

edited by FLAVIA VACCHER

OCCOLOV

One Cinema, One Clinic, One Library, One Village



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Università Iuav
di Venezia



WORKSHOP SERIES

OCOCOLOV

One Cinema, One Clinic, One Library, One Village

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edited by

Flavia Vaccher

essays by

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USEFUL TO THE WORLD

Alberto Ferlenga, *Università Iuav di Venezia*

Architecture today needs to rediscover its reasons. And this need, in a moment of epochal transition such as the one we are going through, in which what is at stake is no longer a superficial embellishment action but facing a dramatic environmental crisis, takes on particular importance.

Today, on cities and territories, the terrain where the architect's action usually takes place, the effects of an accelerated climate change, an unprecedented environmental collapse and a social crisis are all the more severe the further away we get from the economic centers of the world; and it is for these reasons that new solutions must be tested. Moving, therefore, even not physically but only through the topics addressed, from the usual places of work or training does not only mean, for architecture teachers and students, practicing a useful experience by carrying out a service role that brings them a little closer than usual to a condition of necessity that their work risks losing. It also means leaving the sphere of the relative certainties that Europe, the university or the profession can give, to measure themselves with the needs expressed by those areas of the earth where everything is more extreme and, therefore, everything appears with greater clarity. Where cities do not seem to offer any hope of life or form, walls and separations multiply more and more every day, wars become endemic as famines and thirst, and traditions of life and settlement seem to have lost any sense facing the enormity of the problems.

And yet, paradoxically, it is here, in the territories of Central Africa as in the forests of South America or in the frozen expanses of the north that the extreme conditions also bring the germs of new possibilities. Italo Calvino was thinking of our suburbs when at the end of *The invisible cities* he invited us to “Seek in hell what hell is not”, and today the places where most of the world’s inhabitants live are far more terrible than hell. But I believe that Calvino’s invitation is still valid: applying our knowledge to the essential, seeking an idea of beauty that comes from the transformation of what exists and not from phantasmagorical caricatures of the future, is still a desirable program today.

Shifting the gaze from the magazines of the West to the real conditions of the southern hemisphere means reflecting on those reasons I mentioned at the beginning: on what is actually necessary and above all on how the profession of the architect can once again be recognized as necessary. Measuring oneself on topics such as those proposed by the workshop of which this publication contains the results means, even just for the space of an experiment, knowing a new client, verifying how much one’s projects can be shared and be understandable to those who will use them. It means returning to reflect on an idea of utility that is based not only on the solution of technical problems, on feasibility or on costs, but also on the possibility of giving our projects a meaning that goes beyond their strictest function. This means, for example, giving an acceptable form to the resilience that every building must take on, contributing, through architecture, to improving places that have lost all

ability to express identity, offering solutions that, although different from the point of view of language, appear to be replicable in method and objectives.

Metaphorically leaving one's own design habits and beliefs, led by those who move daily in the field of humanitarian, health and social assistance is an action that every architecture student should undertake. Trying to understand, even at a distance, the characteristics of distant and disadvantaged places is also a useful exercise to go back to understanding the problems closest to us and to remove architecture from a condition of imitation or automatism based on fashions or rules. Architecture today can return to play an important role in the real world and certainly not only by designing the expensive homes of the richest.

Going through experiences such as those experienced in the OCOCOLOV workshop is important for those who are architects or who are preparing to be one because they relocate the profession in contact with the primary needs from which it was born. Doing so from Italy and Venice has, then, an extra value, being able to bring the experience of urban sustainability to the plate of the design offer that, despite the centuries and unbridled tourism, still shows its positive effects.

It is a question of multiplying such experiences, finding ways to bring them increasingly towards feasibility and involvement "in the field" which is the only achievement of architecture; even so, helping to build a new generation of architects useful to the world.

IF YOU WANT TO GO FAST, GO ALONE. IF YOU WANT TO GO FAR, GO TOGETHER (AFRICAN PROVERB)

Flavia Vaccher, *Architetti Senza Frontiere Veneto ONLUS*

In recent years, architecture for international cooperation has again become a highly topical issue and the subject of renewed interest. In 2016, for example, the 15th edition of Biennale Architettura, curated by Alejandro Aravena under the motto *Reporting from the front*, is full of numerous projects from different parts of the world. Among the most recent and notable works, we may highlight Gino Strada's last great dream: the Centre of Excellence in Paediatric Surgery in Entebbe, in the heart of Uganda, designed by the Renzo Piano Building Workshop, together with the TAMassociati studio and the EMERGENCY Building Division.

In fact, many architects have been working extensively in "other" territories, different from our closest neighbourhood. For them, approaching such realities – beyond a professional opportunity – represented a chance to get to know seemingly unusual environments.

Provided you avoid "taking too much with you"¹, the encounter with "other" people or places forces you to read situations and locations from different angles, in a perspective of mutual exchange that favours the hybridisation of knowledge and understanding.

Without a doubt, working in these places demands first and foremost sensitivity towards the environmental and cultural context, which can only

be acquired by learning to know it. Likewise, every design, construction or strategic choice in such a context is actively constrained by the real needs of people, the places, the climate, and the technical and practical possibilities, all of which primarily arise from an open and shared dialogue starting from the expectations, organisation, and rhythms of those who will experience those places and architectures every day.

Thus, architectures placed in a physical, geographical, and above all human and relational context. “By building things, people build the feeling of self: forging a citizen with skills and capable of building is more important than erecting a building”, are the words addressed by Hassan Fathy to the Egyptian President G.A. Nasser. These words serve as a reminder, almost sixty years ago now, of architecture’s value as a tool (by no means the only one) for the development of communities and their territories.

“The moral space. Architects in Cooperation between solidarity and sustainability”, a traveling exhibition organised at the end of 2020 by the National Council of Architects, Planners, Landscape Architects, Conservators (CNAPPC) and 18 non-profit organisations consisting of architects and interdisciplinary profiles, showcased their commitment in places with scarce resources, where building a space to meet beauty and quality requirements becomes even more urgent and necessary.

Participants also included Architetti Senza Frontiere Veneto ONLUS, a non-profit association, part of the Architects Without Borders international network, made up of architects based in Veneto, which since 2013 has been delivering projects in highly critical areas, also by supporting international associations.

The international design workshop OCOCOLOV | One Cinema, One Clinic, One Library, One Village, an acronym that summarises the underlying themes, emerged from a solid sharing of ideas and convergence of goals with Adriano Wajskol, Secretary-General of the association of small cocoa producers ghanic.org (10,064 growers concentrated in the so-called cocoa district of Sefwi Wiawso, north-western Ghana.)

Since 2020, the cooperative endeavours to create an innovative ecosystem to make cocoa cultivation more sustainable and deliver a high-quality product, guaranteeing fair prices and investments in local communities. By doing this, growers can offer a better future for themselves and their families while taking care of the environment.

With the workshop, Architetti Senza Frontiere Veneto ONLUS sought to provide assistance and design support to this initiative, which will be enriched by a series of subsequent interventions such as: educational and training facilities, a



Ghana, Abodua, sale of agricultural products and small shops along the main road.



small cocoa museum, accommodation facilities for sustainable tourism linked to the presence of plantations and cocoa processing on site with a view to sustainable growth in the territory of Aboduam, one of the villages in the cocoa district.

A first important consideration was that, rather than working on a single building, the framework had to be that of the village. Thus, it was necessary to build a space for the use of the community and, above all, to recall that erecting a building was but one of the operations.

Starting from the indications and suggestions of the association, the design focused on a community centre consisting of: a small cinema equipped with a space for outdoor projections that could also serve other uses (market, events, etc.); a library with reading and consultation areas but also with meeting and discussion spaces for the community and training activities; a first-aid and outpatient post (FAP), in some cases associated with a small clinic in response to the specific needs expressed by the local area. A small piece of a much larger and more ambitious mosaic, the Cocoa Village, conceived as a cultural project to promote sustainable development while involving the local population. A pilot project that could be replicated – appropriately adapted – in other district villages.

The workshop was conceived as an encounter for national and international teachers and professionals, students of architecture courses at the Università Iuav di Venezia and a few young Italian and foreign architects, engaged in the frantic drafting of project proposals over a two-week period.

The continuous comparison has stimulated the conception and design of solutions generating new spaces, the result of experiments and surprising hybridisations, suspended between tradition and innovation, supported by the conviction that an architecture linked to the place and designed with human, material and cultural heritage of that specific environment leaves a positive imprint on the territory.

Design results collected in this volume are “measured” architectures, sensitive to the context, with particular focus on a landscape strongly marked by cocoa plantations, and attentive to the use of “appropriate and appropriable” technologies, materials and local construction techniques.

The workshop was hosted at the EMERGENCY ONG ONLUS headquarters in Venice, whose manager Mara Rumiz – whose support I sincerely appreciate – immediately accepted the proposal to collaborate. Specifically, she provided spaces and equipment with great generosity and invited professionals, who had worked for many years alongside Gino Strada, to share their field experience. This has allowed us to approach the complex issue of healthcare structures in

equally complex contexts from a geographical, economic and social point of view. Such situations, which one seldom comes across in the academic or professional path, provide an opportunity to expand and enrich our skills.

Together with EMERGENCY ONG ONLUS, the Università Iuav di Venezia, the OAPPC della provincia di Venezia participated and supported the initiative, with the precious support of the Kwame Nkrumah Pan-African Centre: the thread that weaves together these plurality of subjects was an unprecedented collaboration, an experimentation field that proved fruitful and full of ideas on many levels, a cooperative task for a concrete utopia².

“Behind every social revolution there is an intellectual one. We have to imagine, dream, design and plan before we can achieve the harmonious growth we want to see in the world”. These are the words of Samia Yaba Nkrumah³, daughter of the first president of Ghana Kwame Nkrumah, founder of the Pan-African Centre of the same name.

Notes

1. Marco Aime, *L'incontro mancato. Turisti, nativi, immagini*. Torino: Bollati Boringhieri, 2005.
2. Ernst Bloch, *Il principio speranza*. Milano: Garzanti, 1994, vol.3.
3. Samia Yaba Nkrumah, *The future of cities*. Milano: Domusforum, 2018.





Ghana, Abodua, the main street of the village that leads to the project area.

OCOCOLOV AND OCOCO WO SOMOMO LOV

Adriano Wajskol, *ghanic.org*

In 2015, as a film producer, I have been invited to Ghana to film some private moments of the political life of Honorable Samia Nkrumah. Her father, Dr. Kwame Nkrumah, a visionary, a true socialist, and a promoter of Pan-Africanism, led his country to independence in 1957.

He brought growth and development to all spheres of the economy, including architecture for all and across the whole Ghanaian society.

Samia presides the foundation named after her father, for which I have been appointed as International Ambassador.

I then continued on to producing a documentary on chieftaincy and cocoa farmers and became so involved in the research, that the members of the Asakyiri Akan tribe have decided to install me as their King of Development, in the traditional area of Sefwi Wiawso, part of the Western Region of Ghana, where the best quality of cocoa in the world is produced.

As Secretary-General of *ghanic.org*, an ONG based in the town of Aboduaam that supports more than 10,000 cocoa farmers, I am also working towards drastically adding value to the precious work of the farmers.

Most farmers live on a very low income, and although they are all landowners, they can become slaves of their own land, and sometimes, end up having to change their crops, or sell their land.

Their cocoa is in high demand around the world, but it is not processed at the source, leaving the farmers with not even one percent of the value chain to chocolate. This is detrimental to both the lives of many people and to the health of Ghana, which is the second-largest producer of cocoa in the world after Ivory Coast.

Together with other West African countries, they produce 70% of cocoa beans in the world. Cocoa is the third-largest export commodity for Ghana bringing 2,6 Billion dollars, (cocoa beans, cocoa paste, cocoa butter) after gold and oil.

I, therefore, have the triple task of supporting farmers, bringing development, and promoting Pan-Africanism.

In Abodua, we are working on all areas that circle around the daily lives of the inhabitants who are mostly cocoa farmers. That is why it is paramount to master-plan well-designed sustainable architecture, to build spaces that guarantee better living and progress, for a community that serves about 150,000 people.

We have envisaged a Cocoa Village for the town of Abodua: a town where the best of old and new practices will be applied towards sustainable building, water for all, education, health, culture, tradition and technology, green power, electric mobility, waste management, ecotourism... in other words a plan for an exemplary way to live well in a rural area, where jobs, culture, lifestyle, and tourism are improved and promoted. All cities in Africa are becoming unlivable, and part of a solution might be to build more organic self-sustaining towns in rural areas, so that their inhabitants stay and grow with their families, and enjoy the healthier life of less dense and more livable areas.

Thanks to architect Flavia Vaccher and Architetti Senza Frontiere Veneto ONLUS, we have managed to organise an intense workshop, in collaboration with EMERGENCY ONG ONLUS, Università Iuav di Venezia, the OAPPC della Provincia di Venezia, and with the support of The Kwame Nkrumah Pan-African Centre.

Illustrious lecturers and respected tutors have guided 20 young architects. In just two weeks they have produced an impressively valuable design guideline. I am deeply grateful for the contribution of each architect, each expert, and each representative of the institutions that have facilitated and participated in our workshop.

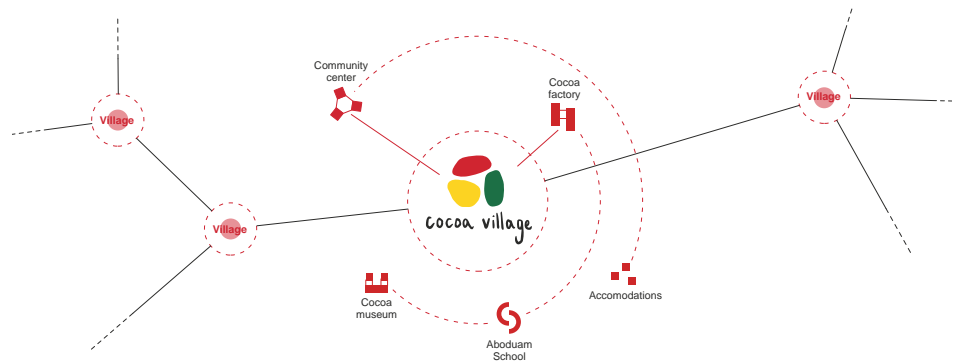
Our development plan will help a depressed community, with non-existing infrastructure, to grow and be a model for other communities. All over Ghana, people tend to live in poorly built unplanned settlements, because there is no control and no real master plan in place. Many new, and alas unfortunately





Ghana, Abodum town, immersed in the spectacular hilly landscape dominated by extensive cocoa and fruit tree crops.

The Cocoa Village: a development project to promote a sustainable growth for the town of Abodum through a series of facilities and services for the benefit of the population and visitors. A pilot project that could be replicated, appropriately adapted, in the Sefwi Wiawso district.





Ghana, Abodua, sun drying of cocoa beans after fermentation under plantain leaves, from the fruit (pod).

already obsolete European-suburban-looking buildings are built everywhere by foreign and Ghanaian developers, looking for a quick profit with no vision. However, most citizens are left behind on the journey to prosperity and modernity. Beautiful vernacular African unique identities and styles are forgotten or looked down upon as poor or to be destroyed.

The use of local materials and technology, our sense of beauty, in collaboration with Ghanaian and African architects, with their precious knowledge, craftsmanship, ancient traditions, and available materials, will help us design and build site-specific buildings that will facilitate and improve local ways of living.

My seven-year experience of living in Ghana and love for African culture, motivate me to push the agenda forward and hopefully see this project take form soon. There is an increasing expectation from the outcome of our valuable academic research on African style and aesthetics.

We are continuing our OCOCOLOV workshop in Ghana and Uganda with African architects, as OCOCO WO SOMOMO LOV, to add planning and design for One Workshop/factory, One School, One Market, One cocoa Museum and a diffused Hotel. WO SOMOMO also means: we like people, in Ga Language.

I had the chance to show the preliminary results of OCOCOLOV to Ghanaian authorities, dignitaries, and most of the people of Aboduam, who have warmly welcomed and appreciated the work done hitherto.

They will also be willing to actively participate in the building of a clinic, a cinema, a library and subsequently a school, a cocoa processing factory, a cocoa museum, a diffused hotel, a community center, and a market.

Original culture becomes global and teaches us what's necessary and essential. The economy of eliminating the superfluous, following the colors of the flora and fauna of the forest, and understanding the way people live every day, indicate to us that real sustainability is not about just making an architectural statement in line with a green movement, but serving the people that will make good use of their buildings.

Medawase

(Thank you in Akan Language)

Boaz Rabinovitch filming the celebration of the traditional four day funeral of a family member of Aaharon Armah, ghanic.org Director, and a protagonist of "A Royal Friendship", documentary produced by Adriano Wajskol.





THINKING OF AFRICA AS A WORKSHOP FOR THE FUTURE (CIT. RENZO PIANO)

Mara Rumiz, *EMERGENCY ONG ONLUS*

“... If I have to make a chair for my house, I make it perfectly at right angles with four legs and a nice seat. If, on the other hand, I have to do it for Africa, for many people it is enough that we can lean against it”.

With these words Gino Strada denounced a way of working in vogue in many organizations operating in Africa. He continued: “The best way to practice equality in Africa is to bring something that Africans have never even dreamed of, but which is exactly what we would like to see here”.

When the OCOCOLOV workshop began, I was working on organizing the exhibition “Scandalously beautiful. Emergency Children’s Surgical Hospital of Entebbe”, designed by Renzo Piano with the collaboration of TAMassociati, and I immediately saw a sort of fil rouge between the two initiatives: the theme proposed to the attention of the participants of the workshop was precisely that of bringing quality within an African village, starting from the analysis of the environmental and social context and designing a center that would help transform a cluster of houses into a urban community.

The cinema, the clinic and the library not only respond to a subjective cultural and health need, but aggregate, contaminate, and improve the quality of life for all.

When EMERGENCY designs its hospitals in Africa or Asia, it doesn’t think only of operating theaters, clinics and wards but, in addition to expecting them

to be beautiful, functional, with beautiful colors, lots of natural light, windows that open onto beautiful views; it pays great attention to the gardens, the common areas, the playroom for children, the guest house for relatives.

“I want a scandalously beautiful hospital” was the mantra that Gino Strada repeated to the designers when a new project was started. It was not simply an aesthetic claim but it contained two fundamental principles: beauty as the backbone of care (if a wounded or sick person is in a beautiful and comfortable environment, it is easier for them to want to heal); equality: Africa too, like all countries in the world, has the right to the highest quality in medical care, in architecture and in the environment.

Too many times it happens that when designing a compound in a so-called third world state, we forget the parameters to which we normally refer, almost instinctively. Instead, when designing concerns Europe: overcoming architectural barriers, points of natural light, natural ventilation, bathroom equipment, safety devices, etc.

I like to recall the principles enshrined in the “Manifesto for a human rights-based medicine” developed during the conference organized by EMERGENCY in San Servolo in 2007, with the Ministers of Health of various African countries.

Equality. Every human being has the right to be treated regardless of economic and social condition, gender, ethnicity, language, religion and opinions. The best care made possible by progress and medical science must be provided equally and without discrimination to all patients. “If the rights are not for everyone, really for everyone, call them privileges” – repeated Gino Strada.

Quality. High-quality systems must be based on everyone’s needs and be adapted to advances in medical science. They cannot be oriented, structured or determined by power groups or companies involved in the health industry.

Social responsibility. Governments must consider the health and well-being of their citizens as a priority and allocate the necessary human and economic resources to this aim. Services provided by national health systems and humanitarian health projects must be free and accessible to all.

What is the point of recalling here, on the occasion of an initiative organized by and for architects, principles that are the basis of an organization that deals with health? I do it because I think that they can/should guide the action of each profession, just as I think that each of us must give his best in whatever work we do.

Let me be clear, equality is the opposite of uniformity. Woe betide us if we think of intervening in Africa or in any other place with the logic of the re-proposal, of the photocopy project.

In order not to be generic, I focus on what I know and, therefore, on EMERGENCY's architecture.

There is a common thread that binds the different projects: structures that are beautiful even in the details, careful in the proportions, ecologically sustainable, functional. Hospitals and clinics have strong identifying marks but, at the same time, they adapt to different contexts, they connect with the environment in which they are located.

And so the Anabah Maternity Center named after Valeria Solesin, in Panjshir, takes into account the Hindu Kush mountains that surround it, the river of the Five Lions that flows nearby, and the pre-existing buildings.

The Salam Center, in Khartoum, was conceived and built in this way because it overlooks the Nile; because the residential compound was built around the large mango trees, with such respect for them that the continuity of the settlement was even interrupted in order not to compromise one; because the desert is perceived and fills the mouth and eyes during the habub, the sandstorm, and this has imposed drastic interventions in order to prevent even a single grain of sand from entering the hospital; because being the only free of charge cardiac surgery hospital in Africa, patients come from far away and, then, it's good to have also a guesthouse for relatives.

The Children's Hospital in Entebbe, Uganda is located at an altitude of 1.200 meters, overlooking Lake Victoria. Not only architects, engineers and plant engineers took part in the design, but also doctors and staff responsible for the daily management of the structure.

Participatory planning, therefore. In addition to the excellence of medical care and the beauty of the structure, the Children's Surgical Hospital in Entebbe is also an example of a circular economy: the walls were built with specially treated earth from the construction site; there are 3,000 square meters of photovoltaic panels to use the twelve hours of light of the place. They are on the upper roof and have the dual function of capturing energy and providing shade, to ensure the thermal regulation of the structure. The lower roof, on the other hand, is made of zintek, an alloy of zinc, titanium and copper. Between the two roofs there is space to allow maintenance.

There is a term that well identifies this quest for medical and architectural excellence: healing architecture, medicine that heals.

I dwelt on telling the principles that EMERGENCY applies in the design and construction of health facilities, because I found those same principles

in the lines that inspired the OCOCOLOV workshop and in the works of the participants.

First of all, it was not a theoretical design exercise but a specific place had been identified, in the village of Aboduam, in western Ghana.

The theme, then, concerned the creation of a sort of community center that would respond to the demand for culture, training, health, and free time of the inhabitants of the area.

The presence among the organizers of ghanic.org, a Ghanaian association that brings together about 10,000 cocoa growers, was fundamental to highlighting the physical characteristics of the place, clearly pointing out the needs and expectations of the people who live there.

I do not dwell on Architetti Senza Frontiere Veneto ONLUS because I know that together we will continue the path we started, with research and study projects for sustainable development in Africa and in other countries that have the same right as ours to a better future.

THE AFRICAN LESSON

Patrizia Montini Zimolo, *Università Iuav di Venezia*

“If I listen I forget, if I see I remember, if I do I learn”
(Bruno Munari)

The AfroLab Iuav Study Centre looks back on a long tradition of urban studies that characterises the Università Iuav di Venezia. The natural development of practices of “attention to contexts” has led to broadening the horizons to other territories, to investigate some major issues of our era – climate crisis, rising water, global warming, mass migration, environmental sustainability and social, recycling, energy saving, new poverty and inequality, new urban dimension – which acquire a paradigmatic value in Africa.

Ubuntu, the centuries-old condition of otherness, appears today as a privileged vantage point. It allows new narratives sensitive to current needs and requires the compilation of the continent’s endless stories to rediscover its traditions with the pressing request, by the returning diaspora, of the most up-to-date living and living solutions.

Especially in North Africa, and with particular examples in sub-Saharan Africa, the explosive growth of some cities leads to multiple contradictions. This opens nonetheless the way for new land uses and methods as a response to the traditional conflict between environmental defence and development, with the introduction of smart uses of renewable energy resources and reserves.

A growth for which traditional planning and design tools prove meaningless, requiring instead training in new skills and knowledge as a response to the informal development of the contemporary city.

Issues such as living in relation to the climate, the place and the territory, at different scales, are so intertwined that they can hardly be considered local.

Certainly, the questions posed above for Africa deserve special attention today as we reassess our way of looking at the city.

The sustainability paradigm, whose application in the Western world faces numerous challenges, finds fertile ground on the African continent. Over time, Africa has repeatedly emerged as a laboratory to experiment with new energy technologies, climate devices, sustainable materials, introducing a different concept of the life of the building, where construction is linked to the ground, the sun and the wind, and becomes an element belonging to the world of things.

In an interview published on *Domus* in 2019, David Adjaye observes: “As has happened in literature or in the arts, the idea of singularity has been completely fragmented into multiple trajectories. We use art to express ourselves, but it is the buildings we make that civilise us. I belong to a movement formed by a new generation of architects who seek to break down the singularity of the architectural narrative into many possible futures, which can respond to the specificities of cultures, places, and people, both from a local and migratory standpoint: we are all in constant migration, we are a flow”.

The AfroLab Luav Study Centre, involving students, PhDs and professors, has developed an extensive experience in the design area, providing interpretations and unusual knowledge, opening new channels of study and analysis, and launching – against all odds – research paths that definitely mark a turning point in favour of “Doing” in a continent where the demand for architecture is real, based on the various and differentiated needs of ever-growing cities and populations in continuous movement. “... there is a need for architecture, studying architecture means studying a lot of theory, but the world needs solutions, the community exists, there is a need for architecture, new spaces, schools, social centres, but also theatres, museums that tell about our identity” says Miriam Kamara, Nigerian architect in an interview with the *New York Times* in 2018 in “15 Creative Women of Our Time”.

Today, it seems increasingly urgent to adopt a learning-by-doing approach at Italian universities of architecture. This approach, already practiced for some time in many other European nations to successfully bridge the serious gap between the academic and professional worlds, becomes strictly necessary as regards the African continent, where architecture takes shape in a flow of continuous exchange of knowledge to create practical know-how.





Presentation of the projects developed during the Environmental Sustainability Atelier at the Università Iuav di Venezia for the administration of Matéri in the Atakora Department of north-western Benin, 2014.

Moments of the building activity carried out by the students together with the local workers in the school complex in Zomai (Ouidah) during the internship trip to Benin in 2012.



Moments of the building activity carried out by the students together with the local workers in the school complex in Zomai (Ouidah) during the internship trip to Benin in 2012.

Not surprisingly, the most exciting architecture lessons, the most important moments for the growth of students, teachers and an entire community, came when it was possible to combine teaching activities with the experience of non-profit organisations and NGOs active in local communities. The implementation of projects developed in the lab as preliminary project studies on site, immersed in the reality of the construction and enriched through the knowledge of the community and the place, has given rise to a process where fixed forms are transformed into new forms, repurposing an ancient culture for other tasks and functions.

Everything that was enclosed in the flat paper space was freed in the land of Africa and became living material, a new architecture made with stone, raw earth, iron, sheet metal, and colours, step by step in a common process that involved Italian teachers and students, African architects, the country's authorities and government representatives.

No longer a mere knowledge exchange but a measure of doing that led to changes to the initial project drawings concerning community needs, local construction techniques and workers' schedules, inventing new working methods and localising one's training.

The results achieved in this workshop, collected in this book, further attest to the largely unexplored possibilities found in the intersection of different disciplines and institutions in the project: Architetti Senza Frontiere Veneto ONLUS, the Kwame Nkrumah Pan-African Centre, EMERGENCY ONG ONLUS – which came to the rescue with the experience of doctors who worked on the front line in African territories – but also the interest of the OAPPC della provincia di Venezia, the experience of the teachers and the commitment of the students who worked with steadily growing focus. All united by the awareness that their architectural effort is poised to change people's lives, united by a passion for the craft, something so new, which perhaps none of us could initially foresee and which gave shape to these buildings of the Community Centre for the Abodum community. The way we thought about the project was transformed as we confronted a reality where the demand for architecture emerged from real community's needs. Thus, the main concern was not so much the introduction of new forms – the problem of invention became irrelevant, or was mostly overshadowed by the concreteness of living – as was freeing ourselves from the constraints of prescribed rules, to build something that is both “beautiful” and functional for its intended users. In this combination, students discovered the secret meaning of an architecture, which goes far beyond the initial typological and formal choices.

THE DESIGN OF HEALTHCARE STRUCTURES IN DEVELOPING COUNTRIES: THE EMERGENCY EXPERIENCE

Gabriele Risica, *EMERGENCY ONG ONLUS*

Ennio Rigamonti, *EMERGENCY ONG ONLUS*

The principles of EMERGENCY

“... once again, your work will only concern the protection of the patient’s health” said Gino Strada in the pre-departure briefing of the mission designed to open the Cardiac Surgery Hospital in Khartoum, Sudan. A statement that sounded a bit pleonastic, but the experience with EMERGENCY later highlighted how many aspects in daily medical practice at public hospitals of the National Health Service have little to do with healthcare itself.

At EMERGENCY’s health facilities, the total lack of bureaucracy, the common effort of all to apply their own skills solely and exclusively to the resolution of patients’ clinical problems, and the total absence of any economic drive create a different and exciting work environment.

This way of “healing” is based on the principle that the protection of health is a right – perhaps the first – of each and every one of us, as well as a measure of equality. And to avoid discrimination between those who can and those who cannot pay for health care, it must be free of charge.

Equality also means that structures must be functional but also “scandalously beautiful”: beautiful because beauty is a recognised contributing factor to care and healing; scandalously to debunk the usual logic of “we are surrounded by

dilapidated buildings anyway”. Beauty, therefore, increases the impact of the intervention on the local environment, evidences the real commitment of its designers towards the service users, and educates and stimulates improvement.

Food for thought for the design

As a rule, the particular situation of the countries where EMERGENCY intervenes requires an in-depth analysis of specific conditions, as well as the adoption of different design solutions and special operating methods: efficiency, effectiveness and appropriateness of the interventions, with a view to making them sustainable and continuous over time.

We must point out the key difference between the terms efficacy and efficiency. The first relates to the actual achievement of expected results while the second relates to the methods adopted to achieve them. As such, the latter can be defined with respect to parameters that may be utterly unrelated with the expected result. In fact, efficiency mainly relates to the yield of resources used and nearly always has an economic and financial nature. Quite often, however, ensuring an effective intervention does not necessarily lead to an optimal financial or economic yield. In this context, a trade-off is usually required between a given healthcare quality and the financial resources required to achieve it; EMERGENCY, however, will always favour the former¹.

Another aspect to bear in mind is that of appropriateness, which concerns not only medical practices adopted but also all activities envisaged, up to the choice of technologies used to equip the sanitary facility, or the executive design of the facility itself. Indeed, the structure must be suitable for the context where the intervention will unfold².

Therefore, appropriateness means being able to develop a project that can best exploit the dynamic balance between local resources and facilities and the means provided by international entities. Dynamic because, for the project to be sustainable, the education and training of local resources should increase to ensure self-sufficiency over time. The other fundamental aspect, designed and built from the outset, concerns maintenance so that buildings remain beautiful and efficient in the long term.

Boundary conditions

Researching the situation of the potential intervention area is paramount for the choice of the structure type to be developed. Key research parameters include not only the area’s population, health demand, and expected patient



Salam Centre for Cardiac
Surgery. Ph. Marcello Bonfanti.

volume, but also the existence of other health facilities, their specialisation, services available and the distribution throughout the area (in terms of distances and travel times), along with unmet health needs, which influence the ancillary services required for the settlement – also in terms of additional functional spaces to be provided in the project.

In EMERGENCY’s experience, all these elements are assessed in integrated fashion among all subjects involved in the project: management, planners, the health function, the logistics function, etc.

This assessment determines the type of structure to be established, the medical functions to be provided, the admission criteria, the estimate of patients and the number of beds to be provided. And yet, the healthcare facility thus defined is only the central – obviously fundamental – part of the healthcare process to be offered to the area in question. Aspects relating to the identification of patients to be admitted to the facility, their transport thereto (which is more relevant the larger and more sparsely communicated the reference area is) and the subsequent follow up after discharge are aspects to be carefully evaluated to ensure healthcare effectiveness.

At this point, the actual architectural design phase begins, during which the integration with the other parties involved continues.

The definition of the architectural and executive project rests heavily on the functional medical plan, a document that collects the information necessary to develop the internal distribution of the clinic spaces, their sizing, and other information. Drafted on the basis of planned activities, it defines the departments to be provided, the functional and accessory spaces and their surfaces, according to the methods that will be used and based on the expected workload.

Once the distribution plan of the spaces has been defined, the plan is verified on the basis of the internal flows of the clinic (of medical staff, auxiliary staff, patients, food, etc.) with the aim of eliminating and resolving any conflicts that may endanger the health safety of patients and health and non-medical personnel (for example, ensure the separation of the “clean” areas, where there is no danger of contamination and/or infection, from the so-called “dirty” areas).

The health situation in Ghana

The healthcare situation in the country has obviously followed the history of the last century. In 1874, during British colonialism, the country had a Medical Department, a Laboratory Branch for research, a Medical Branch of hospitals and clinics, and a Sanitary Branch for public health. All these facilities catered to

Western settlements, essentially in response to Western people's fear of tropical diseases. In villages, "traditional medicine" remains the common practice.

The euphoria of independence in 1957 and the high price of the country's main resource, cocoa, gave a boost to the spread of health and education, but efforts still focused on urban populations. Health protection programmes were financed through general taxation, so access to every public hospital was free for all.

The onset of the economic crisis, to which was added the fall of Nkrumah in 1966, prompted successive governments to introduce initial, limited co-payment for health care costs. As the economic situation worsened in the 1980s, however, many social and health services became inaccessible to most of the population, and health services fell into disrepair.

In 1985, the pressure on the government – exerted by the World Bank and the International Monetary Fund under the pretence of "aid" – to rein in public spending led to the introduction of the Hospital Fees Regulation. Healthcare spending progressively dropped from 10% of GDP in 1983 to 1.3% in 1997.

Between 2000 and 2003, during the so-called "African Spring", the hypothesis of a complex national insurance system to overcome the current cash-and-carry took shape. In 2010, 5.2% of Ghana's GDP (USD 30 per inhabitant) was spent on health care and, since then, all citizens have had access to primary care. The current health system is structured on five levels (health posts, health centres, district hospitals, regional hospitals, tertiary hospitals). Unfortunately, their distribution in the country remains very unequal: rural areas often lack a health centre and patients still rely traditional medicine or must travel long distances.

In the rural area of Aboduam, specifically, the presence of five health facilities is reported which, from the available images, appear to be rather dilapidated and lacking based on the description of services. Moreover, the hilly nature of the territory makes access a protracted affair for most. The seemingly better equipped and closer structure (about 1 hour walk from Aboduam), the Sefwi Wiawso hospital, celebrated, for example, the installation of electricity only last summer.

As for the most evident health needs, alongside maternal-infant health (maternal peripartum and infant mortality in the first year and in the first five years are still very distant from high-income countries), infectious diseases (enormous progress has been made but once again the distance from high and middle-income countries is blatant), non-communicable diseases are assuming an increasingly important role as the chances of reaching a precise diagnosis grow. An example: 80% of breast cancer deaths worldwide occur in low-income countries. 5-year survival from breast cancer diagnosis in Ghana

is 25% versus 90% in the G7 countries. Therefore, these epidemiological aspects must also be kept in mind when designing a health facility.

It is then necessary to consider available staff, whose qualification determines the complexity of the feasible project: for a FAP (First Aid Post), non-health-care personnel (appropriately trained) shall suffice; for a basic clinic, nurses/midwives; for a primary care centre, a general practitioner; for a clinic/hospital, specialist consultants.

It is also necessary to provide training for local staff, which must strive for self-sufficiency in project management in the medium to long term. Accordingly, project facilities must provide adequate spaces for e-learning and telemedicine that will support on-the-job training, which is essential in the early stages.

Notes

1. This is the case of the gardens inside the EMERGENCY hospitals, or the rehabilitation workshops for those injured by mines. Maintaining properly designed and well-tended gardens constitutes a cost, the return of which in health terms is difficult to quantify. An inefficient solution from a financial point of view, but certainly effective for the patient's well-being.

2. Several reconnaissance missions for the assessment of interventions reported very modern eight-storey hospitals in places where the electricity network, due to environmental conditions, was available only a few hours a day, and which cannot be powered with diesel generators alone. Therefore, only the ground floor was in use, as there was no certainty of continuity of use for the other seven.

DESIGNING ACCORDING TO NATURE

Emilio Antonioli, *Università Iuav di Venezia*

Matteo Silverio, *Architect*

Designing a building in an environmental context that is different from the one in which it is usual to work is not a simple operation. There are many factors that influence the functioning of a building organization, especially if it is as complex as the one proposed for the OCOCOLOV workshop, in which a single project had to collect different functions.

Sun exposure, ventilation, rainfall, air humidity but also the altimetry, site accessibility and availability of resources: they are just some of the factors that require, as Victor Olgyay called it, a “bioclimatic approach to the regionalism of architecture”¹. An approach that sees the climate as one of the main design tools for creating effective buildings, capable of adequately responding to the needs of comfort and usability imposed by the specific conditions of the site.

Therefore, the starting point for the design workshop was a bioclimatic reasoning, in order to transform the site’s critical issues into potential for the project. The village of Aboduam is situated in Ghana, in an area characterized by deciduous forests and intense rainfall which can reach 1,400 mm/year, concentrated from May to October. The climate is muggy for most of the year, with relative humidity reaching 90% during rainy periods. Average temperatures are between 20 °C and 33 °C. The dominant ventilation comes from the ocean to the south/southwest, from which cool currents come and allow to

withstand the humid climate that characterizes the area². Another fundamental element was evaluating the availability of resources in the area. The village is located within the Ghanaian cocoa district, the second largest in the world. Agricultural production is rich: cereals such as wheat, rye and rice, fruit trees, various vegetables and tubers grow there. Very common are also plants such as bamboo and raphia, a palm that produces leaves with long stems that can be used as a building material. Less common is solid wood. Although Ghana is rich in quality forests, today the production of timber for construction has been reduced as a result of massive deforestation due to overexploitation during colonial and postcolonial period.

Eventually, even if the village is provided with electricity by the national grid, the shortage of infrastructural networks highlights the need to operate the new civic center autonomously and off-grid, in order to ensure its continuous operativity.

These conditions were the basis for the development of projects during the workshop. Moreover, each project idea has implemented one of the four common strategies.

The first strategy concerns the wall stratigraphy of the buildings, all characterized by thick and massive walls, with high thermal inertia in order to soften the incoming heat wave. To achieve this result, locally sourced materials were used, in particular raw earth, both with traditional techniques such as *pisé* but also through the use of innovative techniques such as bricks and blocks obtained by mixing clay, agricultural waste and cement binders.

The second strategy acted specifically on the roofs in order to ensure high protection from the sun, using the large protrusions as sun screens, and allowing the collection of rainwater. Using materials such as raphia or bamboo canes, large covers, but light at the same time, have been designed in order to maximize internal comfort and collect as much water as possible. In some cases, especially for the cinema/auditorium building, impluvium design solutions, capable of transforming water collection from a technical device to a design tool, have been developed. In these cases, innovative materials have been added to traditional materials such as transparent ETFE films or metal sheet covers capable of guaranteeing the necessary resistance and durability performance.

Another strategy concerned the exploitation of the wind both to improve internal environmental comfort and to produce energy. By optimizing the layout and orientation of the buildings, as well as of the openings and windows, the ability to exploit the prevailing winds was maximized by using openable window and door solutions, sunshades and perforated walls (*claustra*).





Waste from cocoa processing.
Ph. Konrad Lembcke.

Furthermore, the inclusion of micro wind turbines in some projects has made it possible to exploit the wind in order to produce electricity and make buildings autonomous.

Finally, the possibility of reusing cocoa waste was investigated. Although some research show the possibility of using wood waste from the cocoa plant in order to produce recomposed wood panels, the use that seems to be most effective, due to the large quantities of organic waste that cocoa production involves, is the production of biogas. For several years, Ghana has made investments for the construction of large-scale biogas plants but also of small plants for domestic use³. This development brings with it important implications as it is possible to autonomously obtain thermal energy and electricity from biogas, using only agricultural waste and water.

Furthermore, “circular systems” such as the one described make it possible to give value to waste and can trigger new micro-economies capable of sustaining local communities. Examples of these “circular economies” were presented to the workshop participants during the introductory lessons. For example, the project promoted by Father Nzamujo in Benin aimed to solve either the problem of collecting ejections (animal and human), and the water hyacinth (an aquatic plant that makes difficult fishing and moving through the lake). Indeed, special digesters transform the sewage from bathrooms and kitchens as well as mowed hyacinth to methane which is then used to produce hot water and electricity. The residual waste from the digesters is also used as feed for zooplankton and phytoplankton in a local aquaculture project.

The reuse of “secondary raw materials” was not the only solution considered by students for their projects. In fact, many have re-proposed traditional construction techniques - such as clay walls - in a contemporary key. In this sense, in the early stages of the workshop, innovative construction solutions in raw earth were analyzed starting from the projects developed by WASP. Among these, the “Gaia” project is significant since it is the first Italian housing module in raw earth built in 2012 using 3D printing. The project is the result of the use of local materials (clay) and agricultural waste resources (agricultural waste from rice) printed in 3D; the extruded mix is a biodegradable material with a reduced environmental impact. Another important reference was “Tecla”, the first “habitat” built by WASP in 2021 using simultaneously multiple collaborative printers and in which the printed parts also act as structural elements. In addition to the WASP experience, other experiments were also analyzed such as “Terraperforma”, promoted by the Institute for Advanced Architecture of Catalonia. The project involves the construction of modular bricks (easy to

print and transport) whose external texture can be changed in relation to the bioclimatic characteristics of the project area. Or again, the “14trees” project whose purpose is to build economic buildings in a safe and fast way, making up for the housing shortage in many areas of Africa. The 3D printed buildings for the “14trees” project use a mixture of raw earth, concrete and other “local” materials, offering a prime example of how new technologies can contribute to sustainable development on the African continent. So far, the project has led to the construction of 52 houses in Kenya and a school in Malawi, demonstrating the effectiveness and potential of these new technologies.

Starting from these examples and from the four general strategies above described, each working group has therefore developed a specific strategy for its project, capable of combining local resources, innovative production methods and technological solutions with low environmental impact.

Moreover, a common reasoning took place in order to speak about energy production systems from renewable sources (biogas, wind and sun) capable of integrating with the single project through formal solutions studied case by case. These reflections were translated by the students into “circular economy schemes” which accompany the reading of the projects and illustrate the sustainability choices developed by each work group.

Notes

1. Victor Olgyay, *Progettare con il clima. Un approccio bioclimatico al regionalismo architettonico*. Padova: Franco Muzzio Editore, 1990.

2. The climatic data were obtained from the portal <https://it.weatherspark.com> with reference to the nearest city, Kumasi (last view December 2021).

3. Richard Bayitse, Biogas technology development in Ghana: contributions of CSIR's institute of industrial research & the ACTUATE project, *RECIRCULATE*, Ottobre 2021 [online]. Available on <http://wp.lancs.ac.uk/recirculate/2021/10/biogas-csir-iir/> (last view December 2021).

ABRI – COOPERATION FOR ARCHITECTURE IN CÔTE D’IVOIRE

Stefan Pollak, *AKO – architettura a kilometro zero ETS*

Overall, the share of buildings built with architects’ involvement is very low. In many parts of the world, construction work is still undertaken by the users themselves. This is also the case in the hinterland of Côte d’Ivoire, where the AKO-architecture association has been operating since 2018. In these areas, architecture still respects the environment and is substantially aligned with the needs of the local population. Building materials mainly consist of unfired earth and vegetable fibres, natural resources that are locally available with a certain abundance and that, when properly used, can create healthy and effective spaces for residential use or other functions. Too often, however, local construction shows technical limitations due to rough execution or improper introduction of modern materials. This leads to erosion problems on walls and foundations, or to unfavourable microclimatic conditions. Especially for more modern materials, the added difficulty posed by extra maintenance requirements accelerates construction degradation, especially for structures built without the necessary technical expertise.

Such observations led to the definition of “ABRI – Architecture et Bioconstruction pour l’environnement Rural Ivoirien,” a multi-year programme of sustainable architecture that the Italian association is conducting in collaboration with a network of Ivorian associations. The programme includes training, awareness-raising and

construction initiatives aimed at improving building quality in the inland areas of Côte d'Ivoire. These regions undergo major exoduses, especially of young people. Activities involve local workers, students from local schools, young people looking for a first job, but also European university students interested in understanding construction systems derived from the local tradition, albeit updated on a technological and compositional level. This initiative thus aims to create added value directly on the spot and develop, together with local populations, small technological improvements suitable to produce healthy and comfortable homes at affordable prices, which can express their inhabitants' identity.

In 2019, thanks to funding from the Italian Waldensian Church and some private donors, it was possible to start a complete training cycle on such topics. More importantly, the training included the construction of an experimental building in Prikro, a municipality in the Iffou region that lies six hours away from the country's economic capital, Abidjan. The programme's main partner is the network of associations Eau et Miel, operating throughout the northern part of the country with activities of social promotion, environmental protection and professional start-up, especially in the beekeeping sector. For one of its educational facilities, the municipality required a small service building consisting of a warehouse for tools and food equipped with an office station, accommodation for a caretaker, and reception spaces for local workers. After consultation with the local authorities, the AKO team developed a project to meet such practical requirements.

For the execution, it was decided to launch a worksite school aimed at local youth. Approximately 30 young men and women from the surrounding area had the opportunity to learn the basics of sustainable construction while working alongside staff who was already trained in construction work. The same construction site had also hosted a group of European students for shared practical training. Sharing – also on a physical level – construction tasks with peers from another continent has proved to be an additional source of motivation for local youth. The most enjoyable aspects of such cooperation lighten the effort and create fertile ground for challenging established practices and bringing out new constructive solutions. Prioritising natural materials, with lower toxicity by their very nature, also facilitates the management of safety aspects, which should never be neglected, let alone at a worksite school.

From a construction point of view, two innovations were introduced at this construction site: the use of the "pisé" technique for structural walls and the use of a bamboo roofing system. Bamboo, although available in the area, is not part of the construction culture except for fence elements or other overly simple components. In the Fierté building, bamboo is used for roofing and for intertwined domes that will serve as a ceiling for the most protected environments. Interna-





Côte d'Ivoire, Prikro, preparation of raw earth samples with different mixtures for the construction of the rammed earth components.

Côte d'Ivoire, Prikro, transport of the dome made of bamboo strips intertwined with the function of a false ceiling to protect the rooms.

Côte d'Ivoire, Prikro, prototype for a bamboo roof with "eye beams".



tional cooperation in this field is enriched by technology transfer on a larger scale. In fact, Italian designers have referred to construction systems from other parts of the world including beams and box pillars with wooden pins (box-truss) of Colombian origin, or the already mentioned intertwined domes, a reinterpretation of the Domocaña developed in Peru.

In the same way, the numerous construction techniques with unfired earth known and practiced in the area did not consider the “pisé” technique, whereby mixtures of humidified earths are compacted inside solid formworks. Local operators immediately grasped its potential and learned how to put the formwork in place, prepare earth mixtures correctly, and which movements to perform to ensure effective crushing. These processes require heavy manual work but pose no strain on the raw materials budget; the structure is literally built with what you have under your feet.

Prioritising locally sourced natural resources also aims to limit the use of imported materials. In the specific case, only cement and steel were used for the foundations. Elevated parts of the building consist of unfired earth, bamboo and straw, low-polluting materials, all available on site.

Although it serves social purposes with the reception space at the entrance, or commercial ones with the small warehouse-office, the building has a purely residential dimension, and thus lends itself to being a pilot project for some technical and typological solutions that, if accepted, can be replicated in current construction. Extending the coverage also above spaces between walled volumes to create covered but unconfined environments, or the compost toilet as a means to reduce the toilets’ water consumption are examples of solutions applicable to the local residential architecture.

The construction site, further to its training purpose, also becomes a test bed for a series of small but important innovations. Proposed changes are hardly dramatic but rather reconciled with proven and tested implementation methods. In the Fierté building, for example, the large peeled wall, which also acts as an urban fifth, stands against smaller wall cells, made with blocks of compressed earth, a technique already widely used on site. By including several technical solutions for the same problem within a pilot building, the people involved expand their understanding and know-how of construction techniques. Only time will tell which approach shall prevail among the techniques and preferences of the inhabitants.

Because, just like some renewable materials, which can be grown, we must also nurture another cornerstone of cooperation architecture: mutual trust between the parties involved.

COCOASCAPES

Federico Alcaro, *Architect*

Valentino Consiglio, *Architect*

6°12'45.3" N, 2°27'44.3" W

The context for the community centre project is the Sefwi Wiawso district in the north-western region of Ghana.

A country in sub-saharan Africa, overlooking the Gulf of Guinea, Ghana is considered a model for the entire African continent. A former British colony (independence was achieved with Kwame Nkrumah in 1957), the country is characterised by sustained economic growth, making it one of the largest economies in West Africa (in 2019 it will be taken out of the International Monetary Fund's aid programme), based on exports of oil, cocoa and gold and sustained by democratic stability. Yet not all of the population, just under 30 million, is able to benefit. Ghana is a "rich" country, but about 25% of Ghanaians live below the poverty line, mostly in rural areas. The HDI (Human Development Index), referring to 2019, ranks Ghana 138th out of 189 countries, but the value of the index drops dramatically with reference to the inequality expressed by the IHDI (Inequality Human Development Index) across three parameters: Inequality in life expectancy at birth, Inequality in education, Inequality in income).

The country has two large urban areas, the capital Accra (2,070,000 inhabitants, 5,074,000 aggl. urban) and Kumasi (2,035,000 inhabitants, 3,998,000 aggl. urban), a city that has almost doubled its number of inhabitants com-

pared to the beginning of this century, followed by the two “twin cities” of Sekondi-Takoradi (713,000 inhabitants) and Tamale (371,000 inhabitants) and other small administrative centres – Ho, Koforidua and Sunyani – with growing populations.

The territory consists mainly of a plateau that reaches 200-300 metres and descends towards the coastal strip and in the basin of the large Volta reservoir, while the highest peaks reach just 900 metres.

Enclosed between the coast in the south and the savannah in the north, Ghana’s central belt is made up of a large tropical forest that occupies about one third of the country and is characterised by the presence of traditional communities with a strong identity and fertile agricultural land. The introduction of cocoa cultivation in 1879, mainly concentrated in the southern part of the green belt below the Volta River, which led to the establishment of the so-called “cocoa district”, has given the whole area a strong imprint. This is where resources such as timber, cocoa and minerals come from, as well as some of the minor crops for export and much of the food consumed in the country.

The Sefwi Wiawso district is located in the north-western part of this area, about 156 km from Kumasi.

With an altitude ranging from 150 to 610 m above sea level, the geographical position and the hilly topography make the climate of the area peculiar with high temperatures all year round, mostly cloudy skies accompanying rainfall and intense humidity.

The entire district is home to many relatively recent settlements (less than 30 years old), created through the network expansion of villages within the massive forested area, following legal and illegal logging and the creation of connecting infrastructure to encourage the cultivation of cocoa, the predominant cash crop.

With an area of 2,634 square kilometres and a population of 186,658 people, the Sefwi Wiawso district is administratively divided into 11 villages: including Aboduam, where the project area is located.

The village, which has a population of about 4,000 and is situated on a plateau 261 m above sea level, is 4.5 km (8 minutes drive) from Sefwi Wiawso, 150 km (3 hours drive) from Kumasi and 370 km (8 hours drive) from Accra.

Services and infrastructures in the village are lacking or completely absent, such as health facilities. Specifically, the closest health facilities to Aboduam are two hospitals (one of which is private) and two private clinics, all in Sefwi Wiawso, which provide basic services with small specialisations in ophthalmology, odontology and traumatology. Considering the state of the roads and the considerable height difference, the distance from Aboduam to the first useful health centre is more than an hour’s walk.



Country Profile

- Population: 32,372,889
- Population growth rate (average annual %): 2.26%
- Urban population (annual %): 58.60%
- Rate of urbanization: 3.06% annual rate of change (2020-25 est.)

Source: CIA World Factbook - last view December 2021.
(<https://www.cia.gov/the-world-factbook/countries/ghana>)

Satellite view of the Sefwi Wiawso district including Aboduaam and 10 other villages with indication of the distances from the main cities and relative travel times.





Sefwi Wiawso
4.4km/ 1 hour walking

project site

Abodum

Kumasi
150km/3 hours drive

Accra
370km/8 hours drive

Panakrom

Nyamebekyere

Bosomoiso

Adienbra

There is one government primary school in the village, while secondary and senior high schools, both government and private, are spread throughout the district. Two transport companies, one of which is private, guarantee connections with the main towns in Ghana.

A fundamental spatial and temporal reference point for the community, the market in Aboduam is traditionally held along the streets; there is only one covered area used for ceremonial practices and worship.

A community centre for Aboduam

Small villages such as Aboduam can represent a model of growth based on precise development actions that are peripheral, inclusive and self-sustaining. The village in this way becomes a node that is part of a growing network that extends to the level of district, region, macro-region, nation.

The functional programme offered the opportunity to reflect on the possibilities that buildings for collective use together with a small cinema, a library, and a health facility can together build a place with a strong social role, through the use of “in-between” spaces, in which there is a continuous visual and spatial relationship both between the individual buildings and with the context.

In response to precise indications regarding spatial and functional requirements, the design proposals include a small cinema/theatre for about 200 people with a large space for outdoor projections, sometimes in the form of an amphitheatre; a library intended not only as a living space for the community to meet and promote knowledge, but also equipped with classrooms/laboratories for education and training activities, including health, and for the dissemination of culture and sustainable lifestyles; a first aid and outpatient clinic, in some cases associated with a small clinic in response to needs identified by the study of data from the area (paediatrics, obstetrics, traumatology, treatment of infectious diseases such as typhoid and malaria). Places to care for body and mind, where people can meet and exchange knowledge and know-how.

The project area, currently used as a football pitch and as a place for parties and events, is located on the north-west edge of the village and is suitable for the new functions. It is about 100 square metres, sloping slightly to the north, bordered to the south and west by a dirt road that divide it from the houses and the vegetation (to the west), to the east by a small clearing with a telecommunications tower, and to the north by a tropical forest with palm trees and various types of fruit trees, as well as cocoa plantations.



Aerial view of Abodua with traditional courtyard houses.

Ghana, Aboduam, traditional house consisting of a series of rooms with various functions arranged around the court. Entrance and interior view.



The design proposals focus on a number of themes, starting with the topography of the site and the powerful presence of the surrounding landscape, dominated by cocoa plantations and orchards.

One of the themes explored in several projects (Seeds of the future, The embrace, Nest, Nkontim) was that of the enclosure. An archetype that defines settlement in a place, it has been interpreted not only as an element of space delimitation, more or less permeable, but also as an ordering principle that defines inter-scalar relationships between the surrounding landscape and the architecture of the community centre, as well as being a device that configures community public spaces and coexistence.

Another theme investigated was the relationship with the landscape, which in some cases is direct (Bio-loop), with buildings almost lost in the vegetation that becomes an element of the project, or purely visual, so that the building can also become a privileged observation point for the surrounding plantations (Under canopy, Collective layers) in others.

Underlying all the proposals, there is the research to construct, through the articulation of the buildings, spaces – patios, covered or uncovered courtyards – that make the community centre a place of coexistence, while giving the complex a unified character. These spaces can host the market, useful community facilities (e.g. drinking water supply points), events and ceremonies, while in the health care facilities they become gardens, children's play areas and waiting areas.

All the projects have sought to integrate traditional building solutions with new technologies, aimed at making the most of local resources, especially natural resources or those deriving from the recovery/recycling of waste materials such as those from the cocoa processing chain, in a circular economy, demonstrating that limited resources can be transformed into design opportunities.



View of the access road to the village of Aboduam, built on the slopes and top of a hill at +261 m above sea level. The village is about an hour away on foot from Sefwi Wiawso.

View of the project area from the southern edge near the town with the landscape of the surrounding hills in the background and the presence, on the right, of the telecommunications tower fence.







WORKSHOP PROJECTS

September 27th - October 9th 2021

THE EMBRACE

Tosca Bivi, Elisa Montanari, Giulia Todesco

COLLECTIVE LAYERS

Matteo Coppe, Riccardo Dall'Osso, Hao Sheng

BIO - LOOP

Althea Andreoni, Isthara Costa, Giulia Prayer Galetti

NKONTIM

Alessandro Leonardi, Maria Vittoria Morina

SEEDS OF FUTURE

Joanna Adamczyk, Arianna Gorin, Lorenzo Lazzarotto

NEST

Giacomo Bregolato, Noemi Ena, Elena Zilli

UNDER CANOPY

Michael Bordin, Emiliano Manni, Mauro Serafin

The Embrace



How can a library, a cinema and a clinic be brought together in a single space?

On the one hand, a place of education and gathering for the community, and on the other, a space for care, where health becomes a priority. The masterplan is generated by the intersection of two concentric circles - the enclosure walls - with a linear element, namely the volume housing the cinema and library. The entrance is a sort of niche, a diaphragm space, whose permeability allows one to look into the private courtyard of the clinic, which has its own independent access. The two worlds are enclosed: the larger circle wraps around the other like an embrace of the community towards the clinic. Hence the title of the project, which emphasises care and attention to patients, especially pregnant women.

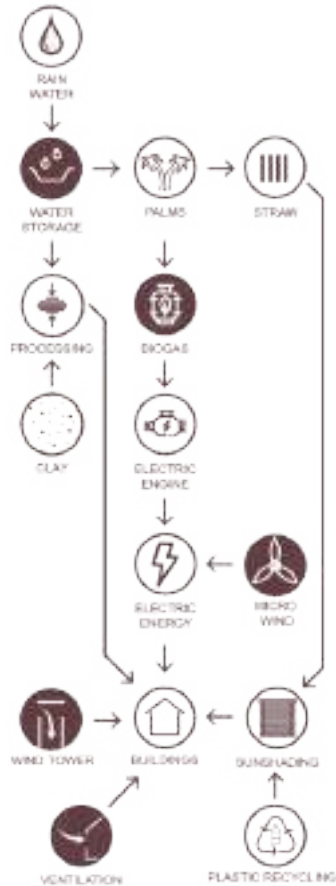
The library and cinema building uses an ancient construction technique, the pisè technique, reinterpreted in a contemporary key, using earth from the excavation of the foundation to build the walls.

Team

Tosca Bivi
Elisa Montanari
Giulia Todesco



CIRCULAR ECONOMY AND BIOCLIMATIC STRATEGY



GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Waiting area
3. Toilet
4. Changing and dirty area
5. Triage area
6. Staff toilet
7. Patient toilet
8. Emergency room
9. Dressing area
10. Pharmacy
11. Storage
12. Resting room & CHO
13. Technical area
14. Surgery
15. Sterilization area

MATERNITY CENTRE

16. Garden
17. Triage area
18. Dirty area
19. Toilet
20. Waiting area
21. Laundry
22. Delivery room
23. Labour room
24. Storage
25. Hospitalization
26. Porter's lodge
27. Ambulatory
28. Technical area

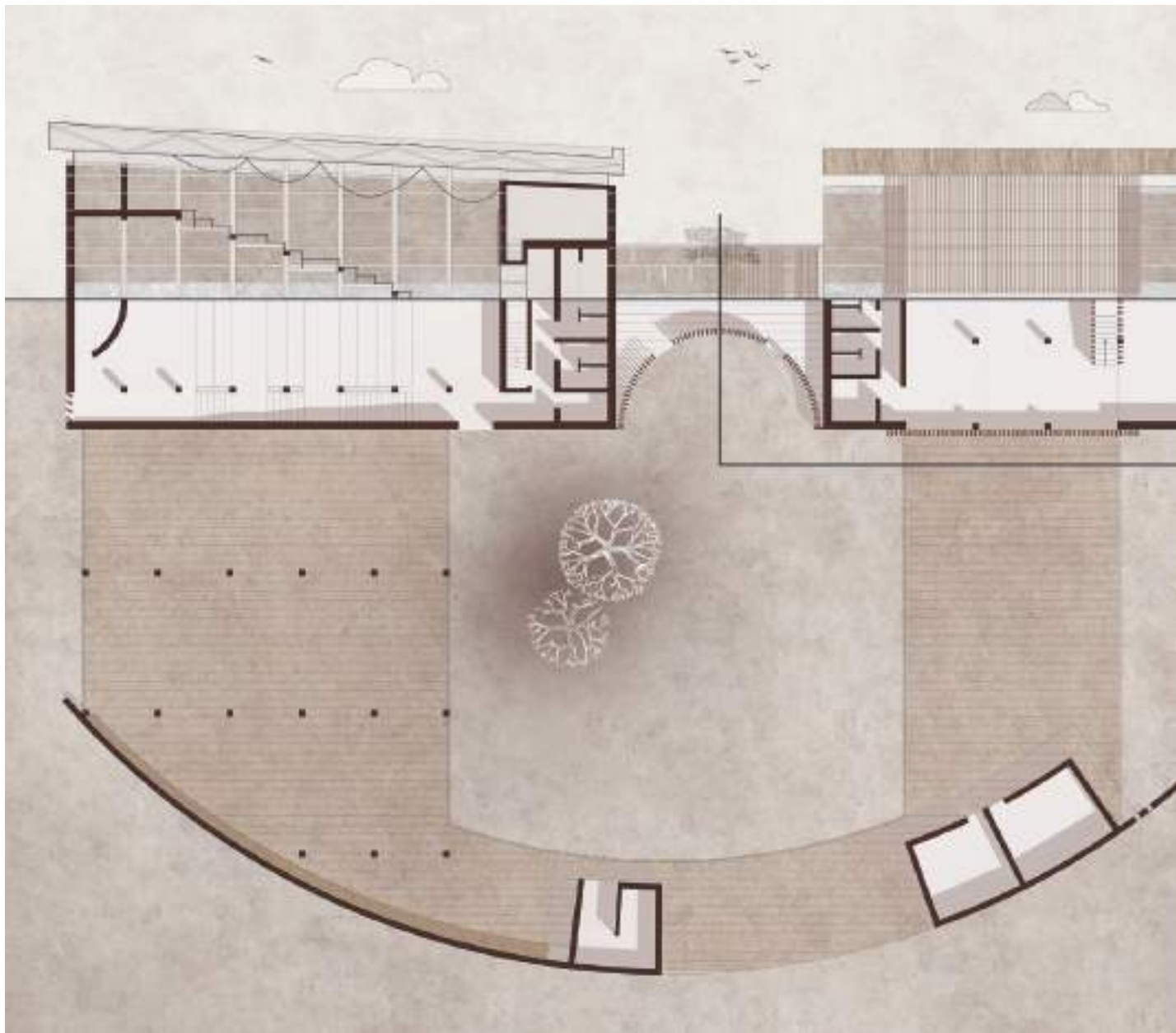
CINEMA

29. Projection room
30. Movie theatre
31. Outdoor cinema
32. Toilets

LIBRARY

33. Reading room
34. Laboratories
35. Open-air reading room
36. Toilets
37. Market
38. Public fountain
39. Lectures and activities
40. Playground







Plan and longitudinal section of the buildings that house the cinema and the library.

1:25 scale model in which the choice of the pisé construction technique and the large roof supported by a structure with pillars and wooden reticular beams are highlighted.



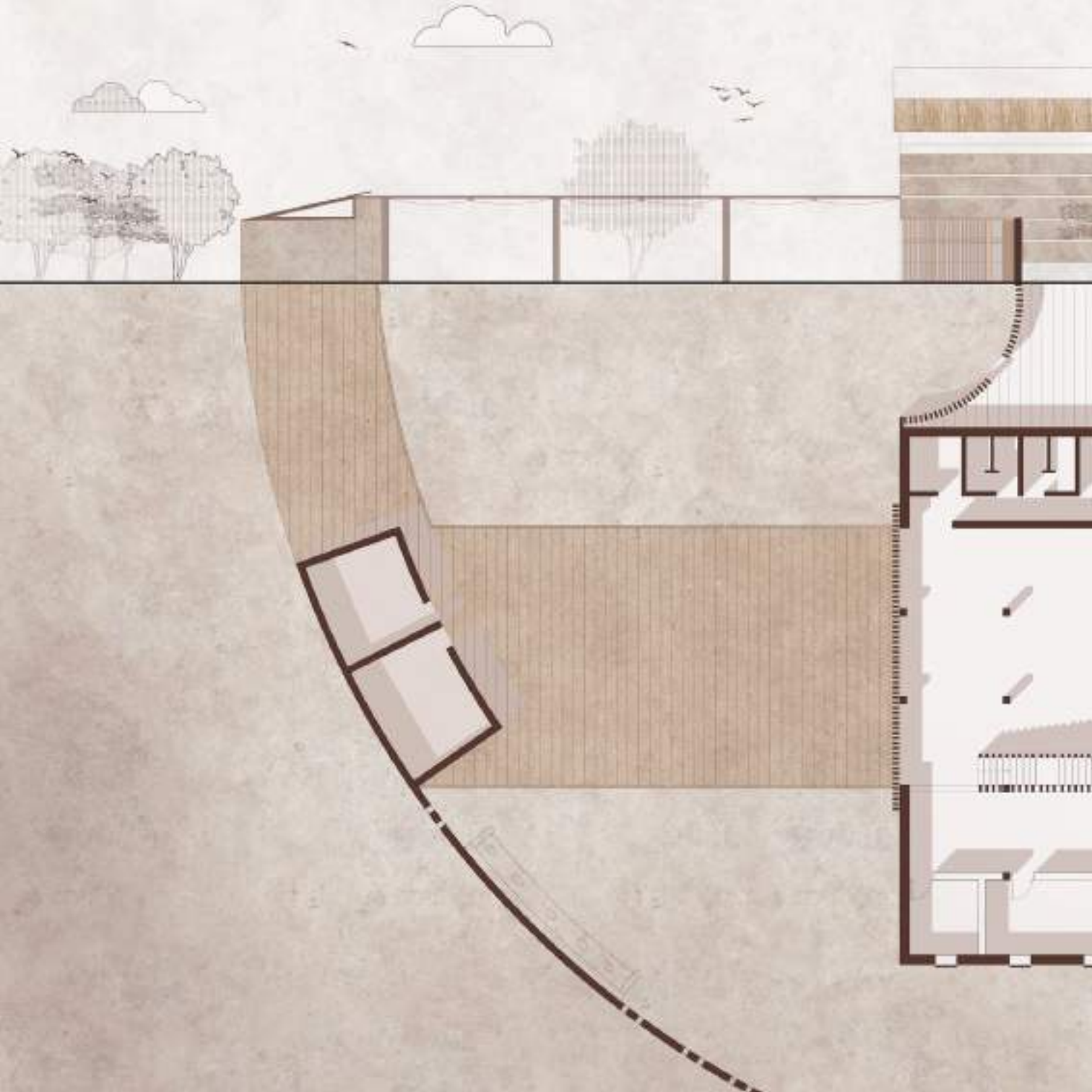


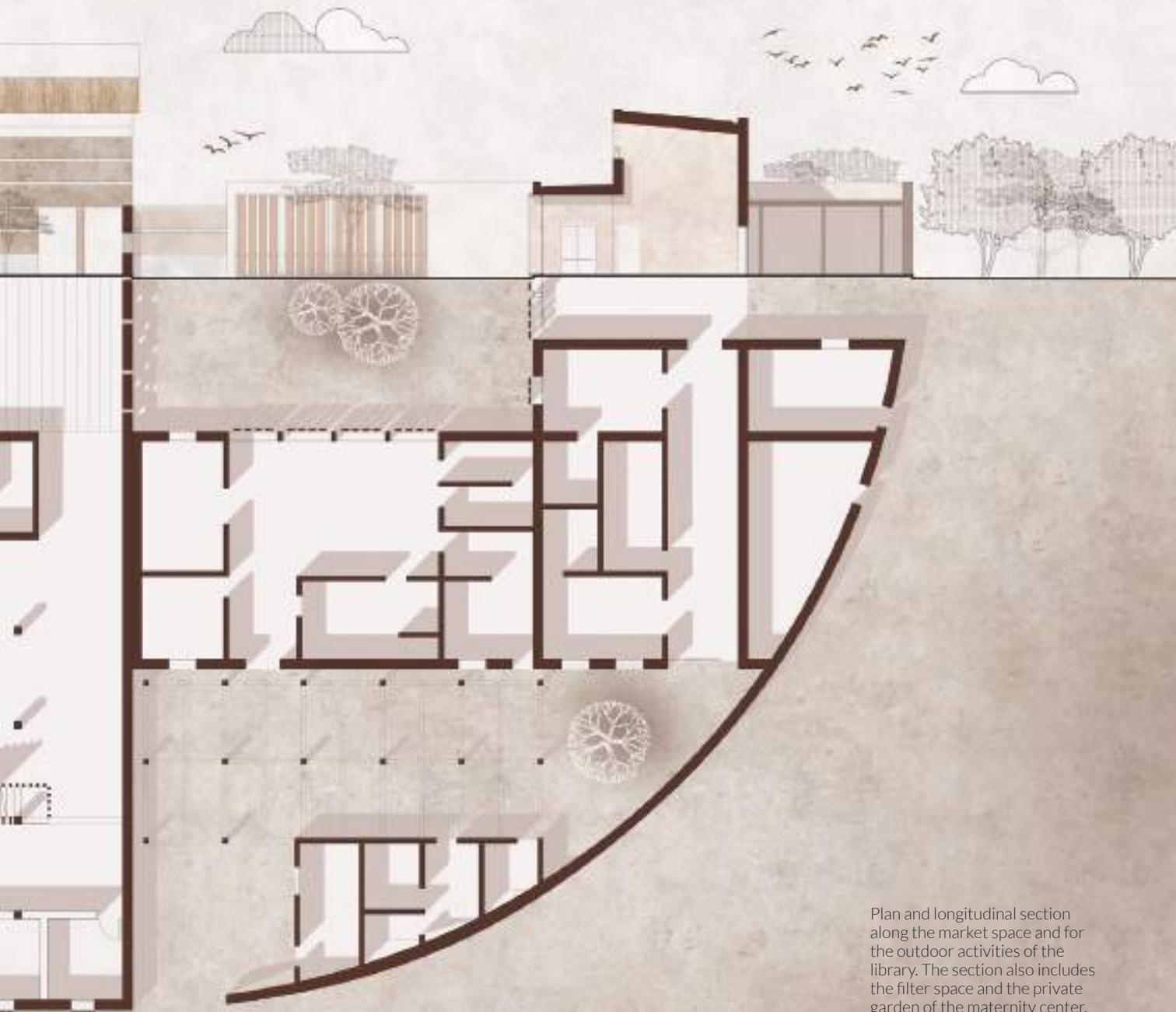


View from the filter space located between the cinema and the library towards the market area.

The main facade of the library seen from the area used for outdoor projections equipped with a light wooden structure that supports curtains to ensure shading.







Plan and longitudinal section along the market space and for the outdoor activities of the library. The section also includes the filter space and the private garden of the maternity center.

Collective layers



Collective layers is the result of an idea based on the need to distinguish two areas with different uses, each one with its own character, even though they are located in the same context. The first, which houses the library and the cinema, with a playground and an area with sports equipment, is characterised by noise, while the second, occupied by the paediatric clinic, is characterised by silence. While the library and the cinema have been designed as light structures made entirely of local wood, with steps and a system of opening panels, also made of wood the former, and large platforms housing small volumes the latter; the clinic is a closed, protected building facing its own entrance courtyard. The entire system dialogues through the open spaces which act as meeting places and give the complex a unified character.

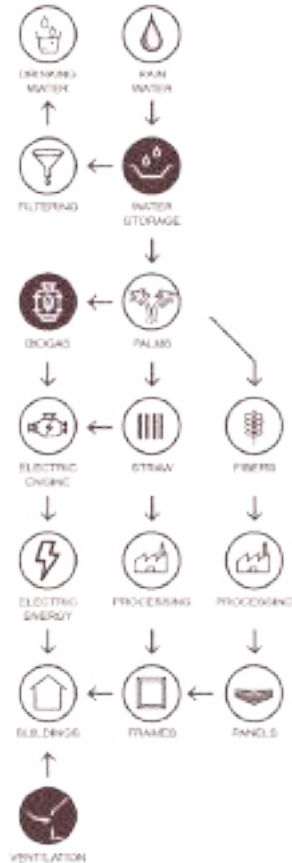
In addition to using native materials, the project adopts strategies which respect the surrounding environment, including the collection of rainwater, which is treated and then made available through a network of supply points concentrated in the public spaces and devices which encourage natural ventilation in the rooms.

Team

Matteo Coppe
Riccardo Dall'Osso
Hao Sheng



CIRCULAR ECONOMY AND BIOCLIMATIC STRATEGY



GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Dressing
3. Toilet
4. Emergency room
5. Resting room & CHO
6. Laundry
7. Dirty area
8. Store
9. Changing room
10. Staff toilet
11. Waiting room
12. Triage area

PEDIATRIC AMBULATORY

13. Patient toilet
14. Ambulatory
15. Office
16. Toilet
17. Pharmacy
18. Ambulatory
19. Ambulatory
20. Waiting area
21. Technical room

CINEMA

22. Covered cinema
23. Storage
24. Toilet

LIBRARY

25. Exhibition spaces
26. Multifunctional spaces
27. Reading spaces
28. Playground
29. Open air cinema
30. Public tap
31. Meeting point



27

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On the left: the 1:25 scale model illustrates the paired pillar structure supporting the reticular framework of the large cinema roof and the system of mobile panels in recomposed wood. They allow to screen or make the building completely open depending on use (day or evening).

View from the seating steps of the cinema towards the stage space which can also be used for outdoor projections. The space is equipped with a drinking water supply point for the community.





Plan and longitudinal section of the library, a solid wooden frame structure with a system of platforms on which the small boxes in colored wood panels are placed. They can be used as spaces for reading and meeting.



The area between the cinema and the library is equipped with a playground, basketball court, outdoor reading rooms and the small volume containing the services (toilets, changing rooms).



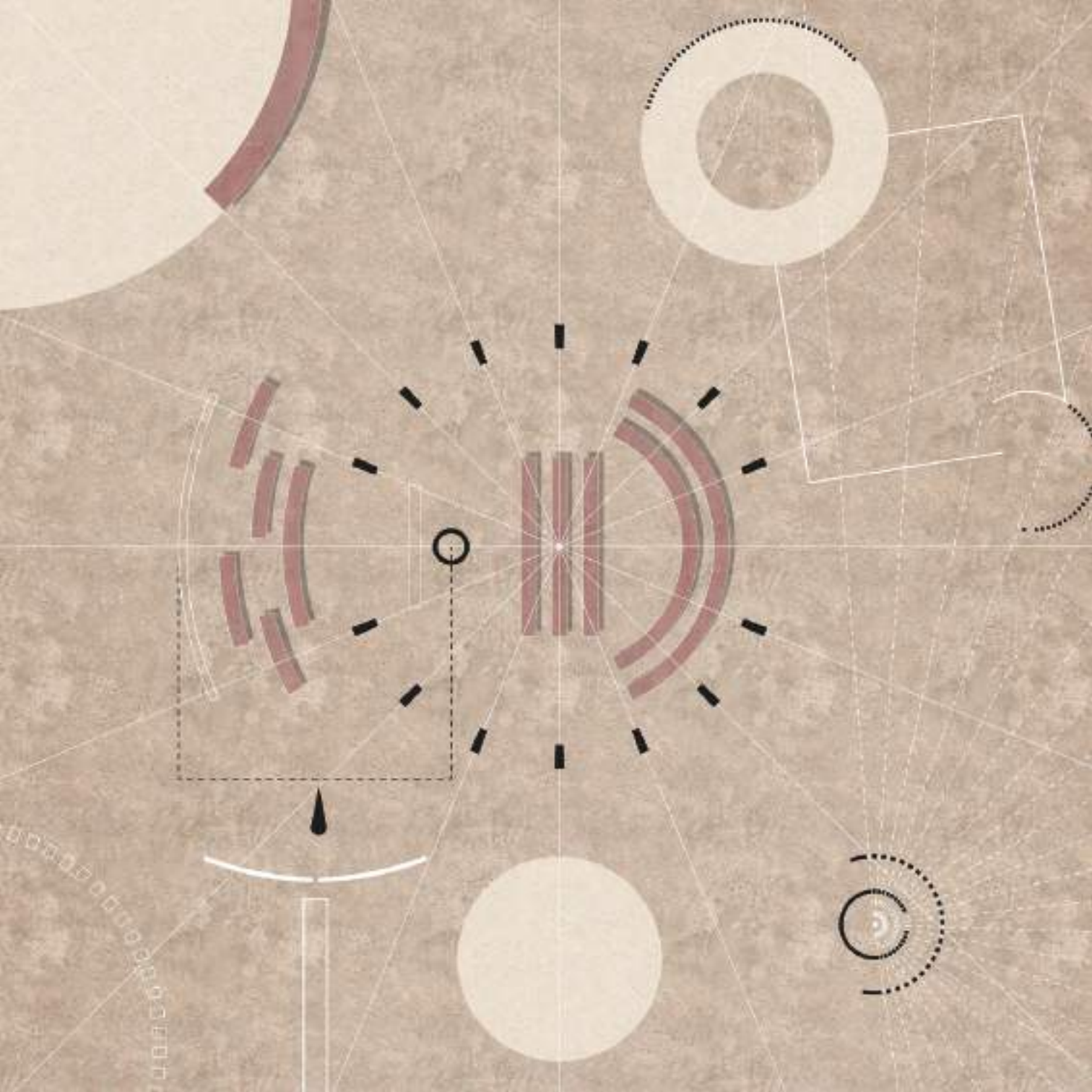
Bio - loop



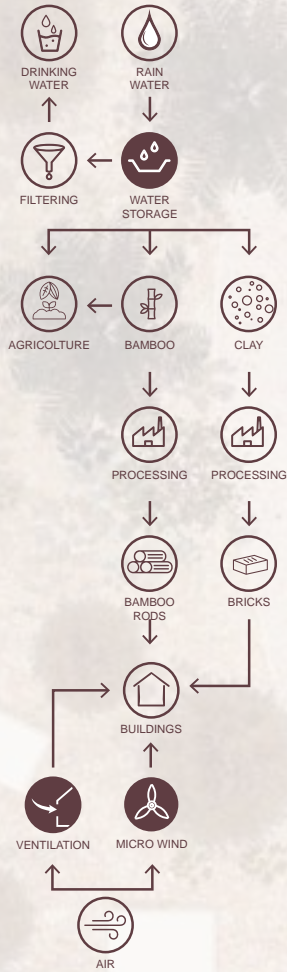
Bio - loop aims to build an informed and continuously growing community through architecture. The concept of circularity, at the basis of the project and highlighted in the floor plan, links the clinic, dedicated to maternity, the cinema, the generating element of the floor plan, and the library rooms, conceived as spaces for training and study. The floor plans of the individual buildings, circular in shape, make it possible to organise flexible, multifunctional environments. In the clinic, the patients' area is characterised by a large window, appropriately equipped with shading systems, which allows patients to enjoy the view of a protected garden, rich in native and medicinal plants. With the aim of creating a project based on the principles of a circular and sustainable economy, solutions were identified: collection of rainwater and, after purification, its redistribution to the community, the use of construction materials found and processed locally, as well as the inclusion of micro-wind systems for self-production of electricity to partially support the clinic's operations.

Team

Althea Andreoni
Isthar Costa
Giulia Prayer Galetti



CIRCULAR ECONOMY AND BIOCLIMATIC STRATEGY



GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Dressing
3. Toilet
4. Emergency room
5. Resting room & CHO
6. Laundry
7. Dirty area
8. Storage
9. Changing room
10. Staff toilet
11. Waiting room
12. Triage area

MATERNITY WARD

13. Patient toilet
14. Ambulatory
15. Office
16. Toilet
17. Pharmacy
18. Kitchen
19. Nurse room
20. Waiting area
21. Technical room

CINEMA

22. Covered cinema
23. Storage
24. Toilet

LIBRARY

25. Internet
26. Multifunctional spaces
27. Reading spaces
28. Playground
29. Open air cinema



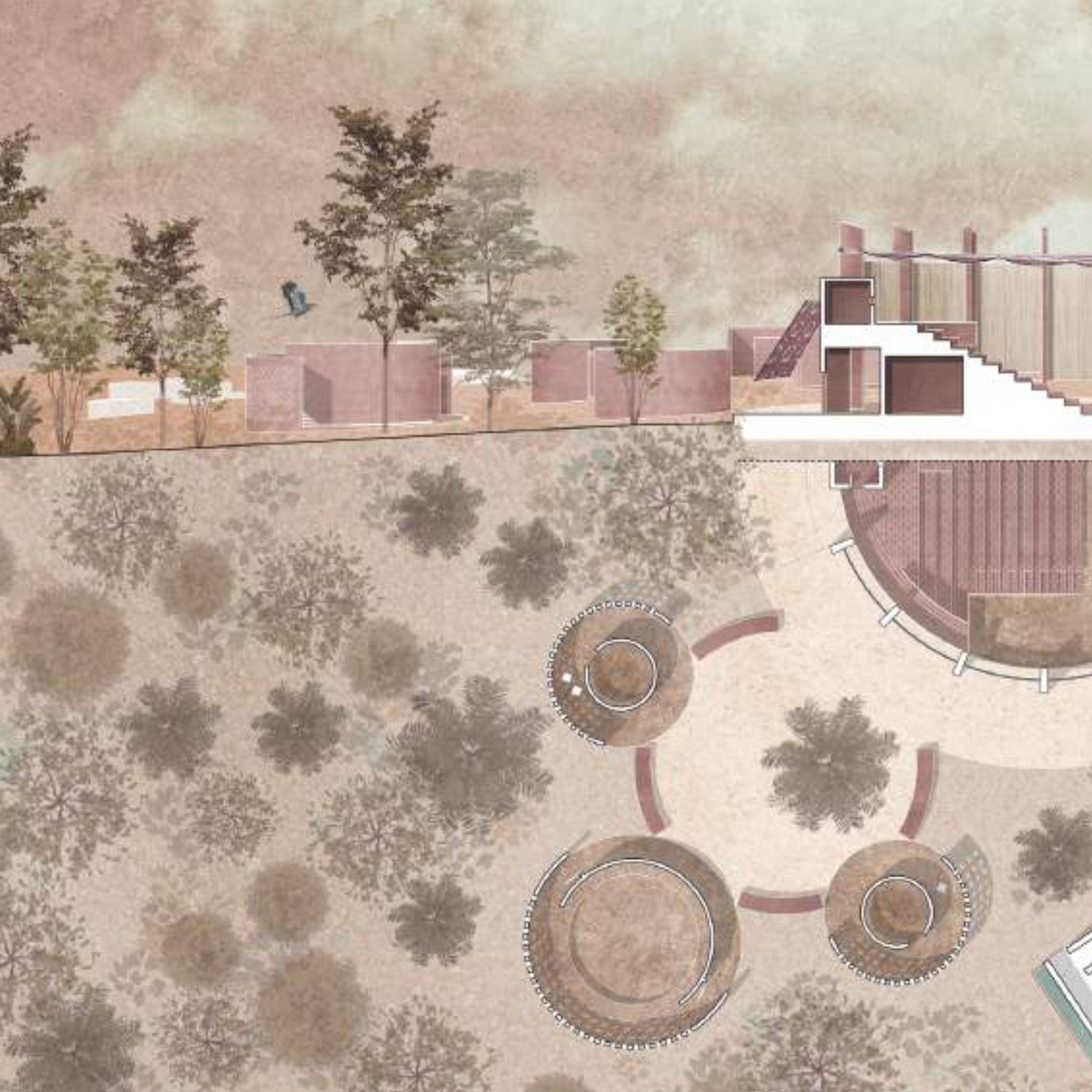




The steps of the cinema and the light mobile cover made up of a system of colored sheets which, like sails, protect the space from the sun and accentuate the ephemeral nature of the events that take place there.

The 1:25 scale model illustrates the rainwater recovery device integrated into the double screen system. Collected by the ETFE curtain system, the water is made to flow, through a circular metal element, onto a concave surface supported by a double hollow brick wall that leads it into an underground tank. The device delimits the space for outdoor projections, enclosed by another wall that becomes an opportunity to organize a system of water supply points made drinkable thanks to some filters.





Plan and longitudinal section of the cinema and of the small circular volumes in raw earth bricks hosting the reading rooms scattered in the greenery.







Interior of the garden overlooked by the maternity rooms, shielded by a light structure with wooden sunshades. It is enclosed and protected by a permeable wall that allows you to perceive the green landscape of the plantations and orchards just a few meters away.

Nkontim



The project aims to create a meeting place where the community of Aboduam can meet and recognise itself, while at the same time raising awareness of sustainability and respect for the environment. Organised on an elliptical layout, as if to suggest an invitation to go into the heart of the composition, the community centre is designed to be an example of community centre.

A number of strategies have been adopted: a rainwater collection and filtering system, a biogas system using agricultural and cocoa production waste to produce electricity, a workshop for recycling plastic from the nearby landfill and the inclusion of wind chimneys, devices to encourage recirculation of the area within the rooms and lighting.

The central space, occupied by a shaded cavea, which can be used for outdoor screenings if necessary, is attached to the volumes of the cinema and library. The First Aid Post, on the other hand, is located in a decentralised position so as to meet the needs and requirements of an emergency medical centre, yet visually connected to the other buildings in such a way as to be an integral part of everyday life.

Team

Alessandro Leonardi
Maria Vittoria Morina



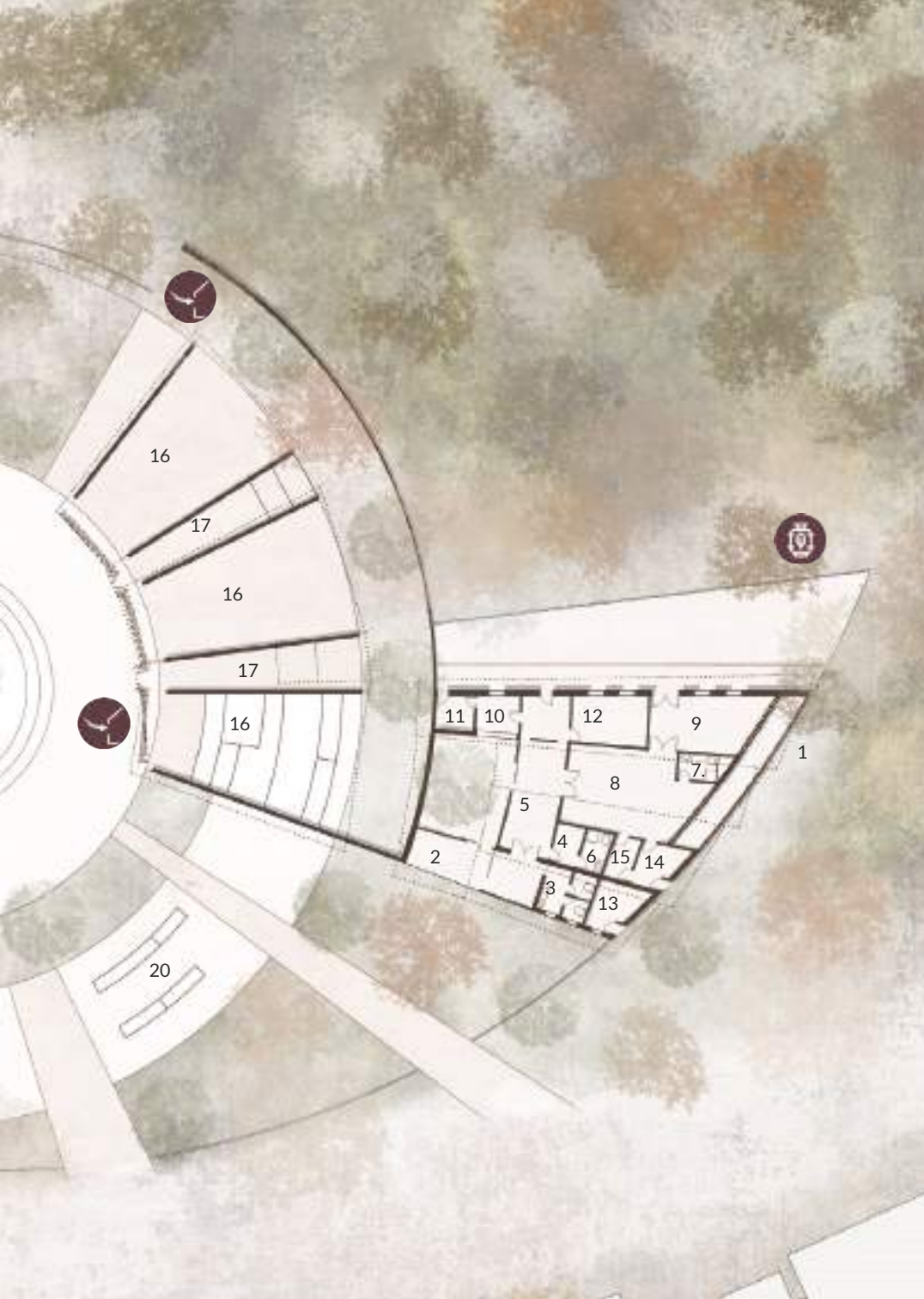
GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Waiting area
3. Toilet
4. Changing room
5. Triage area
6. Staff toilet
7. Patient toilet
8. Emergency room
9. Dressing area
10. Pharmacy
11. Store
12. Resting room & CHO
13. Technical area
14. Dirty area
15. Sterilization area

LIBRARY AND CINEMA

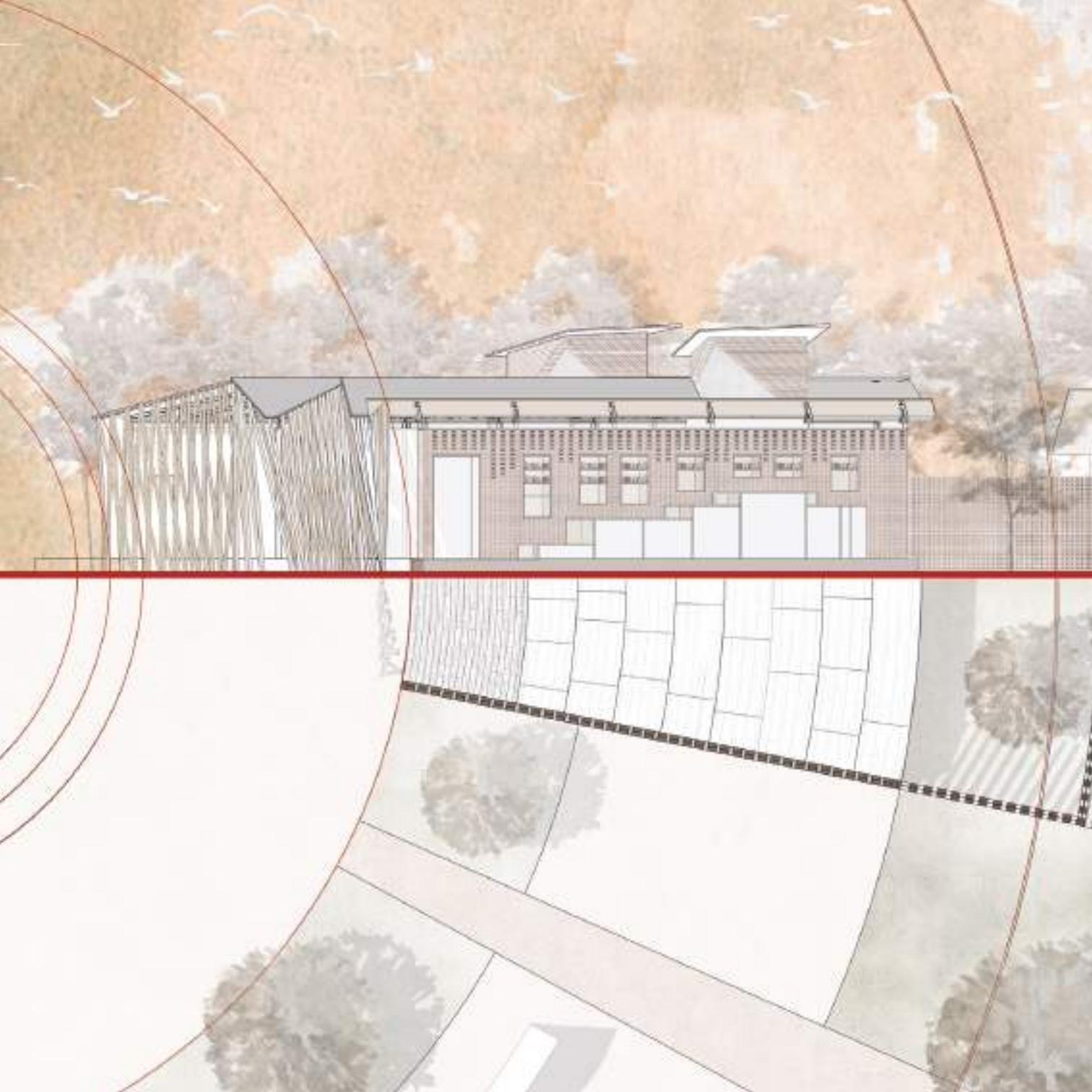
16. Reading rom
17. Technical area
18. Indoor cinema
19. Market area
20. Market, playground area
21. Toilet
22. Plastic laboratory
23. Water storage
24. Community space
25. Outdoor cinema



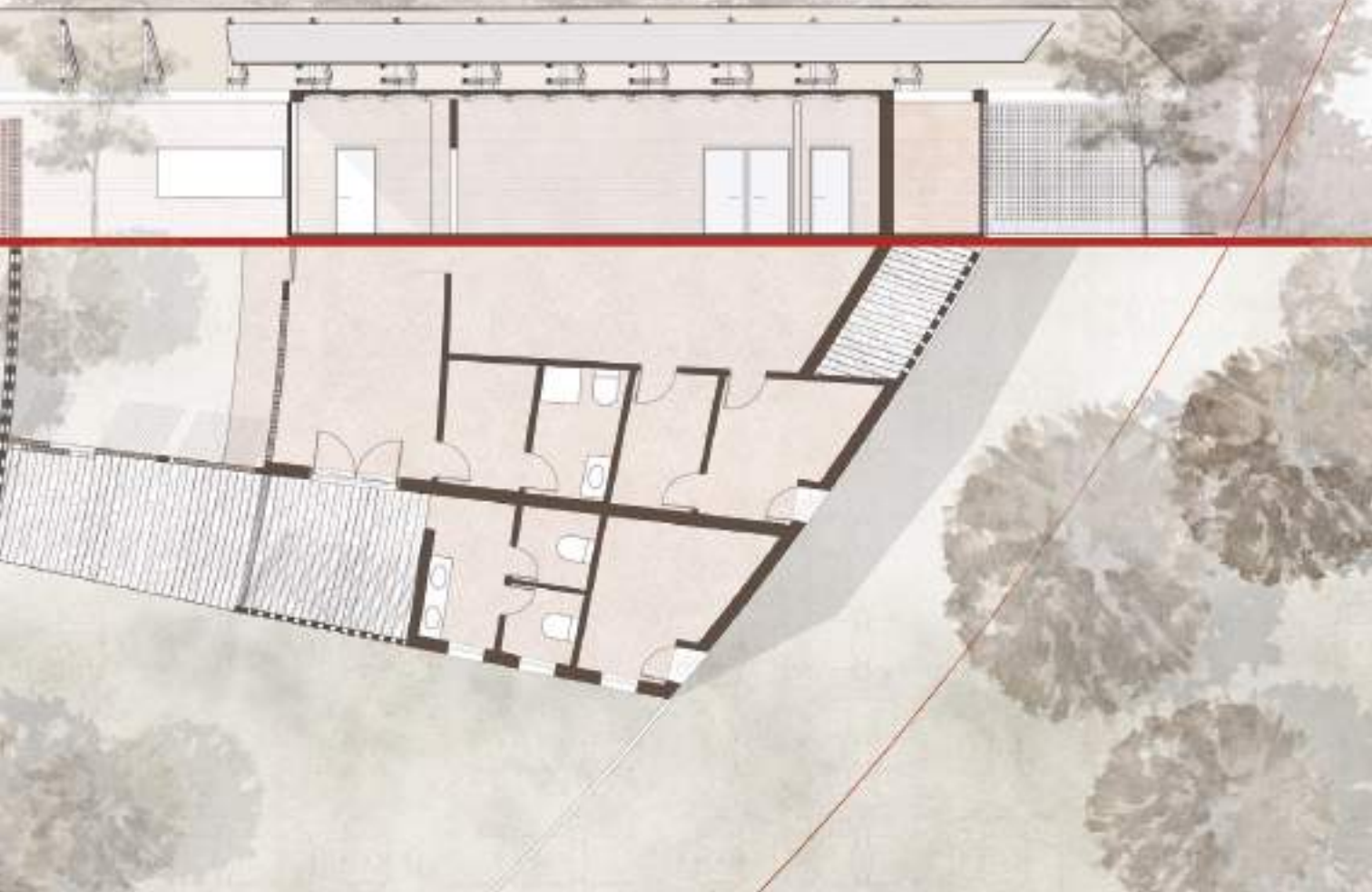




View from the large hall of the library towards the central space. The centrality is underlined by a small recessed amphitheater shaded by a large mango tree. The raphia (a plant element little used in the local construction tradition) builds the facade of the building towards this space, a sort of curtain of intertwined reeds that plays the important role of solar filter, visual protection and coating. In this way the internal space is more protected in some points, in other points it is filtered, in still others the curtain opens to allow access.



Plan and longitudinal section
along the library, the garden and
the spaces of the First Aid Post





View of the area equipped for the temporary open-air market and the small volumes containing the bathrooms.

On the right: 1:25 scale model of the two towers which, inserted in the sloping roofs between the volumes of the laboratory for the recovery and processing of plastic waste, of the library and of the one serving the market area, allow to expel the air (by chimney effect) contributing to lowering the temperature of the internal spaces.



Seeds of Future



Cocoa production is the main activity that punctuates the rhythms of life in the Aboduam community. Seeds of Future was born from this: the cocoa berry not only designs the shapes of the master plan but, thanks to the use of production waste, offers the possibility of producing both bricks for the construction of the buildings themselves and the electricity needed to run them, thanks to the construction of a small biogas plant.

The cinema, clinic and library, arranged around a central space, are all built by local labour using readily available materials such as earth, wood, cocoa waste and vegetable fibres. All the buildings consist of a double skin which, as it expands, sometimes generates open but shaded, covered and ventilated spaces that offer the community a place for socialising and exchange, which is currently lacking in the village.

With Seeds of Future, cocoa is no longer just a job opportunity, but becomes the seed for the development and sustainable growth of the entire community of Aboduam.

Team

Joanna Adamczyk
Arianna Gorin
Lorenzo Lazzarotto



**CIRCULAR ECONOMY
AND BIOCLIMATIC
STRATEGY**



GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Waiting area
3. Toilet
4. Changing room
5. Triage area
6. Staff toilet
7. Patient toilet
8. Emergency room
9. Office
10. Pharmacy
11. Storage
12. Resting room & CHO
13. Technical area
14. Dirty area
15. Sterilization area
16. Laundry

INFECTIOUS DISEASES AREA

17. Waiting area
18. Ambulatory
19. Resting room & CHO
20. Storage
21. Staff toilet
22. Patient toilet
23. Observatory room
24. Vaccination room

CINEMA

25. Atrium
26. Balcony
27. Terrace
28. Outdoor stall

LIBRARY

29. Reading room
30. Toilets
31. Paillottes
32. Outdoor library
33. Market

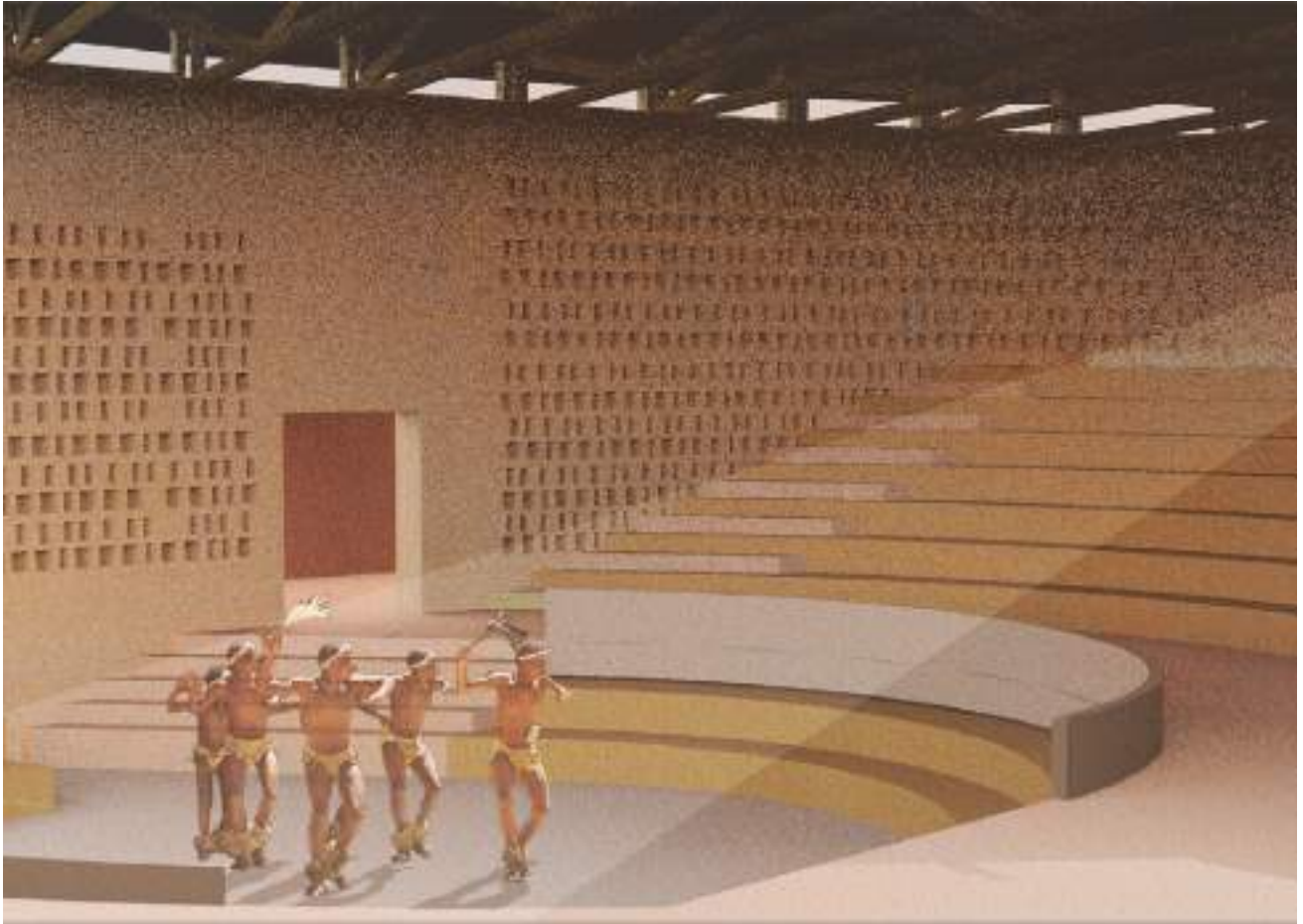
WATER SUPPLIERS

34. Drinkable water
35. Harvesting water

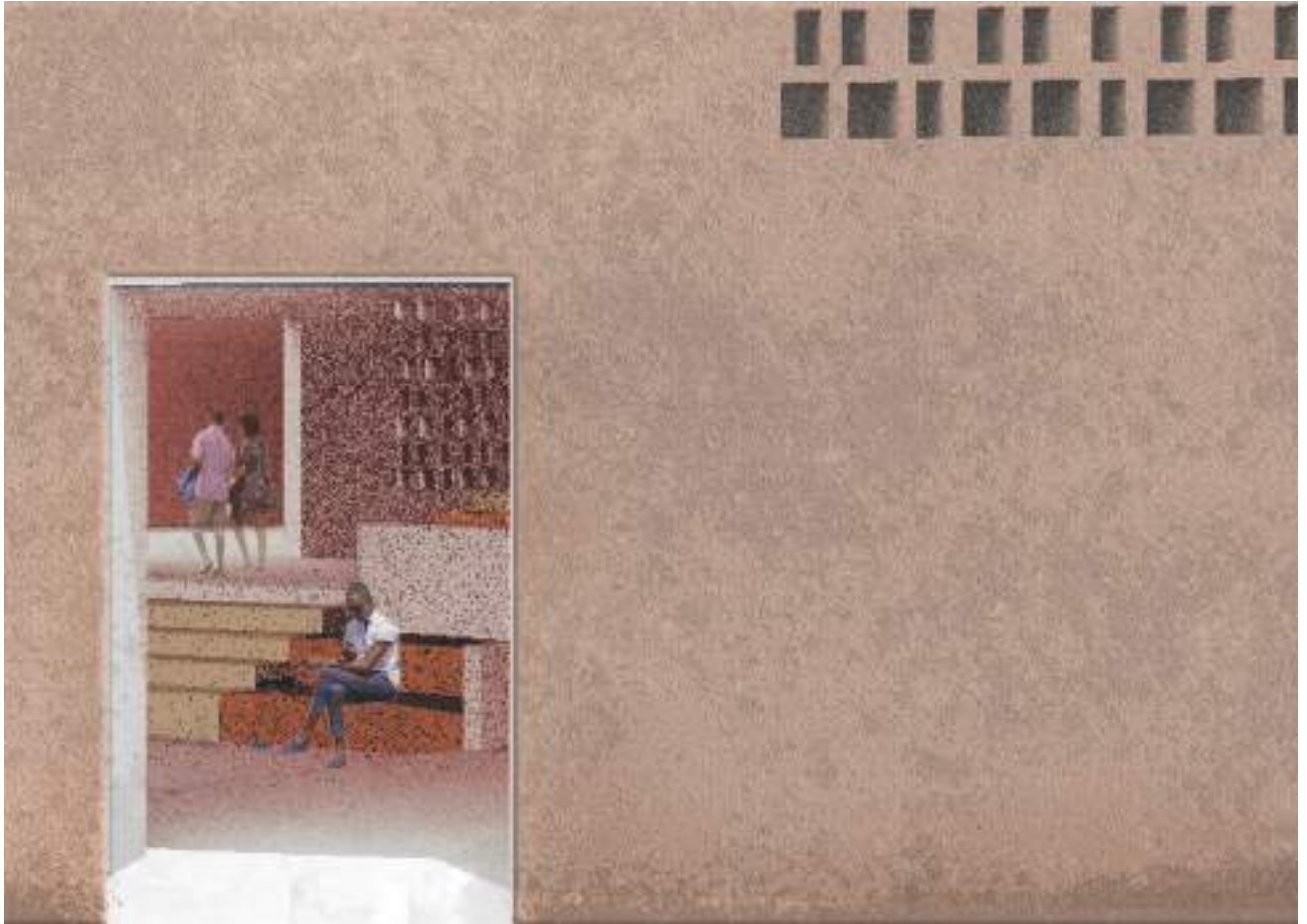


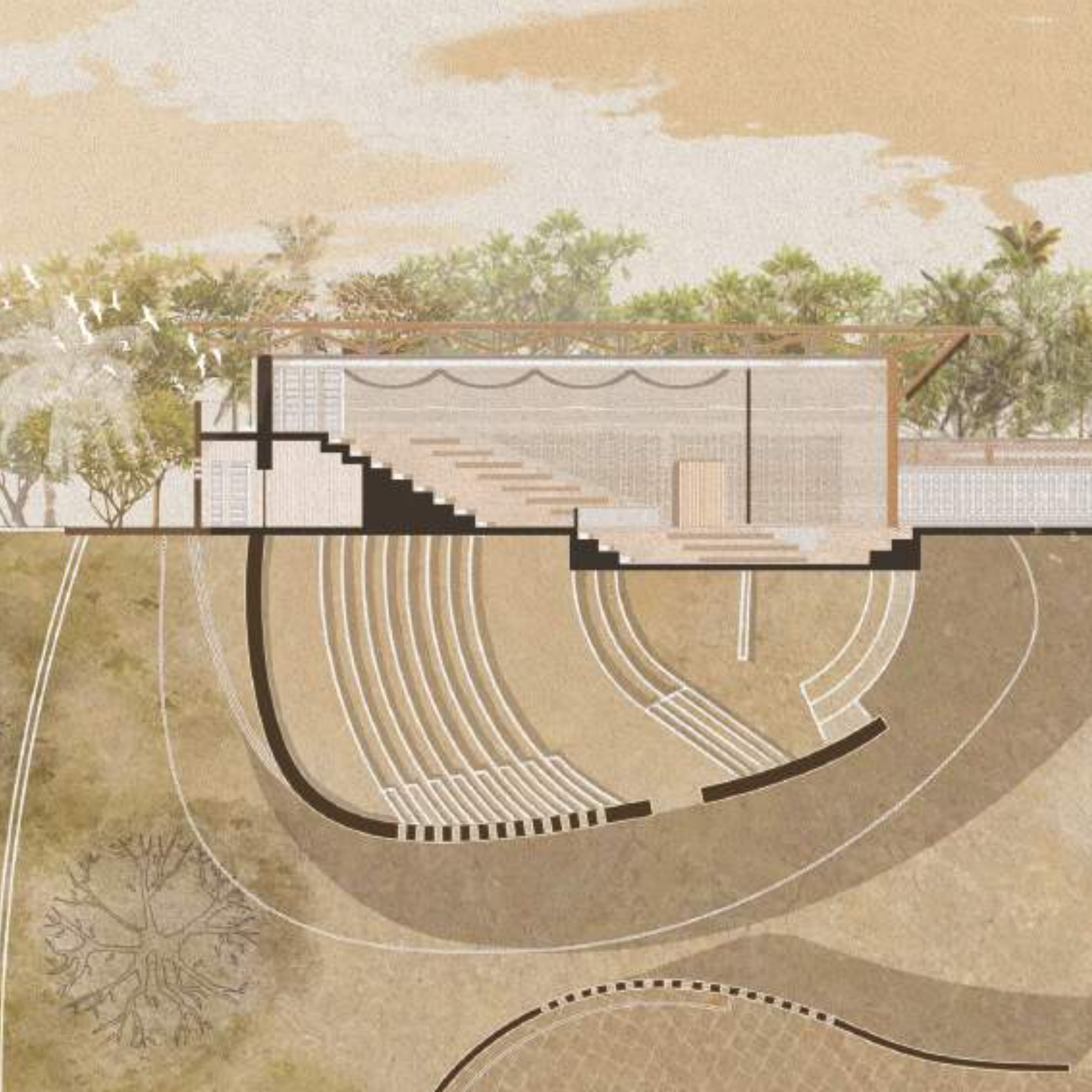


View of the uncovered space between the volumes of the library and the enclosure wall which not only has the function of delineating paths and organizing spaces: niches for the exchange of books, seats, slender structures for sale - even for food and drink - and windows are integrated into the wall thickness, transforming the wall into an extremely articulated structure.



Entrance and interior of the building designed as a space capable of hosting not only film shows but also theatrical performances, parties and celebrations, thus offering itself as a collective space for the community and the territory.





Plan and longitudinal section on the theatrical space and the large pailote, a place of meeting and aggregation.



Nest



Nest is a place of shelter, a gathering place for the community of Aboduam. It is the interweaving of each person's life with that of all the others. The project originates from the architectural element that most delimits: the wall.

On the other side, in Nest, the wall creates, it originates the place where the buildings are located, it shows the way to go and gives water. The clinic, the library and the cinema represent three different ways of relating to the wall: the volumes of the library climb over it, cross it; the clinic makes it its main elevation and, at the same time, an organising element of the circulation system. Finally, the cinema rises from its dissolution in the large interwoven bamboo pillar. At the heart of the project, the pillar collects rainwater, which is channelled into the cistern at its base, and supports the cinema's roof, made of woven banana leaves and raw earth to make it waterproof.

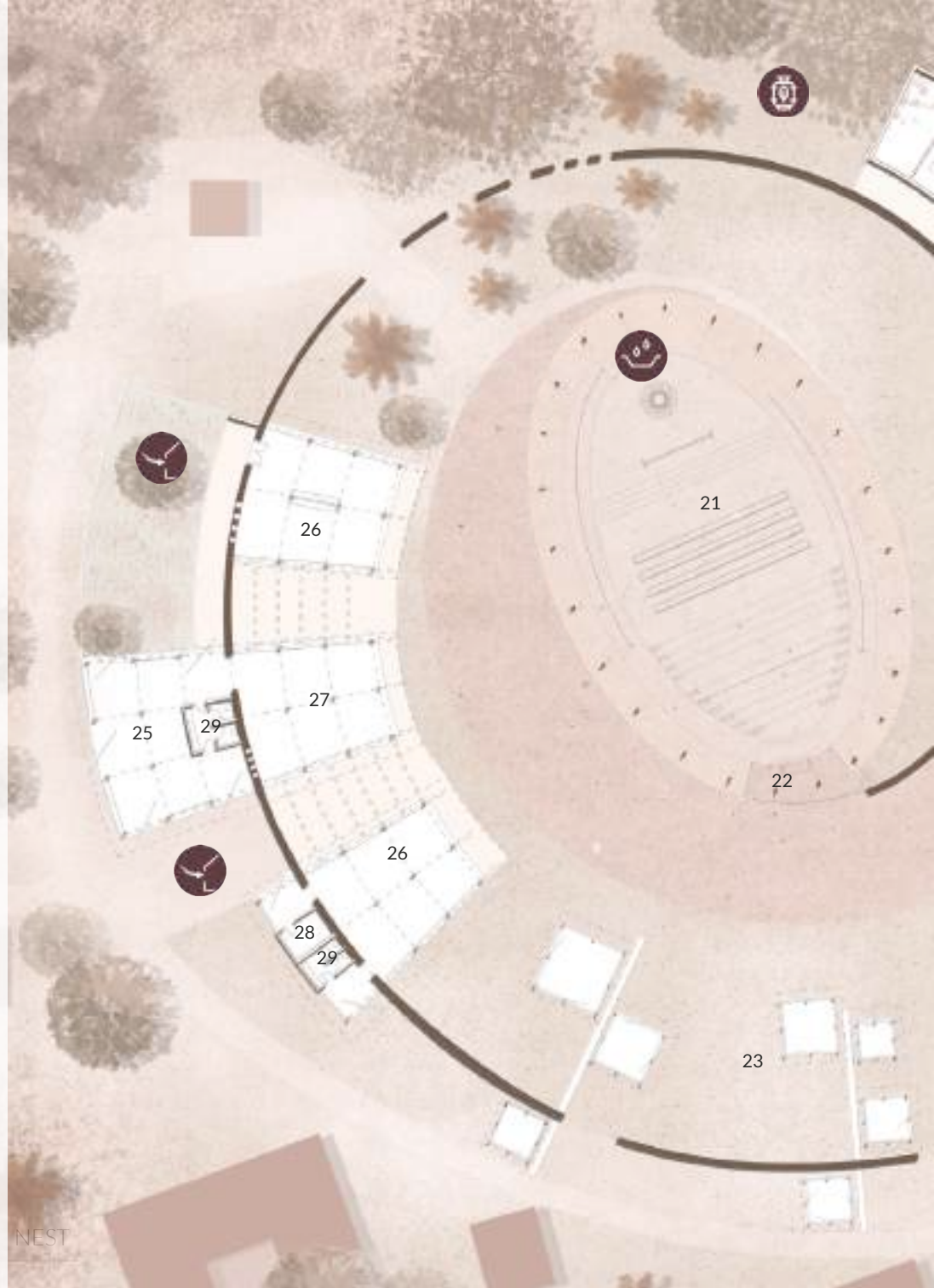
A space usable by all, a roof, which underlines how each of us is part of a single village: we all belong to the same Nest.

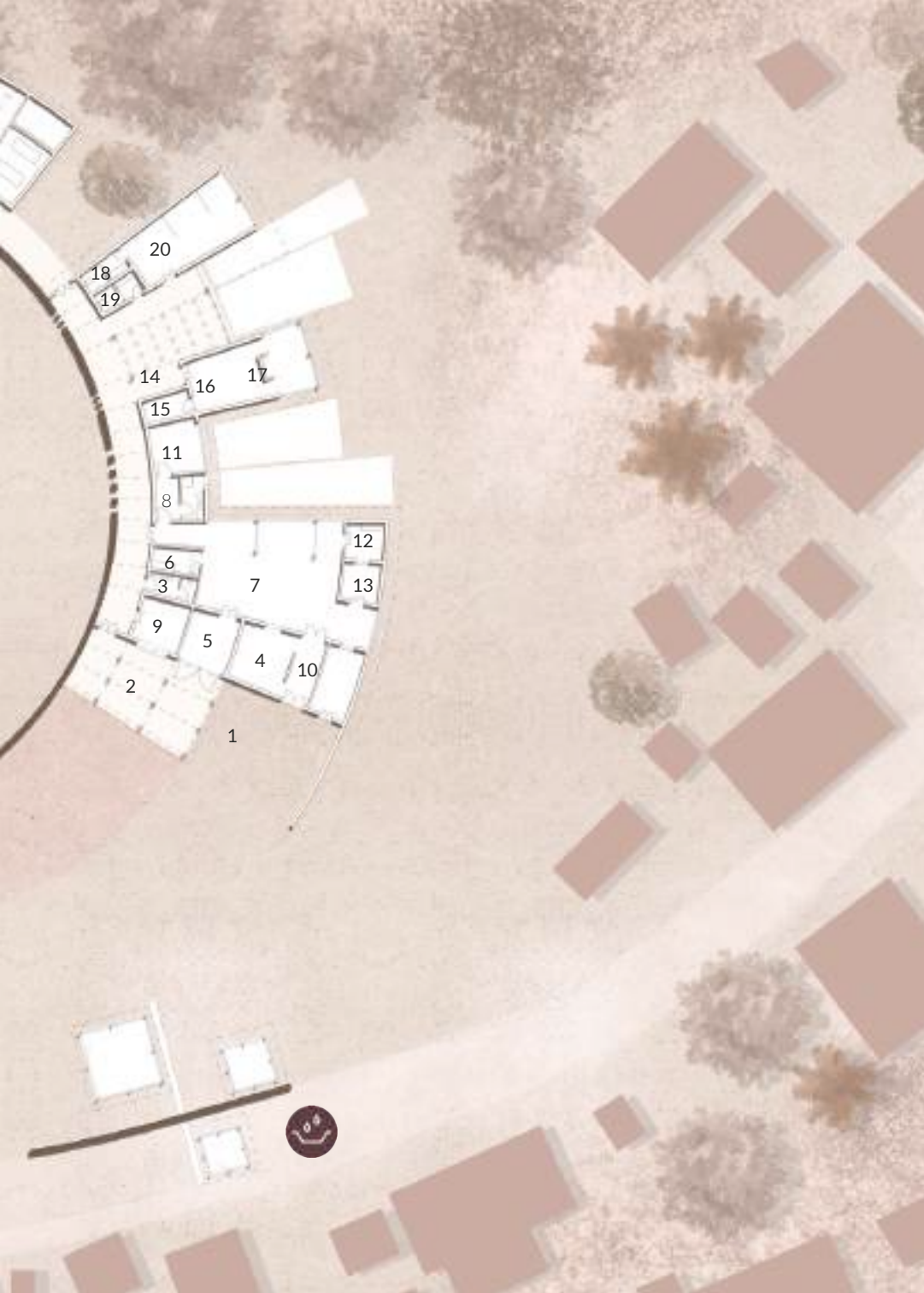
Team

Giacomo Bregolato
Noemi Ena
Elena Zilli



CIRCULAR ECONOMY
AND BIOCLIMATIC
STRATEGY





GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Waiting area
3. Toilet
4. Changing room
5. Triage area
6. Patient toilet
7. Emergency room
8. Dressing area
9. Pharmacy
10. Storage
11. Resting room & CHO
12. Dirty area
13. Sterilization area

ORTHOPEDIC AMBULATORY

14. Waiting area
15. Changing room
16. X-ray room
17. Laundry
18. Observatory room
19. Patient toilet
20. Orthopedic cast room

CINEMA

21. Cinema
22. Drinkable water
23. Open space market
24. Outdoor stall

LIBRARY

25. Reading room
26. Ateliers
27. Meeting room
28. Storage
29. Toilet



1:25 scale model of the device for the collection of rainwater built with a dense weave of bamboo canes without the use of nails, but joined thanks to a peculiar binding system, which combines the use of ropes and fasteners in bamboo.

The view from the steps of the cinema highlights the sculptural element in bamboo that marks the scene and the backdrop, where the big screen is located. Structural element and integral part of the cover made of intertwined banana leaves, it also performs the task of recovering rainwater, conveying it to an underground tank.







Plan and longitudinal section on the large roof that defines the space for theatrical, musical and cinematographic activities.

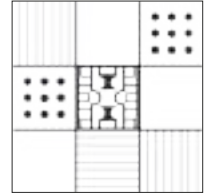






Hooked to the wall in a more silent and protected position, the reading rooms are located, light open volumes and screened with sunscreen panels. The ateliers, the meeting rooms, and the exhibition spaces of the library instead overlook the space dominated by the large roof.

Under Canopy



The big clay and raffia roof, based on a regular mesh of pillars and wooden beams, designed for Under Canopy, brings together three volumes with different functions in a single large semi-covered space, capable of collecting rainwater and protecting from sunlight.

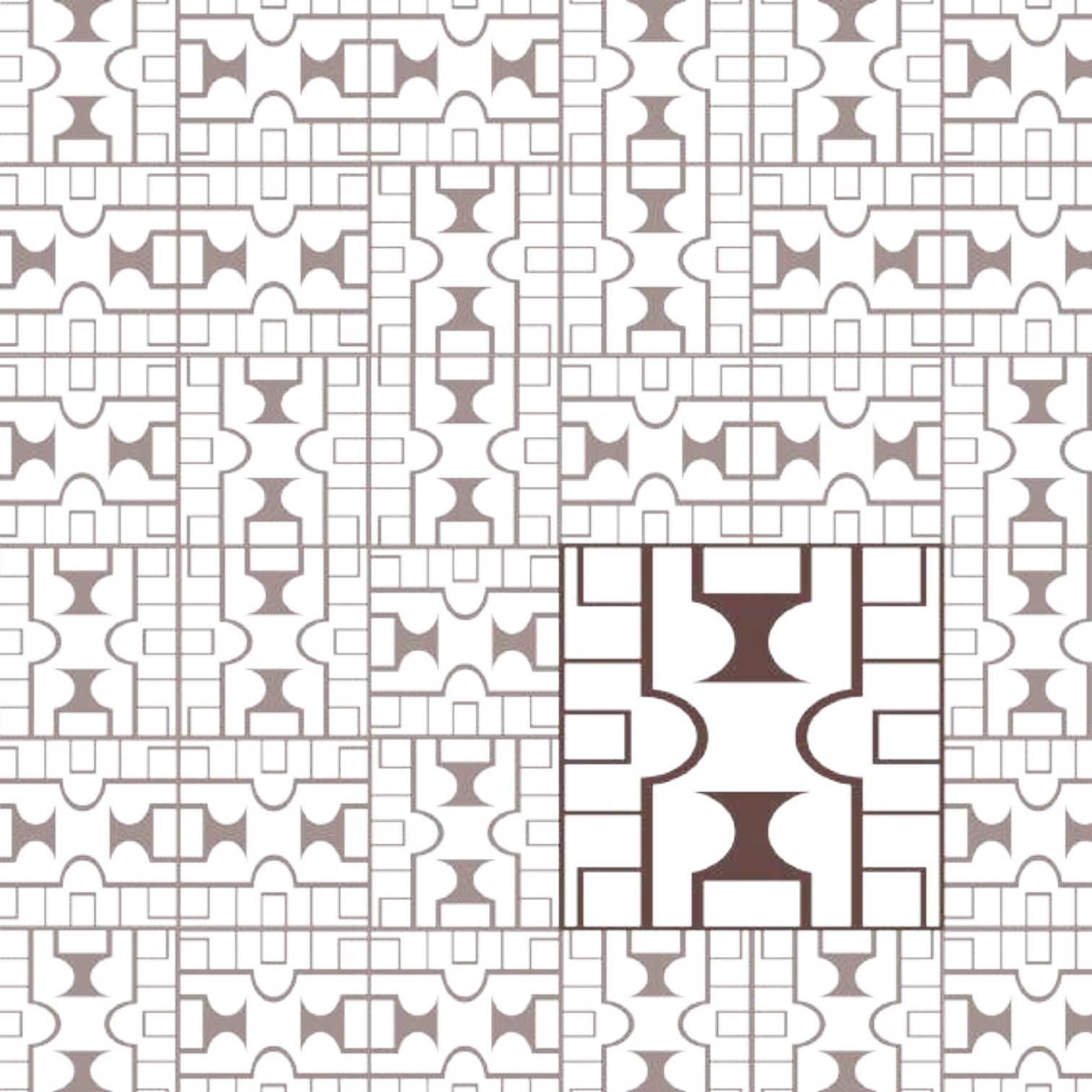
The first building faces west: a small library with study stations and a semi-private garden, while on the opposite side the building developed around an internal courtyard houses the paediatric clinic, with an emergency room attached.

The third volume, the cinema which is also used for concerts and theatrical performances, is located in the centre of the composition, breaking up the rigidity of the grid and introducing a privileged visual cone towards the landscape of orchards and citrus groves, palm trees and cocoa trees.

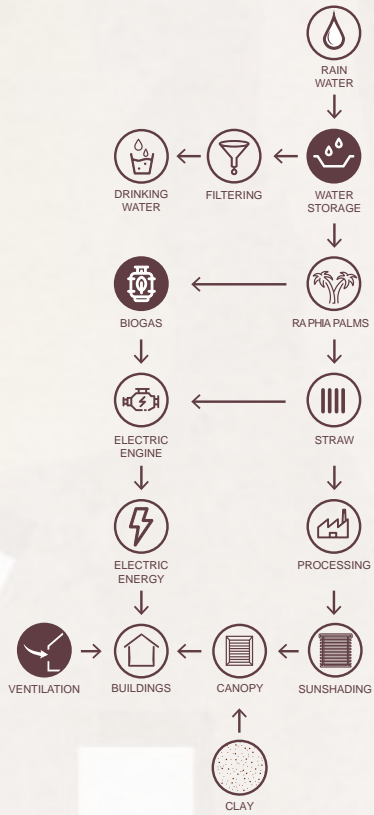
Its side walls, completely perforated, are made of prefabricated elements made on site, characterised by an accentuated splay. This gives the facades permeability and plasticity, allowing sounds to propagate into the surrounding area.

Team

Michael Bordin
Emiliano Manni
Mauro Serafin



CIRCULAR ECONOMY AND BIOCLIMATIC STRATEGY



GROUND PLAN COMMUNITY CENTRE

FAP (First Aid Post)

1. Ambulance post
2. Waiting area
3. Toilet
4. Changing room
5. Triage area
6. Staff toilet
7. Patient toilet
8. Emergency room
9. Storage
11. Resting room & CHO
12. Patient ward
13. Dirty area
14. Sterilization area

PEDIATRIC AMBULATORY

15. Waiting area
16. Triage Area
17. Changing room
18. Ambulatory
19. Pharmacy
20. Office
21. Laboratory
22. Vaccination
23. Toilet
24. Technical area

LIBRARY

25. Reading Rooms
26. Multifunctional space
27. Library garden

CINEMA

28. Halls
29. Screen
30. Outdoor Terrace

31. Water tap
32. Public toilets
33. Free space for Market
34. Courtyards



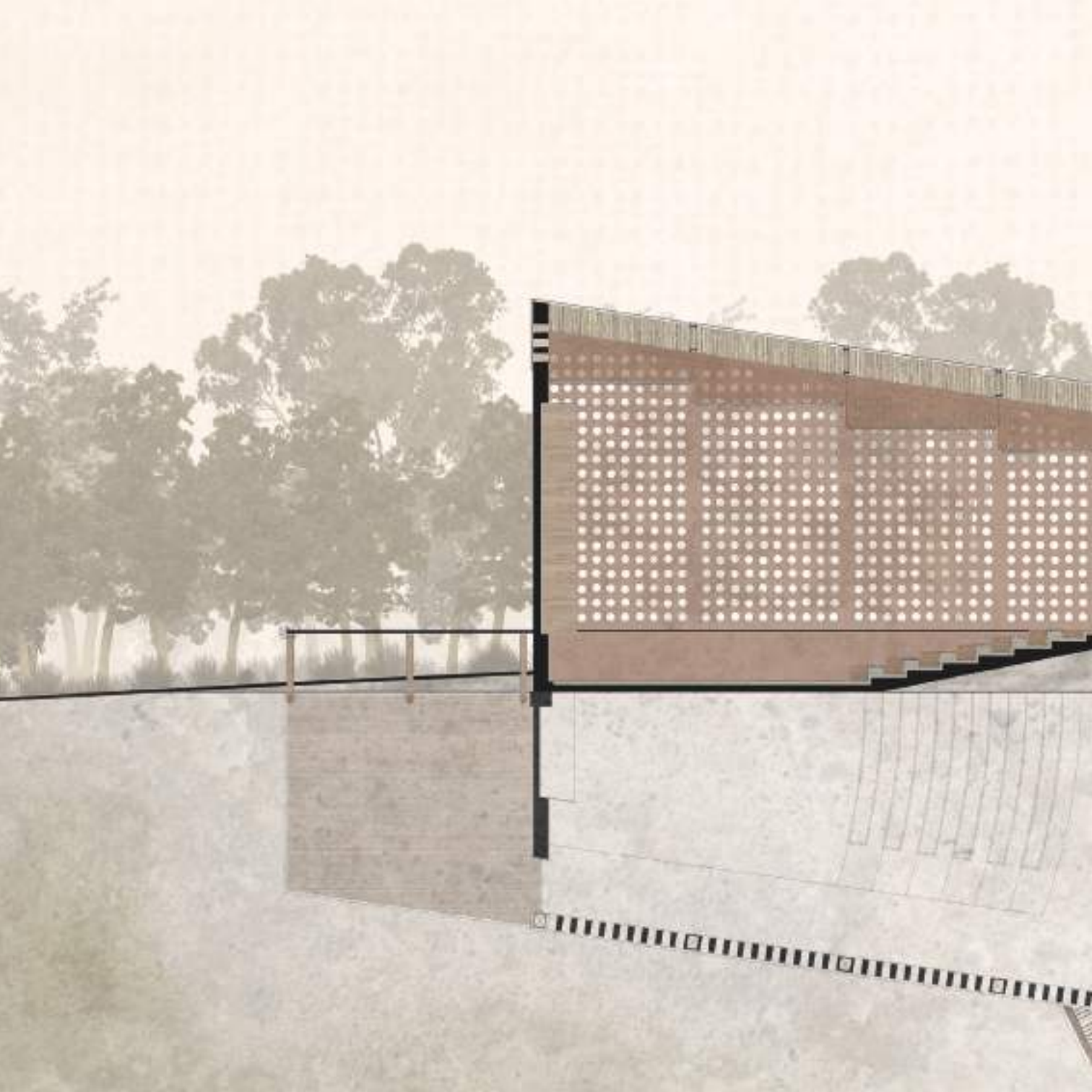




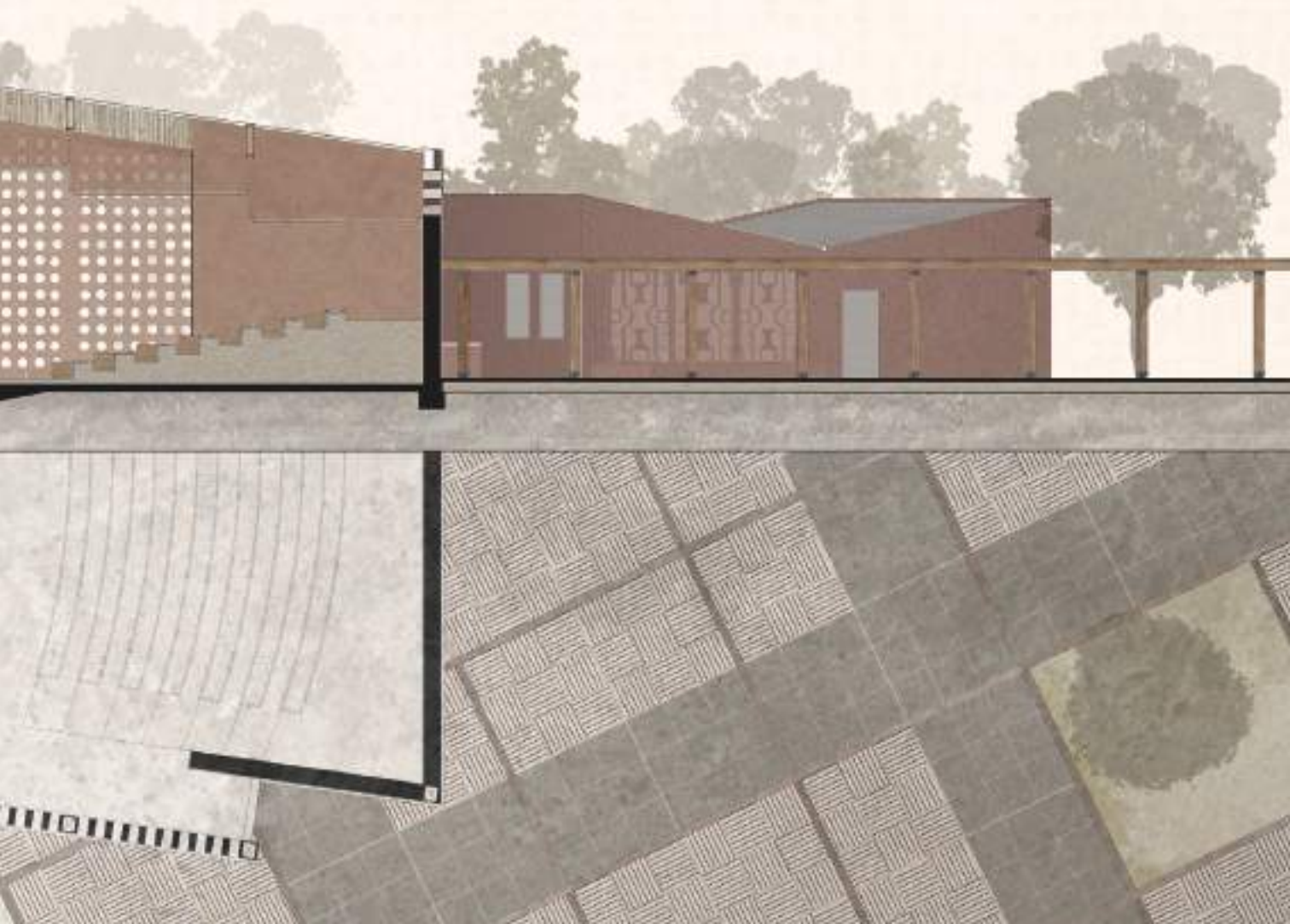
The presence of the claustra, which reflect the geometric patterned decorative texture of traditional Ashanti buildings, guarantees cooling inside the rooms and at the same time the entry of light while preserving their privacy.



Detail on a scale of 1:25 of the construction system of the cinema building made of prefabricated square-shaped concrete elements with a central hole. The openings become many small sound boxes to amplify the sound also allowing natural ventilation of the auditorium.



Plan and longitudinal section of the cinema and the covered space in front of it.







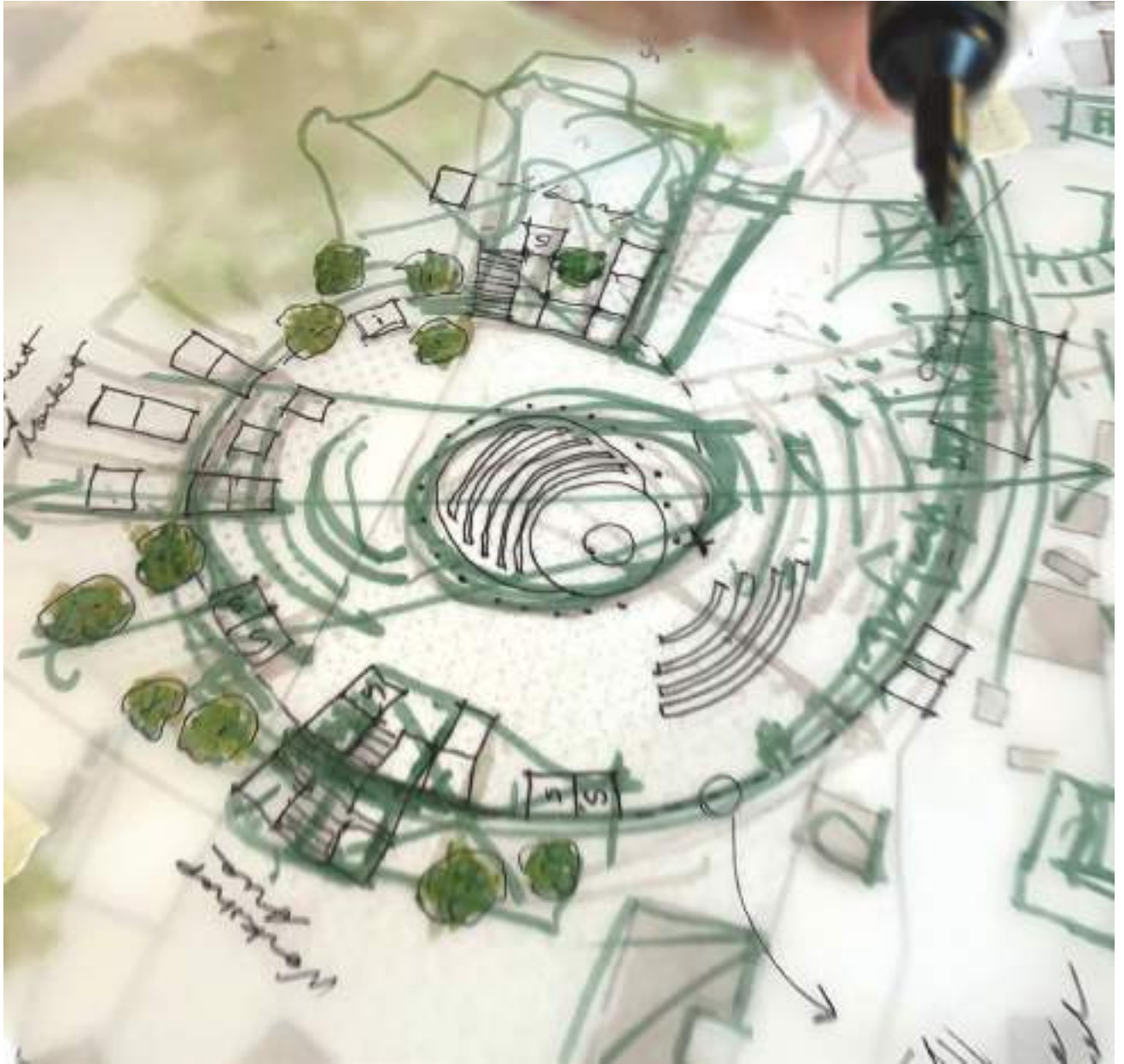
Spaces for the community under the large regular mesh canopy constructed of raffia and clay. The structure tries to limit its presence and aims at integration with the natural environment. The roof is defined by a simple opening and closing system of curtains. However, as a structure was needed to support these sails, it was decided to transform it into a permanent sculptural element. The view from the steps highlights the portal that marks the scene and the backdrop, a door between reality and fiction.

OCOCOLOV Workshop

















EXPERIENCES

THE LONG ROAD TO CHANGE

Raul Pantaleo, *TAMassociati*

In recent times, the perception of Africa has undergone a slow but steady mutation. The pietistic vision often directed at this corner of the world is giving way to a more concrete approach to real problems. The dramas of these lands have certainly not been solved; disease, hunger and wars are unfortunately still deeply rooted in the daily lives of too many citizens of this continent. However, there is a clear feeling that a new approach to the “Africa problem” is emerging, with a view to rebalancing relations between “North and South” and defining a new vision for the future.

In this context, in Africa as in Europe, the climate and ecological crisis, the energy crisis and the struggles for social and environmental justice represent a great opportunity to embark on a path of reconversion by investing in alternative models of development and to begin to deal creatively with a globalisation that involves not only the economic sphere, but also that of rights and the environment.

We believe that Africa, at a time when the western world is being shaken by an unprecedented economic and cultural crisis, can be a research laboratory for alternative models where a new, “low-resolution” modernity can be invented, where a future outside the box can be rethought.

The OCOCOLOV workshop aimed at exploring the possibility of combining ethics and aesthetics; exploring that sort of degree zero where everything is still to be re-invented, where maximum simplicity, economy and sobriety, combined with great attention to environmental issues, are the only possible strategy for tackling the project.



Port Sudan, Sudan.
Ph. Courtesy of EMERGENCY
ONG ONLUS and Massimo
Grimaldi.



URGENCY AND POETRY OF ARCHITECTURE

Jennifer Nyiraneza Mpyisi, *Kuzu-Kiza Design Studio*

Design workshop and training, to develop solutions for a community of cocoa farmers in Ghana. To support, mentor, and engage in critical dialogue with the design workshop team of students. To develop solutions that engage with contextual solutions for the community.

The architecture of intervention that requires a pragmatic solution of building functions, becomes at once a narrative of contextual understanding. We are limited by language to express the values, needs, and wants of the community.

The inherent preoccupation with context invites the designers to deliver outcomes, that are intentionally choreographed, to attain a deeper sense of the community's aspirations towards sustainability. English, as a commonly used and shared language, has limitations in the African narrative. We are from all the far-flung nations of the world, so we have to find resolution through the language of design, and universal space planning, through understanding the human need for expression with specific functions.

The clue to passionate engagement with design lies in the practice of rigorous research, and in the elements of close range sensitivity to the end-users identity of self. At first glance the workshop appears to be a prescribed agenda: an objective, with tools, thought processes, and expected results, to be executed by a committed team, of leading designers, stimulated by the challenge of designing

across borders, across cultures, with significant purposes, ignited by the single voice of the curator, Adriano Wajskol.

The stimulus and execution processes are supported by the fire in the belly of the academic team's thirst, for a deeper and more critical approach to the tenuous progression of stretching young minds, in building bridges, and sharing knowledge to transform lives.

The result will be to leave a mark on the face of the earth, that symbolises a journey of collaboration, and integrated multidisciplinary engagement.

The design conversations is an opportunity to discuss context at a deeper level, sacred geometry, African fractals, self organising patterns, found in the deep and incredible African culture of mathematics, which was a point of clarity. The ancient, rich culture of the people of Ghana presents relevant design direction, in the symbols of design prevalent in the long and rich history of fabric design, gold jewelry, and patterns of dwellings.

The geometry of intention is seen in the project shapes. At once, reminders of the holistic approach of integration and the need to create spaces of wholeness. The spiraling and generous wide canopies illustrate, covering, and zoning. Hitherto unmarked places become deliberate through the cross relational intersections of where the users are, between the shadow of the sun and in the path of the wind. Open shelters.

One cinema

Sound versus noise. How we perceive and engage in the face of theatrical performance. Watching and being watched. The viewer is as important as those being viewed. All at once, the design of the cinema is a platform for stillness. The viewer is focused on the performance. The specific aspect of the cinema, as an amphitheater is ancient wisdom and scientific. The layered seating, encircling the center stage, is a deep ritual of sound vibration as old as time, from Egypt to Greece, and Italy. From Timbuktu to Tibet, and from India to Austria.

The Cocoa farmers are part of the global community, symbolically in tune with universal geometry, that shapes our human experience. Performance, in a packed space, a singular moment of the natural light, streaming through the delicate lace patterns of clay bricks, a veil, a shadow breaker, a wind caller, a mark dividing inside from outside.

The teams were rigorous and relentless in the pursuit of balance between form and function. Thrown into a culture from their own reference points, relative design decisions had to be made.

Storytelling and telling stories merged into project production.

Textures and time

Utilitarian and vernacular-inspired designs took prominence, as places intertwined with socio-anthropological pointers. Designs gained complexity, in the discussions around the fairness of their trade, the rich resources of the peoples, and the integrated services of health, entertainment, and knowledge.

In the African cultures, these are fully integrated activities that are intimately connected: knowledge produces healthy results, the relationship with health, is deeply embedded in the food culture which includes several medicinal plants.

Therefore the separation is a thin line of perspective, culture, and knowledge.

Locality

Creating appetizing food is culture. Full performance in its preparation. A knowledge bank of historical self-identity, instructs processes, connections, and understandings. The proposals presented are nestled between development and rural agricultural hinterlands.

The notion of African fractals as self-organising repetitive patterns, resonates with the monumental idea that these designs, will be repeated across the scared landscapes, to reinvigorate communities, fragmented by exclusion, in the planning of their most intimate spaces. Spaces for gathering and connection, revolve around food, discourse, and health.

Knowledge portals become places of creating spaces of learning. Spaces of gathering as healing spaces, where gardens and medicinal plants, are grown, hand in hand with medical practices.

Rhythms measured in time and volumes become measurements of breadth, width, and personal space. In the African context, this is significantly different from the western cultures. Food, freedom of expression, and faith are intertwined in the cinema, clinic, and library.

Space becomes the voice

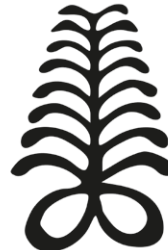
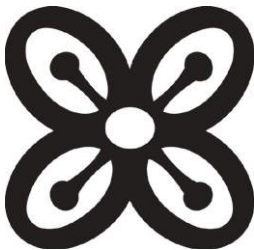
Village economies collapse, when the village potter, who has intimate knowledge of the properties of clay, moves to the city. He carries the fundamental healing property of cleaning water in cool vessels. In the city, the village weaver of the baskets has her fractal designs of mathematical complexity, replaced by plastics that choke the plants' nostrils.

Factory-produced alternatives are the real scourge of social distancing, that produces the distance from real lives, from real solutions. Old rich lives are



Examples of fractals in nature (succulents and leaf pattern).

West African Andikra symbols. From top left: The Bese saka symbolises affluence, power and abundance; Andinkrahene stands for leadership, greatness and charisma; Aya(fern) symbolises endurance and resourcefulness; Adwo which signifies peace and tranquility.



embedded with deep knowledge and algorithms, which reflect the true fulfilling direct connection to nature. Critical observational skills and the embrace of the designs are found in the teacher of life that nature represents.

Lessons

Designing gives us the opportunity to reconnect with what matters. Design is universal, belonging with purpose is key to strong continuity. The new layer of intervention is the privilege of the designer, to respectfully re-enforce the identity of the community, by creating a platform of social interaction, that invites and respects the aged and the young, in fruitful sustainable living.

As designers, we are invited to be observant, respectful, informed, and engaged. The buildings are not sculptures, but they can be sculptured to hold the everydayness of cultures in transition.

The project designs that marked the surface seen in plan, resound with the ancient stories of beings, flying above the surface of the earth, connecting patterns and purpose, melting into mythology and storytelling.

The projects were sensitive, inspired, and a testimony to the engagement of design principles, with a purpose beyond architecture.

BEYOND OCOCOLOV

Roberto Beraldo, *OAPPC della Provincia di Venezia*

OCOCOLOV becomes particularly significant following the 2020/2021 pandemic period, which changed our perspective for good.

Architects reflect on the future of architectural projects as a positive influence on people's quality of life as it relates to sustainability and habitability. The renewed collective interest – and political governance – towards architectural themes has fuelled the debate that arose during the design workshop organised by Architetti Senza Frontiere Veneto ONLUS.

On the wake of the pandemic, we have reviewed many of our well-established positions on the idea of architecture and cities. Today, however, it is blatantly obvious that we must reconsider how the envisioned architecture meets dwelling needs, bearing in mind that architecture must improve people's lives on a global scale.

The events of 2020 and 2021 have provided many pointers towards a broader reflection on the spaces where the world's inhabitants live. We are facing a challenge of renewal and participation in processes of social, cultural and economic transformation, to which designers can – and must – make a significant contribution. OCOCOLOV was the ideal setting to reflect on these well-known issues, which nonetheless demand fresh attention so that communities of individuals could re-take centre stage in architectural projects.

Our professional training as architects, which combines humanistic and technical aspects, allows us to work on projects by providing solutions to needs concerning dwellings, the environment, town planning, production spaces, residence and social interactions. This we must do with a renewed ethical awareness, one that can promote innovative and sustainable projects in Africa, a part of the world which occasionally finds itself in a critical situation.

For workshop participants, both students and teachers, OCOCOLOV represented an outstanding opportunity to re-appropriate the spaces of culture, discussion and professional training, in the light of a period that – in spite of ourselves – has changed the way we relate to each other.

Conceived projects show a design thinking driven by the awareness of the social role of the architectural project, which is suitable to respond to the demand for fluid relational and social systems, and which can dynamically deal with model changes towards an ecological transition that avoids repeating old mistakes in other parts of the world.

OCOCOLOV has focused the attention of tutors and students on projects that deal with sustainability issues, not only through technology or compliance with design regulations, but above all in ethical terms, expanding the horizons of future designers and planners with a multidisciplinary approach.

Recent years' trends aim to define high-quality projects meeting the customer's requirements as those responding to the technical specifications dictated by reference regulatory structures, or produced with specific digital tools that anticipate each development scenario. Even if a project's flawless design and execution – in compliance with a regulatory corpus – is absolutely necessary, the quality of the project, as it relates to the environment or the individual, can only be pursued through the ethical awareness of one's role as a designer.

The community centre projects in the village of Aboduam, in the western region of Ghana, dealt with the inclusiveness issue through a re-reading of the collective memory of its inhabitants, who built and populated those places in close relationship with their environmental traits.

Although largely of an experimental nature, projects envisioned by students for a cinema, a library and a hospital show an interest in building the future community recognising the "strong contextual reference", with the aim of being "perceived by the community as integral parts of the social fabric."



OCOCOLOV
One Cinema, One Clinic, One Library, One Village

DESIGN WORKSHOP

promoted by
Architetti Senza Frontiere Veneto ONLUS
ghanic.org

in collaboration with
EMERGENCY ONG ONLUS, Università Iuav di Venezia, OAPPC della Provincia di Venezia

with the support of
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Vicenza, 2005: Architetti Senza Frontiere Veneto ONLUS is a non-profit association of architects with office in Veneto, which promotes research and planning initiatives for the sustainable growth of critical areas in developing countries, working with underprivileged communities and territories. We are part of ASF rete Italia.

ghanic.org

Accra, 2020: ghanic.org is a non-profit foundation established in Ghana, where the world's best quality cocoa is produced. The type of crop is at risk of extinction due to reduced profitability. Over the next five years, research and support for 5270 farmers, on an area of 31794 acres, will increase productivity exponentially, adding value to local communities.



Milan, 1994: EMERGENCY ONG ONLUS is a humanitarian organisation founded to help civilian victims of war and poverty. Since then they have worked in 18 countries, building hospitals, surgical centres, rehabilitation centres, paediatric centres, health centres, outpatient and mobile clinics, a maternity centre and a cardiac surgery centre.



Venice, 1926: Università Iuav di Venezia is one of the first Architecture Schools in Italy. It is a design-themed university focusing on the teaching, research and practice in the design of living spaces and environments (buildings, cities, landscapes and territory).



Accra, 2018: is a non-profit organisation that promotes the ideas, teachings and vision of Ghana's First President Dr. Kwame Nkrumah. Through education, social interventions and research seeks to contribute to address many of the challenges that confront the poor and vulnerable in human societies to help build a just and a better World.



Venice, 1925: The OAPPC della provincia di Venezia is a non-economic public institution under to the control of the Ministry of Justice. It is a representative structure of the profession of Architect, Planner, Landscape Designer and Conservator, established and regulated according to the current laws of the Republic, whose institution derives from the need to regulate the relationships between the activity of members and the protection of the public interest. The professional Order has territorial jurisdiction, oversees the protection of professional practice and the preservation of the dignity of the Order.



April 2022
PRESS UP Roma

The OCOCOLOV Design Workshop | One Cinema, One Clinic, One Library, One Village was shaped by the idea that global sustainability issues of an economic, social, and environmental nature should be tackled in accordance with the needs and expectations of local communities.

The workshop was promoted by Architetti Senza Frontiere Veneto ONLUS and ghanic.org, Ghanaian association of small producers of the cocoa district of Sefwi Wiawso, in collaboration with EMERGENCY ONG ONLUS, the Università Iuav di Venezia, the OAPPC della Provincia di Venezia and with the support of the Kwame Nkrumah Pan-African Centre. Specifically, the workshop involved teachers and national and international professionals, architecture students and young Italian and foreign architects in the design of a community centre for the village of Abodiam.

The projects collected in this volume, namely “measured” architectures which were attentive to the use of “appropriate and appropriable” technologies, illustrate the results of an experience that favoured a reflection on architecture’s social role, as well as on the possibility of starting transformations from built-up spaces.

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