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THE COOPERATION OF WELL-KNOWN  
ARCHITECTS, ARCHITECTURE STUDENTS  
AND LOCAL COMMUNITIES  
IN THE PROCESS OF ARCHITECTURAL  
CREATION IN DIFFERENT  
CULTURAL ENVIRONMENTS  
Examples from Asia

**A**t the XXIV World Congress of Architecture (UIA)<sup>1)</sup>, held in Tokyo in 2011 after the historically devastating events in Japan in March 2011, professionals and students working in architectural and urban fields consequently made a pledge to “promote responsibility within our profession, support architects and architecture, and enhance the regional quality of life for all people, together with governments and others, by closing the gaps in social justice, whilst working towards sustainability”<sup>2)</sup>

This commitment is expressed in the idea of the cooperation of well-known architects, architecture students and local communities in the creation of architecture in selected examples of completed buildings in South-East and South

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<sup>1)</sup> UIA, The International Union of Architects is a non-governmental organisation, a global federation of national associations of the architects who are its members.

<sup>2)</sup> UIA 2011 TD.

Asia, particular in Cambodia and Sri Lanka. The architects referred to the traditional local materials and construction techniques that had been forgotten or superseded by global ones, and rediscovered centuries-old solutions, which in turn allowed the appropriate inclusion of newly designed buildings into the cultural context. Discussions with the local communities and studies on the needs of future users were the basic guidelines for architectural solutions in the design process. This approach to design involves architects for the local communities living with limited resources in the poorest regions of the world, but also involves the local communities for the contemporary architecture respecting multicultural environments and “leading the next generation of socially responsible architects and designers.”<sup>3)</sup>

The examples of the buildings completed in South-East and South Asia might provide examples of “Art of the Orient” in the field of contemporary architecture, blending into the humanitarian architecture and referring to the UIA 2011 Tokyo Declaration as well.

## HUMANITARIAN ARCHITECTURE

One of the fundamental premises of contemporary architecture is to place it in a broader social context. This means that while facing globalisation and development, an architect has to be capable of addressing the majority of human needs in an effective manner especially in the case of disadvantaged communities. In this context, one of the ways of practicing architecture, as well as gaining experience is to work as a humanitarian architect in a different cultural environment. Thus, well-known architectural offices or independent architects are committed to conducting architectural projects in terms of humanitarian design on behalf of non-governmental organisations (NGOs) engaged in charitable work for communities in need. Some NGOs can be regarded also as architectural offices, as they employ architects, engineers and managers to deliver projects to the needy. Additionally, these organisations deal with the collection of information, the latest experiences and scientific research that could contribute to the project in terms of meeting the needs of the users in a given cultural environment during the stage of analysing local factors. In most cases, these facilities are financed with funds raised by NGOs. Some of the architectural offices also participate in the co-financing of these projects and /or lend their image to raise these funds and to attract the interest

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<sup>3)</sup> Rebuild360 (2014: 1).

of a wider audience for the initiative.<sup>4)</sup> Thus, one NGO called VAN (Voluntary Architects' Network) was created by the well-known architect Shigeru Ban as a result of his experiences in disaster relief efforts in a variety of climatic conditions and cultures, mostly in South Asia. VAN unites likeminded practices, a readymade coalition during emergencies that offers not only design services but incorporates a fundraising charter, is linked to a chain of logistical and material providers, and promotes awareness and skills development, among many other initiatives.<sup>5)</sup> However, to a large extent, humanitarian architects work as volunteers by designing and performing facilities for poor communities in developing countries or in areas affected by disasters. In order to finance the task/mission, they publish and/or work as architects for six months a year since than they are able to spend the next six in different countries of the world.<sup>6)</sup> This approach to design in terms of projects and work for local communities in different cultural environments has become Aalto University's educational strategy in the learning process of architecture students. The aim of WiT course schedule and design studio projects is, among others, to provide students with a basic understanding of various cultural contexts, to teach them to identify problems and possible solutions in reference to the social-cultural, economic and ecological aspects of a particular country. During the course there is a field trip when students help poor communities develop their quality of life through sustainable design. At the same time the local universities and architecture students assist them in accessing the local community and interacting with local residents.<sup>7)</sup> This approach to design is represented also by The Global Studio<sup>8)</sup> which is a people-centred action research project and which, since 2005, has focused on the development of skills in participatory design and planning in students, educators professionals and communities. The Global Studio hosted sessions on "Addressing informality and poverty through design education and practice" at the XV World Congress of Architecture in Durban 2014.

There are two types of humanitarian architecture: short-term projects - bringing emergency aid and forming a temporary solution - and long-term projects, which are the consequence of a broader process and provide specific

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<sup>4)</sup> Rynkowska-Sachse (2014: 309).

<sup>5)</sup> Gould, Luna, Miyake (2009: 116).

<sup>6)</sup> Salamonowicz (2012: 33–37).

<sup>7)</sup> Hollmen, Laurila, Muhonen (2014: 1600–1609).

<sup>8)</sup> GS.

solutions.<sup>9)</sup> Among the architecture objects that have been built there are valuable ones not only because of the functional solutions, but also because of their architectural quality that distinguishes them from other contemporary buildings. This is due to the fact that architects who are involved in aspects of designing in multicultural environments differing from their own domestic ones, first of all focus on understanding the cultural context and at the same on cooperation with the local community. Well-known architects or students of architecture at prestigious universities base their analysis on consultations, discussions with the local community, and surveys of the needs of future users, at the same time providing the basis to formulate guidelines for a design that the local communities identify themselves with. The architects also re-discover traditional local materials, building techniques and architectural solutions that had been used for centuries and largely abandoned for industrial construction methods. It helps them in designing related to the cultural context and determining the architectural identity of the local community, who they support against globalisation.

## CASE STUDIES

Some examples of valuable buildings that have been designed on the basis of the cooperation of well-known architects and/or architecture students of the world prestigious universities with local communities in South-East and South Asia are: The Sra Pou Vocational School in Sra Pou in Cambodia and The Housing Project in Kirinda in Sri Lanka.

### I

The Sra Pou Vocational School in Sra Pou in Cambodia (Fig.1.) is a very interesting example of the use of traditional techniques, materials re-discovered on site and the participation of locals in the process of the creation of contemporary architecture. The project was initiated by Hilla Rudanko and Anssi Kankkunen - young Finnish students in the Aalto university design studio in spring 2010. During that time, they travelled to Cambodia to find a design task with a local NGO which apparently contributed to setting up their own architectural office - Architects Rudanko + Kankkunen. During the design process, the architects even decided to arrange resources and construction under the auspices of

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<sup>9)</sup> Salamonowicz (2012: 33–37).

NGOs since there was an urgent need and their design appealed to both the community and the sponsors.<sup>10)</sup>

During their analysis prior to the design, the architects stated that, first of all, there was an urgent need for a public building in terms of the Sra Pou community being an unprivileged community in Cambodia. The inhabitants, having been relocated from cities to the surrounding countryside as a result of the political situation<sup>11)</sup>, did not have the capacity to adapt to the new conditions and to react to the emerging situation. They lacked basic infrastructure, a decent urban environment, secure income and basic knowledge about how to build and organise themselves in the construction process by means of available local materials and techniques. In the discussions with the local community the architects realised that the function of the building should be clarified and meet the needs of the inhabitants as far as possible and the process of construction should indirectly encourage these low-income families to improve their living environment and to organise themselves and work together for their own good. Therefore, the active participation of the local community became the basis for the design process.<sup>12)</sup> Presently, the completed building serves as a vocational training centre that fights unemployment in the Sra Pou community by teaching people how to establish their own business and it also acts as a community meeting place.<sup>13)</sup>

The involvement of the local people in the building process (Fig.2) was an additional advantage, as they observed, and some of them learned how to build using local materials and technologies which were unfamiliar to them. However, it was not so easy. The construction company executing the project did not want to hire unskilled labourers, because it might not be cost effective and they might fail to fulfil the terms of the contract. Therefore, the NGOs, which hired Architects Rudanko + Kankunnen, undertook the employment of unskilled labourers to perform basic tasks such as carrying blocks, lifting, digging, etc. As a result, they did not learn how to build but, at least, they had the opportunity to observe how it was done. They saw that the building was made from hand-made bricks, and not necessarily from reinforced concrete which made them realise that there was a possibility of building based on local

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<sup>10)</sup> AD.ARK.

<sup>11)</sup> Idling (2010: 92).

<sup>12)</sup> The interview with Architects Rudanko+Kankunnen by Rynkowska-Sachse, on June 12, 2014, Helsinki.

<sup>13)</sup> Rynkowska-Sachse (2013: 55).

resources, which is important in the context of globalisation. Unfortunately, the local workers were not motivated to learn how to build while working with the construction company. The reason for their lack of motivation resulted from their calculation that the simple construction works were heavy and poorly paid and they could earn much more working just as hard for the NGO rather than for the construction company. As a result, the architects were burdened with the responsibility of explaining basic tasks to the unskilled workers. During the process, the architects had to find their own way to demonstrate the execution of simple construction commands, such as, for example, bricklaying. The drawings did not help them at all. Only ready examples and samples of the elements performed in front of the workers' eyes proved successful (Fig.3). During the design and construction process the lack of oral direct communication - as the architects could not speak Khmer - turned out to be a problem. They hired a local translator but it did not help them to gain the confidence of the local community especially after the experience of the civil war in Cambodia. Thus, at the stage of analysis and conceptual design, the architects obtained most of the information by observing and interacting with locals in the daily life, during cultural events and by learning about local materials and techniques from some local experts in other villages. Apparently, this profound observation of daily life gave them crucial inspiration for the design. Finally, as many people of the local community were employed, the architects kept all the techniques simple and transferable<sup>14)</sup> which, at the same time, happened to develop into a trendy architectural design.

As a result of the cooperation developed between the architects and the local community, the school building is made from local materials and hand-made by the local workforce. Due to the high costs of standard concrete blocks and steel reinforcement, the sun-dried soil bricks were made out of red soil, sand, straw, cement and water at the building site (Fig.4). Thus, the colour of the bricks reflects the colour of the Cambodian soil. In the building process, openings were left intentionally between bricks creating a passage for natural ventilation and sunshine (Fig.5). Inside the building there is an open central courtyard, befitting its function as a school compound. The most appealing decorative and functional additions are the colourful cover-mats on the doors and windows (Fig.6). The application of the mats to the overall design goes

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<sup>14)</sup> The interview with Architects Rudanko+Kankunen by Rynkowska-Sachse, on June 12, 2014, Helsinki.

back to a seasonal tradition of mat weaving in Cambodia (Fig.7). The mats are made from reeds either in their natural colours or died in intensive colours of royal stones. Today, mats are used in private homes as carpets for guests and are an important material in building houses (providing shade to walls, roofs and blinds).<sup>15)</sup>

From an architectural perspective, Post-Occupancy Evaluation (POE) defined as “a systematic study of buildings in use to provide architects with information about the performance of their designs and building owners and users with guidelines to achieve the best out of what they already have”<sup>16)</sup> is a very important element of an architectural workshop or experience. Thus, especially while working with foreign cultures and testing new construction techniques, it is also important to learn from the users after the completion of the building. In this context, the vocational school project was continued with Architects Rudanko + Kankkunen’s second visit to Sra Pou. The architects monitored the functioning of the building during its first year and designed necessary changes and amendments together with the local community. For example, there were challenges with the durability of the hand-made doors, so they made improvements with the local craftsmen. Then, the architectural monitoring ended because the aim was to inspire the community to plan the future of this building as well as their whole built environment and to take responsibility for its maintenance.<sup>17)</sup>

The architects cooperating with the local experts helped the local community to re-discover locally available materials, and to make the most out of the them, so that they can use them along with the same construction techniques in future building projects. Concentrating on minimum functionality, keeping all techniques simple and transferable, using the available local materials and receiving a wide range of background information on the cultural context by observation, the architects managed to create a beautiful architectural composition identifying with the trend of contemporary architecture attained through the participation of the locals and the implementation of sustainable solutions.

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<sup>15)</sup> Rynkowska-Sachse (2013: 55).

<sup>16)</sup> Hadjri, Crozier (2008: 22).

<sup>17)</sup> AD.ARK.

## II

The post-tsunami housing project (Fig.8) located in Kirinda, Tissamaharama in Sri Lanka<sup>18)</sup> is a good example of a disaster relief project adapted to the needs of its inhabitants. Moreover, it was designed by a recognised architect - Shigeru Ban<sup>19)</sup>, who was recently appreciated for his work by receiving The Pritzker Architecture Prize in June 2014. In announcing this year's laureate, Tom Pritzker said: "*Shigeru Ban's commitment to humanitarian causes through his disaster relief work is an example for all. Innovation is not limited by building type and compassion is not limited by budget. Shigeru has made our world a better place.*"<sup>20)</sup>

On December 26, 2004 most buildings of the southeastern coastal villages of Sri Lanka were demolished by the Tsunami of the Sumatra Earthquake. The villagers were deprived of roofs over their heads and were forced to live in difficult conditions. In order to help the fishing community, the Colliers International real estate group founded the 'Colliers Kirinda Trust'. The trust was led by Philip Bay, who was experienced in disaster relief projects. He immediately asked recognised architect Shigeru Ban for his cooperation. Over time, Shigeru Ban had acquired extensive expertise in similar projects as for twenty years he had travelled to sites of natural and man-made disasters around the world, to work with local citizens, volunteers and students, to design and construct simple, low-cost, recyclable shelters and community buildings for the disaster victims. In this context, Shigeru Ban Architects committed to reconstructing 67 houses (Fig.9) and a tree plantation in the Muslim fishing village of Kirinda of approximately 100 inhabitants, located 300 km southeast from the capital of Colombo.

From the very beginning, Shigeru Ban Architects focused on rebuilding the lives of individual survivors of the disaster and preserving the rich social life that had held these ancient communities together for millennia.<sup>21)</sup> In his design approach, Ban was supported by the enthusiasm of Philip Bay and the participation of the villagers and he voluntarily designed the houses. His design was built on three main pillars: firstly, the guidelines set forth by Sri Lanka's Urban Development Authority, to make the housing both "architecturally feasible", and accommodate both the local climate and the indigenous culture.

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<sup>18)</sup> AD.SBA.

<sup>19)</sup> SBA.

<sup>20)</sup> SBA PP.

<sup>21)</sup> Gould, Luna, Miyake (2009: 128–145).



Secondly, he wanted to adapt the houses to the specific requirements of the Muslim fishermen. By consulting the villagers directly he was aware of their needs. His third objective was to bring prosperity to the region by using local materials and building techniques and generating employment opportunities for the local people.<sup>22) 23)</sup>

According to Shigeru Ban's design guidelines, the houses were to be adapted to the particular needs of the residents such as:

- “According to the Muslim lifestyle, the spaces needed to be separated. For the women it is necessary to avoid being seen by their guests.
- The design needed to foresee enough space for the tools and compressors of the divers and fishermen.
- The wet spaces (toilets, shower and kitchen) needed to be integrated into the main building. This was contradictory to the Urban Development Authority's (UDA) plan, which stated that the wet spaces were to be placed outside the building as they used to be in their former house”<sup>24)</sup>

As the result, each house has two bedrooms, a hall and a roofed court which is a semi-open space (Fig.10). The hall and the roofed court could also function as a large room. However, to respect the lifestyle of the villagers, these rooms are separated by folding doors. It is necessary for women to avoid being seen by their guests. The roofed court is a space like the shade of a tree, which protects from direct sunlight and ventilates through the house. Therefore, this space plays an important role in the life of its inhabitants; having a meal with family, socializing with neighbours and repairing their fishing nets and equipment.<sup>25)</sup>

Shigeru Ban used compressed earth blocks called CEB-blocks to build the houses. This is a solid material with a high density made from manually compressed soil and cement, giving it a high thermal inertia, which is appropriate for a dry climate. The CEB blocks, which are available in Sri Lanka at low cost were also a good material in the project, where low budget and reduction of the construction period were expected. The blocks have an uneven surface, so that it can be easily interlocked and built up like LEGO. They do not call for skilled labour, so the villagers were engaged in the building process as well. Following the block standard size, in addition, modular furnishings could also

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<sup>22)</sup> AD.SBA.

<sup>23)</sup> Gould, Luna, Miyake (2009: 128–145).

<sup>24)</sup> SBA KH.

<sup>25)</sup> SBA KH.

be fitted into the house. They are made of rubber tree which isn't normally used for architectural material. But in Sri Lanka, the tire industry is popular, so these trees are planted all over the country. The units are pre-fabricated and installed on the spot.<sup>26)</sup>

The inhabitants truly appreciate the houses, mostly because they are fully adapted to their lifestyle and climate and have improved their quality of life after the Tsunami disaster, at the same without being stereotypical and temporary. These benefits have made the Housing Project in Kirinda a work of art in the contemporary architecture of South-East Asia.

## DISCUSSION AND CONCLUSIONS

Design is a complex process and individual interpretation of space. Therefore, in this context, the experience such as the cooperation of architects and /or architecture students with a local community in a different cultural environment proved very valuable as shown in the selected case studies from Asia. The experience has allowed designers to better understand the realities of life, needs, and expectations of future users while at the same time benefitting the disadvantaged communities – the community of Sra Pou having being moved from the city to the countryside and unable to adapt to the new environment and the community of Kirinda lacking a roof over their head as a result of a disaster. In this situation, the active involvement of each of the local communities in the design and building process made them feel connected with the project and responsible for it, and thus allowed them to find the strength for an independent existence in the future. At the same time, the discussions on their needs, cultural background, social structure, and also their inclusion in the construction process, which confirmed and developed the design techniques derived through close cooperation, proved extremely important for a culturally appropriate design. In the case of architecture students, the opportunity of debate with potential users developed their skills in design beyond the conventional boundaries of academic knowledge. Through conversation and discussions with the local community, they observed that the interaction can become a reciprocal exchange of information and offer learning opportunities for all on an equal basis for communication. Understanding the cultural locality (through social coding and the rules of communication which might

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<sup>26)</sup> SBA KH, Gould, Luna, Miyake (2009: 128–145).

differ) is the foremost requirement when working in a different cultural context, especially with disadvantaged communities.<sup>27)</sup>

Working in another country makes architects sensitive to cultural differences which should be respected in the suggested design solutions. As a result, the skills gained by architects in a culturally different context enrich their professional workshop especially with regard to: analysis and information acquisition during the concept development phase in terms of “taking the initiative together with the client in the design process, and later on having the possibilities of checking out the solutions on a construction site and even the capability of taking decisions regarding their change”<sup>28)</sup>

The idea of cooperation of well-known architects, architecture students and local communities in different cultural environments also proved helpful in the process of the creation of architecture as a piece of art. Why? In the context of globalisation, traditional building systems have been largely abandoned for industrial construction methods. Therefore, in this situation “traditional methods hold value as a repository of tested solutions that can be applied to current building issues as well as service-learning models”<sup>29)</sup>, providing that they would be continued in the same cultural context. In the presence of globalisation and solution standardisation such a design approach becomes extremely valuable and should be appreciated as it provides an opportunity for the individual creation of contemporary architecture respecting the cultural environment by socially responsible architects. The Sra Pou Vocational School by Architects Rudanko + Kankunnen and The Housing in Kirinda by Shigeru Ban Architects based on locally available materials and building techniques, according to the author, have provided examples of “Art of the Orient” worthy of appreciation in the field of contemporary architecture facing globalisation and standardisation.

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<sup>27)</sup> Hollmen, Laurila, Muhonen (2014: 1607).

<sup>28)</sup> The interview with Architects Rudanko+Kankunnen by Rynkowska-Sachse, on June 12, 2014, Helsinki.

<sup>29)</sup> Kennedy, Perry (2014: 1588).

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Fig. 1. Sra Pou Vocational School in Sra Pou in Cambodia. Image by courtesy of Architects Rudanko + Kankkunen



Fig. 2. The cooperation of the architects and the local community. Image by courtesy of Architects Rudanko + Kankkunen



MAKING OF THE SOIL BLOCK

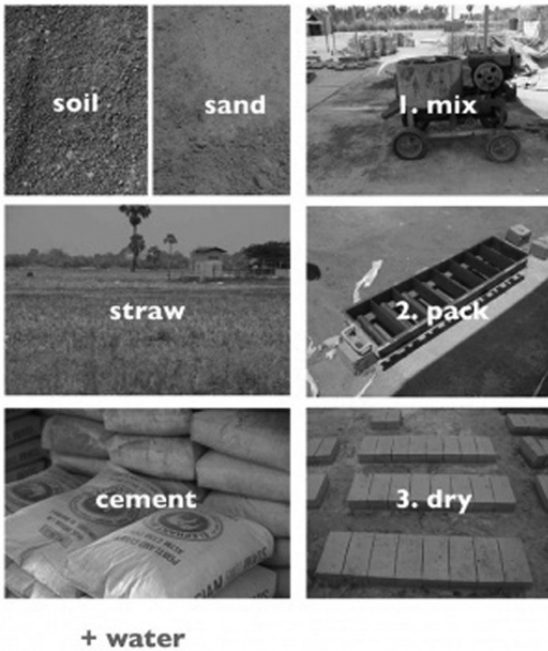


Fig. 3. The local community involved in the construction. Image by courtesy of Architects Rudanko + Kankkunen

Fig. 4. The process of making mud bricks. <http://www.architectureindevelopment.org/project.php?id=27>, (entry: 20.08.2014)



Fig. 5. Openings left between bricks providing natural ventilation. Image by courtesy of Architects Rudanko + Kankkunen



Fig. 6. The colourful cover-mats on doors and windows. Image by courtesy of Architects Rudanko + Kankkunen





Fig. 7. Dying the hand-crafted doors. <http://www.architectureindevelopment.org/project.php?id=27>, (entry: 20.08.2014)



Fig. 8. The Kirinda Community, <http://www.akdn.org/architecture/project.asp?id=3519>, (entry: 27.08.2014)



Fig. 9. The Kirinda House, <http://www.akdn.org/architecture/project.asp?id=3519>, (entry: 27.08.2014)

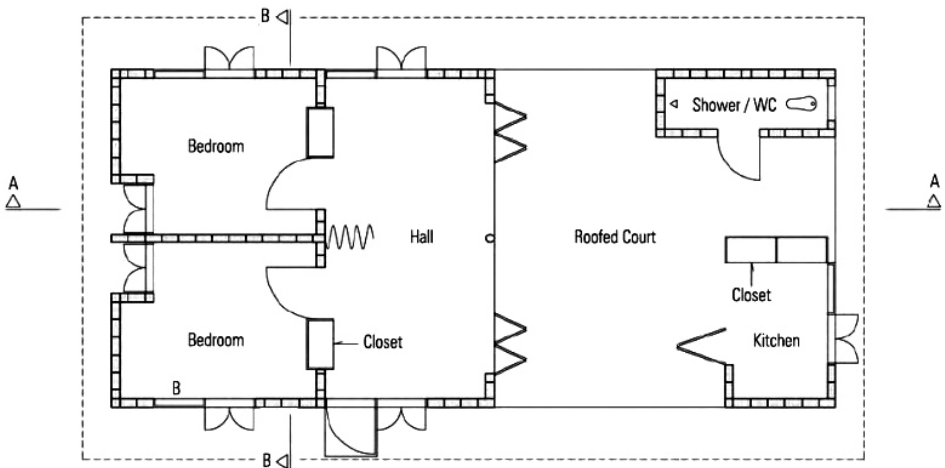


Fig. 10. The Kirinda House's floor plan, <http://www.architectureindevelopment.org/project.php?id=43>, (entry: 27.08.2014)