



### BHIMPHEDI AWASUKA, THREE YEARS AND A HALF

*"Us architects have to leave our glass tower of specialization and Western architecture references, we must get to projects through people and not the other way around"* Joan MacDonald

These are the words that the Chilean architect, President of *SELAPIV (Latin American, African and Asian Service for Popular Housing)*, uses to talk about the true role of architects. With Awasuka, we tried to do the same: leave Western architecture and travel to the rural areas of Nepal in order to reach to people and their basic needs. The "discomforts" of living in a Nepalese village have forced us to live simple and learn to enjoy the little things, making us realize that little is needed to live. Our fieldwork, immersed in a different culture where work progress must always be pushed forward, sometimes led us to exhaustion, discouragement or even despair... But, in the end, the feelings that prevail are always the same: emotion and satisfaction for having contributed to the access of many families to safer homes.

During the three and a half years of the program we have learned many things, but perhaps the most interesting one has been the spirituality linked to the construction of a house: special ceremonies at the beginning and the end of the works, the *Vastu Sastra* rules that must be followed (Hindu predecessor of *Feng Shui*), building areas' limit lines marked by the *Snake God* (much more effective than any urban law), ceremonies to move the altars inside the houses to be demolished, apology ceremonies before cutting a tree... Not to mention that each house must have impure areas (kitchen and latrine) separated from the pure areas (rooms and bedrooms), and that they must keep a sacred space for the altar. In short, every house in Nepal is a temple and must be treated as such: before moving any stone, it is necessary to guarantee that the gods are at peace.

### THE NEW HOUSES OF SUPIN

The seven new houses in Supin were started in December 2017 and were completed in May 2018. Three of them are made of stone and mud, while the remaining four are made of confined masonry blocks. All of them were built thanks to the credits for materials, except for the two social houses, meant for disadvantaged families and entirely financed by Awasuka. The beneficiaries have paid the masons and Awasuka has paid the value of construction materials, which will be returned in five years. The necessary materials for a 2-room house costed 2lakhs of rupees (200,000NRS, about 1600 Eur). An amount was set by Awasuka from the beginning. This is something we are particularly pleased about: we were able to meet the price that we fixed before starting the construction works, and in Nepal it is almost impossible to fulfil the theoretical estimates.



The beneficiaries of Supin and their respective new stone and masonry houses, completely finished.

### GOVERNMENT APPROVAL FOR THE 2-ROOM PROTOTYPE

Awasuka beneficiaries have combined the credit for materials with the government subsidy, this is the reason why the approval of our prototype was required. Last year we had already approved the construction system using confined block masonry, which was presented with a

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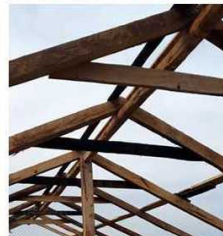
4 room house model, although it was a flexible system that could accommodate more options: 2/3/4 bedrooms, attic or not, indoor or outdoor staircase, etc... However, the Nepalese government does not approve "constructive systems" but "specific house models" and therefore a second approval was required for the 2-room house. Fortunately, this process was simpler than the first one and we were only requested to submit the drawings. The structural report previously submitted for the 4-room house was also accepted for the 2-room-house. The government also requested load-bearing capacity tests for the "Awaskua blocks", manufactured following quality standards that local manufacturers do not follow. This was quite an adventure, as the nearest testing laboratory to Bhimpheedi was 60kms away, which implied a trip of more than 2h, taking two different buses. But the trip was worth it as the "Awaskua blocks" showed excellent results.



Manufacturing of "Awaskua blocks" and load-bearing capacity tests, comparing local blocks to Awaskua blocks.

## HOUSES RETROFITTING IN SUPIN

After the completion of the new houses in June 2018, there was a break of 3 months because the monsoon did not allow the start of new works. In October, upon our return to Bhimpheedi, the house retrofitting tasks started: preparing final drawings, materials' lists and beneficiaries' responsibilities agreements. In contrast with the previous stage, in this stage the construction process was significantly improved, since we learned from everything that had not worked well before. Thanks to Rotary Club Hetauda, a local person with proven responsibility supervised and regulated the prices of the materials' purchase, something that was quite difficult to manage when volunteers and beneficiaries went on their own. The beneficiaries took responsibility for the transportation, reception and storage of their materials, a fact that had not been established in the previous stage and had created some misunderstandings.



The retrofitted houses in Supin almost finished, lacking only all the wooden diagonals.

## COLLABORATION WITH BHIMPHEDI MUNICIPALITY

During the course of the program, we conducted several interviews with Bhimpheedi Gaupalika (Municipality) to inform about the performed activities and to receive collaboration requests on concerning topics. As a result of these meetings, the following documents were delivered to them:

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- **Awasuka Prototype Drawings** for Bhimphedi technical office, so that the government engineers in the village can advice the use of these techniques to many more families.
- **Bhimphedi Geographical Maps**, the first of its kind in the village, in which the main entities had been placed, as well as a comparative study of jungle areas vs. cultivated land; both things were answering to specific requests from the municipality.
- **Waste Management Report in Bhimphedi**, with very easily executable proposals, regarding improvement of latrines and inorganic waste collection by a Kabadi d'Hetauda (private center for selective collection of plastics and glass).
- **Bhimphedi Historical Buildings Photographic Dossier**, and a copy of DOA's (Department Of Archaeology) scanty information on these buildings. This was the answer to Gaupalika's request to improve the Hattisar building (Elephant Saddle Museum), for which the contact of a French museologist was also provided.

During the development of this program, we have witnessed the sad demolition of several historical buildings, all in good condition, which were good examples to convey knowledge about good habits in anti-seismic construction. From Awasuka we advocate for the importance of preserving the historical memory of the village and its unique buildings; because apart from representing its identity and culture, it could also contribute to improve its wealth by attracting new activities to the village. At the moment, this historical information is not registered anywhere, that's why we have conveyed it to several Kathmandu organizations related to historical preservation (Department of Archaeology, UNESCO, Kathmandu Valley Preservation Trust, Rabindra Puri Foundation, etc.) Fortunately, some of them have shown an interest in doing some joint actions in the village.



Documents delivered to Gaupalika: waste management report, Bhimphedi geographical map and photographic dossier of historical buildings.

## "BLOCK, WOOD or STONE", A SONG TO CONVEY KNOWLEDGE

One of the main objectives of Awasuka has always been to spread knowledge of habitat improvement beyond the context of Bhimphedi. In this sense, the government approval of our construction system has been a great step since because, thanks to this, it is now available for all Nepal. But we must continue raising awareness so that people do not forget good habits and continue to build safely; because habits tend to relax as the memory of the earthquake fades away. That's why a song was composed: to reflect about the spiritual value of a house in Nepal, the earthquake's physical and emotional effects and the necessary knowledge to be able to build safe houses. The song video was directed by *Bhimphedi Guys*, a group of dancers from the village who produce videos as well. Through their YouTube channel, which is very successful around the country, we expect to reach as much people as possible. The shooting was done in autumn 2018 and many people took part in it: Balmandir children (Amics del Nepal's orphanage), Bhimphedi villagers and one of our beneficiaries from Supin. The video will be presented in Bhimphedi and Kathmandu next spring, but currently the song is already available on YouTube and other music channels.





### CONTINUITY OF AWASUKA

Having reached the end of the program's constructive stage, it is now time to record the work done and to evaluate its continuity. Awasuka's initial idea was to continue building safe houses, but the inhabitants of Bhimphedi are no longer interested. The reason for this is that almost every family applied for the government help, which was following certain deadlines that have now already gone by. But Awasuka's purpose is not only house construction, but also habitat improvement and for this reason, we have focused in other subjects like: improved **latrines**, **water** disinfection and **chimneys** construction to cook without smoke. In Nepal, everybody cooks without a chimney-hood, which causes many people to suffer severe respiratory diseases and about 22,000 people die every year. Comparatively, the earthquake caused 9,000 deaths. This topic has raised a lot of interest among families who have already experienced the benefits of the first chimney model installed in Supin two years ago. For this reason, one of Awasuka Program's continuation will be to build chimneys for all Bhimphedi communities. This process will be managed and pushed forward by a local social mobilizer through the Agragaami cooperative.



Hareram Pudassainee and his family, beneficiaries who hosted the 1st chimney model in Talo Supin.



The video "Block, Wood or Stone" was shot in fall 2018 and it will be soon available on YouTube.

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### DEVELOPERS



**Amics del Nepal.** General Coordination, local infrastructure and accountancy



**Base A.** Technical Coordination and Technical Volunteers



**CCD-UPC.** Expert Advisor in Habitat Improvement Programs and in Cooperation Program grants covering the Technical Volunteers travel expenses



**Agragaami Krishak Krishi Sahakaari.** Counterpart. Agriculture Cooperative: local organization and social dissemination



**Rotary Club Kantipur and Hetauda.** Local Partners: Government procedures, legal advice, local coordination

### COORDINATION

**Program Director:** Mònica Sans, Architect and Singer - Friends of Nepal

**Technical Coordinator:** Berta Marín, Architect and Professor - Base-A

**Expert Advisor:** Pedro Lorenzo, PhD Expert Architect in Cooperation - CCD-UPC

### TECHNICAL TEAM

**Architects UPC:** Anna Altemir, Andrea Llanas, Valeria Cid, Àlex Espina, Diego Guerra, Victoria Tous, Adrian Àlvarez, Alba Corbella, Andrea Martín, Andreu Lluís, José Carlos Sánchez, Victòria Solina, Marc Socías, Àngel Joaniquet, Irene Gúdel, Martí Domènech, Marta Guilera, Anna Gonzalvo, Arnau Montoya, Irina Berdonces, Ana Fernández, Sebastià Febrer, Emma Ferrer, Mikel Zubiaga, Nerea Gezuraga, Inés García - **Topographers UPC:** Marc Crespo, Jordi Mense, Sergio González - **Geologist Uppsala:** Yuliya Zhuk - **Civil Engineers UPC:** Laura Coll - **IT:** Carles Turró - **Biologist Water-Paani Activities:** Eva Pubill - **Environmental Engineers UPC:** Ainoa Plaza, Daylí Remuiñán, Maria Assens, Marga López - **Journalists:** Sara Barrera, Xavi Clarà - **Nepal Engineers:** Sandesh Gurung, Sumit Thapa, Rajib Maharjan, Vivek Shrestha, Amit Thakur - **Local Coordinators:** Niranjan Pudassainee, Pradeep Waiba - **Accounting:** Dani Roig - **RC Kantipur Coordinator:** Prabhat Yonzon - **RC Hetauda Coordinator:** Ram P. Sharma

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