Lessons from the Global South: Community Engagement for Decolonization and Decarbonization

Yasmeen Lari

Fig. 1. Completed roof of a building sponsored by Lari Green Shelter (LGS) being tested for load-bearing capacity, Tandu Allahyar, Sindh, Pakistan, 2011. All images courtesy of the Heritage Foundation of Pakistan, unless otherwise noted.

I bring you greetings from Pakistan!

What a privilege to be invited by the College of Fellows of APT to have a discussion in this great hall, once a church with lofty vaulted ceilings, a significant example demonstrating the value of the adaptation of historic architecture for contemporary use. And one that demonstrates the importance of the reuse of structures to avoid new constructions, in keeping with the imperatives of today, particularly the principles of the circular economy of recycle, reuse, refurbish, and repair, which would lead to carbon neutral outcomes.

Here I am, standing amidst you, sharing my experience from a country that is rated among the most vulnerable due to its ever-increasing poverty levels and at the same time battling the consequences of climate change. As is well known, excessive consumption in the Global North has resulted in the fast depletion of the planet's resources, as well as the high level of emissions contributed by present building construction methods worldwide.

Is it not professionals such as ourselves who carry the responsibility to ensure reduction of the carbon footprint in all our creations? Simply curtailing the use of cement and steel and other industrialized products will help us reach that elusive figure of 1.5-degree Celsius rise by the year 2030, echoed by various Conference of Parties assemblies since the historic U.N. Climate Change Conference (COP21) in Paris.

In a new world order driven by climate change, should we not strive for a humanistic, inclusive architecture that is fashioned by environmental considerations?

A couple of years ago, I had said in my manifesto, published in London's *Dezeen* magazine: "Today, we live in an era that is beset with fragmentation and disruptions. It is a world ravaged by rising poverty levels and increasing disparities, depletion of the Earth's resources and climate change impact."[1] Global warming, greenhouse-gas (GHG) emissions, recurring disasters, climate emergencies and climate-migrants, conflict-impelled refugees, the displaced, and the homeless all require innovative design solutions. The capitalist industrialized world, in the pursuit of wealth and personal gain, tends to turn a blind eye towards a plethora of ills that afflict our societies and a host of injustices suffered by the weak and the marginalized. We might do well to hark back to the sayings of ancient Greek

philosophers such as Plato, when he says that justice is "far more important than the acquisition of wealth."[2]

Persons such as myself, belonging to the Global South, have seen abject poverty where 50 percent of the population lives below the poverty line in front-line, vulnerable states that suffer from recurring disasters. For me, the basis of all development must be good design that incorporates climate resilience for the poorest. Over time I have understood that it is not only the privileged who have a right to enjoy well-designed environments; the disadvantaged and those who live on the margins need more, not less, design to achieve a better quality of life. Together we must develop a framework for a changed direction in our practice. A majority of us need to relinquish the desire to create imposing megastructures that traditionally have been commissioned by the likes of the sophisticated Medicis of Florence, the unscrupulous robber barons of colonial powers, the eco-indulgent merchant princes of the Industrial Revolution, and the present day's multinationals and tech giants that promote high-carbon lifestyles. We are all aware of the damage caused by the colonial industrial-oriented mindset to the Earth's ecosystem, due to wasteful and highly consumptive ways of living and *building*, as well as the excessive use of Earth's resources promoted by the all-pervading capitalist system.

Fortuitously, more than at any other time, young architects, as citizens of a changing world, are seeking a divergent course in the practice of architecture. By bestowing the great honor of the Royal Gold Medal on my work (a brave move), the Royal Institute of British Architects, its Prize Committee, and the British monarch, have legitimized the path for architects to serve those who live on the borders. They have sent a powerful message that architects no longer need to vie for the attention of the privileged and the wealthy; they can equally be ready to serve humanity. The time has come for a majority of architects and other built-environment professionals to play a significant role in healing the planet. On the one hand, that requires lowering the carbon footprint in all that we create and on the other hand, reaching out to serve the vast number of disadvantaged populations.

Pakistan's Heritage

It is ironic that, though my native Pakistan belongs to the Third World, it was not until 2005, when my 36-year career as a successful architect had come to a close, that recurring disasters there forced my attention toward the vast marginalized sections of my country. As a practicing architect, barring a few projects, I also had indulged in an extravagant egotistic journey that focused on serving the elite of my country. It took me a long time to realize how I could serve the majority living in my own country (Fig. 1).

I am a committed proponent of learning from heritage. Pakistan is the custodian of a diverse heritage whose tangible elements begin with Bronze Age remains at the World Heritage site of Mohenjo-daro. Hindu, Buddhist, and Sikh remains dating from the centuries preceding the fourteenth-century Sultanate period sites, such as the Makli World Heritage site; sixteenth-century Mughal forts, palaces, and paradisal gardens; and a shared heritage of the British Colonial period of the nineteenth and early twentieth centuries all lend a diversity to our cultural legacy that is not found in many countries (Fig. 2).

Fig. 2. Tomb of Jam Nizam Al Din, Makli Necropolis, Thatta, Sindh,1990. Courtesy of Suhail Zaheer Lari Archives.

Fig. 3. Traditional chaura (round desert house) with conical roof, Tando Allahyar, Sindh, 2011.

Pakistan's intangible heritage has also shaped the lives of its people; it is all-pervading and includes Sufi traditions and spiritualism, folklore and folk traditions, oral history, and the many diverse crafts still practiced by rural women that have been passed on from generation to generation, from mother to mother. And then the vernacular heritage that is based on age-old local wisdoms, from which I have learnt the use of sustainable materials, local sourcing, ease of handling, and economical use (Fig. 3).

There are, as well, old medieval towns, walled cities of Pakistan and also of Europe, that provide us so many directions towards converting urban centers into eco-urban enclaves. Replete with a host of zero-energy solutions and passive cooling techniques, they point toward innovative ways to deal with today's energy crisis. There are zero-energy mechanisms for regulating microclimates that reduce energy consumption. Many of these principles are based on natural devices drawn from traditional environments. One example is the historic town of Thatta, with its distinctive wind-catchers and beautiful lime-stabilized, mud-plastered walls. Another example is the wind scoop, which draws the prevailing wind inside, providing natural cooling throughout the house (Fig. 4).

Another example is a wonderfully decorated nineteenth-century mansion in Peshawar's walled city, which I had the privilege to conserve. The courtyard configuration creates its

Fig. 4. Wind catchers, Thatta, Sindh, 1979. Courtesy of Suhail Zaheer Lari Archives.

own microclimate within the building without relying on any mechanical means. At night, cool air is stored in the atrium and then keeps the surrounding rooms cool during much of the day.

In the early 2000s, on behalf of UNESCO, I had the opportunity to co-author the master plan for the World Heritage-inscribed Lahore Fort, where water fountains in introverted atriums cool the surrounding structures. Another example is the paradisal Shalamar Gardens in seventeenth-century Mughal Lahore, which were designed as the reflection of paradise on earth. Here, the expanse of water and small fountains are used for natural cooling. It is methodologies such as these from which I came to understand the value of ancient wisdoms and traditional techniques for providing buildings of great comfort that utilize minimal energy.

Traditional Sustainable Urbanism

I believe that many lessons can be drawn from our energy-efficient traditional inner cities, many of which have several attributes for the creation of low-energy humanistic urbanism:

- Organic morphology
- Pedestrian, non-vehicular streets
- Low rise, medium-density development
- Mixed 24-hour cycle
- Zero/low energy natural cooling
- Passive solar design of structures
- Introverted and courtyard formations
- Incorporation of subterranean chambers
- Water mass cooling in urban spaces
- Semi-public spaces for interaction of people

Such attributes can lead cities towards climate resilience and help contain emissions to within specified limits.

Many of us, and certainly myself, believe that traditional urbanism is equivalent to ecological urbanism. Being responsible for 65 to 70 percent of GHG emissions, our urban centers will remain global-warming battlegrounds unless urban professionals devise ways to convert them into climate-resilient cities. As I have explained, traditional urbanism is the result of local wisdom and the use of sustainable materials and techniques for minimizing the use of energy. Thus, we need to adopt design principles that can help transform present wasteful urban centers into low-carbon eco-enclaves, for example, through the creation of

- Compact cities, not urban-sprawl models
- Low-rise, medium-density, mixed-use development (not skyscrapers) to keep travel distances to work short
- Vehicle-free, walkable enclaves that give preference to public transport
- Greenery and water bodies to transform urban microclimates and to prevent the environment from heating up
- Low-impact hybrid architecture that minimizes the use of energy-consumptive materials in construction and seeks net-zero solutions

And above all, saving all heritage, as well as functioning contemporary buildings, as any replacement will only add to further carbon emissions.

While I harken back to Pakistan's traditional cities, here in Seattle, in the Global North, there have also been visionaries, such as Lewis Mumford and Jane Jacobs. As a well-known humanist, Mumford spoke freely about social injustices in society. I am sure that if he were alive today, he would have been equally vociferous about ecological injustices in a world beset with disruptions due to climate change and GHG emissions. Mumford was fully cognizant of the increasingly dehumanized urban environment in the United States, and he wrote extensively against those who wished to give preference to cars and machines over human beings. We certainly need that voice today and also that of another giant, the social activist Jane Jacobs, whose impactful book, *The Death and Life of Great American Cities*, and the term "eyes on the street" left an indelible mark on some of us. These two were major voices who influenced my generation by emphasizing the necessity of giving precedence to human beings and social capital over cars and urban expressways. Given the increasing severity of disasters all around the world, such as the flooding in New York on September 29, 2023, all of us have to work towards mitigating the grave climate crisis.

Battling Climate Change in Urban Centers

I believe I need to reiterate the oft-quoted statement that cities are for people, not for cars, nor extensive highways, or imposing structures that undermine human scale. There is an urgent need to humanize urban centers in order to fulfill the requirement for climate-resilient, ecologically driven urbanism. My own country's urban centers, such as Karachi, a megacity of over 22 million people, are also among the most vulnerable due to climate change. As elsewhere, rising levels of GHG emissions in Karachi, due to proliferation of multistory buildings and excessive use of concrete pavements, coupled with unwarranted vehicular movement, cause Karachi today to be beset with urban heat islands and urban flooding, causing heat-stroke deaths, as well as immense economic losses during monsoon rains. As in many other cities

in the developing world, Karachi has become unlivable for the marginalized and the disadvantaged, with widespread urban blight and lack of green spaces or other vegetation.

As I have mentioned, many of today's urban challenges are due primarily to the construction methods and urbanism adopted over the last century. Many studies have shown how much damage to the planet is being caused unknowingly by built-environment professionals. It is clear that we could play a key role in reducing carbon emissions.

I would like to share with you the eco-enclave that I have designed and implemented in Karachi. It has successfully dealt with issues of pollution, urban heat islands, and urban flooding. A view of the street from a couple of years ago demonstrates how even an orphan city, such as Karachi, can be transformed through application of eco-principles (Figs. 5, 6). These are some of the guiding principles that I used while developing Karachi's eco-urbanism potential:

- Using zero cement and zero steel
- Restricting motorized vehicles for clean air
- Preventing demolition of historic and other buildings to avoid new construction
- Converting streets and urban spaces for outdoor recreation and cultural activities
- Miyawaki street forests for absorbing carbon dioxide and cooling the air
- Aquifer wells to drain stormwater
- Porous pavements using permeable terra-cotta for rainwater absorption
- Biodiversity through greenery and plantation

The main tenets are no to cement, no to steel, yes to terra-cotta pavers, yes to biodiversity, and yes to water conservation. The eco-enclave contains 12 heritage buildings and spaces for outdoor cultural activity. In a 400-foot-long walking street, there are four Miyawaki-style forests with 600 trees, some having grown to 20 feet in 20 months. The enclave includes 3,000 square feet of terra-cotta permeable pavements, 1,400 square feet of sponge surfaces, and seven aquifer wells.

The success of this project is due to a newly developed sense of ownership by all stakeholders—community members, owners of commercial stores, and the district government, all as a result of eco-transformation of the street. Because of this small example, a new sense of optimism has emerged in the city and a resolve to convert Karachi into an eco-city, one street at a time.

Recently, in Karachi I have formed a Climate Smart City Team, consisting of voluntary partners, including the local administration head of Karachi, the state-owned Pakistan State Oil Company, and the civil society organization, the Heritage Foundation of Pakistan. We are beginning with making one large artery into a climate-resilient neighborhood, with the resolve to bring about a new kind of humanistic, climate-resilient urbanism.

Another important step is the establishment of a Climate Resilient Urbanism Depository to focus on best practices and alternative carbon-neutral building materials. In addition, some other small streets are being taken up and converted from vehicular streets into eco-enclaves by the residents themselves to provide green spaces for women and children, biodiversity, and food sufficiency in urban areas.

Most cities in the Global North are well structured and well maintained. But here too, there is a great need to begin converting more vehicular streets into pedestrian streets, as has been done in many places as a result of COVID-19. In order to maximize the advantage of this trend, these could easily be designed to become eco-enclaves. A combination of the use of zero-cement materials in pavements, the construction of porous pavements and aquifer wells, and the addition of Miyawaki forests could mitigate formation of urban heat islands and prevent urban flooding.

Barefoot Social Architecture

The second major transformational project that I would like to share with you is the rehabilitation of a vast

Fig. 5. Denso Hall Rahguzar, walking street before pedestrianization, Karachi, 2020.

Fig. 6. Denso Hall Rahguzar, walking street after pedestrianization, Karachi, 2023.

number of displaced populations, the success of which is beholden to community participation, decarbonization techniques, and decolonization of aid. But first, let me give you a glimpse of how I became a humanitarian architect.

After the massive Kashmir earthquake of 2005, by working through various disasters that Pakistan has been confronted with, I learnt to build by adopting ecologically- and socially-just methodologies. Because of widespread deficits and deprivations, particularly among women, for me the pursuit for justice has been paramount. And the reason why I decided to design a stratagem called Barefoot Social Architecture (BASA) for the disadvantaged was that I felt empathy with those who walked barefoot and had become my fellow travelers. While the notion of being barefoot may be strange for many living in more affluent societies, for me barefoot is a common sight in our rural areas. It demonstrates the harshness of life, but it has its benefits. You are able to tread softly on Earth and grow up using the planet's resources with care. It reminds us that all of us have to learn to use the Earth's resources judiciously.

By devising BASA, I have been able to develop strategies that fulfill the unmet needs of the vast majority. I have found that by focusing on the issue of resilience and sustainability and using locally sourced materials, as well as low-impact, low-tech practices through participatory mechanisms, it is possible to achieve both social and ecological justice. While working with marginalized communities, I have stumbled upon numerous design opportunities, unclaimed before, in the pursuit of fulfilling the exigencies of social and ecological wellbeing.

So what is BASA? BASA is akin to social engineering. Its goal is to bring about social change that incorporates environmental, cultural, and technical dimensions, and results in the transformation of a mindset from a cycle of dependency to a culture of pride and self-reliance. On the one hand, BASA seeks to democratize architecture that provides people with well-being, dignity, and self-esteem; on the other hand, it unashamedly promotes zero carbon footprint structures, using instead the ubiquitous earth, conservator's magic lime (wet slaked lime), and renewable bamboo.

As an advocate of zero-carbon techniques, I have learnt to utilize for my humanitarian work only earth, lime, and bamboo as being the most sustainable materials. These three materials are the mainstay of my seismic and flood-proof structures. The first prototype shelter built after the major 2010 floods was based on lime brick foundations, earthen masonry walls, and bamboo roof joists (Figs. 7, 8). The prototype helped build 40,000 one-room shelters, primarily located in Sindh province, becoming the largest zero carbon footprint shelter program in the world. No carbon emissions were created, no trees were felled, 1,750 villages were benefited, and houses for 300,000 persons were built.

Interestingly, this project taught me the valuable lesson that in the humanitarian field, we can achieve such results only when funding is at the lowest level. The International Organization for Migration would never have considered my route of zero carbon unless donor fatigue had set in, and an economical model to serve safe rehabilitation was the only way to make progress.

Zero Poverty through Disaster Preparedness

The 2022 deluge brought havoc and devastation to more than one-third of Pakistan, resulting in the displacement of 33 million people, and not only adding to homelessness but also adding substantially to another 70 million people estimated to be facing food insecurity and abject poverty. As a result of the increasing intensity of disasters, today the number of displaced runs into several millions. Since global carbon emissions continue to climb, climate change is increasingly contributing to humanitarian crises and cycles of displacement around the world.

Fig. 7. Prefabricated bamboo structure of a Lari OctaGreen (LOG) one-room house, Pono Colony, Mirpurkhas, Sindh, 2022.

Fig. 8. Completed LOG shelter, Pono Colony, Mirpurkhas, Sindh, 2022.

For me it is paramount that if we wish to repair the planet, we should simultaneously aim for zero poverty. In my view, none of us has a right to sit on any laurels as long as one in ten persons in the world goes hungry every night. At the same time, every disaster is presenting the opportunity to aim for zero poverty by creating resilient communities. It is my belief that my sustainable rehabilitation of millions of those affected can be met only through decolonization and decarbonization of humanitarian assistance.

Most of those engaged in the humanitarian field are aware that the international colonial charity model—which treats affected communities as victims, is based on handouts, and operates through clusters or silos—has not provided a sustainable solution. I put it to you that:

- Charity, although in good faith, fosters dependency and robs the receiver of self-esteem.
- Promotion of alien imagery and expensive materials cannot be replicated by the poor; furthermore, it is culturally and environmentally damaging.
- Lack of appropriate knowledge and tools among communities allows limited assistance to the needy.
- Women are invariably left behind, even though they are the worst sufferers during disasters.
- The high administrative cost of disbursement of aid allows only a fraction to reach affected households.

We recognize that humanitarian aid is provided with good intentions for providing timely assistance to the displaced and that it is driven by donor contributions. Such funding is controlled by aid-giving agencies through INGOs or NGOs, which provide assistance selectively. However, since human living, in my view, is not carried out in silos or compartments, the majority of people remain vulnerable while their unmet needs remain unfulfilled.

The consequences of disasters such as massive floods include displacement, loss of human lives and cattle, food insecurity, increased vulnerability, a rise in poverty levels, loss of habitat, and destitution. On a very large scale, households including women and children face disease, hunger, and homelessness after every disaster, becoming more vulnerable every time.

Today, my effort is to aim for zero poverty by designing disaster-preparedness strategies by avoiding displacement, decarbonizing development, utilizing untapped resources, and conducting development for the people by the people. Here are some guiding principles:

- Creating a purpose-driven, sustainable model with the potential for scaling up.
- Fulfilling unmet needs of the poor for better quality of life.
- Designing affordable products using local resources.
- Training a local workforce of Barefoot Eco Entrepreneurs (BEE) for speedy delivery.
- Nurturing local women with potential to lead social change.
- Crafting innovative methodologies to achieve set goals.
- Assuring adequate return for BEEs who are implementing the program.
- Ensuring systematic checks for quality control.

Barefoot Resource Economy

Barefoot Resource Economy is an economic model that fosters decolonized development and humanistic humanitarianism. Its components are zero carbon, zero waste, and zero donor, which lead to zero poverty. There are many other advantages to such a model, including the following:

- Utilizing available resources. Today, in developing low-cost, sustainable, and affordable options, there is a host of materials that I found to be abundant and available for use, including earth, thatch, reeds, straw, ash from stoves, and cow dung.
- Pride, self-reliance, and zero charity. An example of pride and self-reliance is the Pakistan Chulah stove (Fig. 9). So far, 200,000 have been built with no charity or funding. They are entirely self-built and entirely sustainable. They require no help from outsiders, except the BEEs, who provide guidance at less than one euro. This is where you can see how architecture provides agency that enables people to create a world of their own through painted earthen stoves and houses.
- Affordable, replicable, sustainable. The items in the list above are all elements that can be self-built and provide safety and disaster resilience to prevent loss and damage.
- Knowledge-sharing and capacity-building. A special set-up in one village, called the Lari Barefoot Academy, provides training on a regular basis. The basis of scaling to help in the remotest villages is the mechanism of training local people to share knowledge and build capacities of hundreds of thousands, in order to help them build safe structures and ensure preparedness.
- Utilizing people's strengths. Poverty itself inflicts helplessness in the eyes of others, as well as in those suffering from it. They are led to believe that because they are displaced, they are also disabled. However, in our strategy, since the knowledge-sharing mechanism is carried out by the same kind of people as those receiving guidance, the learning occurs at a fast pace. It is the accompanying attitude of empathy, solidarity, and generosity that makes knowledge-sharing possible. This special humanitarianism is "by the people, for the people," or PFP. These attributes are found in abundance among those who have been displaced, and, under the BASA strategy, they now form the driving force for knowledge-sharing and guidance for fostering self-reliance among devastated communities.
- Maximizing community strengths. In the aftermath of disasters, it is possible to encourage the community to come together to see how to overcome adversity together.

So, in April 2023, six months after the devastating floods in Pakistan, the issue for me was this: what is the strategy we need when at least three million people are homeless? In addition to displacement, these communities are among the 50 percent of people living below the poverty line in my country. Utilizing the above tenets, I am now pursuing two models for sustainable rehabilitation, with a target of rehabilitating one million households by 2024. A holistic model was devised in September 2022, but since the support for my sustainable model was insufficient, I was compelled to design the zero donor model in April 2023 in order to pursue my target.

With a small investment, one can achieve stage one of rights-based needs: a safe, one-room house with a self-built earthen stove for clean food, a shared

eco-toilet, a shared water hand pump, and a shared solar light, along with food security, all within six weeks. Even flood mitigation measures, as well as Barefoot livelihoods, are attained within the short time of 20 weeks. So, in a very short period, residents become self-reliant at a cost of only $150.

In order to facilitate speedy delivery in an area, I have devised the zero donor program based on the very small contribution of the poor, indigent families. It utilizes humanistic humanitarianism principles of benevolence, empathy, and solidarity and maximizes the potential in poverty through the mechanism of "by the people for the people." These are the guiding factors that have propelled the zero donor model. So far, 26,000 self-built and self-financed earthen brick one-room houses have been built, designed using waste from the debris of collapsed houses and bamboo roofs, at a low cost of Rs. 6,250 or $22.

The zero donor model is providing me with all important aspects. Relying on the Barefoot Resource Economy and maximizing the Barefoot ecosystem consisting of the Barefoot market, I have found that we can build the capacities of affected people very quickly, enabling them to rise above adversity and, in the process, achieve self-sufficiency. Instead of a few weeks, as in the case of my holistic model stages, the zero donor model requires more than six and one-half months, as the process is entirely dependent on the resources and savings of the households themselves.

So here are the results of my zero donor model as of December 2023, which are quite encouraging:

- Reached 403,000 communities. All of them will be food secure.
- 25,000 washrooms completed.
- More than 20,000 one-room houses completed.
- Rs. 434,300,000 or $1.74 million brought into circulation.

Fig. 9. Pakistan chulah (earthen stove), Mirpurkhas, Sindh, 2015.

- An economic boom in the area is emerging as more and more people are engaged in the supply chain process.

It is clear to me that the route of decarbonization, democratization, and decolonization is the only way for us to repair the planet and heal humanity at the same time.

Conclusions

I believe that it is essential today that as highly accomplished built-environment professionals, all of us rethink our role—how to rise above personal gain and seek the route for the greater good of humanity. Also, I urge you as a well-organized body of professionals to reflect on how to influence universities and the construction and corporate sectors, as well as powerful professional institutions, such as the AIA, RIBA, CAA, and UIA, to expand the scope of professional education to include other fields related to climate resilience, community engagement, eco-urbanism, and humanitarian assistance; to create architectural/engineering incubators for supporting young professionals to pursue diverse fields; and to establish *pro bono* wings in flourishing professional practices.

I would like to leave you with the thought—to implement the four zeros: zero carbon, zero waste, zero donor, leading to zero poverty, for saving the planet and saving humanity through humanistic humanitarianism, using the Barefoot Resource Economy model.

Yasmeen Lari, *architect for the poorest of the poor, is an architectural historian, a conservationist, and a philanthropist. Her journey from international modernism for the elite to zero-carbon architecture for the masses was rewarded in 2023 with RIBA's Royal Gold Medal in architecture. Lari was the second woman to receive it since 1848.*

This paper is based on the College of Fellows Lecture that Yasmeen Lari presented at the APT 2023 Seattle conference.

Notes

1. Yasmeen Lari, "'We Need to Do Away with the Prevalent Colonial Mindset and the Desire to Create Imposing Megastructures' says Yasmeen Lari," *Dezeen*, Nov. 5, 2021, dezeen.com/2021/11/05/yasmeen-lari-manifesto-dezeen-15/.

2. Plato, *The Republic*, ed. G.R.F. Ferrari (Cambridge: Cambridge Univ. Press, 2000), 335–336.

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