of the economically active were self-employed and that 84 % worked in the informal sector. According to the 2006 CAPMAS census, which covers all enterprises in ADAA, not just the workshops, there were 8969 functioning enterprises which employed 23,888 workers, the vast majority of which (95%) were male.

Above & below: The creation of al-Azhar Park was truly transformative and resulted in a great deal of institutional interest in improving the adjacent neighbourhood of ADAA. It constituted a big boost in employment for local residents.
AKTC’s response to the economic climate of ADAA was to set up a microfinance programme in the 1990s with the aim of providing credit to small local businesses and to offer support to help them become more resilient and start to reverse a long downward spiral in levels of production and economic performance. The programme expanded and in 2005 AKTC partnered with AKAM who established First Micro Finance – Egypt a larger scale microfinance programme which proved extremely successful because it provided local businesses with tangible benefits and offered them access to credit and business support which had not previously been available to them.

Building on this success, and in order to further address a number of challenges faced by local businesses in ADAA, a number of AKDN agencies (AKTC, AKAM and AKF) established the The Cairo Economic Livelihoods Project (CELP) which sought to generate improved employment opportunities through support to micro, small and medium enterprise development with an emphasis on Egypt’s marginalized groups. CELP achieved its goals through increasing the diversity, quality and access to a range of services among men and women in the district, including business development services, vocational training, job placement assistance and career counselling. Strategies were also developed in three areas that had not been addressed previously: promoting gender equality, sound environmental practices, and child welfare.

Over the past ten years, and through both ADAA Revitalisation Project and CELP, the AKDN’s Community Development Company (CDC) has implemented both of the above projects, carrying out vocational training, job placement, job counselling and craft business development services for more than 6,500 beneficiaries. Today al-Mezala for Social Development, an Egyptian NGO established by Aga Khan Cultural Services-Egypt, a local subsidiary of AKTC, is building on those achievements, and has become the flagship for these programmes. The aim of al-Mezala is to contribute to the sustainable socio-economic development of the Historic Cairo neighborhood of ADAA and its surrounding areas.

Like other NGOs in Egypt, al-Mezala had to withstand significant political change and instability following the January 2011 revolution and the uprising of 30 June 2013. During this period, Egypt’s economy suffered from a severe downturn and even today the government continues to face numerous challenges in restoring growth and stimulating investor confidence. Youth unemployment rates have been rising since 2006, particularly impacting Egypt’s poor. According to the 2013 Human Development Report, Egypt has the highest rate of youth unemployment in the Arab region. Young women are particularly severely affected. According to a study carried out by the Population Council, 82.1% of female youth that are not currently studying are out of the labour force; this compares to 13.6% of non-student male youth.

Poverty has been exacerbated by slow economic growth, pervasive unemployment and underemployment, depressed wages, and underinvestment in infrastructure and social services. The Household Income, Expenditure and Consumption Survey (HIECS) for 2010/2011 showed that the poverty rate increased from 21.6% in 2008/09 to 25.2% in 2010/11.
Historic Cairo was severely hit by these circumstances especially because a large part of its residents’ livelihoods relied on tourism, which practically disappeared from Cairo after the Arab Spring. As for women, social considerations have tied them to their homes with less mobility than men, thus limiting their contribution to improving their household’s livelihoods. These limitations that local women are facing make e-learning a most convenient mode of education and training. Notwithstanding these challenges, al-Mezala has achieved success and accumulated experience in the area of crafts training especially in carpentry. It has already trained more than 300 carpenters, raising their standard significantly and enabling them to penetrate new, more discerning, and more profitable markets. Al-Mezala owns and operates a well-equipped carpentry workshop, which is centrally located in ADAA. The workshop is used as a vocational training centre as well as a revenue-generating unit. It employs a staff of experienced carpenters and trainers.

Al-Mezala builds on AKDN’s previous experience in the area, and on the recognition that in order to really improve the economic conditions in an area like ADAA, a multifaceted approach is necessary, one that ties together the financial, social, cultural and community aspects of economic development in a significantly underprivileged area of Cairo.

Community-driven Conservation and Vocational Training

AKTC adopted a unique approach in the rehabilitation of the ADAA district by seeing the community itself as one of the area’s most important assets, as well as by targeting them as the primary beneficiaries of all of its programmes. Such an approach was in stark contrast to earlier approaches to the historic city, which were more concerned with the interests of tourists, rather than local residents, and in many cases viewed local residents and their needs as being detrimental to the preservation of the historic city. There had also been a longstanding view that what was valuable about the historic city were its monuments, and that the urban fabric, the economy and the people of the area of minimal importance.

On the level of urban conservation, AKTC, through a partnership established with the Egyptian Supreme Council of Antiquities (now the Ministry of Tourism and Antiquities), put in place a plan to integrate the monuments after their restoration with the community by reusing them in its service, another radical departure from the convention of reusing historic buildings for cultural purposes. The latter was an approach that had proved untenable given that the vast number of listed monuments far outmatched the demand for cultural activities and cultural venues. Moreover, the previous disconnect between local residents and their historic buildings meant that the community often saw no use in such buildings, and had no incentive to maintain them (with the exception of functioning historic mosques). AKTC recognised that the skills used to restore and upgrade existing buildings in ADAA would be highly demanded outside the context of the historic city, and could be an very valuable area of vocational training to focus on, especially given the huge and growing size of Cairo, and the constant need for building related trades and skills such as carpentry.

Above, middle & below: AKTC’s restoration work in ADAA provided an excellent opportunity to create training and employment opportunities in building and fine conservation and to teach local residents traditional crafts such as cut gypsum work.
AKDN’s development activities in Egypt over the past 20 years began with the project of establishing Al-Azhar Park, an idea that germinated in 1984 after a seminar on urban and environmental problems in the Cairo Governorate organised by the Aga Khan Award for Architecture. The seminar identified a lack of green space in Cairo, and reflecting on this challenge, His Highness the Aga Khan decided to gift a public park to the city of Cairo. The 70 acre site eventually selected was chosen because of its proximity to the historic city. From the onset it was clear that the park project should not be seen in isolation from its context, but be developed as catalyst for socio-economic development, an approach that has been integral to the way that AKTC has developed its multifaceted upgrading programme. ADAA was a particularly interesting area because it had declined from being one of the most prosperous neighbourhoods in the city to being one of its poorest.

One of the greatest opportunities presented by ADAA was the fact that it had preserved much of its urban fabric and that it had many historic buildings, albeit in poor condition. AKTC was quick to realise that restoring such buildings was not only good from the perspective of heritage preservation, but that it would also provide numerous opportunities to develop professional skills and experience that would be of benefit to the local workforce. This applied not just to conservation skills but also to skills and trades like carpentry, which was widespread but generally of poor quality.

Moreover, the rediscovery and excavation of the 12th century Ayyubid Wall of Cairo during the course of preparatory work for the future park presented an unparalleled opportunity to restore the historic wall with its gates, towers, and interior chambers. With a structure of such vast scale, much of which was in poor or neglected condition, the employment opportunities its restoration provided were both numerous and varied.

Challenges, Risks and Opportunities

One of the main challenges vis-a-vis monuments and people in ADAA was that apart from functioning historic mosques, many monuments were unused and therefore had little meaning to their community. With respect to the traditional building stock of ADAA, the problems facing the area were many. Firstly, maintenance of the buildings had been poor, and in most cases, infrastructure systems were long past their working life, and water damage had weakened some buildings. The 1992 earthquake had damaged others and had led to the demolition of the upper storeys of many buildings, out of fear of their possible collapse. A very common problem was that there had been very limited investment in the building stock beyond cosmetic redecorating, and with a building stock that was generally a century old, building conditions were poor. The problem was compounded by the fact that the knowledge of restoring and repairing traditional buildings was practically non-existent in ADAA, and very scarce.
in Egypt at large. Since the 1960s, traditional construction techniques had been superseded by reinforced concrete construction, leading to the gradual loss of traditional building skills. The gradual impoverishment of ADAA also meant that craftsmanship was very poor, even in trades like carpentry which did not cater for the tourist trade but to real community needs. Evidently, the quality of materials and of workmanship had witnessed a steady and marked decline.

The declining conditions of the traditional building stock were exacerbated by the frequent demolition of traditional buildings in order to construct modern residential structures. There was no legislation in place to protect the historic buildings or the urban fabric; unfortunately there were many incentives to demolish and replace. This continued pattern of demolition of traditional buildings and the construction of new buildings by contractors meant that the demand for local skills was decreasing - in many cases new building fittings were sourced from outside ADAA and local craft industries were not benefiting from urban development, which was detrimental for many reasons. Another real challenge was the dearth of skilled craftsmen, especially among younger generations. For existing craftsmen, the challenge was to produce things cheaply to cater to a cash-strapped community - both materials and finishes were poor, and the skill to produce good quality items was largely forgotten.

There were also several risks. To begin with, the absence of any real guarantee that AKTC’s pioneering initiative would work, and that investment in socio-economic development initiatives would bring about long term benefits to the area and its inhabitants. Another risk was that because AKTC’s policies were different to those traditionally espoused by government authorities, old planning schemes to create vehicular thoroughfares through the historic city, as well as a long-term plan to remove all residential buildings abutting historic monuments would be implemented, the case of the Ayyubid City Wall being a prime example. This created yet another risk: the residents’ uncertainty and perceived lack of security of tenure. There were also risks that the demand for vocational training would be low given the widespread belief that blue-collar jobs were less respectable than white collar jobs, and that tradition was a thing of the past, and not worth maintaining. The overarching risk was that AKTC, in going against the flow, might not receive the support to take its vision forward.

On the other hand, there were a number of facilitating factors, which constituted opportunities. One of these was the fact that AKTC’s commitment to creating a large public park at its own expense had given it leverage and credibility among government agencies, who were prepared to allow AKTC to undertake pilot projects, even though they were not always convinced by the outlook and skeptical of their viability. The fact that ADAA was not an area in the political or developmental spotlight probably gave AKTC some leeway, and greater freedom to implement its vision. From the community point of view, the sense of belonging to the neighbourhood, and an appreciation of the strong sense of community and centrality was extremely helpful. It meant that residents were eager to engage with the project, and in general were very welcoming. As a community that saw both its past and its future in the neighbourhood, it was willing to invest its own resources into a more promising future. The project’s strategy of opening an office in ADAA, and hiring a range of young people from
the neighbourhood was extremely beneficial. It made it easy for the project to gain acceptance by local residents and enabled us to create bonds with local community leaders.

Despite its relative poverty, ADAA was not an area lacking in competent people, and this helped AKTC greatly when putting in place vocational training and other educational programmes: it was not a culture shock to local residents, and in fact many welcomed the opportunity to find skills development and employment opportunities in their neighbourhood, rather than having to seek opportunities further afield.

The Vocational Training Programmes

AKTC projects have always used an on-the-job training method, bringing together a combination of international and local expertise to offer support both through organised training programmes and more informal training. The aim was and is always to invest in people, to empower them and to enable them to find their own mechanisms of developing themselves and their community and of building their capacity. The main aims of such an approach is to enable people to improving their livelihoods and their quality of life, and in the process improve their environment, including their urban fabric. In order to do this effectively, in the first few years of the project’s life AKTC invested in developing an understanding of the area and the opportunities for vocational training programmes, as well as the challenges faced by local businesses, craftspeople, and the local economy at large. In mid-2005 AKTC began to implement more formal training in order to maximise opportunities for trained professionals from ADAA to find employment opportunities in all of Egypt. AKTC was of the view that creating partnerships with other actors in the fields of education, training and employment would be the best way forward to maximise the long-term benefits of its vocational training schemes.

The Mubarak-Kohl Project

One such partnership was one established with the Mubarak-Kohl building and construction project. This was represented by The Egyptian Federation for Construction and Building Contractors (EFCBC); The Egyptian Ministry of Education (MoE) and The Institute for Project Planning/ German Technical Cooperation (IP/GTZ) . This programme had much to offer local communities, and the society at large. It allowed a replacement of economic forces and market competition with social forces, harnessing the private interest of all organizations to the public good. Cooperation between AKTC and Mubarak-Kohl was seen as a natural result of both community-based demand-driven training in the fields of construction (DACDC) and a new labour-market driven by the Mubarak Kohl Initiative Building and Construction Training Scheme (MKI B&C).

As a result of discussions between the partners, the project managers agreed to consider the Egyptian Vocational Competencies Qualifications (EVCQs) resulting from the National Skills Standards Project (NSSP) in the curricula of the Mubarak-Kohl Dual Training System to allow students to undergo
testing and certification and exit at any of a number of levels according to the national policy. It also decided to enrich the MKI B&C training scheme with a second track of trainees coming from the informal sector to be trained for the labour market. In order to accommodate this second approach and to respond effectively to the specific context of ADAA and other similar areas, it was necessary to construct and continuously upgrade curricula and training programmes to ensure that they were responsive to those preset needs. It is important to bear in mind that being based in and rooted in ADAA qualified AKTC to understand the community’s needs, as well as best practices, and practical applications of training programmes to a specific context. To that end, the ADAA initiative contributed significantly to setting up a general framework for designing comprehensive vocational training programmes, particularly with issues related to time-frame and applicability of training programmes to area needs and ensuring the personal development of candidates.

In the context of the cooperation agreement between the Mubarak-Kohl Initiative Building and Construction Project (MKI_B&C) and Al Darb Al Ahmar Community Development Company (DACDC) concerning cooperation in the field of dual Vocational Education and Training (VET), a pilot project in plumbing and sanitary installation was agreed as a first step towards a real partnership in the field of vocational educational training specialized in construction and building rehabilitation. The implementation phase started in January 2006 with a pilot project in order to test assumptions. The curriculum was revised considering EVCQ as per an MoU countersigned between the Egyptian Ministry of Education and the Social Fund for Development. The programme was designed to last 15 months, commencing in January 2006 and ending in March 2007 and it was offered to 20 trainees. The training programme itself took place in different venues; the theory and basic practical training took place in Zein el-Abdeen and in-company training took place on site at ADAA restoration projects to ensure that it was based on an actual experience. With regard to certification, upon completion of training the graduates were granted a certificate endorsed by the partners giving them the qualifications to undergo EVCQ tests in order to be recognized as licensed practitioners.

Carpentry Training

In 2007, the project developed a carpentry training programme to be implemented in the context of the wider active partnership. The aim was for this training programme to directly target the informal labour market but also be based on the EVCQ’s (Egyptian Vocational Competencies Qualifications) set by the NSSP project and the market demand. This carpentry training was conceived as a tool for sustaining the partnership established for the sake of developing proper vocational training serving the informal labour sector in ADAA. This partnership involved the Egyptian Federation for Building and Construction Contractors DAR), the Ministry of Education, and IP/GIZ. A three month long preliminary training programme for 23 trainees was initially conducted. This was considered as the seed for more cooperation and networking with new partners, capitalizing on the needs of the labour market and the carpentry industry of ADAA. The carpentry training was foreseen as an important initiative in the revival of the carpentry industry in ADAA.

Above: Skilled carpentry training demonstrated that the complex traditional techniques of Arabic carpentry could be revived, and the finished products marketed in high-end venues in Egypt such as Windoorex and other exhibitions.
The implementation in earnest started with a 9 month pilot project in the trade of Arabic carpentry, catering to 20 trainees from ADAA (14 Male and 6 Female). It was held at the AKCSE Carpentry Training Centre. While it was recognised that residents of ADAA had the potential to work in diverse fields, in general they lacked the opportunities to enhance their vocational skills. Correspondingly, ADAA lacked the formal bodies that could offer professional vocational training programmes to people in the area of working age. Accordingly, a Vocational Training Unit (VTU) was established as a vital pillar of the project, given its aims to develop and enhance the skills of ADAA’s workforce by providing people of working age with vocational education and training opportunities that would allow them to compete in the labour market. This goal was attained through two main tools. Firstly, by offering training to young men and women, as well as artisans in various occupations that would help them find better job opportunities, and secondly by operating and managing ADAA’s carpentry and lime workshops to provide real training and employment opportunities through AKTC’s extensively restoration and housing rehabilitation programme. To that end, ADAA Carpentry workshop was set up with two main purposes: to train beneficiaries to produce high standard carpentry and woodwork, and to provide ADAA with all its carpentry needs. Seventy percent of the artisans working in the workshop come from ADAA. In 2008, upon the request of Cairo Governorate, the wood workshop produced 133 wooden kiosks for Al-Ataba book market, the city’s main book market, demonstrating the workshop’s relevance. The workshop also designed and produced a number of doors for

Above & below: The carpentry trade had traditionally been dominated by men. AKTC’s training programmes identified products and techniques that would lend themselves to being produced by local housewives and which could guarantee a steady source of income for them.
the office of the Cairo Governor upon his request. On the project level, the workshop produced all the needed doors and windows for a new building in ADAA that would become the area’s Early Childhood Development Centre. It was clear that there was a real demand for the products the workshop was making, and that they could produce products of competitive quality.

In 2008, the VTU in collaboration with the German Technical Cooperation (GTZ), held the “Open Doors” exhibition in Al-Azhar Park, where four different doors were produced by the carpentry workshop, each representing a different country (Egypt, Spain, Portugal and Morocco). The main aim of the exhibition was to display the products of the wood workshop thematically and in the context of other places with similar traditions. In parallel the project also set up a lime workshop to produce lime for the different restoration programmes, such as restoration of the Ayyubid Wall and the historic houses in ADAA. This also provided technical training opportunities.

The Vocational Training Unit Branches Out

In 2008, the VTU started applying occupational skill standards to its training programmes. The first initiative was to apply the National Skills Standard Project (NSSP) across three trades: Construction & Buildings, Industry, and Tourism. Accordingly, the VTU developed 111 qualifications for these three trades. The VTU also sought to apply the Egyptian Vocational Competence-based Qualification (EVCQ) and the Scottish Qualification Authority (SQA). The VTU also explored with the ITC the possibility of developing occupational competence standards for people working in heritage conservation in ADAA. These standards were to be the main reference for designing the different curricula used in training workers in occupations related to this specific sector.

The VTU finalized two main training courses in 2008 in plumbing and carpentry. Around 20 trainees completed a 15-month plumbing training that was conducted in collaboration with MKI. Due to the success of the training, the trainees were offered an advanced plumbing training with the Ministry of Trade & Industry, which they also completed. After the completion of the plumbing training, a number of trainees opened their private business, while others established small and micro projects in plumbing. Some of the graduates of the programme formed partnerships together. Furthermore, the VTU conducted a plumbing training course for the youth working in AKTC’s Housing Rehabilitation Programme (HRP) as such expertise was needed in housing restoration. Moreover, the VTU held on-the-job training for the workers in the HRP on various administrative and technical skills required for working in historic buildings to build their skills as well-rounded professionals.

The VTU finalized carpentry training for a group of 93 beneficiaries. The training was divided into theoretical and practical components, the former included an introduction to the different theories of the occupation, while the latter trained them on the different carpentry techniques. It is worth mentioning that the curriculum for this training was developed by 2 young trainers from the ADAA area under the supervision of experts from the VTU.
The VTU also offered a number of training programmes in administrative skills. In 2008, 329 young males and females benefited from training in basic office skills (typing, faxing, photocopying, communication, etc.), public relations, introduction to computing, word processing, IT maintenance and Management Information Systems. The VTU also decided to direct its efforts towards training local NGOs on administrative skills in an attempt to develop their capacities in this regard. In light of all the above-mentioned commitments, the VTU worked on developing itself as an international centre of excellence for vocational education and training in ADAA to be replicated elsewhere by the concerned bodies.

A beneficiaries’ satisfaction survey was conducted by the project’s Monitoring, Research and Evaluation Unit in 2008 to evaluate the training courses offered by the VTU from the point of view of beneficiaries. The survey showed that beneficiaries were very satisfied by the training to the extent that 97% of the people who undertook the various training programmes advised others to undertake them.

The achievements of the Vocational Training Unit

The VTU had numerous interrelated aims it sought to achieve by 2009. It aimed to continue ITC and MOE training, enable CSOs deliver vocational training
in computer skills, plan and implement training programmes, develop new training programmes in technical and administrative skills; develop curricula for heritage conservation, working with ITC and CDC to develop EVCQ’s and then establish a conservation centre providing adequate training. Its other aspirations included supplying local CSOs with the necessary equipment to deliver training, work towards the career service centre as an independent business, plan and implement demand-driven technical training programmes with different partners. It also sought to monitor CSO activities to ensure that they were delivering the key objectives.

The table below shows both the targets and the corresponding achievements in 2008/2009.

<table>
<thead>
<tr>
<th>Programme target</th>
<th>Achievements</th>
</tr>
</thead>
</table>
| 1. A strategy development workshop, including potential stakeholders           | • Internal meetings were held for the preparation of the Strategy Development Workshop planned for July 2009  
• An agreement was made with MID-ME  
• This contracted them as consultants to help CDC put in place the Vocational Training Strategy  
• The first workshop was held in al-Ain al-Sokhna  
• Held a second workshop to complete the Vocational Training Strategy |

Above: Women from ADAA proudly show the products created during the khayamiya (appliquéwork) training programme.
2. Planning and implementation of demand-driven technical training programmes with different partners

- Finalising the preparatory steps of the carpentry training second phase with the ITC and MOE.
- The demanded technical training was prioritised according to the outcomes of internal meetings as well as a report prepared by one of the project’s consultants.
- Preparing technical training for the recycling unit as part of the tasks of the technical Vocational training regarding the responsibilities of the agreement between all the partners.
- Ongoing preparation for the training of high-school students and young people about the basics of carpentry and Arabic carpentry.
- Reached the selection phase of the governmental partner to start a conservation training centre.
- Identified all of the TEC Training Action Plans for 2010 according to the budget.

3. Complete modernisation of the carpentry workshop both administratively and technically through a rigorous quality-control process

- The workflow was streamlined to enable the workshop to be able to produce any type of woodwork required, including reproductions of old Arabic doors.

### Major Concerns and Challenges Identified
- The woodwork trainers of the Ministry of Education were busy with the school exams which delayed the start of the second phase of the woodwork training.
- There were some vacancies that needed to be filled.

The Vocational Training Unit continued to develop and to deliver a wide range of programmes to meet local demand. The table below summarises its cumulative achievements between its inception and 2012.

<table>
<thead>
<tr>
<th>1 - Administrative Training (770) Beneficiaries</th>
<th>130 beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public relations</td>
<td></td>
</tr>
<tr>
<td>Computer skills</td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td></td>
</tr>
<tr>
<td>Communication skills</td>
<td></td>
</tr>
<tr>
<td>Secretary</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 - Traditional Craft Training Programmes (1070) Beneficiaries</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patchwork (Khayamiyya)</td>
<td>200 beneficiaries</td>
</tr>
<tr>
<td>Women’s Accessories</td>
<td>200 beneficiaries</td>
</tr>
<tr>
<td>Leather</td>
<td>80 beneficiaries</td>
</tr>
<tr>
<td>Arabic carpentry</td>
<td>90 beneficiaries</td>
</tr>
<tr>
<td>Wooden Accessories</td>
<td>200 beneficiaries</td>
</tr>
<tr>
<td>Crochet</td>
<td>200 beneficiaries</td>
</tr>
<tr>
<td>Sewing</td>
<td>100 beneficiaries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 - Technical Training (560) Beneficiaries</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional carpentry</td>
<td>150 beneficiaries</td>
</tr>
<tr>
<td>Mobile phone maintenance</td>
<td>80 beneficiaries</td>
</tr>
<tr>
<td>Electric skills</td>
<td>100 beneficiaries</td>
</tr>
<tr>
<td>Welding</td>
<td>80 beneficiaries</td>
</tr>
<tr>
<td>Plumbing</td>
<td>150 beneficiaries</td>
</tr>
</tbody>
</table>
The Cairo Economic Livelihood Project (CELP)

In 2008, based on the success of AKDN’s vocational training programme, further financial support was secured from the Canadian International Development Agency (CIDA) for a five year programme funded by the Foreign Affairs, Trade and Development Canada (DFATD). For this initiative AKTC worked with a number of other related agencies, namely, The Aga Khan Foundation Canada (AKFC); The Aga Khan Foundation – Egypt (AKF -E), The Darb al-Ahmar Community Development Company (CDC) and First Microfinance Foundation – Egypt (FMF-E). CELP was designed to support a set of coordinated interventions to promote employability and enterprise development in ADAA, while serving as a platform for informing and enhancing employment sector initiatives in Egypt through policy engagement and outreach. It aimed to improve technical skills and creating qualified technicians; integrate the technical school within ADAA district’s fabric; improve the environment of ADAA; supply the market with new products; generate new income sources (improving the economic value of the sector) and revitalise traditional handicrafts (thereby preserving them and improving their cultural value.

As the vocational training programme had reached an impressive level of complexity, it became necessary to rethink its managerial approach so as to maximise its effectiveness. Thus, the programme also focused on incorporating ‘soft’ developmental factors in order to put in place a system that would lead to the sustainable handling of the technical school’s facilities and an effective use of human and financial resources. It aimed to improve management facilities of the school’s infrastructure by enabling administrators and other educational stakeholders to look after facilities themselves and by integrating the local community into its work. It included the specific improvement of personnel’s qualifications as well as well-directed school maintenance and operations management and the establishment of a monitoring and evaluation scheme. In terms of geographic reach, the project expanded beyond ADAA to include adjacent areas to the north and east. Financial and business development services were offered by FMF-E in the nearby districts of Gamaleya (north) and Manshiet Nasser (east).

The project conducted a value chain analysis: (VCA) on three sectors identified by CDC as most promising. These were woodwork, leatherwork and Khayamiyya. The VCA was useful in helping to identify the sectors with the most potential for developing more sustainable and profitable businesses. The analysis looked at how and whether the poorest segments of the community were benefiting from a particular sector. It was also important in identifying whether there was any unmet demand, and if so, why this was the case. In addition, it identified the principal actors and services required for a subsector to grow including producers, processors, inputs suppliers, exporters, retailers and others and incorporating both vertical and horizontal linkages. In this way, the VCA analysed interactions and relationships between the actors, and identified constraints and opportunities related to the pro-poor growth of each sub-sector. Based on the value chain analysis, the project offered a range of craft business development opportunities. The main focus of these opportunities was to enable local businesses to move forward.
As part of the process, an agreement was signed with the German University in Cairo (GUC) to undertake projects in the area working with local craftsmen to produce new and innovative designs, that were later exhibited at GUC. Students and craftsmen met regularly to come up with designs and ideas which they could then execute. In the case of some students, the relationship went beyond school and many who graduated and are now working in the field of interior design and stay in close contact with the craftsmen and do business with them. Under the umbrella of the CELP programme, a number of specific training and development activities took place. These included:

- **Khayamiyya (appliquework)**

  The main focus of the development of this craft was design innovation. The project provided craftsmen with new designs with which they could work. This particular activity was collaboration with the IMC (Industrial Modernization Centre). A French designer worked with Khayamiyya artists to diversify the application of Khayamiyya work on everyday items, for example, handbags and cushions. Artisans were taught how to come up with ideas and develop their own designs based on these. The initiative also included follow-up visits so that the craftsmen would have feedback and constructive input at regular intervals while they developed their products. Follow up training was provided with other designers to expose the craftsmen to different approaches to design. The outcome of training was the production of a number of innovative products that responded to a need in the Egyptian market. As part of this programme, 12 beneficiaries were trained for a period of 3 months.

  This initiative was augmented by a programme to train people to use natural dyes that could then be used to create a new line of appliquework. 12 females and 2 males received this training which lasted for 1 month.

  In 2016, funding from the Embassy of Switzerland in Cairo expanded the Khayameya Training Programme to focus on women’s empowerment by teaching them useful income-generating activities that could take place from home. This not only included technical training but as with previous initiatives introduced the element of product design as well as business linkage skills. 50 women were given productive handicrafts training, 27 women were given innovative designs training 59 worked on innovative handicraft products and 16 women given entrepreneurship/ business linkages training. Based on their own demand to boost their skills in running a small business, 14 women were given the New Companies Incorporation and Taxes training. This was to enable them to navigate the administrative side of business more effectively.

- **The Carpentry School**

  This expanded to include a number of new elements:

  A development training programme was put in place to enable the carpentry products of ADAA to compete in a wider market. One achievement was to
showcase newly developed designs of doors and windows in national trade fairs, such as Windoorex 2011. The ADAA products received a great deal of attention from visitors and a great deal of positive feedback.

As part of the unit’s approach to support the women of ADAA to increase their income, the unit started a wood decoration training course by hiring a professional trainer to train a number of women from ADAA how to paint and decorate wood products thereby adding value to the products of the wood recycling unit. It supported a group of 12 women from ADAA to paint and decorate on wood to increase the income and achieve economic sustainability for their families, and increase the unit’s economic sustainability. The training programme lasted six weeks.

- Recycling Unit and Training Programme

Solid waste management being one of ADAA’s main challenges, it was seen as essential to establish a productive solid-waste recycling unit at ADAA technical school in order to create new products with economic value out of the school’s wood, leather and paper waste, as well as the waste of ADAA workshops.

The unit kept abreast of the latest developments in waste recycling and endeavoured to upgrade their products and their marketing. As part of this
project, a marketing officer was appointed to search for ways to market the products of the unit. The unit developed a design brand with information about the products to act as a distinctive trade mark and exhibited its products at a wide number of exhibitions. Encouragingly, the products received a lot of attention because of their sensitivity towards the environment. The unit collaborated with AKF to follow up on the performance of the CSOs engaged in the unit. LCBD helped the CSOs in their relationship with the Donor GIZ.

Adopting a Fair Trade Approach

In order to make a significant improvement in the way in which the craft sector functioned in ADAA, the projected contracted a consultant to explore means of introducing Fair Trade initiatives in the craft sector. The consultancy team started by selecting suitable workshops and target groups which had the ability to embark on the path towards Fair Trade. By doing so, the project made sure that their efforts were heading towards tangible future results and that the workshops would adopt and register in one of the Fair Trade networks. This step entailed data collection about target groups and their capacity and trade capabilities to embrace Fair Trade in order to take the process forward. The consultancy team then started working with the selected workshops, on the one hand, assessing, analysing and diagnosing their needs and their approach with respect to Fair Trade practices and consequently, highlighting and prescribing the interventions needed to reach Fair Trade networks. On the other hand, training courses were provided to introduce Fair Trade principles and practices. The consultancy team later provided specialised training courses to address major gaps in the delivery of Fair Trade in ADAA. The consultancy team organised field trips aiming to follow up on the provided training courses conducted earlier and to offer on-the-spot coaching.

A pricing strategy was developed whereby handicraft producers would receive a fair return on their investment and labour from selling their goods. The premise is that when they set the price for their goods, they would not only recover their product costs, but also make a reasonable profit that would enable them to earn a living. In general, the consultancy team focused on introducing Fair Trade Movement concepts and principles to target groups, while diagnosing their needs to point out the essential steps needed in order to start planning to join a Fair Trade Network in later stages. Overall, the consultancy focused on raising target groups’ awareness about the Fair Trade concept and its principles, advocating for the adoption of Fair Trade and highlighting its significance and benefits to target groups’ trade prospects and well being. It also assessed and analysed target groups’ current status from the perspective of Fair Trade practices.

“Creative Artisan”: Economic Empowerment for Historic Cairo Artisans

Building upon an earlier programme which trained 276 people in craft sectors in 2014-2015, from 2016 to 2018, the Sawiris Foundation for Social Development
awarded AKDN additional funding to focus on the economic empowerment of Historic Cairo artisans (mostly of households and women) by enabling them to generate income. The idea was to provide training in technical carpentry, women’s accessories and khayamiyya skills, design, market linkages and also providing women with access to markets through the different channels readily available to al-Mezala. The aim was to help women to improve their quality of life. 135 beneficiaries were trained in the sectors mentioned above. They were also provided with valuable complimentary training in entrepreneurship, branding, E-marketing, and participation in domestic exhibitions. This programme’s main technical training strands were handicraft design development and technical handicraft training but it also introduced a competitive element in the form of design competitions to inspire trainees to excel. In order to guarantee the project’s sustainability, it produced a project documentary video, a catalogue of innovative products and a business and marketing tool kit for new brands.

Focus on Young People

One of the key challenges observed by AKDN’s surveys of ADAA were the number of challenges facing local youth with regards employment and employment opportunities. Starting in 2012 and running until 2014, a programme called ‘Head Start’ funded by USAID and the Aga Khan Foundation (AKF) focused specifically on addressing youth employment issues. It was found that
Egyptian young people seeking employment faced a combination of obstacles including limited job opportunities, low wages, mismatched and inadequate preparation for labour market demands, and social pressures and biases attached to certain professions. When young adults struggle with establishing their livelihoods, they may become apathetic, disillusioned, and disengaged from civic life.

Young people face particular challenges establishing their own businesses, notably with access to finance. In 2010, less than 4% of those needing start-up financing received any financing from a formal institution such as an NGO, MFI, bank or government. Other challenges for youth entrepreneurs were found to include a lack of marketing services and business information, and a lack of skills matching the economy’s demands.

Focusing on missing, market-driven skills was seen as essential not only help young people start new businesses, but also help them gain jobs with established companies. Facilitating improved access to short-term, market-driven vocational training opportunities was used as a means to improve the overall employability of participants, whether they eventually became entrepreneurs or employees. In addition to providing access to training, avenues for youth to gain needed job experience and skills were scarce, hence the importance of linking youth to newly-created vocational training opportunities.

E-Learning as a Tool

From 2016, a new programme focusing on e-learning to enhance career options and employability was implemented through funding from La Caixa Foundation and AKTC-AKF. The programme was developed as a response to the growing role of technology in enhancing the effectiveness and impact of training and capacity building endeavours offered to benefit local communities. The philosophy behind this programme was that in the digital, networked world, people have access to huge amounts of information online and form virtual communities of interest. In this context, education and training provision have become more flexible, interactive and more easily tailored to individual needs. Enhanced forms of distance education and online learning (e-learning) provide access to previously unreachable resources and open up participation for hard-to-reach communities that would not previously have had access to high quality resources. Moreover, traditional training (classroom lectures) methods have proven to be expensive as a result of trainer and participant costs, particularly in developing countries. Quality levels are difficult to maintain, particularly in remote areas. The training environment is often more passive with little interaction between peers or instructors. Once the training has ended, trainers (and materials - usually only paper-based) are not accessible for follow-up questions or support.

Through e-learning, courses that traditionally reached dozens now reach hundreds of thousands of students. The variety of e-learning high quality academic, self-development and vocational courses is also becoming ever wider. The use of video courses that can be accessed remotely and played...
repeatedly, the availability of open educational resources and materials; and the interaction between teachers and students and among students through numerous alternative ways to connect and collaborate are a few examples of how learning is changing. The proliferation of “how-to” YouTube videos, as well as learning sites like the Khan Academy have in recent years shown the potential of video to provide effective and powerful learning experiences to large audiences, at a very low cost. Videos have become the new language for learning. Technology, however, is only the enabler. The real focus is learning and the experience around learning. It is how these technological advances are used that will make the difference to improving quality of life in society. This project aimed to train 54 beneficiaries at general carpentry, 54 beneficiaries at making windows & doors, 54 beneficiaries at Mashrabia Arts and 60 beneficiaries in general entrepreneurship.

The programme sought to tackle and mitigate several key challenges related to youth employment initiatives. The first of these is that it was often hard to attract young people to join the project. In order to overcome this obstacle, the field officer responsible for recruiting trainees was selected to be a trusted, well-accepted resident of the district. Through his insider knowledge of the area, he was able to select young men with a background in carpentry who were interested in enhancing their career path and livelihoods. A second challenge was keeping the trainees engaged until the end of the programme. To overcome this, the project organized meetings with the trainers through face-to-face workshops and giving them access to the carpentry workshop to practice what they learned from the videos in order to keep them engaged. In addition, it was made clear from the onset that those who completed the training would receive a complete toolbox. This provided a good incentive to complete the course.

An institutional risk was the worry that the knowhow developed by al-Mezala in the delivery of this project might not be retained by the organisation, and could be dispersed. To mitigate this, the know-how of creating, writing, producing and delivering e-learning videos was received by both the media specialist and the project coordinator. They worked closely with the Aga Khan Foundation experts to acquire this know-how. The media specialist was responsible for documenting the knowledge in an e-learning manual. A report writing consultant guided them in preparing the manual and perfecting it as the project evolved. The manual was kept in al-Mezala’s possession.

With any innovative programme like this one, there is always the risk that new methods and techniques are rejected by the community. To mitigate this, the project needed to clarify and facilitate the community’s acceptance of these new ways in training and its advantages before the training could go ahead. Fortunately, through this capacity building project, al-Mezala developed its capabilities to offer thematic content to serve more specific training needs (i.e. entrepreneurship, crafts, agriculture, health, education, governance). This set of thematic content was co-developed with technical and instructional design support from specialized partners in each specific domain. Thus, over time, al-Mezala continues to build a robust set of core courses that organizations and individuals can use. In pursuit of a wider transfer of skills and spread of knowledge it is envisaged that al-Mezala will make its courses available online.
and cooperate with adult education institutions and career enhancement organizations for the development of online materials serving the same objectives, career development and employability for youth and job seekers.

The current Revival of Craft Heritage in Danger of Extinction Programme

This is a two year programme running until February 2021 funded by the Development and Housing Bank (Bank al-Taameer Wal Iskan). The programme supports four of ADAA main crafts: Arabic woodwork, inlaywork, metalwork, and khayamiyya. It aims to train young apprentices to counter the threat being faced by the traditional craft sector that not enough young people are joining these trades, leading to the threat of their extinction. The current phase of the programme focuses on training 60 young people. It responds to current surveys of the craft sector in ADAA, noting weaknesses in marketing, as well as in working conditions such as health and safety. It also offers technical and design training, both by providing placements in local workshops as well as providing tuition by applied arts and design academics.

Building upon earlier initiatives, this programme links practitioners to designers and also explores new markets/outlets such as shopping malls, large residential compounds and handicraft shops outside ADAA. It puts in place a quality control review process to ensure that the quality of the output is maintained and thus local workshops can cater to more discerning markets. It also tries to decrease the reliance on tourism, which has proven to be a fragile market. The typical programme consists of a 2-3 week introductory session followed by a six month placement in a workshop in ADAA. The programme also acts as a mediator, building trust between workshop owners and the apprenticeship system. Some workshop owners are fearful that apprentices will be wasteful and therefore more of a hindrance than an asset.

Among the innovative aspects of this programme are the fact that it encourages the combining of different materials from the four different craft lines to produce innovative products in order to create a niche in the local market. The programme aims to encourage the production of a wide range of products and to ensure that the price range is also varied to widen market appeal. Some of the key principles are to produce crafts that are contemporary and good quality, to ensure that they compete favourably against their main competitors - similar products from Syria and Tunisia. With some lines, for example Arabic carpentry, it recognises that the traditional designs are often very ornate and not always desirable to a modern eye, and that a simplified aesthetic is not only more desirable but also more affordable. The philosophy is to take a simple produce and add value through good design and execution.

One of the challenges was that the craft sector is not seen as lucrative – in fact people in local workshops often observe that tuk-tuk drivers make more money than the average craftsman. Yet there were 500 applicants for the 60 places offered under the current training programme. An important aspect of the scheme is that it focuses on including young women, identifying products
that can be made at home, such as jewellery and accessories. Another key strength is that it builds upon the good name of both AKTC and al-Mezala, and in fact, the funding agency has indicated that it would be willing to consider funding the programme beyond the current funding phase.

Conclusions

AKTC’s initiatives over the past twenty years have demonstrated the effectiveness of vocational training programmes as tools to create sustainable employment opportunities for local communities, drawing upon local heritage, and serving both community needs and diverse markets further afield. Programmes such as those discussed above combine a number of key factors: firstly, they are based on a sound understanding of a local community’s economic potential and its socio-cultural profile. Secondly, they involve local communities as active participants in the process of identifying challenges and opportunities, rather than imposing a preset model imported from elsewhere. Thirdly, they address economic development holistically, thinking about cultural sensitivities, and while respecting these, also seeking new opportunities for traditionally economically dependent groups in society to achieve greater independence and autonomy. Fourthly, they are developed through an iterative process of developing understanding, implementation, reflection, and refinement. Fifthly, they seek and nurture meaningful partnerships that maximise impact and effectiveness.

From the specific perspective of craft development – AKTC’s approach was clear – while it placed strong emphasis on the preservation of local craft traditions, it ensured that these were linked to contemporary demand, thus ensuring their viability, reversing a slump resulting from a widening gap between production and demand.

Given its larger mandate to preserve and revitalise the historic environment, AKTC also focused on developing the skills related to the maintenance and repair of traditional buildings, and to the effective stewardship of local infrastructure systems. In doing so, it helped guarantee that the skills required to preserve traditional buildings would be revived and in many cases improved, filling gaps in the current market. These were skills that would also prove to have a significant positive impact on quality of life.

AKTC’s strategy to partner with other organisations was also significant – it identified complementary organisations and proactively created partnerships with these – many of its most effective partnerships were those with organisations that had developed vocational training schemes and widely recognised certification that would improve the career prospects of graduates and enable them to access new markets outside the historic city. The value of certification and legitimisation is a critical one to ensure that graduates of vocational training programmes can benefit from a wide range of opportunities and can broaden their professional horizons. Given that AKTC’s interest in historic urban environments is coupled with a commitment to improving the lives of local residents, understanding the socio-cultural realities was of paramount
importance. It was clear that for some young people in ADAA, career prospects were likely to be outside the historic city, or at least not exclusively within it. As such, training opportunities imparting important transferrable skills were extremely valuable.

AKTC’s work also successfully focused on improving the gender balance in the workforce and creating suitable employment opportunities for women that would not be at odds with their family commitments. (Many of them had never previously worked). In more recent years, as AKTC has developed a deeper understanding of the opportunities for women, it has strengthened its focus on gender-balance oriented initiatives. Through such programmes, it has helped them to become entrepreneurs who could work from home and therefore attain a much higher level of economic security, and enabled the employment sector in ADAA at large to develop vital entrepreneurial and managerial skills.

Perhaps what is most remarkable about AKTCs model is that it is simultaneously focused on the local, but global in its outlook, and rooted in tradition, but also dynamic, forward-thinking and pioneering. In giving equal measure to a number of seemingly contrasting factors it has struck a valuable balance, and achieved significant success.
Afghanistan

Genesis of the Programme

In Afghanistan, ever since it became active there in 2002, AKTC (referred to henceforth as AKTC-A) has been engaged in various forms of vocational education and training (TVET). During the initial years such training was rather informal and consisted mostly of on-the-job education. It mainly concerned development of crafts that were needed for the rehabilitation and restoration of historic sites. From an operational perspective, AKTC-A’s objective was to create a pool of highly qualified workers on which it could rely for the implementation of its projects. AKTC-A would help fine tune the skills of local practicing carpenters and stonemasons through on-the-job training, using master craftsmen for skills upgrading. This process of transferring skills, however, lacked structure in terms of the educational process that apprentices went through. In response to the felt need to rationalize its vocational training system, AKTC-A started to develop training modules for the different subject taught. In addition, graduates were given certificates highlighting the content and duration of the training they underwent after having successfully passed final examination.

As the portfolio of completed projects grew, so did requests from local communities to continue the Trust’s engagement in vocational training beyond projects for the rehabilitation of monuments only. While much of such training was aimed at satisfying the needs of local communities, there were also instances where AKTC-A decided to provide training in traditional crafts such as tile making. Justification to continue training for such crafts beyond the completion of the project, was based on demand that had been detected at national level.

Below: Commercial demand for glazed tile products has enabled the program to reinvest proceeds towards further training activities, 2015.
The Start and Development of TVET in Kabul

AKTC-A’s initial engagements in Afghanistan concerned the rehabilitation of the Garden of King Babur, known locally as Bagh-e-Babur, as well as the rehabilitation of a number of houses in Kabul’s historic quarter of Asheqan wa Arefan. Between 2004 and 2016, AKTC-A’s programme for vocational training, skills development and employment in Kabul provided 5,454 young apprentices, including 4,789 women, with professional training and skills development, including literacy. Roughly three quarters of these former apprentices found employment within months after completing their training. The subjects covered during this period included carpentry, wood carving, masonry, traditional plastering, tailoring, embroidery, carpet and kilim weaving and horticulture. The choice of subjects chosen for vocational training was directly related to the outcome of data analysis carried out in District 1 (Asheqan wa Arefan and Chindawol) and District 7 (Gozargah), at the onset of its intervention. While employment clearly appeared as the highest priority of most households surveyed, AKTC-A also noted low levels of education among the population aged 20 years and above.

Above: Vocational training programs are undertaken in tandem with conservation projects, providing opportunities for those in need and enabling them to improve their livelihoods, 2016.

Below: A thriving local market in the production of traditional clothing will provide graduates an opportunity to generate sustained income from their craft, 2016.
Although the Trust is not directly involved in primary education as part of basic social services delivery, its training programme did contribute indirectly by providing doors and windows for a number of schools, including the local Gozargah School where 4,600 girls are taught in four shifts. The main objective of the vocational training and skills development programme, however, was (and still is) to help increase family income levels by engaging younger family members to become professionally engaged in the manufacturing of marketable crafts of outstanding quality. Subsequently, training in woodwork would not just be limited to carpentry, but would come to include the manufacturing of vertically sliding stepped windows known as *patai*, and lattice-patterned screens (*jali*). It now also includes the manufacturing of musical instruments such as the *rubab*, a popular Afghan string instrument made of mulberry wood. More recently, the manufacturing of complex wooden architectural scale models has been added. A number of detailed models of important historic monuments have been completed and are on show for visitors. It is expected that this component of the programme will help increase interest for this craft and that this will provide a commercial market for those who have been trained. AKTC-A has now brought most of its Kabul-based vocational training under one roof in the former industrial site of Jangalak in District 7.

*Above:* Apprentices prepare a horizontal loom, used to make flat weave kilims, in a workshop located in a historic house restored by AKTC, 2004.  

*Below:* Courses in tailoring, embroidery and carpet weaving (shown here) form part of the curriculum of AKTC training programmes, 2016.
The vocational training and skills development programme in Herat was started at the time when AKTC-A was involved in a number of important rehabilitation projects, which included the Gozargah complex with the shrine of the poet Ansari, the Ikhtyaruddin Citadel in the old city and a number of historic sites in the heart of Herat’s historic centre. Vocational training in Herat was carried out by the Trust over a five-year period, starting in 2006. It involved 36 apprentices who were trained on-the-job in a number of specific crafts that were directly related to the local rehabilitation efforts. A wood-fired kiln was set up in 2007 to produce traditional blown glass components. Another workshop was established in the old city for the production of incised tiles and glazed bricks.

Balkh

Following the Herat experience in manufacturing of tiles and glazed bricks, a similar kiln was set up in Balkh for the restoration of the Khwaja Parsa Shrine. An existing mid-20th century kiln within the Ali Shrine in nearby Mazar-e-Sharif, which produces low quality tiles, was not considered acceptable for this project. Using cobalt, copper, manganese and lead sulfate as dyes, AKTC-A specialists, working together with local craftsmen, began experimenting in 2012...
and ultimately succeeded in producing high quality tiles of various designs, including large multi-coloured (muaraq) tiles. As part of the manufacturing process, AKTC-A took the initiative of encouraging the development of a modest local glazed tile industry that now produces pieces of very high quality in a variety of coloured glazes and calligraphic designs and directly employs 12 people. An exhibition of the tiles, introducing the technique and the art form, has since been organized, while a number of examples are on permanent display in the Jangalak centre. Vocational training in Balkh also involved 35 student trainees who were instructed in design of arches, domes and vaults.

Faizabad

As part of AKTC-A’s established “Multi-Input Area Development” activities physical conservation and rehabilitation activities have been supplemented by a formal vocational training programme established in the Old Town of Faizabad. As demonstrated in similar initiatives in Kabul, Herat and Balkh, investment in providing vocational training in crafts oriented trades to young Afghans – of which more than 70% have gone on to find stable employment - has helped build important capacity and has been instrumental in ensuring the economic viability of small communities who generate supplemental incomes from practice of these vocations for their families.

Above: Courses in glazed tile making (2016) have helped revive a lost craft skill that has been practised in the region since the 14th century.
In addition to providing on the job training opportunities, these programmes have provided a platform for the promotion and development of traditional crafts, transferring knowledge to a younger generation of Afghans. Based on results of the socio-economic survey conducted in 2011 in Faizabad, three vocational courses were designed and initiated including carpentry, tailoring, and embroidery. These trades were selected on the basis on access to training to a cross-section of young women and men. Based on a rigorous and inclusive selection process, classes of up to 30 candidates were chosen to attend six-month training courses on a bi-annual basis. The initiative in Faizabad has resulted in the education of a total of 925 young women and 566 men over the period of 2014-2016.

The Current Situation

In order to address requests from local communities for vocational training – particularly where this concerned women’s needs - the Trust developed over the years training modules around a number of crafts. This included training for women in subjects that, from a cultural perspective, would be considered acceptable. To some extent, AKTC-A has now exceeded its targeted 50/50 gender balance in favour of women. The positive outcome for women, however, was mainly the result of the Trust’s policy to adhere to traditional
beliefs that women might be trained in professions that could be carried out at home, such as tailoring, embroidery and carpet weaving. AKTC-A has since recognized that perceived cultural limitations, leading to exclusion of a number of professions for women and vice versa also for men, might not be so much be a consequence of the nature of the profession, as well as the mobility of the professional involved. If the mobility factor could be accommodated for in future professional life, and if the homestead would be considered a potential workshop, the choice of subjects to be taught for both men and women might increase and could subsequently be adjusted periodically, as part of a true Labour Market Intelligence-based operation and management system for TVET.

The need for qualified staff goes hand-in-hand with the demands from the communities where AKTC-A is active, to provide people with basic skills in order to enhance their employability. Taking both factors into account, AKTC-A has made a clear distinction between crafts and industrial skills. Whereas crafts skills relate in a major way to AKTC-A’s own internal needs (both current and historic) as well as its mission to help and preserve culture-specific skills, industrial skills improvement is primarily meant to help increase an individual’s employability. In many ways then, training in industrial skills responds more directly to requests from the local communities to provide means that help increase household incomes.

Above: Training in hand-blown Herati glass, produced since the mid-14th century, focused on improving the quality of materials and techniques used in the process, 2009.
The overall objectives of the TVET programme have recently been redefined, stating that it is AKTC-A’s primary aim:

1. to ensure it achieves high levels of employability of graduates, and
2. to make a sincere effort to preserve traditional crafts that are an integral part of Afghan culture.

Underlying objectives associated with these two primary objectives are (i) to demonstrate social responsibility by including the less privileged and (ii) to ensure the long-term sustainability of the TVET programme.

The Jangalak TVET Centre

The recently (2016) established Jangalak Technical Education and Vocational Training Centre has a total of 506 students engaged in courses that last six months and which students are required to attend for half a day at a time. Operating on two shifts per day, the centre provides training in carpentry, woodwork and model making (242 male students), as well as carpet weaving, tailoring and embroidery (264 female students). In addition to Jangalak, AKTC-A provides tailoring and embroidery courses in Asheqan wa Arefan (103 female students) and in Faizabad (250 female students). Faizabad also trains men in carpentry (131 students). With new courses planned for tile making,
metal work, electric circuits design/electric circuits repair and possibly musical instrument making, the total number of students would in the near future reach around 837 at any time. This would translate in roughly 1460 graduates on an annual basis - assuming an average drop-out rate of 20% over the duration of each course. Broadly speaking, current TVET programmes at Jangalak and the satellite TVET centres in Asheqan wa Arefan and Faizabad are, as far as the number of students are concerned, fairly equally divided in terms of traditional crafts versus industrial skills development.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Traditional Crafts</th>
<th>Industrial Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpentry</td>
<td>51 + 55</td>
<td></td>
</tr>
<tr>
<td>Wood work (carving)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Jaoli (screens)</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Tailoring</td>
<td>171 + 165</td>
<td></td>
</tr>
<tr>
<td>Carpet making</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Embroidery</td>
<td>60 + 120</td>
<td></td>
</tr>
<tr>
<td>Musical instruments (including the recently established Rubab Making course)</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Metal work</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Tile making</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Electric circuits</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>362</strong></td>
<td><strong>523</strong></td>
</tr>
</tbody>
</table>

* Number of students from satellite TVET centres in Asheqan wa Arefan and Faizabad

Further introduction of subjects related to industrial skills development, directly aimed at employment, would certainly be possible, as the Jangalak site still has sufficient space for enlargement. An additional advantage of this large site is that it could be put to use for those who lack space, basic tools and access to essential equipment and who would be happy to continue using the Jangalak Centre for the commercial production of goods, obviously against a nominal fee to cover operating costs.

Effectiveness and Impact of AKTC-A’s Programme

Measuring the effectiveness and ultimately the impact of the programme in Afghanistan, requires regular monitoring and evaluation over the medium and longer term. For vocational training, skills development and literacy, it concerns monitoring of job permanence for the initial months after graduation. Indications are that more than 65% of AKTC’s graduates are able to continue in new-found employment. Continued AKTC-A’s presence at local level, such as in Asheqan wa Arefan and Gozargah, ensures permanent monitoring of housing conditions, and improvements made to the local social and physical infrastructure. For interventions in Herat and Faizabad, AKTC-A monitors the condition of its interventions through regular field visits. Indications from such monitoring missions and from AKTC-A’s permanent presence in other intervention areas, are that the maintenance of improvements made by AKTC-A to the built environment are holding well – particularly in areas where it has been possible to mobilise local committees in maintenance and in carrying out small repairs.
Adjusting to the Future

With Market Needs becoming the driving factor for the choice of a number of subjects taught at Jangalak, the centre needs to adjust its planning accordingly. This means that, apart from continuing to provide training in traditional crafts, popular demand for particular training courses from potential students and local communities, as well as specific training requests from the Government or from donors, would have to be weighed against information collected from the job market or against guarantees that can be obtained for employability after graduation. All of this requires a vision for the type of training that Jangalak can provide that is based on factual market information. Such information has to be collected, verified and analysed at regular intervals.

AKTC-A has adopted the Labour Market Intelligence (LMI) approach as its lead strategy for the choice of subjects for vocational training. In theory, this would have meant that all ten subjects that are currently taught at Jangalak and its satellite TVET centres in Asheqan wa Arefan and Faizabad, were selected on the likelihood that graduates would easily find employment, as there is high demand for their skills. Furthermore, the LMI approach would require that TVET training is accompanied by efforts of AKTC-A to assist former students in finding employment after graduation. Central to this would be an updated computer database with addresses of workshops and service providers.
AFGHANISTAN

willing to take on graduates as apprentices. Alternatively, the system could link graduates who plan to start as independents with SME financing institutions that could help arrange loans for start-ups. In practice, however, AKTC-A has not yet engaged with LMI to this extent. The choice of subjects currently taught is rather a reflection of:

• on-going internal needs for qualified craftsmen (i.e. carpenters) who are able to carry out traditional wood crafts and construction-related skills, such as door and window frame making;

• cultural restriction affecting women. As mentioned before, skills development for women is limited to activities that can be carried out at home. Still, TVET courses aimed at improving tailoring skills may not just be seen as the result of demands from women, but may also reflect LMI needs as seen from the household: not only do clothes manufactured at home reduce expenditure on clothing, but the homestead itself may become a tailoring workshop with the graduate taking orders from outside;

• conditions set by donors for the Trust’s TVET programme, whereby the focus is predominantly on the number training courses conducted and the number of graduates that have enrolled, rather than achievement of high levels of employment following graduation.

Above: An apprentice works to complete a hand carved timber panel, 2010.
The dual approach to TVET that AKTC envisages for the future, whereby it would address training with regards to crafts, as well as training concerning industrial skills, would in effect be a continuation of current practices and should therefore not pose a problem for management and operation. However, should future LMI research indicate that specific crafts that are taught bear no relationship with employment opportunities on the labour market, then the Trust would need to have the ability to shift course and focus on alternative subjects for which there is demonstrated demand in terms of skilled workers.

The more than adequate space that Jangalak centre has at its disposal, combined with the number of graduates who have requested being allowed to come to the premises and use the equipment off teaching hours, may provide a good opportunity for the Trust to create a production line for commercial purposes. A small design centre that would be an integral part of this production line would enable Jangalak to adjust products to the particular preferences of individual customers. Proceeds from these commercial activities, together with the sale of products created during the training, might in the future contribute for an important part to the longer-term financial sustainability of Jangalak.
Background

The restoration of the Mughal Emperor Humayun’s 16th century garden tomb in New Delhi, the jewel of Mughal architecture that predates the Taj Mahal, was completed by the Aga Khan Trust for Culture in September of 2013 after six years of conservation works and 200,000 work days undertaken by master craftsmen. To restore the original designs of the Mughal builders of Humayun’s Tomb as well as a number of other monuments in the Nizamuddin area of Delhi was a painstaking and mammoth multi-disciplinary undertaking. In addition to the emphasis on matching the standards of Mughal-era craftsmanship, the project took a craft-based approach to conservation that offers a model for reviving these fast-disappearing skills while simultaneously creating employment. Moreover, In keeping with AKTC’s overarching aim to leverage culture in ways that stimulate socioeconomic development, conservation has been accompanied by projects aimed at improving the lives of residents in the neighbouring Hazrat Nizamuddin Basti. In addition to initiatives in health, education and vocational training, neighbourhood green areas have been landscaped, housing improvements have been undertaken in partnership with house owners and support has been provided to the municipality for a major street improvement programme. Skills training for the development of livelihoods has been an integral part of the AKTC’s initiative and there has also been vocational training in building crafts, notably tile-making. Both these dimensions of the project will be explored below.

All these undertakings were set in motion by the AKTC in response to the suggestion made in 2004 to His Highness the Aga Khan by the then Prime Minister of India, Dr Manmohan Singh, that “more public-private partnerships (should) be evolved to maintain conserve and restore the monuments of our ancestors, which often lie in neglected condition in our cities.” The story,  

1) “Prime Minister’s address at the presentation of the Aga Khan Award for Architecture”, in PIB website (November 27, 2004) http://www.pib.nic.in/newsite/pmreleases.aspx?mincode=3

Above: A traditional skill revived.
however, actually began in 1993, when the designation of Humayun’s Tomb as a World Heritage Site was accompanied by the recommendation that “the gardens should be restored…”[2]. In 1997, the fiftieth anniversary of India’s Independence, His Highness the Aga Khan gifted to India the garden restoration of Humayun’s Tomb. Both the restoration of the monuments as well as of the gardens surrounding them have built on this original pledge.

The garden restoration, the first ever in independent India, and also the first ever privately undertaken conservation of India’s national monuments, was completed in 2003. It resulted in restoring flowing waters to the garden enclosures, restoring garden levels, repairing 2,00,000 square feet of pathways and planting Mughal flora such as citrus fruit trees, Pomegranate, Hibiscus, Neem on plots that were overgrown and unkempt. All these improvements led to a huge increase in annual visitor numbers, which attained 1,500,000 in 2015. Equally significant, if not more so, was the later reshaping of a 90 acre green area north of the Tomb itself, where the Sunder Nursery was established in 1913 to provide saplings for avenues in the new capital that was to become New Delhi and experiment with plants brought from other parts of the British Empire. This mammoth landscaping undertaking is based on a unique public-private partnership among India’s Central Public Works Department, the Archaeological Survey of India, the South Delhi Municipal Corporation and the AKTC. Today, it is replete with newly designed formal gardens, informal settings for family outings, ponds and lakes, together with expanded nursery beds, a flower showcase, an arboretum, a rose garden and orchards, while a specially built new facility allows the display of a rich bonsai collection. The facilities wing of the Humayun’s Tomb Interpretation Centre is currently nearing completion in the Sunder Nursery.

The Crafts Training Focus

The Nizamuddin Basti Urban Renewal Initiative was launched in 2007 as a major socio-economic effort to complement the Tomb conservation and the garden restoration projects. The aim was to improve the quality of life for the residents of the Nizamuddin Basti (the Hindustani term basti refers to an urban settlement area usually inhabited by very resource poor people) by providing education, health, sanitation urban improvements and development infrastructure for them. Vocational training and economic opportunities for the inhabitants of the basti would be an integral part of these efforts. The project is based on cooperation with the Ministry of Culture, the Ministry of Urban Development, the Archaeological Survey of India, the Central Public Works Department and the Municipal Corporation of Delhi (now the South Delhi Municipal Corporation). The actual signatories of the MoU for the Nizamuddin Urban Renewal Initiative are the Archaeological Survey of India, the Central Public Workds Department and the South Delhi Municipal Corporation as the public partners and the Aga Khan Foundation and the Aga Khan Trust for Culture as the private partners.

For the heritage conservation component, AKTC has adopted a crafts-based approach, employing hundreds of craftsmen using traditional tools, materials and building techniques to revive the intentions of the original builders. Because the entire zone is a World Heritage Site, a key goal of this approach has been to retain its authenticity, integrity and ‘Outstanding Universal Value’. Accordingly, the preservation, promotion and revival of traditional building crafts have been given major attention.

Over thousands of years in India, building was always accompanied by repair or conservation. With the formation of the Archaeological Survey of India in the mid-nineteenth century, the British government replaced craftspeople with engineers and archaeologists – not trained in traditional building techniques and hence not at all familiar with traditional repair techniques. Repairs carried out in the 20th century with newly invented materials accelerated deterioration and disfigured the historical architectural character of the monuments. Noting the damage caused by the use of cement, the guidelines for conservation contained in India’s 2014 National Conservation Policy highlighted the importance of traditional techniques and materials and explicitly recognized that “the country still has long established building crafts and traditions and traditional Raj Mistris Sthapatis (master craftsmen), stone carvers, carpenters, crafts persons…[who] can play an important role in the conservation of monuments”.

Here AKTC has worked with traditional craftspeople in several ways so as to ensure that restored monuments retain their architectural integrity and authenticity, using stone, wood, lime plaster, copper and mother-of-pearl and tile crafts. India is fortunate that many craft skills remain alive and hence it was possible to find skilled craftspeople for most of the crafts that were needed. This was not however the case for tile work, however, as this tradition had been lost over the years. Moreover, in India skills have emerged and developed in the locations where the raw material is found, e.g., stone craftsmanship around the quarries of Rajasthan. There is also a tradition of craftspeople travelling to construction sites, especially where certain specific skills and are not available locally. The Nizamuddin Urban Renewal Initiative has actively engaged traditional craftspersons in the project and has also recognised that each craft tends to develop in areas where the raw material is found and a social network exists. It was also important to realise that people in the local community did not aspire to be part of the building crafts network and would perhaps not find a way into the process. The project therefore deployed the following strategies to promote the learning of traditional building crafts, specifically for stone carving and incised plaster:

• Supporting young craftspersons through training: In stone carving, master craftspersons were identified and supported. They joined the project team as employees. To increase numbers, the project helped them to train family members or others in their social network. Typically, young men come and spend two to three months over the summer, between school and agriculture operations, with the master craftsperson and gradually learn the skill. These ‘trainees’ have been supported through training and a learning stipend. If found suitable, they have then been employed by the project, gradually constituting a small team of onsite craftspeople.

Above: Traditional stone-carving.
• **Teaching skills to an unskilled group working in construction:** The project has also worked with unskilled labour and taught them the required building craft. This strategy has been used particularly for incised plaster work where a few skilled workers trained other unskilled workers.

• **Teaching skills to the local community:** In the case of tiles, the skill had been lost. The project saw this as an opportunity to revive the craft. Two years of research and 20,000 tiles later, the skill was recovered and mastered. Having achieved this result, the project managers decided to use this as an opportunity to train local young people in the craft so that they might be able to produce the tiles needed for the project and even set up their own independent enterprises. This process continued for almost three years, with 20 young people being trained and earning wages. They were also supported with other trainings to prepare them to take on other roles with increasing independence.

### The Special Place of Tile-making

Glazed tiles are a significant decorative element in many historic buildings in the project area. Their use as such by the Mughals can be traced to Persia (Iran). They have acted also as a protective layer that prevents rain-water penetration in the inner core materials of the structural members. Tiles have been glazed mainly in five colours - turquoise, cobalt blue, shades of green, yellow and white. All these colours were produced using natural metal oxides extracted from the neighbouring mines. These metal oxides were fused at high temperature in the earthen kilns in the presence of alkali and soda to produce a range of coloured glazes. The tiles were then fixed to the surfaces using lime mortar mixed with gypsum. Glazed tiles have been applied to domes and canopies, on external dome and wall surfaces or on parapet walls. Turquoise blue glaze played a significant role in highlighting the architectural features of Islamic buildings and turquoise blue is the most prominent colour found in the historic buildings of the project area. Besides covering surfaces in a specific pattern, glazed tiles have also been cut in various shapes and in very intricate geometrical patterns, specially on wall surfaces.

Much of this tile work has suffered extensively over the years on account of the degradation of clay-quartz body, glaze or carrier. Deterioration has ranged from superficial ‘peeling’ of the glaze layer to total loss of entire sections of the decorative element. Owing to limited research, the only conservation measures so far attempted have caused further deterioration or disfigured the historic architectural character. In the absence of technical information, little effort has been made to conserve or restore tile work in its original form. Since the tile fabrication techniques introduced into India from Persia centuries ago had been lost to India, the AKTC effort for the restoration of glazed tiles was developed as a long-term conservation strategy that would not only document existing tile work but also produce tiles for the conservation work. The programme envisaged comprehensive documentation as well as scientific testing and analysis of the material composition and physical characteristics of historic tiles. This was the first time that something of this nature was being attempted in the field of conservation in India, with the aim of eventually yielding standards
and technical guidelines for the conservation of historic tile work as well as reviving the lost tradition of making tiles.

The Process

The project undertook several activities before the tile making actually commenced. These were as follows:

- **Documentation**: Documentation of the tile work at each site that included a detailed condition mapping of each tile. This information was stored electronically using AutoCAD software. In situ examination was used to determine the state of preservation of the tile work and identify factors responsible for their deteriorated condition. This was also done to understand the original layout and current status of the tiles onsite. All this information was mapped on drawings.

- **Scientific testing**: Scientific testing and research was carried out in order to identify the original chemical composition of the tile body and the glazing process of setting up the tile making unit:
  - Documentation and detailed condition mapping of each tile
  - Scientific testing and research of tiles
  - Detailed analysis of test results to work out possible proportions
  - Discussions with national and international experts
  - Modelling of canopies
  - Peer review of conservation plan
  - Study on existing traditional practices of tile making
  - Experimental tiles
  - Identification of resource people
  - Setting up tile production unit
  - Experimentation
  - Production
  - Training of local young people
layer. This was done at several institutes across India and resulted in the identification of the following:
- composition of ceramic bodies and glazes,
- proportion of various ingredients,
- colorants
- glaze type
- technology of their production
- firing temperature

• Analysis: A detailed analysis of the test results was carried out to work out the possible proportions of the individual components for both the body and the glaze. This revealed that all the tile bodies consisted essentially of angular quartz grains of different sizes cemented with a glassy phase. A phase of poorly developed interstitial glass just about enveloped and bonded the quartz grains together. The minimal development of the glassy phase makes these bodies quartz rich with high silica values. The analysis phase included discussions with national and international experts to identify possible solutions in different settings.

• Modelling: Models of each of the canopies were made to showcase their appearance after conservation works by retaining the existing tiles, with or without glaze and placing new glazed tiles, as per the original design wherever the old tiles were missing.

• Peer Review: A peer review of the conservation plan was held with key outside experts and the Archaeological Survey of India. The conservation plan was revised based on comments received.

• International Workshop: An international workshop was organised in 2009 as part of the UNESCO-ASI workshop on ‘Conservation and Management of Persian, Timurid and Mughal Architecture’ to discuss possible solutions for the conservation of tiles on the canopies of Humayun’s Tomb and the restoration of missing tilework. Forty participants from nine tile-producing countries participated in the workshop. Several significant decisions were taken in this workshop including training local young people to produce tiles as a livelihood option.

• Study on existing practices of tile making: A study was carried out of the existing traditional practices of tile making in Samarkand, Iran; Khurja and Jaipur, India.

• Resource people: Based on the studies of existing practices and the results of pilot tile making, resource people who were still engaged in making tiles in the traditional manner and who could come to Delhi and set up a tile making unit as well as train local young people to prepare the tiles were identified in Uzbekistan.

• Tile production workshop: A tile production centre was set up at Humayun’s Tomb for the production of glazed tiles under the guidance of the Uzbek craftsmen. This process included procurement of raw material and setting
up operations for making the clay and the two stages of glazing which included the construction of electrical kilns, grindstones for making the glaze mix, tables for cutting tiles, etc. Since the workshop began operating in 2010, several advances have been made to improve quality and efficiency of operations.

- **Experimentation:** Following the setting up of the tile production unit a period of experimentation began, in which several permutations and combination of various proportions of the original ingredients was tried out. Over 20,000 samples of one colour needed to be made before the right match was found. Each step was documented. Finally, a process was established to reproduce the matching glazed tiles.

- **Production of tiles:** Matching glazed tiles have been produced under the supervision of an inter-disciplinary team. Regular quality checks are part of the process.

- **Capacity building programme:** To ensure a continuity of the tile making programme, a capacity building program for the young people of Nizamuddin was organized for making glazed tiles.

**Production**

Tiles were produced in various colours, corresponding to their location in and on the various monuments, namely blue, turquoise, several shades of green, yellow and white, as well as in several different design modes, such as geometric, floral, or calligraphic. Upon the finalisation of the process to be used, the project began to adopt innovations that would increase the efficiency of the production process. These innovations included the following:

- **Clay Mixing:** The Uzbek craftspeople had suggested mixing by hand of the clay components i.e. ball clay and crushed quartz, in a ratio of 60:40 by weight. This was a time consuming process; in order to improve efficiency, the project developed a simple mechanical device that had two mixing pedals powered by a motor that would mix the clay more efficiently.

- **Water proportion:** The traditional method was to saturate the ball clay and crushed quartz mixture and then make slabs before cutting it into the desired shape. As the water content in the mixture was very high, it could take 10-15 days, depending on the season, to dry the tiles before they could be baked and glazed. The project standardised the proportion of water to clay as 0.5 part water to 1 part of clay. The clay mix was put in the machine and water added gradually, turning the mixture clockwise and anticlockwise to make a cohesive homogenous plastic mass of clay mix.

- **Compacting:** This step was added. Once the mixing machine had yielded a mixture of the desired consistency, the prepared clay was compacted using a compaction machine. This ensures that the cutting of the tiles is more efficient and accurate. Standardising the water and compacting have also resulted in tiles of higher density with the same combination of ingredients.
• **Template:** Since there were several shapes and sizes of tiles to be produced, metal templates were made to ensure accuracy and increase efficiency. Tiles were cut using templates and sharp metal knives for increased accuracy.

• **Drying:** The change in mixing with a measured amount of water and compacting both resulted in faster drying, thus reducing the total time it took to produce a batch of tiles. With less water in the clay, the drying time reduced from 10-15 days to 3-9 days, depending on the weather.

• **Kiln:** The kiln was modified twice before the desired efficiency was achieved. The traditional kiln of the Uzbek craftspeople was a rectangular vertical loading model with a capacity of only 15-20 tiles. Glazing capacity is always lower than baking capacity as glazing requires more space. The second kiln that was made was also rectangular and front loaded. Its capacity was almost 200 tiles, but the problem was that the temperature was uneven, which led to uneven glazing and high colour variation, wasting almost 40% wastage of tiles produced. The third and so far final kiln is round, with an internal diameter of 1 metre and height of 1.2 metres. This has led to greater uniformity of temperature and hence almost 90% of the tiles match the required standard and only 10% of the tiles are wasted.

All these innovations have led to increased efficiency and increase in the output. The year-wise production of tiles is as follows:

**Table: Details of the tiles produced and sites used**

<table>
<thead>
<tr>
<th>Year</th>
<th>Tiles produced</th>
<th>Site used</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>1600</td>
<td>Barber's Tomb</td>
</tr>
<tr>
<td>2012</td>
<td>7200</td>
<td>Humayun's Tomb</td>
</tr>
<tr>
<td>2013</td>
<td>115000</td>
<td>Nila Gumbad, Bu Halima's Tomb</td>
</tr>
<tr>
<td>2014</td>
<td>6200</td>
<td>Arab ki Sarai Gateway, Isa Khan's Tomb Complex</td>
</tr>
<tr>
<td>2015</td>
<td>9900</td>
<td>Batashewala Complex, Nila Gumbad</td>
</tr>
<tr>
<td>2016</td>
<td>8800</td>
<td>Isa Khan's Tomb Complex</td>
</tr>
<tr>
<td>2017</td>
<td>6200</td>
<td>Arab ki Sarai Gateway, Sabz Burj</td>
</tr>
<tr>
<td>2018</td>
<td>6000</td>
<td>Sabz Burj, HTIC</td>
</tr>
</tbody>
</table>

* This number is indicative of the tiles that have already been glazed and installed on the monuments. A further 20,000 tiles have been produced which are yet to be glazed.

**Learnings**

• Tile restoration has demonstrated the need for a traditional craft-based approach to conserve India's monumental buildings. It has also shown that the use of traditional building materials and original craft skills can help to restore the historic character and architectural integrity of these monuments.

• The systematic process followed offers a methodology by which traditional building crafts can be revived and is one that can aid in the conservation of India's monuments.
The craft of traditional tile making has been revived and documented for others to learn from, as an example of fostering endogenous capacities within the country rather than looking outside. The Archaeological Survey of India now has a rich resource at its disposal.

Private donors such as the Tata Trusts helped in documenting the process, pursuing the experimentation and training a cohort of people to carry the process further.

Innovations in the traditional method of production such that the authenticity of the tiles was retained while streamlining the process.

The acquisition in 2014 of a genset (combination of an electrical generator and an engine) to ensure continuous power supply helped to make the process more efficient by reducing wastage. Even a short break in power supply during the final glazing can ruin an entire batch.

Coordination with architects to estimate demand for tiles based on condition mapping of the monument has worked to plan production and ensure that there is a stock of tiles for the masons to work.

However the process of teaching the skill to local young people did not work out as planned. Although 20 were trained over a period of three years none of them took it up as a profession, for a range of reasons. Several strategies were tried but none really worked. The building crafts are not an aspirational profession for young people in Nizamuddin; moreover, these skills tend to run and be handed down in particular families.

The process suggested by craftspeople brought in from Uzbekistan needed customization and innovation to make it workable in this very different geo-cultural setting.

On the basis of these learnings, the project now envisages the preparation of a manual on tile-making and AKTC also plans to apply them to the restoration of the Qutb Shahi Heritage Park in Hyderabad.

Skills Training in the Socio-economic Domain

In all of its conservation sites, AKTC has sought to stimulate socioeconomic development through accompanying projects aimed at improving the quality of life of people living in the neighbourhoods of the historic structures being conserved. In the Nizamuddin Basti, a range of socio-economic initiatives devoted to health, early childhood care and development, sanitation, vocational education and livelihoods, urban development and education were accordingly set in motion. All of these were based on the findings of a Quality of Life survey conducted in 2008 that was based on the Quality of Life framework (See Annex 1) of the Aga Khan Development Network. The livelihoods programmes were designed as a response to the aspirations and needs of the community as revealed by the findings. The programmes have focused on two main

Training young people in Nizamuddin

The aim was that the tile making unit would train a cohort of young people who would embrace the craft as a livelihood option and possibly become entrepreneurs in this field later. Accordingly, eight young people were identified and trained over a period of 3-4 months. The group could not be stabilized, however. There was almost constant movement in the group so that it always consisted of both old and new members There were several reasons for this – tile making was not a traditional activity and there was ‘no precedence’ or familiarity with it; ceramic tile work is quite technical and achieving a glaze that matches the original historic tiles is a very precise but difficult process. Chemical composition has to be weighed in milligrams and even small changes alter the colour of the entire lot! Tremendous patience is required. Despite all these obstacles, the project continued to work with local young people for over three years, training and retraining, changing strategies and closely supervising before deciding that this approach was perhaps not feasible. During that time the young people did learn and earn, in fact, wages comprised the largest budget head.
segments of the community – young people and women – whose aspirations and expectations have played a major role in the designing of the interventions. The Nizamuddin Urban Renewal Initiative follows a life cycle approach with a special focus on women and children, that is, the most vulnerable groups in society. The project also follows the Aga Khan Foundation’s Multi Input Area Development (MIAD) approach using several simultaneous interventions. The strategy has been to reduce people’s expenditure on health, education and sanitation through improved urban services while increasing their incomes through the livelihood interventions.

Women in Nizamuddin had limited education and mobility. Very few of them had a source of income let alone a dignified one. The project needed to begin with interventions that would be acceptable to the community. The first points of entry were to improve health and education services. The logical next step was to get to work on improving livelihoods with a strategy based on the QoL findings. Women, both young and old, needed livelihood options that could overcome the constraints of limited education and mobility. Young people, both women and men, needed livelihood options appropriate to their aspirations as well as the needs of the market. The QoL findings also revealed that only 1% of the young people had access to any kind of vocational training. In addition, the QoL survey had indicated that they saw their lack of knowledge of English and computer skills as a bottleneck to seeking employment. Few had sought employment outside the Basti precisely because of the lack of vocational training. The livelihoods initiative therefore sought to address these multiple problem areas through needed several interconnected strategies. The key areas that were addressed were:

- Teaching English for employability
- Computer based skill training programmes with placement services
- Skill training for those who had dropped out of school
- Livelihood opportunities for women with limited education and mobility.

Addressing these opportunities was executed through the setting up of a Career Development Centre (CDC) for young people and two livelihood options for women, Insha-e-Noor and Zaika-e-Nizamuddin. Both of these initiatives are explored below.

**Insha-e-Noor – A Craft based Women’s Enterprise**

Work in the Basti began in July 2007. One of the earliest activities was to conduct a Quality of Life (QoL) survey according to the AKDN Quality of Life Framework (See Annex 1). The findings of the survey informed the project design. The AKDN’s quality of life survey is comprehensive, covering issues related to household economy, health and education, natural and built environment, community and associational life and voice and representation.

The key finding was that only eleven per cent of women in the basti had any income of their own. In addition, the older women had limited literacy and limited mobility. The challenge here was to identify an activity that met the criteria of potential of earning from home or within the Basti, did not need an elaborate set
up or expensive tools, was socially acceptable, i.e. in keeping with the cultural ethos of the community, and did not require extensive training.

The key goal was to demonstrate ways of improving the quality of people’s lives. The first two interventions were to improve the health and education facilities. The third was to initiate training programmes in tailoring and embroidery for women. This was chosen deliberately as it was a popular as well as non-controversial conservative activity that connected the project directly with large sections of the community, as batches of young girls and women came to the centre to learn a skill. The project management ensured that the training programme would certified by the Jan Shikshan Sansthan, an official Government of India agency. Between 2008 and 2011 two hundred women were trained and the project became the Insha Crafts Centre.

Simultaneously, another craft was taught to a smaller group of women with the intention of generating a livelihood programme based on a locally rooted skill, that of sanjhi or paper cutting. While sanjhi was not heard of in Nizamuddin, the craft did lend itself beautifully to converting the stone lattices on the heritage monuments into paper lattices which could then be converted into contemporary products like notebooks, lamps, bookmarks, greeting cards etc. The women doing sanjhi were organised into a group called Noor that began marketing their wares in 2010 through a series of exhibitions, while the Insha Crafts Centre also began marketing its products in 2011, also through exhibitions. In 2012, crochet skills that many women knew and used to do at home was added to the repertoire with a view to using them to produce marketable products. In 2012, however, crochet was dropped, as the Insha members were not very good at it and too slow for the process to be efficient.

In 2015, it was decided to open a kiosk for the sale of Insha-e-Noor products at Humayun’s Tomb with a view to test out the products for sale at a future souvenir shop to be located at the planned Humayun’s Tomb Interpretation Centre. Another major decision taken in 2015 was to merge the Insha Crafts Centre and Noor into one group, creating the brand Insha-e-Noor which means the creation of light (light as a form of energy of and for the women).

It was also decided to expand the garment construction unit as it could do job-work to provide the mainstay of livelihoods for women and also serve other manufacturers, craft groups and design houses. A bottleneck to this was the skill sets of the members – these needed upgradation to meet international and/or design house standards. Another bottleneck was the sewing machines which the members were using. They had been taught on domestic sewing machine with an electric motor. There was one industrial machine in the centre which only a couple of members were willing to try. By 2018, most of the women had become accustomed to using mainly industrial sewing machines, enabling quicker and neater work as well as attracting a more profitable clientele. In 2016, a binding and packaging unit was added to Insha-e-Noor operations for finishing/binding products, mainly notebooks. The group used to depend on external vendors located outside Nizamuddin and this presented several problems – quality and cost being the major ones. In addition, urgent demands, sampling and small orders could not be catered to, as the external vendors
would have their own deadlines and were unwilling to accommodate smaller orders, especially at short notice. A grant from the Australian High Commission enabled Insha-e-Noor to set up this new binding and packaging unit, which quickly became an integral part of Insha-e-Noor – their members have been trained in the basics and can take on newer designs; their members are part of a savings groups (like other members of Insha-e-Noor) and the group’s turnaround time for notebooks has reduced considerably. They are also experimenting with different bindings and packaging options.

Timeline showing the journey of Insha-e-Noor:

- **2008**: Set up of Insha Crafts center as a training institute. Trainings provided under Jan Siyashan Sansthan.
- **2009**: Set up of Noor, a sanjhi group. Training of members in Sanjhi.
- **2010**: Noor begins production and sales
- **2011**: Insha Crafts Centre begins production and sales, takes part in an exhibition for the first time.
- **2015**: Insha Crafts Center and Noor came together under the brand of Insha-e-Noor
- **2015**: Insha-e-Noor sets up its kiosk in Humayun’s Tomb
- **2016**: A new group - binding and packaging unit incuded as a subsidiary of Insha-e-Noor
- **2018**: Registration of Insha-e-Noor as a Producer Company in process.

**Investments**

The initial investment consists of creating training and certification for the selected crafts skills of tailoring, embroidery and crochet. Sanjhi is not covered by any government institution and therefore it is not ‘certified’; the trainer however was a National Awardee. The binding and packaging unit was set up in 2016 when

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3) National Awards are given by the Government of India to skilled craftspeople.
Insha-e-Noor had become a known entity and participants had greater focus on livelihoods as opposed to certification. The women were encouraged to form self-help groups to benefit from savings and credit. In addition, they were taken on exposure tours to understand other models and enterprises. Trainings in life skills and self-help group management were also organised for them, together with regular meetings to discuss the progress of the enterprise and participatory decision-making. Product development to meet market demand with the help of a designer also contributed to boosting their turnover. A team comprising a livelihoods coordinator who is a trained professional along with an experienced centre in charge supported by instructors for each craft and an accountant manages all the operations. The project supports the bulk of human resource expenses, rent, utilities and some overheads, while Insha-e-Noor itself manages its own working capital and labour charges.

**Impact**

A hidden and undocumented component of the programme is made up by the women who received training but chose not to be part of the operations. It has been determined that almost all of them are supplementing their incomes through small tailoring operations at home. They choose to do this as it offers them greater flexibility and they do not have to adhere to the stringent demands of the design houses or other external clients even if they earn less.

The income of the women has gone up – QoL data from 2013 indicate that family expenditure has increased even as income seems to have decreased. This is a fairly common phenomenon in socio-economic surveys, where income is often concealed. As this has been well documented, the proxy indicator used is expenditure which indicates that income has also increased – even if reliable data are not available. The aggregated data, however, hide the struggles of individual members and the reality that women work as much as they can, as much as they are “allowed to” and many times with the sole objective of having a little money to spend for their own needs. They are not always driven by wanting to earn the maximum that they can.

Women’s livelihoods have never been accorded priority in the household – even if in money terms they earn almost as much as their male counterparts in the unorganised sector. This is a complex issue that has roots in patriarchy, the socio-cultural system within which the project in general and Insha-e-Noor in particular operate. This manifests itself through women’s work and deadlines never been given a priority in household decisions; women always have to do their “professional work” only after their “household responsibilities” have been fulfilled.

Since 2008, Insha-e-Noor has trained over 300 women in different skills. It now has over 100 members. Turnover increased steadily till 2018 (See table) but dipped in 2019 and 2020 due to the slowdown of the economy worldwide and then due to Covid in 2020. It has reached a size where it needs to be registered. New taxation laws introduced in 2017 make it mandatory and operations difficult without registration and the new Goods and Services Tax (GST) number. The option chosen after evaluating all the options is to create a Producer Company.

Zeenat and Zaida are two critical members of the Insha-e-Noor family. They are living examples of what hard work and commitment can accomplish. They are often found together as both work as part time community health workers in the health component of the project as well. They are both in their late forties/early fifties and have been associated with the project since its early days.

Even when people would speak against the AKF - they could see the good things that were happening in Nizamuddin through the project. Zeenat works in the garment construction unit of Insha-e-Noor. She spent most of her life not knowing financial independence but loves it now! She remembers resenting the decision to transfer wages to members bank accounts but is grateful now as it helps her save. More than that she enjoys the confidence with which she conducts herself and communicates with tourists as she sells the group’s creations at the kiosk at Humayun’s Tomb.

Zaida makes crochet products and works in the tailoring unit. She knew crochet but learnt tailoring at Insha-e-Noor. She has recently been elected as a Director in the soon to be registered Insha-e-Noor producer company. She really enjoys the appreciation of the customers when they see the Insha-e-Noor products.

Table: Sales data of Insha-e-Noor

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Sales in INR (Rounded off to the nearest thousand)</th>
<th>Noor</th>
<th>Insha-e-Noor</th>
</tr>
</thead>
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<tr>
<td>2011-12</td>
<td>1,00,000</td>
<td>Data not available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2012-13</td>
<td>3,70,000</td>
<td>Data not available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2013-14</td>
<td>5,10,000</td>
<td>Data not available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2014-15</td>
<td>11,90,000</td>
<td>6,20,000</td>
<td>7,39,500</td>
</tr>
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<td>2015-16</td>
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<td>2016-17</td>
<td>14,40,000</td>
<td>5,60,000</td>
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<td>2017-18</td>
<td>41,10,000</td>
<td>5,10,000</td>
<td>46,20,000</td>
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<tr>
<td>2018-19</td>
<td>Insha-e-Noor registered as a producer company</td>
<td>32,69,000</td>
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</tr>
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</table>

Insha-e-Noor sales

Zaika-e-Nizamuddin – a Women’s Enterprise based on the Cuisine of Nizamuddin

The QoL survey had indicated a low awareness of the government’s Integrated Child Development Services (ICDS) centres, known as aanganwadi centres. These centres are supposed to have a range of services for children under six years, their mothers and adolescent girls. Given this finding, it was no surprise when the baseline survey conducted before the start of the Early Childhood Care and Development (ECCD) intervention in 2010 indicated that almost 50 per cent of children under the age of 6 years were malnourished. A deeper study indicated that the snacks eaten between meals, as they were nutritionally very poor, contributed to malnourishment in a major way.

The project devised several strategies to address malnourishment – growth monitoring of all children under six years, supplementary nutrition, nutritional counselling and a parenting programme for caregivers of children. One of the strategies was the setting up of a women’s/mothers group to make low cost and nutritious snacks to sell in Nizamuddin with a view to address malnutrition, promote healthier snacking among children and supplement the mothers' incomes.
incomes. This group of mothers was set up in 2012 and called itself Zaika-e-Nizamuddin (ZeN). The initial training focussed on the development of low cost nutritious snacks. They started production but could not market and the group functioned only sporadically. In 2014, a professional was recruited specifically to look at the livelihood components of the project. In 2015, the idea to experiment with the cuisine of Nizamuddin as a livelihood option was explored. ZeN experimented by setting up a stall with kebabs and parathas during the annual Apni Basti Mela in November 2015. Their food was a huge hit. The journey to use the cuisine of Nizamuddin as a source of livelihood for the women while promoting the culture of Nizamuddin began in earnest then. This required a hygienic kitchen space with appropriate equipment and water supply, training the women in standardising recipes from Nizamuddin, setting up operational systems and training the women to work together among

The journey has been difficult and eventful. Yet it has enabled the group to be able to offer standardised dishes (that they were used to cooking with minor variations at home) cooked in a hygienic environment. The AKTC’s promotion of the poetry and music of Khusro and Rahim had already identified the basti as a seat of culture. The food of Nizamuddin offered by the chefs of Zaika-e-Nizamuddin is another offering in the cultural menu.

**Their Journey**

The members of ZeN in the past three years have travelled a long, arduous and unfamiliar path. What began as a vague dream of earning through cooking entailed learning several new skills before it could become a reality.

The first step was to improve hygiene. Even a sole upset stomach after eating ZeN food was a huge reputational risk for the group and the project. This meant several changes in cooking behaviour - short fingernails, use of headgear while cooking, apron, frequent hand washing, using drinking water for making foods like chutney or sliced onions, etc. The second step was to standardise recipes and cook using them. This presented a challenge as none of the women, barring one, could read or write. This led to the initiation of literacy classes with a focus on reading and understanding recipes and labels. The third step was teaching teamwork and joint operations – big topics that hide a multitude of skills and assume a level of mutual trust within the group. Training programmes on specific topics as wells life skills and team building were organised to help the group work efficiently. In addition to these training programmes, regular meetings to address operational issues as well as savings and credit were held to develop operational systems and address intra-group conflicts. To fulfil legal requirements, ZeN needed a Food Safety and Standards Authority of India (FSSAI) number. Apart from legal requirements, it also offered a sense of confidence to the customers.

Saiba is 23 years old and has 3 children! She never got the opportunity to study. She came to Nizamuddin when she got married and had children at a very early age. At 18 years, she was the mother of 2 children, with no education, money or savings which made her feel helpless.

She joined ZeN in the early days when there wasn’t much work but she continued. Today, she is the confident deputy coordinator of ZeN, earns through her cooking, a member of a savings group and has her own bank account. Most importantly, she is learning to read and write. She cherishes the standing ovation that the group received at the end of the first pop-up restaurant.

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4) Apni Basti Mela is an annual event initiated by the project to celebrate the culture of Nizamuddin.
Table: Sales figures of Zaika-e-Nizamuddin

<table>
<thead>
<tr>
<th>Financial year</th>
<th>Sales in INR (Rounded off to the nearest thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>2,10,000</td>
</tr>
<tr>
<td>2016-17</td>
<td>8,73,000</td>
</tr>
<tr>
<td>2017-18</td>
<td>12,09,000</td>
</tr>
</tbody>
</table>

Zaika is now on the road to being well established – it has a rented kitchen space (supported by AKDN’s Nizamuddin Urban Renewal Initiative) well equipped through an Australian grant, a standardised menu, efficient systems for procurement, production and distribution of food and a growing clientele. It bears the salaries of two of the group members. The challenge is to sustain the initiative so that it is operational without the support of the project. Since 2011, 20 women have been trained, while the group has 11 members – this is a closed group and membership is increased with consensus of the existing members. Its turnover in 2019 was INR approximately 28,49,000. This figure has taken a severe beating with the Covid crisis in 2020.

Career Development Centre (CDC) – Computer based Training Programmes with Soft Skills

A detailed socio-economic survey in 2008 and discussions with different community groups revealed that that the livelihoods of most of the adult population was dependent on the informal, unorganised sector. The tendency for young people was to join the sectors favoured by their fathers, as there were practically no opportunities to train in skills that equipped them to work outside Nizamuddin Basti. The two major skill sets that the young people wanted to equip themselves with so as to improve their employability were fluency in English and computer operations – lack of them were seen to be as the two major bottlenecks to employability. Another set of young people had been unable to complete their schooling for a variety of reasons, usually a pressure to earn for the family. They tended to begin their working lives as apprentices or the bottom of the pyramid with their low/no skills. These findings guided the interventions made by the project in terms of choosing the target groups i.e. young people and women and the nature of skill enhancement offered. Care
was taken that programmes for the young people included at least 50 per cent women.

The Journey

The CDC was initiated in 2009 to address some of the skill development and training needs of the youth of the community, especially the trainings that relate to computer operations and is run in partnership with the NIIT Foundation5), which is one of the first groups to begin computer based vocational training in the country and has a history of working through similar CDCs in underprivileged areas. The NIIT Foundation certification also has a high acceptance and credibility among employers.

The CDC’s efforts backed up by extensive community mobilization done by the field staff on a very regular basis to inform and encourage young people to seek training and placement. The courses offered fall into two broad categories – professional courses and non-professional courses. Some of these were courses that the NIIT Foundation offered, while some needed to be customised based on the needs of the community. In addition, non-professional courses were added for community members who were seeking computer literacy. These tended to be young people under 18 years of age. Professional courses are offered to those over 18 years of age and include skill training, soft skills development and placement in an appropriate organisation. Non-professional courses are usually for children wanting to learn computer operations and social networking; these courses do not lead to placement. The courses offered also include a certificate course that equips the trainees to work in the retail sector, data entry, hardware and networking, tally. The average duration of each programme is four months. The course includes the subject matter and soft skills. Soft skills tend to focus on communication skills and presentation of self to potential employers.

Once the CDC had established itself as a centre that offered more than skill training and placement, the community asked for training in areas that were not offered by it. Care is taken to ensure that the other training agencies selected for this purpose are either recognised by the government or have credibility in the market. This is done to ensure optimum resource use as well as easier placement.

The CDC is also the node for other livelihood programmes that are not offered by the NIIT Foundation and are sourced from other training agencies. Some of the specialised skill trainings organised in the past include trainings on video editing, beauty and hair spa, care of elderly and disabled and para medical courses. The eligibility for these courses is at least completion of grade twelve for better employability. Some of the students also choose to continue higher education while working. The team ensures that there is a gender balance in selection of trainees on an overall basis. These programmes tend to cost much more than the regular computer based ones that the CDC offers. They are

5) http://www.niitfoundation.org/

Practice of assisting a potential trainee

Step 1: Potential trainee (PT) mobilized to come to the centre.
Step 2: PT counselled by CDC staff and advised on what is the best career choice for her/him.
Step 3: PT and family guided for appropriate training programme – in or out of Nizamuddin.
Step 4: PT offered full or part fellowship and/or bank loan to undergo training.
Step 5: PT goes through life skills/soft skills training offered by CDC.
Step 6: PT linked to a job through either placement service of training organization or Job Fair or linkage with potential employers.
Step 7: Tracking for 3 months after placement while they settle into their jobs.

Above: Orientation session for young people.
Below: Learning assessment in progress.
subsidised, but the students are required to make a financial contribution of up to 25% of the total cost of the training programme.

At the end of the training programme, the students are offered placements in suitable companies. These are done either with companies directly or by organising Job Fairs where several companies are invited together.

### Programmes for Young People who have Completed School

These programmes are for young people who have completed school and are eligible to work. There is a pressure on the young people to learn so many of them now choose to equip themselves with an employable skill while continuing their education. The training programmes for this category include largely training programmes for the retail sector, data entry and other office operations. Till December 2019, 2153 young people (947 women and 1206 men) were trained, of whom 60% have been placed in companies of repute like Puma, Westside, Pantaloon, Marks and Spencer, McDonalds, Cafe Coffee Day, Eureka Forbes to name some.

### Programmes for Young People who have not Completed School

The setting up the CDC changed the situation considerably, in terms of the availability of vocational training, but the gap still remained, as there was ‘no one size fits all’ solution when it came to skill training. Interaction with the community as well as data from 2008 indicated that almost 30% young people were working and not at school because they needed to earn in order to support their families and therefore either continued their studies as private candidates or dropped out.

The computer-based courses did not cater to young people who had not completed their elementary education. The programme was therefore extended to create customised skill training programmes for this group. This had two components – first, to train new people and second, certification of people who had some skills by a government agency to enable them to apply for government contracts. These included short term apprenticeship courses in masonry, electrical fitting, plumbing etc. The choice of these courses depends largely upon community demand and market trends. The main objective of the Nizamuddin CDC remained enhancing the skills and ultimately employability of the young people of Nizamuddin.

Till September 2018, 350 young people (50 women and 300 men) have been trained. Most of these people are working.

### Impact

Placement is offered to those to participate in training programmes through the CDC. Placement is through job fairs, contacts developed with the industry and relationships with local traders associations. The CDC has trained 2153 people in professional courses, 1550 in non professional courses and placed in different companies. Of the 2153 students trained, 1442 or 60% of them...
have been successfully placed. The average salary ranges from INR 84,000 to INR 1,44,000 per annum. The placement results in the increase of an earning member in the household and a significant increase in the family income.

The average cost per trainee supported by the CDC is INR 15,800. Assuming an average salary of INR 10,000/trainee/month even though our data of 2016 suggest that the average income of trainees is over Rs 11,000 per month, the total increase in family income is at least Rs 120,000 per year. Using a conservative estimate of placement of 50% of the trainees of the 300 trained every year (even though data suggests 60% placement), the total benefit to the community will be approximately INR 1,80,00,000. AKDN’s investment is 47,40,000. There are very few interventions that offer these kind of tangible benefits to the community and return on investment for the project.

Table: Trainings and placement record since inception of CDC

<table>
<thead>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Trained (placed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer and mobile repairing (CSAT, Data Entry, IT, Video Editing, Tally, Hardware Networking and web designing)</td>
<td>150(54)</td>
<td>212(130)</td>
<td>221(125)</td>
<td>188(103)</td>
<td>209(230)</td>
<td>210(131)</td>
<td>248(136)</td>
<td>222(145)</td>
<td>174(115)</td>
</tr>
<tr>
<td>Diploma in Early Childhood Care Education</td>
<td>10(5)</td>
<td>11(7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Paramedical</td>
<td>15(10)</td>
<td>23(16)</td>
<td>10(6)</td>
<td>10(5)</td>
<td></td>
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<tr>
<td>Hospitality</td>
<td>37(20)</td>
<td>21(15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Construction</td>
<td>70(45)</td>
<td>37(23)</td>
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<td></td>
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<td></td>
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</tbody>
</table>

Challenges

The livelihoods programme has performed well, but there are still several challenges that need to be addressed.

Career Development Centre

The biggest challenge faced by the CDC is the gap between the community’s aspirations and reality. The education and skills that young people possess do not always match the expectations of employers and needs of industry. This often results in disappointment among the candidates and to high rates of employee turnover. For this reason, the CDC focuses on training in market-oriented skills and in enhancing employability and offers a forum for discussion and regular job fairs where candidates and employers may find the best fit. In addition, many parents still have reservations regarding their daughters.

Above: Ex trainee at his workspace.

Middle: Youth from Nizamuddin undergoing training as chefs.

Middle: An electrical fitting class in progress.

Below: Training to be a plumber.
Pankaj (24) joined the customer service associate training to work in the retail sector. After the 4 month training he was placed in firm as a customer care executive that runs a search engine and began earning Rs 14000 per month. Pankaj’s income allows him to support his family, a responsibility that previously solely fell on his father. His father is a driver and earns INR 8000 to 10,000 per month for a family of 5. His mother is a homemaker. Pankaj was looking for ways to support his family but was at a loss on possibilities. A conversation with an AKF mobilizer led Pankaj to the CDC. The course allowed him to improve his confidence levels and build his skill set.

Pankaj’s hard work and determination paid off at the annual job fair where he was shortlisted by three organizations. Pankaj is now performing very well in his workplace and he is really happy with his job and the salary.

Yusuf had an interest in working as an electrician but he could not find anyone willing to have him as an apprentice - the usual way of learning a trade.

He was doing odd jobs when he met the CDC field mobilisation team. On hearing about the forthcoming training for electricians, he decided to enrol for it.

Today, he is working with a contractor for a salary of Rs 12000 a month. He and his father are now able to support their joint family.

Parveen (30) realised the economic burden her husband had to bear to support the 5 member family but did not know how to help him. Mobility was not an issue with her and she liked helping people.

She was encouraged to join a patient care programme. She is now employed as a private care givers and earns Rs 15,000 a month. She feels she is contributing to the family well being while being economically independent.

Women’s Livelihoods

Enterprise development involves both community dynamics and market forces. For successful outcomes, groups have to fight against centuries-old dogma and social constraints while navigating an extremely unpredictable and dynamic market. Till a breakthrough is achieved, the enterprise has to fuel itself not through profits, but through the promise of profits. It is thus common for members to lose motivation when demand for their work dips and it is equally difficult for them to meet surges of high demand with their limited supply potential. Constant efforts are being made to identify marketing strategies to ensure that there is regular work and market engagement for the group. Training, workshops and product development are pursued so as to build capacities and keep community members motivated and involved during lean periods.

In addition, in order to survive in a cut-throat competitive environment, the group needs to demonstrate professionalism and discipline. They need to provide on-time delivery, and the right pricing with high quality standards. However, such demands are often alien and intimidating to women who have never worked in a professional setting before. Indeed, even their families tend to be unaware of the demands of running an enterprise. Imbibing in them the entrepreneurial values and a professional attitude is a slow and painstaking process. To that end, on-the-job instructors maintain strict quality control of products. Systems and Standard Operating Procedures are regularly streamlined and aligned with real-time operations so as to achieve the right balance. Regular meetings and discussions are conducted focusing on operations, areas of improvement and consumer feedback. Also, members are provided greater exposure of successful systems and institutions to ultimately inculcate in them a professional attitude and an attention to detail.

Most importantly, the these women’s enterprises need not just to be economically viable but also to function as independent, self-sustaining units and this in turn requires legal, financial and managerial independence. They need to be able to expanding the scale and scope of business to be able to bear a part of the expenses on their own in the short term, and all the expenses in the medium term. Further, registration of the groups as independent and self-owned is being pursued. Such a legal identity is only the first step, however. Members...
need to have a sense of ownership and take the group forward as producers involved in decision making wherever possible, from systems development and quality control to consumer engagement, and not merely as workers. It is thus necessary to hand over several responsibilities to the members for them to manage while being able to provide support if needed.

Risks

Vocational Education - Career Development Centre

One of the most observable risks associated is high employee turnover, after placement of the young people who have been trained. This may eventually lead to reduced interest among employers. One of the major reasons for this is the situation in the market, where there is low demand for a vast number of unemployed young people; the other reason is the gap between employee’s aspirations for a ‘job in the corporate world’ and the market reality. An unstated reason is the lack of an open atmosphere in companies for people of different social, cultural and economic backgrounds. Extensive training of young people to be able to perform better at their work and simultaneously be increasingly aware of market realities and expectations can help them be better prepared and hence stay motivated. It also requires continuous negotiations with the employers to get better work environment for the students. In addition, there is always a safety risk for young working women, which discourages them and other aspirants. This limits their options to a large extent, excluding all distant jobs or those with longer working hours. This can be remedied to some extent by working out solutions with employers, e.g. trying to secure day jobs (safer workings hours) for women and young girls and also providing safety measures.

Women’s Livelihood Promotion

The risks associated with the the women’s livelihood component are a combination of market-oriented and community-oriented risks. Like any other player in the product industry, the women’s groups also face a persistent risk of market rejection for internal reasons like poor product quality or untimely delivery. These risks can be mitigated by better training, constant focus on improving quality standards, better monitoring and quality control, and streamlining production to ensure customer satisfaction. On the other hand, there are always external macro risks with the potential of adversely affecting business over a period of few years. These risks include possible saturation of the handmade products market, changes in overall shopping trends, declining numbers of people with substantial disposable incomes or healthy purchase capacity, and a non-conducive business environment. The only way to mitigate these is to stay vigilant of the market and overall trade environment and device new approach and strategies as and when required.

Another major risk which can be foreseen in the coming years is sustainability. The groups are currently functioning with a lot of support from the project. This support is both financial and “hand holding”. It is possible, that there is a dip in services or gaps in systems for a while when the organisation withdraws...
support and the groups are completely on their own. This can be mitigated by strengthening systems and training members extensively in enterprise management. An exit strategy needs to be devised for the gradual withdrawal of support with simultaneously preparing the groups to take on greater responsibilities. The community-based organisation, a society with all the prominent and active members from the community, is an important part of the exit strategy and can be a support system. The option of linking the enterprises with government for continued support can also be explored. Since AKDN is going to be present in the area for the next ten years through the Sundar Nursery Management Trust, oversight of the groups is also possible, though in a changed role.

Ways Forward

**Vocational Education - Career Development Centre**

The CDC remains a reliable and affordable source of career advice, skill training and placement for the young people. In this phase of the project, it is expanding the range of trainings it offers with a view to increasing employability in a changing market. The CDC offers counselling as well as advice, financial linkages and support to young people who need to undergo a skill development programme, even when it does not always conduct programmes itself. It will continue with the soft skills component for all participants, conduct job fairs, track the progress of trainees and provide hand holding support. The current work plan is to work with over 300 young people from 2018 till 2020 impacting close to 900 families. This is in addition to the young people who have been trained and placed from 2009 to 2018. The major shift proposed here, post the project period, is to encourage the community to invest in their own skill training to the level that they are able to or link with a financial institution. This will require a major change in their behaviour. The CDC and AKF together have established linkages with the market welfare associations and vendor associations to facilitate employment of the trained young people in areas close to their residence.

If the CDC has to continue in its present form, then continued financial support for sustaining it will have to be ensured. Getting support from external funders is one approach. A more sustainable one is linking students with banks and other government and private lenders. Nizamuddin has not had a culture of young people being able to invest in their education. The project has worked towards preparing working young people as role models for others in community. They will be the change agents to facilitate a change in the overall approach of young people towards training and employment.

**Women’s livelihoods**

Insha-e-Noor and Zaika-e-Nizamuddin will be registered as independent legal entities. The process to register Insha-e-Noor as a producer company has already started. Zaika-e-Nizamuddin has a Food Safety and Standards Authority of India registration, which is the first step. This will be an important
step towards sustainability. In addition, both enterprises will need strengthened systems and streamlined operations to ensure maximum output. As the businesses grow, there will be a need to adapt to the changing situation. A major opportunity will be the opening of the Humayun’s Tomb Interpretation Centre with several commercial outlets, including souvenir shops and food outlets. Increase in community membership with intensive fieldwork and expanding the geographical reach to the catchment of Nizamuddin which includes other low income areas will also be undertaken.

Market linkages will have to be strengthened so that drop outs are minimised through regular incomes along with skill enhancement and a safe working environment. Greater focus is planned on expanding the scale and scope of business so as to increase turnover so as to break even and even obtain profits. This will be possible by improved market strategies, better branding, expanding product repertoire to cater to market demand and ensuring the highest quality standards.

Annex 1

AKDN Quality of Life Framework
Case studies

Nazreen Rahman

Nazreen’s (20) dreams of pursuing higher education were cut short when her father became ill and could no longer work. When Nazreen noticed that the changed financial situation was becoming a barrier to education for her younger siblings, she took on the responsibility for supporting her family financially. She stopped pursuing her education after XII and started looking for work. However, she had difficulty finding a part-time job; so, she began to impart tuition classes to some children in Nizamuddin Basti. Unfortunately, her tutoring income was insufficient to support her family. She came across an AKF mobilizer, who referred her to the Career Development Centre (CDC), where she attended a counseling session and chose to enroll in the data entry course with the knowledge of customer handling and soft skills. Four months later, she earned a job as a Customer Service Associate in the first round of interviews at the job fair. Her new job has a monthly salary of INR 12000. Nazreen is proud of her accomplishments and happy to share her experience with other young women. Her employment gives her a sense of independence and confidence that she can support her family as a woman. In the years to come, Nazreen looks forward to continue expanding her skill set as a young professional.

Shaheen Ansari

Shaheen belongs to a lower middle-class family in Basti Hazrat Nizamuddin. Currently, she is working as a Team Member at Burger King at a salary of Rs 9,000 per month. Shaheen has always been a brilliant student of her class at Government School Jangpura and had a desire to pursue higher education and get a decent job. His family consists of 6 members. Her father works as a peon at a school in Nizamuddin and her mother is working as a community worker at Aga Khan Foundation. She has always been supported by her mother in all the aspects. From her childhood, she was very shy and a reserved girl who always avoid interacting with people but she wants to develop herself to get a job so that she can support her family. She cleared her senior schools exam with good marks and wanted to continue her higher study but also wanted to have an income of her own to support herself and her family. Her mother referred her to the programs that were offered at the Career Development Centre. The scholarship programs, interactive training sessions, and placement opportunities were exactly what she was looking for. She immediately enrolled herself into the Certificate course in Data Entry (CCDE) and began to work hard to pursue her dreams. She worked hard to develop her IT skills to get a desirable job. She was a quick learner and hardworking girl. After completion of this 4 months course, she was selected as a Team Member at Burger King on a salary of Rs 9000 per month. She is happy and satisfied and supporting her family financially. She is also pursuing her graduation along with this job. Shaheen looks forward to better career opportunities in the coming year.
Haroon

Haroon (22) comes from a family of 5 where his mother was the main wage earner. She is working as patient caretaker with a total family earning of 12,000, before Haroon found a job.

He was very shy at school and used to hesitate to interact with people with a very low confidence level. He lacked communication skills, but he wanted to develop his personality and knowledge. He then enrolled himself at CSAT course. He worked hard to develop his IT skills and soft skills to become confident. The faculty supported him a lot to enhance his personality and he found a job at a private hospital where he is earning Rs 13,500 per month doubling the family income.

Ahtesham

Ahtesham’s (20) father, who works in a private company with a family of 5 and draws a small salary. His mother is a homemaker. He always wanted to support his family but he was not confident enough to get a job as he lacked employable and communication skills. One day he came for the counseling session at the centre and was very influenced and decided to join the data entry course. He worked hard to develop professional IT skills to meet the industry requirement. After few months later, he got selected at Paras Dairy and now a responsible earning member, earning Rs 14000 per month and a financial helping hand for his family.
The sculptural qualities of the Nando Mosque, Mali.
Background and Development of the Earthen Architecture Programme

When the partnership between the Aga Khan Development Network with the Malian Government was formalized in 2003, discussions with the Ministry of Culture and its Direction Nationale du Patrimoine Culturelle reached the conclusions that AKTC’s expertise was necessary to assist in the rehabilitation of the earthen architectural heritage mosques in Mali that were in dilapidated conditions.

Following a formal request from the Malian Government for assistance, AKTC selected in 2004 the mosque of Komoguel in Mopti as a pilot project. Being badly rehabilitated with a cement coating, the Mopti mosque was to be fully restored using traditional techniques, thereby returning integrity and durability to the building. During rehabilitation, a Memorandum of Cooperation between AKTC and the Malian Ministry of Culture was concluded. Signed in February 2006, this agreement stated the following objectives:

- To preserve and rehabilitate significant heritage building in earth.
- To reinforce the administrative and technical capacities of local civil servants.
- To reinforce technical capacities and train building professionals, master masons and craftsmen.
- To disseminate knowledge on earthen architecture and heritage to raise awareness.

In Mali, heritage buildings had never been subject to conservation. Because accumulated layers of earth resulting from years of plastering or crépissage were causing a risk of collapse for flat roofs, interventions were deemed essential. There was also a wider rationale to promote earthen architecture as an alternative to modern energy-intensive cement buildings.

The role of AKTC was to set-up teams, to make logistical arrangements, to finance, and to manage the proposed interventions, while the Malian Ministry of
Culture would provide legal support and would help facilitate the implementation of project activities.

During the 16 years of the Earthen Architecture initiative in Mali (2004 – 2020), the main subjects of intervention were the conservation of heritage mosques in Mopti, Djenné and Timbuktu. From 2007 onward, the Programme was extended to also include improvement of living conditions in the areas around the restored Mosques. This first happened in Mopti, with a water and sanitation and street paving programme, and later also included Djenné, where the public square next to the mosque was rehabilitated, nearby eroded riverbank was restored and a serious problem with solid waste management was tackled. Building upon the experience of rehabilitation earthen heritage, the Programme focused on vocational education with the construction of the Centre de l'Architecture en Terre (completed in 2010) and its vocational training centre. Transferring knowledge of earthen construction techniques for craftsmen and young architects proved critical for safeguarding the country’s cultural heritage.

**Rationale for Focus on Earthen Architecture**

Earth is one of man’s oldest building materials and most ancient civilizations used it in some form. It was easily available, cheap and strong, while it required only simple technology. In Egypt the grain stores of the *Ramesseum*, which was built by Rameses II in 1279 BC, are one of the earlier examples of a Nubian
technique used to construct the mudbrick vaults that have survived for over 3,500 years, The Great Wall of China has sections built in rammed earth over 2000 years ago. Iran, India, Nepal, Yemen all have examples of ancient cities and large buildings built in various forms of earthen architecture. In Mali, earth has been used for construction in the Inner Niger Delta for thousands of years and the oldest remains documented date back from the 3rd century.

At present, one third of the world’s population is believed to be living in structures that are at least in part made of earth. The techniques used to build them are extremely varied. They include raw adobe bricks and compressed mud blocks. Structures partially or wholly constructed with earth – some of them erected and maintained by entire communities drawing on ancestral know-how – account for 20 per cent of UNESCO’s universally admired cultural sites that are inscribed on UNESCO’s World Heritage List. Earthen architecture is one of the most original and powerful expressions of our ability to create a built environment with readily available resources in the nature.

Building with raw earth has a number of advantages, including:

**A minimal environmental footprint**

Most modern construction materials and techniques are energy intensive. Earthen architecture, however, offers attractive solutions for environmentally friendly buildings in the modern context. As earth is nearly always available locally, its usage helps reduce the need to transport heavy building materials, reducing the emission of carbon dioxide. Furthermore, recycling of soil does not require fossil fuel in any way and is not labour intensive. The characteristics of recycled soil for construction remains the same whereas modern building material retains an inferior chemical and physical composition after recycling.

**Socio-economic benefits**

The selection of building materials and the use of different techniques plays a major role in the use of limited natural resources, in community participation and in the distribution of wealth. Promoting earthen architecture for its potential to help fight against poverty is a good option as it offers many job opportunities, while it is environmentally friendly and socially equitable.

Supporting craftsmanship of respected master builders is critical in order to ensure that know-how can be passed on and that appropriate maintenance is guaranteed for the future.

In spite of the environmental and socio-economic advantages of earthen architecture, the relative fragility of buildings, combined with a lack of well-trained skills and standards in the field of earthen urban and architectural conservation, make building with earth a challenge. Natural impacts such as exposure to heavy rainwater and the rapid repetition of quick wet-dry cycles cause erosion of building envelopes. In addition, exceptional flooding and earthquakes can cause collapse of earthen buildings.

Above: Repairing the roof at the Djenné Great Mosque.

Below: Manufacturing djenne-ferey, cylindrical mud bricks typical of Djenné.
Earthen architecture is nowadays subjected to rapid socio-economic changes that are affecting many countries and that include:

- The dissolution of traditional community structures due to social change caused by massive urbanization.
- Increased monetization of the economy and disappearance of professions related to earthen architecture that traditionally were paid in kind. This in particular affects maintenance.
- The possibility to import modern building materials and introduce modern building technologies as alternative to local know-how.
- The development of new building urban programmes such as offices, health centres, shopping centres and the like, and their construction by contracted labour.
- The general cultural changing of the way of life, urban and disconnected from local ancestral traditions.

Conservation Approach

Neglect and decay of traditional buildings is extensive throughout the country and affects entire groups of buildings - often resulting in structural collapse or rendering conditions that are no longer considered safe for residential use. The case of threatened heritage structures is of course of special concern for the implications that it has on the loss of material evidence and, more so, on the loss of know-how that has made it possible to perpetuate a living building.
tradition. It is this immaterial knowledge and its related apprenticeship system that stands central in AKTC’s conservation strategy for Mali.

The conservation programme adopted criteria and standards that are internationally accepted and it has consistently sought to identify the best way in which these could be adapted to the conditions found in the Malian context. The applicability of criteria and standards is relevant both for the restoration of the monument and its related training component. AKTC’s vocational training efforts have had great relevance for the country as a whole, because of the efforts made to rejuvenation local knowhow and to emphasize the importance of maintenance and long-term sustainability of the historic built environment.

Some of the challenges that conservation of earthen architecture monuments poses, due to the nature of the building materials, include:

- Documentation of the current condition of monuments is essential. It is the process of collecting data and critically evaluating and interpreting various sources of information, such as archives, archaeological remains, material science, architectural and structural surveys, drawings, and photographs.
- Historic evidence and authenticity, associated to archeological knowledge whether archival or via information collected in the field, should be combined to provide a better sense of the original configuration and subsequent transformations that have affected a site.
- Use of unbaked bricks and raw mud requires the best possible materials and techniques to protect against weathering. Field research, intensive testing before formulation of the best appropriate mixes and the input of experienced traditional masons, associated with technical advisors was critical to determine the most durable materials and techniques.
- Use of building materials that are collected locally, but for which availability is seasonal.
- Re-introducing quality materials that have not been used for a long period due to their high price.
- Identify and recruit local traditional masons with knowledge on how to pass on expertise.
- The yearly application of mud plastering or crépissage on the outer surface of buildings. Proper maintenance requires masons to do this once every year.

Heritage Rehabilitation Projects Implemented in Mali

**Mopti (2004 – 2006)**

The Great Mosque of Mopti is an earthen structure built in the traditional Sudanese style between 1936 and 1943 on the site of an earlier mosque dating from 1908.

The skilful use of this simple material, called banco, coupled with palm wood for the construction of floors and roofs, has given rise over the centuries to an architecture that is a unique blend of indigenous forms and Islamic traditions.
The Mopti Mosque, however, suffered other more radical transformations. In 1978, the mud plaster along the entire upper section of the building was removed and replaced with a layer of cement. In 2003, a second intervention took place in an effort to keep the incompatible cement surface from detaching and falling from the upper part of the building. At this point, the older cement had to be removed. Following some hasty repairs to the earthen masonry underneath, a new protective surface made of fired bricks covered by a new layer of cement was added.

These unfortunate recent interventions, like many others elsewhere in the country, were carried out in the mistaken belief that they could resolve once and for all the need for periodic maintenance to prevent rainwater infiltration. However, because fired bricks and cement are heavier and integrate poorly with the traditional materials, the mosque suffered far worse water infiltration. The resulting cracks and structural damage seriously weakened and compromised the stability of the monument.

Having been invited by the Ministry of Culture and the local mosque committee to help restore the mosque, AKTC saw the initiative as a pilot project for future interventions. Particular attention was paid to vocational training provided on-the-job, the purpose being that this would have a lasting effect and that trained craftsmen could be employed in the future in other earthen architecture projects in which the Trust would expect to become engaged.
Training at the Mopti Mosque was organized to cover all aspects related to pre-construction, setting of the site and implementation of the various types of work necessary to restore the monument and equip the building to respond to its purpose. Even alphabetization classes were organized to supplement the trainees’ basic skills and abilities. The interrelated training and construction processes were driven by the will to achieve quality results, whether with respect to building materials, its construction methods or offering the apprentices the necessary supervision and support from more experienced craftsmen and project trainers.

Trainers and local builders were selected from individuals with considerable experience and understanding of local conditions. The region around Mopti was scouted together with the prospective builders and trainers to identify the best sources of earth (black and white banco), stone, sand and aggregates, as well as the structural wood and best quality rice straw employed in the fabrication of bricks. The selection of the trainees targeted young, energetic individuals between the ages of eighteen and twenty-two, interested in learning new skills which would have broad applicability in Mopti and other parts of the region, thus opening the door to future employment opportunities for them. Previous involvement in construction was not a pre-requisite.

A decision was made early in the process to train apprentices directly on site and expose them to the various tasks and techniques carried out during

Above: The mosque’s upper section was replaced with a cement finish applied to terracotta tiles.

Below: Assembling the components of the central minaret’s tower.
construction. In this way a total of 34 apprentices were trained. One aspect that distinguished the Mopti training from other vocational training provided by the Trust, was the constant exchange of information and know-how that occurred between and among the specialists, the most experienced and capable local builders and the trainees themselves.

This synergy proved very effective and fruitful as it combined the best of the local expertise with the highly committed specialized consultants. The outcome proved that, while strongly rooted in local traditions, earthen construction standards and techniques could be updated and adapted to respond to new market conditions and expectations of the users, and this without the radical transformation of the monument, or the introduction of alien and unsuitable new materials. This was especially significant in this case, as the mosque had already been unnecessarily and improperly transformed with dire structural consequences, which were evident to all. The project demonstrated that the recourse to the well-tested traditional alternative was not only better suited technically but could also become an engine for revitalizing local industries and generating new employment.

Overall, the project provided the trainees with hands-on experience. This enabled their trainers and the project staff to assess their performance as site works advanced, while providing the young apprentices with the necessary skills and, more importantly, the self-motivation necessary to learn and excel through emulation, in a spirit of engaging cross-cultural exchange. In this respect, the philosophy of training in the Mopti Mosque mirrored that prevailing in traditional societies where knowledge is transferred from one generation to the next through the engagement of individuals in all aspects of construction. In terms of training, the project showed that there is potential and prospect for:

- Making full use of the traditional know-how and capabilities that are still available from the older generation of builders. These can be mobilised to pass on their knowledge and serve as an example for the younger generations;
- Finding young committed people who can learn quite rapidly appropriate restoration and construction methods and the right way to make full use of the materials and equipment available locally.
- Attaining very high standards in up-to-date conservation and traditional construction practices that are well within the capability of individual builders and local contractors.
- Responding to the considerable local demand for improving and upgrading the existing built fabric that comprises not only monuments, but, significantly, the majority of the country’s vernacular buildings inhabited by the vast majority of the population.
- Backing the traditional construction sector as an economic engine that can generate income, create new employment opportunities within marginal communities, and contribute significantly to the country’s general process of development.
Timbuktu (2007 – 2010)

Local tradition dates the founding of Timbuktu to around the year 1100 AD, at a seasonal nomad camp based around a well. Whatever the myth of the town’s origin, by the twelfth century Timbuktu was an active trading post on the routes crossing the Sahara into West Africa. In the fourteenth century, the town was absorbed by the Mali Empire and enjoyed a period of prosperity.

In the middle of the fifteenth century Timbuktu fell under Songhai rule. Until the Moroccan invasion at the end of the sixteenth century, this was Timbuktu’s most brilliant epoch as a centre of Islamic learning, and the town housed more than 150 Islamic schools, with students coming from as far as North Africa and the Middle East.

The Djingarey Ber Mosque is known to be constructed in 1327 by an Andalusia architect, Abou Ishak, at the initiative of King Hadj Moussa, upon his return from pilgrimage to Mecca. It is Timbuktu’s oldest monument and its major landmark. The Mosque is built in rubble stone blocks and banco (raw earth), which is also used for rendering.

In 1988, the three main mosques of Timbuktu, together with the tombs and mausoleums of the Saints, were declared a World Heritage Site.

The Mosque was in poor condition when it was first documented by the Aga Khan Trust for Culture in early 2007. It revealed that the building was in

Djenné is located on the internal delta of the Niger in Mali. The entire town is almost completely built of raw earth. The city prospered as a trading centre deserving of mention by travellers and historians from the Middle Ages onwards. Its architecture became a reference point in West Africa.

Traces of continuous occupation since the third century AD were found at Djenné-Djeno, a site a few kilometres inland from Djenné. Present day Djenné, located on the Bani river, was established in the thirteenth century when Koy Konboro, the 26th Prince of Djenné, converted to Islam and tore down his palace in order to establish the city’s first mosque on its ruins.
Constructed by the community in 1906 on the remains of a pre-existing mosque, the Great Mosque of Djenné is the largest historical mud mosque in the sub-Saharan region and is considered by many to be the greatest achievement of the Sudano-Sahelian architectural style. It was built with sun-baked mud bricks (called Djenné-Ferey), a mud-based mortar, and coated with a mud plaster – which gives the building its smooth, sculpted look.

The entire community of Djenné takes an active role in the mosque’s annual plastering, an event that has over the years turned into a major festivity, whereby the barey-ton, the local guild of traditional masons, coordinate and oversee the work.

In recent years, periodic droughts have caused farmers and fishermen to move out of the area. By the mid-1980s it was feared that Djenné, in the form it had assumed for most of the last millennium, was in danger of disappearing altogether.

Commencing with architectural survey and studies in 2008, the Aga Khan Trust for Culture’s restoration work aimed to guarantee the stability of the building by consolidating the carpentry and wall bearing system. The restoration, completed in 2010, provided on-the job training in traditional building crafts and contemporary conservation methods to more than 140 community masons.
Situated at the junction of the Bani and Niger rivers, the city of Mopti in Central Mali has developed over the past one hundred years from a modest settlement into an important urban and administrative centre that reaches out to both the north and east of the country. Mopti’s strategic location at the confluence of two major rivers has also become its major constraint to further development. During the months of November to February, when the waters of the Niger and Bani are at their highest levels, the city becomes a virtual island with only the causeway as its connection to firm ground. Mopti’s population, currently estimated at more than 125,000, is squeezed during this period into an area of not more than 2.5 square kilometres.

As a result of population pressure and overall low levels of development, living conditions in Mopti, particularly in the areas around the harbour and in the adjacent districts of Komoguel have steeply declined over the past decades. Water and sanitation are in a poor state, a situation that is being aggravated by the absence of a proper system for waste collection and by unpaved streets with open sewers. The area not only has poor sanitary conditions but has an equally poor developmental status of health and education.
The major objective of AKTC’s intervention in Komoguel was to improve existing living standards in a limited geographical area of Mopti as a pilot initiative, thereby focusing on improved sanitation conditions. To achieve this, a number of limited interventions were carried out between June 2006 and 2009, aimed at replacing open drains with an underground sewage system. The project was implemented in close collaboration with the inhabitants of the neighbourhood, local religious authorities and government officials.

Following the complete and successful rehabilitation of Mopti’s Great Mosque by HCP in early 2006, substantial goodwill had been created with the local population and with the authorities to justify the launch of a major initiative for the area. The Mosque’s Committee in particular welcomed plans for improvement of the environment in the immediate surroundings of the Great Mosque. The activities were carried out in phases between mid-2006 and continued until December 2009 with the natural watershed, rather than a particular number of city blocks, being the determining factor for the shape of each intervention area.

Improvements were realized to provide protection against periodically rising river water by constructing a flood barrier with 3200 square metres of landfill. In addition to this, several public water points were established to increase access to safe and clean drinking water. The underground sewage system that established connected individual households to a treatment facility for raw sewerage. 4000 square metres of streets were paved with locally manufactured bricks made from compressed polythene bags mixed with sand. Finally, a system for collecting solid waste was introduced. During the three and a half years that it took.

Turning waste plastic bags into paving bricks

In an urban environment with open drains, as is the case in many West African cities, stray plastic bags tend to block the flow of raw sewage, causing drains to overflow into the streets. Stagnant sewage then becomes a major hazard to public health as it provides an ideal microenvironment in which vectors for pests and diseases thrive. Blocked drains pose a particular threat to young children who play freely in the streets. For domestic animals that roam the streets and feed on leftovers, plastic bags pose an immediate danger when swallowed.

In order to counter the problems of plastic in the environment, many African and Asian countries have now brought legislation into effect that strongly discourages the use of plastic or that outright prohibits its use. Positive as that may seem, the broader question remains of what to do with the large quantities of plastic bags still in the open environment. To address this issue head-on, the Aga Khan Trust for Culture started a project in 2006 transforming low-density and high-density polyethylene (both generally referred to as polythene) waste bags into paving bricks, using melted polythene as a binder and sand as aggregate. These bricks were subsequently used to pave the streets around the Centre de l’Architecture en Terre as part of a major sanitation programme.

After an initial two years of experimentation, during which the components of the mix were altered, various moulds were tried and a press with vibrating table was introduced, AKTC had mastered the production process for bricks that are durable and that conform with ISO norms – resistance to extreme heat excepted. During 2006 an initial 1000 square meters of paving bricks were manufactured and 75 tons of polythene waste had been transformed. By 2010 more than 4000 square meters (44,000 square feet) of urban streets in the Komoguel area of Mopti had been paved with bricks made from recycled plastic and more than 300 tons of plastic had been collected from the urban environment and transformed.
Djenné Urban Upgrading

The Djenné population expressed the need to intervene in addressing an improvement of the public open space, compromised by inefficient sanitation systems and accumulating piles of solid waste. The project, started in 2017 through a series of periodic information sessions, responded to the people’s needs also reflected the concerns expressed by the international community as to the level of dilapidation of the public open space in a city designed as a World Heritage since 1988. The project included the following components:

Solid Waste Management and Infrastructure

Djenné’s major threats to public health and quality of the public open spaces find their origin in an inefficient solid waste management and the inappropriate sanitation systems. Since decades, Djenné residents dumped their solid waste on the riverbanks resulting in accumulated fills of a dozen of meters and in parts even more of freely deposited solid waste. Knowledge of local practices of solid waste practices in Djenné households was critical to assess the quantity produced by district, who in the household was taking care of solid waste and the detailed location where each zone of the city was depositing its waste on the riverbank.
The access to the main solid waste deposit remained critical, as there was no direct existing path leading to it. The only solution remained to design a pedestrian bridge above the river branch that was an obstacle, allowing donkey-carriages accessing the final waste deposit.

**Urban Upgrading**

The project’s objective was to upgrade the central market square and a delimited area of the riverbanks, which used to act as an open and free solid waste discharge with bad sanitary conditions. Prior to proposing a technical solution, a social and technical study of the waste management was required to assess the current practices and plan a sustainable improvement. Work included the following components:

- **Rainwater discharge, sanitation, and wastewater treatment**
  Rainwater drainage for the market square and around it was supplemented with entire sanitation sewage in the project area, collecting wastewater from houses and street channels to a wastewater treatment plant implemented to serve for 60m³/day, equivalent to 3,000 users.

- **Riverbank consolidation and upgrading**
  Following the engineering design based on imported gabions, local stones were supplied to consolidate the riverbanks. Installation started in May 2018.

*Above: Map depicting the collecting points implemented in the project to collect solid waste.*

*Below: Innappropriate rainwater management at the market square in front of the Great Mosque.*
and by the end of June 2018, the first platform level was completed (more than 3000m² of gabion mattress 30cm wide). Before the 2018 rainy season and flooding, a first part of the gabions wall was also installed.

In details, the following works were implemented:
- Riverbank consolidation and promenade: 250 linear meters.
- Two platforms providing direct access to the river of approximately 300m² were created in Dioboro and Konofia.
- Two new water wells for public use were created.

The new urban space was formally opened to the public and handed over to the local authorities in early March 2019. As symbolic event to reinforce the social dimension of the public space, the local authorities planted trees in the upper level of urban character:

• Pavement design for Monday Market Square in front of the Mosque

As projected, complete leveling and soil compaction were necessary to ensure regular slopes for appropriate rainwater drainage. Benches were built in the perimeter for pedestrian recreation and to prevent intrusion of vehicles. Paving areas were treated with baked bricks pavement and the remainder of the esplanade was finished with stabilized banco.
In details, the following works were implemented:

- Full surface area of the stabilized Market Square: 3,500 m²
- Of which, the paved area: 1,000 m²
- And the stabilized banco: 1,600 m²
- Public benches were implemented on 150 linear meters.

An opening ceremony was held for the community by 17 August 2018, marking the completion of construction work and handing-over the market square to the community. As symbolic event to reinforce the social dimension of the public space, the local authorities, representing the city districts taking part in the yearly Mosque crepissage, planted four trees.

The Monday Market returned to the square regularly using the new paving treatment. In addition, community awareness campaigns were organized to raise consciousness for stakeholders and improve social responsibility for the maintenance of the public space.
Earthen Conservation Vocational Training in Mali

The establishment of the Centre de l’Architecture en Terre

AKTC established the Centre de l’Architecture en Terre (CAT) in 2010 in collaboration with the Malian Ministry of Culture, as part of the Trust’s wider Earthen Architecture Programme in Mali, which also included the restoration of the Great Mosques of Mopti, Djenné and the Djingereyber Mosque of Timbuktu. Designed by award winning architect, Francis Kéré, the CAT was built with blocks of stabilized, compressed earth. It serves multiple purposes and houses a vocational training facility where different aspects of building with earth are taught. In addition, it has a permanent exhibition of building techniques in earth with examples of earthen architecture. It also provides services for the poorest households of the local community by offering water and sanitation facilities through a toilet and shower block that was especially constructed for this purpose.

The Centre was built with the following specific objectives in mind:

- To provide visitors who intend to see earthen monuments elsewhere in Mali – in particular the Great Mosque of Djenné, the Mopti Komoguel Mosque and the Djingarey Ber Mosque of Timbuktu – with a thorough briefing about the use of banco (the local term for adobe or earth).
To provide education in the use of banco to nationals and to experts from abroad.

To present the history, the techniques, and the use of materials in earthen architecture. This information that was amassed by AKTC through research in three major restoration projects.

To act as a base for periodic maintenance of major monuments restored by the Trust.

To maintain close links with the local community in terms of street sanitation efforts carried out by the Trust in the area of Komoguel that surrounds the CAT and to provide health and sanitation services for the community through a shower and toilet block built and operated by the CAT.

Since its opening, the CAT has played an important role in education through vocational training with a number of tailor-made courses for practical application of building with banco. The Centre has also provided advanced training for architects in using banco as sustainable construction materials in their designs. The training efforts undertaken by AKTC in Mopti and Timbuktu in traditional building techniques and use of banco resulted in the education of dozens of able craftsmen and craftswomen – some of whom are expected to further continue to be educated as master craftsmen and craftswomen with the help of the Malian Government. The Government has in this context started the development of a programme for the construction of several typologies of public service buildings such as schools, village health centres and other structures.
infrastructure buildings to be built in villages across Mali in the traditional style using *banco*.

The Centre is also a source of information for professionals and researchers. It has a library equipped with literature related to earthen architecture and it is engaged on a multi-year base in the maintenance of three historical mosques (Djingareiber, Mopti Djenné) and a number of historic buildings – particularly in Djenné. In 2020 the CAT was handed over to the Ministry of Culture as part of AKTC’s planned withdrawal from that country.

For the purpose of clarification, earthen architectural heritage is defined as the architectural, archaeological and cultural landscape heritage constructed of unfired clay-soil-based materials.

The vernacular technology known as “*banco*” in Mali refers to the mud brick widely used in Sahelian architecture. The effectiveness of this pluri-millennial technique probably lies in the quality of the clay found in the Inner Niger Delta, associated with natural additives available in the Sahel, such as karité butter, gum arabic, baobab fruit, etc.

*Above:* Manufacturing mud bricks and letting them dry in sunshine.

*Below:* Mud quarry near Mopti.
Training curriculum

The training curriculum is based on a 6-week session that covers all the essential aspects of earthen architecture. Sessions included both theoretical inputs (mornings) and practical sessions (rest of the day). A discussion to review results and key learnings took place each morning to facilitate continuity of vocational education throughout the week.

An example of the curriculum of the initial week of training is provided below:

INTRODUCTION TO EARTHEN ARCHITECTURE

- Presentation of the apprentices, and introduction of the goals of the vocational training.
- Visit to the permanent exhibition of the “Centre de l’Architecture en Terre”.
- Introduction to mud building, techniques, and materials.
- Viewing Timbuktu’s pictures: Djingareyber, restoration phases, significant building in the medina.
- Building of basins to knead the mud.
Discussion on different experiences in working mud and making bricks, on materials and tools based on the observations of each apprentice. Highlight the differences noted between cities, villages, and regions.

Making bricks taking care of the mix in preparation.

Resume of the subjects treated at the beginning of the course.

Theoretical framework of basic notion of mud building.

Introduction to the use of additive in mixing mud, introduction on different performances of the mud depending on the kind of soil, the attention paid in preparing the mix, the addition of additives, the best season for the preparation, the proportion between the materials used.

Preparation of new materials such as Terre de Bourem, Tannin.

Performing a plaster with Terre de Bourem without additives.

Viewing pictures on how bricks are made in other places (Tombouctou, Damascus, Cairo) and discussion comparing and commenting differences on materials, mixes, tools, techniques.

Making bricks, improvement of the mix with chopped straw, and fermented mud.

Discussion on additives and presentation of the ones more used in the region, and in other regions of the country.

Conclusion

Indeed, the challenge ahead lies in safeguarding Mali’s tradition of earthen construction and promoting the ingenuity of its builders, as well as making sure both are relevant and attuned to contemporary conditions. The Mali Earthen Architecture Programme was an opportunity to bring back and re-interpret traditional practices and train through vocational education a new generation of practitioners who will be instrumental in keeping the region’s earthen construction alive and well in the years to come.

The paper looks at studying Shankaribazaar, an urban settlement of Dhaka city named after its famous craftmen who make shankha (a kind of special bangle made for married women from seashells). The paper advocates for a “community-based” conservation process to market the area as a tourist attraction. This paper suggests the process of integrated public involvement in the conservation management plan for Shankharibazar including steps, such as, understanding problems; generating and evaluating the options for response; and ultimately choosing a roadmap for conservation management for a successful spot for cultural tourism.


Heritage conservation has multiple values: cultural, aesthetic, educational, environmental, social, historical, and others. A more recent addition to this litany of values is the economic value of heritage conservation. Thus many heritage conservation organizations are increasingly making the economic case. Europa Nostra, the pan-European federation of heritage conservation groups, in a paper entitled Cultural Heritage Counts for Europe notes, “Cultural heritage has multiple benefits of Europe today”[1]. Many of those benefits are economic. Studies over the last decade have identified the five major measurables of the economic impacts of heritage conservation: 1) jobs and household income; 2) center city revitalization; 3) heritage tourism; 4) property values; and 5) small business incubation.

Dedicated as it is to the in-depth rehabilitation of urban heritage in the Islamic World, the Historic Cities Programme (HCP) of the Aga Khan Trust for Culture deals with a complex reality. For historic cities harbour an important architectural legacy that goes well beyond the realm of “bricks and mortar”. Their monuments and their traditional urban patterns speak to us about the attitudes, the aspirations and the living conditions of past generations of human beings. That is how cities gain their symbolic dimension and how they are enabled to dispense cultural identity.


This publication includes the documentation and proposals prepared for the Conservation Plan. In this book an argument is put forth suggesting that growth and new development are not incompatible with the preservation of the Stone Town’s old buildings and spaces. On the contrary, they can contribute to protecting the cultural heritage, while improving standards of living and promoting economic activity in Zanzibar’s central area. The Conservation Plan provides a framework needed to encourage appropriate development, and foster a living and working environment in the Stone Town that is both attuned to today’s requirements and in line with Zanzibar’s traditional urban character.


This document talks about AKTC’s conservation and urban rehabilitation programme in Herat established in early 2005. The project included documenting the surviving fabric, as a basis for initiating pilot conservation and upgrading measures in key neighbourhoods, and promoting more effective urban management through strengthening of local institutional capacity.


World Monument Fund (WMF) has been committed to protecting and conserving heritage in conflict zones and strengthening communities around sustainable commitment to heritage. WMF and its British affiliate, World Monument Fund Britain, worked with Petra National Trust in Jordan to create a training facility and recruit a catalyst group of qualified candidates who, once trained, would become mentors for subsequent trainees in the eighteen-month program. The project included training in stone cutting; manufacture of molds, templates, and models; repair of damaged masonry; stabilization of arches, vaults and domes; underpinning and reinforcement of foundations; hoisting and lifting of
stone block; methodologies for grouting and pinning masonry surfaces; lime technologies; surveying; stone selection and quarrying; cleaning historic stone; mortar analysis; and other related masonry conservation skills.


The conservation projects of Historic England organisation offers the opportunity to engage with the public and to build in skills and training for those working on the project.


This brochure celebrates the completion of a five-year-long restoration and rehabilitation effort in the historic city of Mostar, carried out in parallel with the restoration of Mostar’s most famous landmark, the Old Bridge [Stari Most]. The whole work programme was shaped in such a way as to establish a framework of urban conservation schemes and individual restoration projects that would help regenerate the most significant areas of historic Mostar, and particularly the urban tissue around the Old Bridge.


The paper presents the case study of community led “informal heritage management” of the chini-tikri work of Kosaituli mosque, Old Dhaka, Bangladesh. It critically explores the interrelationship between the craft, existing social capital and informal heritage management.


Conservation in this paper is seen as an umbrella term that covers a wide spectrum of issues that can be classified under three categories: socio-physical, socio-cultural, and environmental concerns. With an ultimate goal to discern lessons from urban conservation practices, urban rehabilitation and adaptive re-use is discussed with reference to a number of non-western case studies. The paper aims at exploring the merits of six conservation and rehabilitation projects which have received considerable coverage and recognition on a national and international level while they have not been put into contextual comparison with others. Merits of these projects are analysed and highlighted
in this article to work as an archetype for similar projects around the world. The paper concludes that to maintain sustainability of the revitalisation and urban conservation approaches, the typical urban tissue and essential qualities of the historic areas and of the life of the communities residing there should be maintained, while adapting the physical structures and activities to some of the today’s requirements.


The case study of heritage conservation at Rosetta focuses on the role of heritage conservation in contributing to community improvement, development and revitalisation goals. The integration between urban planning, development and heritage conservation in Rosetta (Rashid) is investigated. Community improvement indicators are consequently devised to measure the success of heritage conservation and to determine progress toward community improvement.


This paper looks at the case study of Port Said at Egypt. It aims to investigate the role of the local inhabitants in protecting their buildings heritage through listing the community level of participations and studying it from the point of view of the ladder of community participation study. Also, it suggests to encourage community participation in order to promote city architecture conservation, heritage management, and sustainable development.


The project aims to focus on capacity building and leadership nurturing for site managers and the communities living in and around these heritage sites as well as on improving interpretation and visitor experiences at a diverse range of heritage sites.

The Global Heritage Fund has been working since 2015 with local partners to promote community driven protection of the fragile igoudar (communal granaries). They focus on developing local economies, women led initiatives, and sustainable tourism. The programme works at building capacity for local workers, create new opportunities for women in tourism and local products, and engage over two thousand children in heritage education.


The City of Vigan in the Philippines presents a virtuous example of cooperation between local communities and the local government to ensure the preservation of its tangible and intangible heritage. In line with the City’s mission statement to conserve the heritage and to provide an improved quality of life, the local communities are not only primary stakeholders, but also dedicated and knowledgeable preservers of their heritage. They play an increasingly important role in the formulation of a vision and action plan for the city. With the implementation of ‘The Vigan Conservation Program as a Tool for Development’, the local government has maintained its focal position in engaging all stakeholders and guiding the local development in compliance with the conservation of a unique heritage.


The aim of the paper, therefore, is to demonstrate how heritage can be used to create a positive impact on society and the economy in the neoliberal age. It traces the workings of heritage-led regeneration politics in the attempts of adjusting to the global economy. The experience of Beypazari is highlighted as empirical evidence. The future challenges and key precautions are spelled out in enabling sustainable conservation within the context of 21st century development trends.


The Radcliffe Trust supports the development and practice of the skills, knowledge and experience that underpin the UK’s heritage and crafts sector. This includes support for emerging craftspeople of high quality, craft and conservation projects and training, projects demonstrating creative outcomes by designer-makers, projects with potential for capacity building within the sector, and some special needs projects focusing on the therapeutic benefits of skills development.

This article studies the case of Nether Poppleton near York (UK). It explores the factors and conditions for effective community management displayed in one locality by groups who are successfully conserving and managing a diverse set of local heritage sites. New schemes such as the Local Heritage Initiative in the UK aim to encourage communities to recognise their heritage assets and in managing them effectively to contribute to their preservation. The importance of this agenda is underscored by the increasing reliance on community-based heritage management in the UK and elsewhere.


This paper based on the case study of Kanazawa Machiya, Japan indicates that the building up of the conservation management systems involve the local communities and development of the activities. This study demonstrates the necessity of community involvement and civic activities for the conservation management of historical assets.


The Aga Khan Historic Cities Programme has shown how culture can be a catalyst for development in even the poorest and most remote areas of the globe. From Afghanistan to Zanzibar, from India to Mali, the Programme’s support to communities demonstrates how conservation of cultural heritage, coupled with urban regeneration efforts, can provide a springboard for social and economic development. This publication highlights, through case studies, drawings and images, the work of the Aga Khan Historic Cities Programme over the past 20 years.


For decades, the Aga Khan Trust for Culture has been working to revitalize the social, cultural, and economic strength of communities in the Muslim world through its Historic Cities Programme. This book documents more than 100 such efforts that have been carried out in Afghanistan since 2002. This section focuses on work and activities in Afghanistan such as socio-economic activities, capacity building and institutional support, musical heritage through the work of the Aga Khan Music Initiative and cultural support activities.

This article studies the case of Murad-Khani, a historical conservation project in the old city of Kabul, and deliberates its impact on the neighbourhood regeneration process. In the war torn region, the case looks at the post-war efforts of local and international aid organisations and their undertaking in the historical conservation process. It further examines the process of revitalisation of architectural and urban heritage in the old city in light of social and economic regeneration and cultural awareness.


The report highlighted shortfalls in traditional skills and an ageing workforce in these areas throughout England. Subsequent investigations covering Scotland, Wales and Northern Ireland show a similar trend across the UK. Although the organisation has 150 staff with traditional expertise including stonemasons, carpenters, joiners, plumbers, bricklayers and lime plasterers, this workforce is following the same worrying trend that the NHTG report highlighted.


This is the twelfth chapter of the book, and the fifth of seven chapters in Part II: Project Development. A strategy for the combined preservation and appropriate development of the built environment – including monuments, architectural ensembles, settlement structure and the man-made landscape – could not succeed without a prior change of people’s attitude towards the legacy of the past and its importance for the present – and the future. It is with this background in mind that AKCS-P projects in the area have initiated a broad community-based effort to save, revive and develop local heritage – acknowledging that sustainable use of natural and cultural assets hinges on the commitment and support of local residents. The chapter focuses on AKCS-P’s initiatives in Karimabad.


The KORU Project is working in Turkey to develop the local capacity to protect the rich heritage in the southern cities of Mardin and Antakya (formerly known as Antioch). The project aims at documenting existing architectural heritage through community engagement, learning and training. They include practical training on maintenance for stone masons, carpenters and historic property
owners; conservation management and awareness training for heritage professionals and teachers in the public and private sector; professional tourist guides as well as journalists who report on culture.


The report is based on research carried out by the British Council’s global network as well as consultations with the UK sector. The key findings of this report suggest that investing in a people-centred approach to heritage, that benefits all levels of society, will bring social cohesion and economic growth to emerging economies and developing countries. This report also examines how cultural heritage for inclusive growth can contribute to the UK’s ‘soft power’. The UK heritage sector is a leader in making tangible and intangible heritage accessible and relevant to society, through a people-centred approach.


In 1996, the Lhasa city government encouraged the Tibet Heritage foundation - a spontaneously developed initiative that became an NGO. The project provided the opportunity for vocational training with established Tibetan masters and occasional foreign experts training more than 300 Tibetan, at least half of them women, to become masons, carpenters, painters, restorers, electricians, plumbers and surveyors/draftsmen.


Heritage, Conservation and Communities is an edited book comprising a collection of articles (19 in total) on the topic of public participation in heritage conservation processes. At the heart of this book is the importance of genuine community involvement in heritage conservation. The importance of ensuring community ownership and involvement in heritage conservation practices is the common thread connecting all the chapters throughout this volume.


This research was set to investigate the significance of traditional artisan trades which forms the intangible living culture of George Town World Heritage Site (GTWHS). Although the traditional trades have high significance to George Town World Heritage Site, they are facing the pressure of economic development
that is affecting sustainability of cultural tourism particularly the living culture of traditional artisan trades in GTWHS. The sustainability of the traditional trades as a form of intangible living culture are critical hence it need some forms of structured and systematic forms of capacity building to enable the traditional artisan trade to sustain.


This paper examines the role of traditional woodworking and building crafts as a local resource in a country in transition from socialism to a market-based economy. The authors use an applied anthropological approach to integrate the preservation of intangible heritage (in the form of traditional crafts) and sustainable heritage-based livelihoods into a contemporary institutional framework. The paper also examines several related phenomena such as economic sustainability of the crafts, intergenerational transmission of skills, and relevant implications for crafts-related institutions and policies.


The purpose of this work is to revive the historical urban quarters of Tunis Medina, through improved socio-cultural urban dynamics of creative industry and public private partnerships for historical building adaptation and reuse. initiatives were designed to enable traditional crafts to create a new socio-economic opportunities and historical buildings were analyzed for potential reuse to current community needs and building repurpose potentials.


The document ‘The Road to Success’: Integrated Management of Historic Towns has the character of a Guidebook. The network aimed to develop integrated and innovative management strategies for historic urban landscapes. Its main objective was to facilitate the right balance between the preservation of built cultural heritage and the sustainable, future-proof socioeconomic development of historic towns. The document looks at economic benefits livelihood enhancement, job creations and business opportunities for local communities.

The study covers theoretical and practical aspects of conservation practice and regeneration initiatives of historic cities, relevant to Malaysia (Melaka and George Town), taking into consideration social, cultural, political, economic aspects and stakeholders’ aspirations. It seeks to explore whether the current practice facilitate in regenerating the economy of the areas to ensure the sustainable continuity of the local culture in the historic urban environment.


This article is presented in the second section of the three-part book, entitled “Present: A Comprehensive Approach”. The article details out its approach towards this particular project. AKTC’s long-term strategy focuses on the physical upgrading of the building stock and the socio-economic development of the community, two complementary objectives aimed at the general revitalisation of the entire district. Training is in fact crucial in introducing appropriate know-how, developing independent capabilities and re-establishing vanishing crafts and skills, especially those related to traditional construction so highly relevant to the future maintenance of Cairo’s historic areas, al-Darb al-Ahmar in particular. Direct apprenticeships on AKTC restoration sites have led to the development of skills and employment prospects for residents of the district.


The major findings in this research were that 1) for the Sustainable Livelihood Framework to be used in an area, it should include cultural capital in the framework; the Historic City of Ayutthaya has various cultural contexts which can convert to cultural capital that may sustain livelihoods and determine people’s livelihood strategies; and 2) people’s livelihood in the Historic City of Ayutthaya is found to be unsustainable. Using self-reliance (independence of external support) as a measure of a sustainable livelihood is inappropriated in the urban context because urban areas depend on external cash income and external natural resources.


This chapter presents a case study of the World Monuments Fund conservation programme at Preah Khan, Angkor (Cambodia), showing how ten years of privately-funded conservation work has created jobs and equipped the local community for the future management of the site. In light of the ongoing need for secure sources of conservation funding, this case study demonstrates how such projects have immediate sustainable development impacts, and are therefore ideal for corporate funding partnerships. Through corporate social
responsibility (CSR) programmes, many companies seek to have an impact on sustainable development, and use this rationale when selecting such projects to support.


This paper addresses rehabilitation and conservation of old inner-city areas and historic monuments in the cities of the developing world which have so far received very little attention in urban development policy. The need for urban rehabilitation and adaptive re-use is discussed with reference to a number of cases, i.e. Cairo, Tunis, Sana’a, Aleppo, Delhi, Bombay, Bhakpur, Galle, Penang, Singapore, Shanghai, Beijing, Quito, Cartagena, Rio de Janeiro and Havana. A delineation of the concept is provided, and some key aspects of rehabilitation are discussed. The paper concludes with considerations on the need for area rehabilitation and revitalisation approaches which maintain the typical urban tissue and essential qualities of the historic areas and of the life of the communities residing there, but which can also adapt the physical structures and activities to some of the present day requirements. In terms of monuments, it is stressed that these need to be seen as part of conservation areas, and that their sustainability and revitalisation will be most feasible if they are integrated into new concepts of use.


Upon agreement between the World Bank and the Government of the Republic of Macedonia 4 year Project: Community development and Culture (1999-2003) has been designed and implemented. Principal idea of the project was to establish conditions that facilitate poverty reduction, socio-economic development, and community development by leveraging one of the county untapped resources, its cultural assets, to create culture-based industries (notably handcrafts and community-based tourism) in areas adjacent to cultural heritage sites, while improving the management of cultural assets, particularly at local level.


The study covers theoretical and practical aspects of conservation practice and heritage regeneration initiatives of historic cities, relevant to Egypt, taking into consideration social, cultural, political, economic aspects and stakeholders’ aspirations. It seeks to explore whether the current practice facilitate in
regenerating the economy of the areas to ensure the sustainable continuity of the local culture in the historic urban environment in Egypt.


Turquoise Mountain was founded in 2006 by HRH Prince Charles to regenerate historic areas and traditional crafts, to create jobs, skills and a renewed sense of pride. The vision for Turquoise Mountain Myanmar was to save the iconic urban heritage of Yangon’s Downtown and to revive the traditional handicraft industry. As part of this initiative, comprehensive programme of vocational training in traditional construction skills was run in parallel with the renovation project.


The paper proposes a new heritage-led urban regeneration paradigm that has communities and sustainable lifestyles at its core. The analytical approach is based on the premise that urban heritage environments are complex and dynamic systems. They are complex systems composed of multiple dimensions (such as social, cultural, political, economic and environmental) that are in dynamic interactions with each other. The paper is based on the study of the Townscape Heritage Initiative (THI), a heritage-led regeneration scheme funded by the Heritage Lottery Fund.


Artisans and agri-food producers are often the backbone of Canada’s rural communities, many of which rely on small businesses as an economic base. Canada’s highly talented artisanal workforce protects diverse cultural heritage and contributes to the symbolic values, identities, and economic wellbeing of society; however, large gaps exist in the labour and skill development of this sector’s workforce. The artisanal trades are often overlooked by government, education institutions and other funding agencies in favour of the more familiar industrial trades. Invisibility may come from a lack of a clear definition of the sector, which makes it challenging to understand the sector, estimate its contributions or provide appropriate supports for further development.

Albania has an incredible found of build culture heritage. In 1962 were established specialized institutions, called “conservation ateliers”, responsible for maintenance and restoration works on monuments. These institutions employed the most skilled craftsmen at the time and functioned until the beginning of ’90’s as schools for new apprentices. “Skills for Employability of Tomorrow” aims to establish a training for historical repair skills. The suggested format of the training would be targeting both senior crafts persons and new apprentices, securing in the same time the involvement of the old craftsmen and the salvage of their knowledge by transferring it to the younger trainees.


“Part 1 of this volume consists of five chapters that examine broader issues of conservation principles and approaches in historic cities in Asia” – Page 23. “The case studies in Part 2 contextualise current debates on the role of community engagement to conserve historic urban quarters and examine diverse contexts across Malaysia, Taiwan, Thailand and Philippines” – Page 14.