



Awake, 2012  
The sculpture made of construction material, new wood and very old timbers

# The Biheeve House

My diary from Idlib region, Northern Syria:

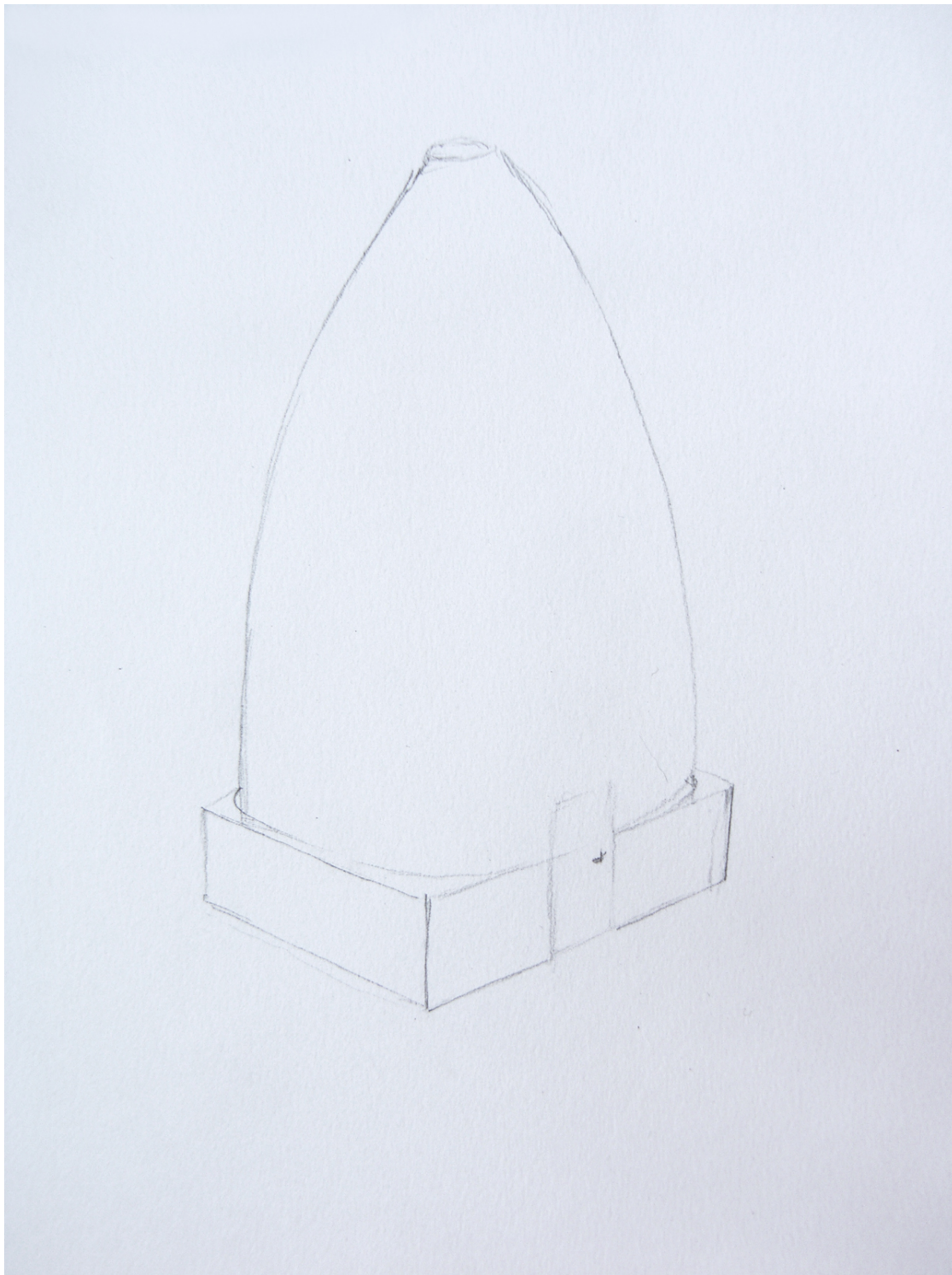
“Architecture is often the place of great prospects, representation of progress, power, wealth and complexity. All we need to do is look at the skyscrapers of Sharjah or Hong Kong, Shanghai. Still I would not like to use this Project for the representation of great achievements on a big scale, but rather to bring up ideas about Syrian architecture, sustainable environment and humanitarian questions, solutions on a small scale. I would like to introduce a housing type from northern Syria, where form and function have found a perfect unity: a perfect minimalism, a contemporary designer or architect could only dream about. This house is the Beehive, where my ancestors lived and which was a common housing type in our village in northern Syria until the 70s. The Beehive was a rotund building with a very high dome, at least four or five meters high. When I was a child and I looked up in these houses at the top of the dome, it seemed nearly endless, as if the upper part, its round aperture was not real anymore. While sitting in these domes there was a sense of warm hospitality, inside they were nearly empty and always very clean. The colored mattresses, which were piled up during the day were almost the only furniture. In the evening I was lying close to my aunts, in winter there was also a small oil-stove that smelled like petrol. Then in the eighties, I arrived to the village and saw that suddenly angular houses became fashionable, they were a kind of status symbol representing modernity, and cube houses were build in the same dispersed way like the Beehive houses. Roads were not very common and there was so much space on the top of the huge, dry hill, at the edge of the desert. The cube-houses were as clean and empty - without any furniture inside - as the Beehive. Three new elements appeared: one strict neon light on the wall, a TV-set, usually placed on top of the other furniture: the refrigerator. The emptiness was touching, farmer families having built their empty two-bedroom cubes underneath the vast Syrian sky on the empty land without trees. At night, I could see them from far away: nearly motionless, so calmly sitting close together on the mats under the strict minimal line of their neon-light. / *diary entryt by Róza El-Hassan*/

Trying to handle the situation of the catastrophe, us Syrian artist try to find new solutions for the moment of the new beginning. How will we rebuild the country? I dare not write the word: heal it. Millions of houses are damaged. I try to map old and new techniques and find out incredible things about the old Beehive house of my grandmother. The inner temperature was usually twenty degrees lower then outdoors. No concrete or steel was needed, no bricks burned, no hard lava rocks. Steel is a problem in Syria, it is an import product, wood is also rare in the drier areas. The adobe bricks of the Beehive houses are completely sustainable, they just fall crumble and turn to mud when not in use. The round shape is a perfect form, the high dome is a cooler system trapping warm air in the top of the dome and keeping cool air in the ground where people sleep, which could not be better if the best computers tried to calculate. The temperature difference is 15- 20 degrees between indoors and outdoors without air-condition. The form has remained the same for three or even ten thousand years. At this moment I do not know what will happen in Syria during the next months, how people will have the strength to rebuild it. I try to think in the smallest scale: the dome made of mud, the Beehive and the one-room cube, or two rooms, with a framed photo of a relative and a mattress as all their sole belongings - our Syrian modernity, our pride. Anything more complex exceeds what my imagination can bear.”

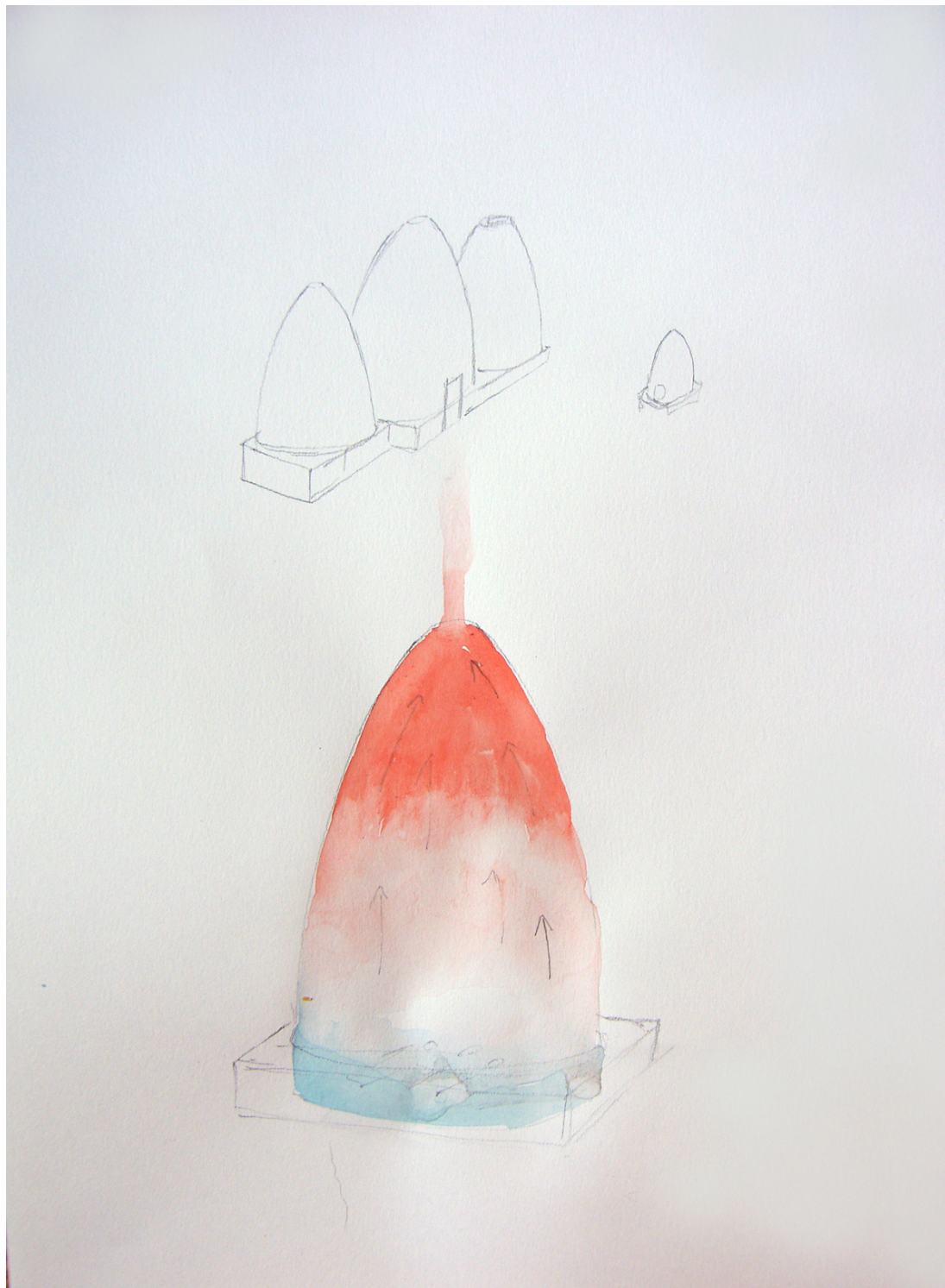


Biheev houses – which were built in some villages in Northern Syria, the sharp stones are used to reach the top during repair work

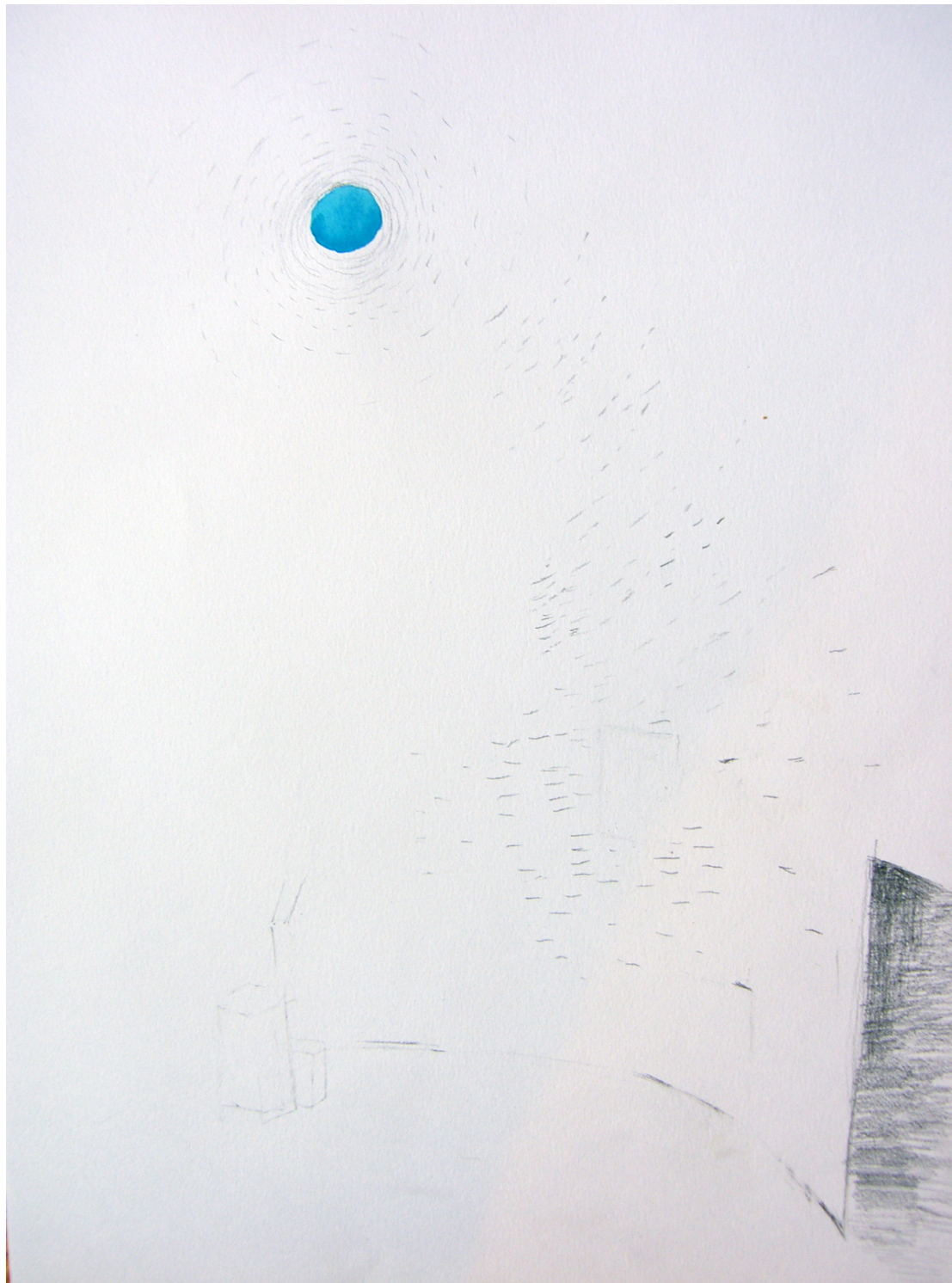




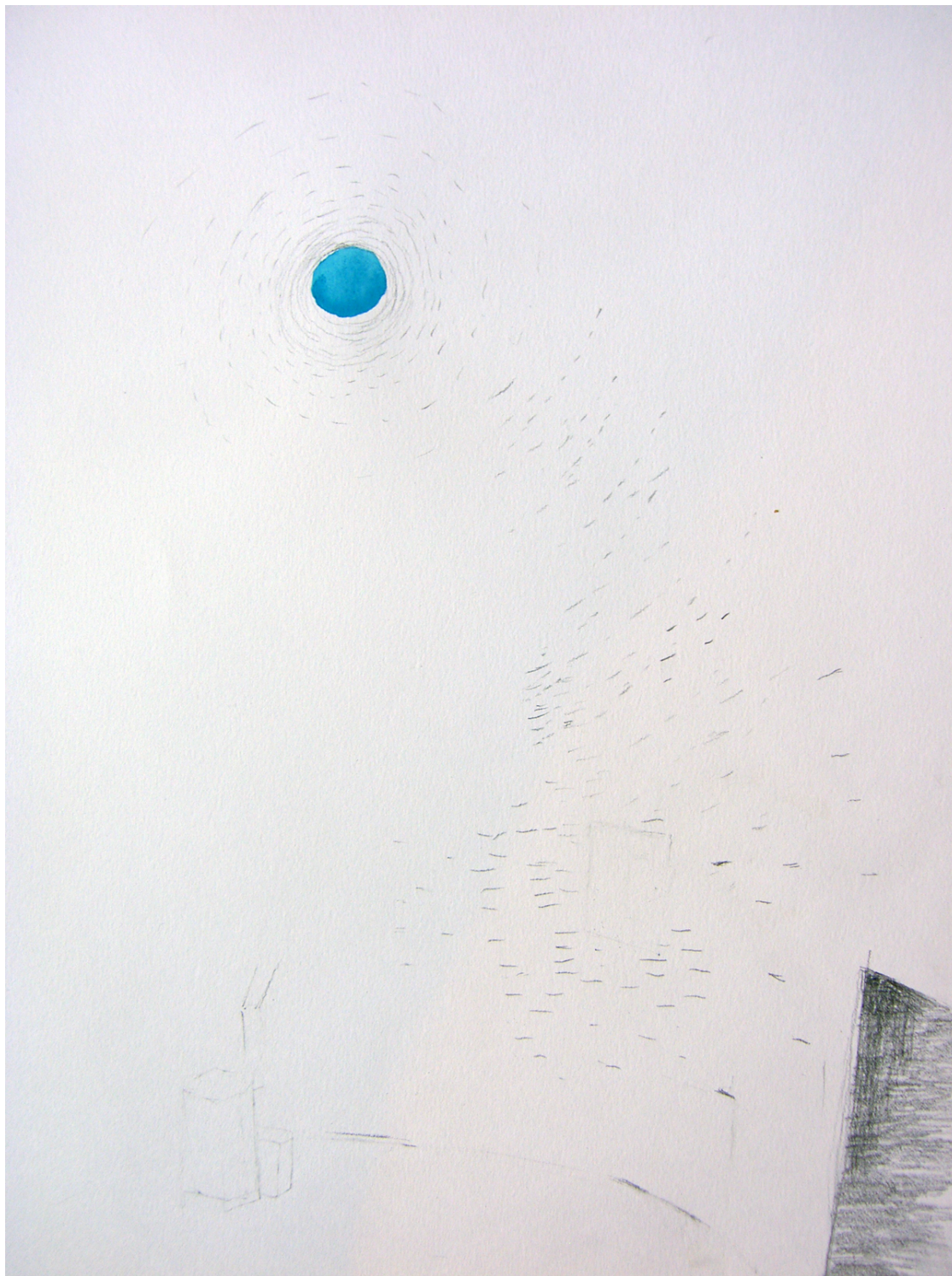
Inside always 24- 30 C  
Outside 14-50 C



The high dome keeps the heat, while the lower part, where people sleep is cool



Indoors: a round aperture on the top of the dome, where heat can pass







Inside the house  
during the day







الهواء

Ideas for panel discussions, symposium or workshops by Shadi Alshhadeh:

### 1. The Breeze --- Wind

One of the tasks I would like to suggest is exploring alternative city architecture methods. Ventilation is created by using natural wind as the resource in summer. This can replace masses of air conditioning units - Or at least reduce their working time a bit. The problem of creating wind or a fresh breeze is very important in Middle East.

Working class people in Aleppo live in densely built apartment houses with little fresh air during the intense heat of summer, while middle and upper class people install air conditioning units. At noon when all the air-conditioning units are turned on, they use so much energy that the cities electricity grid breaks down from time to time.

Old air condition units ruin the buildings facades and drop water on the streets.

Can we find alternative solutions to planning and designing houses and windows, that support using the winds natural direction for circulation of the air in the cities? This way we can simply open the windows in the night to let

apartments cool down and close the shutters during the day? Could we utilize meteorologists wind-maps of the cities to find the best places for the windows and shutters?

(Two artists have already created wind-maps as art works: Fernanda Viegas and Martin Wabenberg [www.hint.fm](http://www.hint.fm) ).

Another approach: Modernist architect Le Corbusier already created models that support natural cooling of buildings sixty years ago in the city of Chandigarh, India.

Dr. Abde---moniem El---Shorbagy conducted a study on the natural ventilation of courtyard houses in the hot climate region of Saudi Arabia.

The starting point of the project would be to research historical solutions in traditional Syrian architecture, such as the custom of using courtyards and their water basins, which exist in the old city of Bab Touma in Damascus. Also, the sophisticated ventilation and cooling system of the old mental hospital in Aleppo that uses arcades and water pools called 'Bimaristan Arghan'. Last but not least the Behiive adobe houses in Northern Syria, which I described earlier.

I have to add to the previous description of Syrian adobe dome buildings, that we find in many villages in Northern Syria a keystone on the top of the dome instead of the round aperture, which is described in scientific articles as the archetypical form of these buildings - as in Bikash Vaidya's study. The keystones and the completely closed dome are useful in regions with rain and cold winters. Both prototypes of dome buildings: the dome with the round aperture on the top and the dome with a keystone can be found in ancient rural architecture in Syria.

## 2. Gardening

The big trend these years is Urban Gardening. One example is 'AAA', a group in Paris who recently presented their project to the 'Venice Biennial of Architecture'. Could we apply these achievements and this knowledge to the hot Middle East region? Can we adopt the roof top salad gardens of Eastern Asia's big cities? Or the new Chinese methods of gardening?

### 3. Reconstruction of ruined houses

We can utilize the archives of Japan, Syria, and the Peruvian earthquake region to get ideas and compare notes on reconstruction.

Between 2009 and 2012 our team realized a project in Hungary based on social design: we visited many small villages and contacted the eldest but still living masters of Hungarian- Romani wicker handcraft. We could bring the experience of these work-shops to Syria. Also in Syria we are in the last minute to save the handcraft and knowledge of adobe dome buildings. A few years ago a family member visited the our village and it was not easy to find elder people who still remember the technique. Considering the fact, that masses live since two years in tents and provisory shelters in the border-region between Syria and Turkey these old and warm housing types could be very helpful.

Further topics would be: How to remove the rubbish and use what is still valuable. In several areas of the world houses are recycled in selective ways.

Another question will be safety and how to remove the ruins in a safe way.

We would create a collection of archives and documentation on topics such as disaster recovery, removal of debris and waste, recycling, dealing with structural building safety, and the removal of unexploded ordnance. Also the testing, repair and safety involved with the electricity grid, gas lines, communication grid, sewerage mains, and water mains.

This third topic for reconstructing demolished housing areas is a very extended and scientific topic in relation to methods for rebuilding. Still, we could explore some of its additional aspects in the workshops.

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initiated by Shad Alshhadeh and Róza El-Hassan  
2012- 2013

all art-works by Róza El-Hassan

Photocredits: photos on page 5 and 6 wikipedia  
freeware archive

Photo on page 14: collection family EL-Hassan's  
archive: Fatima and Róza El-Hassan

Photo of the sculpture Awake: Sarah Bernauer

Scientific sources and literature:

Design/Sustainable Product Design Aug, 2009 <http://www.treehugger.com/sustainable-product-design/how-to-live-without-air-conditioning-syrian-beehive-houses.html>

Bikash Vaidya, Beehive House [www.toollending.com/UCBxweb/homework/.../bikash\\_vaidya\\_HW\\_1.pdf](http://www.toollending.com/UCBxweb/homework/.../bikash_vaidya_HW_1.pdf)