

Rethinking Iran's Rural School Buildings

Spatial and process design for
a primary school building in
Sistan & Baluchestan

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Sistan & Baluchestan

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I dedicate this thesis to the brave women and men of the “Woman, Life, Freedom” movement in Iran, whose persistent courage and resilience coincided with the inception of this work. Their struggle for justice and equality has been a profound source of inspiration, fueling the passion and determination that underpin this project.

I extend my deepest gratitude to the kind-hearted Baluchi people, whose hospitality and generosity during my field study were invaluable. Their honest insights and enthusiastic contributions have greatly enriched this project, providing a deeper understanding and a stronger foundation for my work.

I hope that this project and its final objectives will lead to meaningful change, benefiting the Baluchi children of the Sistan and Baluchestan Province of Iran, who are victims of a deficient educational system and political challenges. May this work contribute in some small way to improving their learning experience and opportunities.

Lastly, I would like to express my sincere thanks to my supportive friends, whose encouragement and assistance were crucial to achieving the goals of this thesis. I am also profoundly grateful to my family and boyfriend for their unwavering support throughout this journey. Their belief in me has been a constant source of strength and motivation.

Abstract

During the late 19th century, Iran underwent substantial changes in its civil society, creating a need for an improved education system and the broad establishment of public schooling. Despite attempts to modernize, persistent political and cultural obstacles led to the manipulation of education for political purposes rather than fostering children's physical, emotional, and social development. These issues primarily influenced the educational framework and the physical infrastructure, causing school buildings to remain largely static for over a century, missing out on advances in teaching theories. Consequently, the absence of vital physical and spiritual components in the contemporary education system has significantly compromised its quality.

Ongoing challenges in the Iranian educational sector, such as the inequality in educational opportunities between urban areas and remote rural regions, persist due to inadequate public support and motivation. In response, individuals and philanthropists have attempted to tackle this disparity, initiating projects that have significantly improved educational access in isolated areas. However, despite these charitable endeavors, officials still report rising dropout rates and an increase in out-of-school children in rural communities.

To thoroughly investigate this issue, the study begins by examining the historical development of the Iranian modern education system to identify crucial events that have shaped the educational landscape

and their influence on school architecture, education quality, and student outcomes.

Exploring the complexities that impact Iran's educational system, this study comprehensively addresses the architectural and pedagogical shortcomings of schools built by charities. Focusing on Sistan & Baluchestan province, where philanthropic efforts are most concentrated, the thesis proposes a new primary school building design tailored for the remote rural areas of the region. This design aims to enhance the learning experience for rural students and resolve common issues associated with charitable school constructions through close collaboration with philanthropists.

Once the design proposal is conceptualized, the researcher proceeds with a field study to delve deeper into its feasibility and adaptability. This involves examining the vernacular architecture, local construction techniques, and materials of the region. Through this investigation, the researcher evaluates and refines the school building design to align seamlessly with the unique characteristics of the area.

Finally, to execute the modified design at its designated site, the researcher convenes a multidisciplinary team to establish a non-profit association. The primary goal of this association is to actualize the design proposal as its first project and utilize the expertise gained to advance educational facilities in underserved regions in Iran and around the world.

A partire dalla fine del XIX secolo, l'Iran ha subito cambiamenti sostanziali nella sua società civile, determinando la necessità di migliorare il sistema educativo e garantire una istruzione pubblica inclusiva. Nonostante i tentativi di cambiamento, persistenti ostacoli politici e culturali hanno portato all'uso dell'istruzione per fini politici piuttosto che promuovere lo sviluppo fisico, emotivo e sociale dei bambini. Questi problemi hanno influenzato principalmente il quadro educativo e le infrastrutture scolastiche, mantenendo invariati questi edifici per oltre un secolo e perdendo l'occasione di migliorare gli insegnamenti erogati.

Di conseguenza, l'assenza di un ambiente educativo, fisicamente ed emotivamente stimolante, ha compromesso significativamente la qualità della didattica. Le sfide in corso in ambito scolastico in Iran, come l'ineguaglianza nelle opportunità educative tra le aree urbane e le regioni rurali più remote, persistono a causa della mancanza di sostegno pubblico e della scarsa motivazione collettiva. In risposta a ciò, alcuni soggetti privati e filantropi hanno tentato di diminuire questa disparità, avviando progetti che hanno notevolmente migliorato l'accesso all'istruzione nelle aree isolate del Paese. Tuttavia, nonostante questi sforzi, si riportano ufficialmente tassi crescenti di abbandono scolastico e di mancata iscrizione tra i bambini delle comunità rurali.

Per indagare a fondo su questo problema, è stato esaminato lo sviluppo storico dell'attuale

infrastruttura educativa iraniana, identificando gli eventi cruciali che la hanno plasmata e la loro influenza sull'architettura scolastica, la qualità dell'istruzione e i risultati degli studenti. Questo studio affronta le questioni architettoniche e pedagogiche poste dalle scuole costruite da enti di beneficenza, esplorando le complessità che condizionano il sistema educativo. Focalizzando l'attenzione sulla provincia di Sistan e Baluchestan, dove gli sforzi filantropici sono più concentrati, la tesi propone un progetto per una nuova scuola elementare. Questo progetto, adatto alle aree remote della regione, mira a migliorare l'esperienza di apprendimento degli studenti locali e a risolvere i problemi comuni associati alle strutture scolastiche.

Una volta concettualizzata la proposta di design, la tesi procede con uno studio sul campo per approfondire la realizzabilità del progetto. Questo ha comportato l'esame dell'architettura e delle tecniche di costruzione locali e dei materiali disponibili nella regione. Attraverso questa indagine, è stato possibile valutare e perfezionare il progetto dell'edificio scolastico per allinearsi al meglio con le caratteristiche del territorio.

Infine, per realizzare il design prescelto nel sito designato, si è costruita una squadra multidisciplinare per fondare un'associazione no-profit. L'obiettivo principale di questa associazione è realizzare, come suo primo progetto, l'edificio e utilizzare l'esperienza acquisita per migliorare le strutture educative nelle regioni svantaggiate dell'Iran e di altre parti del mondo.

"Baluchi Boys in Baluchestan region of Iran" Hadi Aledavood, 2023.¹



Preface

In the summer of 2022, as I embarked on the journey to identify a topic for my thesis, I was determined to focus on educational subjects. My passion for educational projects dates back to my bachelor's degree thesis, during which I worked on a Performing Arts Center project in Iran. This passion has grown through further academic pursuits and professional experiences.

Despite my interest in education, I initially hesitated to study the Iranian pedagogical system due to my unpleasant schooling experience. I was reluctant to revisit those years. I shared my thoughts with my former manager, Hossein Ebrahimzadeh, seeking his guidance. Contrary to my reservations, he suggested, "I believe you should work on Iran's schools. Study the reasons that made your schooling period unenjoyable." His advice sparked the idea for this thesis, prompting me to reflect deeply on my educational experiences.

In September 2022, as I began my research, the Women, Life, Freedom movement erupted in Iran, demanding systemic change. This movement led me to wonder: if a transformation potentially ending Islamic ideologies were to occur, how would the educational system adapt? This question became the initial aim of my thesis.

However, as the movement was suppressed in the following months and hopes for change began to

fade, I realized that addressing the thesis question involved complex, multidimensional aspects beyond my skills and the scope of this thesis. Consequently, by February 2023, I shifted my focus from theoretical hypotheses to a specific, existing educational issue that can be tackled independently of social and political movements. This pivot allowed the thesis to remain relevant and grounded in practical solutions.

Yet, this was not the sole unexpected twist in my thesis journey. Initially aimed at exploring the Iranian pedagogical and architectural landscape and concluding it by proposing a design for a remote rural region in Sistan and Baluchestan province, the project evolved significantly by September 2023. Collaboration with local authorities and Indigenous academic experts during the research phase led to a demand for the actual implementation of the proposed design. This necessitated refining the design and strategy to ensure practical applicability and alignment with the execution phase.

Therefore, the thesis is extended by two additional initiatives. Firstly, an expanded field study in the region provided fresh insights into the design proposal, broadening the scope of the thesis to encompass additional data crucial for project realization. Consequently, the design underwent refinements and a thorough review to enhance its adaptability within the context.

Subsequently, the thesis delved into studying and addressing the implementation process, laying the groundwork for establishing a non-profit association. Comprising a team of experts to review the design, this association would eventually spearhead fundraising initiatives essential for project realization.

In conclusion, my thesis journey has been a deep exploration driven by my passion for enhancing education through architecture and tackling real-world challenges. Beginning with uncertainties and reflecting on my schooling experiences, I adapted to evolving societal demands, shaping my research direction. Initially focused on studying Iran's education system and school architecture in Sistan and Baluchestan province, the project has evolved into a robust endeavor supported by extensive research. Emphasizing practicality and responsiveness to community needs, my thesis aims to propose effective solutions and create lasting change through collaboration with experts and local stakeholders.

Lastly, I wish to express my deepest gratitude to the following individuals whose support and guidance were instrumental in the completion of this thesis:

- Professor Daniele Campobendetto, for his invaluable guidance, support, availability and insightful feedback throughout the project.

- Professors Carlo Micono and Marianna Nigra, for their constructive criticism and reviews that

significantly enriched the project's quality.

- Mr. Mohammad Baluchi, whose remote guidance provided essential contextual insights for the project

- My parents and my dear brother Tarokh, whose assistance during the field study was pivotal to the thesis's outcome.



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Introduction

In the late 19th century, European economic advancements and social and political freedoms inspired Iranian intellectuals to advocate for societal transformation. They viewed education as crucial for civil progress, political freedom, and military power in Iran. Consequently, a modern educational system emerged, characterized by distancing from traditional values, embracing Western educational models, and integrating modern teaching methods.

Despite significant changes to the structure and curriculum of schools, the new system struggled to address the fundamental needs of children and the evolving society. Consequently, the modern education system and its learning environments emerged more from turbulent historical, political, and social upheavals than from deliberate planning to meet students' spiritual and moral needs.

Architects attempted to transform school environments during the mid-1930s as modern architecture began to take root in Iran. However, these architectural innovations could not significantly enhance long-term educational quality without fundamental changes in the education framework. This inefficiency underscores the inseparable relationship between school architecture and the pedagogical structure. The interplay between these dimensions is rarely addressed in Farsi sources. Rapid changes in school architecture before the Islamic

Republic and the censorship imposed afterward have stifled free criticism of the national educational system and its physical environment.

This thesis aims to bridge this gap by examining the mutual influence between learning environments and teaching methods, drawing on two sources: one detailing the history of school-building transformations in Iran before the Islamic Republic and the other exploring the evolution of Iran's modern educational system and the key events shaping it. The research seeks to clarify two aspects: (1) the extent to which architectural design impacts educational quality within a historical context and (2) the measures necessary to maximize this impact.

The historical development of education in Iran, coupled with contemporary challenges such as insufficient budgeting, poor planning, and the pervasive influence of Islamic ideologies on curricula, suggests that significant change is unlikely. Thus, new architectural designs aimed at improving learning environments risk repeating the failures of the modern architecture era.

However, recent case studies demonstrate that state oversight is less stringent for rural charity-built school buildings. The state's inadequate resources to address rural education have led to increased reliance on charitable initiatives. Few of these charities, focusing on extracurricular activities and innovative

architectural designs, tried to tackle the common charitable approaches, offering enhanced learning experiences. Although the number of schools that benefited from this relaxed supervision remains extremely low, they indicate that collaboration with NGOs and philanthropists is the most effective way to integrate creative architectural patterns with progressive pedagogical strategies in remote areas.

Despite the contributions of charity-built schools, dropout rates and the number of out-of-school children remain high. Reports attribute this crisis to outdated pedagogical methods and inadequate spatial quality of schools. The state's repetitive academic strategies have stifled educational innovation, and charities following the same patterns have not broken this trend. This raises an important question: given their potential, why do most NGOs continue to replicate outdated spatial designs? Understanding this requires a historical examination of these architectural patterns.

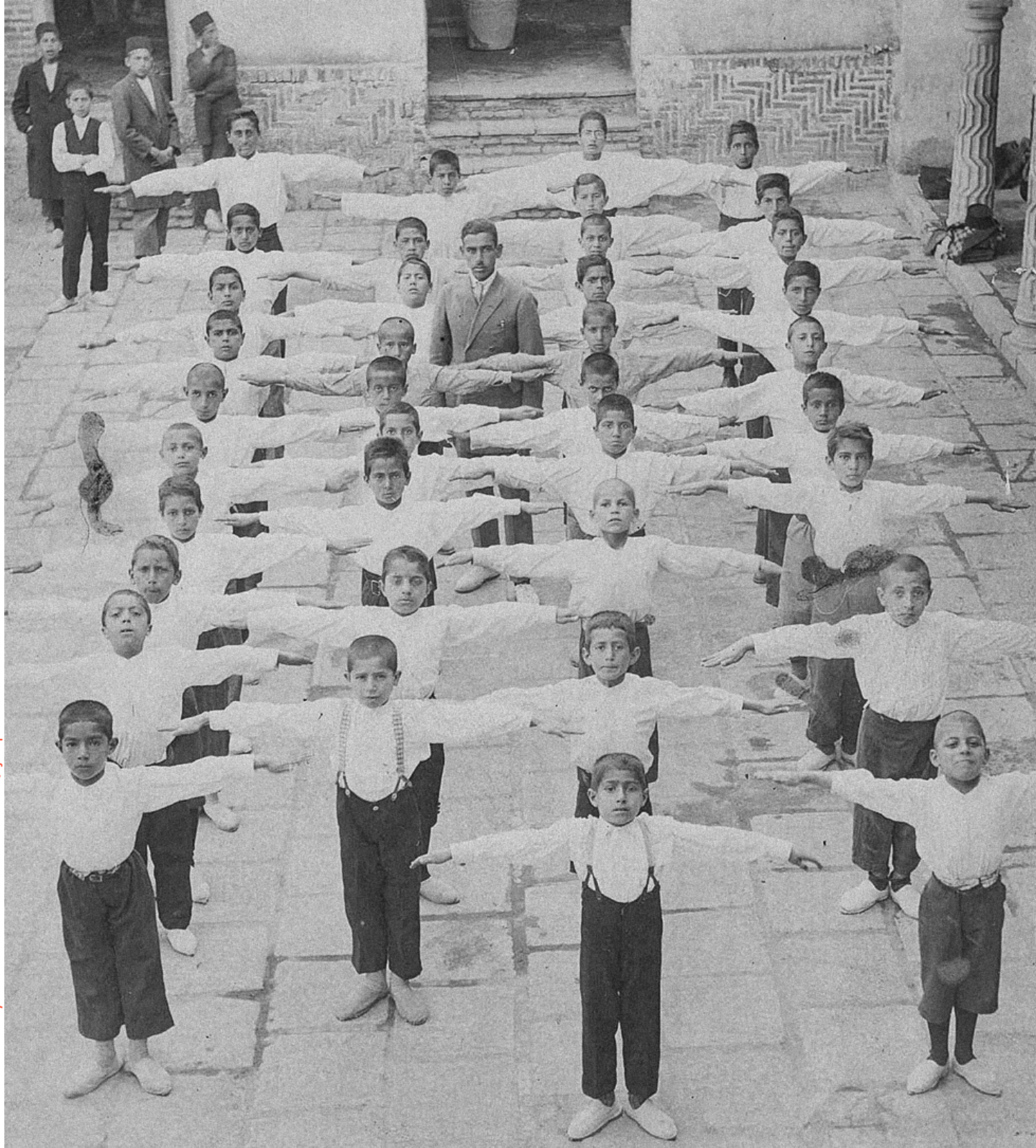
Among Iranian regions, Sistan and Baluchestan stands out for its rural nature, extreme poverty, poor infrastructure, and cultural barriers, exacerbating educational shortcomings. As the focus of many charitable initiatives over the past decade, this province provides a crucial case study. Conducting a field study was essential to gain in-depth insights into the issues of Sistan and Baluchestan province and to

verify the research's credibility. Therefore, I undertook this study to investigate the challenges that impede the success of charity-built schools in the region.

Based on the research and the field study, the thesis proposes a new design for a primary school in a remote village in Sistan and Baluchestan. The new design aims to overcome the shortcomings of typical charity-built schools and reflect the architectural identity and characteristics of the region, as identified through the field study.

Furthermore, prompted by an official request from local authorities at the Organization for Renovation, Development, and Equipment of Schools, alongside input from local teachers and the community, this thesis advances the design towards the executive phase. To increase the feasibility of the design implementation, I initiated the establishment of a non-profit association to raise funds and support the school's construction. By assembling a multidisciplinary team, the association aims to bolster the credibility of the design proposal through rigorous alignment with local regulations, precise simulations, accurate cost estimations, and comprehensive reviews. This comprehensive approach ensures thorough preparation for presentation, collaboration with NGOs, and eventual implementation.

"Elementary school students in the late Qajar period" n.d.³



Modern Education in Iran

The Transformation of School Buildings Across Regimes

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"Alborz American College, Tehran, 1930s" n.d.⁴

The Qajar Dynasty

1789 - 1925

Two strands of development stand out in the Qajar period, to whose early decades we can trace back the first beginnings of modern education: a progressive deterioration of Iran's internal situation, and vastly expanding contacts with the West. Both alike sustained the growing awareness among Iranians of their country's weakness as compared with the West, particularly in military and technological terms.

Knowledge in the traditional sense, has always been appreciated by the Iranian society and by the nineteenth century, the country had already a rich tradition in education. However, Iran's old education institutions (*maktab and madrasa*) were unable to adapt themselves to the social, scientific and educational changes of modern time.

Gradually, a few intellectuals, in Iran as well as in other Muslim countries, came to realize that modern military techniques and technologies could not be implanted into an otherwise unchanged society; it was the whole fabric of the social, economic, and political order that needed to be reshaped.

Iranian intellectuals, like their counterparts elsewhere in the Middle East, were united in viewing education as the cure for all that was wrong with their country and their people. More particularly, at the end of the period under review, their optimism was fueled by the speedy modernization of Japan. The Japanese victory over Russia (1904-1905) fired

the imagination of Muslim intellectuals and gave them confidence in the ability of the East to equal and eventually outpace the West. (Menashiri 1992, 43)

More particularly, they came to a conclusion that education is a prerequisite not only to promote military power equal to the West's achievements, but also in the instruments that Europe's strength had derived from. The instruments like social, economic and political that intellectuals believed in its dependence on education. The interrelation of education, freedom, and progress became the mainstay of intellectual argument in the second half of the nineteenth century. As a result, Referring to the school model developed in Europe, proponents of this thinking were looking for a school whose mission was primarily to reduce underdevelopment and promote modern culture. (Peivandi 2012, 79-102) Yet, pioneers of the modern school tried to integrate religious education as a compulsory subject in the curriculum of the new schools, to avoid conflicts with religious conservatives. They did not reject traditional religious knowledge but held that it needed to be complemented by modern, European education if Iran's ills were to be cured. Such resolute support of new educational concepts, derived from the first contacts with Western thinking and schooling, undoubtedly contributed to the spread of modern education. (Menashiri 1992, 45)

Elementary and Secondary Education

Modern elementary and secondary schools were opened in Iran only from 1870 onward, much later than in Egypt and the Ottoman Empire. Their establishment was made possible mainly through the collaboration between intellectuals and politicians who supported Westernization.

In 1873/4, Sepahsalar (Moshir al-Dowla) the prime minister between 1871 and 1873, established in Tehran the first public secondary school, named Moshiriye in his honor. A similar school was established in Tabriz in the same year, to be followed by military high schools in Isfahan (1882/3) and Tehran (1884/5). Later on in the 1890s, the first public elementary schools were established by an Iranian cleric, Mirza Hasan Roshdiyyeh, and later mainly by the *Sherekat-e Ma'aref*, whose members set up schools and served as their first headmasters. In 1918/9—more than a century after the first contact with Western education, there were no more than several dozen new elementary schools (with a total of 24,033 pupils) and few secondary schools (with 2,392 students). Most of them were private schools. They did not, however, prove sufficiently attractive

to many elite families. The curriculum and the pedagogical approach differed from one school to another according to the educational philosophy of their founders. It was a period of “experimentation with new education.

However, they all were completely different from the traditional system: the contents of the studies went far beyond the curriculum taught by the clerics and included mathematics, science, and foreign languages; the majority of teachers and principals were graduates of foreign schools or Dar al-Fonun and were not dependent on—indeed often hostile—to the religious establishment. However, the new schools stimulated fierce opposition by the *ulama*. They claimed that the curricula in these schools were bound to weaken the students’ faith, lamented the loss of an important source of income for the clerics, and resented their lack of control. The struggle over modern education consequently acquired the nature of an acute cultural conflict. The *ulama* pressured the government to refrain from supporting the new schools, threatened their headmasters and staff, and brought pressure to bear on the students and their families. The initial emergence of modern school buildings primarily took place in larger towns, with the hope that a greater number of people would be willing to enroll their children in these new schools. (Menashiri 1992, 60-61)



“Mohammadiyeh School and Mosque, Dejgan, Bandar Lengeh” n.d.⁵

However, they encountered numerous challenges and were not immediately embraced by the majority of the population. Consequently, in smaller towns and villages, traditional schools were more prevalent. These rural schools resembled their urban counterparts, where a part of a mosque was allocated for religious studies. An illustrative example is the Mohammadiyeh School and Mosque in Dejgan Village, located 75km away from Bandar Lengeh, a city in the Hormozgan province in southern Iran.

This mosque was established in 1839 by a local ruler and remains one of the few school buildings in a rural area that has endured over time. The building is designed in accordance with the indigenous architecture of a hot desert climate. Thick walls are incorporated to block the sun's heat during summers and to retain the heat during winters. The exterior walls have limited openings, and there is a courtyard surrounded by porches, which helps in filtering direct sunlight and providing natural ventilation.



“Dar al-Funun New Building, Established in 1929” n.d.⁶

Dar al-Fonun

Dar al-Fonun was the first educational institution in modern Iran to be set up by the political, rather than the religious, establishment, and the first to teach Western (not religious) sciences. That is why its inauguration is often held to mark the beginning of modern education in Iran. Dar al-Fonun (meaning Academy of Technology), was a polytechnic designed

to teach upper-class youngsters Western technology and sciences, thereby preparing them for senior appointments in the army and the administration. (Menashiri 1992, 53). The graduates of Dar al-Fonun contributed considerably to the growing intellectual enlightenment, specifically in the overall process of promoting modern education, whether by propagating their views or by founding and directing new schools.

Amir Kabir, who was the initiator and driving force

behind Dar al-Fonun, had before him the model of similar schools in Russia (where he had traveled in the 1820s) and the Ottoman Empire (where he spent a long time in the late 1840s). In Russia, he was particularly impressed by the technical college at St. Petersburg (founded in 1828); and in Istanbul by the *Maktab Ulum Harbiye* (School of Military Sciences, established in 1834) and by the broader educational reform under Rashid Pasha in the 1840s. Dar al-Fonun's name and curriculum were modeled on a comparable school that opened in Istanbul in 1845.

For half a century, Dar al-Fonun was the only institute for higher learning and up to the establishment of Tehran University, it remained the most important one. Its contribution to the making of modern Iran was significant. Most important was the very initiative by the state to set up a school to teach modern sciences in defiance of the *ulama*. This itself turned it into the cornerstone of contemporary education. Additionally, Dar al-Fonun trained relatively large cadres of Iranians, giving them expertise in their particular field of study and generally acquainting them with Western culture and languages. In the high positions they came to occupy, the graduates contributed significantly to the overall process of change and reform. Also, The graduates, in turn, promoted modern education, whether by propagating their views or by founding and directing

new schools. And last but not least, Dar al-Fonun was a cultural center where public lectures and discussions were held. Its printing press published official newspapers, textbooks, and Western literature translations. (Menashiri 1992, 57)

The establishment of Dar al-Fonun and the new elementary schools signify two significant innovations: for the first time, there was a deliberate, even systematic attempt to learn from the West; and, for the first time, the state assumed responsibility for education, dislodging the religious establishment from its former monopoly. Both innovations would remain major educational system features until the 1979 Islamic Revolution. This was true even though the Iranian approach was initially narrowly functional and technological, aiming primarily at that part of European education likely to help promote Iranian military strength. The social prestige that came to be attached to the new education gradually made it an essential prerequisite for a successful career and thereby further encouraged its expansion.

The newly educated class was central to the nineteenth-century reforms and the liberal movement leading to the Constitutional Revolution. (Menashiri 1992, 63)

Legislation

The Constitutional Revolution of 1906 opened the way for enormous change in Iran, heralding the modern era and creating a model for later political and cultural movements in the region. In line with the tendency already prevalent before the revolution, advocates of educational reform attached overriding importance to elementary education. The early stage of education was a prerequisite for a durable constitutional regime and an essential condition for building a modern nation-state, for social and economic progress, and, of course, for expanding and improving higher education. The educational legislation of the period reflects such thinking.

The first educational laws of the period laid down the broad guidelines for a school system in keeping with the ideals held by the intellectuals. Already the Supplementary Constitutional Law of 1907 established the legal basis for education to be free, and for schools to be removed from clerical control.

Another significant law was approved by the parliament in 1907, which required the government to develop schools using the country's general budget.

The Fundamental Law of Education of 1911 and

the Parliament debate preceding it set forth with greater force and clarity the conceptual framework of the educational system. Both the debate and the law dealt with elementary education only. Special stress was laid on how to bring the children of lower-class parents into the schools and how to make educational programs uniform throughout the country. The Law also divided universal education into two sections: elementary and intermediate, declaring it free for all. In line with the optimistic mood prevalent during the years of the revolution, but in total disregard of the reality of widespread illiteracy, the law specified that each village or urban quarter must have a school, and that public schools should primarily serve the poor. Wealthy families from towns were to be made responsible for the upkeep of urban schools, and rural landlords for village schools. (Menashiri 1992, 77-78)

This was a significant step towards promoting universal education. The law also presented a detailed plan for centralizing school affairs through the Ministry of Education. Since the enactment of this law, even private and foreign schools have become subject to its regulations, obliged to comply with its provisions. Although the Fundamental Law of Education is considered a cornerstone of the new educational system due to its provision of free public education, it has made private sector investment



“A classroom in the late Qajar Dynasty” n.d.⁷

in education unprofitable by eliminating the profit motive of schools. Consequently, this has led to a recession in the establishment of schools.

In 1912, a law passed by the parliament marked a new era in the history of education in Iran. This law made elementary education compulsory for everyone, obligating parents to send their children to school from the age of seven. However, the implementation of this measure was practically delayed until 1934, when it was officially approved

by the Supreme Council of Education. It was then communicated to schools nationwide. Although this coordination seemingly addressed the content of education, it later justified a uniform physical appearance for schools. As a result, the educational environment in the country's schools became uniformly structured, and any changes to the physical appearance of schools were considered contrary to the centralized national policy.

The 1911 Act quickly increased the demand

for the construction of new schools to meet the compulsory educational needs across the country. However, this urgency, despite all the advancements it brought, lacked a responsible source for guidance and supervision in the matter of school construction. Consequently, school builders would simply refer to the only model recently circulated without having any guidelines or framework for school design.

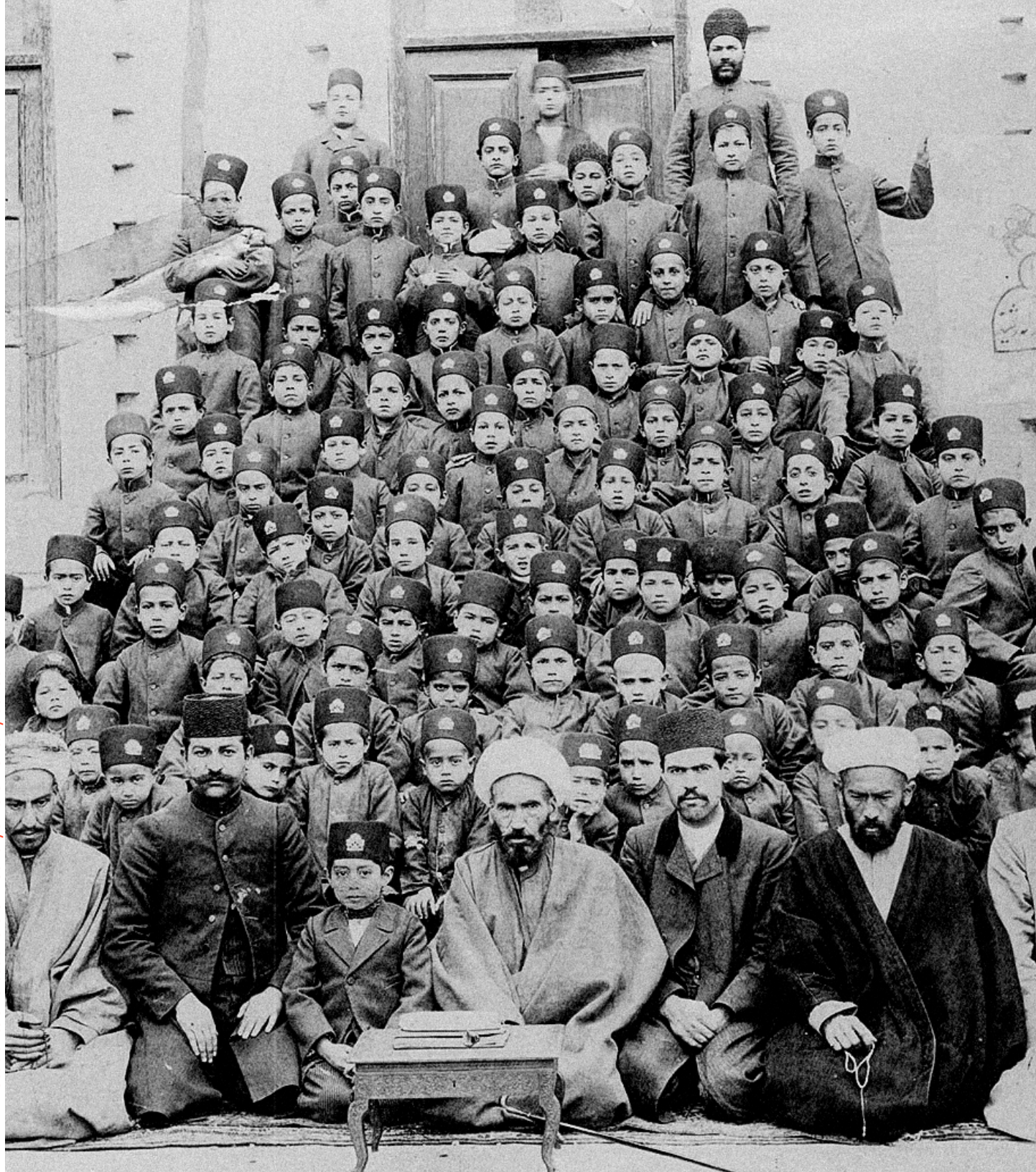
Although the Islamic Education Act legally obligated the government to supervise school construction, the relevant authorities lacked sufficient technical expertise and knowledge for this task. Nevertheless, these conditions raised public awareness regarding school design, leading to the enactment of the 1934 Act, which provided clearer and more specific guidelines for school architecture. (Sami Azar 1997, 163-165)

The constitutional period registered some important achievements. The overall objectives of the educational system were defined and incorporated in legislation. These objectives were free and compulsory education, a uniform educational system opening the schools to children from the lower classes and from the provinces, and making certain occupations conditional on an appropriate modern education.

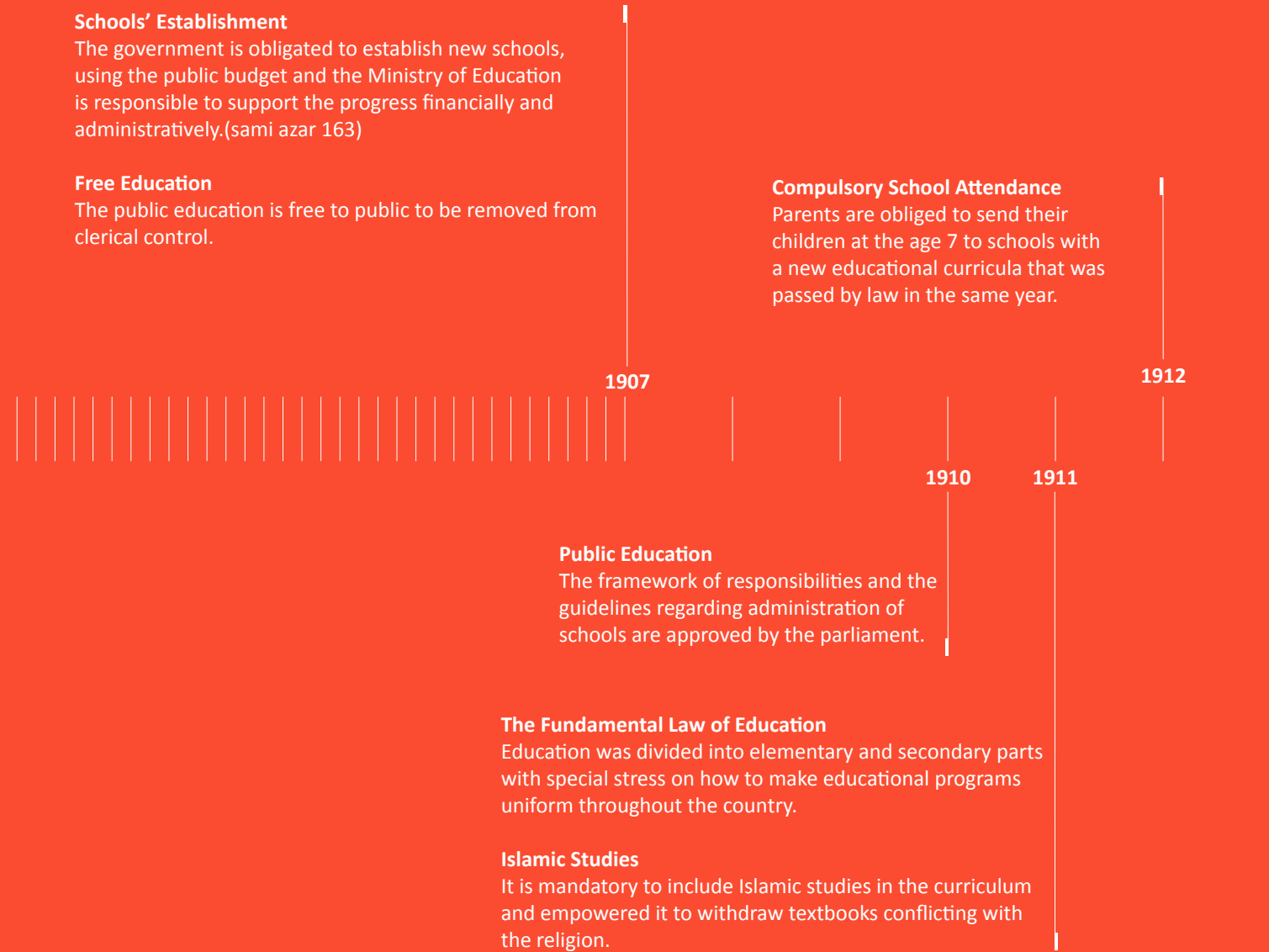
Also in this period, the foundations of the Ministry of Education were laid. The keen interest of the

Parliament in educational matters, in particular the speeches of some of the provincial delegates, helped draw attention to the educational requirements of the outlying districts. But translating principles into practical action was another thing altogether. The Pahlavis later tried in their own way to implement some of the ideas of the early years of the century; others were put forward over and over again by the opposition whenever the Pahlavis' government authority seemed to be weakening at the center.

"Students and teachers of Roshdiyeh elementary school" n.d.⁸



Legal Acts*



* A summary of key legal acts that have had the most influence on the educational system. (Sami Azar 1997) (Menashiri 1992)

New Regulations for Establishing a maktab

The Supreme Council for Education approves a certain of strict requirments (both pedagogical and sanitary) for establishment of maktab and their oweners. (menashiri 102)

Compulsory Schooling came into force

The compulsory schooling law of 1912 officially applied to schools on a national scale.

1924

1922

Formation of the Supreme Council of Education

The government charged it with responsibilities to outline a unified educational policy.

The Emergence of Modern School Buildings

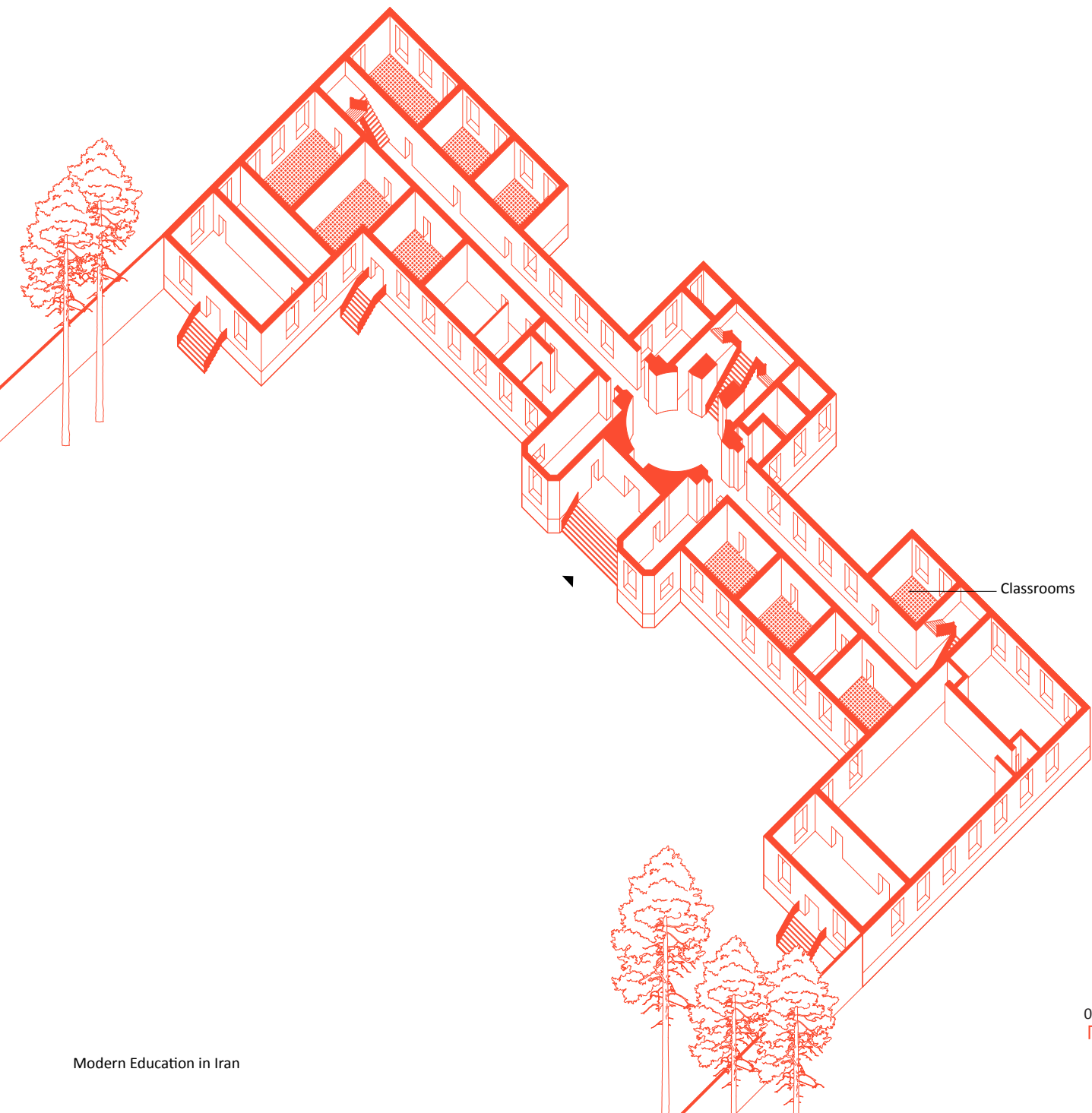
During the Qajar Era (1789-1925), schools in Iran were categorized into three groups based on their educational objectives, curricula, and architectural styles. The three groups were Traditional Schools, Ministry Schools, and Foreigners Schools. (Sami Azar 1997, 180)

While Traditional Schools followed the traditional pattern of Iranian architecture and focused on religious studies, the other two groups played a crucial role in modern education. Ministry Schools like Dar al-Funun, which were influenced by western architecture, followed a more linear and symmetrical pattern. However, they still incorporated some elements of Iranian architecture, such as a central garden. Foreigners Schools like Alborz High School were designed and established by foreigners, and therefore followed a western educational model. In the schools constructed following Alborz, the general layout has consistently comprised a series of classrooms arranged along one or two corridors. This arrangement has now become the most conventional pattern for organizing classrooms in a school. This architectural shift, which emerged during that

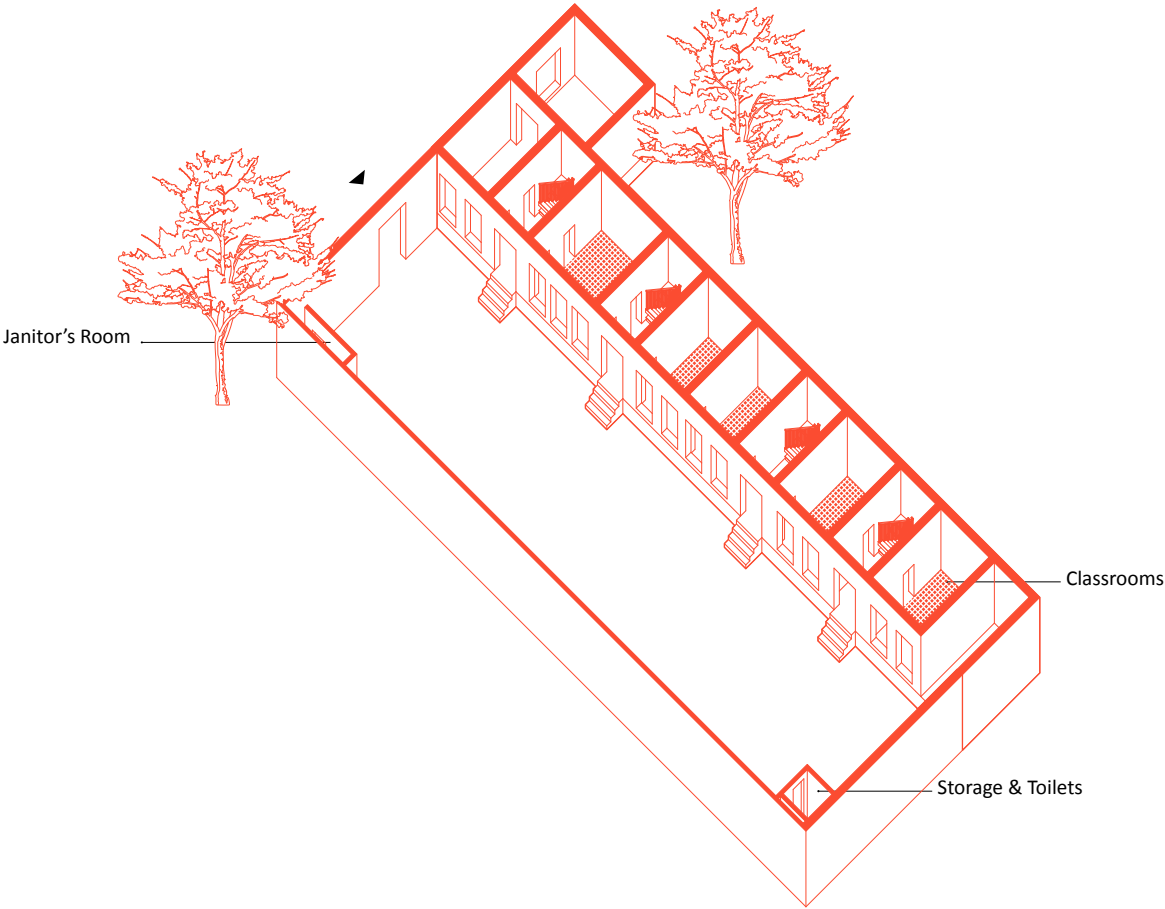
revolutionary historical period in school design, came to fruition with the advent of Dar al-Funun and was fully realized in Alborz.

In the new model of school spatial arrangement solidified by Alborz, a central corridor serves as a pivotal element of the structure. This corridor typically runs in an east-west direction and provides access to the classrooms along its length. This pattern, rather than being directly inspired by European school design, was a result of the new educational system and innovative school programs of the time. The new order recognized the fact that modern education primarily occurred within the confines of the building, with open and semi-open spaces holding less significance. Given this functional characteristic, an internal corridor served as a more rational connecting element between spaces than an external courtyard. This tradition has been emulated in all new schools to date.

Schools in Iran during the Qajar period were constructed by local rulers or governments, as well as foreign investors. The first modern school built by the government was Dar al-Funun. Other schools were constructed by local rulers in different regions of Iran, following the new teaching method influenced by Dar al-Funun with support from the central government. However, access to educational facilities was limited for all classes during this period, resulting in the rarity



Classrooms



of people constructing schools, with little information available on the matter. Nonetheless, Mirza Hasan Roshdiyyeh (1230-1323), a social and cultural activist, played a significant role in constructing elementary schools, particularly for underprivileged and disabled children. Despite not holding a government position, he built nine schools during his career, and even sold his own farm to finance one of the schools. Although the specifics of his benevolence are unclear, his background and interest in building new schools and improving the educational system make him a pioneering benefactor of modern education in Iran.

Roshdiyyeh's innovative educational approach, named the "New Method," revolutionized traditional teaching methods. Instead of teaching the alphabet, he used a phonetic approach that helped children learn to read and write more quickly and effectively. This new teaching method transformed education in Iran and set a new standard. Roshdiyyeh developed his teaching method while studying in Beirut, where he learned from French and English teachers at the Teacher Training College. The new teaching method of seating students in rows facing the teacher had been in use for a long time, primarily in higher education and vocational schools like Dar al-Funun and equivalent institutions. At that time, this concept, introduced by European teachers as an alternative to the traditional circle arrangement, was

embraced by the proponents of the modernization movement. Roshdiyyeh and other pioneers of modern education had the innovative idea of applying this model to elementary education. Although his education's content was not significantly different from the prevailing curriculum of the time, his teaching methodology paved the way for the expansion of the education system and the inclusion of new subjects. As a result, his elementary schools became leaders in educational quality in a short time.

His method primarily focused on what happened inside the classroom, which gradually transformed the way of life and relationships within the school. Although his schools' architectural design was not significantly different from traditional schools, his innovative teaching approach became the source of innovative models in school architecture.

For Roshdiyyeh, two points were crucial when it came to constructing a school. Firstly, it was essential to place it in a location within the city that was easily accessible to a larger population. Secondly, the speed of construction was of utmost importance, naturally accompanied by simplicity in design and ease of execution.

The latest building for Roshdiyyeh's school in Tabriz, as shown above, reflects the founder's desire for simplicity in school architecture. Unlike other school buildings of the time, such as Dar al-Funun



or Shokatiyeh, Roshdiyeh School does not follow a symmetrical pattern. The building has a linear shape, and each pair of classrooms is connected by a corridor that also leads to the ground floor and the first floor. The placement of toilets, storage, and the janitor's room in the garden has become a model for school buildings to this day.

Roshdiyeh's efforts serve as a prime example of the positive impact that non-governmental organizations can have on the Iranian modern education system. His approach emphasizes the critical role that the private sector can play in utilizing its experience and knowledge to bring about significant, long-term changes to the pedagogical methods and overall education system of a country.

Despite facing numerous challenges such as *takfir* and having his schools destroyed by clerics, Roshdiyeh remained dedicated and strict in his efforts to continue establishing schools and expanding modern education.

After Roshdiyeh schools, the construction costs of the Alborz School building in 1922 were initially provided by a philanthropist named Albert A. Rolleston, and it still stands today. However, until 1974, the school's expenses were covered by its students. During the Qajar era and especially after the Constitutional Revolution, many schools were established by political, cultural, and social activists

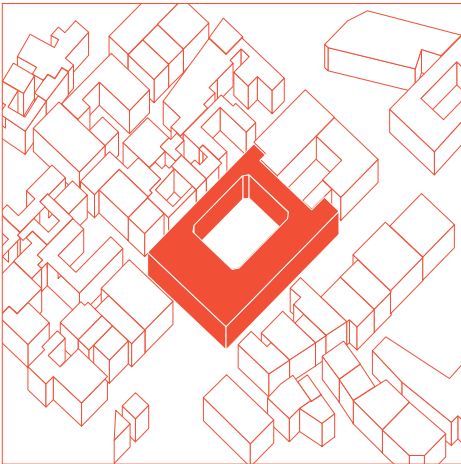
with the aim of expanding modern education. These schools were managed and funded in various ways, depending on their founding purpose, the number of students, and their methods of operation. However, what is important to note is that private investors, activists, and philanthropists were primarily responsible for the expansion of education and its accessibility to the public, especially girls. Their efforts facilitated the acceptance of modern education within local religious communities and paved the way for future governments to establish school buildings.

Architectural Typology

Notable School Buildings and Their Interior Spatial Distribution During the Qajar Dynasty's Era of Modern Education.¹¹

* Governmental/Charity: The founder holds a government position but uses personal funds or property for charitable activities.

* Private/Charity: The founder independently funds charitable initiatives without government involvement.



1890

Shokatiyeh

Location: Birjand

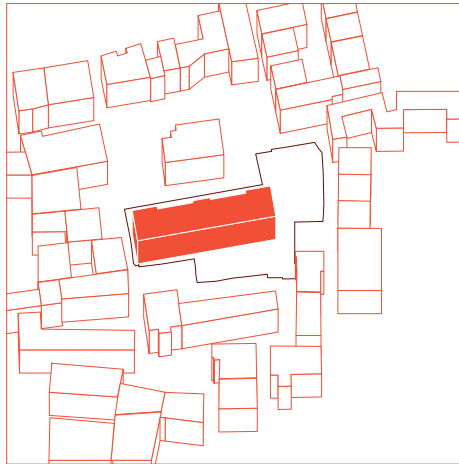
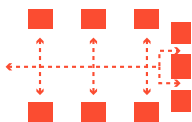
Architect: Unknown

Founder: Mohammad Ebrahim

Khan Alam

Funding: Governmental/Charity*

Classrooms Distribution:



1895

Tumanian

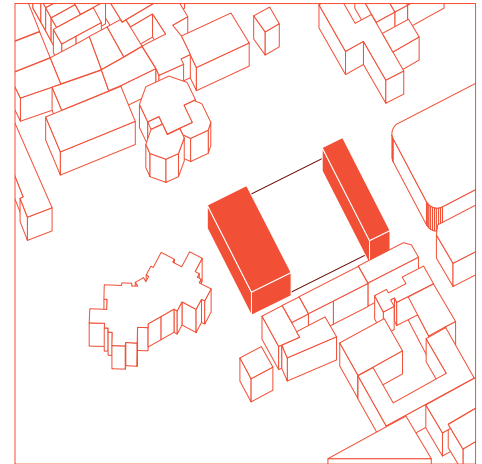
Location: Tabriz

Architect: Unknown

Founder: Tumanian Family

Funding: Private/Charity*

Classrooms Distribution:



1901

Sa'adat School

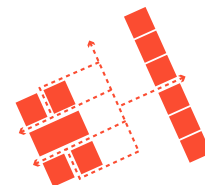
Location: Bushehr

Architect: Unknown

Founder: Ahmad Khan Daryabeigi

Funding: Governmental

Classrooms Distribution:





1910

Roshdiyeh School

Location: Tabriz

Architect: Unknown

Founder: Mirza Hasan Roshdiyeh

Funding: Private/Charity

Classrooms Distribution:



1916

Mohammadiyeh School

Location: Tabriz

Architect: Unknown

Founder: Abbas Adham

Funding: Governmental

Classrooms Distribution:



1922

Alborz High School

Location: Tehran

Architect: Nikolai Markov

Founder: Albert A. Rollestone

Funding: Private/Charity

Classrooms Distribution:



0 50 100m





"Pahlavi School, Boroujerd, 1936" n.d.¹²

The Pahlavi I Dynasty

1925 - 1941

The real development of the modern and secular education system was achieved during the First and Second Pahlavi era (1925-79). The Ministry of Education was given responsibility for regulating all public and private schools and providing a uniform curriculum for primary and for secondary education. Thus the traditional sector of education declined substantially. The *Maktab* gradually disappeared and the *Madrassa* focused on religious studies and training of clergy.

The two decades from the coup that brought Reza Khan to power in December 1925 to his abdication and exile in September 1941 were a period of (comparative) political stability, authoritarian rule, and intensive modernization. (Menashiri 1992, 87).

Reza Shah aspired to make Iran into a nation-state in the modern, western mode. He believed that progress depended on the adoption by Iran of western technological achievements and on the selective borrowing of some western cultural values and social, economic, and political institutions. For all three goals, a modern educational system was, in the shahs view, a primary, indeed a vital, requirement. He considered education as primarily a means to advance his policies, valuable only if it contributed to the stability and progress of the state and to the social adaptation of the individual in it. (Menashiri 1992, 90)

In 1922, the government formed the Supreme Council of Education and charged it with outlining a unified education policy. In 1925, the Department of Public Education was formed in the Ministry of Education to supervise its implementation. (Menashiri 1992, 95)

In the mid-1920s, a uniform syllabus was prepared for elementary and secondary schools (for boys and girls) and was made mandatory for all schools. The graduates of all elementary schools (having completed sixth grade), intermediate schools (ninth grade), and high schools (twelfth grade) were required to take final examinations set by the ministry. Private schools were subordinated to the ministry and obliged to follow the official program. In 1928, a decree compelled all foreign schools to use the official syllabus up to the fourth grade and use Persian as the only language of instruction. In the upper grades, they were required to complete the Persian language and literature syllabus as well as the official teaching program in Arabic and Iran's history and geography (but they could establish their syllabus for other subjects). In 1937, the government nationalized all foreign elementary schools, and in 1939, the secondary schools as well. (Menashiri 1992, 95)

Another critical step was the introduction, in 1928, of standard textbooks for all regions. In 1939,

a new, modified series of textbooks were published for all subjects in all elementary and secondary grades. This was of great academic value, for until then, there had been no government supervision of textbooks; they were published as commercial ventures and filled with mistakes and distortions. Besides, the new books were tailored to fit the regime's needs. They emphasized the customary elements of national education: language, literature, history, and geography, as well as music and folklore. (Menashiri 1992, 95)

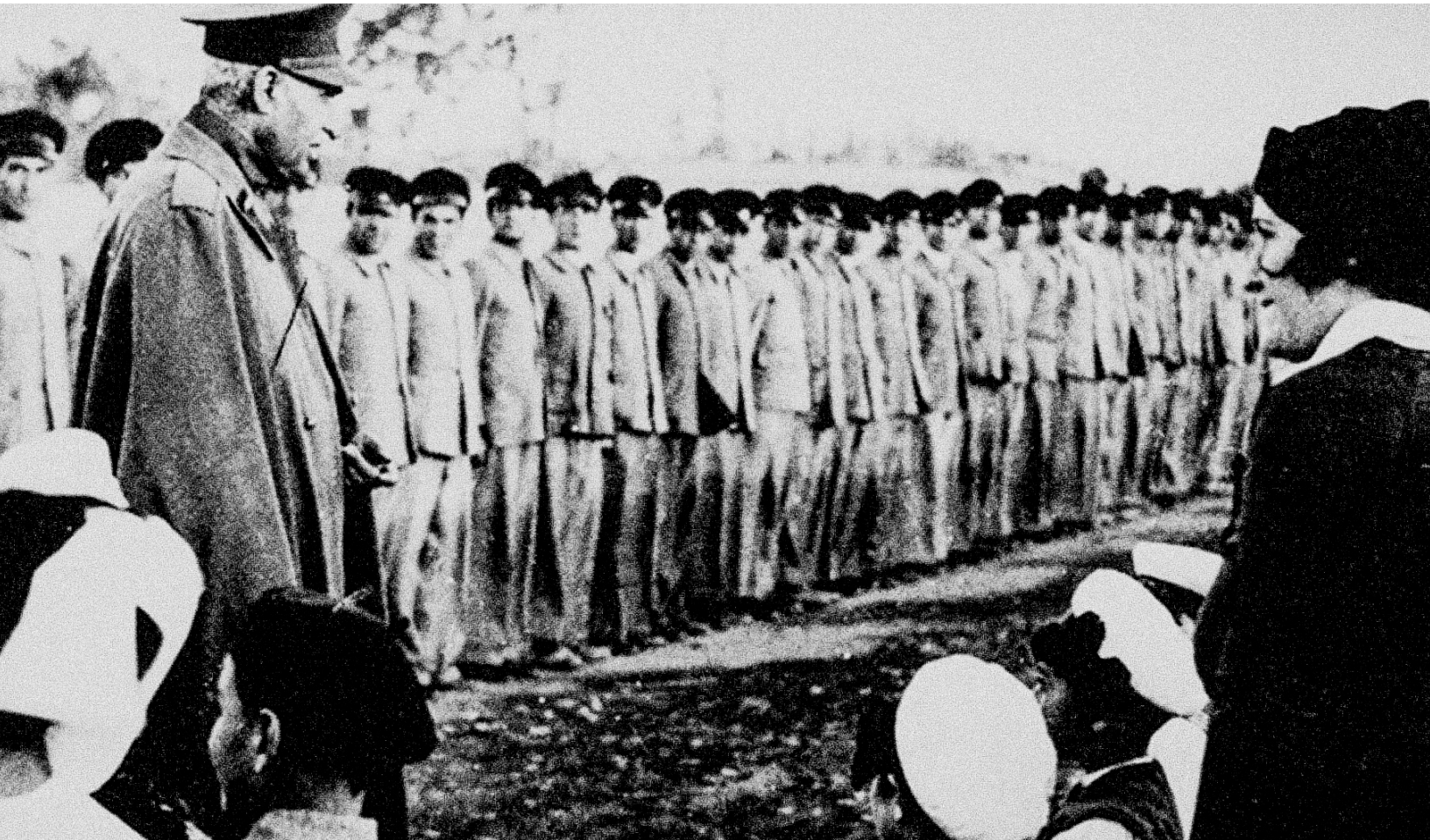
To counteract the country's ethnic and linguistic pluralism, special emphasis was put on the knowledge of Persian. Teachers were urged to use only the correct standard pronunciation in class and to avoid local dialects. The teaching of pre-Islamic history, mainly of the Achaemenid period, was stressed. Instruction in geography attempted to make students see Iran as a unified country and to stress the bonds linking its various regions. Literature, especially poetry, and Iranian art were likewise emphasized. Physical education and paramilitary training-typical of nationalist education, were also promoted. (Menashiri 1992, 96)

After the relatively rapid growth in the population studied in elementary and secondary schools following the initial consolidation of the regime, its momentum was curbed: the average growth at the

end of the period was similar to that at its inception. This slow-down was not due to a lack of demand for education or to diminishing goodwill on the part of the government but rather to a shortage of teachers, insufficient budgets, and demographic problems. (Menashiri 1992, 121-122)

The severe shortage of skilled teachers was directly related to the decline in the social prestige of the teaching profession. This decline had already begun under the Qajars but accelerated between the two world wars. Urbanization and industrialization, the social and economic reforms, and the resultant expansion of the bureaucracy opened new, more prestigious employment opportunities for the educated class. Additionally, Insufficient budgets slowed down the construction of schools and the acquisition of teaching aids. The country's overall economic difficulties kept allocations for education at a low level: throughout the period, they averaged no more than 4 per cent of the total budget, and much of that went to higher education. (Menashiri 1992, 121-122)

Moreover, As in other developing countries, the high rate of population growth militated against the expansion of education. Moreover, the population was spread out over vast areas, many of them sparsely settled. The majority lived in rural or tribal areas. The rural population was scattered over



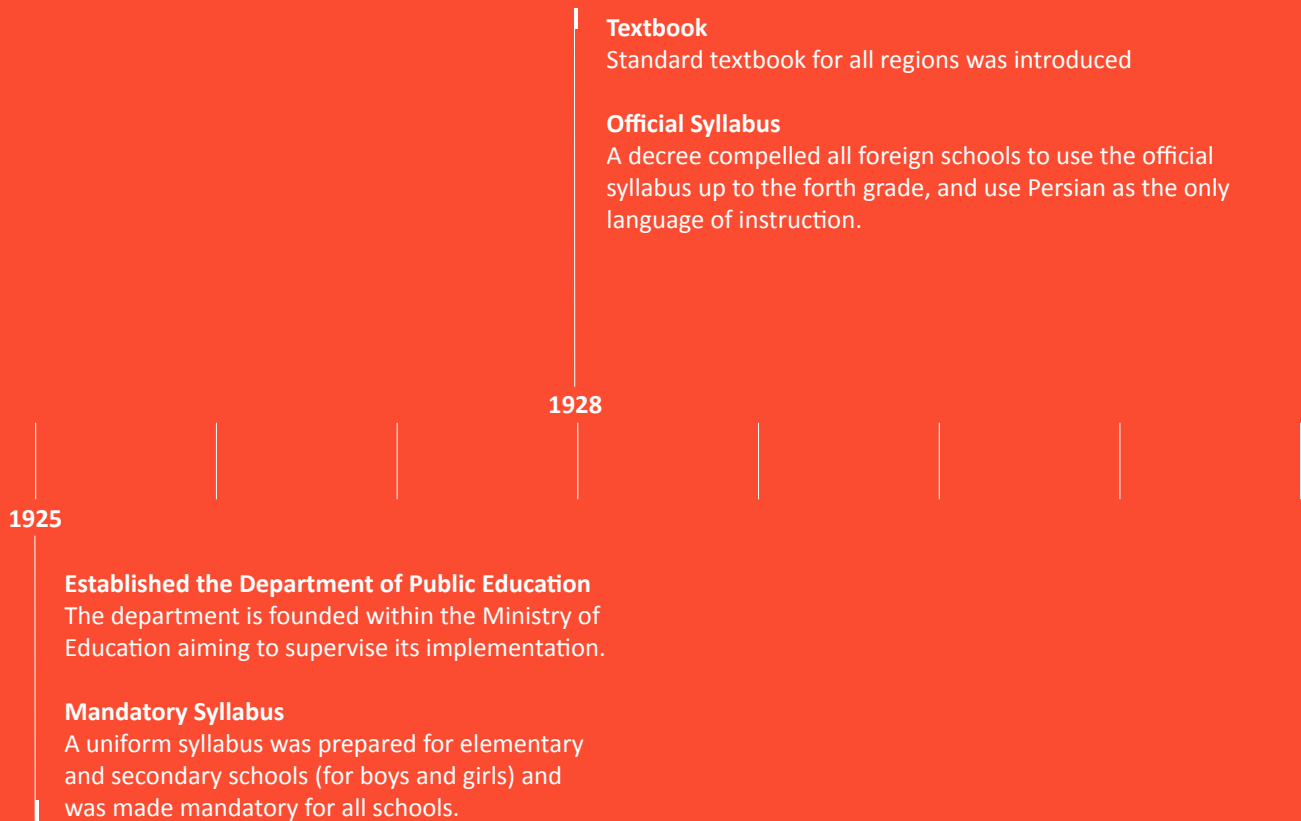
“Reza Shah visiting the students and teachers of Hamadan schools” Alliance Israélite. 1936¹³

50,000 villages, most too small to sustain a school. In addition, in the countryside, children were still considered part of the family's labor force, and parents were reluctant to send them to school. Moreover, the elite groups had no incentive to encourage rural education, and the clerics had no wish to do so. (Menashiri 1992, 121-122)

Despite the challenges during the Pahlavi I dynasty to fulfill Shah's avowed exceptions for the educational system, Reza Shah's efforts in modernizing education

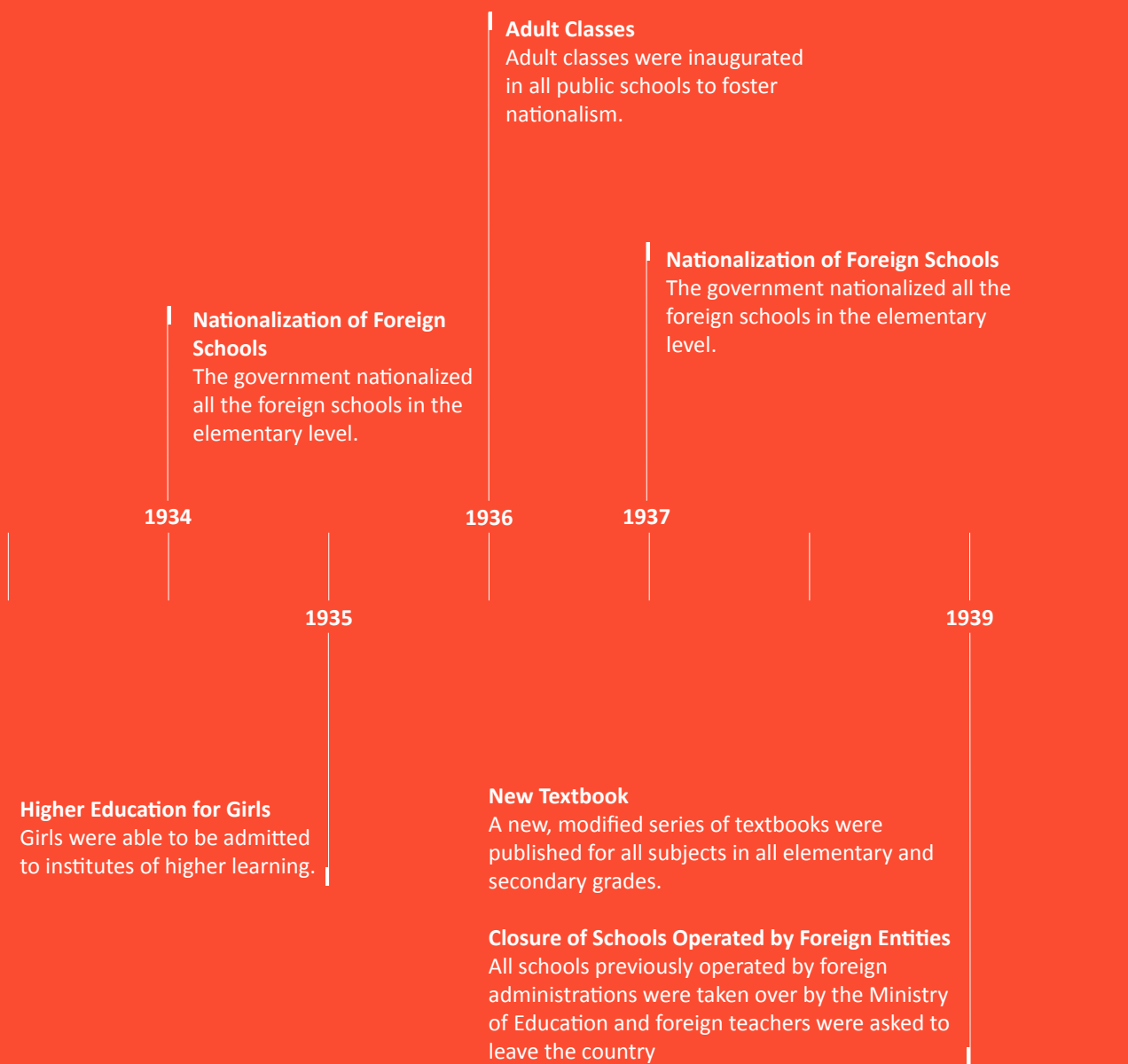
laid the foundation for Iran's educational system in the 20th century. However, Reza Shah viewed the educational system not merely as an instrument for supplying the cadres he needed for his modernizing policies, but equally as a tool for mobilizing broad support for the regime and its policies.

Legal Acts*



* A summary of key legal acts that have had the most influence on the educational system. (Sami Azar 1997) (Menashiri 1992, 95-115)

The Pahlavi I Dynasty





"The board of directors of Jam'iat e nesvan e vatan-khah, a women's rights association in Tehran (1923–1933). n.d.¹⁴

Secularization and Westernization

In Muslim society, therefore, any change in the traditional life-style, and the removal of any sphere of activity from clerical influence, come under the heading of "secularization." (Menashiri 1992, 99)

Reza shah's desire to develop a secular nation

and for religious to take its place in similar to that customary in the Christian West, he pinned his hopes on Education. To achieve this goal, the regime took action to bring down the number of traditional schools' (*maktab*) students, while expanding the new education and reducing the number of classes in Islamic studies in the new schools. Number of classroom hours devoted to Islam and Arabic significantly reduced; instead, classes on natural sciences, music, and painting were added.

“The changeover from the traditional to the new education, which had begun late in the nineteenth century, was now significantly accelerated.”
(Menashiri 1992, 102)

(Menashiri 1992, 101-103)

The changeover from the traditional to the new education, which had begun late in the nineteenth century, was now significantly accelerated, with the concomitant decline in the number of *maktab* students. (Menashiri 1992, 102).

In the domain of Islam, secularization subsumed westernization. The latter is being discussed separately only to bring out more fully the regime's eagerness to adopt western ideas and a western life style and to stress the role it assigned to education in this context. The shah and his courtiers perceived a twofold connection: (1) the expansion of the new school system as such, the growth of the school population (including girls), and the launching of new branches of schooling (i.e., vocational schools and universities) were seen as bringing the country closer to western ways; (2) the new material taught in schools was intended to give an added impetus to westernization. Similar trends had already existed towards the end of the Qajar period; now they became the ideal of a powerful and authoritative regime. (Menashiri 1992, 105)

The spread of nationalism, secularization, westernization, and loyalty to the regime was best served by the expansion of elementary schools. However, the growing demand for skilled labor to implement the regime's reform programs,

consequently, had the higher education experience a more rapid growth than that of elementary education. In fact, the shah and the educationalists of his time supported giving priority to elementary education, though they often had different reasons for doing so. Reza Shah stated: “We must, first and foremost, teach our workers and farmers to read and write”; only then was it time to move on to higher education. (Menashiri 1992, 116-118)

Westernization and patriotism had failed to reach deep into the masses (certainly not among the ethnic minorities), and above all: religious sentiment continued to eclipse all other loyalties. The power base of the religious establishment had not been significantly curtailed. This was not solely a policy failure but also had to do with the still limited scope of education, which prevented new ideas from reaching the mass of devoted Muslims. Even more important reasons for the modest success of the new educational system stemmed from the shah's *modus operandi*: in his reforms, he endeavored not to destroy old institutions and values, but rather to build the new alongside the old. (Menashiri 1992, 124)

However, there were some significant long-term achievements: the infrastructure for a national school system was put into place; the traditional elementary schools were almost eliminated; and

“Most prominent schools established by the private sector were initially built by religious groups for religious minorities.”
(Menashiri 1992, 124)

the concept of the new education-the vision of intellectuals a generation or two earlier-finally won out. (Menashiri 1992, 124)

The first kindergartens were established in this era. Essentially, the existence of kindergartens was a necessity for industrialized societies, where mothers were engaged in work outside the home and didn't have the opportunity to care for and educate their children. While Iran, during the reign of Reza Shah, achieved an average industrial growth rate of 17 percent, it still wasn't an industrialized society, and the majority of Iranian women were homemakers. Despite government support and newspaper advertisements, only the upper echelons of society embraced kindergartens, primarily due to their imitation of Western lifestyles rather than daily necessity. Gradually, the middle-class urban population also started sending their children to kindergartens because psychologists suggested that children's education should begin before the age of 7.

The expansion of public education during the reign of Reza Shah and the society's tendency to send their children to school, coupled with the increasing need for more schools, led to heightened activities by religious groups, capitalists, and social activists in school construction. Most prominent schools established by the private sector were initially built by religious groups for religious minorities.

For instance, the Zhandark School was originally constructed for Armenian girls, but later, Muslims also attended. In another example, the Zoroastrian community made significant contributions to the expansion of the modern education system. Their schools were so architecturally impressive and of such high educational quality that even the children of the Shah studied in them. Some of these schools, such as the Anooshirvan and Firouz Bahram schools, are still in operation today. (Menashiri 1992, 124)

Zoroastrians' philanthropic activities in building schools started during the Qajar period, particularly after the Constitutional Revolution. The Kikhosrawi School in Yazd is a notable example, founded in 1890 by Arbab Kikhosrow Mehraban Kikhosrawi, a member of a Zoroastrian group known as the "Parsis Association". This school was free, and the association covered the teachers' salaries. Alongside Roshdiyeh schools, these are among the first free and philanthropic schools for which information is available from the Qajar era.

Overall, during the Pahlavi I dynasty, the widespread attachment to Islam remained firm, clerical control of education was terminated, and finally, for the first time, the government put forward explicit educational policies and planned practical steps to carry them out. (Menashiri 1992, 124)

"Firooz Bahram School, Tehran" n.d.¹⁵



“ The school buildings became more simplified with a monotonous arrangement of classrooms in one or two floors and a row of windows on the facade.”
(Sami Azar 1997, 203)

School Architecture

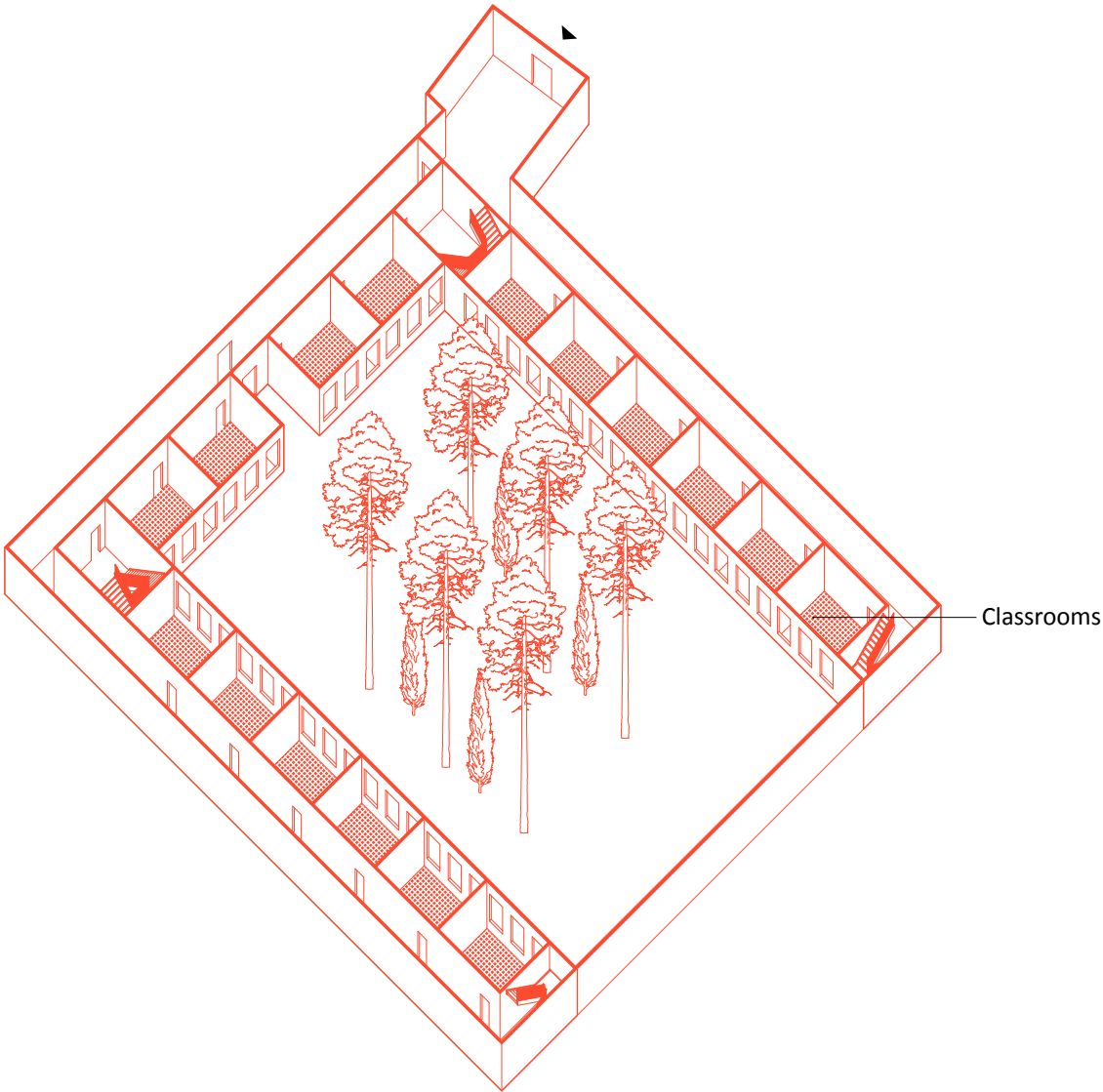
The development of the infrastructure for a national school system and the rising number of pupils in the country have resulted in the need for new educational spaces that can meet the growing needs of the students. As a result, the concept of Western school buildings was once again put into place. The implementation of school buildings respecting the Western concept became widely acceptable throughout the country, as it was able to host more students with less complex structures and technical requirements.

Despite minor changes, the pattern of the newly built schools in terms of shape and function remained similar for decades later. The school buildings became more simplified with a monotonous arrangement of classrooms in one or two floors and a row of windows on the facade. All the rooms are connected by a central hallway which also connects the interior and the exterior of the building. In cases of symmetrical planimetry, the central hallway is accessible with an entrance in the middle of the floor, from which the building is divided into two even wings. (Sami Azar 1997, 203)

Additionally, for the first time a set of regulations

was formulated that all schools were obliged to adhere to. This included prohibitions on digging deep pits in the schoolyard to prevent children from drowning, the requirement for large windows in each classroom to ensure adequate lighting, the construction of railings on staircases, and the creation of spacious courtyards for children's recreation. During the early 20th century, the Westernization movement had a significant impact on the design of school buildings. Schools began to adopt larger sizes and spatial arrangements that were likely inspired by Western schools. A typical feature of this era was the chain of classrooms located on either one or both sides of a hallway, with linear windows arranged in a repetitive pattern on the facade. However, this standard pattern, which remained unchanged for decades, restricted the learning process to the indoors and raised questions about the role of the outdoors in education. On the other hand, it allowed for greater efficiency in the use of space and materials, and also facilitated the implementation of modern teaching methods and technologies.

Notably, foreign architects such as Maxime Siroux, Nikolai Markov, and Andr e Godard, among others, were responsible for designing most of the school buildings in this era. These architects brought with them their own architectural styles, which were



largely influenced by European and modernist styles. However, despite the foreign influence, elements of the traditional Iranian architecture played a significant role in designing school buildings during the era. The incorporation of architectural elements such as the *Ivan*, *Tagh*, and *Ravagh* was a deliberate attempt to maintain a connection with Iran's cultural and historical identity and make school buildings adaptable to the traditional architecture of the time, while also transforming the educational system.

The *Ivan*, also known as a covered porch or veranda, was a common feature in Iranian architecture. It provided a shaded area for students to gather and socialize during breaks, offering a comfortable space to unwind and relax. The *Tagh*, on the other hand, was a vaulted arch used in the construction of entrances and hallways, providing a grand and imposing entrance to the school buildings. This element not only added an aesthetic appeal to the buildings but also contributed to their structural stability.

Lastly, the *Ravagh*, also referred to as a courtyard or open space, was used as a gathering place for students and teachers. It provided natural ventilation and light to the buildings, making the environment more conducive to learning. The *Ravagh* was also used for hosting cultural events, such as concerts and plays.

Today, these buildings stand as a testament to the rich architectural heritage of Iran and serve as important landmarks in the country's educational history. Some schools from this period are still operating, while others have become museums or office buildings. They are the last generation of school buildings in Iranian contemporary educational history that include traditional Iranian architectural elements. The intricate designs and architectural features of these schools are a testament to the skill and craftsmanship of Iranian architects and builders of the time. Despite the passage of time, these buildings continue to inspire and captivate visitors with their beauty and grandeur.

Unlike school buildings during the Qajar Dynasty, school buildings in this era became more unified in terms of form and scale. Indoor spaces became repetitive and a standard of classroom area became adopted in all school buildings.

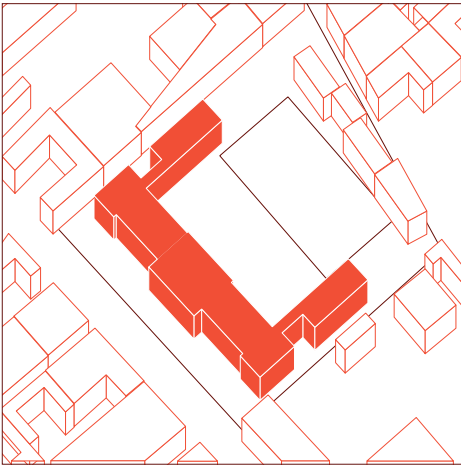


Architectural Typology

The Most Remarkable School Buildings and Their Interior Spatial Distribution During the Pahlavi I dynasty.¹¹

* Governmental/Charity: The founder holds a government position but uses personal funds or property for charitable activities.

* Private/Charity: The founder independently funds charitable initiatives without government involvement.



1926

Iranshahr High School

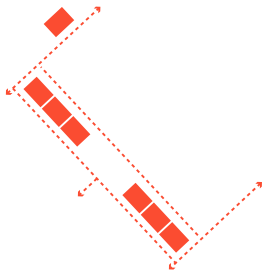
Location: Yazd

Architect: André Godard

Founder: Navab Agha Hossein

Funding: Private/Charity*

Classrooms Distribution:



1929

Dar al-Fonun (New Building)

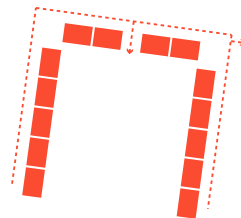
Location: Tehran

Architect: Nikolai Markov

Founder: Amir Kabir

Funding: Governmental

Classrooms Distribution:



1931

Jeanne d'Arc School

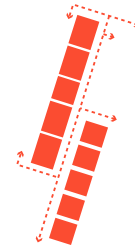
Location: Tehran

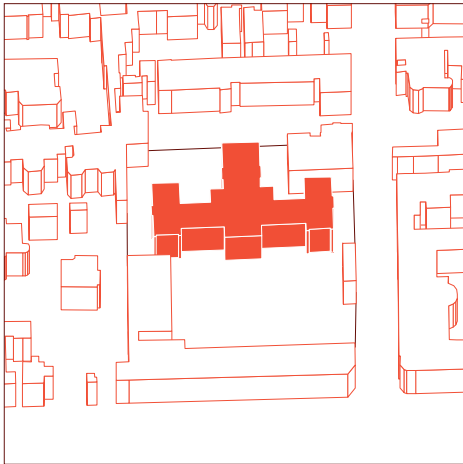
Architect: Nikolai Markov

Founder: French Catholics

Funding: Governmental/Charity*

Classrooms Distribution:





1931

Anooshirvan School

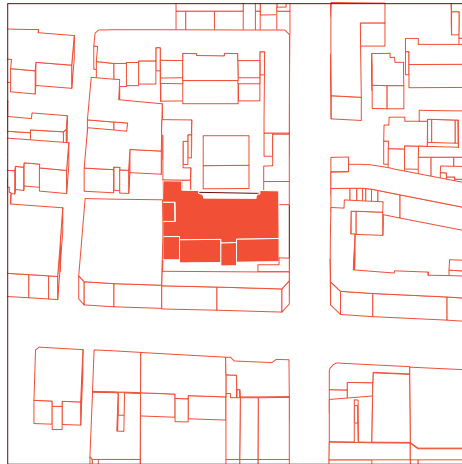
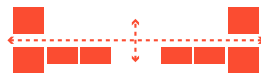
Location: Tehran

Architect: Nikolai Markov

Founder: Ji Tatar

Funding: Private/Charity

Classrooms Distribution:



1932

Firooz Bahram

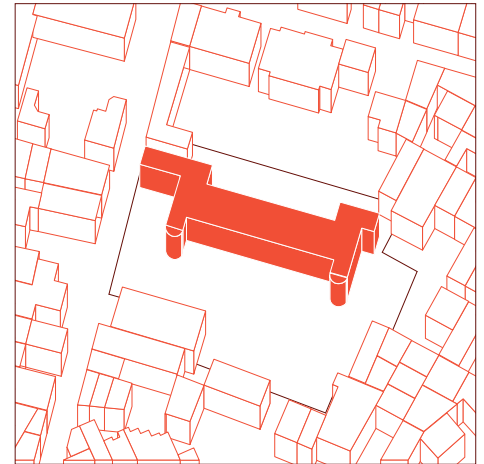
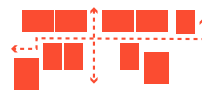
Location: Tehran

Architect: Jafarkhan Memarbashi

Founder: Bahramji Bikaji

Funding: Private/Charity

Classrooms Distribution:



1936

Pahlavi School

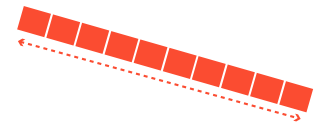
Location: Boroujerd

Architect: Maxime Siroux

Founder: Government

Funding: Governmental

Classrooms Distribution:



0 50 100m





"Girls' Art Academy, Tehran, 1938" n.d.¹⁷

The Pahlavi II Dynasty

1941 - 1979

After Reza Shah's abdication in 1941, his son Mohammed Reza, the self-styled shah of Iran, furthered the cause of secular modernism during his reign, which lasted until 1979.

Although the first attempts to adopt at least elements of western education go back to the early nineteenth century, the most rapid expansion of the pre-university educational system occurred during the years of White Revolution (1961-1963) when the Shah was firmly in control, and therefore largely reflects his personal direction. (Menashiri 1992, 172)

The idea of legislating compulsory education dated back to the eve of the Constitutional Revolution. But it required the reassertion of liberal thinking and the weakness of the central government during World War II to move from the enunciation of a principle to the actual passage of a law. The law that was approved on 28 June 1943, stated that six years of universal, free, and compulsory schooling were to be introduced throughout the country over the following ten years. (During the first five years, the Ministry of Education was entitled to limit compulsory education to a four-year course.) Appropriate school buildings would be designated in each district, and parents failing to send their children to school would be severely punished. (Menashiri 1992, 173).

Later in 1948, a supplementary law was approved

by the parliament that stipulated that local councils would finance schools under their jurisdictions, that landlords would have to participate by means of special levy in the establishment of village schools, and that the government was to provide special incentives for the teaching procession. The desire for rapid expansion as measured against the limited facilities then available once again raised the issue of quantity versus quality. However, thirty-five years later, at the end of Mohammad Reza Shah's reign it had still only been partially carried out. (Menashiri 1992, 174-177)

The emergence of Iranian architectural studios marks a significant highlight of this era. Although the number of Iranian architects designing architecturally notable buildings remains limited, this period represents a pivotal moment as Iranian architects, for the first time, assume control over the design of domestic public buildings. Prominent figures in this movement include Kamran Diba, Nader Ardalan, and Abdolaziz Farman-Farmian.

Architecture began to be professionalized in Iran in the 1940s. During this time, Iranian architecture started to develop nearly all the features of a full-fledged profession. The first architecture school opened at Tehran University and an architectural association, the Iranian Society of Graduate Architects, was formed in 1945. Moreover, the first

building codes and standards were established in the Municipality of Tehran. A new generation of Iranian modernist architects worked to create a bridge between the old world and the new. Many projects, including the design of large civic and public buildings, by this younger generation demonstrated a shift in aesthetics. (Bani-Masoud, 2020).

These architects first attracted public attention at the start of the 1940s when they banded together to form a professional association, establishing a tariff, setting by-laws, and electing an executive board. Before this, Iranian architects did not have any sense of identity as a group and the public knew little about them or what they did. The association's officers included leading members of the architectural profession. There were thirty-eight young architects in this association; all had professional training as architects. They not only wanted to raise architectural standards but also wanted the government to establish architecture as a profession with status and rights. They maintained that the right to practice architecture in Iran should be given only to those who either passed examinations that tested their architectural knowledge or demonstrated evidence of formal professional training. Their approach resulted in the creation of architecturally advanced buildings in both the public and private sectors. This period marked a turning point in the

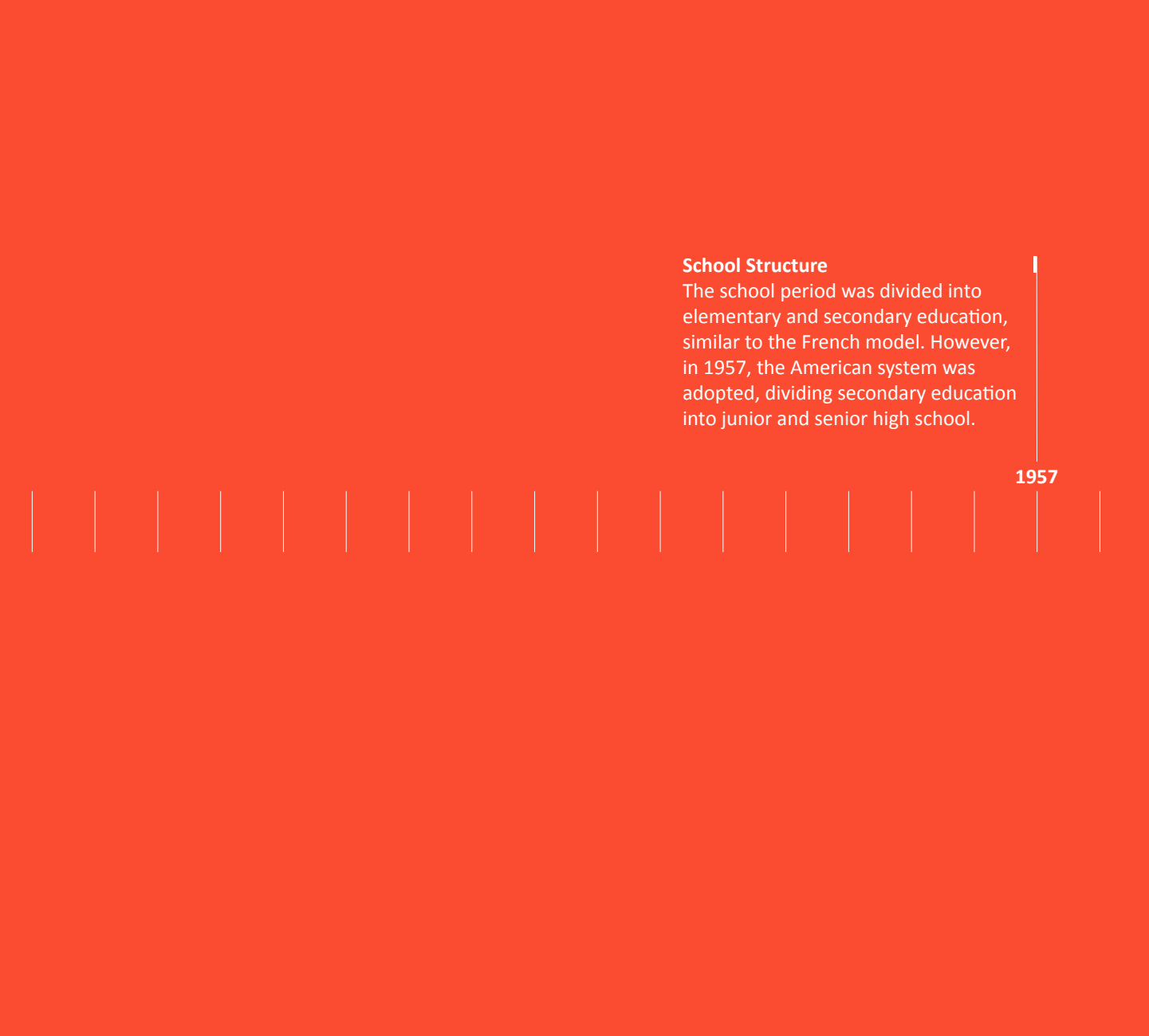
professionalization of architecture, introducing economic, innovative, high-rise, and lightweight construction with open and flexible floor plans. (Bani-Masoud, 2020).

Most of the legal approaches that prompted the modern education stem from the last three dynasties in Iran during the monarchies of Qajar and Pahlavi. Even though that Islamic Republic made significant changes in the overall education context, yet it could not quite uproot the new education. Arguably, they neither tried nor had the tools and scientific support to implement effective legal steps. Therefore, most of the legal advancements to qualitatively enhance the modern education, with minor changes, sustained up this day. After Islamic revolution, a law in 1987, considered the most important document instituting the major reforms in Iran's education system. The law emphasized an ideological framework for schools based mainly on Shi'ite values which presented as the religion of the state. For the law (1987), the most "sacred" mission of the school is to educate the new Muslim, to become "a virtuous believer, conscientious, and engaged in the service of the Islamic society." The first important point made by the 1987 legislation is the priority given to the ethical and religious development in education and school activities. (Paivandi, 2006).

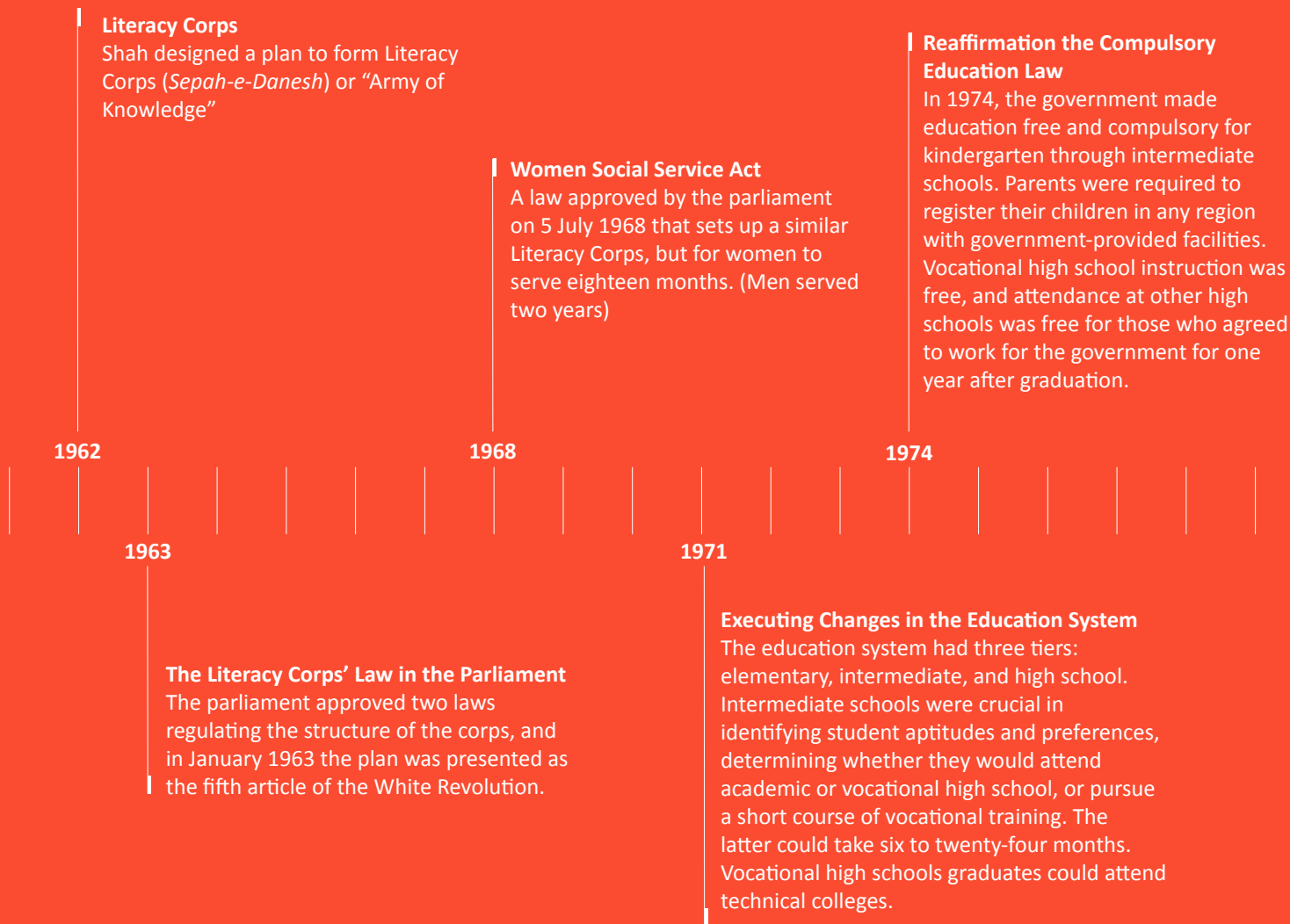
"Senate Building, Tehran" 1968¹⁸



Legal Acts*



* A summary of key legal acts that have had the most influence on the educational system. (Menashiri 1992, 183-185)



Rural Education

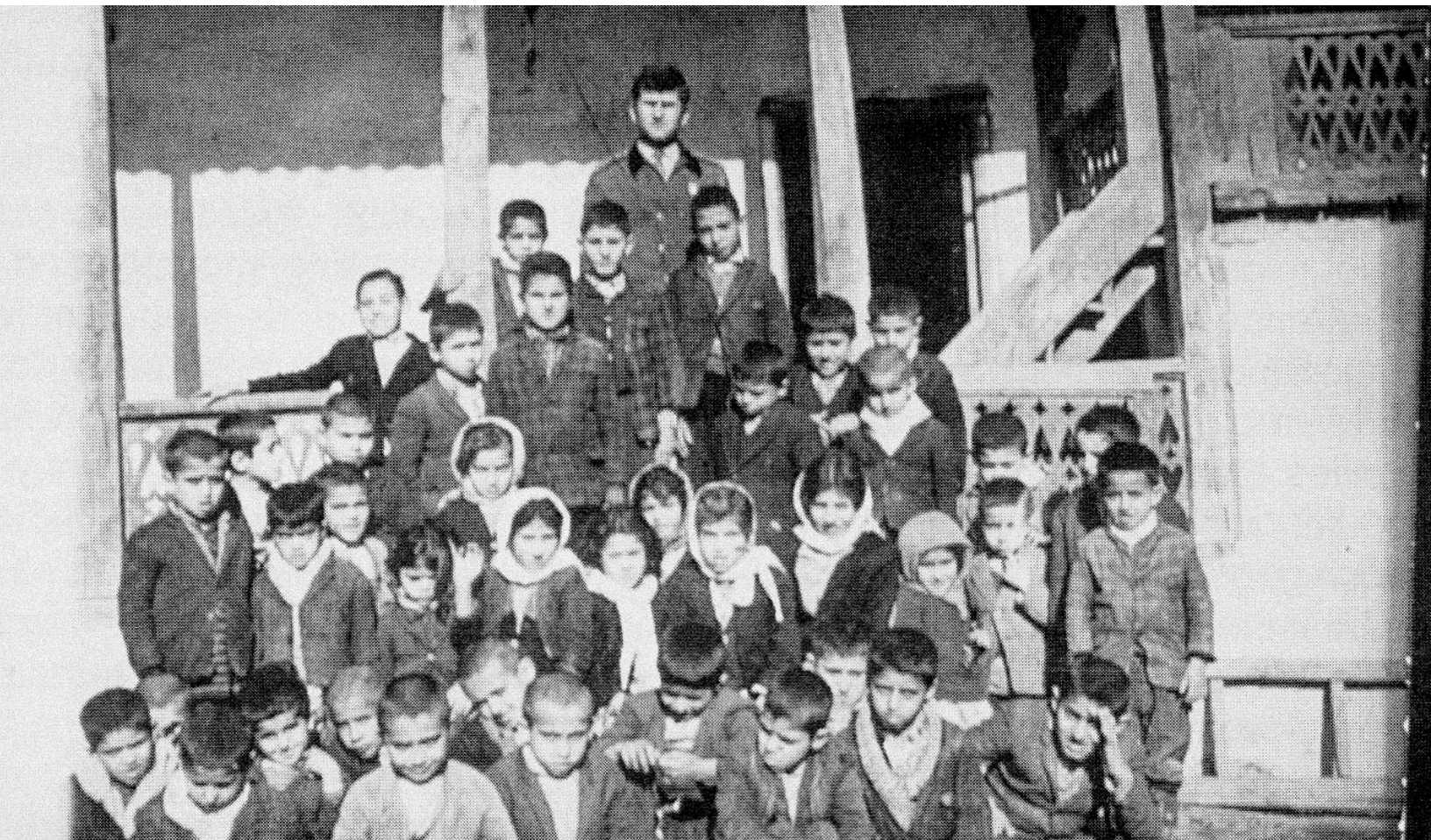
The implementation of compulsory education was slow everywhere, but much more so in rural and tribal areas. For example, only 16 percent of school-age children attended school in Kurdistan and 20 percent in Baluchestan in 1962-1963. Therefore, the Shah planned to form a Literacy Corps, composed of high school graduates who, instead of performing their regular military service, would go out to teach in villages. The Shah concluded that “no basic solution to the country’s educational problems was possible by ordinary methods” and that for rapid advancement, “revolutionary and unusual means” were essential. The plan he designed in 1962 was to form a Literacy Corps composed of high school graduates who, instead of performing their regular military service, would go out to teach in villages. In 1963, the Parliament approved laws regulating the structure of the Literacy Corps. The members of the corps would receive four months of military and pedagogic training and then be assigned to teaching positions in remote regions. Those with a satisfactory record of service would later be offered employment as regular teachers. (Menashiri 1992, 178)

In promoting rural education, the Shah had a

threefold aim: to improve the quality of village life, raise productivity, and create greater social justice; propagate the philosophy of the White Revolution; and foster loyalty to it and himself. (Menashiri 1992, 179)

The accomplishments of the Literacy Corps, as reflected in official statistics, were impressive. Despite a percentage decrease in the rural population, at the end of the Shah’s reign, the share of rural and tribal students in the total elementary school population went up to 52 percent, and 74.4 percent of all rural and tribal children between the ages of six and ten were reported to be attending school. No less important, every second corps teacher remained in the profession, continuing in the employ of the Ministry of Education and adding significantly to the supply of teachers. Although valid, the following deficiencies posed severe problems for this kind of schooling: poorly prepared teachers, schools with appallingly high student-teacher ratios, a high dropout rate for students, and ill-defined educational goals. The concept of the Literacy Corps stemmed from a conscious preference for quantity over quality. (Menashiri 1992, 180)

It is possible to divide the village school into three main categories. The first category included schools in large villages where corps teachers taught alongside regular teachers, offering a full curriculum



“Literacy Corps elementary school in one of the villages of Iran” 2002.¹⁹

for grades one to five. These were similar to schools in smaller towns. The second category comprised medium-sized schools, in which fewer than five teachers had to cope with five grades. At Razun (in Lorestan), for example, one teacher taught the second and fourth grades together. When he finished teaching part of a lesson to one grade, he gave the pupils assignments to keep them busy while he addressed the other grade. Another teacher applied the same system to the third and fifth grades. In

some schools, classes were taught in two shifts. Most villages had schools that fell into the third category, where there was only one teacher (sometimes two) who divided pupils into “beginners” and “advanced.” The graduates of schools in the second and third categories did not reach an academic level that would have allowed them to move on to intermediate schools. (Menashiri 1992, 180-181)



"Preschool Education in 1972" 1975.²⁰

Pedagogical Approach

Adopting the new education system required developing a new teaching method. By the end of the 19th century, the curriculum focused on teaching basic reading, writing, and math, often using religion as a tool for literacy. However, the emergence of new professions during industrialization, as well as the influence of intellectuals and constitutionalists,

The Pahlavi II Dynasty

necessitated the implementation of a new teaching method that included new scientific and secular subjects. The new teaching strategy in schools was typically one-sided, with the teacher as the knowledge holder and the student as the recipient of knowledge. Students were required to concentrate throughout the course, with any behavior outside of that facing punishment. (Sami Azar 1997, 172)

On the other hand, this innovative educational method allowed a single teacher to enroll a larger

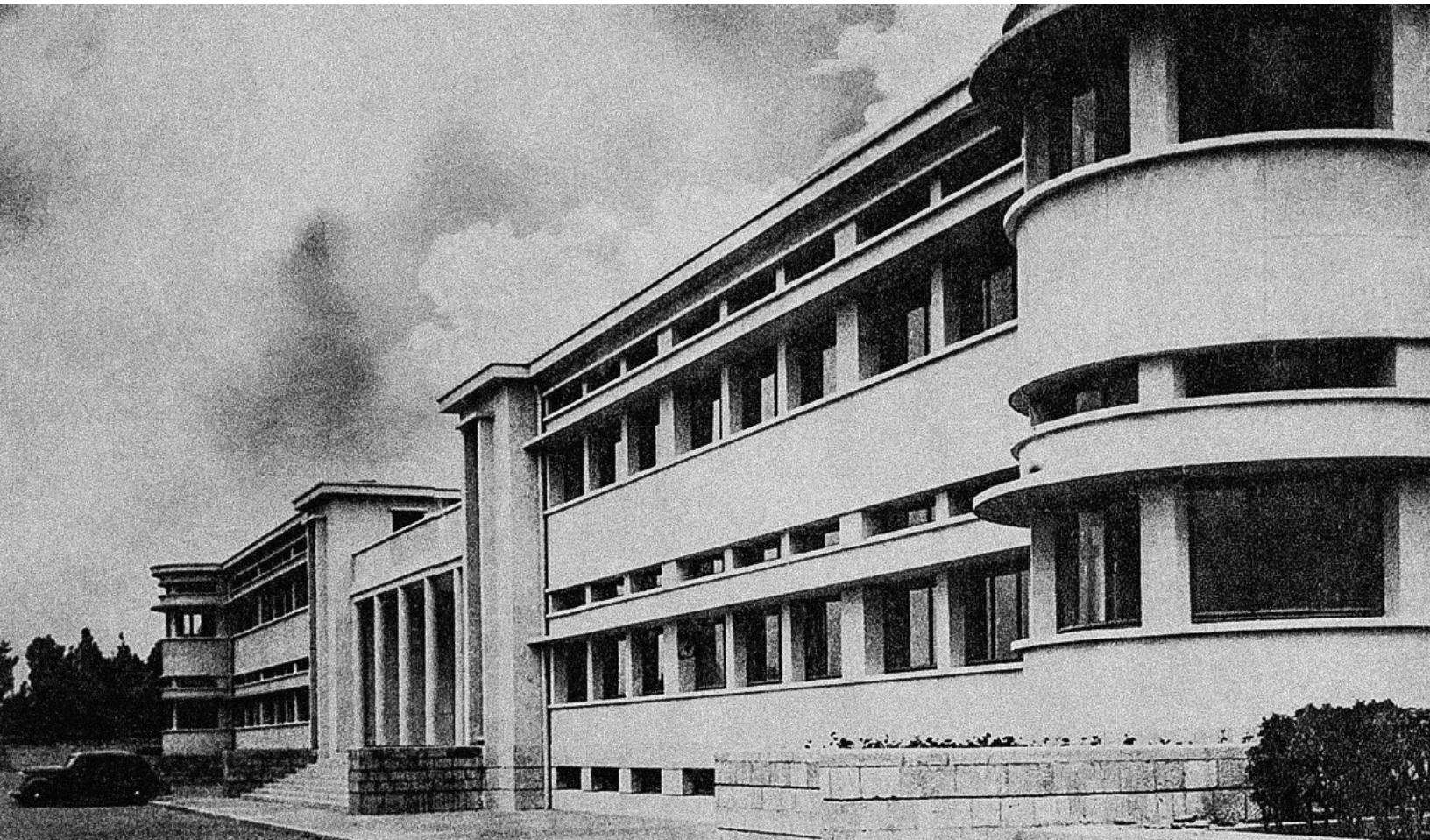
number of students, resulting in larger classrooms with fewer teaching staff. (Sami Azar 1997, 210) Although this approach was able to provide students with a lot of data, it failed to promote their physical, emotional, and social skills.

The American Overseas Consultants Incorporated, evaluating Iran's educational system reported in 1949: The principal point of weakness in the educational structure of Iran is its educational philosophy. The existing school system has been relatively successful in accomplishing the apparent aims of its founders three-quarters of a century ago, which were to produce a distinguished intellectual elite and to establish an instrument by which the thoughts and actions of the common people might be efficiently manipulated. The existing system is anachronistic and unsatisfactory because of a changed social philosophy rather than because of the technical failure of the schools. The nation's educational system has failed to meet the needs of modern Iran. The educational philosophy, and the technical details of the school system, are largely a copy of the traditional French system characterized by extreme centralization of administration, authoritarian mythology, theoretical rather than practical studies, stereotyped and overloaded curricula, and a policy of eliminating rather than salvaging students who do not meet the arbitrary

and rather artificial standards of academic excellency. (Menashiri 1992, 123)

Although over 70 years have passed since the publication of this report, the persistence of this educational methodology, with only minor amendments, has continued.

Perhaps the main reason for the ineffectiveness of all criticisms towards the uniform and passive teaching method, from its inception until now, has been the lack of attention to its physical form. This means that while the prevalent teaching method has been recognized as undesirable and conflicting with the spirit and intellectual abilities of children, the arrangement of rows of desks facing the teacher has never been subjected to the fervor of similar critiques. Unaware that this physical form accepts nothing but that teaching philosophy, it has practically become the agent of preserving and perpetuating the mechanism of sitting and listening in the classroom. As long as that teaching philosophy remains unchanged and exerts its dominance over the educational environment, this physical form will also remain unchanged. As long as this physical pattern in the arrangement of the classroom persists, discussions about transformation in the country's educational system will undoubtedly lead nowhere. (Sami Azar 1997, 175)



“Ferdowsi School, Tehran” Amir Bani-Masoud, 2020²¹

School Architecture

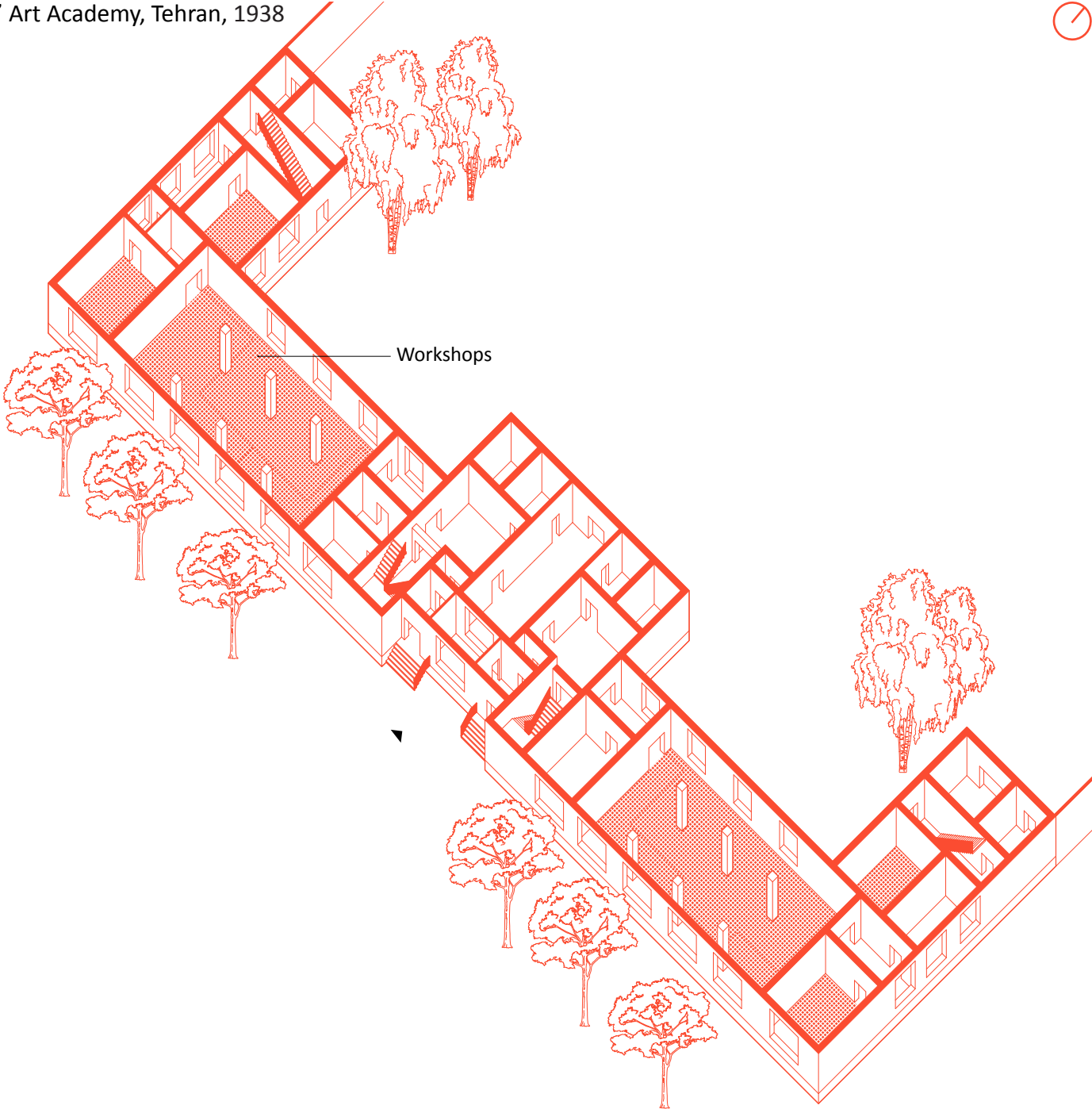
The mid-1920s marked a significant turning point in Iranian architecture, as modernism began to take hold in the country. This modernization was spurred by Reza Shah’s (of the Pahlavi Dynasty) desire to industrialize Iran, which in turn required a reform of the social, cultural, and educational spheres. As a result, new public buildings were constructed,

The Pahlavi II Dynasty

including schools, to meet the increasing demand for modern facilities.

During this period, the rise of oil urbanization led to massive urbanization and the creation of new cities. Three architectural tendencies - Neoclassicism, Islamic revivalism, and the neo-Achaemenid style - emerged as part of the Iranian national style. (Bani-Masoud, 2020)

During this era, Iranian architects, both recent graduates from the University of Tehran or abroad,



0 1 2 5m

and foreign architects were instrumental in embodying Pahlavi's vision of modernity by adopting Western architectural prototypes. The burgeoning need for new spatial environments necessitated a rapid and cost-effective approach. Consequently, the school buildings of this period lacked traditional architectural elements, resembling administrative buildings rather than distinct educational structures. This was a notable shift from the school architecture of the Pahlavi I dynasty.

Although the buildings became simpler in form, the influence of renowned architects and the emphasis on architecture as a profession remained significant. Innovative passive strategies for better daylight and ventilation were adopted. A notable feature of advanced school buildings from this period was the separation of windows into two parts for each floor. Linear shading elements were employed to filter direct sunlight while maximizing daylight through larger transparent areas. This design allowed for less intrusive shading elements and simplified construction. The divided windows, with separate upper and lower sashes, provided greater control over ventilation. Opening the upper sash promoted airflow and ventilation at the top of the room while keeping the lower sash closed maintained privacy and security during nighttime and school closures.

School buildings from the Pahlavi II era often

featured facades finished with light-brown brick masonry, a classic architectural building element that persisted in modern constructions such as residential, educational, and healthcare facilities. These buildings are distinguished by their brick masonry, setting them apart from newer structures. Many such buildings remain in urban areas today.

Despite the influx of new architectural styles and ideas, Tehran, the fastest-growing city at the time, remained the epicenter of modernism. As the modernizing nation-state, buoyed by oil revenue, embraced modern architecture, buildings adopted new characteristics such as cubic forms, large windows, lightweight steel structures, flat roofs, and thin walls. However, this intense urban renewal program resulted in reduced outdoor spaces for school buildings compared to previous eras. Additionally, the emergence of steel structures introduced innovations such as floors on stilts (pilots), enabling school buildings to expand in size and rise to three floors above ground level.

"Razi High School (Lycée Razi) under construction, 1962-1966" n.d.²²



Architectural Typology

Notable School Buildings and their Interior Spatial Distribution in the Late Pahlavi I and Early Pahlavi II Dynasties.¹¹

* Governmental/Charity: The founder holds a government position but uses personal funds or property for charitable activities.

* Private/Charity: The founder independently funds charitable initiatives without government involvement.



1937

Firoozkuhi School, Tehran

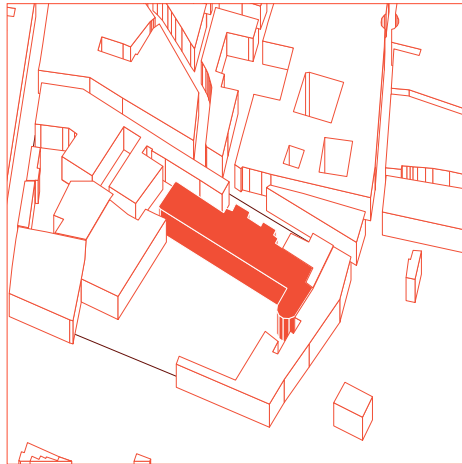
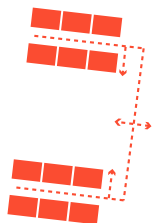
Location: Tehran

Architect: Unknown

Founder: Mirza Seyyed Karim Khan (Montazem al-doleh)

Funding: Governmental/Charity*

Classrooms Distribution:



1938

Hafez School, Tehran

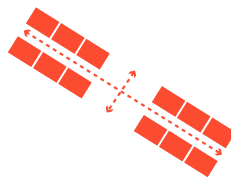
Location: Tehran

Architect: Roland Dubrulle

Founder: Reza Shah

Funding: Governmental

Classrooms Distribution:



1938

Girls' Art Academy, Tehran

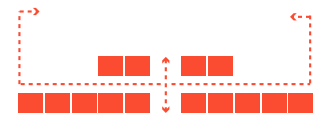
Location: Tehran

Architect: Vartan Hovanesian

Founder: Reza Shah

Funding: Governmental

Classrooms Distribution:





1946

Ettefagh School, Tehran

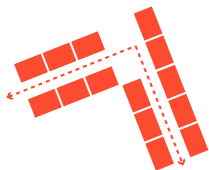
Location: Tehran

Architect: Unknown

Founder: Mayer Abdollah Batsoun

Funding: Private/Charity*

Classrooms Distribution:



1955

Ravesh-e-No School

Location: Tehran

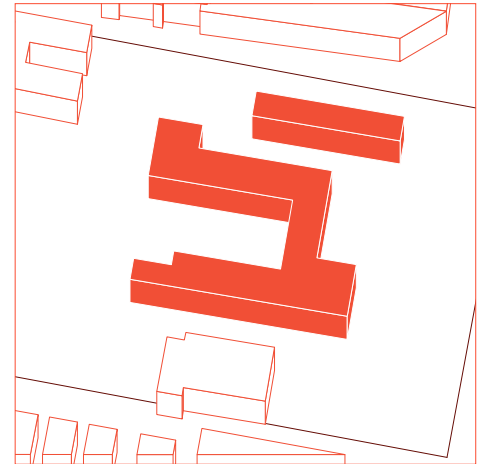
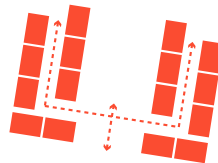
Architect: Unknown

Founder: Toorandokht Moghumi

Tehrani

Funding: Private/Charity

Classrooms Distribution:



1966

Razi High School, Tehran

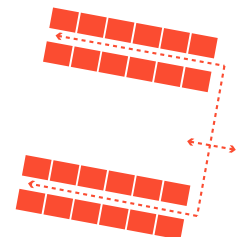
Location: Tehran

Architect: Unknown

Founder: Mission laïque française

Funding: Governmental

Classrooms Distribution:



0 50 100m

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موسسه فرهنگی
ناحیه مقاومت بسیج چهارم تهران
خوزه مقاومت بسیج شهید رجایی
راحد مشاورت بسیج دانش آموزی شهید یوسفی

مدرسه فنی و کاردستی محمد حسن بابی
اداره کل آموزش عالی و فنی و حرفه ای
تهران ۱۳۳۲

آینده جوانان بسته به تربیت آنهاست



پنجمین کفایت شهر استوار استوار و ناکورد دانشجو

به منبرستان دکتر حسابی

و میارا

نعمت خا

بهرین زمان برای خدمت اراده و یادگوار

"Dr. Hesabi Technical School, Zanjan" n.d.²³

The Islamic Republic

The Current Educational
Condition, 1979 - Present

The Islamic Revolution in Iran has undoubtedly been one of the most momentous developments in the Middle East--and in human history at large--in recent decades. Some of its unique features, such as its revolutionary ideology, massive popular participation, the leadership of the *ulama*, the nature of clerical rule, the policies of the new regime, and its *modus operandi*, have made Iran (and Shi'ite Islam) into a focus of public attention since the late 1970s. (Menashiri 1992, 1)

A combination of urgent social, economic, cultural, and political issues contributed to the emergence of the Islamic revolution. Education played a role in this transformation, influenced both by its successes and shortcomings. Resentment deriving from educational problems centered on two major areas: (a) shortcomings of the educational system itself, both qualitative and quantitative (the low level of teaching, insufficient vacancies in institutions of higher learning, lack of coordination between overall workforce needs and educational programs, the concomitant dependence on foreign experts, and the persistence of social gaps); and (b) more basically, the philosophies underlying the educational system and the ideologies it strove to impart (mainly the atmosphere of *Gharbzadegi*, "West-strickenness"), which had "contaminated" Iranian thinking, educating Iranians--so it was now

claimed--to view themselves as inferior to westerners, turning the young generation away from traditional religious convictions and instilling alien philosophies in them. The clerics, the intellectuals, and some of their partners in the revolutionary movement thought the second set of problems was more harmful and dangerous. Still, the first category was no less significant in fomenting popular discontent. Each had its share in fostering resentment and was instrumental in preparing the ground for the revolution. (Menashiri 1992, 2-3)

Having come to power in 1979, the Islamic regime concentrated in the first dozen years of its rule on two interrelated targets: First, the consolidation, institutionalization, and--insofar as possible--perpetuation of clerical rule. Second, the implementation of Khomeyni's ideology, the first leader of the Islamic Republic, which, in turn, would further promote legitimization and consolidation and would bring the country closer to its leaders' perception of a genuine Islamic society. Indeed, for the new rulers of Iran, "Islamic Revolution" was not just a title for their movement; it reflected their intent to concentrate all power and to bring all spheres of life in conformity with Islamic tenets and ideals. Making "new Iran" in the mold totally conforming to Khomeyni's perceptions of a genuinely Islamic society was a major objective of the Islamic

“ Khomeyni was a great believer in education, He therefore viewed education as a major instrument to implement his ideology and perpetuate Islamic rule.”

(Menashiri 1992, 308-309)

Republic. To achieve this goal, the new rulers placed special emphasis on the overhauling of the code of laws and the judiciary, and the revision of the educational system. Under the Pahlavi Rulers, these had been the two areas whose reform was considered the primary prerequisite for the country's successful secularization and westernization. In revolutionary Iran, their reform was to be of a different kind, meant to accelerate Islamization in all spheres of life. Now, as then, education was both a subject of change itself and perceived as an instrument for change. (Menashiri 1992, 307)

Khomeyni was a great believer in education, in its power both to destroy (if controlled by the imperialist powers) and to advance the people and the country (if employed by an Islamic regime). He therefore viewed education as a major instrument to implement his ideology and perpetuate Islamic rule. According to his doctrine, a proper education can lead to the creation of a perfect human being or exemplar individuals, who will serve to create an ideal Islamic society. “A good man can save a country whereas a bad man can destroy it. Therefore it is very important that our schools, from the first grade to the university, become training and educating institutions. They should become schools that train good men.” Furthermore, without educational reform, there is “no hope that an Islamic Republic

shall ever take shape in this country”; but reforming the schools and universities will not only “guard our country from the hands of the devils, it shall enable it to stand on its feet without dependence on foreigners.” The Cultural Revolution was therefore planned to Islamize and purify the educational system, with greater emphasis being laid on higher education. In a meeting with educators in September 1982, he asserted that a Muslim educator must hold it “more important to acquire values than science.” After all, the aim of education was not to provide the students with a livelihood, but rather to elevate their cultural level so that they would attain the goals of the revolution.” (Menashiri 1992, 308-309)

For all their radical differences, the philosophies of Khomeyni and Shah Mohammad Reza Pahlavi (1941-1979) had one thing in common: their appreciation for education. Both leaders viewed it as a major vehicle for implementing their ideology, advancing their people, and perpetuating their rule. Both made extensive use of education to cast “modern Iran” in the mold of their vision. Yet each led it along an entirely different path: one toward rapid westernization, the other toward radical Islamization.

However, The Pahlavi and Islamic regimes encountered similar educational challenges and sometimes implemented comparable solutions. For instance, the Shah established the Literacy Corps in

“ After the Islamic Revolution, the elementary school system in Iran experienced minimal changes, primarily in the curriculum.”

1962, which later evolved into the soldier-teacher initiative with a similar structure but different content. Similarly, the *Jahad-e Madrese-Sazi* unit for school construction resembled the Shah’s 1971 initiative to have people contribute to establishing new schools. However, during the Islamic Republic, the solutions initially initiated by the Shah could not fully achieve the expected results due to flawed administration and inadequate resources. (Menashiri 1992, 326)

After the Islamic Revolution, the elementary school system in Iran experienced minimal changes, primarily in the curriculum. The traditional school building design in Iran, with straight and uniform rows of windows on the facade and classrooms, has remained largely unchanged for over a century. This design has not adapted to the diverse characteristics of different regions, such as cultural, geographical, and climatic differences between urban and rural areas, and has failed to meet the evolving social demands.

Moreover, the efforts of the Pahlavi II Dynasty to improve education quality to a global standard were ignored by the Islamic regime, resulting in a return to outdated methods. This has caused issues such as dropouts, inadequate teaching staff, and inequality, leading to a nationwide education crisis.



“Row of men holding khomeyni’s photos, Tehran” David Burnett, 1978.²⁴

The Cultural Revolution and Its Educational Consequences

The Revolution did not itself have a clear agenda about education. However, the leaders of the Islamic Republic quickly made reforming of education a priority. (Paivandi 2012, 7)

To reshape the educational system to conform

to genuinely Islamic norms, Khomeyni announced a cultural revolution in 1980 and created revolutionary institutions to carry out the Islamization. The actual Islamization effort focused on four areas: the student population, the faculty, the general Islamic atmosphere to be created on the campuses, and the curriculum. The goal was to harness the universities and schools in general, to the task of shaping a new generation with “Islamic personality” in keeping with the principles of the revolution.

(Menashiri 1992, 317)

The objective of cultural revolution was to promote Islamic culture, to control the influence of western culture, and to educate a new individual Muslim imbued with the revolutionary culture. Initial steps were taken in terms of political and ideological; aiming to dismiss the teachers opposed to the revolution to ensure that only those who are loyal to the new political order remained in the schools, to impose a number of prohibitions to pupils especially to girls (wearing of a veil became mandatory with segregating the sexes as much as possible), and to introduce a set of religious practices such as collective prayer, and to organize political and religious propaganda events. (Paivandi 2012, 7)

The acute shortage of teachers became exacerbated by the rapid growth of the population, as well as by the segregation of schools by sex, which created more classrooms and hence the need for more teachers to staff them. Vocational education remained one of the major problems regarding an unclear future path of the graduates of vocational schools. (Menashiri 1992, 324)

Another major reform in 1979 was the creation of a new authority within each school, entitled “Educational Affairs” (*Omour Tarbiyati*), responsible for instilling Islamic culture in students and shaping their minds. (Paivandi 2006).

The Islamization of the curriculum placed greater emphasis on “moral education” and on courses intended to raise the students’ consciousness of history, Islamic culture, literature, and arts. Courses on the principles of religion were made part of the standard curriculum initially at universities and later on at schools. As a result, Islamic education became mandatory in schools, and the curriculum was revised to reflect the principles of the Islamic Republic and Islamic culture, aiming to minimize the impact of western culture. The revision of textbooks is perhaps the clearest example of the way the curriculum was harnessed to serve the aims of the revolution. The most fundamental changes were made in textbooks in social science and humanities which now clearly reflected the ideology and politics of the Islamic Republic. The textbooks aimed at fostering loyalty to Islam and the revolution and advancing those ideals that they deemed important as well as revealing and stressing the flaws of the old regime and the superpowers. The symbols and messages were not much different from those presented to the people by the indoctrination machinery. (Menashiri 1992, 320).

Islamic revolution introduced significant changes both in style and content of education. No less significant was the rapid quantitative expansion. Although the first contacts with modern elementary

and secondary schools have existed for a century, the initial steps were extremely hesitant and slow. Rapid expansion did not occur until the last generation. Quantitatively, that was the era of educational revolution. For all its flaws and shortcomings, the Islamic regime found an educational infrastructure - highly influenced by cultural revolution - covering virtually all parts of the country. Literacy rate increased and accessibility to educational facilities greatly increased, especially in rural areas. However, country's dependence on oil and the unexpectedly falling oil prices, population growth and eight year long war with Iraq, made the country facing an economy rescission. During which, revolutionary leaders neither tried nor even could expressed the wish to make an effort to qualitatively improve the education system and infrastructure, due to financial issues. Additionally, mass elimination of government employees and academies after the establishment of cultural revolution, and trivializing expertise and knowledge by faith in the Islamic regime, caused an exile in the enlighten society. In other words, revolutionists had no intention to use expertises in order to enhance the infrastructure to the latest global scientific and technological advancements. (Menashiri 1992, 301)

Moreover, under the prevailing circumstances it was extremely difficult to improve the quality

of education, or to plan and coordinate the development of the educational system in line with the ever changing social and economic realities and plans. In fact the new schools had serious flaws. At the elementary and secondary levels they were: low teaching standards; textbooks that were outmoded or in short supply; mostly nonexistent teaching aids; many unsuitable school buildings. Despite education expansion domestically during the educational revolution, it did not benefit the quality of education and its outcomes. The aforementioned flaws at the time, remained to exists decades later. Attempts to unify the curriculum failed to do away with the differences in the quality of schooling between cities and villages, between rich and poor neighborhoods in the cities, and so on. (Menashiri 1992, 302).

Additionally, revolutionists' tendencies towards isolation and independence from western achievements, has left vocational schools with outdated machineries and lagged far behind. On the other hand, some of the defects of traditional schooling, such as rote learning, were carries over into the new schools. Owing to the predominantly theoretical nature of schooling, dropouts remained unprepared for work in the productive sector. All this indicated inherent deficiencies in the pre-university system which greatly diminished the potential benefit of its rapid expansion.

"Boys elementary school classroom in the 80s" n.d.²⁵



Operational Frameworks for School Establishment

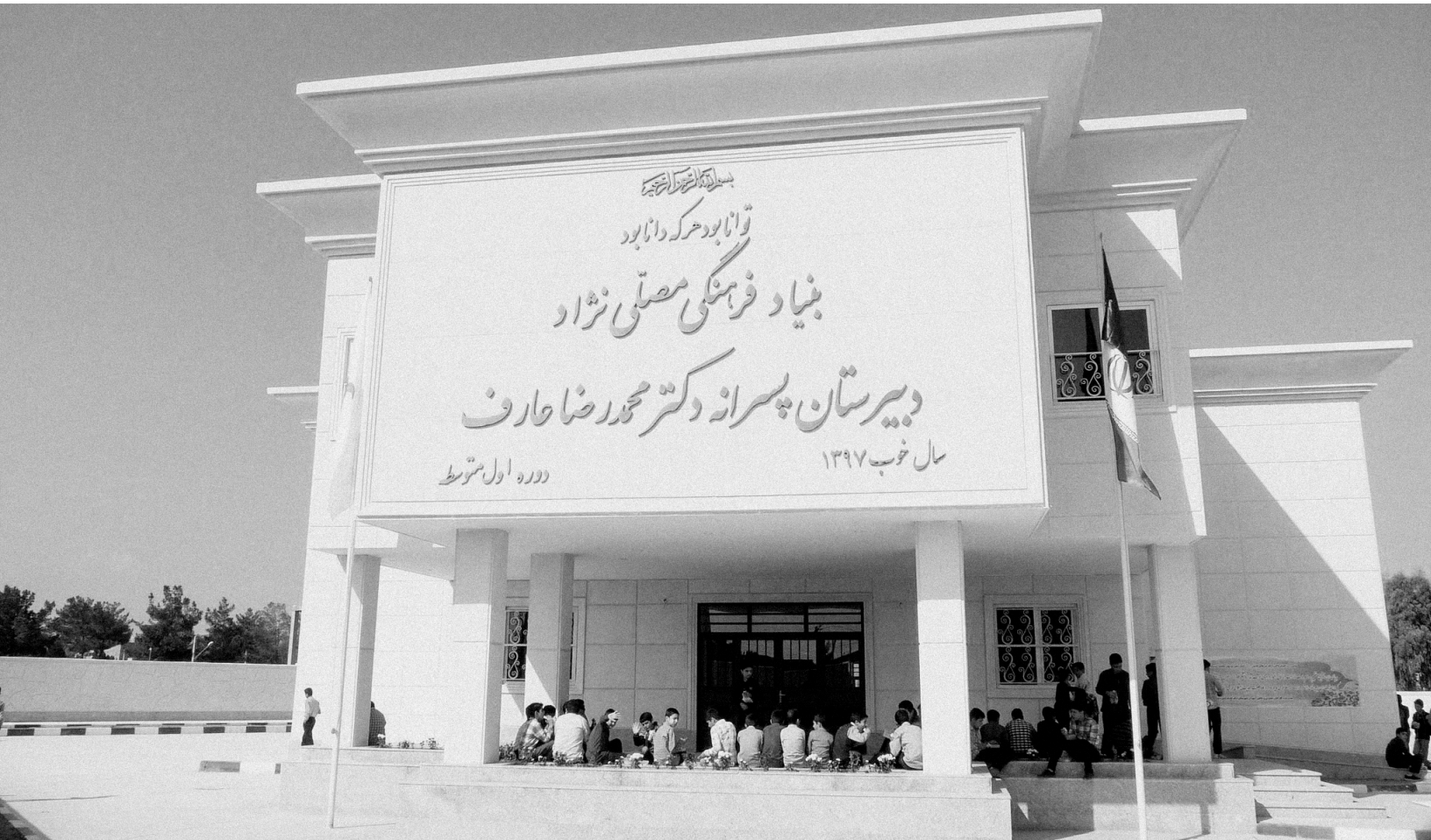
The inadequacy of public schools and authorities' inability to enhance the accessibility of education for the growing demand has inevitably led the government to seek help from the non-state sector. They were hoping that it would take financial pressure off the public sector. On the other hand, social demand also played an important role in the expansion of the non-state sector. The demand mostly comes from modern and educated middle classes, who believe the public sector has failed to meet the cultural needs of the modern world. Therefore, the non-state sector took place as an alternative to respond to the growing public demand for an advanced curriculum within schools. The first law authorizing the participation of non-state actors was adopted in 1988 paving the way for the presence of the non-state sector in the formal education system. (Paivandi 2022, 18)

At the same time, the non-state sector has also become a major player in non-formal and informal education, neglected by a state overwhelmed by the demand for compulsory education. The mobilization of non-state actors in non-formal and informal

education is also explained by a learning society that mobilizes to develop and appropriate different forms of knowledge beyond the framework of formal curriculum and culture provided and controlled by the Islamic State. (Paivandi 2022, 4)

As a result of the law of 1988, the schools were divided into two main sectors: private (controlled by institutions or non-state actors) and public (controlled by the state). However, the regime's excessive desire to have control over education, to promote Islamic ideologies, has faded the line and pedagogical freedom between state and non-state administrated schools. This issue has posed a challenge for the private sector to operate independently. Even if a minority of these schools try to go beyond the formal curriculum (with extra-curricular cultural or sporting activities or the teaching of foreign languages), the control exercised by the administration reduces their margin of pedagogical freedom. Yet, the financial participation of families has made it possible to develop differentiated management of schools with the relative reduction of the role and power of the State administration. (Paivandi 2022, 18)

Private schools are established and operated by individuals, profit or non-profit organizations, and entities other than the government. They have more autonomy in terms of curriculum, teaching



“Dr. Mohammadreza Aref High School, Mashhad” n.d.²⁶

methods, and administrative decisions compared to governmental schools. For example, private schools can hire their teachers without the authorization of the Ministry of Education.

On the other hand, public schools, also known as state schools, are the most common type of schools in Iran. They are established and funded by the government or nonprofit/charitable entities. They are operated under the supervision of the Ministry of Education and follow the curriculum and guidelines

set by the government. Public schools provide education to a significant portion of the population and aim to ensure access to education for all citizens. These schools are typically funded by tax revenues and are free of charge for students.

It is important to mention that even though non-profit and charitable organizations pay more contributions to rural schools, however in urban areas, they are prevalent. These schools which can also be defined as semi-public, can benefit

from budgets coming both from the state and the charitable organizations and since the dedicated budget is higher than public schools, they are known for their superior education quality and benefit from higher quality teaching aids. Therefore, at the high school level, they can be defined as “Governmental Leading High Schools”. These schools accept students through an entrance exam and can require less tuition fees compared to private schools. These schools place more emphasis on students’ talents and abilities. An example of this is the schools built by the Mosalanejad Cultural Foundation and The Popli Khalatbari Charitable Foundation.

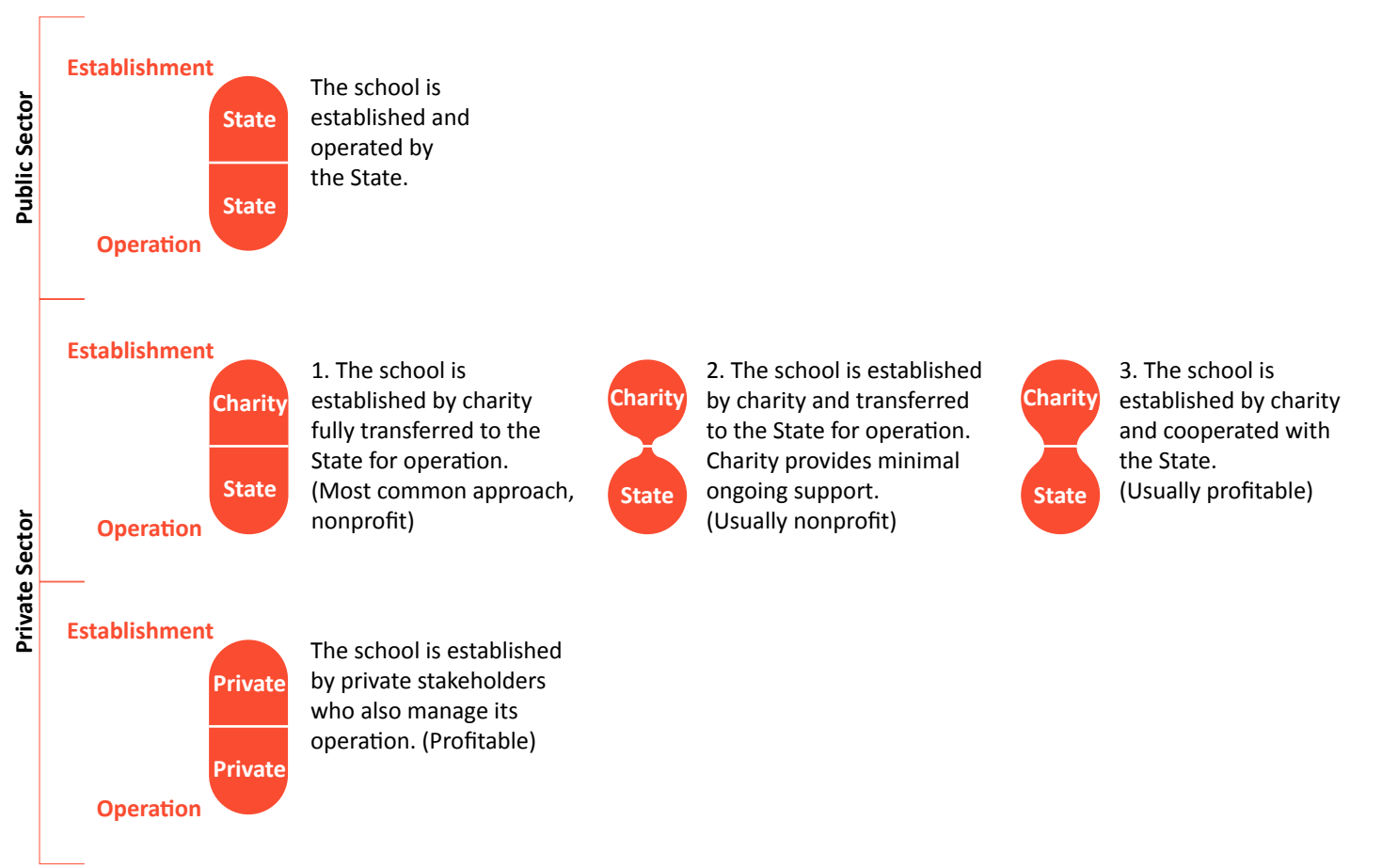
Additionally, private and charity-funded public schools benefit from a higher spatial quality and better teaching tools, due to their larger budget and autonomy. However, the approach to their operation plays a crucial role in the quality of education and the development of students.

Private schools are usually fully or partially funded by Pupils/students’ tuition fees. The financial involvement of parents inevitably enhances their relationship with school activities. Either by playing a role in the important decision-making sessions and supervising them, or by physical presence mostly in the extracurricular activities. Private schools have been proven by many researches to be more efficient and more satisfactory to both students and their

parents. In general. They are considered to be better organized and offer better pedagogical quality.

Additionally, studies have also proven, that the democracy that private schools can occasionally benefit from results in better critical thinking and social skills of female students. However, Private schools have contributed to a significant disparity between more and less-developed regions. For instance, according to the Ministry of Education Statistical Yearbook published in 2019, in 2018, only 11% of schools in Sistan & Baluchestan province belonged to the non-state sector, whereas this proportion was 41% in a province like Tehran. The reason behind this inequality is the economic status of less developed societies, where parents are not financially stable enough to pay high tuition fees and fund extracurricular activities within schools. (Paivandi 2022, 37)

Establishment and Operational Methodes of Iranian School Buildings



Private schools play a significant role in providing education to accessible and affordable communities. However, in rural and remote areas where profitable private schools are scarce, charities address the shortage of educational opportunities. In such regions, charity-built schools are the primary source of education for many children. However, due to the non-profit nature of charity-built schools in rural areas, their operational approach differs from profitable ones. Once a school is established by a charity, there are three approaches to its operation: (a) the charity could dedicate the school to the State, making it a public school; (b) the charity could share responsibility with the State, making the school semi-public; (c) the charity takes sole responsibility, making the school private.

The government's limited budget for education in the first approach hinders extracurricular activities and flexibility in teaching methods. The government selects the staff and sets boundaries for schools to operate within the budget. In some cases, the charity that initially funded the school steps in to fund extracurricular activities or bring in teachers from cities like Tehran. However, government authorities closely monitor these activities, potentially impacting their freedom.

On the other hand, a charity-operated school uses a different approach. It operates similarly to private

schools, leading to a more democratic curriculum and investment in extracurricular activities, enhancing student engagement.

More importantly, the charity can ensure the educational mission aligns closely with its core values and goals. This alignment can lead to a more focused approach to education that directly addresses the community's needs. Charities can go beyond educational needs and assist students' families in health care, economic concerns, and other areas.

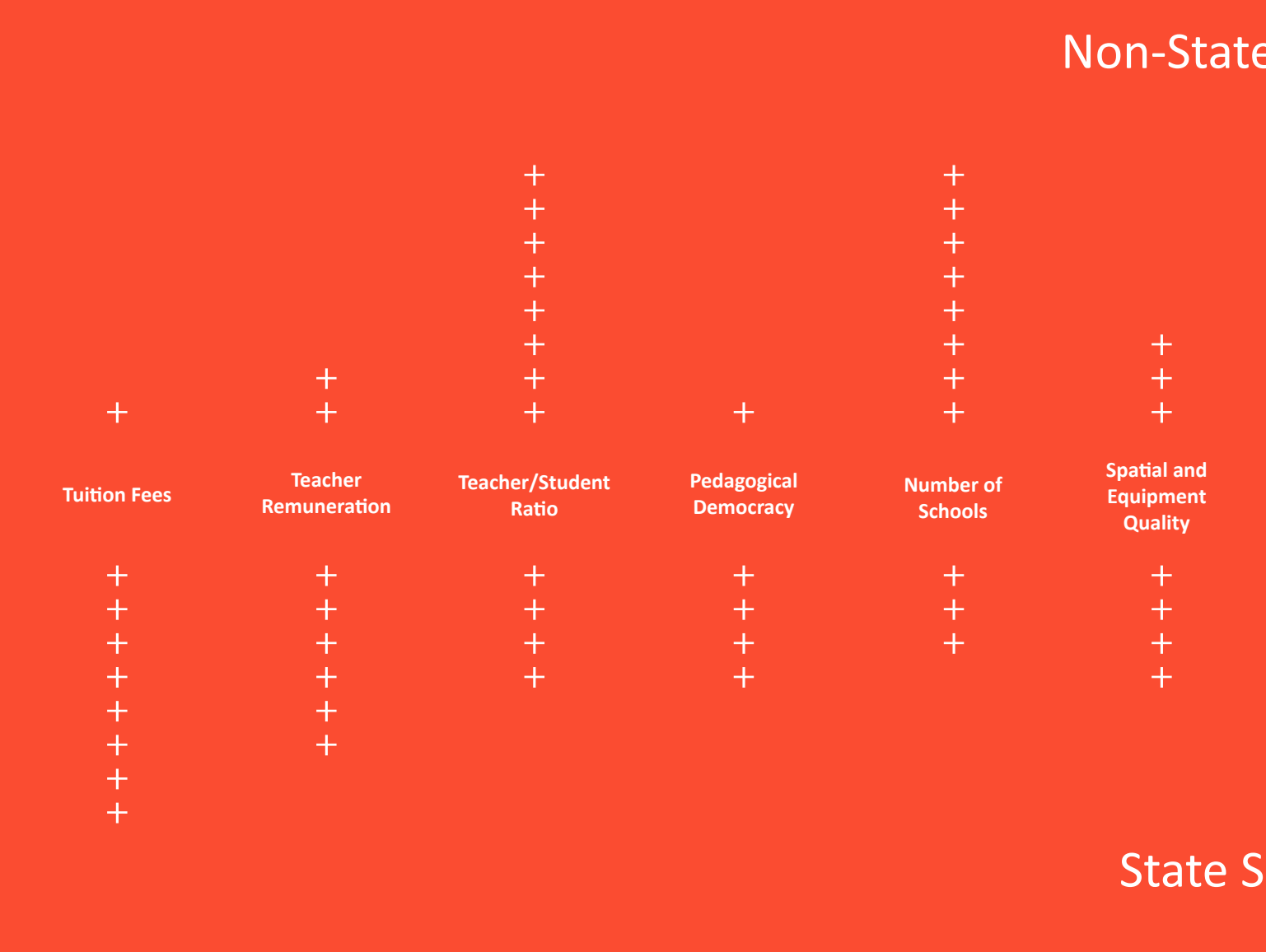
Moreover, by managing the school, the charity can optimize resource allocation, ensuring that funds, materials, and support are directed efficiently toward educational initiatives. They can contribute to the school's long-term sustainability by planning fundraising events, engaging with the community, and forming partnerships.

Overall, operating a charity-built school directly empowers the charity to take a hands-on approach to education, enabling it to maximize its impact, tailor its efforts to specific needs, and create a sustainable and meaningful educational experience for the students and the community it serves.

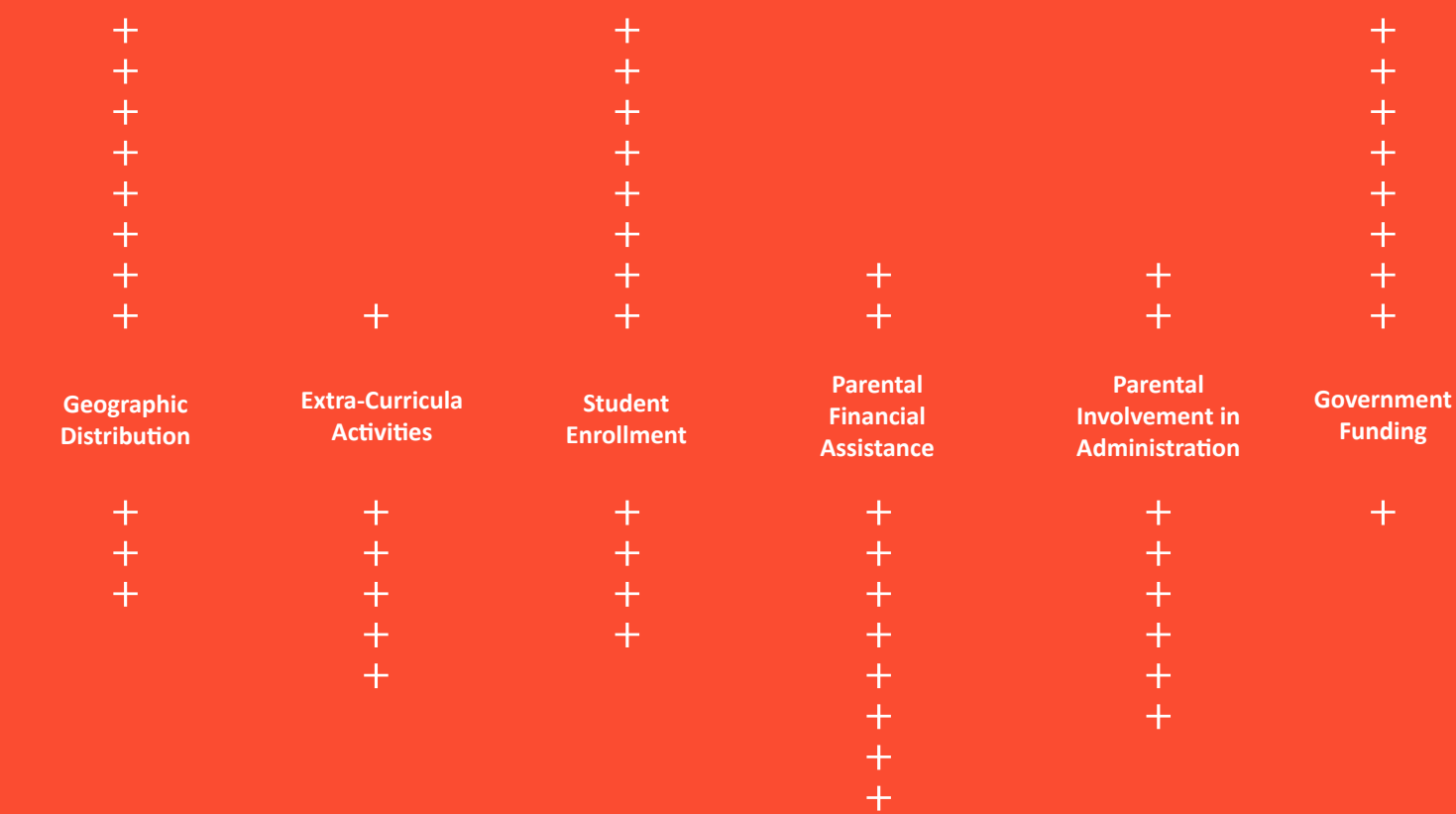
"An overcrowded classroom in the 2000s" n.d.²⁷



Comparing State and Non-State Schools



e Schools



chools

“Cultural and socioeconomic factors also play a significant role in obstructing rural education access.”

Rural Education

The educational landscape in Iran has long been shaped by political ideologies, economic constraints, and administrative priorities, resulting in a disproportionate focus on urban schools due to their strategic significance and demand. As a consequence, rural schools have been relegated to a secondary position over time, essentially mimicking urban educational models despite their distinct local identities.

This trend is particularly concerning given that rural communities constitute a significant portion of Iran’s population, each with unique cultures, values, and traditions that deserve recognition within the educational framework. The neglect of rural schools has widened the gap between urban and rural areas regarding access to quality education and opportunities for growth and development. Despite this disparity, urban and rural elementary schools adhere to a standardized curriculum comprising 925 annual education hours. An additional 100 hours are allocated for extracurricular and environmental activities, reflecting regional needs and conditions.

In contrast to countries involved in OECD (The Organization for Economic Cooperation and

Development) where primary students receive 807 compulsory instruction hours per year, Iranian students receive a higher total. However, severe teacher shortages, particularly in rural areas, limit opportunities for students to participate in extracurricular activities. Inadequate facilities further hinder their engagement in such activities.

Challenges inherited from previous administrations, such as poorly trained teachers, high student-teacher ratios, and ambiguous educational goals, persist and have been exacerbated over time. Cultural and socioeconomic factors also play a significant role in obstructing rural education access. Traditional gender roles and cultural norms, for example, often dissuade families from sending daughters to study in larger towns or cities due to safety concerns, cost considerations, or social pressures to marry early. Consequently, many girls miss higher education opportunities, impacting their prospects.

Similarly, poverty presents a formidable barrier to education in rural areas. Boys from economically disadvantaged families may prioritize labor over schooling to support household income, leading to high dropout rates and diminished career prospects, perpetuating cycles of poverty.

Moreover, rural school infrastructure in Iran faces comparable challenges to urban counterparts but



“Elementary students a charity-built school, Sistan & Baluchestan” n.d.²⁸

is uniquely shaped by local contexts. Insufficient funding and lack of government investment frequently lead to poorly built structures that lack crucial amenities such as electricity, heating/cooling, adequate sanitation, and sufficient classroom space. These deficiencies significantly undermine educational quality in rural areas.

Government initiatives to promote education in remote regions have been limited, prompting non-governmental organizations (NGOs) and charities to

fill the void. These organizations have played a pivotal role in recent years by constructing schools, providing funding and scholarships, distributing educational resources, facilitating extracurricular activities, and renovating school facilities. Their efforts are critical in bridging educational gaps and improving learning environments in rural Iran.

Guidelines for School Building Implementation

In 1957, the Majlis approved the establishment of The Organization for Development, Renovation, and Equipping Schools under the Ministry of Education. This organization's purpose is to construct, develop, repair, and renovate school buildings, procure necessary supplies and equipment, and set desirable standards and criteria for educational spaces. It operates under the Ministry of Education and is headed by the Deputy Minister for Development.

The most recent guidelines, "Design Standards for Educational Buildings (Uniform Architectural Planning for Elementary and Secondary Schools)," were published in 2016 as Regulation Number 697. These guidelines apply to all elementary and secondary schools in both urban and rural areas, ensuring that educational facilities are safe, accessible, and conducive to learning. However, despite its comprehensive title, the guidelines primarily address minimum spatial requirements, providing only basic architectural specifications. They do not offer detailed recommendations for creating enriching educational environments, such as the design of classrooms, workshops, libraries, and playgrounds.

As a result, the regulations often lead to simple and symmetrical building forms, typically resulting in rectangular shapes.

In Section 4.1 of Regulations No. 697, titled "Standards and Regulations," the document references additional guidelines provided by various organizations and ministries for further information (figure ?). However, it does not specify how to access these other regulations. As a result, developers and constructors must study up to 12 different regulations to fully understand the requirements. This raises the question of whether investors and charitable NGOs thoroughly review all these regulations. More importantly, it prompts us to ask why the Ministry of Education has not yet produced a comprehensive document addressing all concerns related to school buildings in one place.

The lack of a unified and accessible regulatory framework indicates poor management and oversight in such a critical area. This inefficiency contributes to the perpetuation of a uniform construction typology across the entire country, with little variation or innovation in school design.

The documents referenced in Regulation No. 697, which are necessary to study for a comprehensive grasp of the requirements and regulations for constructing school buildings:

- The latest revision of the Seismic Design Code for Buildings, Standard 2800
- Standards of the Iranian National Standards Organization
- Climatic Zoning of Iran – Educational Buildings (by Morteza Kasmaei)
- Design Standards for Single-Cycle Elementary and Secondary Schools (First and Second Three-Year Cycles) and Combined Schools
- Standards and Guidelines of the Technical Office and Research Department of the Organization for Renovation, Development, and Equipment of Schools
- Urban Planning Regulations for Physically and Mobility-Impaired Persons by the Building and Housing Research Center, Publication 246, 2003
- Executive Guidelines for School Environmental Health, No. 18039206, 2015
- Acoustic Design Guidelines for Educational Spaces, Publication 343 (by the Management and Planning Organization of Iran)
- Resolutions of the Supreme Council of Architecture and Urban Planning of Iran
- The National Building Regulations of Iran
- Publications related to the Design of Educational Spaces by the Management and Planning Organization of Iran



“Hedayat High School, A public school in Saveh” n.d.

School Architecture: Urban School Buildings

During the first decade of the Islamic regime’s establishment, Iran experienced rapid population growth that required the state to meet the educational needs of its citizens quickly. As a result, mass construction of school buildings took place

during the 80s and 90s. However, the state relied on a low-cost and fast approach to construction, which led to disregarding renowned architects and graduates. Instead, construction laborers were put in charge of constructing school buildings based on minimum requirements like dimensions and the number of spaces for defined activities.

School buildings constructed during this era are simple cubic forms with a linear spatial organization, limited circulation, and entries from outdoors to

control student movement and ensure safety. Unfortunately, the lack of proper organization for overseeing construction has led to a fragile school infrastructure that has failed to adapt to the rapidly changing society and the spiritual needs of children. Many schools still operate without intervention, even three decades since their establishment.

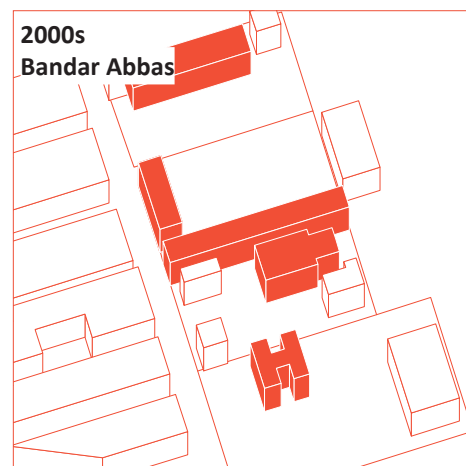
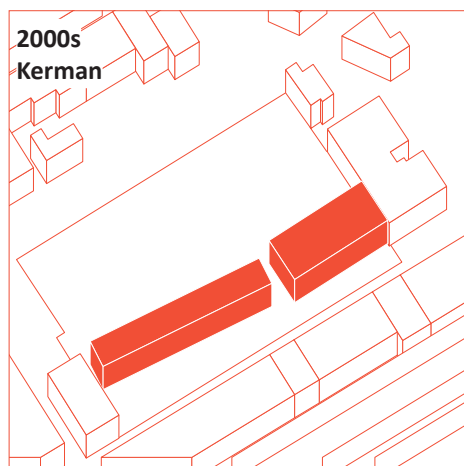
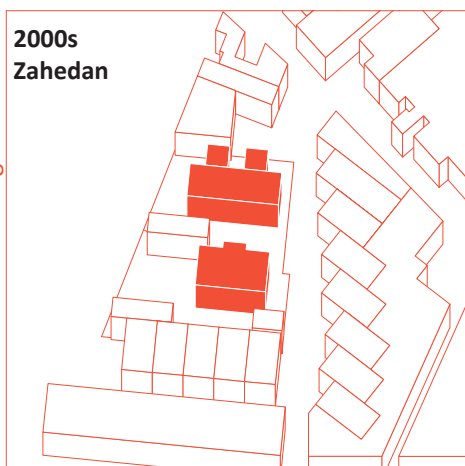
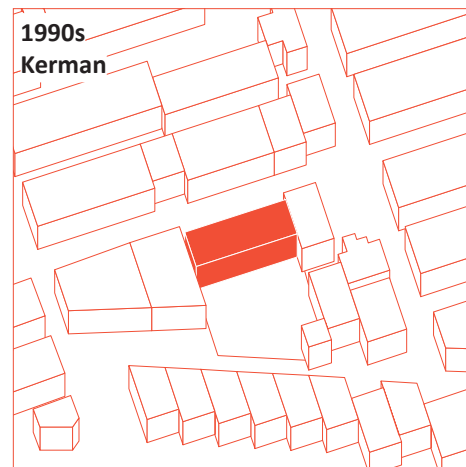
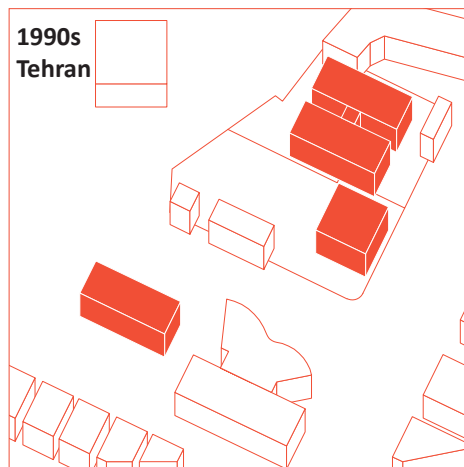
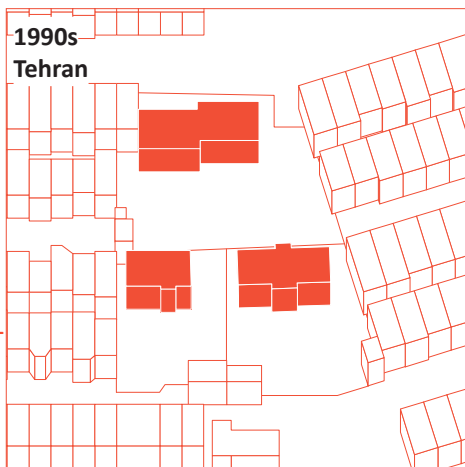
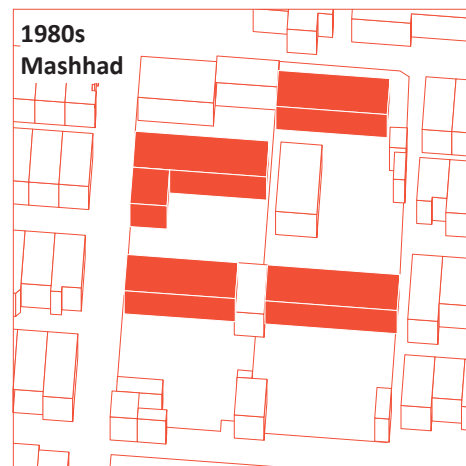
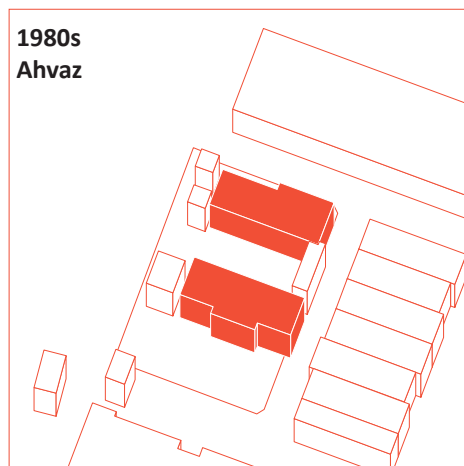
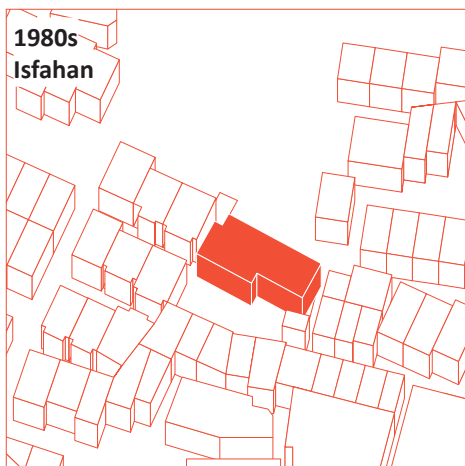
Researchers and experts have highlighted various deficiencies in the design, construction, maintenance, and management of educational facilities in Iran following the Islamic Revolution. One of the common concerns is the lack of planning and coordination among stakeholders, resulting in suboptimal outcomes. Inadequate funding and resources for construction, renovation, and repair have compromised infrastructure and functionality.

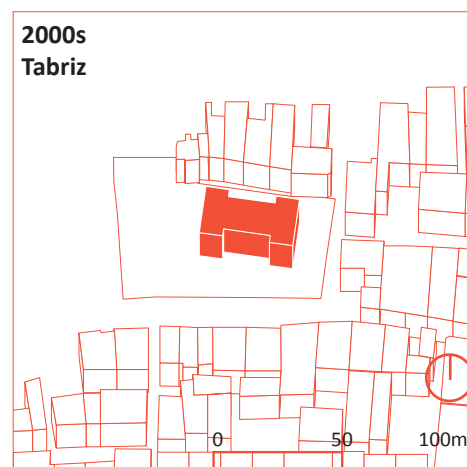
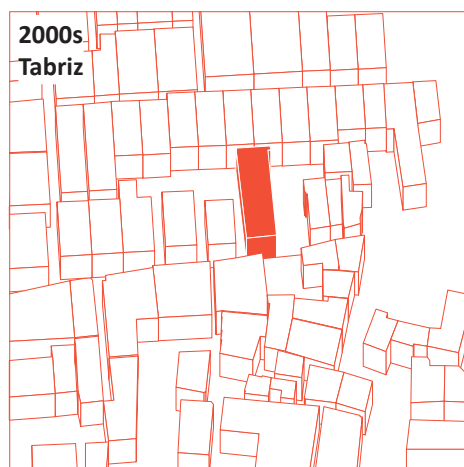
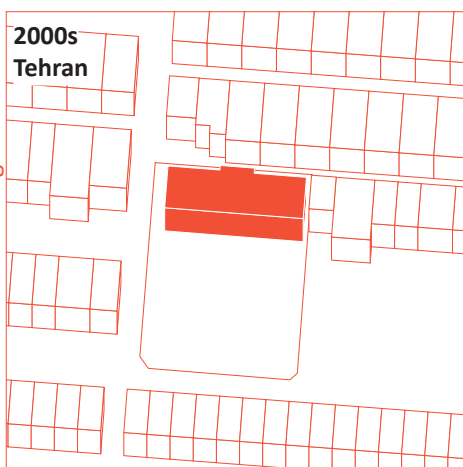
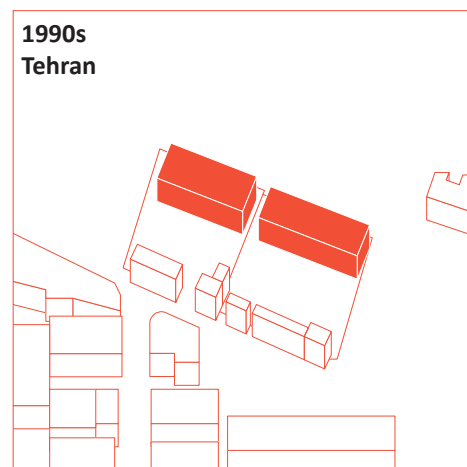
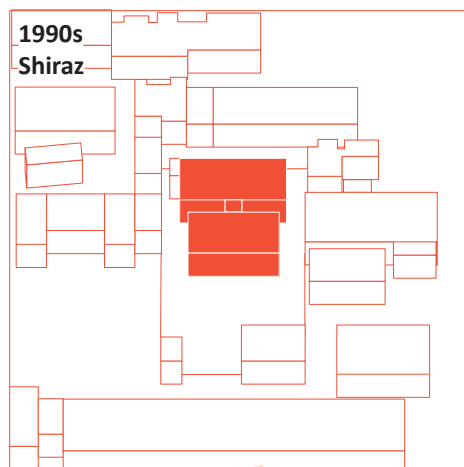
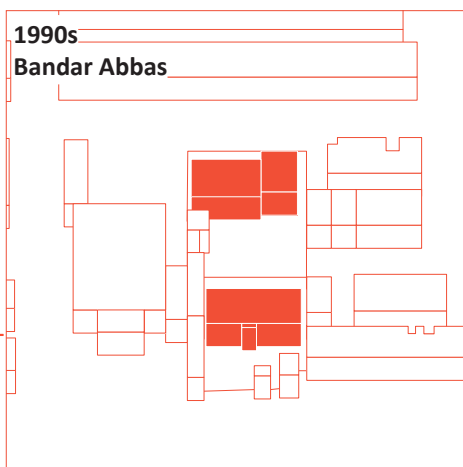
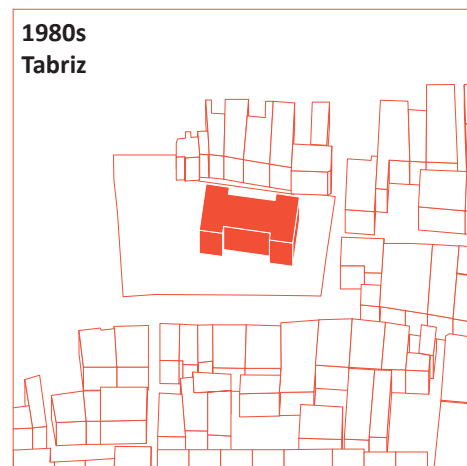
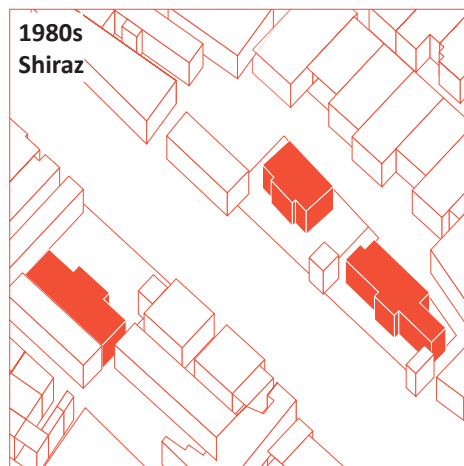
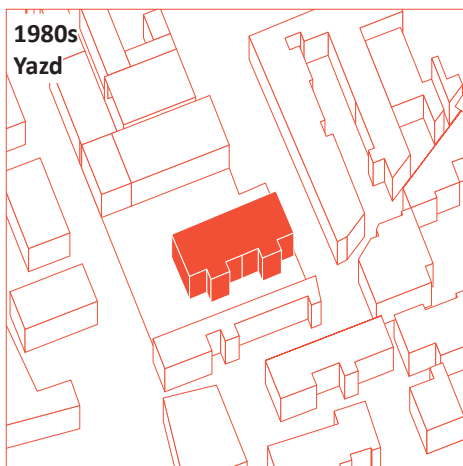
Furthermore, subpar materials and equipment used in school construction cause frequent breakdowns and damages. Outdated design standards fail to meet evolving educational requirements, leading to a mismatch between physical spaces and student needs. These schools also lack energy efficiency, accessibility, and safety features for individuals with disabilities. Additionally, the rigid design limits adaptability and innovative teaching and learning approaches.

The widespread construction in Iran has significantly shaped the architectural style of

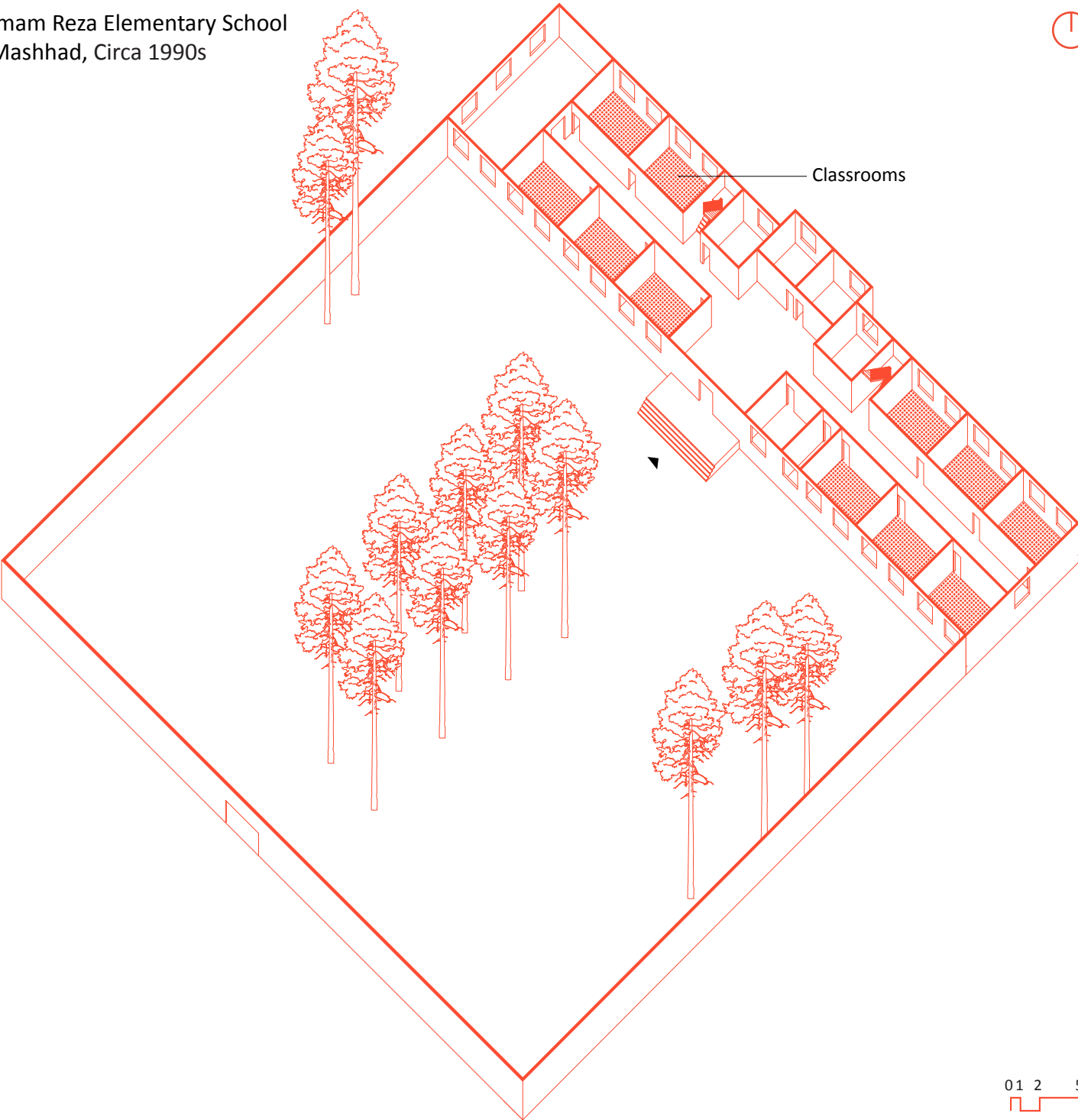
school buildings. While the cubic form design was initially developed for urban school expansions, it soon became the prevailing standard for school construction during the Islamic Republic era, regardless of local climate and specific characteristics. This uniformity has led to all educational institutions, from elementary schools to universities.

Pages 110 and 11, represent the classification of school buildings in ten major cities during three decades at various academic levels. Despite the varying climatic conditions of these cities, the physical structure of the school buildings is similar. This illustration further illustrates that the arrangement and dimensions of school buildings are primarily influenced by urban planning and not by the specific requirements of educational spaces and users. Additionally, school buildings in Iran lack basic passive strategies such as sunshades, which could help enhance thermal comfort. This indicates that these buildings are not aligned with the principles of building physics and technological advancements that aim to improve the overall experience of occupants in terms of thermal comfort, air quality, ventilation, and other relevant aspects.





Imam Reza Elementary School
Mashhad, Circa 1990s



0 1 2 5m

Regarding outdoor spaces, unlike traditional schools, the courtyards of modern schools neither hold a central position nor serve as the heart of the school spaces. The courtyard is an open area that separates the school building from adjacent structures. Therefore, it is not a positive space designed for active functionality. The modern educational system mainly takes place within the school building itself, and the courtyard is neither a lively space adorned with trees and gardens nor does it host any learning activities. In reality, the courtyard is a place for escaping the pressure of classroom teaching and perhaps serves as an environment for maintaining order during entry and exit. The courtyard is not designated as an educational space, lacking facilities for teaching, learning, or physical activities. (Sami Azar 1997, 212)

Generally, In all schools constructed from about a century ago until now, the scale and proportions of both the interior and exterior architecture have been aligned with the attitudes and specific standards of adults, and there is no trace of the characteristics of a child-oriented environment within them. Since the introduction of the initial schools in a new style in Iran up to the present day, only one official architectural model for schools has been acknowledged as responsive and suitable for the Iranian modern education system. (Sami

Azar 1997, 212)

Since the beginning of the current century, the architectural pattern of a school has consisted of a straight and uniform arrangement of classrooms in the floor plan, a linear and uniform alignment of windows in the facade, and a linear and uniform arrangement of desks within the classroom layout. This combination of parallel rows forms a series of linear paths for movement within the school, starting from the courtyard entrance to the building, then along the corridors, and finally into the classroom. Regarding seating, this linear approach assumes that children will interpret discipline and order primarily through the physical arrangement of rows, limiting their focus inside the classroom to the teacher's position. With this perception, the physical setting is not significantly different from a storage area for lifeless objects and fundamentally lacks practical dynamism and movement. The source of this perspective in the design of the educational environment lies in the disregard for the spiritual needs of children and adolescents, as well as an overlook of the active role the environment plays in nurturing students' mental faculties. (Sami Azar 1997, 221-222)

"A morning ceremony in an elementary school. Ismael Band, Fars Province."



The Linear Pedagogical and the
Distribution Approach within schools



“Rural school buildings in Iran are usually replicas of their urban counterparts, resulting in a uniform appearance despite varying geographical or cultural contexts.”

School Architecture: Rural School Buildings

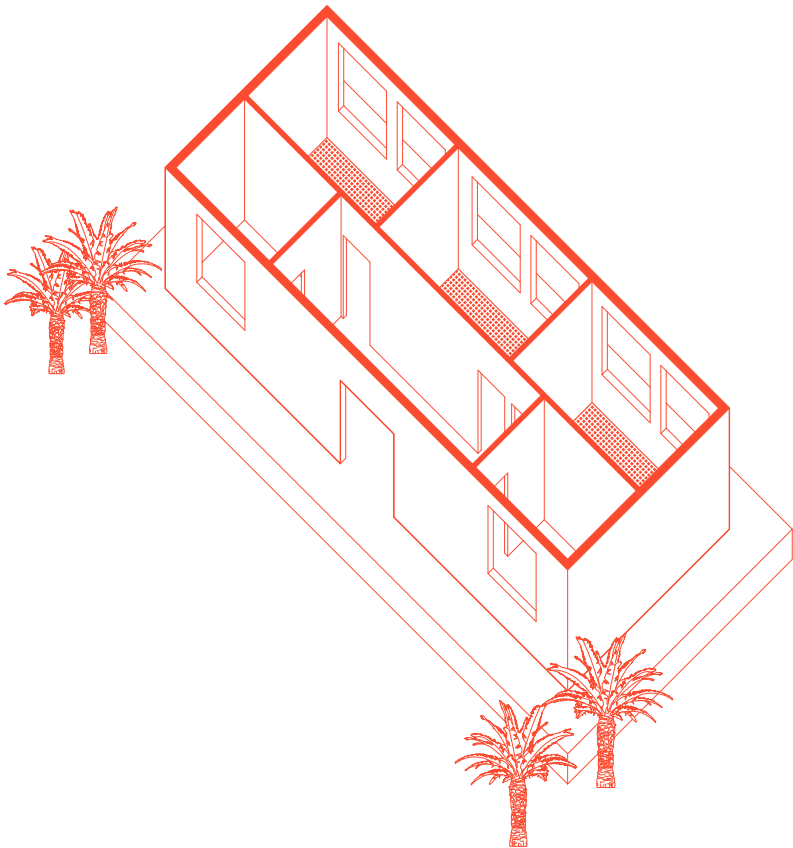
In contrast to urban school buildings, where non-state initiatives often lead to more advanced facilities, rural school buildings in Iran exhibit no significant difference between those established by state and non-state actors. This is because non-state efforts in rural areas are typically non-profit, focusing on improving access to basic educational facilities rather than enhancing educational quality or generating profit. As a result, the primary goal in rural regions is to provide essential infrastructure rather than to innovate or improve existing state-run educational standards.

Rural school buildings in Iran are usually replicas of their urban counterparts, resulting in a uniform appearance despite varying geographical or cultural contexts. According to Regulation Number 697, rural schools can have between one and six classrooms based on local needs and student numbers. However, as the number of classrooms increases, these schools adopt a more linear design. Given that urban school architecture has not significantly evolved over the past century, it is unsurprising that rural schools replicate these outdated design patterns.

(Pir Jalili 2016)

Pages 118 and 119 illustrate six types of rural school buildings developed by the state and charitable NGOs since 2000. These examples, located in the province of Sistan & Baluchestan, highlight the unchanging form of school buildings over more than two decades. This stagnation underscores a broader issue: the failure to adapt school designs to meet the evolving needs of students and the unique challenges of different rural environments.

Despite the critical need for modernization, the architectural design of rural schools remains static, reflecting outdated models that fail to incorporate advancements in educational facilities. This perpetuates a cycle where rural students are provided with subpar learning environments, limiting their educational opportunities and overall development. To truly address these disparities, there must be a concerted effort to innovate and tailor school designs to better serve the diverse needs of rural communities.



Architectural Typologies of Rural One-to-Six Classroom Schools in Sistan & Baluchestan

Kahnankesh School

Location: Kahnankesh, Chabahar



Form:



Number of Classrooms: 1
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Cement
Year: Approximately 2000s
Facilities: Teacher's Residence/
Office
Constructed by: Government

Houriyeh Golkhani School

Location: Doshinkouh, Zahedan



Form:



Number of Classrooms: 2
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Cement
Year: 2000
Facilities: Teacher's Residence/
Office
Constructed by: Government

Cheragh Abad School

Location: Doshinkouh, Nikshahr



Form:



Number of Classrooms: 3
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Cement
Year: 2024
Facilities: Teacher's Residence,
Office
Constructed by: Philanthropists

Houriye Golkhani School

Location: Chahan, Nikshahr



Form:



Number of Classrooms: 4
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Brick
Year: 2019
Facilities: Teacher’s Room
Constructed by: Roshd Charitable
NGO

Hami Girls School

Location: Pirsohrab, Chabahar



Form:



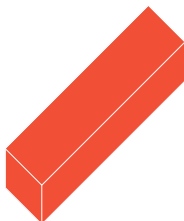
Number of Classrooms: 5
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Brick
Year: 2005
Facilities: Teachers’ Residence,
Workshop, Library, Administration
Constructed by: Hami NGO

Banafshi School

Location: Banafshi, Nikshahr



Form:



Number of Classrooms: 6
Structure: Reinforced Concrete
Walls: Brick & Mortar
Finishing: Brick
Year: Under Construction (2024)
Facilities: Teachers’ Residence, Lab-
oratory, Workshop, Administration
Constructed by: Mehrgiti NGO

Concluding Overview: Rural Education Today

Throughout history, the educational system in Iran has been heavily influenced by the ideologies of its rulers. Different regimes have used schools to promote nationalist narratives, whether Persian nationalism during the Pahlavi dynasty or Islamic nationalism after the Islamic Revolution.

During the Pahlavi dynasty, under Reza Shah (1925-1941) and later his son Mohammad Reza Shah (1941-1979), there was a strong emphasis on modernization and secularization. Significant reforms were made to centralize and adopt a Western-style education. However, these efforts were often seen as tools to consolidate power and promote the regime's ideology rather than fostering critical thinking and intellectual growth among students.

After the Islamic Revolution in 1979, the educational system underwent a radical transformation. The new government, led by Ayatollah Khomeini, aimed to Islamize education and align it with Islamic principles and values. Their objective led to the introduction of Islamic teachings into the curriculum and the segregation of boys and girls in schools. The system became a means of indoctrinating students with the Islamic ideology, often at the expense of critical thinking and

academic freedom.

In this context, schools in Iran have often served as instruments of political and ideological control rather than nurturing environments for the holistic development of children. The prioritization of political agendas over educational objectives has hindered schools from providing quality education and fostering students' intellectual, emotional, and social growth.

Studying the history of modern education in Iran and its issues is crucial before addressing current challenges because it provides essential context and insights into the root causes of these problems. By examining past decisions, policies, and events, we can identify patterns and trends that have shaped the current educational landscape. This historical perspective helps avoid repeating past mistakes and, more importantly, highlights the problems those mistakes have created, influencing today's educational opportunities.

Iran's educational sector confronts numerous obstacles, ranging from inadequate teaching standards and antiquated teaching methods to a shortage of educators, a high dropout rate, and insufficient facilities and resources. These challenges vary in intensity and are often exacerbated by the unique circumstances of different regions. For example, the educational challenges become even more evident in areas with limited access to private education and where rural communities



“Hami School. A charity-built school by Hami Association in Dashtyari Country, Sistan & Baluchestan” n.d.³¹

outnumber urban ones.

Among Iran’s provinces, Sistan & Baluchestan, located in the southern region, stands out for facing the most formidable educational challenges. It is particularly evident as 71% of its schools are situated in rural and remote areas, as reported by Hamidreza Rakhshani, Director of Education in Sistan & Baluchestan. (Ilina News Agency 2021)

Despite its remoteness and the prevalence of rural living, the province grapples with various

cultural, political, and social complexities that further compound the educational obstacles. Consequently, addressing educational quality and accessibility in Sistan & Baluchestan takes precedence over other provinces facing similar challenges.

Charitable organizations have stepped in to fill the void left by the government’s lack of support and resources in Sistan & Baluchestan. Over the past few years, these organizations have played a crucial role in raising awareness about the challenges faced by

“Hamidreza Rakhshani attributes high dropout rate to several factors: a lack of teaching staff, poor learning environments, cultural issues, child marriage, and poverty.”
(Ilina News Agency 2021)

indigenous communities in the region. Social activists, philanthropists, and journalists have collaborated closely to address issues ranging from education and healthcare to economic development in impoverished areas. One notable effort is their contribution to the financial well-being of families by enhancing women’s social engagement. They have promoted “Suzan Duzi,” a traditional form of local embroidery used for clothing, and modernized its sales by introducing it to Online platforms. As a result, this initiative has garnered national and international attention, leading to the expansion of the business not only throughout Sistan & Baluchestan but also to other southern provinces with similar handicrafts. This success demonstrates how charitable activities can promote indigenous livelihoods and enhance the quality of life for thousands of families.

Regarding education, charitable and volunteer initiatives have been pursued, yet they often face more complexities compared to economic promotions. As a result, they do not always achieve their intended outcomes. For example, despite significant efforts to build new school facilities and improve accessibility, the dropout rate continues to rise. Hamidreza Rakhshani attributes this high dropout rate to several factors: a lack of teaching staff, poor learning environments, cultural issues, child marriage, and poverty. (Ilina News Agency 2021)

Many of these issues are beyond the scope of charitable initiatives focused solely on education, especially without strong governmental support. Efforts have been made to address “poor learning environments,” but charities typically focus on constructing new school buildings rather than improving the overall quality of educational spaces. In the educational context of Iran, “poor learning environments” often refer to dilapidated classrooms rather than the broader learning atmosphere. Consequently, new charitable school buildings frequently mirror older designs, lacking innovative features or creative elements that could enrich the educational experience. This stagnation fails to inspire or engage children, ultimately contributing to higher dropout rates. This situation once again emphasizes the need to conduct background research on the history of modern school buildings in Iran. It’s important to understand the persistent box-shaped architectural pattern and why charities and officials continue to replicate it.

Despite the historical context, it’s vital to explore school projects in other impoverished regions of the world. They offer valuable insights into innovative and effective educational practices that can be tailored to local contexts. Some serve as excellent examples of how a school building can not only meet educational needs but also engage indigenous communities in

construction practices, providing valuable lessons that enhance rural livelihoods and benefit communities beyond education.

Simultaneously, it's crucial to recognize that poverty and scarcity take on unique meanings within different cultural contexts. Consequently, what works well in one region may not be applicable or effective in another. Therefore, studying projects that are culturally relevant can provide more accurate information and lead to more effective decision-making processes.

In Iran, there's been a recent upsurge in initiatives aimed at cultivating more innovative educational environments, driven by the efforts of philanthropists and charitable NGOs dedicated to transforming education in remote regions. Three notable examples stand out: the Jadgal and Jangarak Schools in Sistan & Baluchestan province, and The Noor-e-Mobin School in Semnan province. As we delve into international case studies on the following page, these three Iranian instances illuminate how partnerships between NGOs, social activists, and architectural studios have disrupted conventional approaches to administration, educational settings, and teaching methods within the rural context of the country.

After thorough analysis of the historical background and examination of international and national case studies, a site visit to Sistan

& Baluchestan could yield invaluable insights.

By immersing oneself in the local livelihood, documenting available resources, understanding cultural contexts, and assessing architectural and structural requirements firsthand, vital information can be gathered to inform future initiatives effectively.

To accomplish this objective, I embarked on a trip to Sistan & Baluchestan for several purposes. Firstly, I aimed to identify potential sites within the province that were previously considered and assess the various challenges and scarcities present in different areas. Secondly, I sought to delve deeper into the cultural, social, economic, and political obstacles that charitable education initiatives might encounter. Thirdly, I aimed to evaluate and prioritize the educational needs of the region. Lastly, I intended to document available resources, local construction techniques, and the feasibility of structural strategies, while also studying the region's vernacular architecture. The insights gained from this trip will be elaborated upon in subsequent chapters of the thesis.

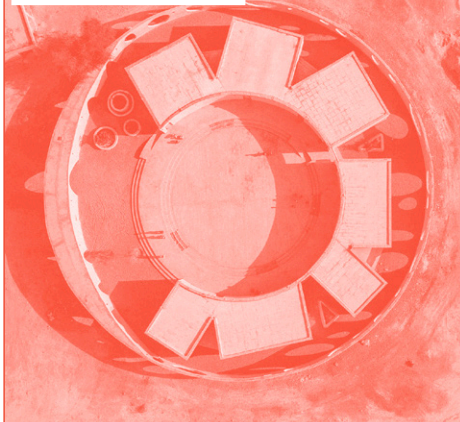
“Sharif Secondary School in Doshinkouh, Nikshahr Country, Sistan & Baluchestan” Photo by the Author.



Centre pour le Bien-être des Femmes - FARE Studio



Jadgal School - Daaz Office



Umubano Primary School Extension - ASA Studio



Fass School and Teachers' Residences - Toshiko Mori Architect



Kao La Amani Children's Village - Article 25



Evergreen School - Claukin Studio



Gando Primary School - Kéré Architecture



Lanka Learning Center - Feat.collective



The Noor e Mobin G2 Primery School - FEA Studio



Bio-climatic Preschool - BC Architects



The Mwabwindo School - Selldorf Architects



SOS Children's Village In Djibouti - Urko Sanchez Architects



Jangarak School - Philanthropists



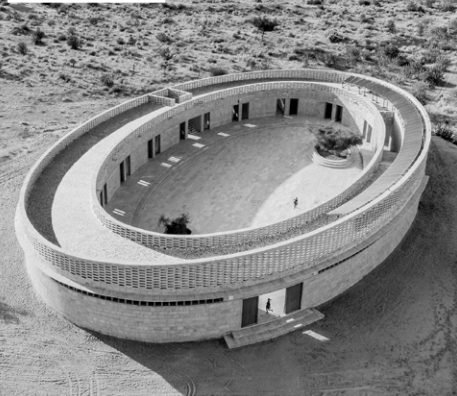
Siete Vueltas Rural Educational Institution - Plan:b Arquitectos



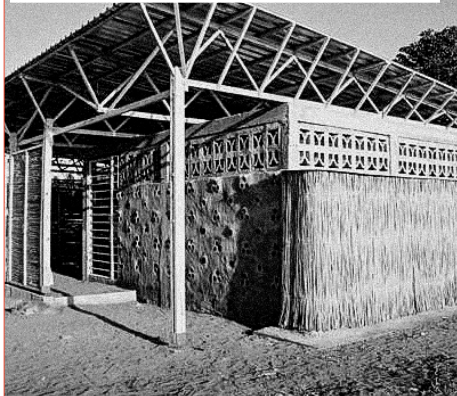
Lycee Schorge Secondary School - Kéré Architecture



The Rajkumari Ratnavati Girl's School - Diana Kellogg Architects



Educational Building In Mozambique - Masterstudos of Bergen School of Architecture



Collège Amadou Hampaté Bâ - Article 25





“Jadgal Elementary School” Deed Studio. n.d.³²

Jadgal Elementary School - Daaz Office

Location: Seyyedbar, Dashtyari Country, Sistan & Baluchestan Province, Iran

Date: 2020

Charity: Iran-e-man Charitable NGO

Passive Strategies: ICF walls acting as thermal mass

Materials: ICF System, simgel (mix of cement and soil)





“Jadgal Elementary School” Deed Studio. n.d.³²

The project is a public call for the construction of an elementary school with a sustainable development approach, initiated by the Iran-e-Man NGO, which has been dedicated to school construction for several years. This initiative also responds to the request from the residents and youth of Seyedbar-Jadgal village, located 100 km from Chabahar, who have appealed to the NGO to build a school in their community.

Architecturally, the school stands out with its

circular spatial organization and a semi-opaque wall surrounding the premises, showcasing a thoughtful and unique design that defines itself as a place for children. Despite its innovative form, the Jadgal School is currently operated by the state, and the NGO did not provide ongoing pedagogical support. This raises concerns about whether the school can achieve higher educational quality using conventional teaching methods.



“Noor-e-Mobin Primary School” Ali Daghigh. n.d.³³

Noor-e-Mobin Primary School / FEA Studio

Location: Abarsij, Shahroud Country, Semnan Province, Iran

Date: 2017

Charity: Noor-e-Mobin charitable NGO

Passive Strategies: Shading walls

Materials: Steel structure, clay hollow blocks, brick finishing

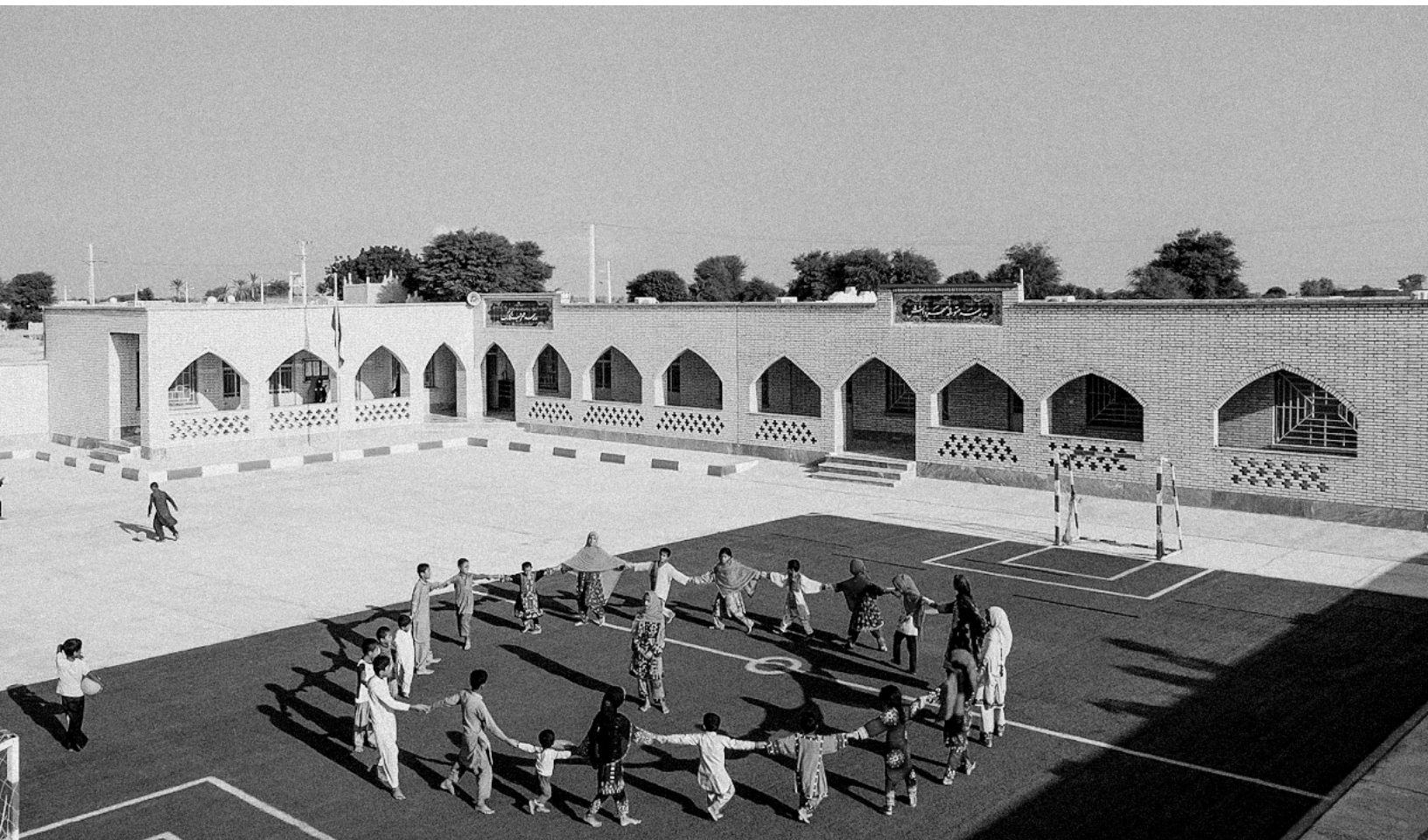




“Noor-e-Mobin Primary School” Ali Daghigh. n.d.³³

The project was initiated by the Noor-e-Mobin charity NGO, which aims to provide a better educational experience. This charity-built school is one of the few examples where a new pedagogical method is aligned with ongoing private administration and an innovative learning environment. Although the ongoing administration involves tuition fees for rural students, the NGO has effectively understood the relationship between spatial quality and teaching strategy. The school offers three sets of spaces for

primary students, each tailored to a different grade level, and includes multipurpose workshops, ateliers, laboratories, and playgrounds. Each grade has an independent learning environment, yet the spaces are connected through narrow hallways, creating a small neighborhood feel for the students. The construction process was managed by the NGO to ensure alignment with its objectives, highlighting the critical role of charitable organizations in enhancing the quality of educational spaces.



"Jangarak School" n.d.³⁴

Jangarak School / Mehr-e-Mandegar Charitable NGO

Location: Jangarak, Dashtyari Country, Sistan & Baluchestan Province, Iran

Date: 2019

Charity: Mehr e Mandegar Charitable NGO

Passive Strategies: Ivan (Shaded semi-closed hallway)

Materials: On-site cast concrete structure, masonry walls





“Jangarak School” n.d.³⁴

The Jangarak School caters to both elementary (left wing) and secondary (right wing) students, standing out as an exemplary model of community and student involvement in its construction. Managed by the charity, the school continues to thrive under their administration. Architecturally, the school features the traditional Persian element, Ivan, a semi-enclosed shaded area that also shades the southern and southeastern walls, offering an enhancement over typical educational facility designs.

Furthermore, the NGO remains actively involved by organizing extracurricular activities, such as football championships with neighboring villages and tree planting initiatives. These activities not only enrich the educational experience but also foster meaningful community engagement for rural children and students.

Sistan & Baluchestan Province

Sistan & Baluchestan during Pahlavi Dynasty and Islamic Republic	P. 140
Climate Characteristic	P. 142
Regional Climatic Features	P. 144

Overview of the Region

Sistan and Baluchistan is Iran's second largest province, covering an area of 180,726 km² and located in the southeast of the country. It shares borders with Pakistan and Afghanistan, as well as South Khorasan province in the north, Kerman province and Hormozgan province in the west, and the Gulf of Oman in the south. Chabahar, Iran's only oceanic port, is on its coast on the Gulf of Oman. Chabahar has the potential to be a key trading hub for the Middle East and South Asia. The province is divided into 24 counties. These administrative divisions are further subdivided into districts and sub-districts, forming the administrative structure of the province. Each county encompasses multiple cities, towns, and rural areas, contributing to the governance and management of the province's affairs. (Nada 2021)

Sistan & Baluchestan has a population of 2.8 million people, with 51% residing in rural areas and just over 600,000 living in and around its capital, Zahedan.

Before the 1979 Revolution, the province was called "Baluchestan," meaning the "House of Baluch," due to the majority ethnic group. However, after the revolution, the name changed to Sistan & Baluchestan to also represent the minority of Sistani ethnic. The term "Baluchistan" refers to the southern, western, and eastern parts of the

province where the ethnic Baluch are concentrated. Most ethnic Baluchis live in Sistan & Baluchistan province, with smaller numbers in Kerman province. However, Baluchis have migrated elsewhere in Iran, particularly Tehran, to find work. Many have strong tribal and family ties to Baluchi populations in neighboring Pakistan and Afghanistan and several hundred thousand are believed to have migrated to find work in other Gulf countries. Baluchis in Iran mostly speak Baluchi as a first language, with a minority speaking Brahoui. Iran is home to 1.5 to 2 million Baluch, who make up about two percent of the national population. "Sistan," on the other hand, is a derivation of the old Persian "Sakastana," refers to the northern part of the province near the Afghan border and the ethnic Persians who reside there. (Nada 2021)

The region that includes present-day Sistan and Baluchistan, which was historically part of Afghan, Arab, Greek, Indian, Mongol, Persian and Turkic empires, has changed hands many times over the centuries. The origins of the Baluch are unclear, but they were first mentioned in Persian and Arabic texts in the 8th and 9th centuries A.D. The Baluch have remained fiercely independent throughout history. Local dynasties attained varying degrees of autonomy or independence between the 11th and 17th centuries. (Nada 2021)

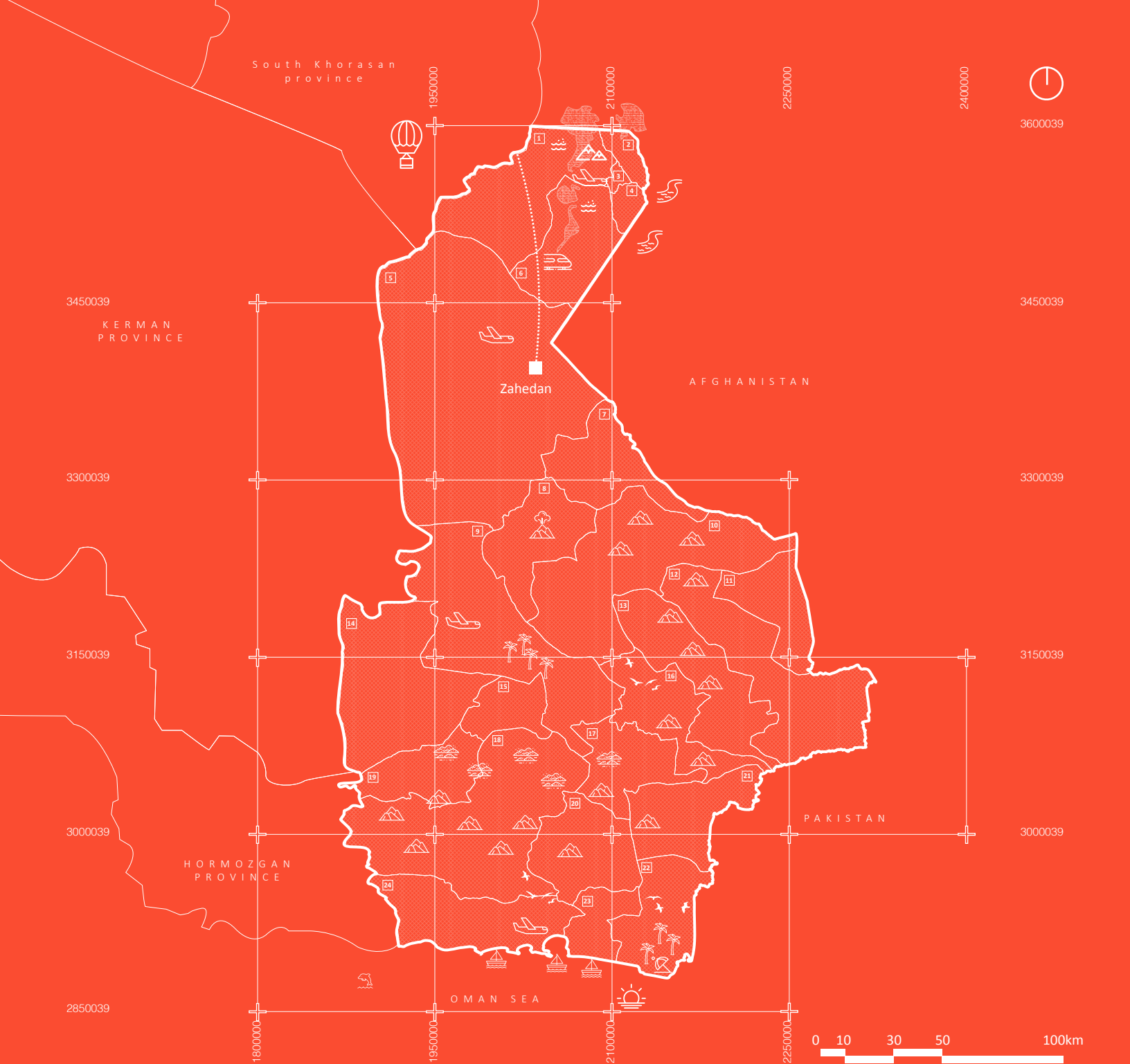
Sistan & Baluchestan Province³⁵

Legend

- 1. Nimrouz
- 2. Hirmand
- 3. Zabol
- 4. Zahak
- 5. Zahedan
- 6. Hamoon
- 7. Mirjaveh
- 8. Taftan
- 9. Iranshahr
- 10. Khash
- 11. Golshan
- 12. Saravan
- 13. Sib & Souran
- 14. Dalgan
- 15. Bampour
- 16. Mehrestan
- 17. Sarbaz
- 18. Nikshahr
- 19. Fonouj
- 20. Ghasarghand
- 21. Rasak
- 22. Dashtyari
- 23. Chabahar
- 24. Kenarak

Overview of the Region





“Poverty was described as rampant in the vicinity of cities, especially rural areas in Baluchestan.”

(BBC News Farsi 2014)

Sistan & Baluchestan during the Pahlavi Dynasty and the Islamic Republic

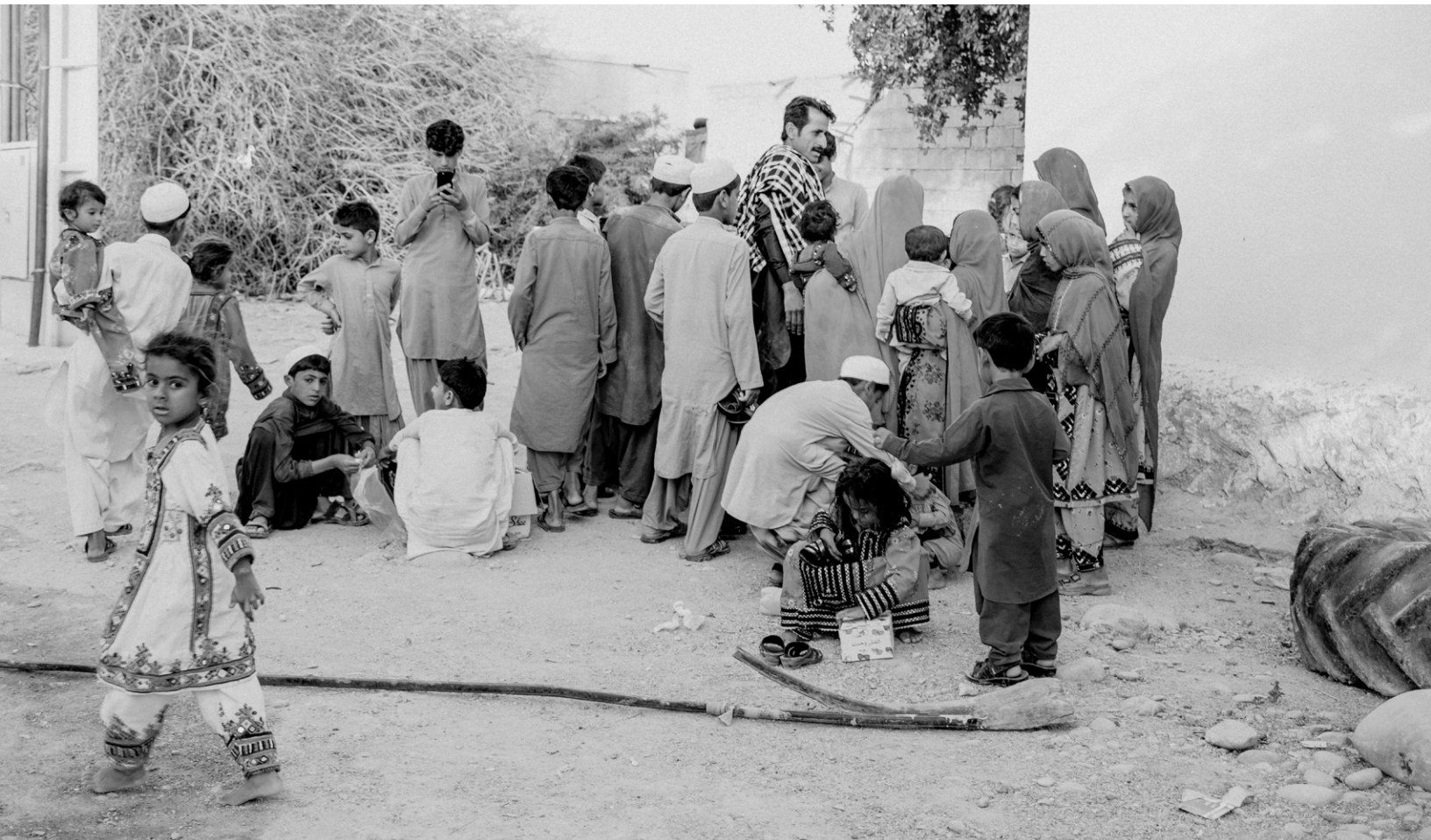
Upon the ascension of Reza Shah to power, governmental forces dispatched under the command of Amanollah Jahanbani in 1928 to Baluchestan. They engaged in military operations and successfully defeated Dost Mohammad Khan (the ruling authority of Baluchestan at the time) and his forces. Following this, Baluchestan came under the administration of the central government of Iran, marking the end of the rule of local leaders and chieftains. (Amanollah Jahanbani 1928)

In September 2013, Halema Aali, the representative of Zabol in the Iranian Parliament, warned about the increasing migration from Sistan and Baluchestan Province due to drought. She requested the Iranian government to take action to revive Lake Hamoun. During this time, the international wetland of Lake Hamoun had dried up, exacerbating sandstorms and dust storms. (BBC News Farsi 2013)

A report in February 2014 on BBC Persian stated, “Sistan and Baluchestan is a vast and relatively

forgotten land that consistently ranks high on indices of underdevelopment and deprivation, or attracts attention due to periodic massacres by militant groups.” Up to that year, according to the latest survey by the Iranian Statistical Center, the province had the lowest economic participation rate in Iran. A year earlier, the existence of significant energy resources along the shores of the Baluchistan Sea had been confirmed. The report stated that few development and industrial projects in the province had progressed more than forty percent and usually, except for military or security projects, they had been abandoned halfway. Even at the time of writing the report, Baluchestan was the only province in Iran without city gas. The relevant report for that year, 2014, stated that many farmers in the province were facing difficulties in providing livelihoods and sustenance. Furthermore, poverty was described as rampant in the vicinity of cities, especially rural areas in Baluchestan. The report also accused the Iranian government of discrimination. The report continued that during this period, according to the latest research of the Iranian Ministry of Health, Tehran and Gilan had the highest and Sistan and Baluchestan had the lowest life expectancy in the country. (BBC News Farsi 2014)

In 2018, a report on Radio Farda attributed widespread poverty in the province as one of the



“Giving away donated shoes by philanthropists. Kahnaniqesh, Dashtyari, Sistan & Baluchestan” Photo by the Author.

factors driving vulnerable segments of society to join “tribal mobilization” and wrote, “Discrimination and deep-seated poverty in the Baluchestan region are two root causes of problems that have brought about significant security repercussions”. However, before that, in April 2014, the Governor of Sistan and Baluchestan stated, “There is no discrimination between men and women, ethnicities, and religions in Sistan and Baluchestan Province, and only meritocracy is considered.” (Radio Farda 2018)



“Agriculture lands, Dashtyari Country, Sistan & Baluchestan” Hadi Aledavood.2023.¹

Climate Characteristic

Sistan and Baluchestan, due to its unique geographical location, is impacted by two major climate characteristics. On one hand, it is influenced by numerous atmospheric currents such as the wind flow of the Indian subcontinent and consequently the monsoon rains of the Indian Ocean. On the other hand, it is affected by the high pressure of the middle

latitudes, with extreme heat being the most critical climatic phenomenon.

In Sistan, characterized by a long, hot, and dry summer, the absolute maximum temperature reaches 46.8 degrees Celsius, with an average maximum of 29.2 degrees Celsius. The absolute minimum temperature is -5.3 degrees Celsius, with an average minimum around 14.8 degrees Celsius. In Baluchestan, the absolute maximum temperature in northern Baluchestan reaches 41 degrees Celsius,

while the absolute minimum ranges from -7 to -16 degrees Celsius, with an annual average temperature of approximately 18 degrees Celsius. Central Baluchestan records an absolute maximum of 47.8 degrees Celsius and an absolute minimum ranging from 1.7 to -6.2 degrees Celsius, with an annual average temperature of around 26 degrees Celsius. (Department of Environment 2016)

The Köppen-Geiger climate classification system categorizes Sistan & Baluchestan as having a BWh (Hot desert climate) and a subtropical desert zone. However, the Iranian Department of Environment, which is responsible for environmental protection, further divides the province into four more specific climatic zones: (Department of Environment 2016)

Northern Zone: This zone, influenced by the climatic and geographical characteristics of the Hirmand Basin, includes the Sistan plain and its surrounding areas. The amount of precipitation in this zone is very low, typically ranging between 45 to 60 millimeters per year. The northern zone is impacted by tropical air masses from the north and warm, dry desert airflow originating from the desert region along Afghanistan's border.

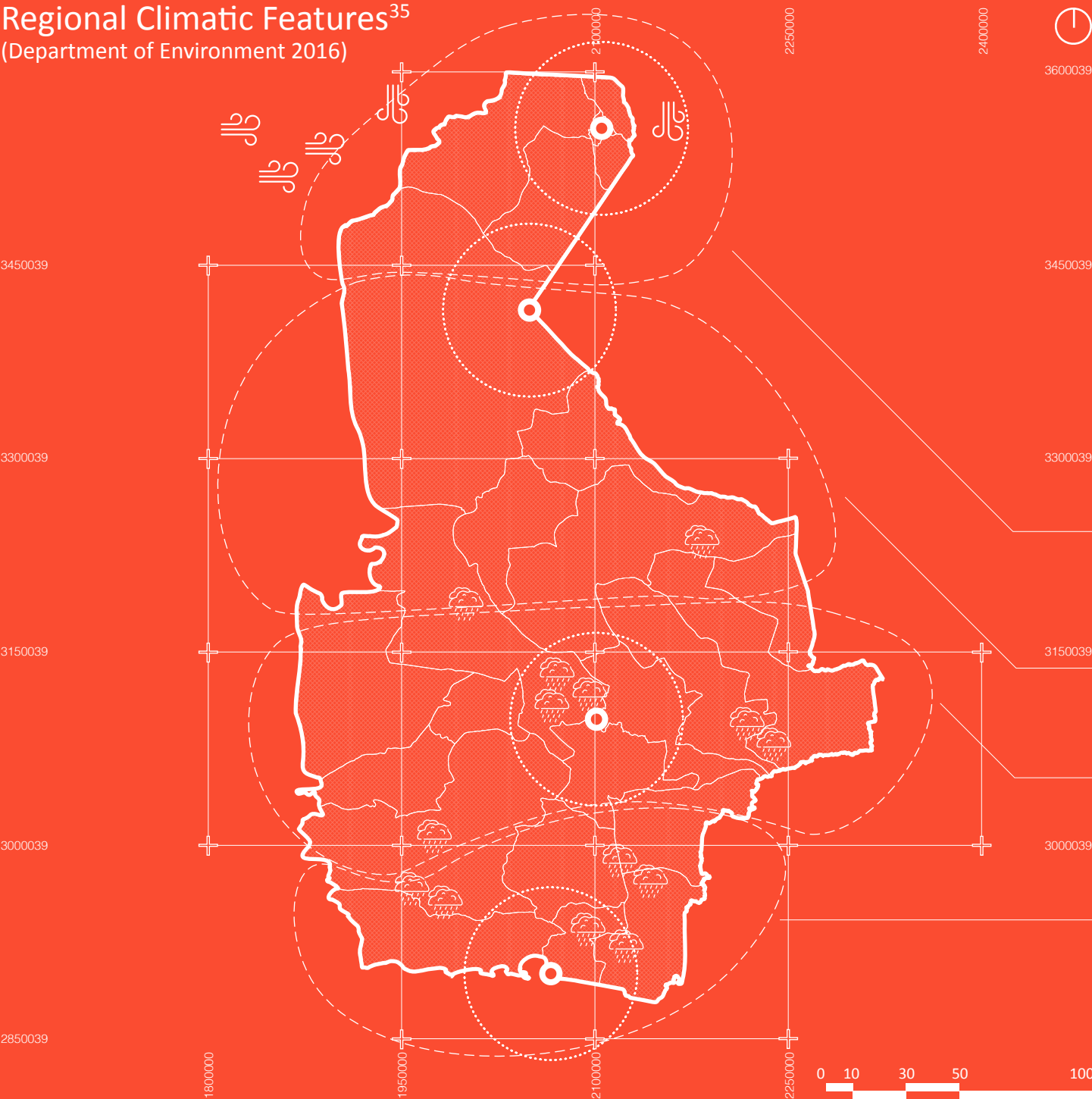
Central Zone: This zone encompasses the counties of Zahedan, Khash, and northern Saravan, with its topographic features being directly affected. It is the easternmost watershed in the country,

with an elevation difference ranging from 900 to approximately 4000 meters. The region's distance from the summer monsoons of the Indian Ocean and the influence of Siberian air currents have contributed to its arid and desert-like climate.

Western Central Zone: This zone includes the eastern area of Jazmourian Basin and the warm regions of Saravan. During the summer, it is influenced by dry tropical air masses from the northwest, moist Indian Ocean currents from the south, and warm dry currents from Arabia. In the winter season, it is affected by dry and cold polar air currents as well as moist western air masses.

Southern Zone: This zone covers the city of Chabahar, a significant portion of Nikshahr, and the sections of Sarbaz, Rask, and Pishin. The southern zone is profoundly influenced by the topographical features of the Beshagard Mountains and the flow from the Oman Sea and the Indian Ocean. Rainfall fluctuations in Chabahar range from 114 millimeters to 185 millimeters annually. This area experiences a warm climate and is impacted by southeast-southwest and monsoon air currents.

Regional Climatic Features³⁵
(Department of Environment 2016)



The CBE Clima Tool* identifies four climate stations in Sistan & Baluchestan, each located in a specific climate zone as defined by the Iranian Department of Environment. The map shows both the zones and the climate stations within them. The climate characteristics of other regions can be roughly estimated based on the zone and climate station they belong to. (CBE Clima Tool) (Department of Environment 2016)

Zone: Northern

Climate Station: Zabol

Average Yearly Temperature: 22.9 °C

Hottest yearly temperature: 43.8 °C

Coldest yearly temperature: 0.9 °C

Zone: Central

Climate Station: Zahedan

Average Yearly Temperature: 19.4 °C

Hottest yearly temperature: 37.2 °C

Coldest yearly temperature: -3.3 °C

Zone: Western Central

Climate Station: Iranshahr

Average Yearly Temperature: 27.4 °C

Hottest yearly temperature: 44.0 °C

Coldest yearly temperature: 7.5 °C

Zone: Southern

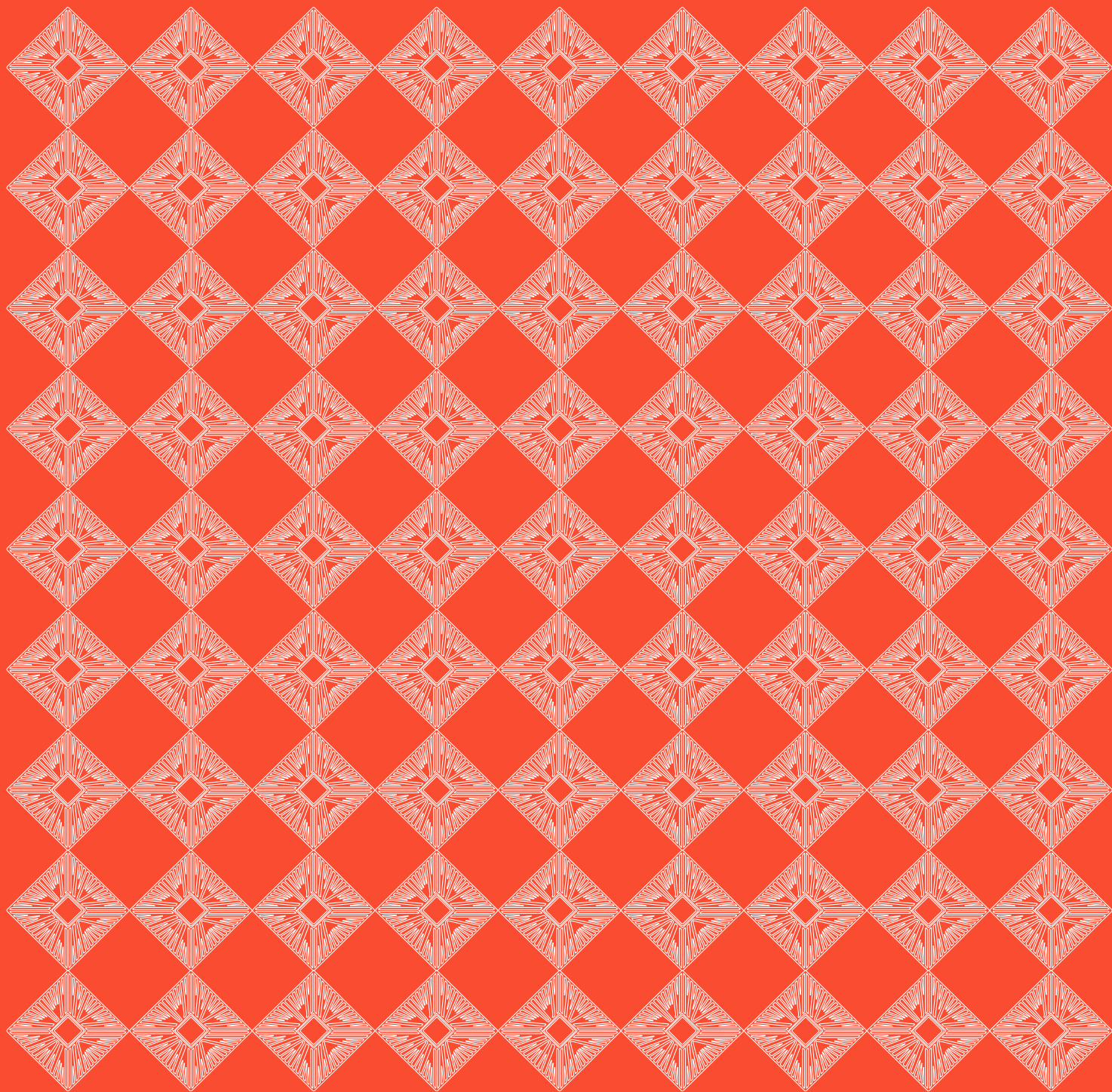
Climate Station: Chabahar

Average Yearly Temperature: 26.6 °C

Hottest yearly temperature: 37.0 °C

Coldest yearly temperature: 14.3 °C

* CBE Clima Tool is a free and open-source web application for climate analysis tailored to sustainable building design.



Navigating the Challenges of Sistan & Baluchestan

“Sistan and Baluchistan has the country’s poorest indicators for primary school enrollment, access to improved water and sanitation, and infant and child mortality. .”
(Nada 2021)

Sistan and Baluchistan faces a range of political dilemmas rooted in historical marginalization, ethnic disparities, and socio-economic challenges. The Baluch population’s calls for cultural recognition and autonomy have led to tensions with the central government. The Baluch community in Iran has struggled with limited integration into Iranian society due to the central government’s insufficient efforts. This has been compounded by challenging socioeconomic conditions, leading to heightened ethnic tensions. “Areas with large Baluchi populations were severely underdeveloped and had limited access to education, employment, health care, and housing,” according to the State Department’s 2019 report on human rights. In 2018, Sistan and Baluchistan had the lowest life expectancy of any Iranian province. According to the latest census, the province also had a literacy rate of only 76 percent, significantly lower than Tehran’s 93 percent. In addition to these challenges, Sistan and Baluchistan has the country’s poorest indicators for primary school enrollment, access to improved water and sanitation, and infant and child mortality. (Nada 2021)

Additionally, in recent years Sistan & Baluchistan has suffered severe drought and extreme weather conditions, which have placed further strain on the province’s resources. The scarcities in the province

have not only impacted the lives of local residents for decades, limiting their access to basic human needs, but they also present challenges for philanthropists and charitable NGOs seeking to address these issues. Despite recent attention and charitable donations directed towards the province, there is evidence of unfair distribution within its borders. This inequality is often influenced by political, cultural, and religious factors. Also, the effects of global warming and the resulting climate crisis, such as floods, extreme rainfall, droughts, and wind storms, can further hinder the equitable distribution of resources.

Recognizing the underlying causes of these complexities is essential for volunteers to discern the distinct needs of various regions and implement more effective, sustainable actions that can truly benefit indigenous communities in the long term.



“Doshinkouh, Bent District, Nikshahr Country, Sistan & Baluchestan” Photo by the Author.

Political, Cultural and Religious

The vast majority of the Baluch are Sunni, which has caused the long-standing tensions with the predominantly Shiite government. Although most of Baluchestan’s population adheres to Sunni Islam, the Islamic Republic has systematically downplayed their religious and cultural identity. The government has reportedly sent hundreds of

Shiite missionaries to convert the predominantly Sunni Baluch. The government has closed, and, in some cases demolished Sunni mosques and religious seminaries. It has also used public education to promote an Iranian national identity, with Shiism as its foundation. Most elementary and high school teachers in Sunni Baluch areas are also reportedly Shiite. (Nada 2021)

The government tends to avoid hiring non-Shiite teachers. Abdollah Aref, director of the Baluch

“The clans and tribes of Sistan and Baluchestan represent a vibrant and intricate aspect of the province’s cultural diversity.”

Activists Campaign based in London, highlighted in an interview with Iranwire News Agency that the central government has consistently appointed officials from outside the province to oversee education in Sistan and Baluchistan. Despite the presence of local NGOs and charitable organizations dedicated to improving education, their efforts are often hindered by various obstacles. Aref emphasized that the government seems to deliberately aim at keeping literacy rates low among children in the province. (Iranwire 2022)

Moreover, one of the most important characteristics of the local society is the organizations of the families of clans and tribes. The clans and tribes of Sistan and Baluchestan represent a vibrant and intricate aspect of the province’s cultural diversity. Their traditional way of life, characterized by strong kinship ties, nomadic traditions, and distinct social structures, continues to shape the identity of the region and its people.

However, this aspect of the region’s culture has also complicated the situation for decades regarding the historical military tensions with central governments, accessibility to public services, and approaching the deprived-stricken people by NGOs and charitable organizations. Often, the clans and tribes’ characteristics of the indigenous people have created a disparity, especially in terms of donations made by philanthropists and charitable institutions.

Based on my experience visiting the region, I noticed that villages that host wealthier and stronger clans have better resources and connections to attract philanthropists. These villages are often less willing to attribute donations to less developed villages, which can create a gap in the distribution of resources.

During my trip, I visited a village named Doshinkouh, nestled in the mountains of Bent District. This village struck me as one of the most developed in the province, boasting three new school buildings, a healthcare center, and an emergency room. The locals appeared to be relatively well-off, with better clothing and possessions. Despite being the central hub for thirteen neighboring villages, which provides superior facilities and services, some residents believe that Doshinkouh exploits its status to attract NGOs and their aid, even if they may not truly require it.

While waiting for my ride back to Bent, I met a local taxi driver named Aslam Delshab from Rufnan village in the Bent District. We discussed my observations in Doshinkouh, and I inquired about his thoughts on tribes possibly taking advantage of donations. Aslam shared, “People in Doshinkouh are some of the wealthiest in the Bent District. They often own properties in larger cities but choose to reside in the village due to their business

dealings.” He elaborated, “When they hear about a philanthropist visiting Sistan & Baluchestan and landing in Chabahar, they rush to pick them up and direct them to their village, insisting that any donations be directed solely to their community.”

As an illustration, he mentioned Hossein Abad, a nearby village devoid of even a single school building. Aslam believes that the authorities in Doshinkouh turn a blind eye to the needs of surrounding villages and seldom acknowledge their deficiencies.

Although I couldn’t personally verify the absence of a school building in Hossein Abad, Aslam’s testimony served as evidence supporting my observations. Furthermore, Aslam’s account proved accurate when, through connections like Mohammad Baluchi, a journalist, social activist, and elementary school teacher, I was introduced to a key figure in the development of Doshinkouh from The Organization for Development, Renovation, and Equipping of Schools (DRES). This individual picked me up from Chabahar and escorted me back to their village. However, despite the considerable effort and the challenging journey to allow me to witness the deficiencies of Doshinkouh, upon arrival, he showed little motivation to give me a comprehensive tour, particularly of the school buildings. Throughout our conversations during the journey, he scarcely mentioned the three newly constructed school

buildings and instead focused on the inadequacy of educational spaces, which, to some extent, rang true.

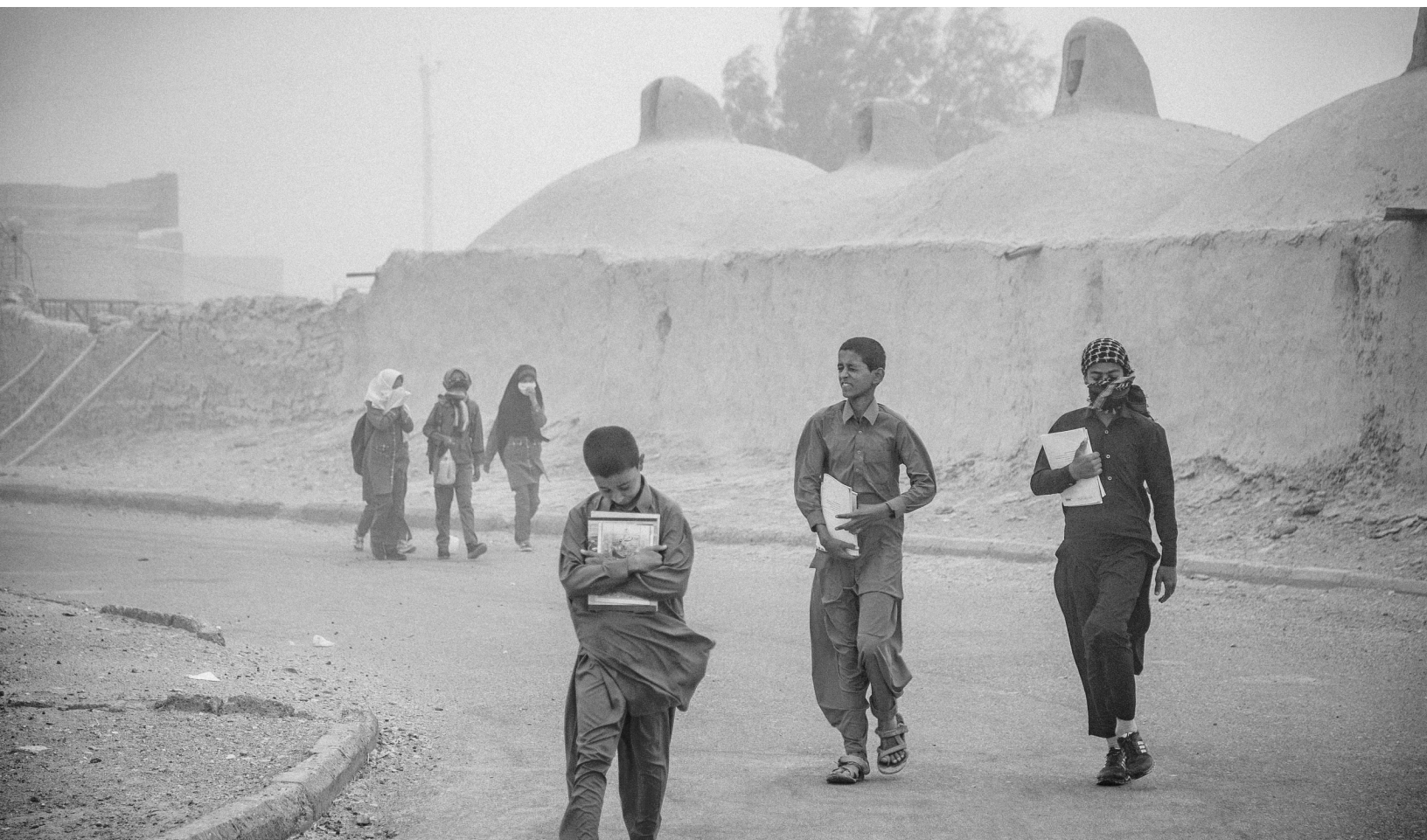
The presence of well-appointed facilities and the comparatively affluent status of the inhabitants in Doshinkouh prompted me to contemplate why, given their ability to afford cars, multiple residences, and amenities, they have not resolved the issue of inadequate educational space by constructing additional school buildings.

This question gained significance considering that, according to teachers and authorities in Doshinkouh, they could construct a school within two to three months, using the same construction methods employed in building their houses. Also, the village was in the process of constructing a large mosque solely through the budget and labor of the local community.

While this experience may not reflect all communities in the province, it’s important to acknowledge that villages facing extreme poverty still exist. However, the tight bonds within clans and tribes in Sistan & Baluchestan, along with the prioritization of religious matters over education, can sometimes impede equal distribution of donations from philanthropists and charitable NGOs. This can also present challenges for volunteers trying to identify locations in urgent need of attention.

“Doshinkouh, Bent District, Nikshahr Country, Sistan & Baluchestan” Photo by the Author.





“Climate Crisis in Hamun Lake, Sistan & Baluchestan” n.d.³⁶

Climate Crisis

Sistan and Baluchestan province is significantly affected by the climate crisis, experiencing a range of environmental challenges that have profound impacts on its communities and ecosystems.

One of the most pressing issues in the region is drought, which results from limited and erratic rainfall patterns. Prolonged drought periods have

led to water scarcity, affecting both agricultural activities and water resources for domestic use. This has a direct impact on livelihoods, food security, and economic development, exacerbating poverty and driving migration. Also, The province faces acute water shortages due to a combination of factors, including low precipitation, high evaporation rates, and unsustainable water management practices. The over-extraction of groundwater for agriculture and other purposes has led to declining water tables and

“One of the most pressing issues in the region is drought, which results from limited and erratic rainfall patterns.”

the depletion of aquifers, further aggravating the water crisis. Communities, particularly those in rural and remote areas, struggle to access sufficient and safe water for drinking, sanitation, and irrigation.

Moreover, Sistan and Baluchestan is prone to frequent and severe dust storms, which are exacerbated by desertification, drought, and wind erosion. These dust storms have detrimental effects on public health, as they can lead to respiratory issues and other health complications. They also impact agricultural productivity by depositing dust and sand on crops, reducing yields and affecting soil fertility. Dust storms can also disrupt transportation and infrastructure, hindering economic activities and connectivity. The primary source of dust storms in Sistan & Baluchestan is the northern border with Afghanistan. The 120-day winds are renowned as one of Iran’s most notable and impactful local winds, dominating the eastern region from around May 15th to September 15th. Given the fine-grained deposits comprising approximately 60% clay, 30% silt, and 10% sand, these winds create an ideal environment for dust storms and sandstorms with their gentle yet persistent gusts. Their effects have been particularly pronounced in the Sistan region, leading to significant damage and security concerns for cities. Consequences include the abandonment of border villages, eye infections, flight cancellations

and delays, and transportation route blockages, all of which pose challenges that could ultimately jeopardize the region’s security.

In 2022 in an interview with Mehr News Agency, the Deputy Head of the Crisis Management Headquarters of Sistan and Baluchestan Province stated: The vast province of Sistan and Baluchestan has been grappling with the consequences of climate change for over 20 years, resulting in chronic drought and severe water shortages, along with the rise of dust storms and strong winds as a consequence of climate change in this region. (Mehr News Agency 2022)

In a 2021 article titled “A glimpse into the climatic conditions of the coming decades in the southeastern region of the country” an analysis of climatic variables was conducted at six synoptic stations in the southeastern region of the country: Zabol, Zahedan, Khash, Iranshahr, Saravan, and Chabahar. (Farzaneh et al. 2021)

This examination covered the period from 1987 to 2020 due to the suitable distribution of these stations and the length of the statistical period.

The study investigated maximum temperatures during the baseline period (1987-2019) and future periods (2021-2060) under two scenarios: RCP 2.6 (countries’ commitment to reducing greenhouse gases) and RCP 8.5 (lack of commitment to reducing

greenhouse gases).

After analyzing the temperature data, the research identified heatwaves lasting three days or longer at each of the six synoptic stations in the southeastern region of Iran. The study concludes that the region has experienced a temperature increase in recent years. Iranshahr station, followed by Zabol, showed the highest temperature rise, while coastal stations exhibited the least changes, and inland stations experienced the most significant changes.

Furthermore, the research investigated changes in the annual average temperature difference over a 30-year statistical period in the southeastern region of the country. The data revealed a positive trend in temperature, indicating noticeable temperature changes overall. These changes serve as indicators of climate change in the southeastern region of Iran.

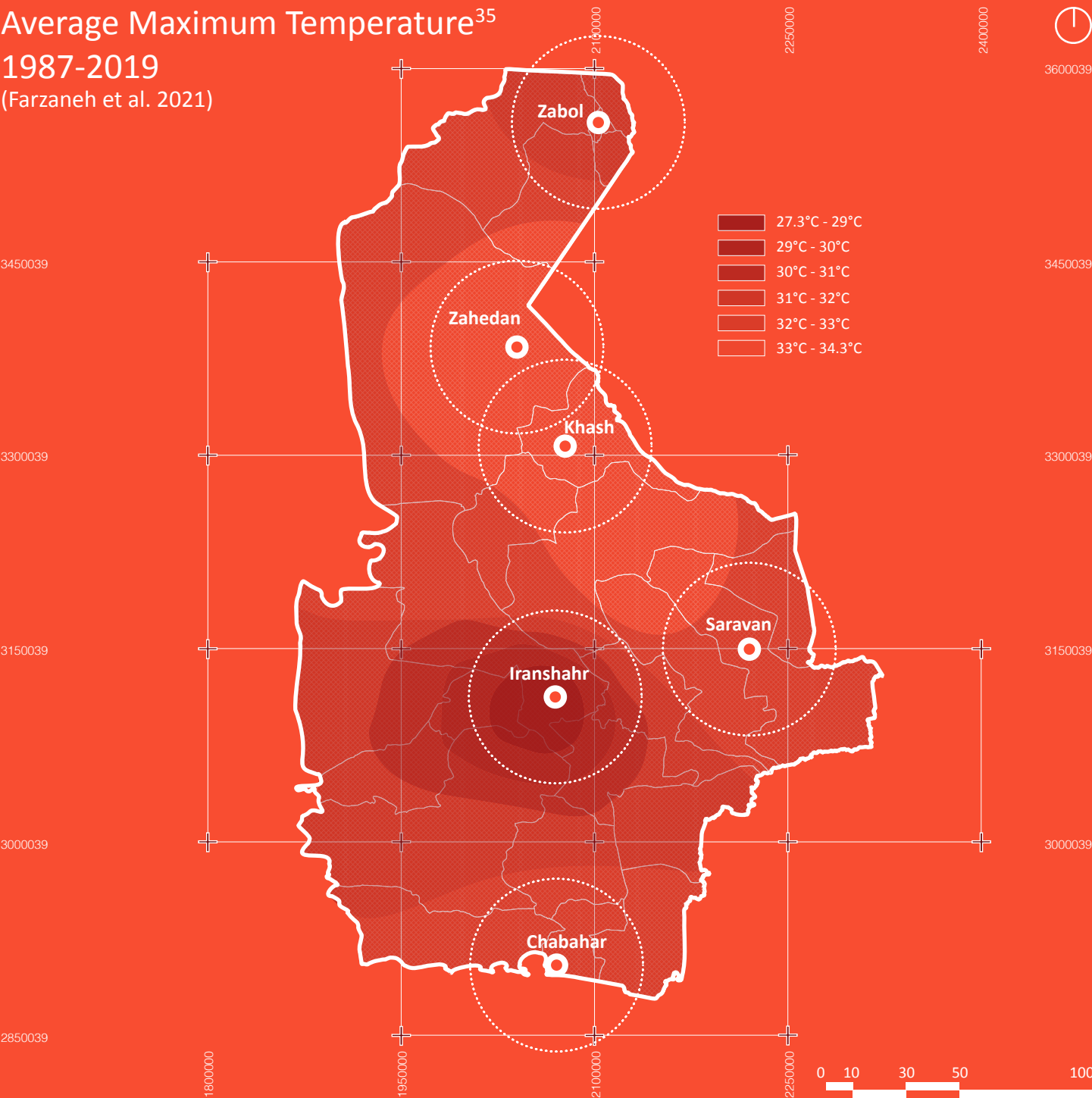
The consequences of the climate crisis can significantly impact charitable efforts, particularly in terms of their sustainability. Not only must approaches be prepared to address the complexities arising from extreme climate phenomena, but the increasing number of abandoned villages due to dust storms, water shortages, and droughts could also result in donated services and facilities from philanthropists going unused or neglected. Furthermore, scarce resources strain humanitarian efforts, with charitable organizations facing

heightened demand for food aid and water provision. This prioritizes charitable efforts addressing immediate survival needs over educational and well-being initiatives. Therefore, charitable activities that do not typically address disasters may need to be paused. In the construction sector, charities must consider the climatic characteristics to build structures capable of withstanding disasters like floods or extreme rainfall. Additionally, implementing features such as shading can help mitigate the impact of rising average temperatures.

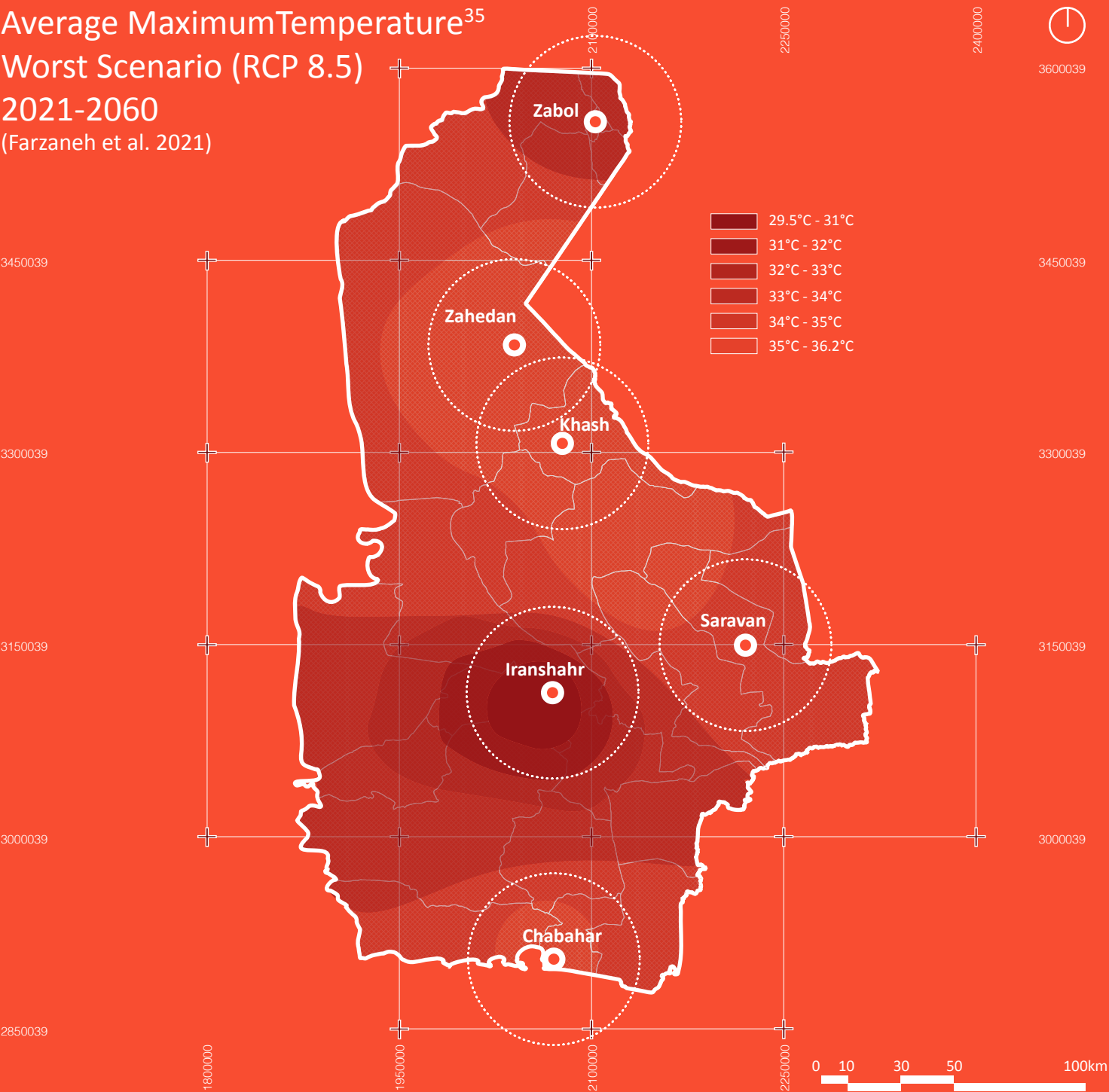
Overall, the climate crisis exacerbates existing vulnerabilities and challenges in improvised regions, requiring charitable organizations to adapt their strategies and interventions to address the evolving needs of affected communities. This may involve implementing sustainable solutions, building resilience, and fostering community-led initiatives to mitigate the impacts of climate change and ensure the continuity of charitable activities in the long term.



Average Maximum Temperature³⁵
1987-2019
(Farzaneh et al. 2021)



Average MaximumTemperature³⁵
Worst Scenario (RCP 8.5)
2021-2060
(Farzaneh et al. 2021)



“According to a report by the Ministry of Cooperatives, Labor, and Social Welfare, 73.16% of out-of-school children in Sistan & Baluchestan face poverty.”
(Bayat and Molashahi 2023, 14)

Educational Opportunities

Sistan & Baluchestan faces significant educational challenges due to cultural factors and deprivation. In December 2022, the Majles Research Center released a report highlighting the province’s alarming rates of school dropout and out-of-school children. Titled “Investigation of the Trend of School Dropout and Retention in Education,” the report analyzed data from 2014 to 2022. It revealed that in the academic year of 2015-2016, there were 24,171 dropouts, a number that increased to 33,878 by 2020-2021. Similarly, the count of out-of-school children surged from 117,245 in 2015-2016 to 145,340 six years later. These challenges are exacerbated by long-standing issues of poverty and deprivation in the province. According to a report by the Ministry of Cooperatives, Labor, and Social Welfare, 73.16% of out-of-school children in Sistan & Baluchestan face poverty. (Bayat and Molashahi 2023, 14)

Insufficient infrastructure in Sistan & Baluchestan exacerbates the educational challenges. Administrative setups often designate a village as the central hub within a cluster of neighboring villages. These central villages typically have essential facilities like healthcare clinics and schools. Consequently,

students, particularly at the secondary level, must commute to the central village of their sub-district to attend school, provided it offers secondary education. If not, they face the additional challenge of traveling to the nearest town with a secondary school building. This dual challenge: (1) Most remote areas in the province are accessible only via gravel roads, posing significant transportation challenges for both indigenous communities and charitable NGOs. Moreover, the long and arduous gravel roads cause considerable damage to vehicles, discouraging people from offering school transportation due to repair costs. (2) Local families are reluctant to allow their daughters to travel to other towns or villages due to cultural and religious reasons such as early marriage, poverty, and isolation. According to the report published by the Majles Research Center, school enrollment rates in the province are 71.5% for girls and 81.8% for boys, well below the national average. (Bayat and Molashahi 2023, 14)

Ultimately, constructing a charitable school building in one town cannot single-handedly address these challenges. The optimal location for a school building must consider the proximity to neighboring villages to reach more students and ensure a convenient distance from their homes to the school.

Moreover, students’ access to digital devices and Online platforms is extremely limited, with

a predominant focus on outdated pedagogical methods emphasizing physical presence in the classroom and traditional educational tools such as books and blackboards. In 2021, Hamidreza Rakhshani, the director of education in Sistan & Baluchestan, revealed that 400,000 students in the province lack access to smart devices or tablets. This lack of access has led to students falling behind in their courses during pandemics, floods, and other natural disasters. (Mehr News Agency 2020)

The traditional pedagogical approach poses a challenge to new initiatives aimed at addressing the scarcity of educational spaces, as simply constructing new school buildings may not be sufficient to change the educational landscape and attract students to enroll. Therefore, charitable activities must also consider this issue and simultaneously focus on meeting the users' needs when designing and utilizing educational spaces.

During my visit, I observed that even in the most remote areas, most villages have at least one newly built school building dedicated to elementary education, often funded by philanthropists. As a result, I believe that charitable activities could significantly improve the condition of the region's crumbling school buildings to a satisfactory level. This observation aligns with the fact that most complaints from local residents revolved around

the insufficient availability of educational spaces rather than the need to repair dilapidated school buildings. In essence, the priority lies in providing additional educational spaces due to the lack of sufficiency, rather than focusing solely on replacing deteriorating structures. However, while the region requires more educational spaces and remote areas are struggling with an unbalanced student per classroom ratio, there is a noticeable decrease in the number of students as they progress to higher grades. In other words, the demand for educational spaces is primarily concentrated in the early grades of elementary school, and thereafter, students either drop out of school or lack access to secondary education. Therefore, this disparity between the demand and the number of users over time presents a challenge for philanthropists aiming to have a lasting impact on educational scarcities in the region.

Therefore, unless the aforementioned issues regarding dropouts and out-of-school children are addressed, constructing new educational spaces alone will not lead to efficient new educational opportunities. Nonetheless, due to the vast proportions of Sistan & Baluchestan, disparities may vary across different regions.

“Zahedan scored the highest as the growth center of the province, whereas Nikshahr exhibited the lowest level of educational development.”

(Mir, Anvari, and Miri 2016)

An article titled ‘An Evaluation of Educational Development in Sistan and Baluchestan Province’ was published in 2016 with the aim of ranking cities in the province based on their educational development, comparing them in terms of educational progress, and prioritizing planning efforts for these cities. (Mir, Anvari, and Miri 2016)

This article sought to evaluate educational development, analyzing and describing educational indicators across seven cities: Iranshahr, Chabahar, Khash, Zabol, Zahedan, Saravan, and Nikshahr. Such evaluations can assist planners, school principals, philanthropists, and charitable NGOs in identifying the potential impact of education on sustainable development and making informed decisions for educational development initiatives.

The United Nations Human Development Index primarily employs life expectancy, education, and income as the three key human development indicators,” the study emphasizes. It further elaborates: “For this study, the educational indicator was assessed using factors such as the number of students, educational and administrative staff, total workforce, schools, and classrooms. Data collection involved documentary research, including scrutiny of libraries, references, and educational statistics from Sistan and Baluchestan province between 2011 and 2012. Due to restricted access

and challenges in obtaining expert opinions, international criteria were adopted. Considering the significance of indicators, limited accessibility, and the difficulty, and sometimes impossibility, of experts accepting indicators, we endeavored to utilize international criteria. Therefore, the Morris method was employed to gauge the educational development of cities due to its mathematical nature and its capacity to integrate various indicators and development variables, which are extensively utilized in determining the development status of cities. (Mir, Anvari, and Miri 2016)

The study concludes by stating, “As many as 18 indicators were utilized to rank Sistan and Baluchistan cities educationally using the Morris model in 2011. Some fundamental inequalities are observable among these indicators. According to the Morris Model, it is concluded that Zahedan is in the first level of development (very high). Iranshahr is in level 4 (low), while Saravan, Khash, Zabol, Chabahar, and Nikshahr are in level 5 (very low). According to the results, Zahedan scored the highest as the growth center of the province, whereas Nikshahr exhibited the lowest level of educational development.”

It is also important to mention that this study evaluates the capital city of each country. This means that even in the remote regions of the cities analyzed in the research, the conditions are even

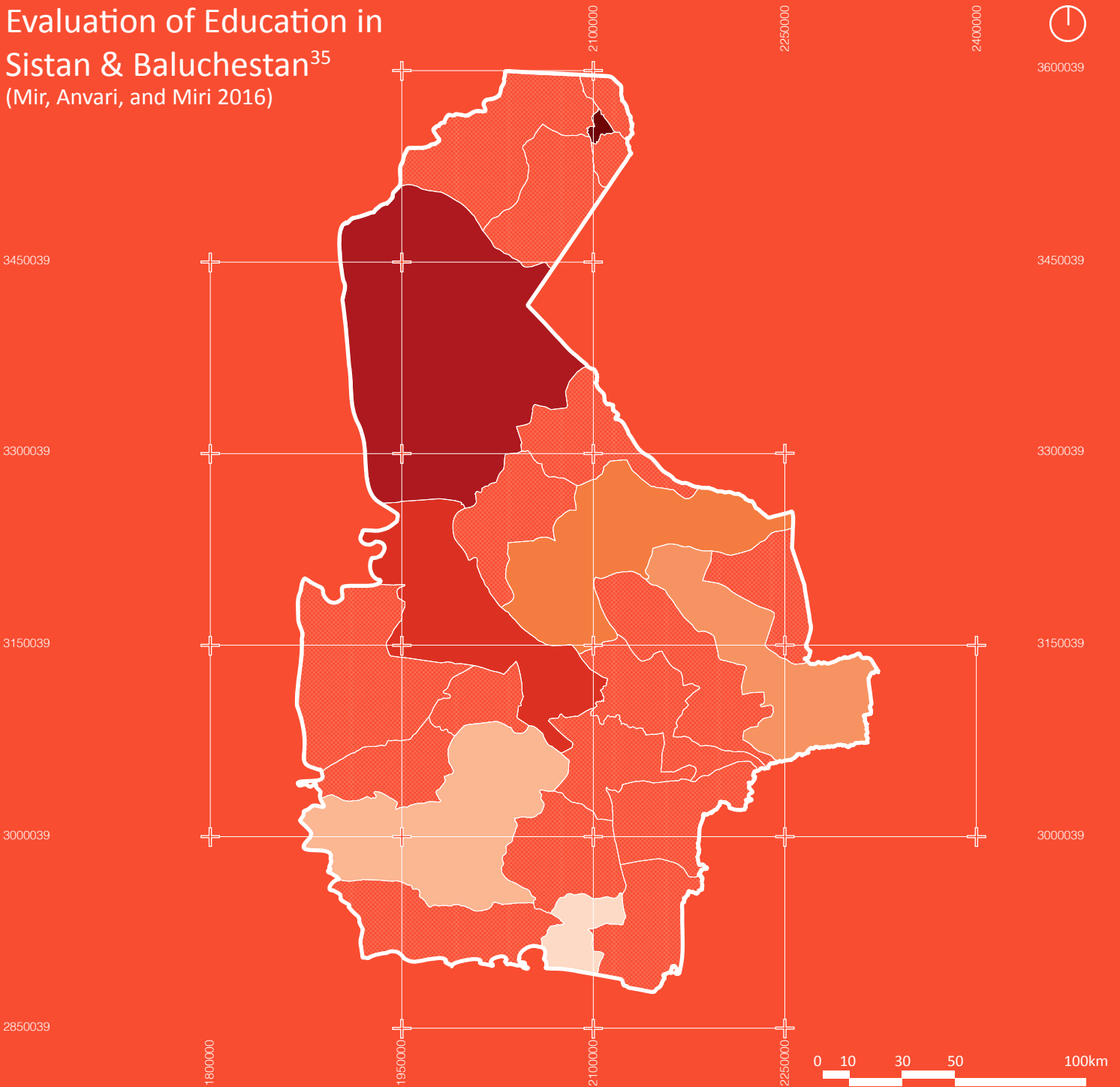


“Conex Box School, the initial school of Doushinkouh, Nikshahr Country” Photo by the Author.

worse. However, despite the significance of studying the evaluation of education in different regions of Sistan & Baluchestan, similar studies seem not to have been conducted in recent years. Nonetheless, based on this research and my interviews with social activists, journalists, and teachers, inequalities regarding educational distribution still persist in the province. Nikshahr remains renowned as one of the most underdeveloped areas in the province. (Mir, Anvari, and Miri 2016)

Evaluation of Education in Sistan & Baluchestan³⁵

(Mir, Anvari, and Miri 2016)



“According to the importance of indicators, limited access, and the fact that the acceptability of indicators is difficult and sometimes impossible by experts, we tried to utilize international criteria. Therefore, Morris method* is utilized to measure educational development of cities due to the fact that its mathematical nature, the capability of integrating indicators, and development variables are extensively used in the development determination of cities.” (Mir, Anvari, and Miri 2016)



*The Morris method involves systematically varying one factor at a time while keeping other factors constant to assess the sensitivity of a model to different input parameters.

“An eco-lodge under construction by Next Office Studio. Kahnianikesh, Dashtyari Country” Photo by the Author.



Reaching a Conclusion

Sistan & Baluchestan province is a mosaic of diverse ethnicities, religions, languages, cultures, historical backgrounds, and climates. Domestic and international contributions to the province are allocated based on mobility, infrastructure, and economic status. Given the unique challenges and characteristics of each area within the province, charitable NGOs and philanthropists must understand the specific challenges of their target region and the situations in comparable areas. This comprehensive understanding ensures equitable distribution of donations, preventing any single region from receiving disproportionate assistance. It also aids in assessing the long-term sustainability of donations, ensuring that initiatives, such as school buildings, can effectively meet educational needs over time and withstand climatic conditions and natural disasters.

During my visit, I observed that NGOs primarily focus on Dashtyari County. This focus is likely due to the easier accessibility of the area via its capital, Chabahar, the only port city in the region and home to the sole airport in southern Sistan & Baluchestan. Additionally, multiple tourist attractions in Chabahar

draw visitors year-round. Consequently, philanthropic efforts aimed at promoting ecotourism and offering affordable, culturally relevant accommodations are concentrated in Chabahar City, improving the local economy and livelihoods. This economic growth, in turn, fosters greater social involvement, particularly in education. However, this concentration of resources in regions like Dashtyari has exacerbated inequalities, making it more challenging to attract philanthropists and activists to address the needs of less prominent areas in the central region.

Furthermore, the severe flood in March 2024 throughout the Dashtyari Country damaged numerous projects and infrastructures that significantly affected local lives. This damage resulted from a failure to heed forecasts of the region's climatic changes, which had predicted increased rainfall in the southeast of Sistan & Baluchestan. Proactive measures to mitigate such impacts are necessary to ensure the resilience and effectiveness of aid projects.

Site Evaluation for Hosting a New School

Through an investigation into the underlying causes of educational quality issues and structural challenges in school buildings across Iran, particularly in its remote and challenging regions, a comprehensive understanding of these obstacles and potential remedies has been achieved. Central to this inquiry is the critical task of identifying suitable locations for school construction and overcoming the hurdles faced by philanthropic efforts. To this end, I conducted preliminary interviews with journalists and social activists, laying the groundwork for subsequent field studies. Among the notable individuals interviewed, Mohammad Baluchi emerged as a pivotal figure, contributing valuable insights as an elementary teacher and journalist at Mayarjal Media. His intimate knowledge of local communities, especially in the underdeveloped area near Bent City in Nikshahr County, Sistan & Baluchestan, proved indispensable in the selection process for the school's site. Teachers like Mr. Baluchi are esteemed in small towns for their profound understanding of students' lives and needs, making their input invaluable in decision-making processes.

Mr. Baluchi, hailing from a village near Bent City in Nikshahr County, previously identified as one of Sistan & Baluchestan's most underdeveloped areas, provided a substantial amount of crucial information before my on-site visit. His involvement

in choosing the school site was pivotal, significantly influencing the final decision. While brief interviews with residents were informative, Mr. Baluchi's contributions during our interactions were particularly profound and influential.

The subsequent narrative in this document originates from an initial conversation with Mohammad Baluchi on May 12, 2023. This dialogue, along with subsequent discussions, played a crucial role in specifying Bent District in Nikshahr County as the optimal location for constructing a new elementary school building.

May 12, 2023

Interview with Mohammad Baluchi

Interviewer: Mr. Baluchi, thank you for taking the time to speak with me. Could you please tell us where you are originally from?

Mohammad Baluchi: Certainly, I hail from the Bent district in Nikshahr county, Sistan and Baluchestan.

Interviewer: What do you do for a living currently?

Mohammad Baluchi: I am involved in various roles. I work as a journalist at Mayarjal Media, handle public communications for the Bent district administration, teach at an elementary school, and actively engage in social activism with charitable organizations.

Interviewer: Thank you for sharing. Can you tell me more about your teaching career? Are you a full-time teacher?

Mohammad Baluchi: Yes, I was recruited under the Ministry of Education's "*Moalem Gharardadi*" program, commonly known as Contract Teachers.

This initiative supports Iran's education system, though teachers often receive compensation below the Ministry of Cooperatives, Labor, and Social Welfare's minimum wage. Their employment terms include various contracts like service purchases, company contracts, and fixed employment contracts. These teachers are paid daily wages and do not receive compensation during breaks, holidays, illness, or school closures due to health, safety, or maintenance issues. They lack benefits such as insurance and overtime pay, despite their extensive work hours. Unofficial teachers fill gaps in the Education Ministry's workforce but aren't recognized as official employees.

Interviewer: How would you describe the condition of school buildings in your region?

Mohammad Baluchi: Most schools in Bent district and other remote areas were built by UNESCO in 2001-2002 but are now in disrepair. During rainy periods, classes are often suspended due to leaks in multiple areas.

Interviewer: Can you give us an idea of the student-to-classroom ratio?

Mohammad Baluchi: The number of students per

classroom varies based on village population. Due to classroom shortages, teachers sometimes instruct 23 students in small spaces measuring about 3x4 square meters, whereas standard classrooms are typically 6x4 square meters.

Interviewer: In your opinion, what is the main reason for high dropout rates in Sistan and Baluchestan?

Mohammad Baluchi: The primary issue, in my view, is the long distances students must travel to reach schools. Not every region has elementary and secondary schools, so children from smaller villages must go to larger ones or nearby cities, posing challenges.

Interviewer: Could you explain what boarding schools are?

Mohammad Baluchi: Boarding schools provide accommodation and meals during the academic term. They are often located centrally, like in Bent city, serving students from various regions.

Interviewer: You mentioned travel obstacles. Could you expand on that?

Mohammad Baluchi: Many villages lack proper roads, making it hard to provide school transport on gravel roads. Families want to send children to school but often can't afford transportation. Cultural factors also play a role, with some families hesitant to send daughters to distant boarding schools.

Interviewer: You also mentioned a lack of secondary schools contributing to dropouts. Can you elaborate?

Mohammad Baluchi: Regulations require a minimum of 50 secondary-level students to establish a secondary school, rarely met in remote areas. After elementary school, students either move to cities for education or stop altogether, more common among girls.

Interviewer: In your reports for Mayarjal Media, you've visited many areas in Sistan and Baluchestan, interviewing locals and officials, witnessing their challenges. Which region needs a school most urgently, and why?

Mohammad Baluchi: For a secondary school, I recommend Roudgolandam village in Bent district. Ministry documents show 57 secondary-level students with no school. A new six-classroom school



“The Elementary School in Osman Abad” Photo sent to the Author. May 20, 2023.³⁷

could serve Roudgolandam and three nearby villages, totaling 106 students. For an elementary school, Sefid Kooch region needs attention. Osman Abad village has a three-classroom school building in disrepair, failing to meet educational needs.

Interviewer: Osman Abad is smaller and more remote than Roudgolandam. How would teachers manage at the new school?

Mohammad Baluchi: Teachers would commute from cities, staying in remote areas Saturday to Wednesday, with meals provided by locals. Student families would provide their food.

Interviewer: What features should the new school in Osman Abad have, in your opinion?

Mohammad Baluchi: A three-classroom school with a teacher’s office and administrative room



Mohammad Baluchi, Mayarjal Media

would suffice for Osman Abad.

Interviewer: What are common occupations among locals?

Mohammad Baluchi: Many work in public transport or city industries, while others are involved in farming or fishing in nearby ports.

Interviewer: How would you describe the climate

in Sefid Kooh region?

Mohammad Baluchi: The temperature ranges from 30 to 45 degrees Celsius with minimal rainfall. People rely on groundwater for drinking and agriculture, and they have small gardens for daily vegetables next to their homes.

Interviewer: Thank you very much for your time.

Nikshahr Country

Nikshahr, situated in the southwest of Sistan & Baluchestan province, spans an area of 13,530 square kilometers, constituting 7% of the province's total area. The decision to focus on this region stemmed from its unfavorable educational evaluation and the reports by Mayarjal Media highlighting its scarcities and underdevelopment. Collaborating with Mohammad Baluchi, a local journalist, and conducting interviews further solidified our choice of Nikshahr as the site for our project.

The capital of Nikshahr County is Nikshahr City, situated approximately 530 kilometers from Zahedan, the provincial center, and around 135 kilometers from the Oman Sea. At the 2016 census, the county's population was 141,894 in 37,207 households. The county is located at 60 degrees and 13 minutes east longitude and 26 degrees and 13 minutes north latitude, bordered by Iranshahr and Dalagan counties to the north, Qasr-e Qand county to the east, Fanouj county and Hormozgan province to the west, and Konarak and Chabahar counties to the south. Nikshahr county has three urban centers named Nikshahr, Espkeh, and Bent, and four districts named Central, Lashar, Bent, and Ahuran, as well as 11 rural districts and 395 villages. (General Census of

Population and Housing 2016)

Climate-wise, Nikshahr County has a warm climate, and its important rivers include Kajou, Tang-e Sarheh, Bent, Nikshahr-Darukan, and Maluran. It is considered one of the mountainous regions of the province, with the Ahuran Mountains being the most significant elevations. The people of this county are of Baluch descent, speak the Baluchi language, and adhere to Sunni Islam.

“Poor road conditions affect education quality, as teachers are reluctant to accept temporary positions due to difficulties in reaching remote villages.”

Bent

In Nikshahr, many areas lack essential infrastructure like energy, roads, railways, and water facilities. Bent, due to its distant location from the province’s center, faces severe shortages. Limited investment in infrastructure and ongoing population decline has made it hard for philanthropists and charities to notice this region. Most towns and villages in Bent rely on gravel roads, making it challenging for authorities and NGOs to provide necessities and for locals to access services.

The situation worsens in remote areas far from central cities. Subdistricts like Dastgerd and Tutan & Mohammadan in Bent suffer from inadequate transportation infrastructure, impacting various aspects like education.

“An elementary school is usually present in the area,” explained Mohammad Baluchi. “Most of them were constructed by UNICEF in 2001-2002 as part of a large-scale program to improve access to education in impoverished areas of Sistan & Baluchestan.” However, during my visit, I observed that while most villages now have newly constructed school buildings, the old ones are still in use due to insufficient educational space. Although some have

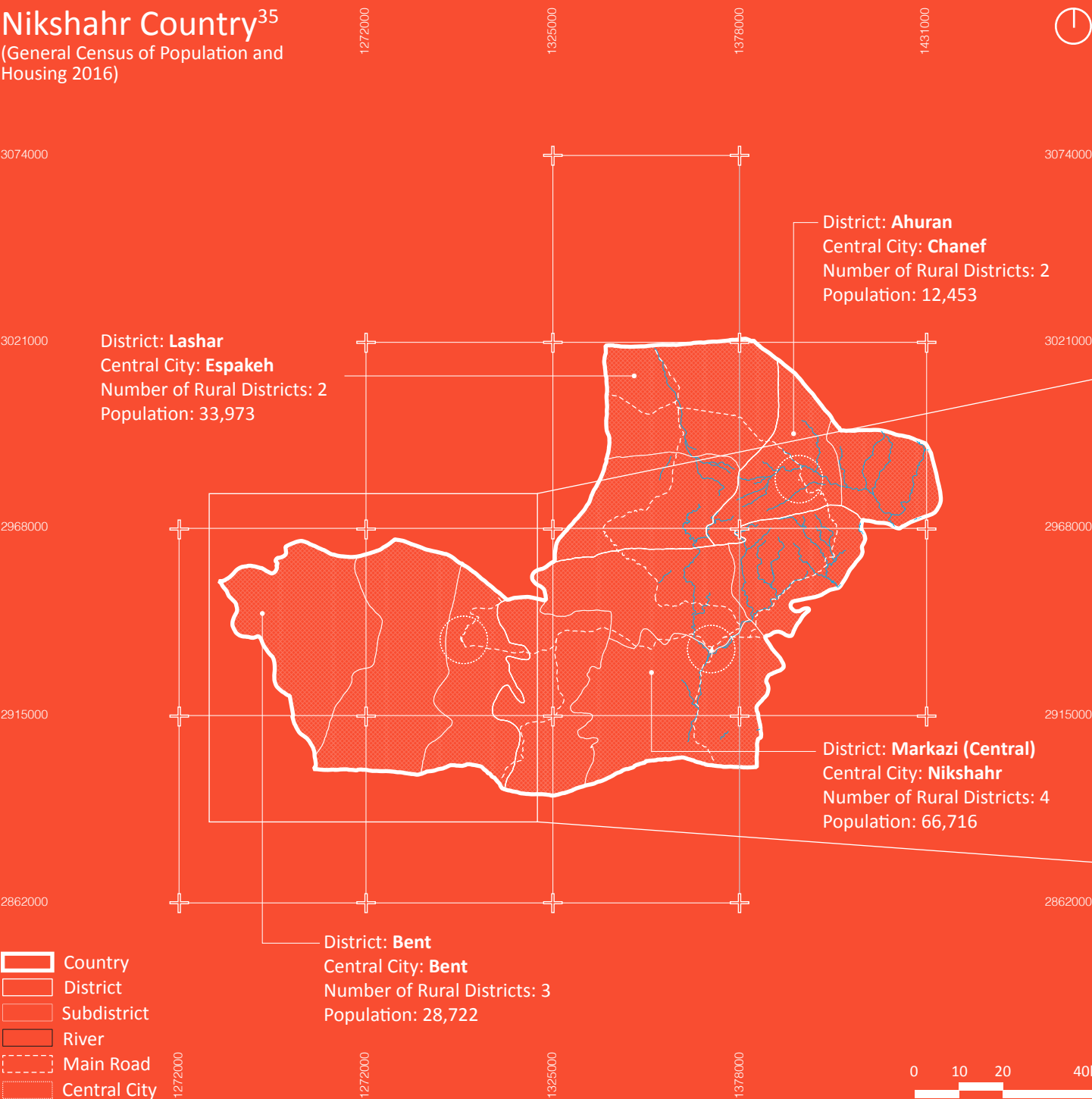
undergone minor renovations, they are still not in good condition, which may negatively impact a child’s education.

Despite the presence of elementary schools, the more significant issue lies in the lack of secondary school buildings. This problem compels parents to send their children to the nearest village with higher-level schools. Mohammad Baluchi emphasizes that the absence of secondary schools and poor mobility contribute to high dropout rates.

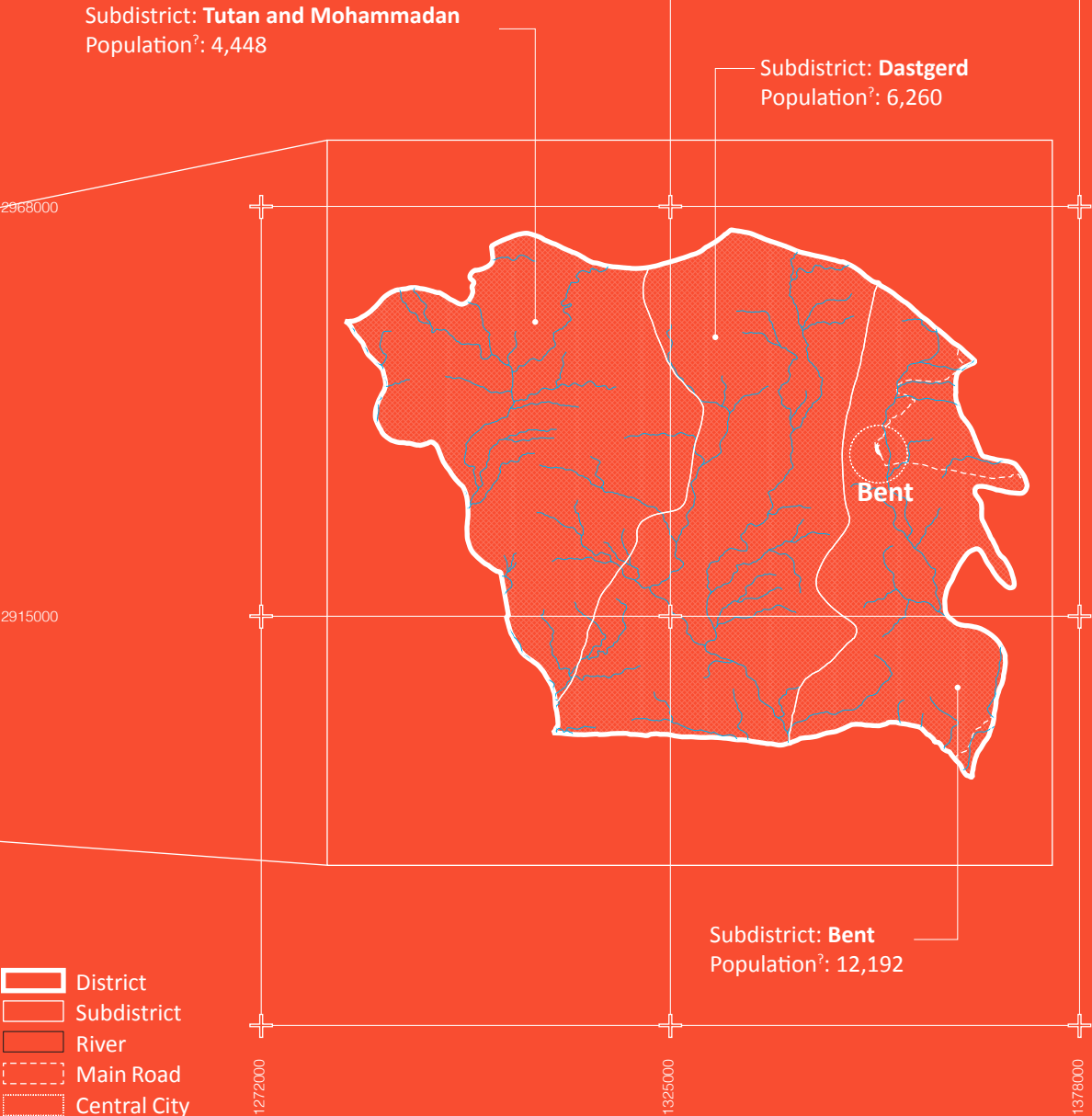
Moreover, poor road conditions affect education quality, as teachers are reluctant to accept temporary positions due to difficulties in reaching remote villages. The government’s practice of not officially hiring teachers worsens the situation. Mr. Baluchi explains, “The Ministry of Education doesn’t consider local teachers as official teachers. The teachers get hired on a daily contract basis under a service called ‘Service Purchase.’ Shortages of teaching staff and overcrowded classrooms are nationwide issues, affecting scarcity regions like Bent.

Nikshahr Country³⁵

(General Census of Population and Housing 2016)



Bent District³⁵
(General Census of Population and
Housing 2016)





“Children playground of Doushinkouh, Bent District, Nikshahr Country” Photo by the Author.

Moreover, Mr. Baluchi also highlights another significant issue that deeply engages young people: the absence of a playground, specifically a grass football field, which is the most common type. During his investigation into the scarcities of Bent District and his interviews with local communities, he encountered complaints about the lack of a suitable play area where the younger generation can enjoy themselves. He and the community believe that this problem has contributed to an increase in addiction

among youngsters.

Despite the presence of a football field that serves young people of various ages, there remains a lack of adequate outdoor spaces to complement indoor learning environments. Outdoor spaces play a crucial role in promoting holistic development, nurturing students’ physical, social, emotional, and cognitive growth.

Sefid Kooh Region (Nilag)

After extensive discussions and careful consideration with Mohammad Baluchi, we explored various aspects concerning social engagement, legal procedures, the demographic profile of school-age children, and educational needs. Our focus shifted to a specific area known as Sefid Kooh, or White Mountain, in the northern part of the Dastgerd subdistrict. Locally referred to as Nilag, derived from Nili, meaning Blue in Farsi, the name reflects the bluish hue of the stones in Sefid Kooh's hills. Notably, neither Sefid Kooh nor Nilag appear on online mapping services like Google Maps.

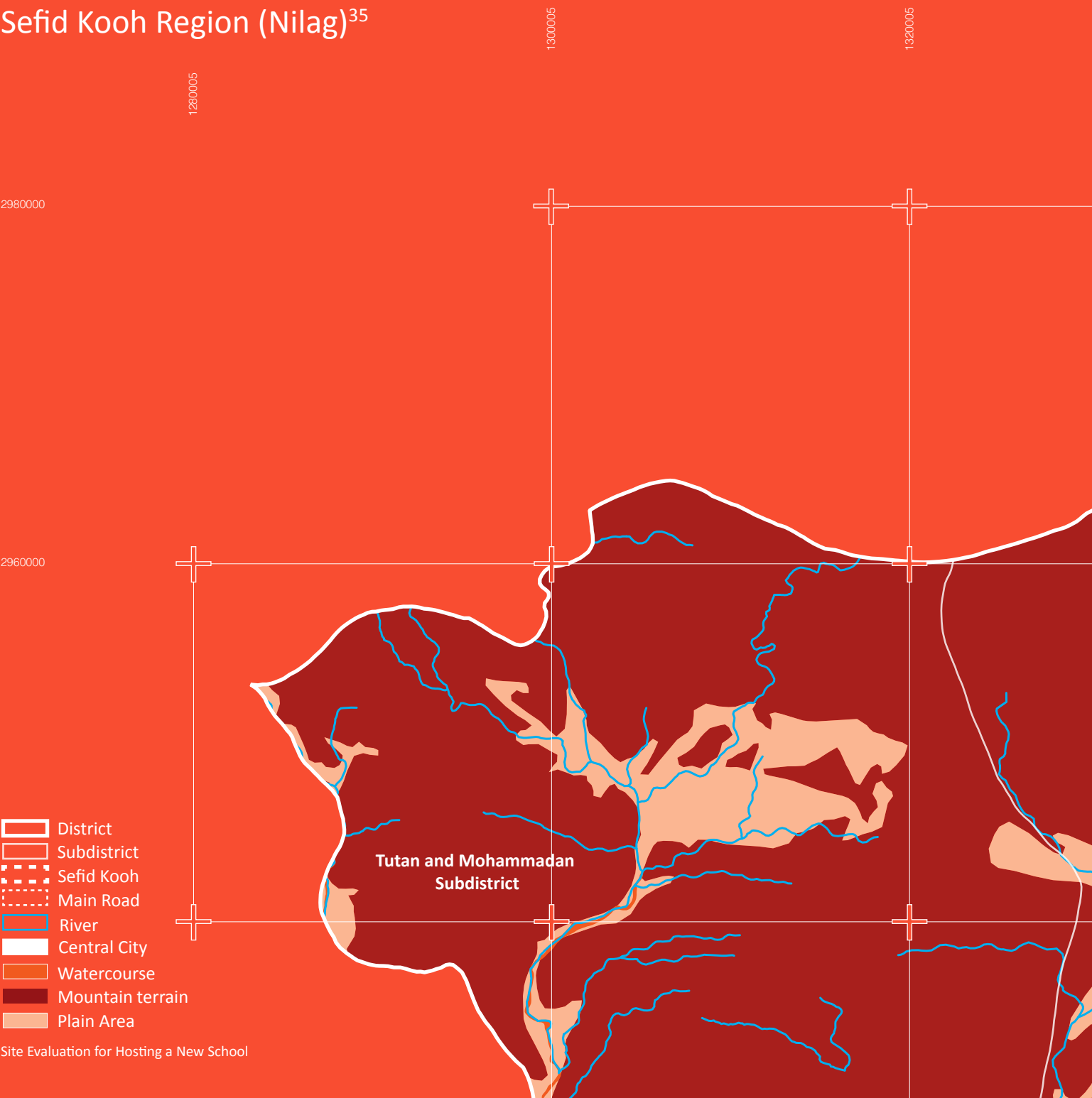
Sefid Kooh encompasses thirteen villages, each facing similar challenges of scarcity and limited accessibility, making them among the most challenging areas within the broader Bent district. The rugged terrain isolates these communities and complicates efforts to provide essential infrastructure and services, including electricity and digital connectivity. Initiatives aiming to improve living standards and educational opportunities face significant hurdles in reaching remote villages due to various obstacles.

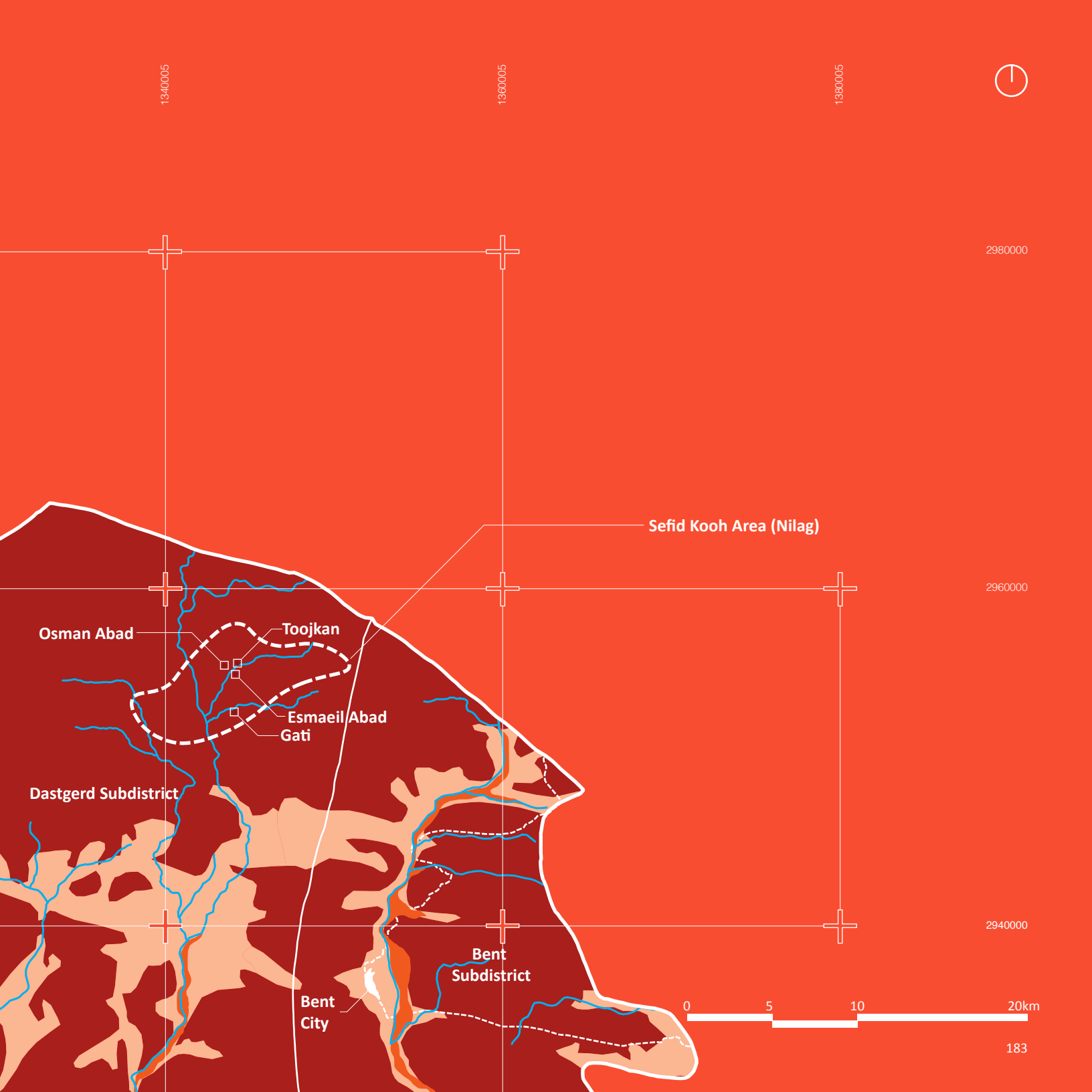
Furthermore, inadequate road infrastructure

necessitates transportation for students to reach schools in other areas. The lack of a reliable school transportation service, compounded by economic difficulties among local families, has contributed to an increase in school dropouts. Mohammad Baluchi underscores the necessity of a school bus service to attract students from surrounding villages. "The community is willing to support a school transportation service if an organization or authorities can provide a bus, insurance, a driver, and a schedule for picking up students from different villages. They recognize the importance of education for their children," he stated.

Therefore, charitable NGOs seeking to enroll students from these four villages must prioritize establishing a viable transportation system and seek financial or logistical support from the Ministry of Education or other stakeholders.

Sefid Kooh Region (Nilag)³⁵





1340005

1360005

1380005

2980000

2960000

2940000

Sefid Kooh Area (Nilag)

Osman Abad

Toojkan

Esmail Abad
Gati

Dastgerd Subdistrict

Bent
Subdistrict

Bent
City

0 5 10 20km

183

Focusing on the specific site, there are four villages within Sefid Kooh: Osman Abad, Toojkan, Esmaeil Abad, and Gati. As mentioned during the interview, Mr. Baluchi advocated for establishing an elementary school in Osman Abad, the central village in the area.

To obtain precise and reliable information about the area and the requirements for a school building, we needed a formal census from the Ministry of Education, which monitors the number of students and their educational needs. To achieve this, I asked Mr. Baluchi to contact the authorities for the necessary documents. Fortunately, he was able to liaise with the local administration of Nikshahr County to gather detailed information, particularly regarding the number of students, which is crucial for this thesis. Thanks to Mr. Baluchi's efforts, the administration reached out to us, formalizing a proposal for collaboration and providing essential information about the four villages.

This information includes the exact number of school-age children, their current educational facilities, and the specific needs of each village. Such detailed data is invaluable for planning and justifying the establishment of a new school building in Osman Abad. With this comprehensive understanding, we can better address the educational challenges faced by these communities and work towards practical

solutions that benefit the children and their families.

Authorities requested a six-classroom elementary school. However, after consulting with Mr. Baluchi, he expressed concerns about this plan. Given the current teacher shortage, Osman Abad may struggle to provide the necessary academic staff for a six-classroom school. Additionally, considering the limited educational spaces in remote regions like Sefid Kooh, a gender-separated school would not be ideal.

Mr. Baluchi suggests that a smaller, more flexible school structure might be more feasible and effective in meeting the community's needs under the present circumstances. This approach would make better use of available resources and accommodate both boys and girls together, ensuring that all children have access to education without unnecessary complications.

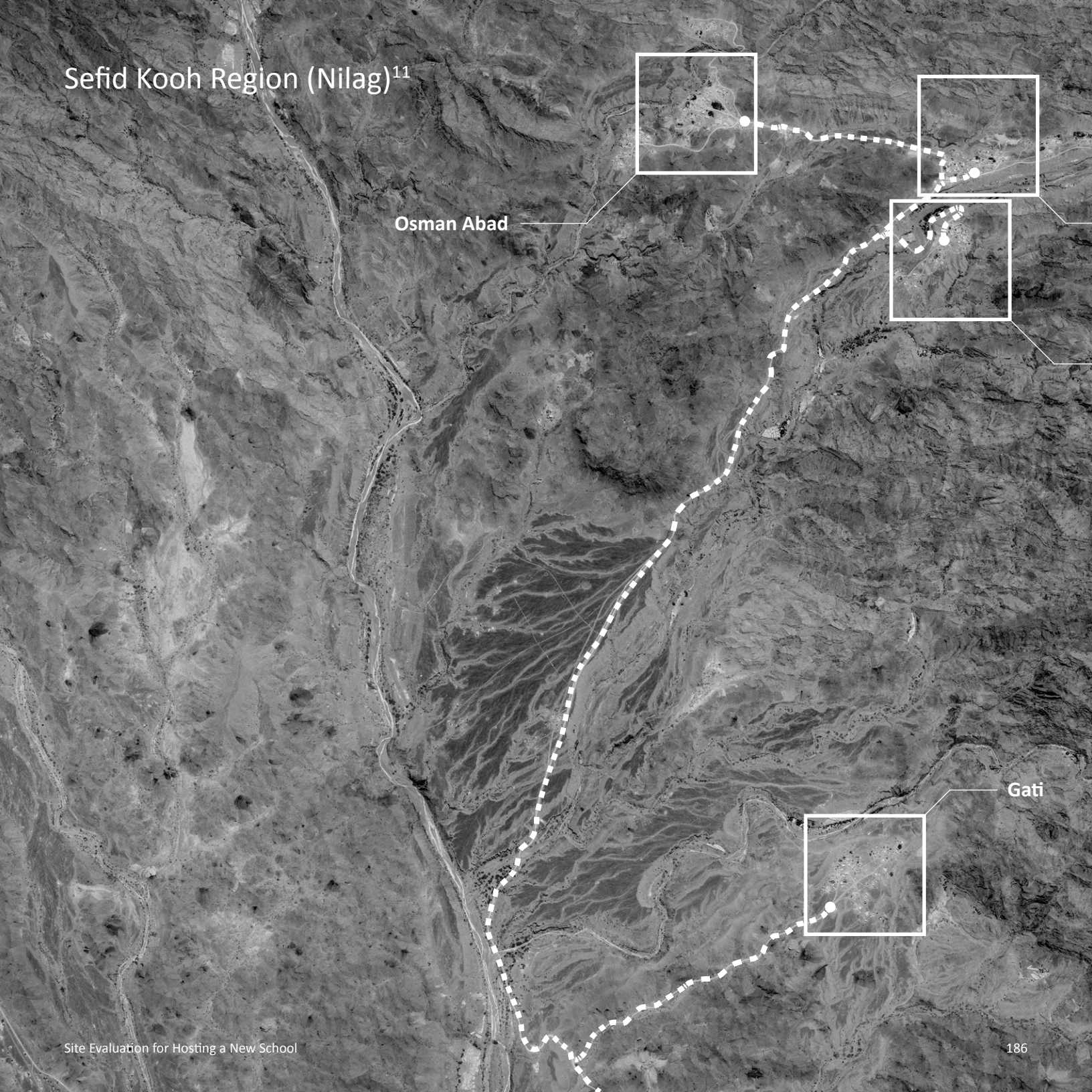
“Official Request from the Ministry of Education to Establish an Elementary School in Osman Abad” English Translation. Sent to the Author.

“Sustainable Growth and Development in Economic, Social, and Cultural Areas is contingent upon providing equal educational opportunities for all sectors of society, including deprived rural areas. Reaching this goal, the education system can create a conducive environment for maximum enrollment and continued education, particularly for female students, in these areas through the implementation of various initiatives and programs, including the construction of primary schools. This step would be a significant and effective stride towards the growth and prosperity of these regions. Recognizing that the development of educational spaces will minimize dropouts and maximize student coverage, universal education for all children will be equally facilitated, fostering interaction and enhancing the social life skills and cultural development of students in these regions. Given the importance of the issue and to mitigate deprivation, the establishment of a 6-classroom educational space with a capacity of 41 rural students centered in Osman Abad is proposed. This could cover three satellite villages: Toojkan, Gati, and Esmaeil Abad, which are mostly lacking suitable communication routes, to meet the educational needs of the region, which is of paramount importance.”

Sefid Kooh Region (Nilag)¹¹

Osman Abad

Gati



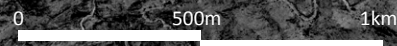


Toojkan

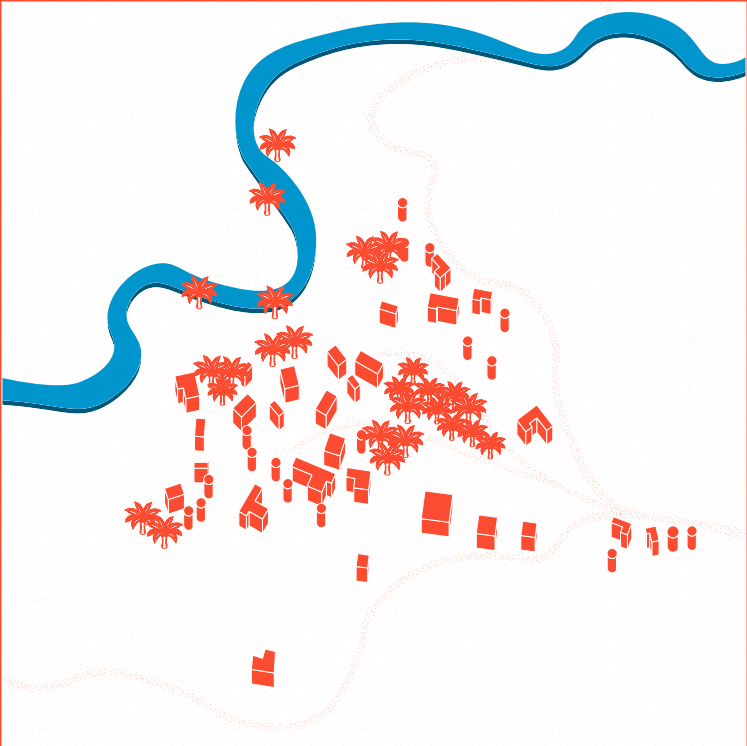
Esmaeil Abad

	Country	District	Subdistrict	Village	Number of Students	Distance (km) to the Site	Time distance (in minutes) to the Site	Accessibility Condition
1	Nikshahr	Bent	Dastgerd	Osman Abad	41	The Site		Gravel Road
2	Nikshahr	Bent	Dastgerd	Gati	39	10	25	Gravel Road
3	Nikshahr	Bent	Dastgerd	Toojkan	35	3	7	Gravel Road
4	Nikshahr	Bent	Dastgerd	Esmaeil Abad	15	8	15	Gravel Road
Total					130			

“Official Request from the Ministry of Education to Establish an Elementary School in Osman Abad” English Translation. Sent to the Author.



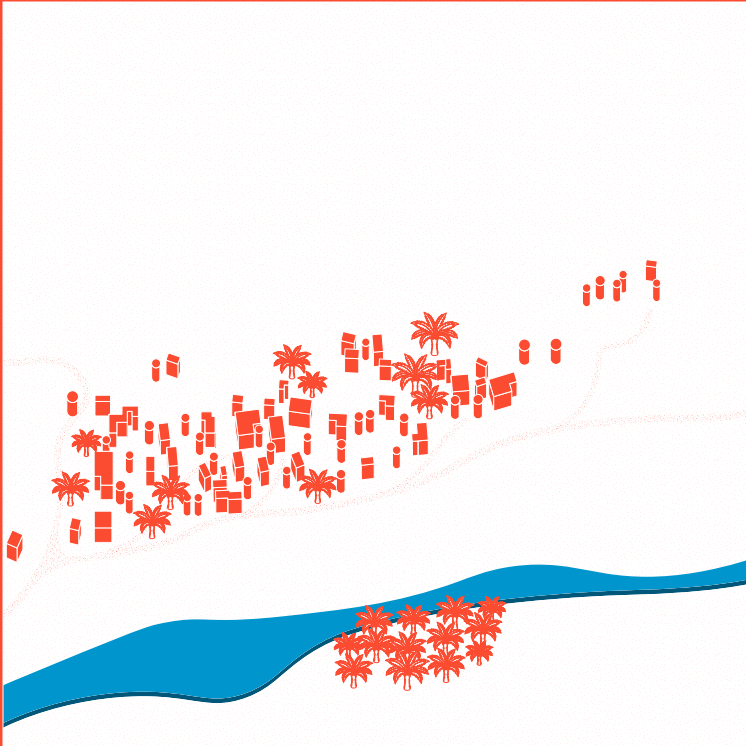
Sefid Kooh Region (Nilag)³⁵ - Target Villages



Osman Abad

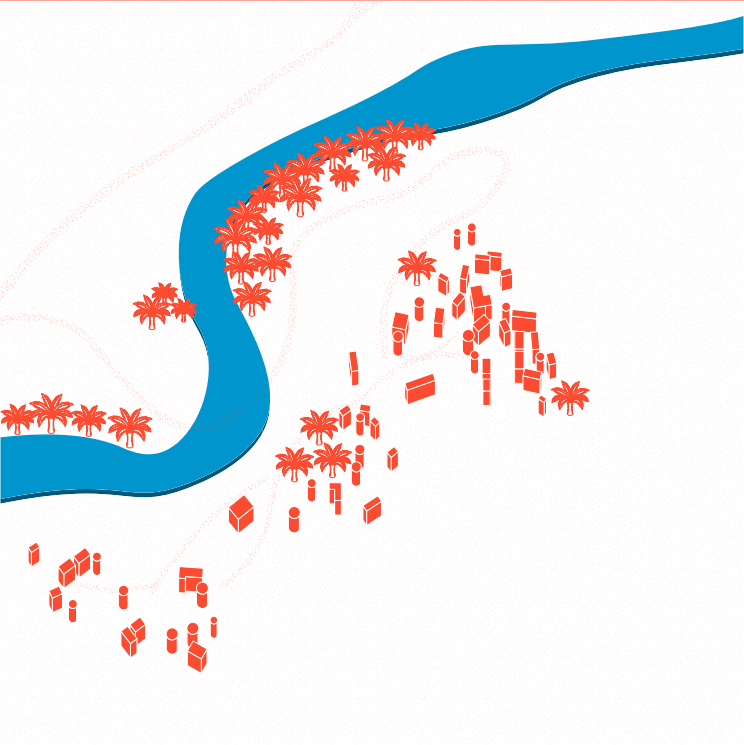
Number of Students: 41
Number of Families: 65-70
Population: 150-160

- Gravel Road
- Plain Area
- Watercouse
- Regular Buildings
- Kapar

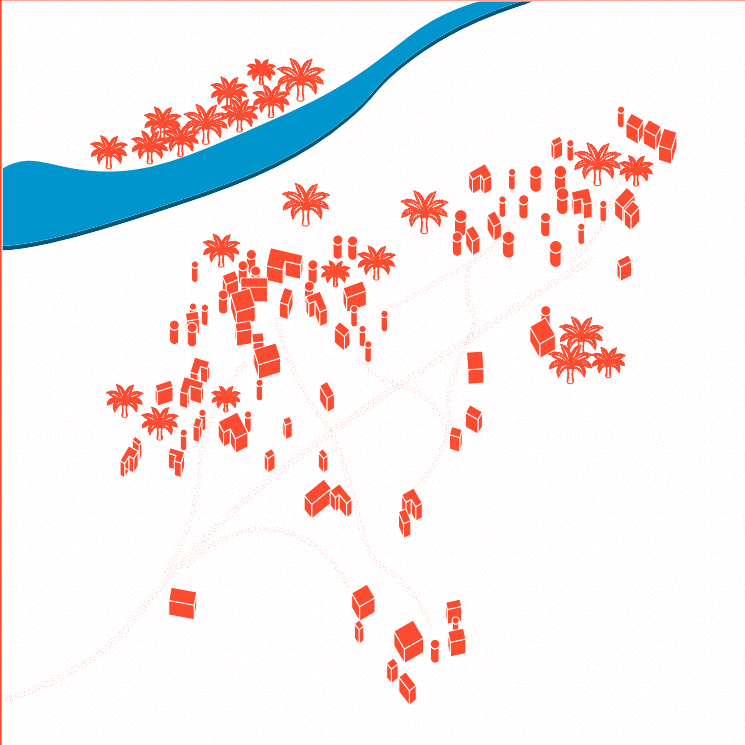


Toojkan

Number of Students: 35



Esmail Abad
Number of Students: 15



Gati
Number of Students: 39



Osman Abad

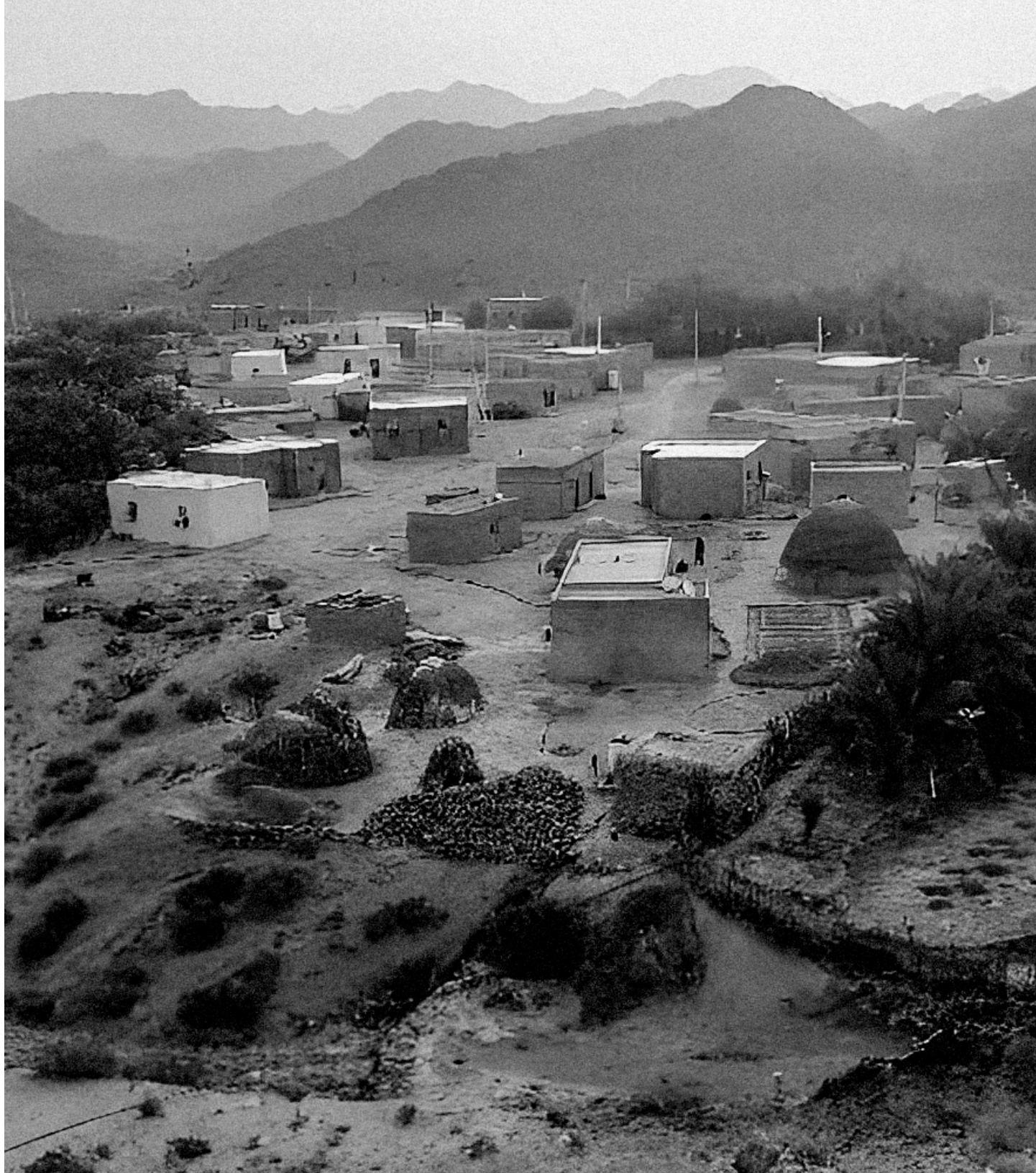
During an interview with Mohammad Baluchi on Mayarjal Media, Ahmad Baluchikheir, the headman of Osman Abad, reported that the village has 60 households with a total of 148 inhabitants. Most of the community lives in modern houses made of cement, brick, and concrete. However, a few households still live in traditional Kapar structures, which nowadays are mostly used for cooking or storage. Despite having a school, the only public building in Osman Abad is a mosque, which serves as the sole community center due to the strong influence of religion within the indigenous community. However, this mosque is primarily used by men, highlighting the need for a space where women can gather, socialize, and promote their roles within the local community.

Osman Abad has a three-classroom elementary school building. Mohammad Baluchi states, “The current elementary school was built between 2001 and 2002 as part of UNICEF’s plan to improve access to education.” Similar schools, varying in size based on the number of households, were constructed throughout Sefid Kooh. These schools follow a typical design, with an outdoor toilet and an indoor linear

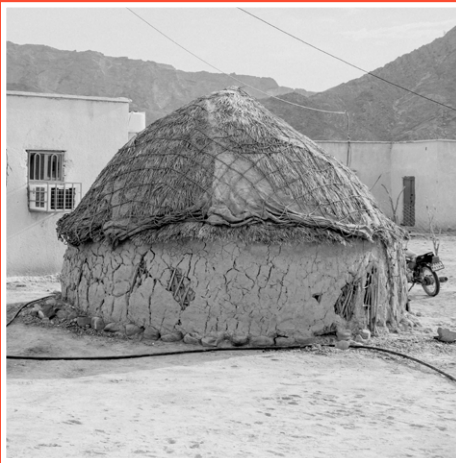
layout. Baluchi continues, “Due to the shortage of classrooms, teachers sometimes have to hold classes of 23 students in the teacher’s room, which is only 12 square meters.”

Moreover, after nearly twenty-one years, the UNICEF schools have not undergone any renovations or upgrades. Pictures sent by the village headman show severe rust in the structure and elements, water damage, mold on the walls, and lead paint. These problems affect daily teaching performance and, more importantly, pose serious health and safety risks. “We have to close the school due to even a small amount of rainfall; water leaks everywhere,” said Mohammad Baluchi. Due to the poor condition of the school building and its outdated structural elements, renovating it would be a more expensive and complex solution compared to constructing a new building. Additionally, because of the lack of educational space, even after a new school is established, the old building will still need to operate to help address the shortage of educational facilities.

“Osman Abad” Photo sent to the Author. May 20, 2023.

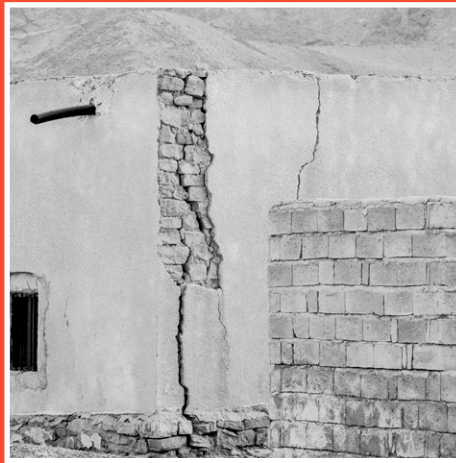


Osman Abad



Kapar

There are approximately 30 Kapars in Osman Abad but they are used for cooking or storage.



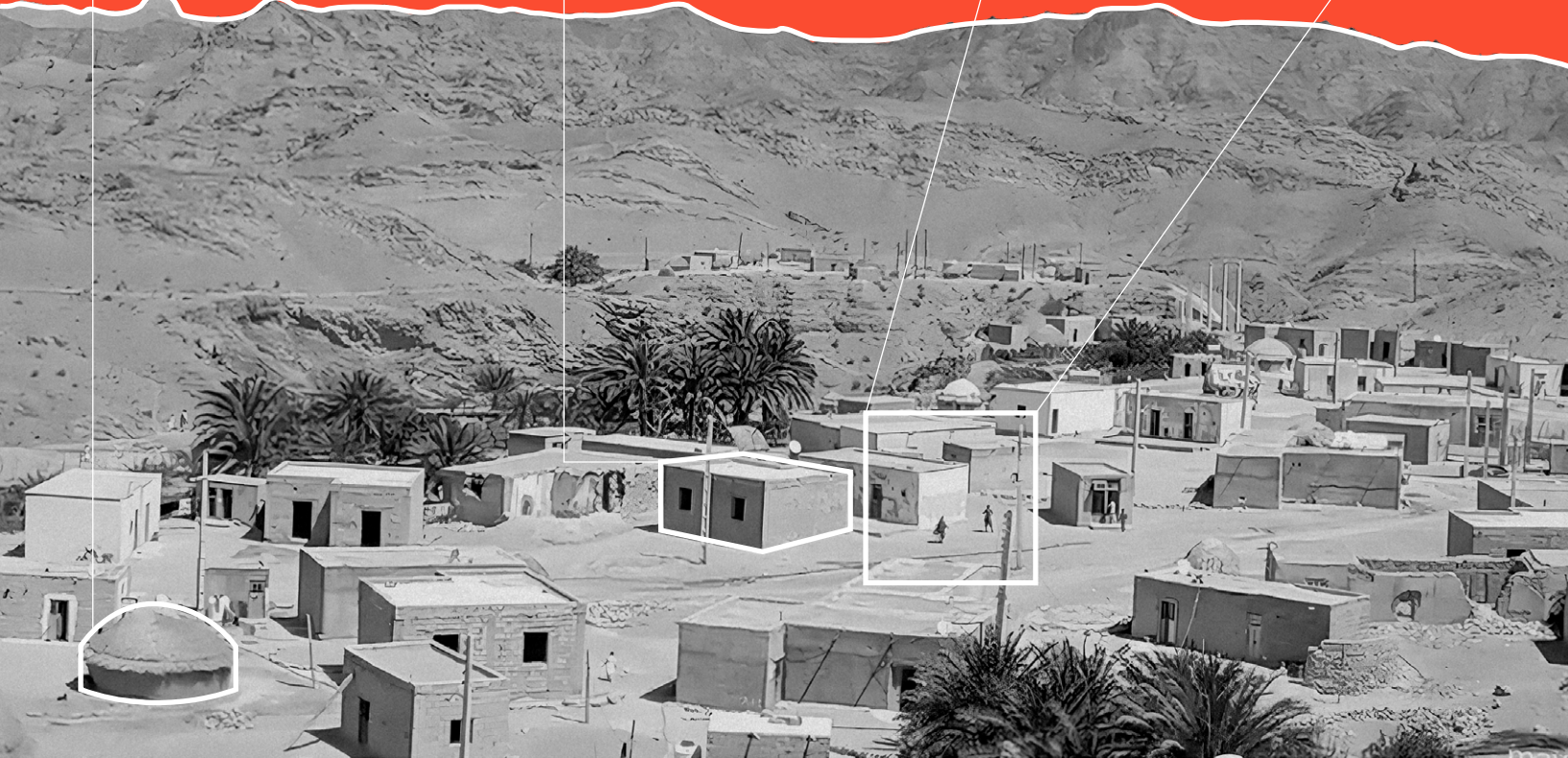
Construction Materials

Buildings in Osman Abad use load-bearing walls or Cast in situ RC frame structure, with walls typically made of concrete blocks or, in older structures, brick.



Random Playground

The children of Osman Abad do not have a proper playground. They play in random unpaved areas, which puts them at risk of health issues due to dust and potential physical injuries that can cause infections.



Elementary School Building



The Entrance Roof



Toilets



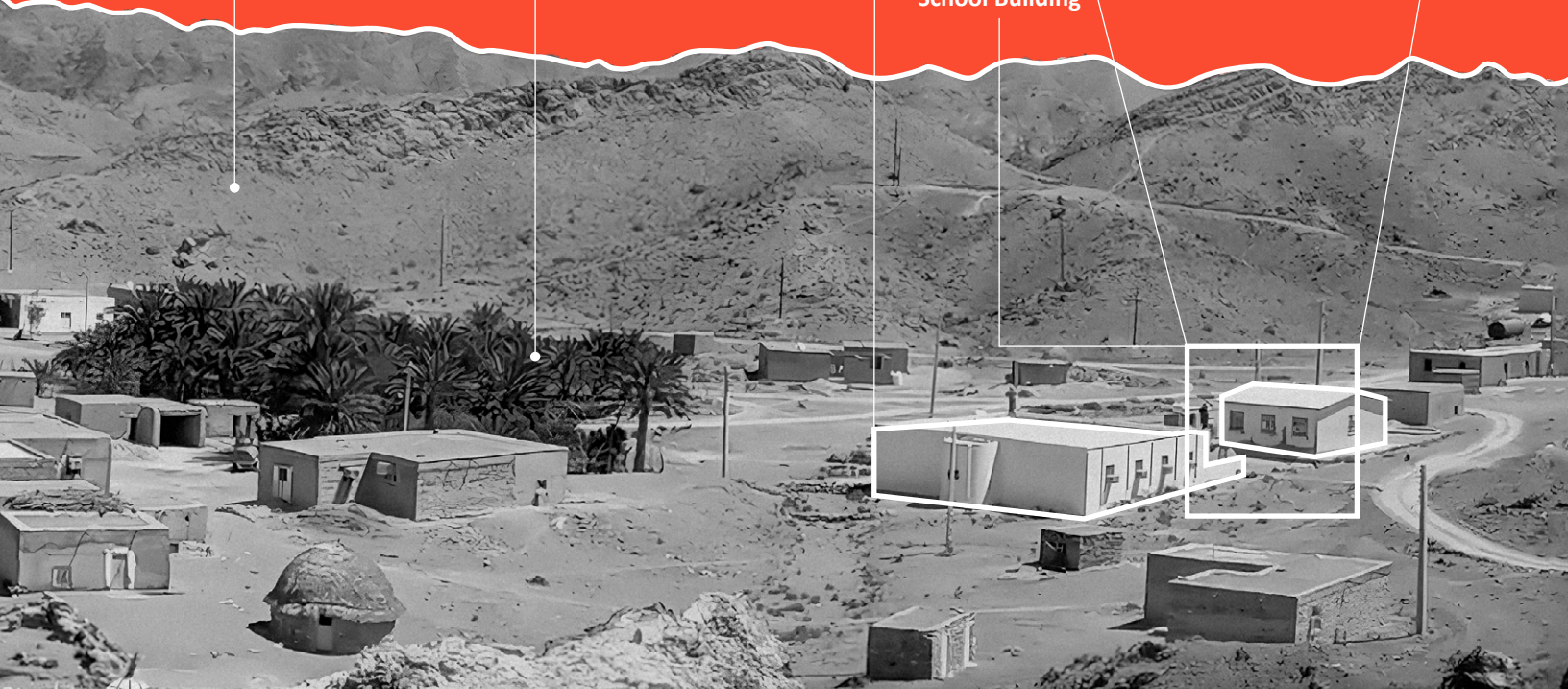
The Facade

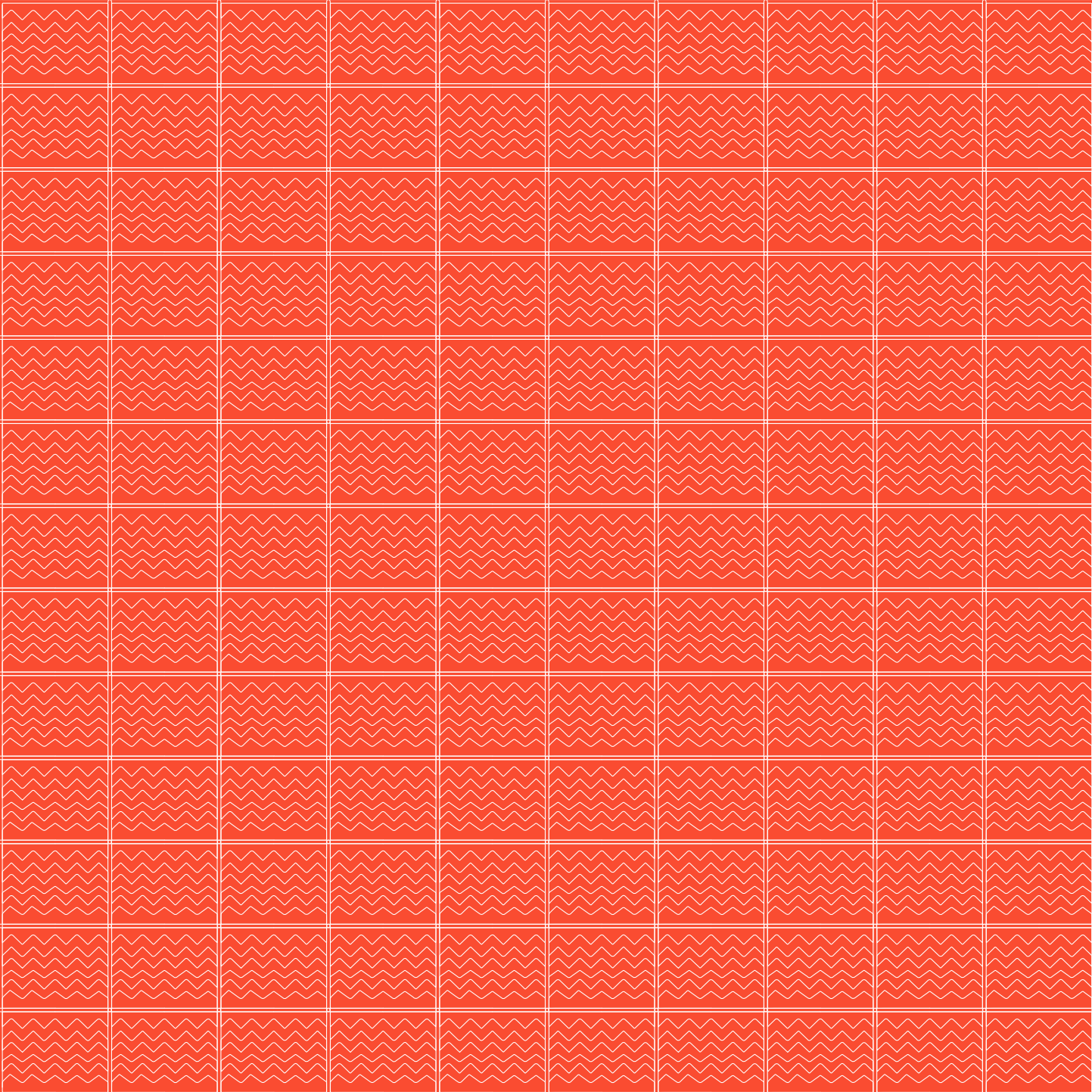
Nilag Hills

Maki Mosque of
Osman Abad

Palm Garden

Elementary
School Building





The Design Proposal

Fundamental Criteria	P. 199
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Outdoor Requirements	P. 202
Approach	P. 204

Requirements for a New School

Beyond its role as an educational facility, a school building in a remote, culturally sensitive, and underdeveloped region catalyzes community development. Engaging the local population in the construction process, leveraging their knowledge of materials and techniques, and fostering community involvement can strengthen societal bonds and provide valuable training opportunities for developers and community members.

However, designing and implementing an educational environment in such contexts presents unique challenges and constraints. For instance, poor infrastructure and difficult accessibility in remote areas pose significant hurdles for transporting materials to construction sites. Therefore, relying on local materials and craftsmanship techniques becomes imperative. This approach underscores the critical role of social engagement in rural projects.

Moreover, integrating innovative ideas to enhance user experience allows the school to serve as a prototype for future rural developments. It demonstrates how modern solutions could harmoniously blend with traditional practices to advance local construction standards. Although, achieving this vision requires careful consideration of several key aspects.

Firstly, the project must prioritize cost-efficiency, essential for facilitating implementation,

fundraising efforts, and enabling Indigenous communities to replicate similar initiatives. Secondly, emphasizing modularity in school design ensures an understandable construction process and guarantees scalability for future expansions. This flexibility is particularly crucial for the new school in Osman Abad, accommodating students from four villages, necessitating future expansion within the same complex without structural damage or excessive costs.

Functional flexibility is also paramount. Beyond its pedagogical purpose, the school can adapt to serve the local community during extended summer hours typical in remote regions. For instance, in contexts such as Sistan and Baluchestan, where cultural norms often restrict women's engagement outside the home, the school could function as a hub for promoting women's activities and local craftsmanship through workshops. Additionally, in scenarios where fluctuating student enrollments affect school operations, the building could pivot to accommodate alternative uses such as healthcare facilities, workshops, or ecotourism residences.

Addressing the shortage of teachers in the region requires adaptable classroom configurations. For example, designing classrooms that can merge with outdoor areas creates larger learning environments, allowing educators to manage larger groups of

students during periods of insufficient academic staff. These measures ensure that the school not only meets immediate educational needs but also serves as a versatile community asset supporting a variety of local initiatives.

Lastly, in remote regions with limited access to skilled labor, it is crucial to implement strategies and designs that require minimal maintenance. Thoughtful passive strategies can significantly reduce reliance on technological devices. This is especially relevant in places like Sistan and Baluchestan, where power outages are common during hot daytime hours when schools are in session. The school must ensure user comfort while minimizing dependency on air conditioning.

Furthermore, maintenance considerations extend beyond power-dependent devices to include building elements such as learning tools, furniture, shading devices, and more. Therefore, ensuring the durability of these elements is essential to reduce long-term maintenance costs and enhance the overall sustainability of the building.

“This thesis project proposes a school building with four flexible rooms to create a more practical solution.”

Fundamental Criteria

The Organization for Renovation, Development, and Equipment of Schools, operating under the Ministry of Education, sets the standards for new school buildings. Their latest directive, Regulations Number 697, provides comprehensive guidelines for designing school facilities. These standards are mandatory for all elementary and secondary schools in both urban and rural regions.

According to Regulations No. 697, schools are classified into two grades: grade one and grade two. Grade one pertains to schools located in cities with a population of over 500,000, while grade two includes cities with a population of less than 500,000. Schools with less than six classes are considered rural schools and have specific requirements for indoor and outdoor areas, which are listed in the accompanying tables 1 and 2. (Pir Jalili 2016)

As a result, a new elementary school for Osman Abad would be a grade two rural school building that must accommodate 130 students from neighboring villages. Despite the request from the Ministry of Education for a six-classroom school on the ultimate site, after assessing the conditions, including the significant teacher shortage, and consulting with

Mohammad Baluchi, a three-classroom school was deemed more feasible and realistic. However, this decision would lead to additional challenges.

Given the total number of students accessing the new school, a three-classroom school would have to host approximately 44 students per classroom, causing overcrowded conditions and violating Regulations No. 697, which states a maximum of 30 students per classroom. To compromise, this thesis project proposes a school building with four flexible rooms to create a more practical solution. Flexibility means that these rooms are not specifically defined as classrooms but provide the minimum space proportions to support educational activities. Administrators could use four classrooms with 30 students each or merge two classrooms in case of a teacher shortage.

Outdoor Requirements		One Classroom		Two Classroom		Three Classroom
Total Open Area	Play Area	25,2	106,2	50,4	140,4	75,6
	Sport Field	72		72		72
	Greenery	9		18		27
Plot Surface		223,94		323,93		423,87
Floor Area Ratio		12,44		9		7
Notes		1- For one-classroom schools, a minimum of two toilet stalls each for girls and boys is required. 2- One, two, and three classroom schools should have a wall-hung boiler installed in the kitchen. 3- In the absence of a multifunctional hall in one, two, and three classroom schools, it is necessary to have a multifunctional hall. 4- For four, five, and six classroom schools, a circulation area of 25% of the GFA is recommended. 5- Each student is allocated an estimated green space of 0.5 square meters. 6- The covered area for 1, 2, 3, and 4-classroom schools is equivalent to the total GFA. In the case of 5 and 6-classroom schools, the covered area should be 25% of the total GFA.				

Classroom		Four Classroom		Five Classroom		Six Classroom	
	174,6	100,8	208,8	126	140,4	151,2	140,4
		72		72		72	
		36		45		54	
424,84		323,93		598,22		691,87	
7,86		9		6,64		6,4	

h for heating purposes. If the boiler is floor-mounted, a separate room within the kitchen should be allocated for it.

ary to allocate 35% of the Gross Floor Area (GFA) for circulation space. This space can be utilized during exam sessions or ceremonies.

d. A multifunctional hall can serve various purposes such as praying, ceremonies, and exam sessions.

se of 5 and 6-classroom schools, it is estimated as 50% of the total GFA due to the consideration of a two-story building.

Approach

The requirements table provided by the Organization for Renovation, Development, and Equipment of Schools outlines the minimum spaces necessary for a functional school building. However, these requirements, which are already insufficient to fully meet the educational needs of students, are often disregarded even in remote regions.

During my visits to elementary and secondary schools in remote areas of Sistan & Baluchestan, I have observed that certain regulations are frequently ignored or overlooked during the construction of new schools. This disregard is primarily driven by the urgent demand for additional educational spaces, leading to schools being hastily built on limited budgets. Consequently, charitable NGOs and philanthropists operating in these regions may not strictly adhere to all regulatory standards.

While this approach has resulted in quicker construction and increased availability of learning environments, it has also limited educational opportunities such as access to multi-purpose halls, workshops, and libraries. As a result, students' educational experiences are primarily confined to classrooms. This limitation poses an additional

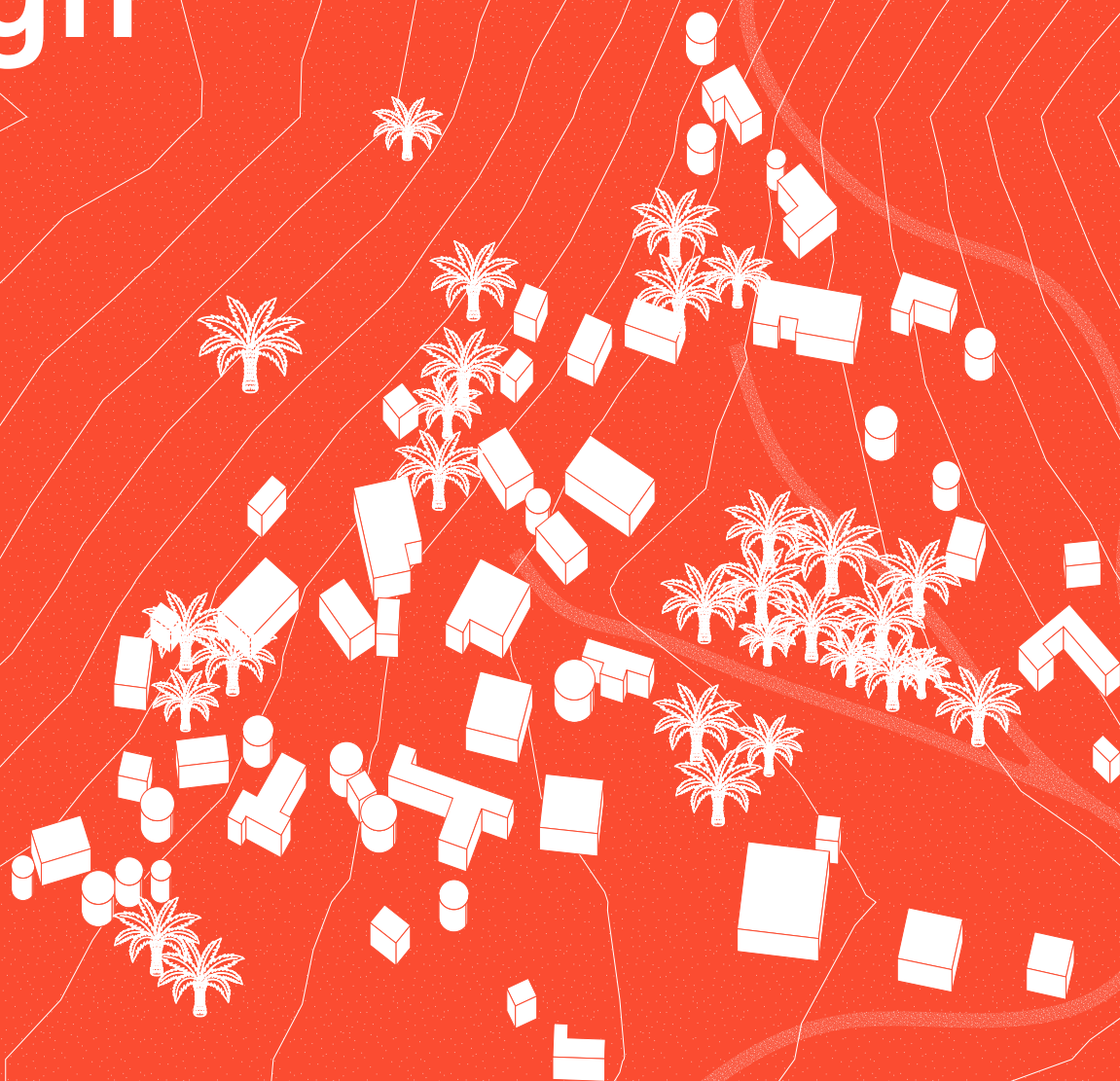
challenge in addressing the high dropout rates in the region, as students often lack essential educational tools beyond basic classroom settings like blackboards and chairs.

In the design proposal for Osman Abad, we aimed to revolutionize traditional pedagogical methods by redefining the boundaries of a conventional classroom and offering alternative spaces for versatile use. Additional areas have been integrated to bolster educational initiatives and create an environment that prioritizes security, functionality, and flexibility. The design adopts a cost-effective strategy, focusing on optimizing the layout and structure of typical school buildings. This approach simplifies planning and construction processes, enhancing speed and efficiency within budgetary and labor constraints.

“One-classroom school in Kahnaykesh, Dashtyari Country” Photo by the Author.



Design



The New School's Site



The New School

We host the school!
We are Osman Abadi!

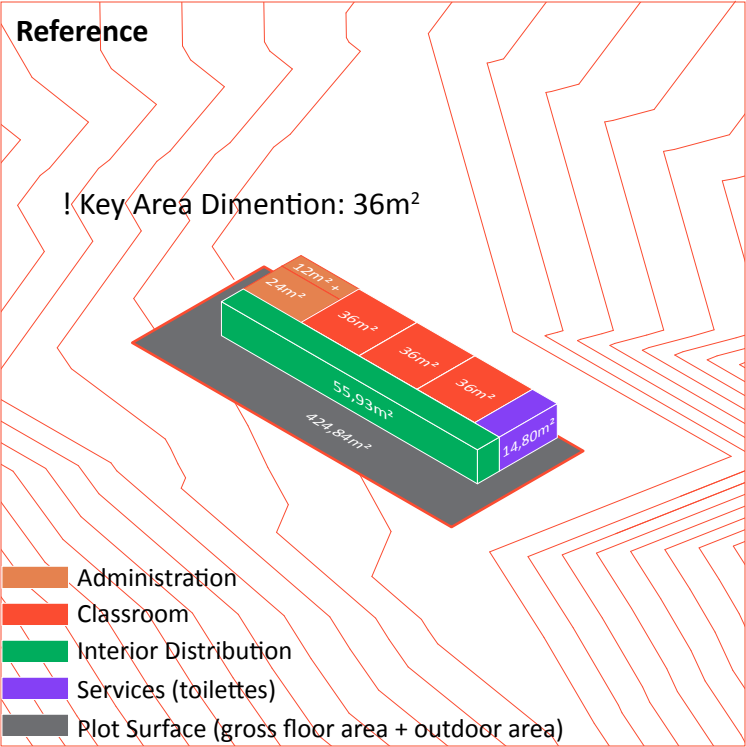
We are the students
from Toojkan!

We represent Gati!

We are coming from
Esmaeil Abad!

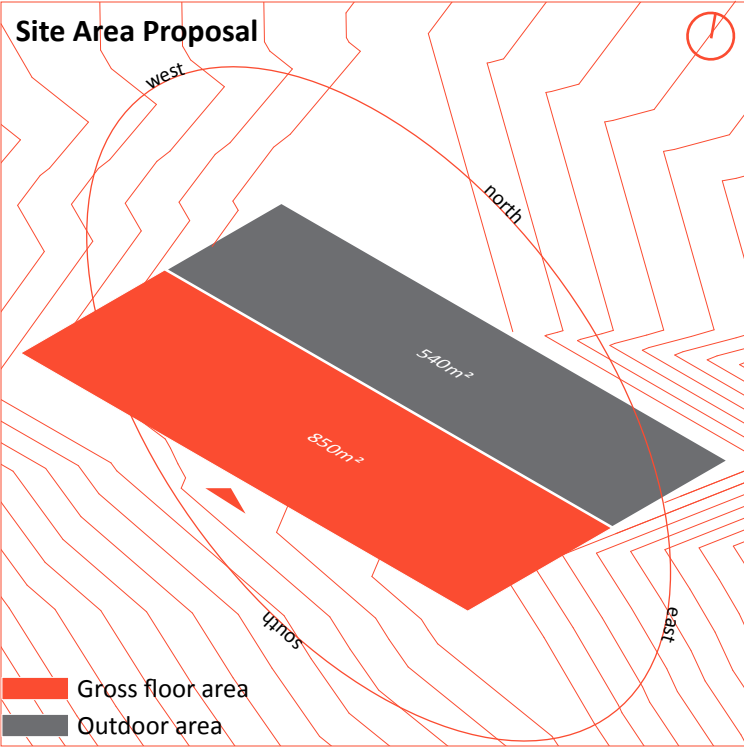


Concept Diagram - Design Process 1-4



Typical Three-classroom School Typology

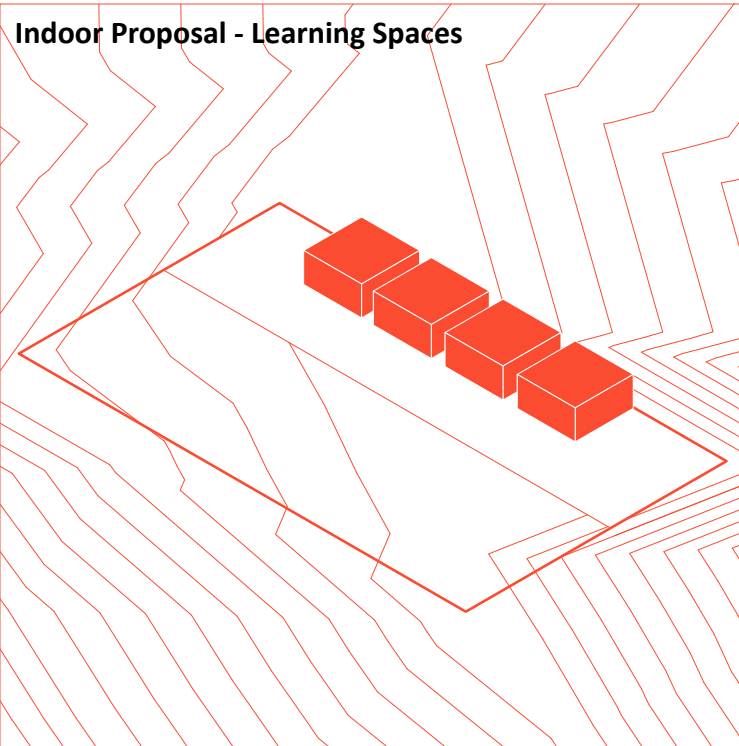
The spaces and their areas are determined according to Regulations No. 697 issued by the Ministry of Education.



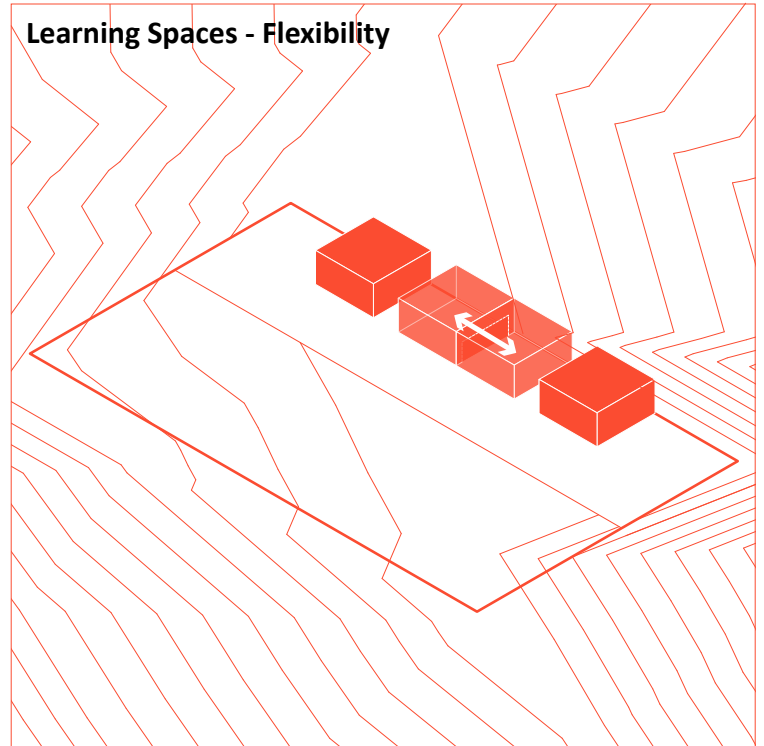
Gross Floor and Outdoor Area

The site is oriented to maximize natural lighting during school hours.

Indoor Proposal - Learning Spaces



Learning Spaces - Flexibility



Definition of Spaces

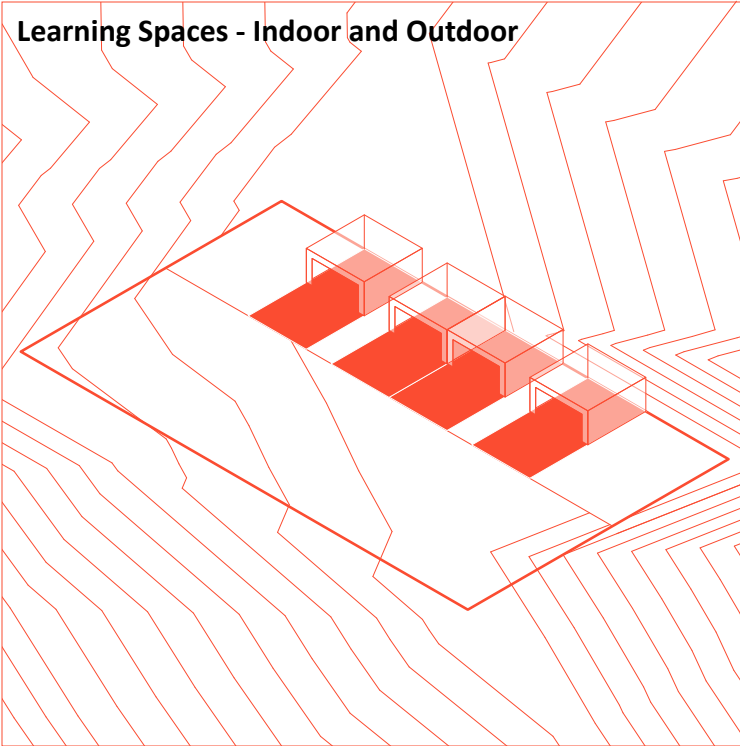
The design uses the 36 square meter requirement as a key dimension, proposing four equal indoor spaces that can be utilized according to user needs.

Multi-purpose hall

Although a multi-purpose hall is not required for a three-classroom school, a simple strategy of mergeable learning spaces can create a versatile hall for exams or an additional classroom in case of teacher shortages.

Concept Diagram - Design Process 4-8

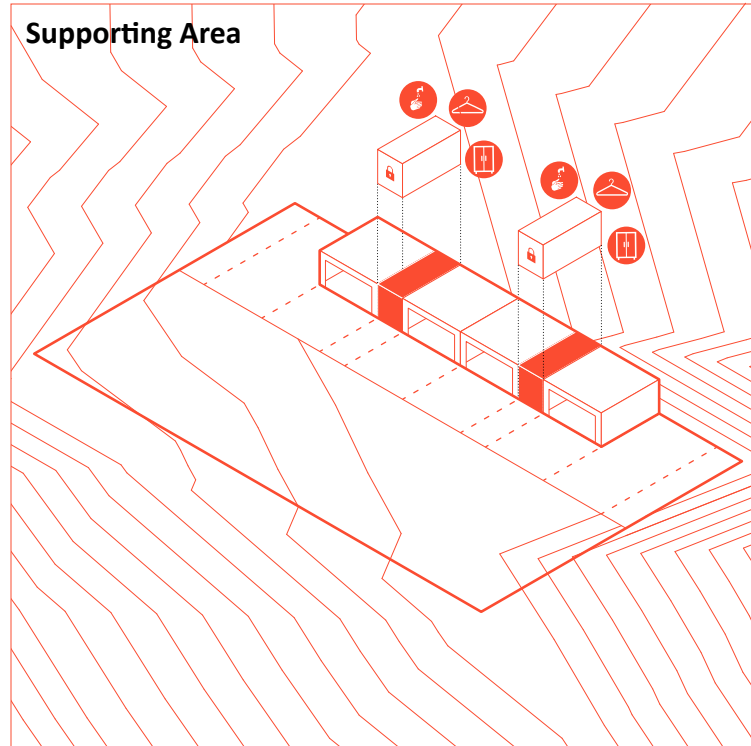
Learning Spaces - Indoor and Outdoor



Redefining Classroom Boundry

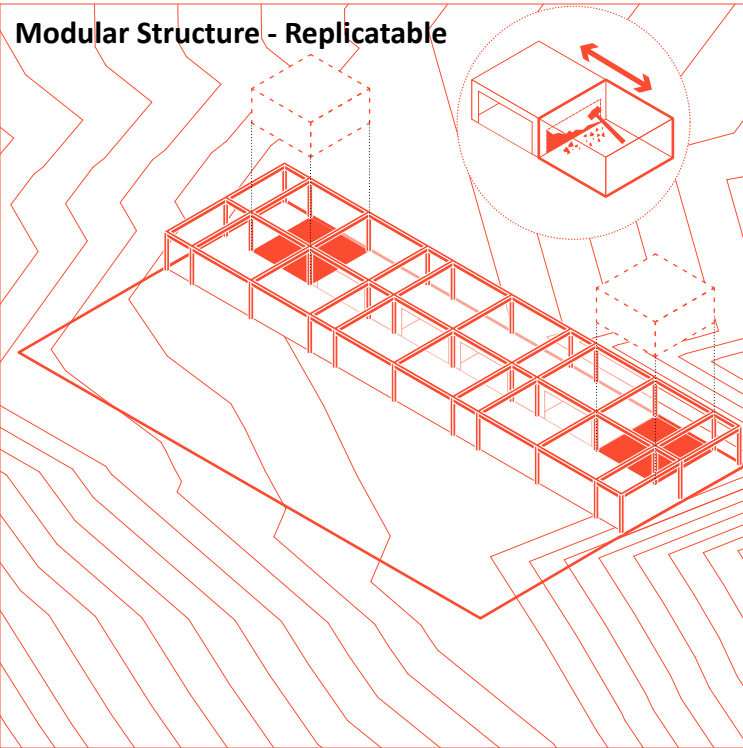
Classrooms extend beyond their interior spaces, seamlessly connecting with the outdoors to foster a harmonious indoor-outdoor learning environment.

Supporting Area



Security and Functionality

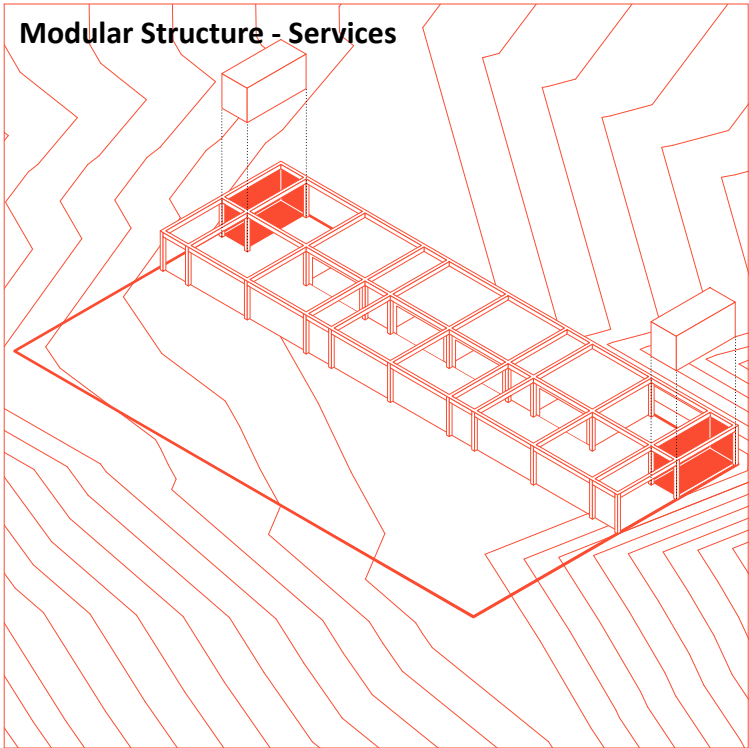
Each learning space includes access to an area equipped with lockers for students to store their belongings at the end of the day. Additionally, this area features a sink for handwashing, particularly useful after workshops.



Modular Structure - Replicable

Future Expansion

The modular structure allows for the school building to expand by adding two additional classrooms in the designated empty spaces.

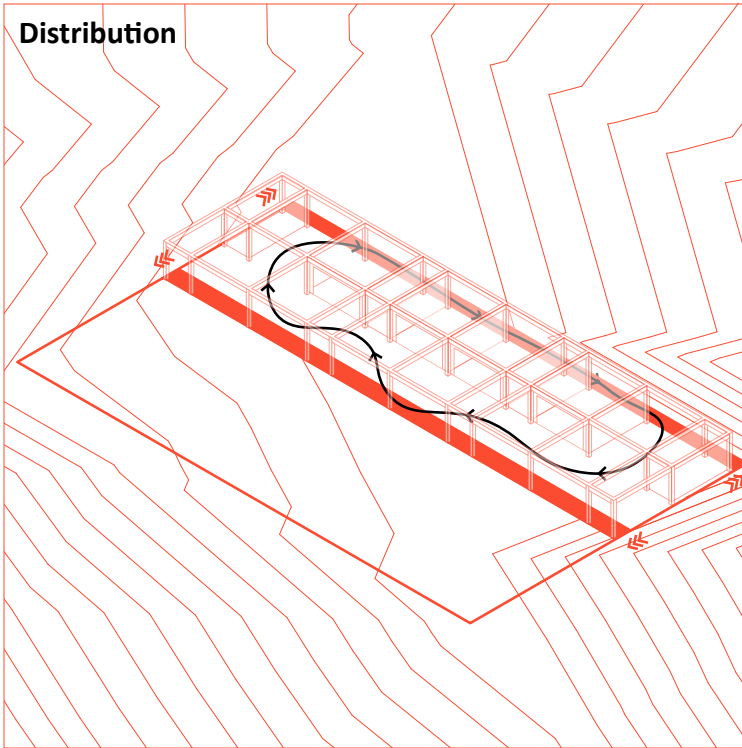


Modular Structure - Services

Providing Additional Services within the Module

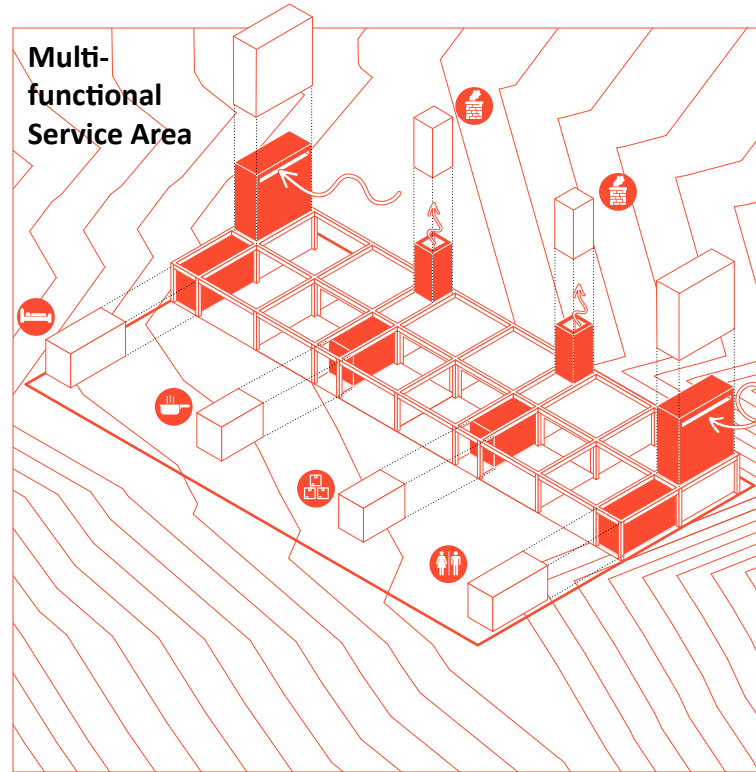
Culturally, toilets are separated from the main house or building to enhance sanitation and minimize unpleasant odors.

Concept Diagram - Design Process 8-12



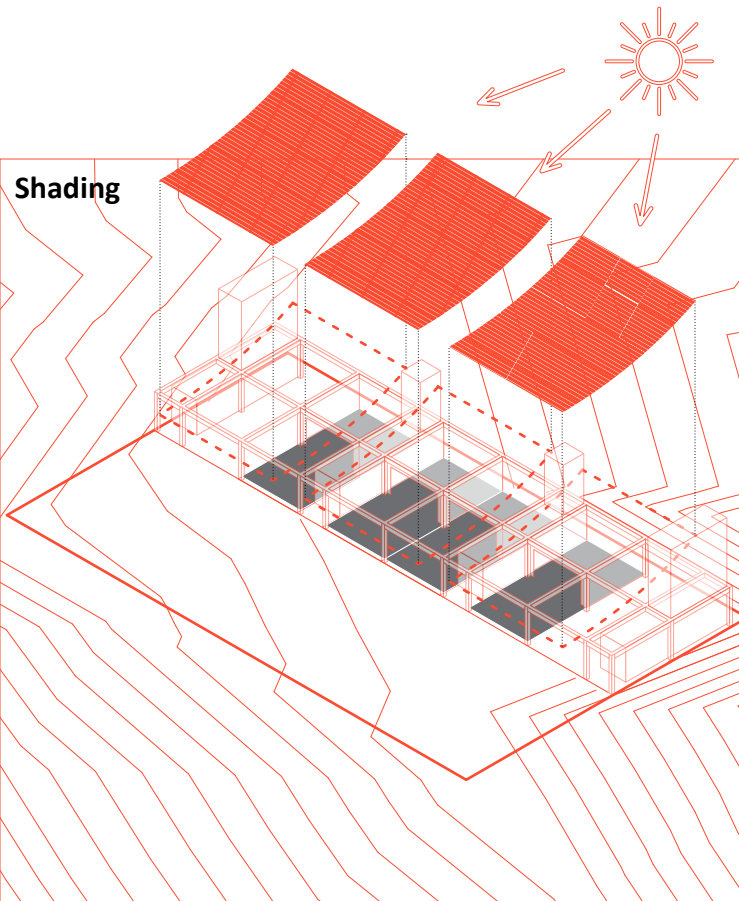
Improving the Circulation

Additional spaces have been incorporated to facilitate distribution, improving accessibility and movement throughout the building.



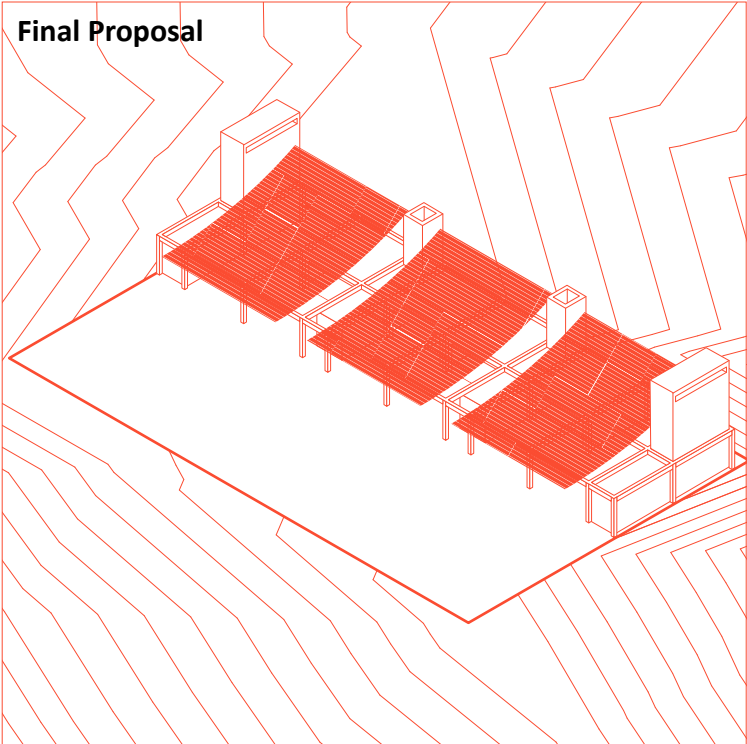
Passive Strategies and More

The additional spaces in the supporting and service area serve multiple functions, benefiting from the modular structure while also acting as passive strategies and useful spaces for students.



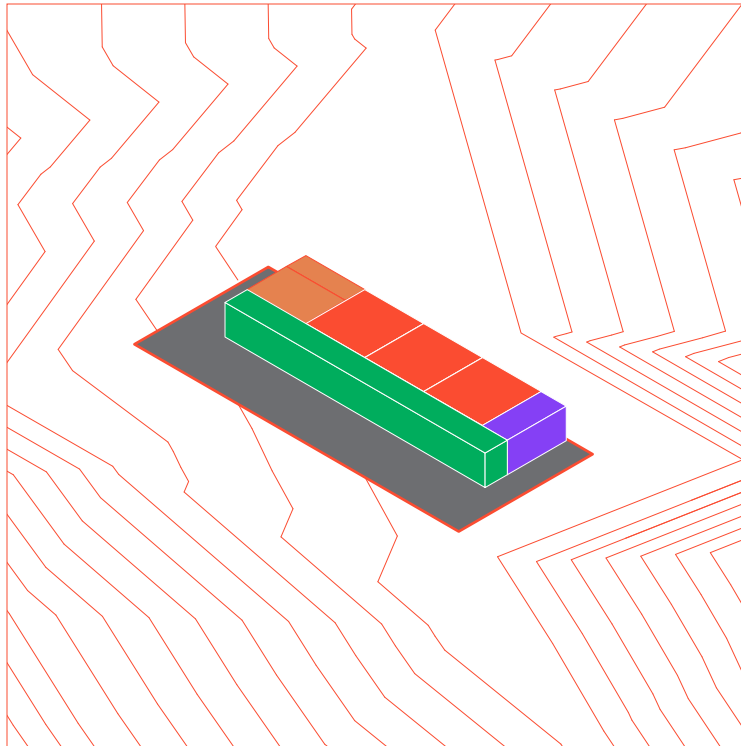
Protecting Learning Spaces

Taking inspiration from local handiwork known as Hasir, the learning spaces are shielded from direct sunlight. This not only enhances thermal comfort for indoor and outdoor learning activities but also contributes to the vernacular architecture.



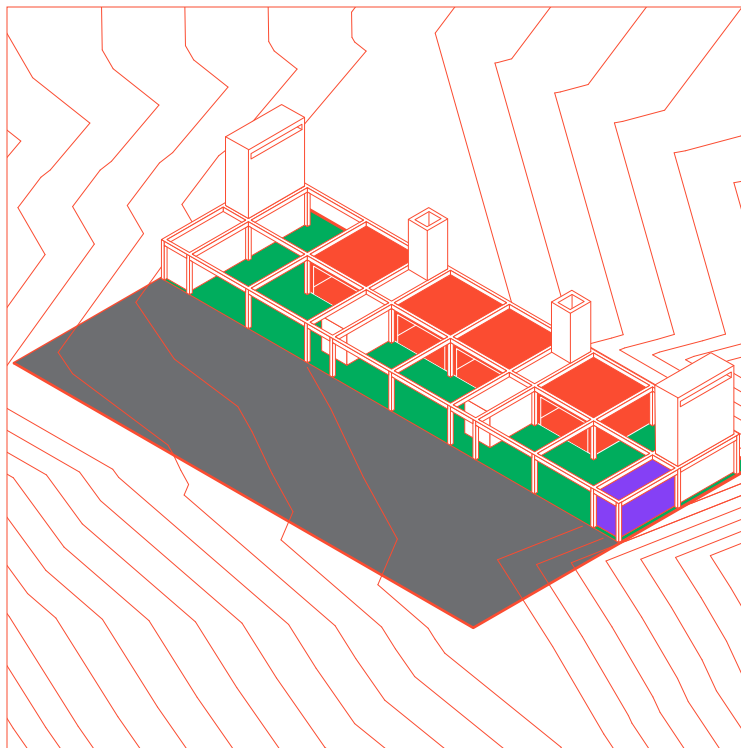
The New School

Spatial Distribution - A Comparison



Typical Charity Built School

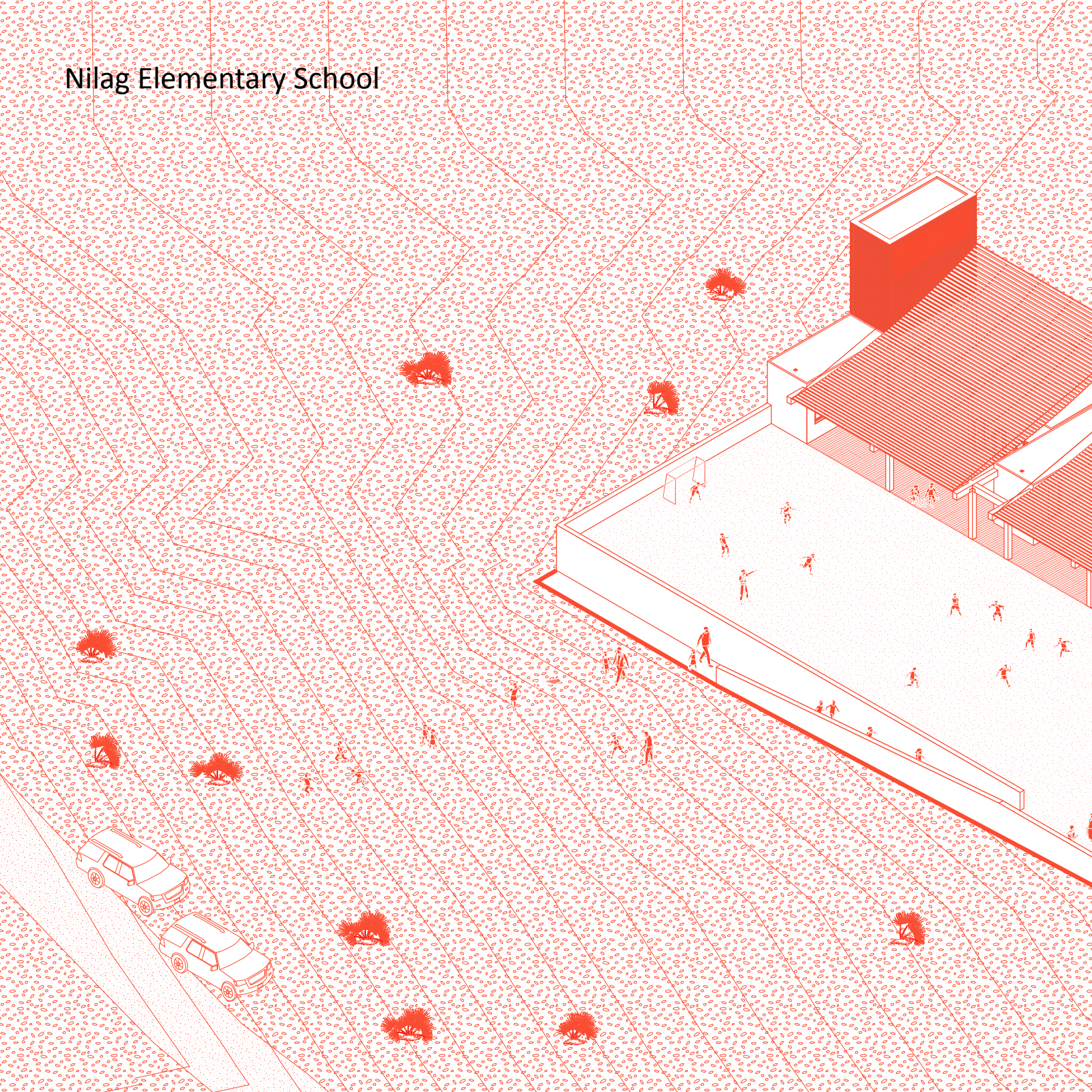
- Administration
- Classroom
- Indoor Distribution
- Services (toilettes)
- Plot Surface (gross floor area + outdoor area)

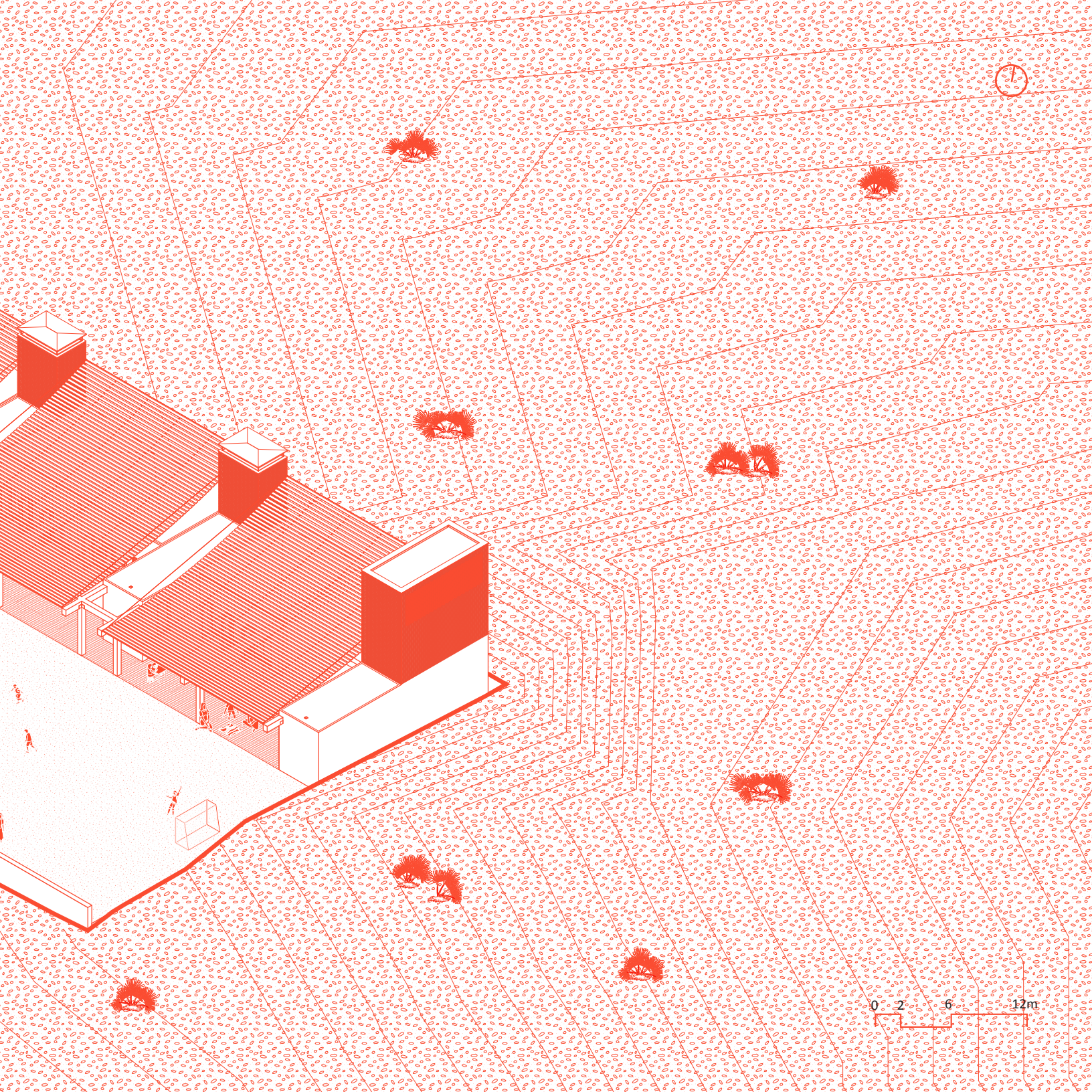


The New School

- Classroom/Administration
- Outdoor Distribution
- Services (toilettes)
- Playground

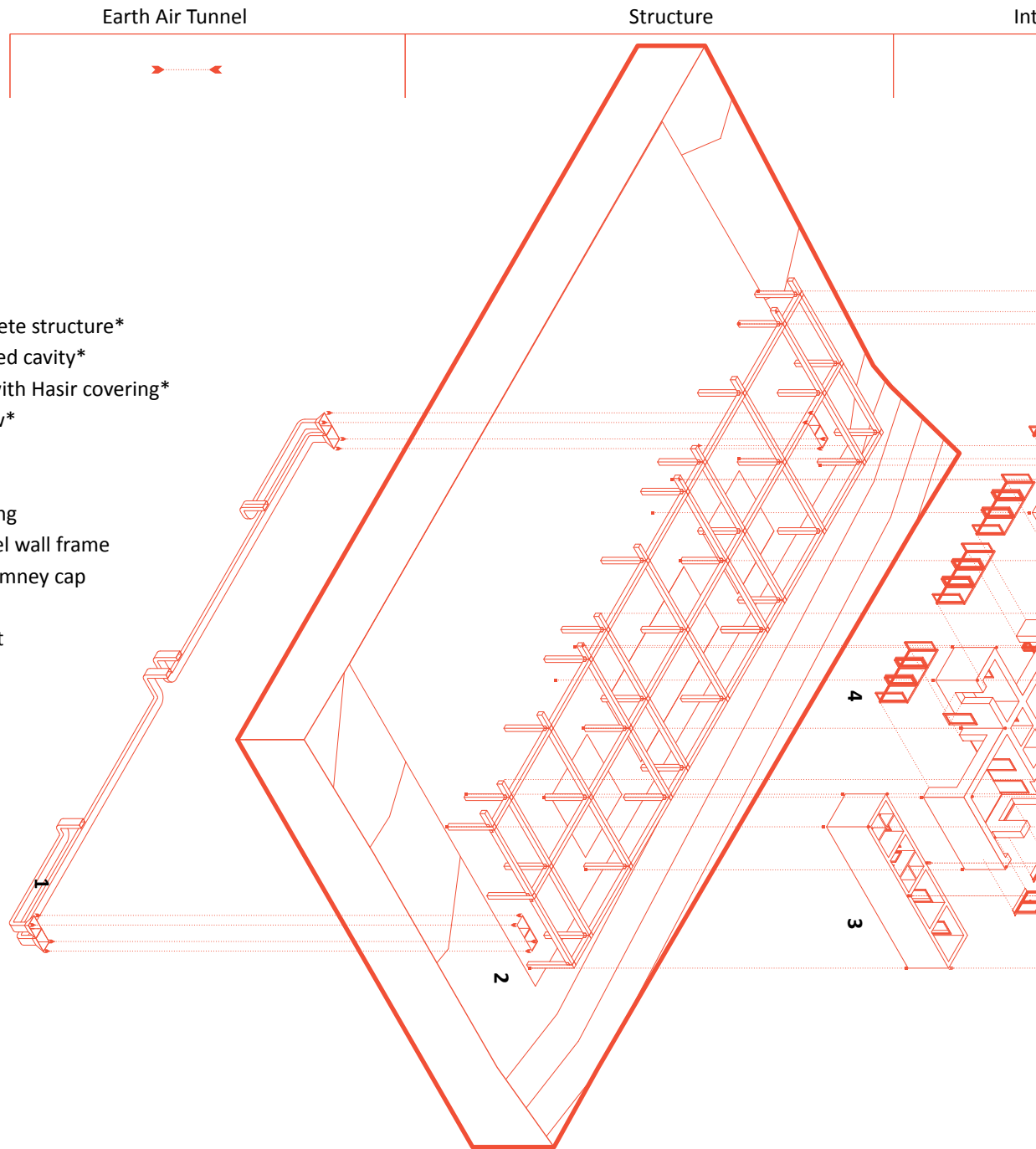
Nilag Elementary School





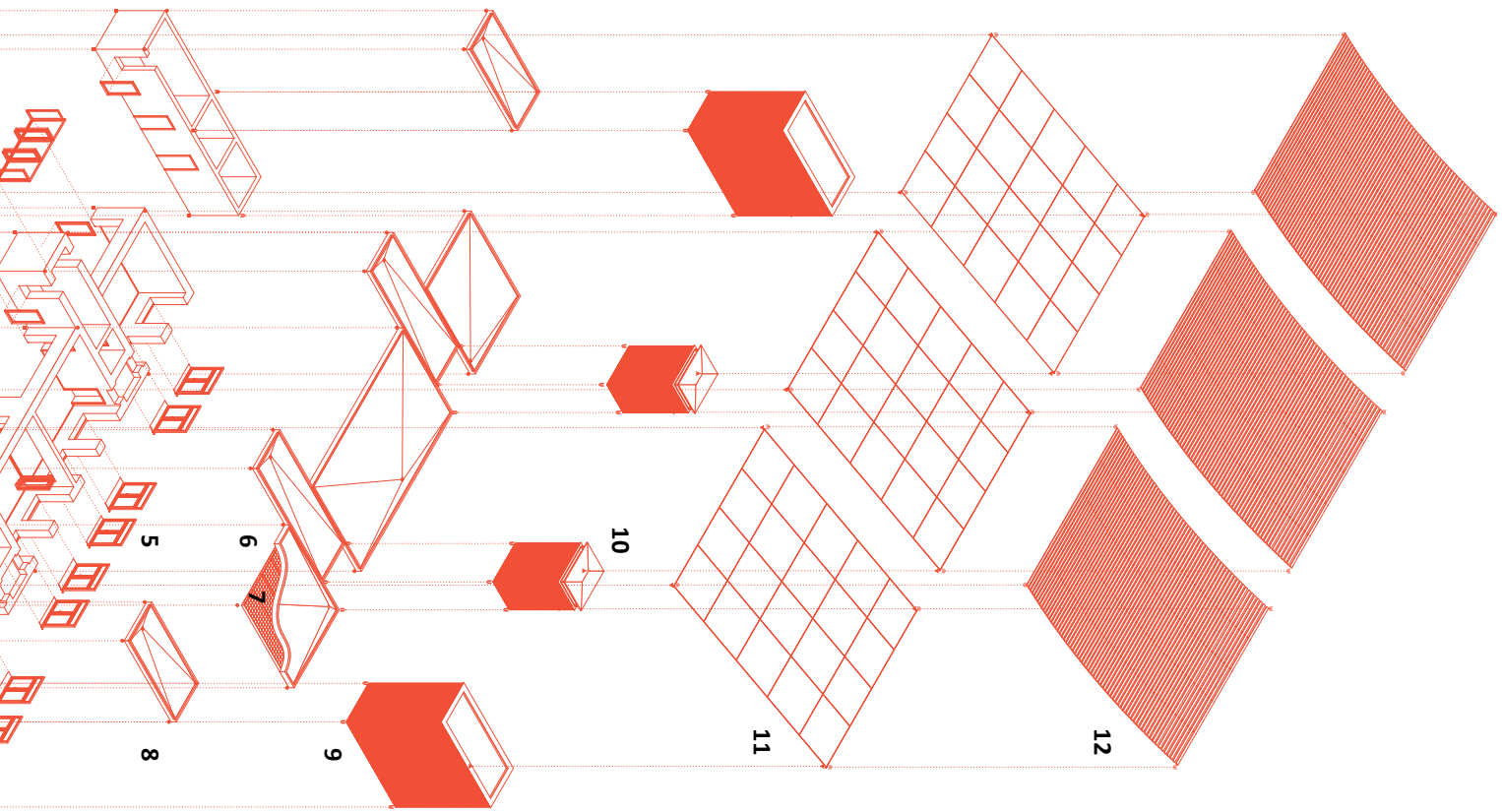
Building Components

1. Aluminum duct
2. Prefabricated concrete structure*
3. Brick wall with a filled cavity*
4. Metal frame door with Hasir covering*
5. Steel Frame window*
6. Hollow core slab*
7. Steel mesh*
8. Cement/clay covering
9. Brick walls with steel wall frame
10. Galvanized steel chimney cap
11. Steel cable
12. Wooden woven mat

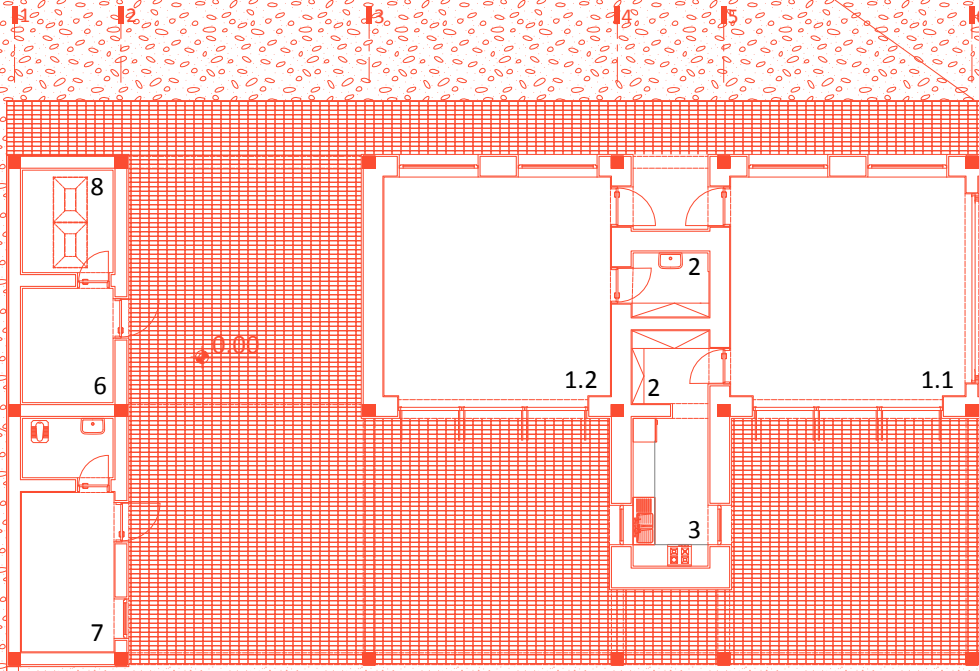


* To be modified in the chapter 4 (The Design Review).

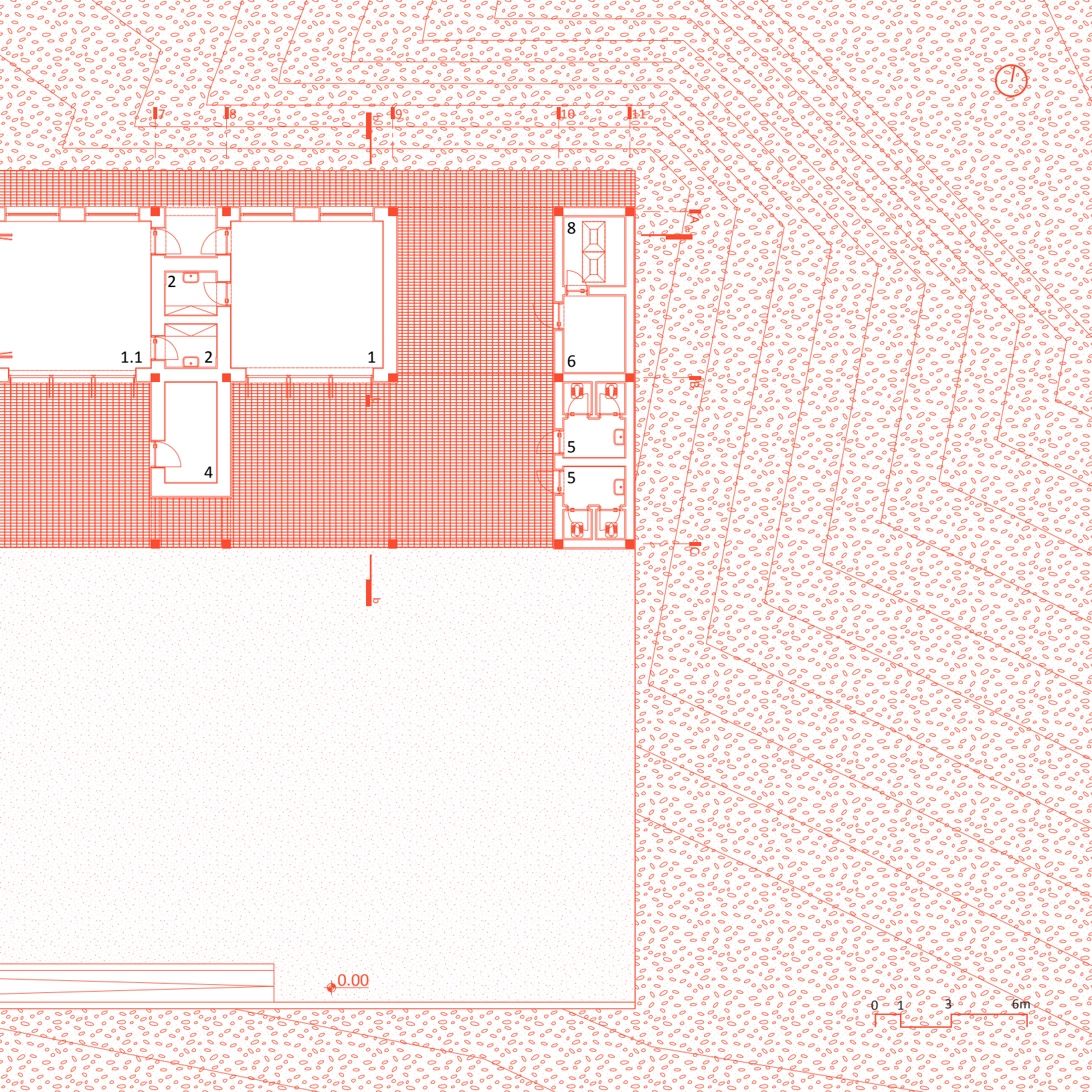
Interior Division	Roof	Chimney & Wind catcher	Shading Installation	Hasir (Woven Mat)



Floor Plan



- 1. Classroom
- 1.1. Classroom/Multi-purpose Hall
- 1.2. Classroom/Administration
- 2. Closet
- 3. Kitchenette
- 4. Storage
- 5. Toilette
- 6. Water Tank Storage
- 7. Janitor Room
- 8. Wind Catcher Base



The building incorporates four strategies to enhance thermal comfort, improve natural ventilation, and prevent overheating in learning areas. These strategies combine traditional architectural techniques from arid regions in Iran, including Sistan and Baluchestan, with modern approaches to ensure their effectiveness and functionality on site.

For ventilation, the building utilizes chimneys that help exhaust warm air after the cool night breeze enters the interiors, reducing indoor temperatures. During the hot daytime, a combination of windcatchers and an earth air tunnel system works with the chimneys to cool the interiors. Windcatchers, a hallmark of desert climates in Iran, capture warm air from higher elevations and direct it towards earth tunnels. The earth air tunnel system, situated two meters underground beneath the construction site, then lowers the temperature of the incoming air and channels it indoors through floor vents. This cooled air circulates through the space and is eventually exhausted through the chimneys.

While these integrated strategies help provide a comfortable learning environment, extreme hot summer days may still require supplemental air conditioning. Nonetheless, these methods significantly reduce energy consumption and costs, and they ensure the school remains functional

during power outages. Structurally, the chimneys and windcatchers are supported by the cast-in-situ RC frame structure, adhering to the modular design of the building and avoiding additional structural costs. This integration ensures that these elements not only function effectively for ventilation and cooling but also fit seamlessly into the overall framework, maintaining the cost-efficiency and structural integrity of the project.

Additionally, inspired by the thermal mass walls in Yazd City, the school building features thick brick walls that enhance thermal comfort for users. Bricks, which are locally abundant, have excellent heat storage capabilities. They help moderate indoor temperatures by absorbing heat during the day and releasing it when temperatures drop.

Furthermore, both indoor and outdoor learning areas are covered with shading structures inspired by a local craft called Hasir, a wickerwork made from the leaves of a plant called Daz. In local constructions, different types of Hasir with varying densities are used to cover structures like Kapar or to replace glazing and wooden doors. Hasir is lightweight and can be crafted and implemented by the indigenous population. In addition to filtering direct solar heat and providing a cooler, shaded area for students, Hasir fosters social engagement by involving locals, especially women, in its creation and installation.

Daytime Ventilation



Outlet

2

1

Intake

4

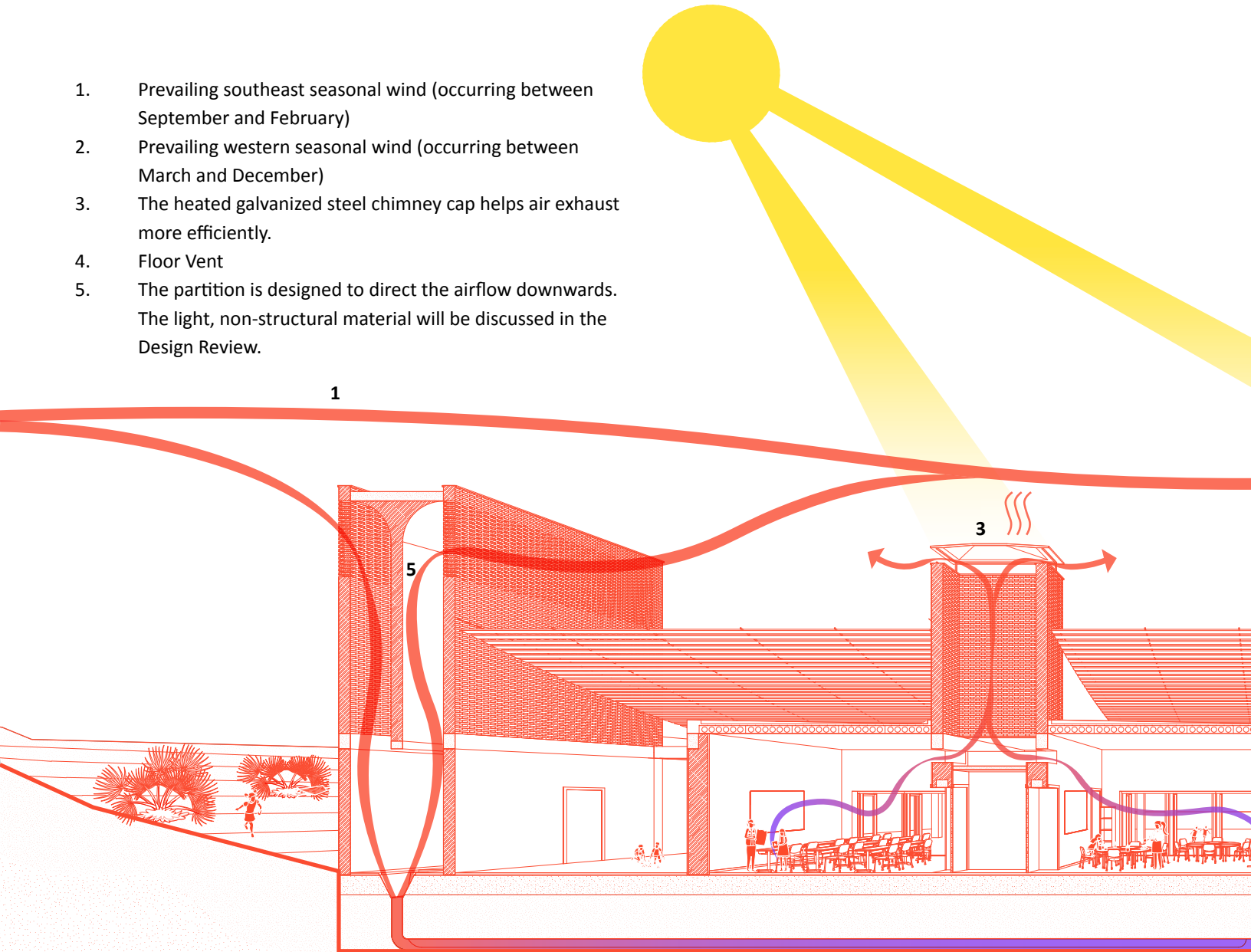
3

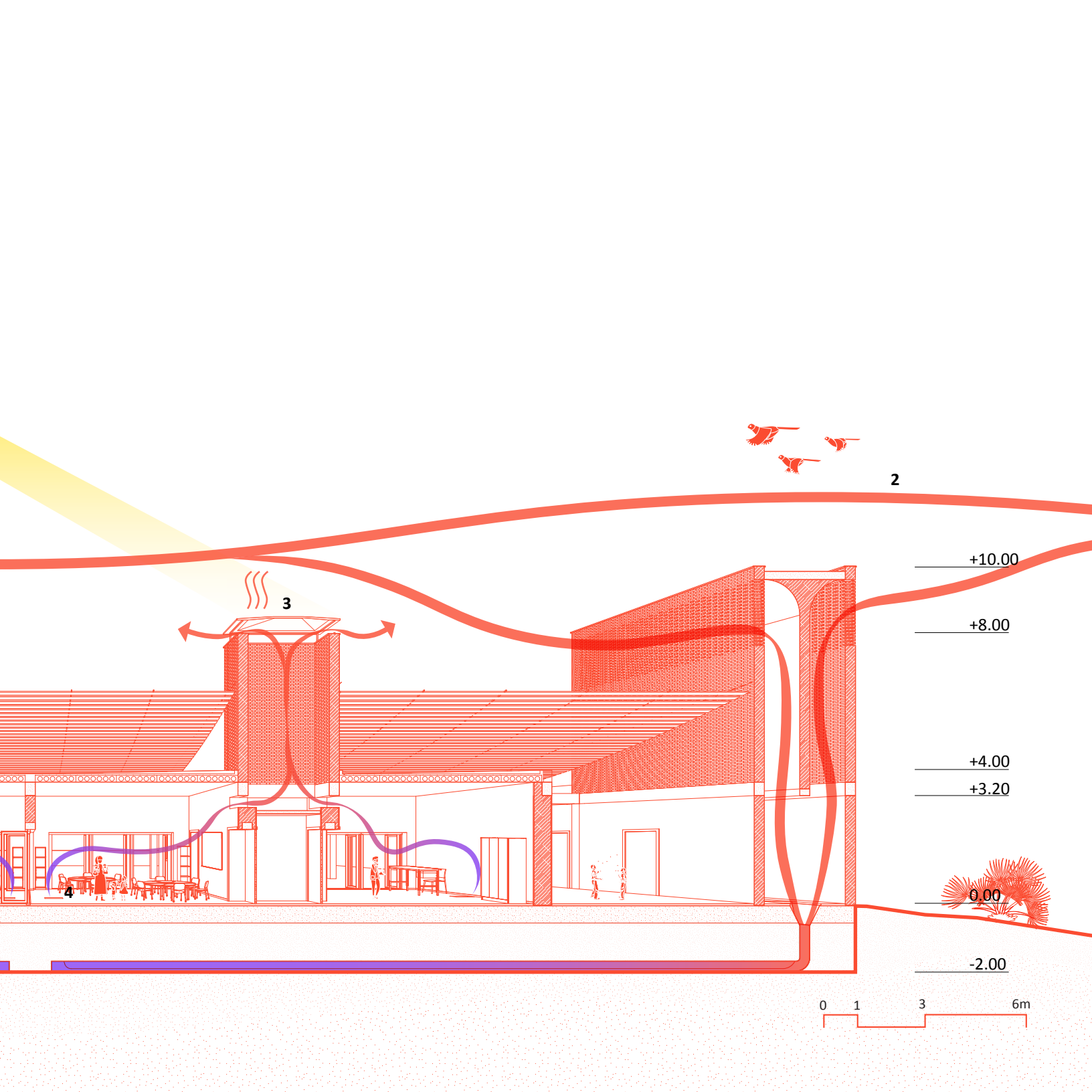
- 1. Windcatcher
- 2. Chimney
- 3. Earth Air Tunnel
- 4. Ground Vent



Daylight Ventilation - Section a-a

1. Prevailing southeast seasonal wind (occurring between September and February)
2. Prevailing western seasonal wind (occurring between March and December)
3. The heated galvanized steel chimney cap helps air exhaust more efficiently.
4. Floor Vent
5. The partition is designed to direct the airflow downwards. The light, non-structural material will be discussed in the Design Review.





2

+10.00

+8.00

+4.00

+3.20

0.00

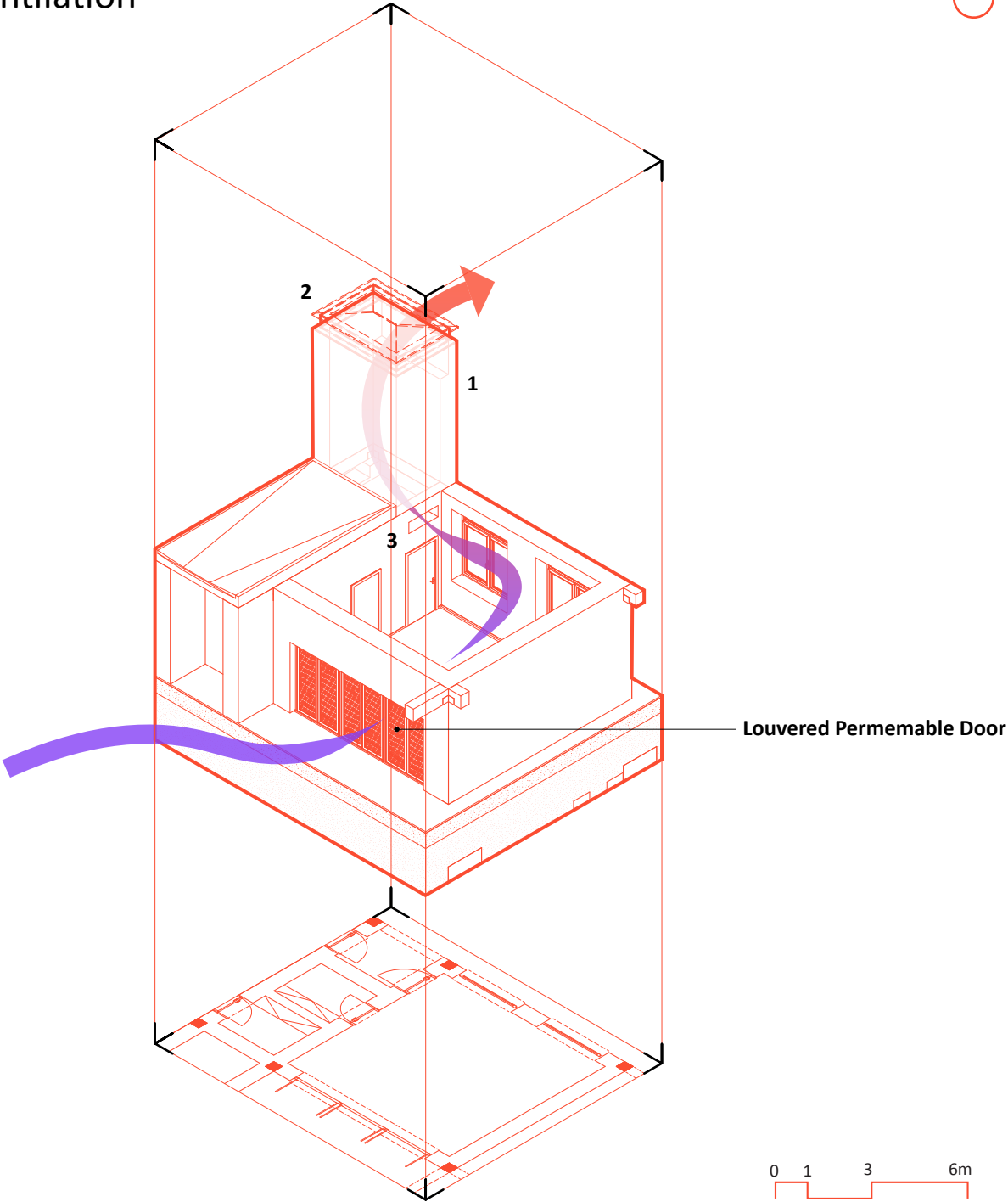
-2.00

0 1 3 6m

3

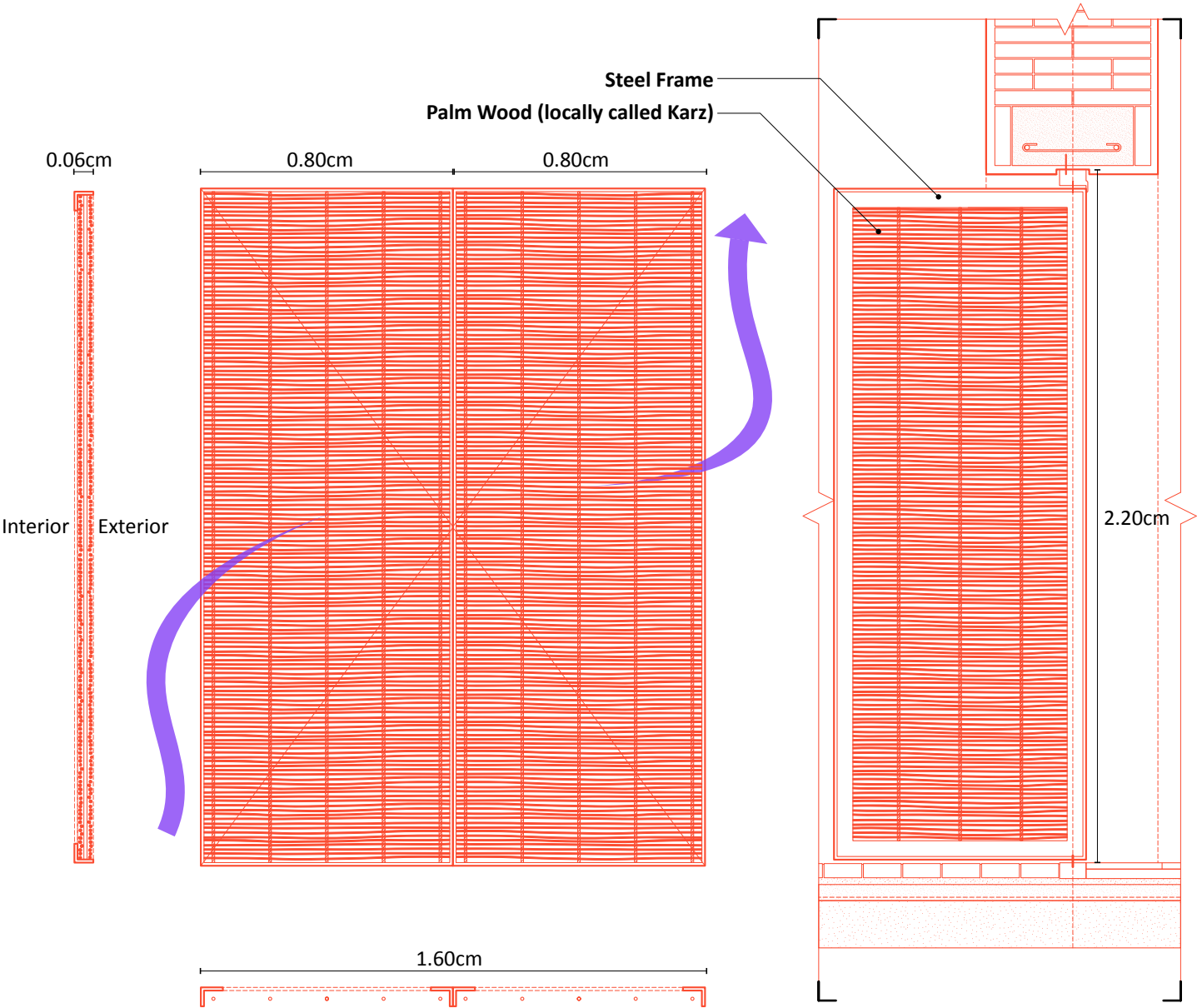
4

Night-time Ventilation

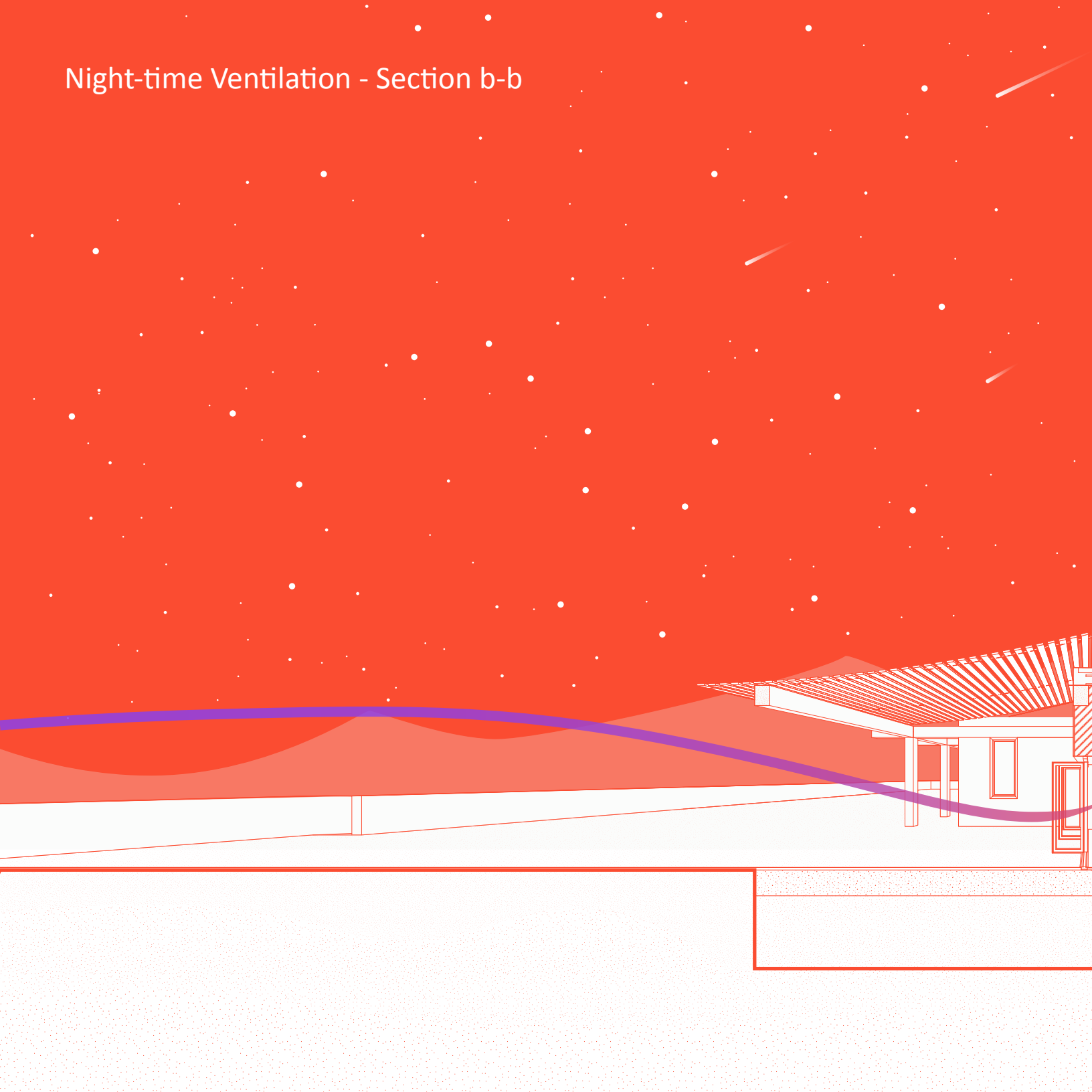


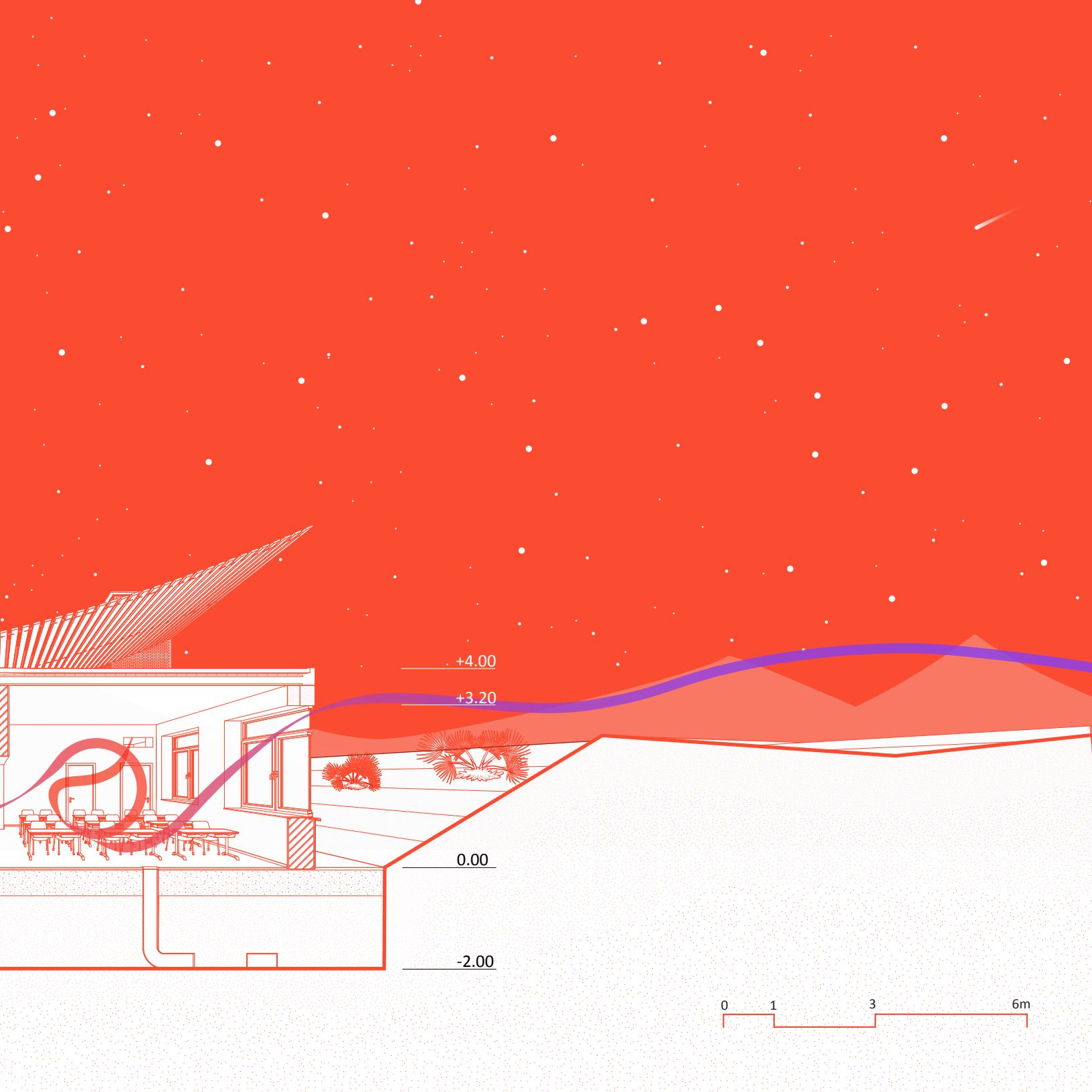
- 1. Chimney
- 2. Chimney Cap
- 3. Wall Vent

Louvered Door



Night-time Ventilation - Section b-b





+4.00

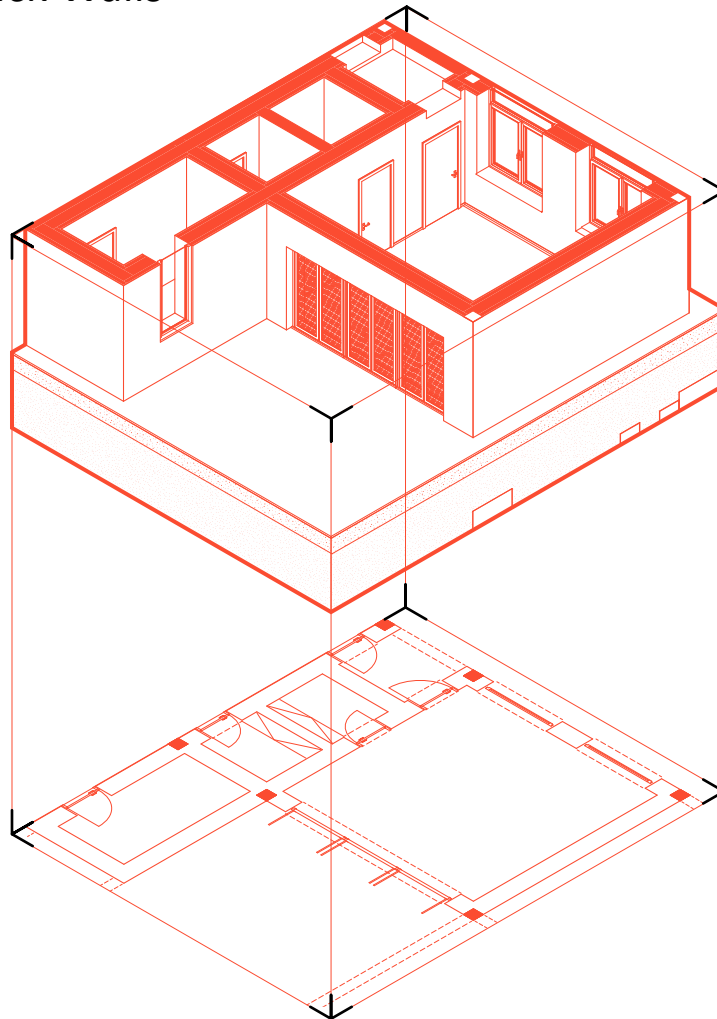
+3.20

0.00

-2.00

0 1 3 6m

Thermal Mass Brick Walls



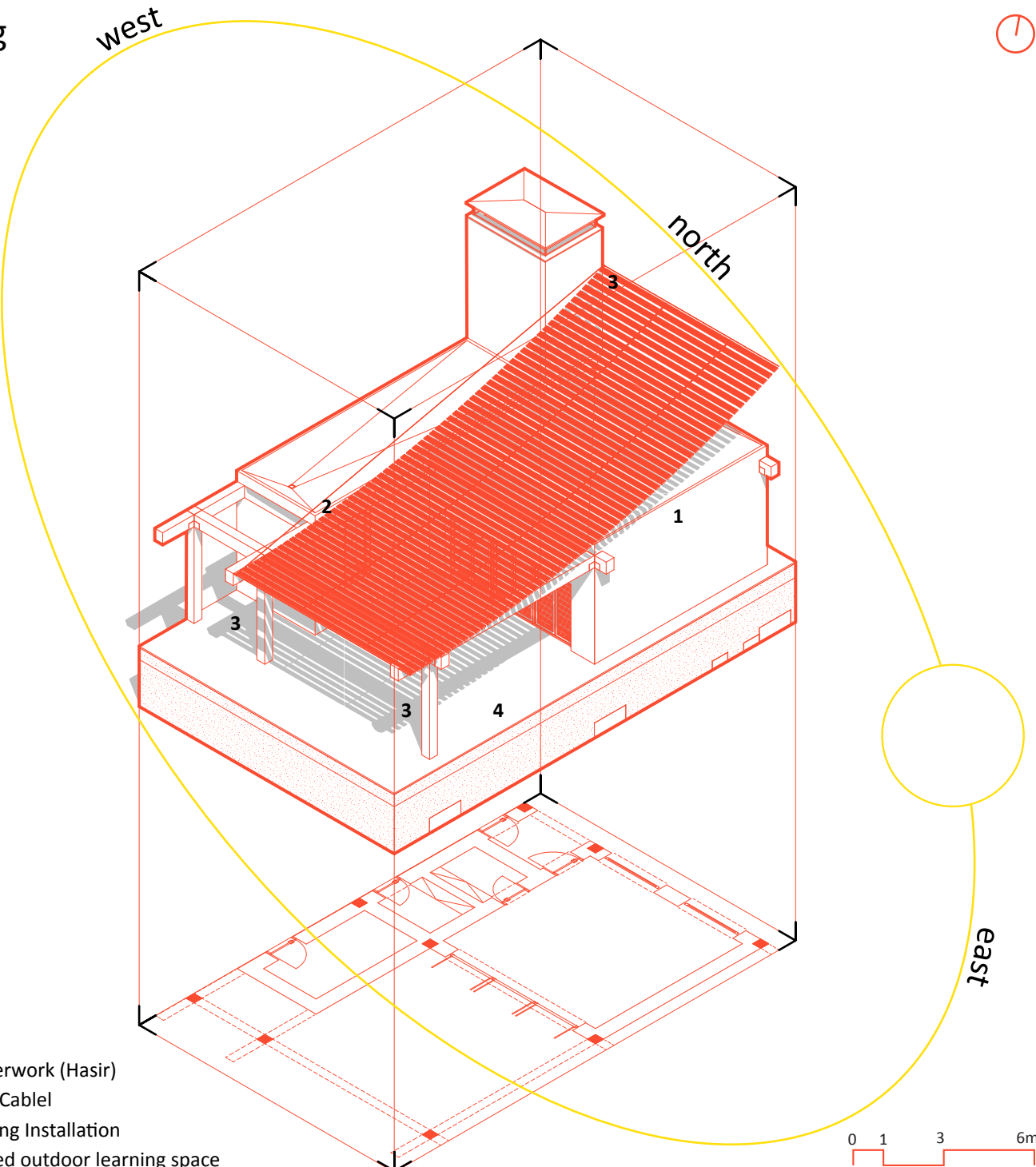
In Summer:

During the day, a shaded thermal mass wall absorbs and stores heat from the surrounding air. Because it is shaded, it absorbs less direct solar radiation, which helps keep the internal temperature cooler. During the night, when outdoor temperatures drop, the thermal mass wall releases the stored heat back into the environment. Since it has absorbed less heat due to shading, the release of heat is gradual and less intense, contributing to a cooler indoor environment.

In Winter:

The shaded wall absorbs less direct sunlight and consequently less solar heat during the day. However, it can still take in heat from internal sources, such as heating systems or passive solar gains from sunlit windows. At night, or when indoor temperatures drop, the thermal mass wall gradually releases the stored heat back into the interior space. This helps moderate indoor temperatures by providing a continuous, albeit reduced, source of warmth.

Shading

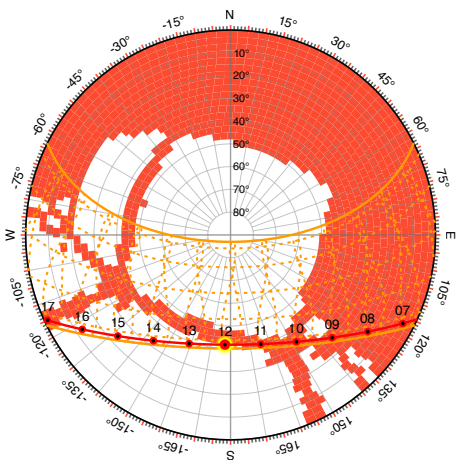


- 1. Wickerwork (Hasir)
- 2. Steel Cable
- 3. Shading Installation
- 4. Shaded outdoor learning space

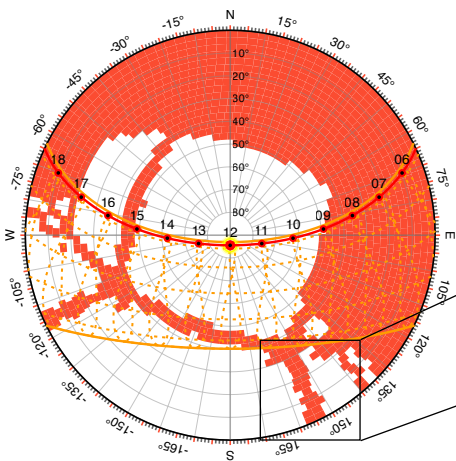
Shading Analysis - Outdoor Learning Area



Using Andrew Marsh simulation, the outdoor learning area was simulated with and without a shading strategy during both a cold and a hot month of the year. The purpose of this analysis was to determine how effectively the outdoor learning area could be shaded with the proposed strategy.

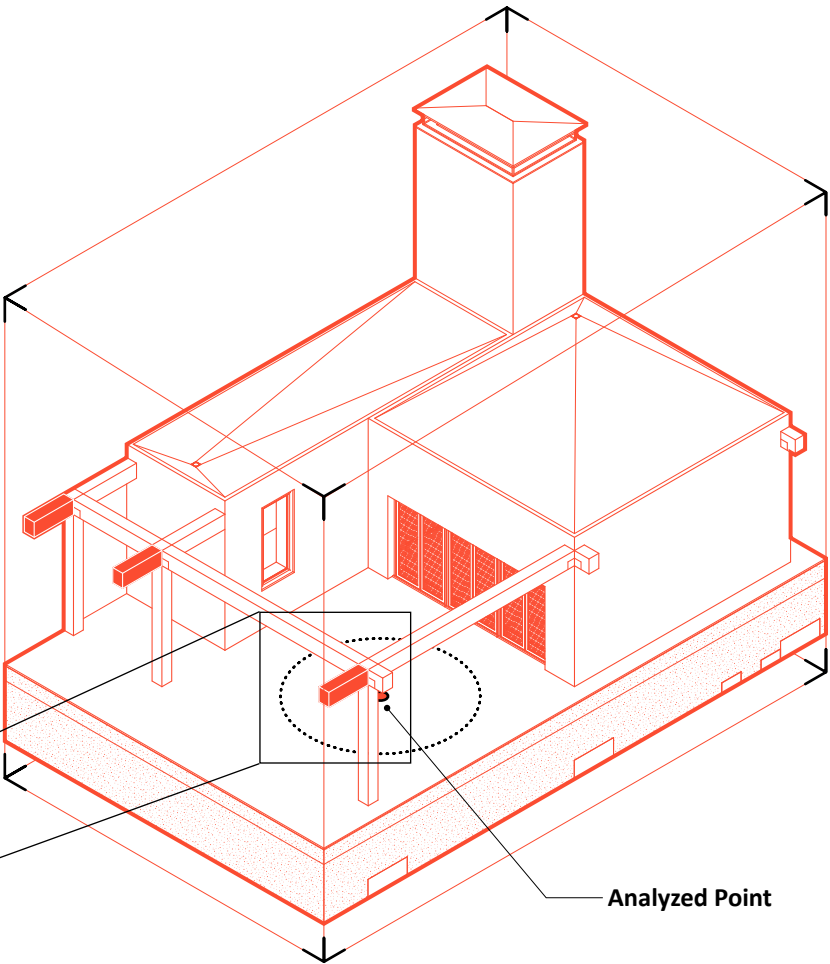


December 1st



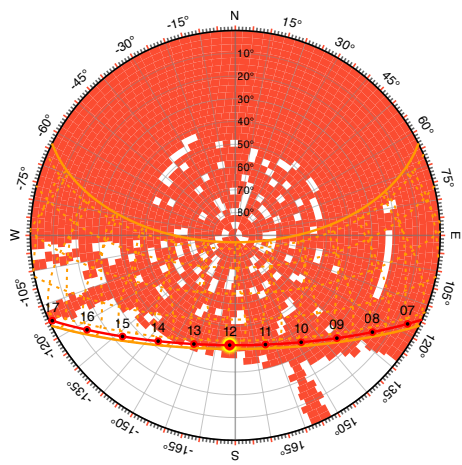
June 1st

Design

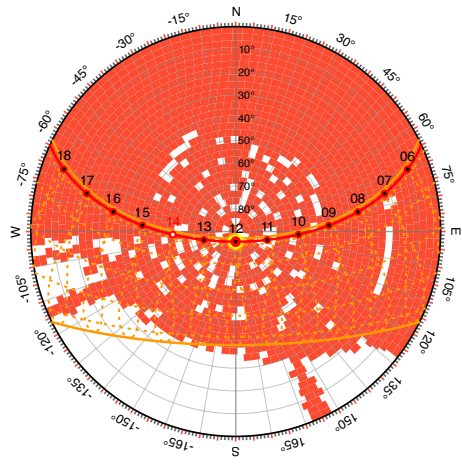




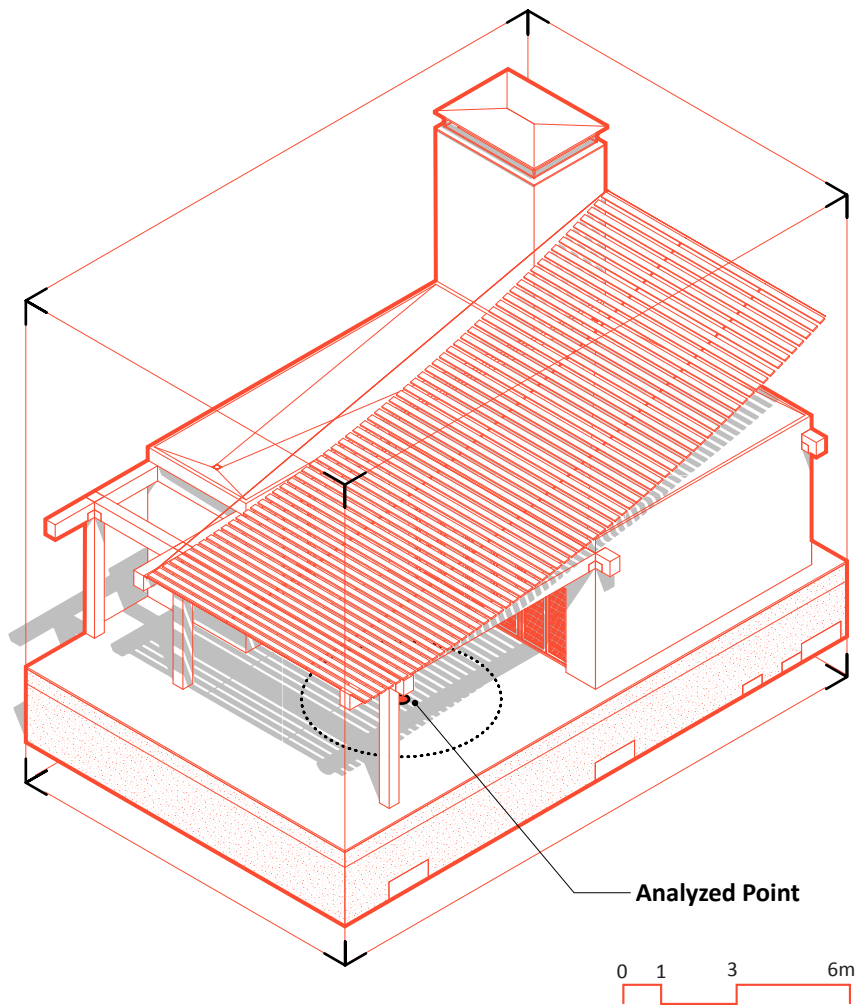
The analysis concluded that extending the structural beams was necessary to position the shading wickerwork further forward, ensuring the entire outdoor area is fully shaded.



December 1st



June 1st





Level of recommendation for vertical and inclined daylight opening	Target daylight factor	Fraction of space for target level	Minimum target daylight factor	Fraction of space for minimum target level
Minimum	1.69%	50	0.56%	95
Medium	2.82%	50	1.69%	95
High	4.24%	50	2.82%	95

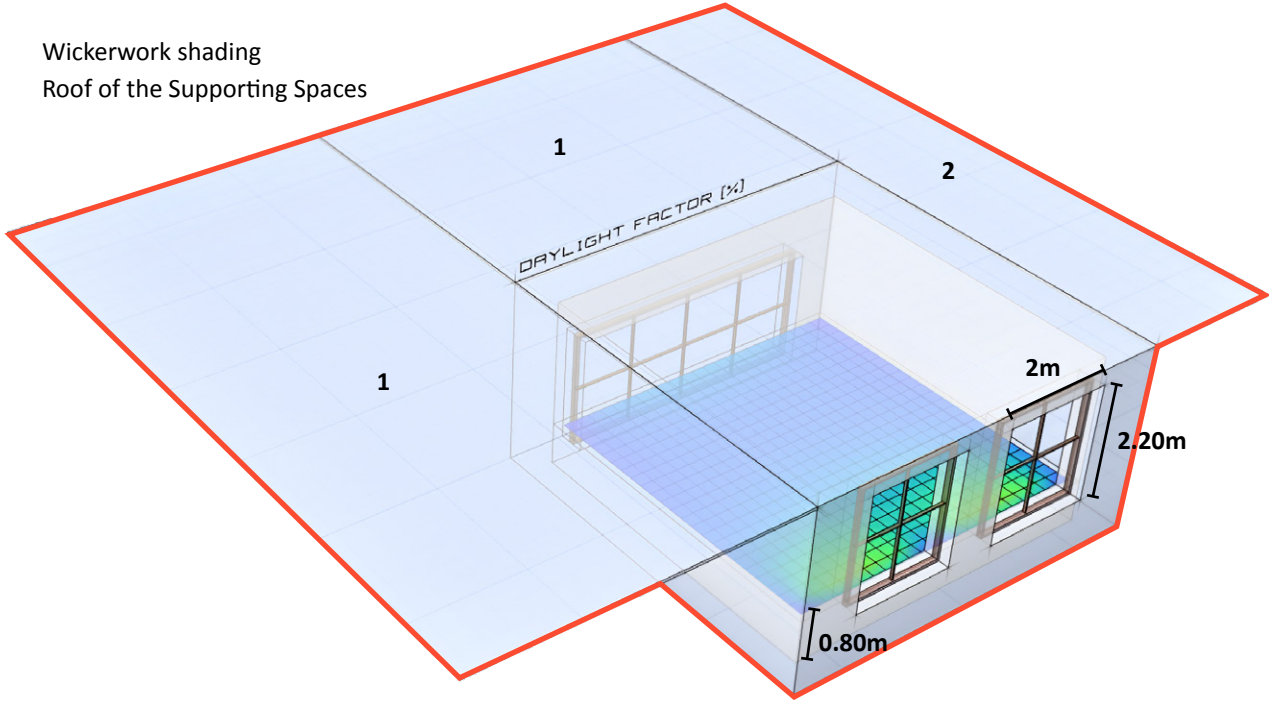
Table 1 Daylight Factor suggested values in EN 17037

To evaluate and optimize the building envelope’s performance in each aspect, various normative have been introduced by different authorities to be used as reference. In our case, one of the most important aspects of designing the school relates to the transparent envelope and supplying sufficient natural light inside the classrooms. Knowing that there is no local regulation regarding daylight values by local authorities in Iran, we used EN 17037 the leading standard among European countries as our

reference. The suggested values for the daylight factor in classrooms are classified into three levels based on the fraction of the area above specific daylight factor values which are collected in Table 1. To perform the assessments, we have been using the simplified Online tool of ‘Dynamic Daylighting’ from AndrewMarsh® to simulate and extract the daylight factor values on the horizontal plane located 0.85m above the floor as suggested in the normative. Several modifications have been made within the



- 2. Wickerwork shading
- 3. Roof of the Supporting Spaces



Design Target	Area of Room Above Target
1.69%	100%

Design Target	Area of Room Above Target
2.82%	91.7%

Design Target	Area of Room Above Target
4.24%	40.3%

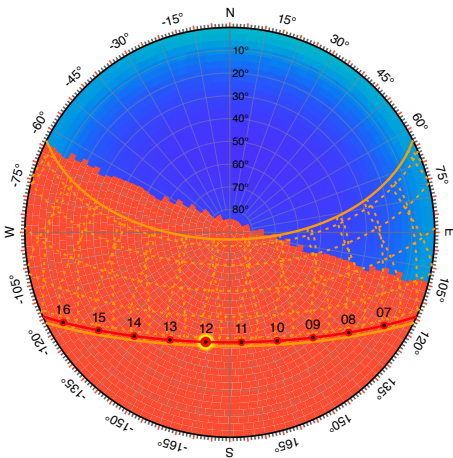
Table 2 Results gained from AndrewMarsh

tool to optimize the configuration of the openings and meet the highest classification level possible. Based on the three levels of target daylight factor recommendations outlined in Table 1, the school design achieves the following in terms of daylight: 100% of classroom areas meet the minimum level requirements, and 91.7% meet the medium level requirements, surpassing the minimum target of 50.

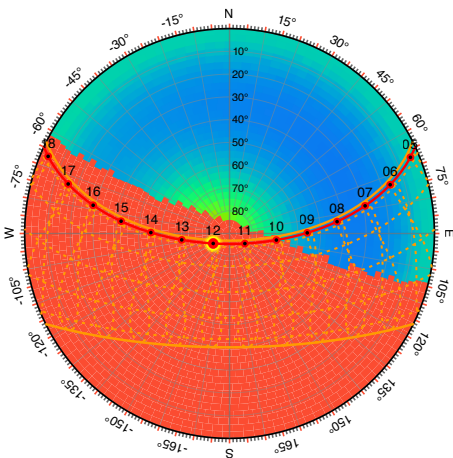
Orientation - Northern Wall



The southwest orientation of the building was crucial to ensure that the northern and southern sides, which are the only ones with glazing, receive sufficient light during school hours. However, it's also important for the northern wall to be shaded to prevent the classrooms from overheating. Andrew Marsh's simulation was applied to all eight northern transparent envelopes. The results for both a warm and a cold month of the year were closely similar across all windows. Therefore, an example of one classroom is illustrated below:

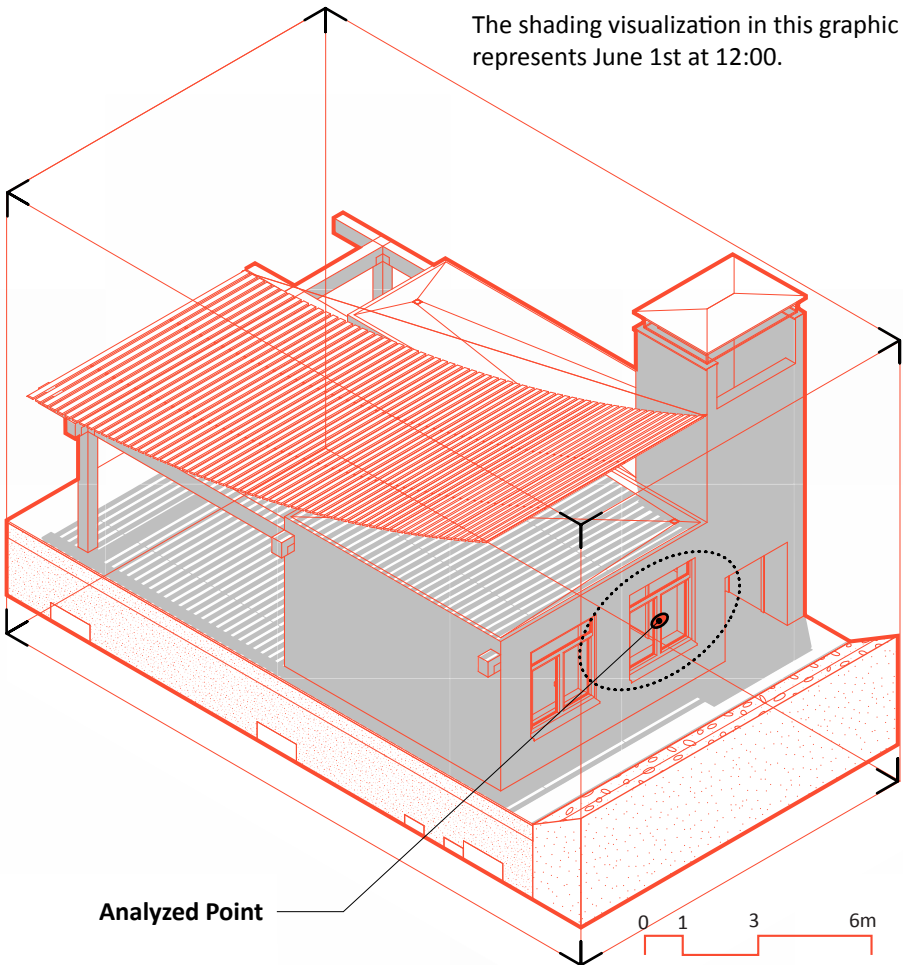


December 1st



June 1st

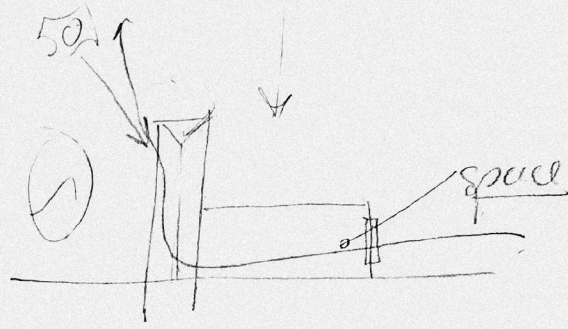
Design



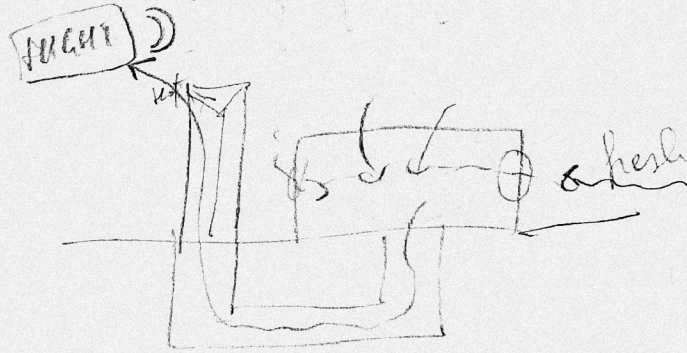
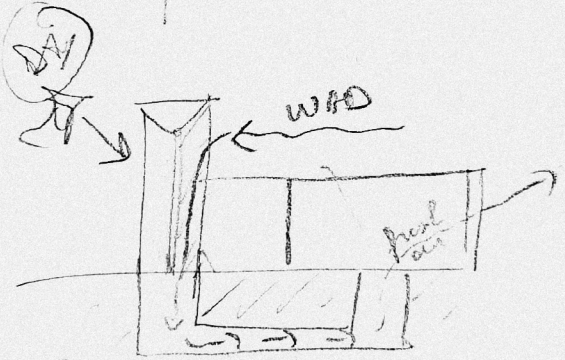
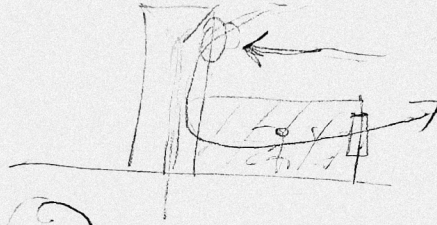
The shading visualization in this graphic represents June 1st at 12:00.

Analyzed Point

solar radiation



6



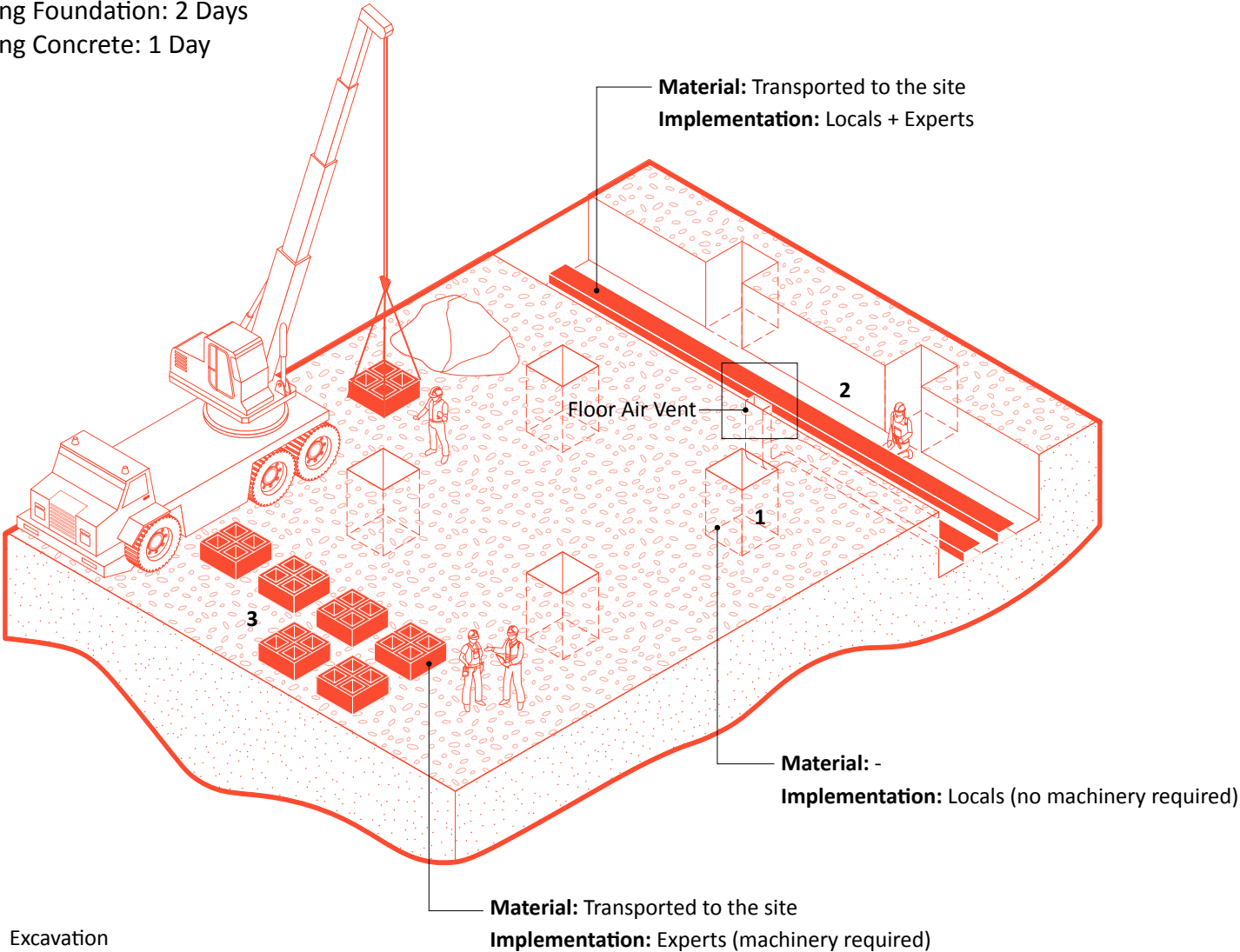
Materials and the Construction Process

Phase 1-2

Phase 1: Excavation and Foudnation

Estimated Time Required:

- Excavation: 7 Days
- Placing Foundation: 2 Days
- Placing Concrete: 1 Day

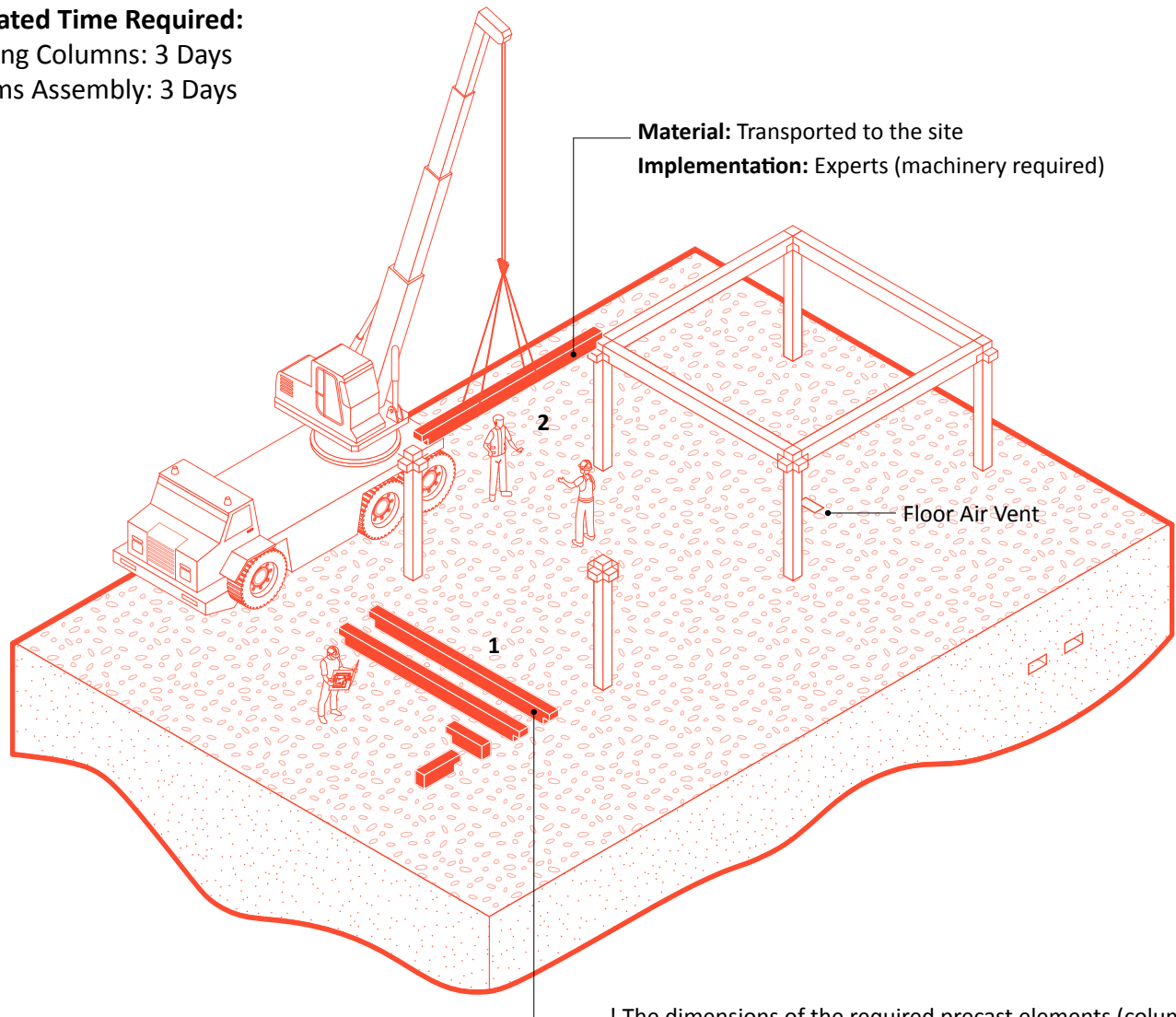


1. Excavation
2. Earth Air Tunnel Implementation
3. Precast Concrete Structure - Foundation

Phase 2: Prefabricated Framework

Estimated Time Required:

- Placing Columns: 3 Days
- Beams Assembly: 3 Days



1. Prefabricated Concrete Structure - Columns and
2. Beams Assembly

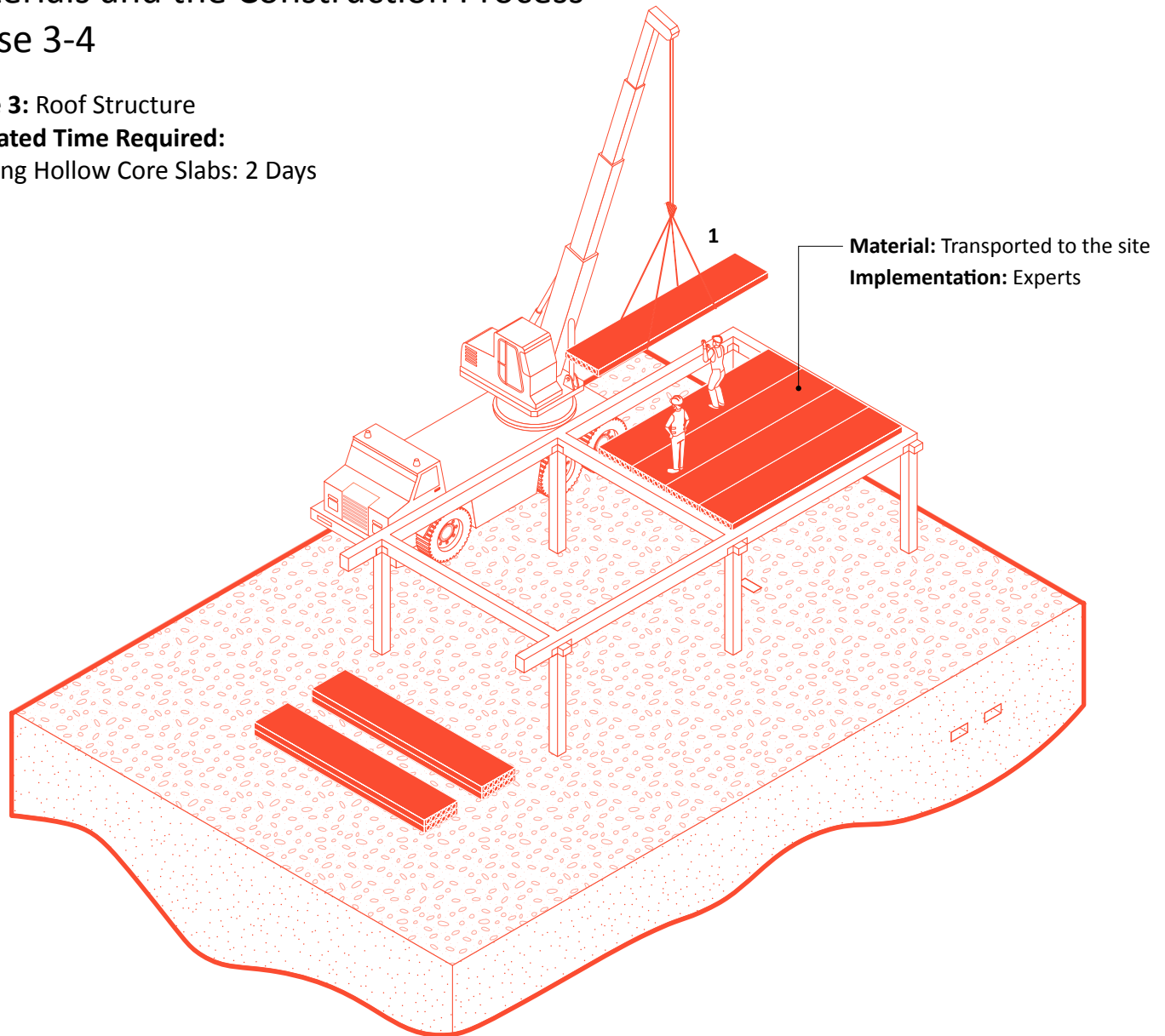
Materials and the Construction Process

Phase 3-4

Phase 3: Roof Structure

Estimated Time Required:

- Placing Hollow Core Slabs: 2 Days

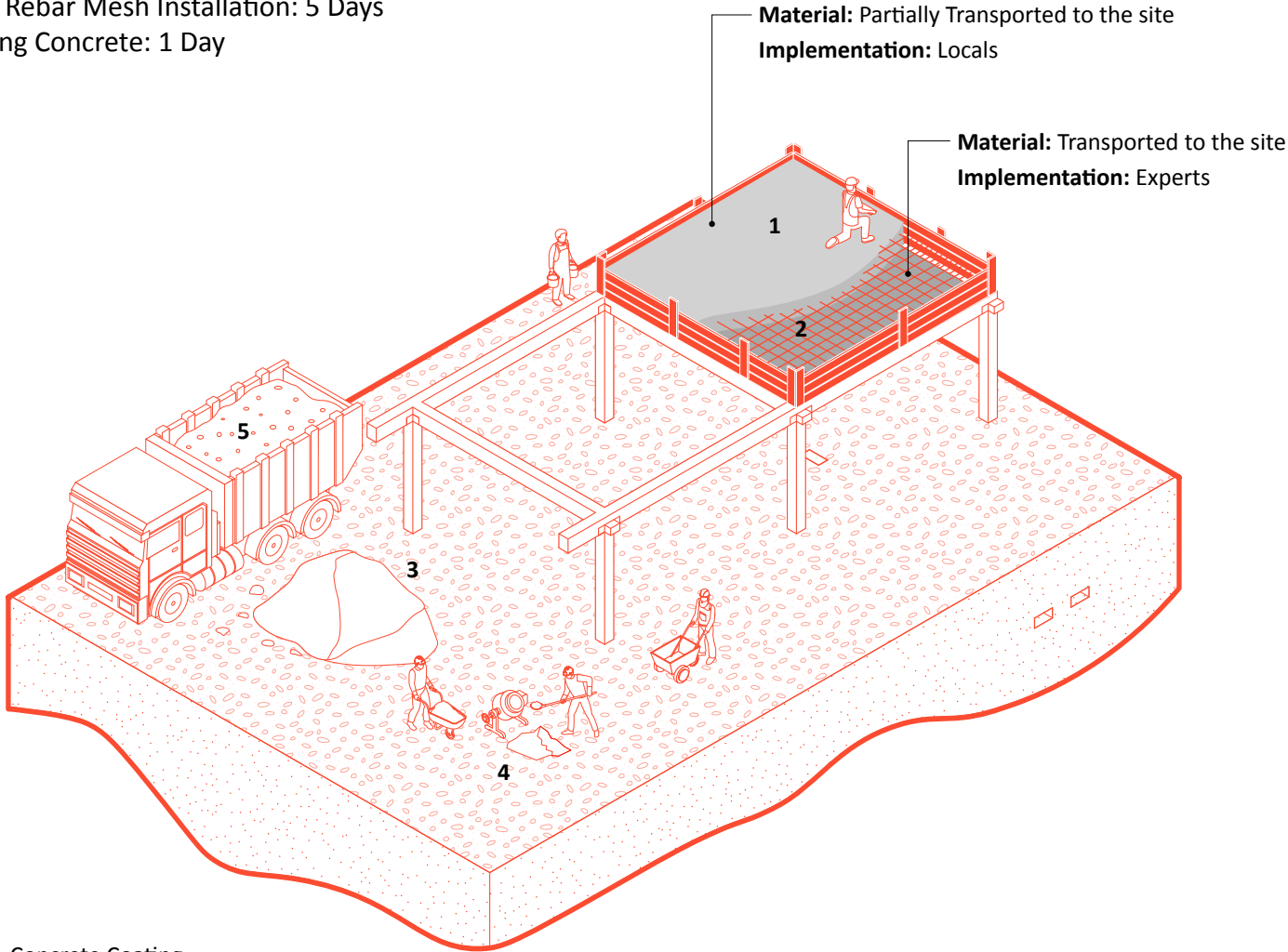


1. Concrete Hollow Core Slab

Phase 4: Roof Coating

Estimated Time Required:

- Roof Rebar Mesh Installation: 5 Days
- Placing Concrete: 1 Day



1. Concrete Coating
2. Welded Wire Mesh
3. Sand
4. Cement
5. Gravel

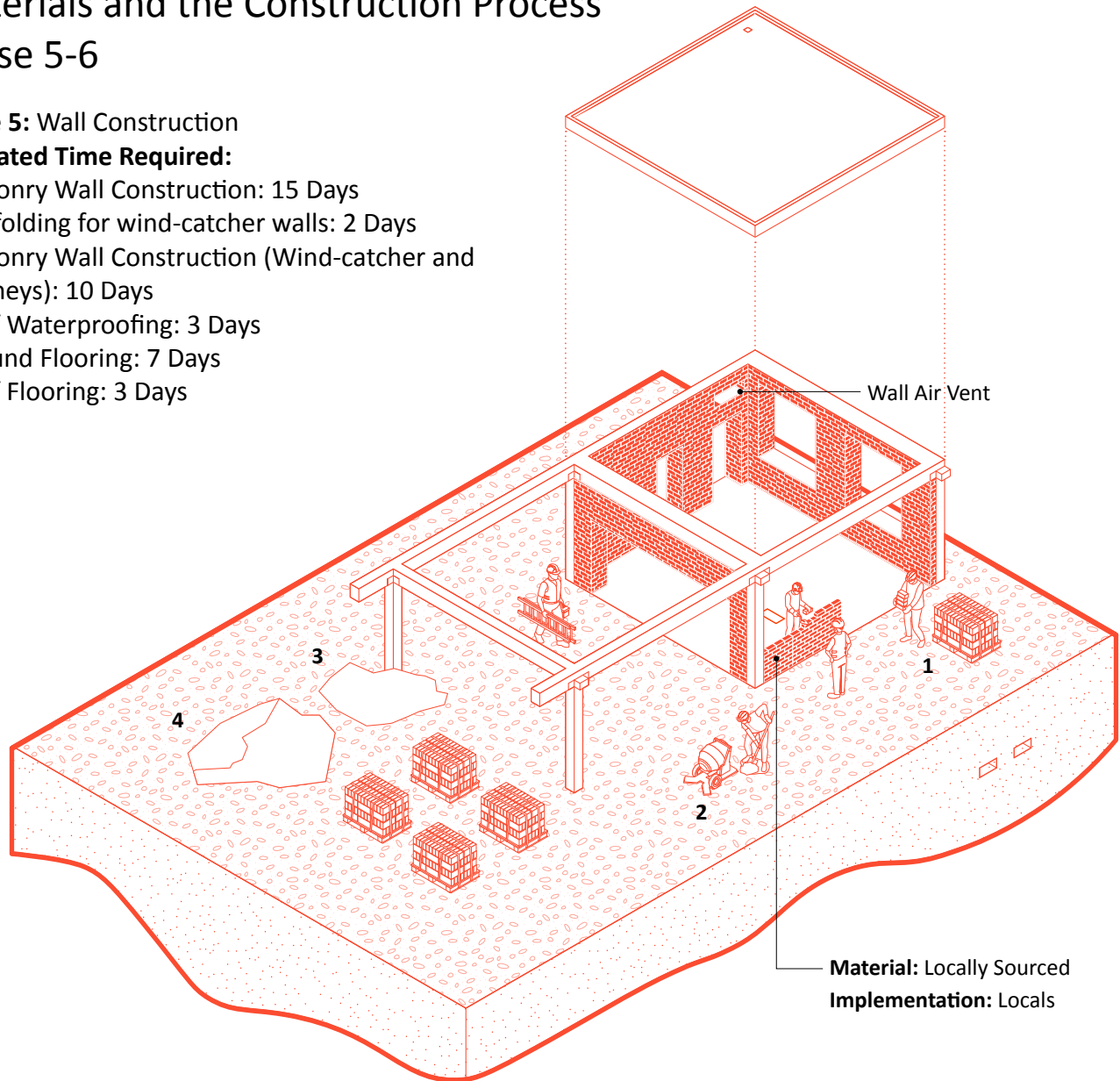
Materials and the Construction Process

Phase 5-6

Phase 5: Wall Construction

Estimated Time Required:

- Masonry Wall Construction: 15 Days
- Scaffolding for wind-catcher walls: 2 Days
- Masonry Wall Construction (Wind-catcher and Chimneys): 10 Days
- Roof Waterproofing: 3 Days
- Ground Flooring: 7 Days
- Roof Flooring: 3 Days

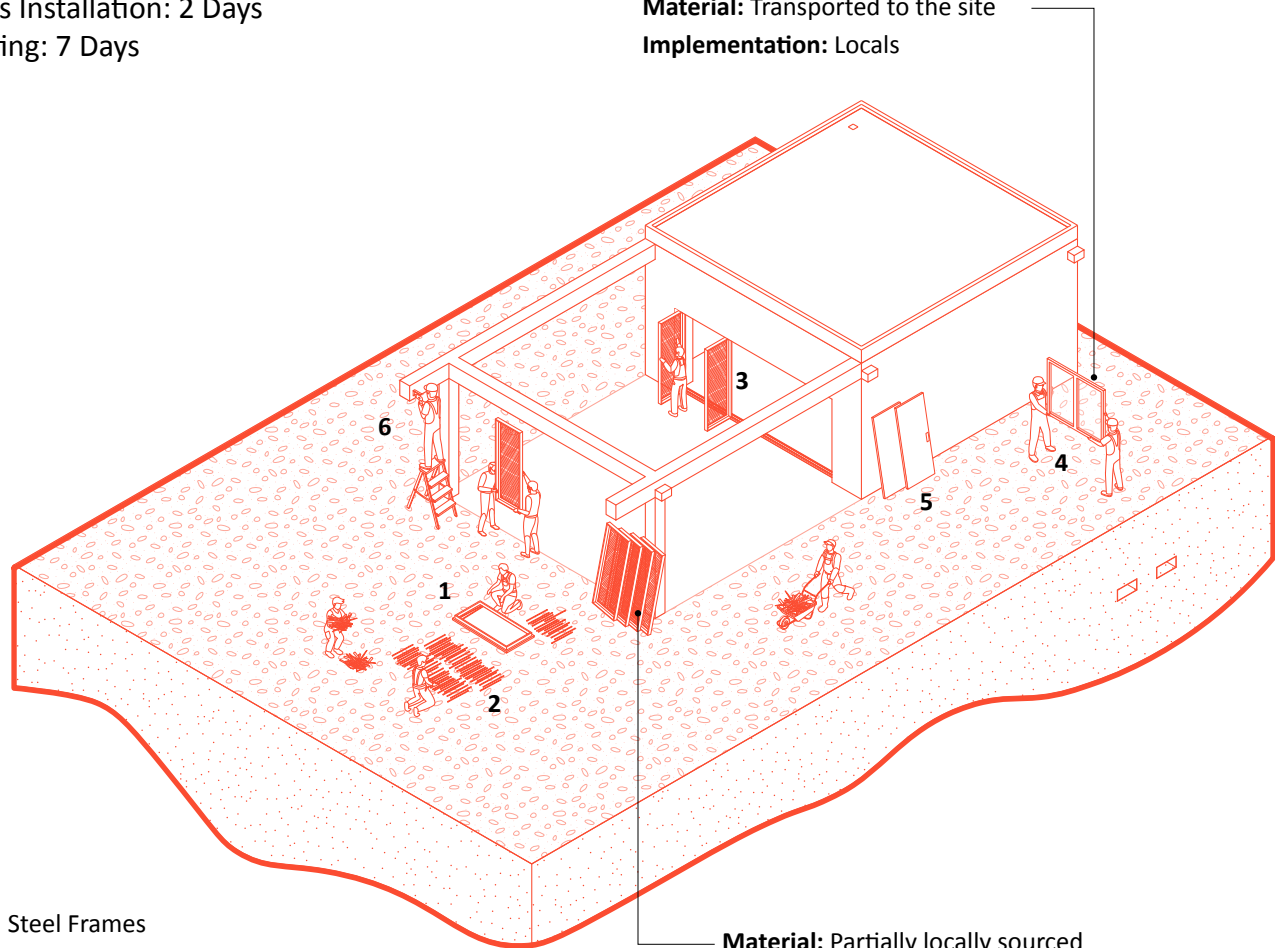


1. Mud Bricks
2. Cement Mortar
3. Cement
4. Sand

Phase 6: Interior
Estimated Time Required:

- Plastering: 7 Days
- Windows Installation: 2 Days
- Doors Installation: 2 Days
- Painting: 7 Days

Material: Transported to the site
Implementation: Locals



1. Steel Frames
2. Rattan (locally sourced)
3. Finished Louvered Doors
4. Steel Window Frame
5. Wooden Interior Doors
6. Shading Installation Components

Material: Partially locally sourced
Implementation: Locals









The Design Review

Kahnaniakesh

P. 254

Dooshinkouh

P. 264

Section 4

i

P. 251-271

Field Study

Exploring the Regional
Architectural Identity

At this stage of the thesis, the research, potential location, and design proposal were all conceived and developed remotely through interviews, questionnaires, secondary sources, Online resources, and reports from the state and various NGOs about Sistan & Baluchestan. However, to verify the accuracy of the information regarding the research question, the characteristics of the region, and the feasibility of the design proposal, a regional visit is essential before advancing the project to the execution phase.

Due to time constraints and accessibility challenges, I was unable to visit Osman Abad, the village hosting the new school proposal. However, with the assistance of local teachers, authorities, and activists, I managed to visit nearby regions with similar characteristics and proximity to Osman Abad. Consequently, the regional visit concentrated on the remote areas of Nikshahr and Dashtyari Countries. These counties are selected based on discussions in Chapter Two of Section Two, which classified their capital cities among the most underdeveloped in Sistan & Baluchestan (level 5). Additionally, their accessibility, proximity to an airport, and safety considerations further justified their suitability for this study.

The study documents data that can potentially affect the design proposal and its realization, offering valuable insights for developers regarding

the social and cultural impacts on charitable projects. This documentation was achieved through interviews and discussions with residents, students, academic staff, and administrators, ensuring the data is relevant to all stakeholders involved with the school building. Additionally, the study provides alternatives for architects and engineers to ensure the school building is adaptable to the context. It analyzes the availability of materials previously discussed in the design proposal, studying the variety of local materials, their durability, the cost and labor required for implementation, and other techniques that enhance the project's vernacular and sustainable aspects.

While data collected from field research was mentioned briefly in previous chapters, this section offers detailed insights specifically pertinent to the design proposal. Additional information on charitable initiatives is too extensive for inclusion in this thesis. Therefore, for a deeper understanding of the indigenous lifestyle and their perspectives on volunteering efforts, it is recommended to explore the activities of the Nilag Association in Section Five.

“Unlike Sistan region in the northern part of the province, Baluchestan has not historically developed a vernacular architecture that addresses climatic challenges.”

Kahnanikesh

The field study began with the first destination in Dashtyari County, specifically the village of Kahnanikesh, located 170 km north of Chabahar, the county’s capital. The only accessible road to this village is a gravel path that passes through a small town called Kahirborz, connecting Kahnanikesh to the main road. The indigenous population is Baluchi, and they speak the region’s unique language, Baluchi. Although Baluchi is the most spoken language in the region, the locals, including the students, do not have the ability to write it. This is due to years of neglect of Baluchestan’s identity by the State and the imposition of Farsi as the only spoken language in the province.

Architecturally, unlike the Sistan region in the northern part of the province, Baluchestan has not historically developed a vernacular architecture that addresses climatic challenges. One reason for this is the relatively recent shift to sedentary lifestyles among the Baluchi people, who were primarily nomadic. This nomadic heritage led to the prevalence of temporary dwellings like Kapar in the region, which were never intended for permanent habitation.

However, there are local techniques for constructing Kapars and similar structures in Kahnanikesh, inspired by the availability and cost-efficiency of local materials. While Kapar dwellings are relatively rare in the region, their construction techniques and materials are still employed, particularly for roofing in housing constructions. The process begins with a framework made of palm wood, which rests on a stable base wall to protect against decay and moisture. Palm leaves, akin to Hasir, are woven and secured using ropes made from leaves or natural bindings to ensure stability. The entire structure is insulated with local materials like wool or plastic, and finished with a layer of worn-out Palm or Daz leaves for added protection.

The walls of these constructions are typically made of Khesht, which are local sun-dried mud bricks. Traditionally, Khesht walls are coated and plastered with a layer of Kahgel, a mixture of mud and straw. Kahgel serves as both thermal and humidity insulation, as well as a protective layer for the walls.

“Constructing a roof using Kapar structure. Kahnaniqesh, Dashtyari Country” Hadi Aledavood. 2023.¹



"A temporary Structure for social events. Kahnaniqesh" Photo by the Author.



"A temporary residence in Kahnanimkesh" Photo by the Author.





“A border wall made of river boulder. Kahnanimkesh” Photo by the Author.

Another distinctive wall construction method characterizing vernacular techniques in Kahnanimkesh is river boulders, primarily used for exterior walls like land borders, gardens, or temporary structures. In this method, river boulders are arranged in layers, with each layer positioned in the opposite direction to the one beneath it.

Kheshty Wall and the River Boulder Wall offer excellent thermal insulation and structural properties. They are environmentally friendly,

providing robust stability and durability over time and in various conditions.

However, these construction approaches are increasingly being replaced with newer materials such as concrete blocks or ceramic bricks. This shift is largely due to the higher labor costs and slower construction speeds associated with traditional materials.

In a conversation with Hadi Aledavood, an architect and social activist in the village, he



“Two Houses, one built by Khesht and Kapar Roof Structure (right) and another with Concrete Block Walls and Concrete Roof (left). Kahnanikesh” Photo by the Author.

recounted his successful efforts to encourage indigenous communities to revive their traditional building methods. By sponsoring the labor costs for a project using river boulders, he persuaded a landlord to abandon concrete blocks in favor of the traditional approach. His experience highlights the potential for charitable initiatives to support local societies in preserving their architectural heritage.

Kahnani-kesh exemplifies many villages in Sistan and Baluchestan where traditional architecture

and practices are fading. This critical situation underscores the need for charitable initiatives that promote social engagement by educating communities about the importance and value of their cultural traditions.



“Outdoor animal shed using tree trunks structure. Kahnankesh” Photo by the Author.

Wooden columns and beams are another vernacular structural technique in Kahnankesh, primarily used for temporary constructions such as livestock shelters, event spaces, and storage facilities. This method requires no additional joint elements. Slimmer tree trunks are used for lightweight structures, while thicker ones support heavier loads. The combination of wood with concrete, as illustrated on page 244, showcases a strategy that merges local and modern materials to create more

stable vernacular structures.

Such combinations of materials are also evident in other construction forms, such as houses with concrete block walls but locally built roofs and coatings. Additionally, houses with river boulder bases are often covered and flattened with cement and concrete for added stability.

“Tree Trunks columns and beams are another vernacular structural technique in Kahnankesh, primarily used for temporary constructions such as livestock shelters, event spaces, and storage facilities.”

“More Examples of tree trucks temporary structures. Kahnankesh” Photos by the Author.





"More Examples of locally available materials. Kahnunikesh" Photos by the Author.

Exploring how indigenous communities combine local materials with traditional methods offers valuable insights for innovative projects, enhancing the strengths of vernacular techniques and addressing their limitations.

Unused materials like dry leaves, tires, woven mats, and wood branches can be found scattered throughout Kahnanimkesh. Each of these materials can serve as inspiration for reuse strategies in new projects.

“More Examples of locally available materials. Kahnanimkesh” Photos by the Author.





“A house built in 1989 in Dooshinkouh with facade figures” Photo by the Author.

Dooshinkouh

My second destination was Dooshinkouh in Nikshahr County, Bent District, Tutan and Mohammadan Subdistrict. Dooshinkouh is the closest village to Osman Abad that I had the opportunity to visit, making the knowledge and data gathered here highly relevant to the current situation in Osman Abad. Consequently, the design adjustments in the

Field Study

next chapter are greatly influenced by this visit.

Dooshinkouh is approximately 222 km from Chabahar in western Sistan & Baluchestan. The village is accessible only by a gravel road, often damaged by seasonal floods, which connects it to Bent City and neighboring towns. Unlike Kahnankesh, Dooshinkouh appears more developed, with fewer constructions combining traditional and modern methods. The local society appears to benefit from a modest income, as evidenced by the

“The road from Bent (capital of Bent Subdistrict) to Dooshinkouh” Photo by the Author.





“Daz, a self-sown native plant that is prevalent in the region and its leaves are used for the covering of Kapar structures” Photo by the Author.

presence of several public buildings. Compared to Kahnunikesh, Kapar dwellings are more common here, but they are not used for living purposes but serve as storage or cooking spaces. The term “Kapar Living,” referring to indigenous people residing in Kapar, is often associated with poverty and scarcity. Therefore, it is important to recognize that the presence of Kapar structures in a village does not always indicate poverty.

The availability of local materials in Dooshinkouh

is similar to that in Kahnunikesh. River boulders, palm wood, and leaves are easily accessible. However, the Daz plant is more common in the Bent Subdistrict due to its drier climatic characteristics.

The only vernacular technique or construction method in Dooshinkouh pertains to the Kapar structure. Local materials are primarily used for building Kapar dwellings, creating land borders, or enclosing areas for animals.

“It is important to recognize that the presence of Kapar structures does not always indicate poverty.”

“Dooshinkouh” Photos by the Author.





“Operating schools in Dooshinkouh” Photos by the Author.

Houses and public buildings in Dooshinkouh are well-developed, having transitioned from traditional methods like load-bearing walls to cast-in-situ reinforced concrete (RC) frame structures with concrete block walls. The village hosts four charity-built school buildings, which follow the same structural methods as residential buildings. According to an authority from the Organization for Renovation, Development, and Equipment of Schools residing in Dooshinkouh, new school buildings can

be established within three months. All construction materials are imported from nearby cities, with none being locally sourced. This shift from locally available materials to imported ones underscores the local priority for cost-efficiency and construction speed. Consequently, the school buildings lack connection to the region’s architectural heritage and face various thermal comfort and sustainability-related issues.

“The first school of Dooshinkouh. Currently not in operation” Photos by the Author.



“Flood protection using river boulders. Dooshinkouh” Photo by the Author.



“A building under construction with cast-in-situ reinforced concrete (RC) frame structure.
Bent, Nikshahr Country” Photo by the Author.



Design Revision Following Field Study

The regional visit provided valuable insights into the materials and construction methods utilized by local labor, whether they are locally sourced or imported. These observations are essential for refining our design proposal to align with the region's resources. Assessing transportation routes and access to remote villages like Osman Abad also required reconsidering material choices and construction techniques.

While using local materials has its advantages, traditional construction methods are not always sustainable for rural projects. The shift from traditional to modern techniques reflects the locals' preference for faster, easier construction with less maintenance and greater durability. For instance, replacing load-bearing walls with concrete structures not only enhances efficiency but is also essential for safety and resilience in earthquake-prone areas like Sistan and Baluchestan. Therefore, examining both old and new buildings in the region is essential. It helps us understand how respecting vernacular architecture in charitable projects can yield long-term benefits and meet cost-efficiency requirements.

Additionally, involving the community in the construction process is more likely to succeed if the methods are familiar to them. Implementation strategies that require community training can introduce new social challenges and

impact the project's timeline in the context of Sistan & Baluchestan.

Consequently, integrating the insights gained from the regional visit is crucial to enhance the project's adaptability and sustainability within its specific context. The following pages will review certain aspects of the design proposal introduced in Section Three regarding the regional visit. Detailed discussions on their implementation and installation specifics will follow in the executive phase outlined in Section Five.

Structural Framework

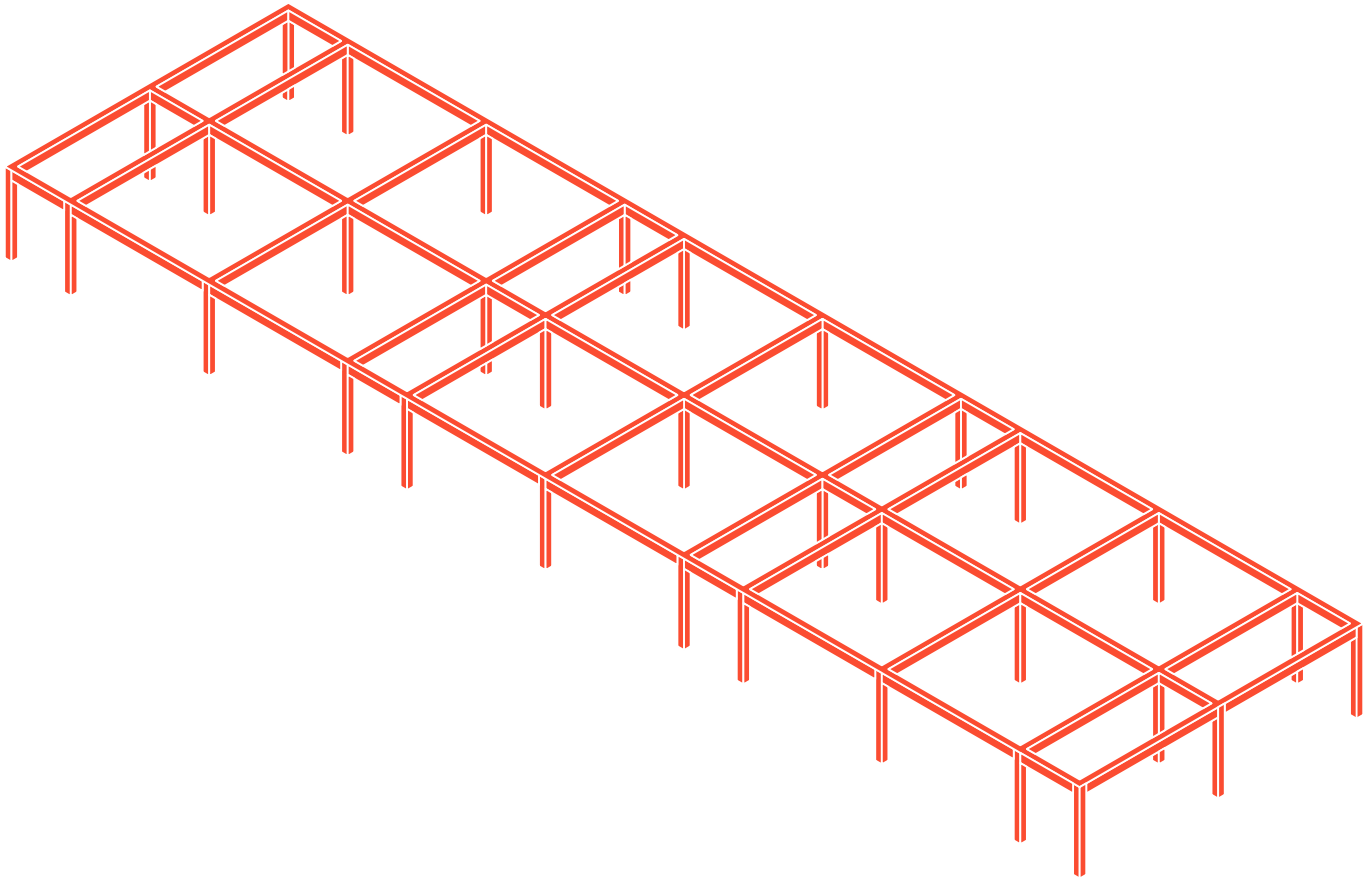
Locally common: Cast-in-situ reinforced concrete (RC) frame

"A building under construction with a cast-in-situ reinforced concrete (RC) frame structure. Bent City, Nikshahr Country"

Photo by the Author



Design Proposal: Prefabricated concrete



The challenging access routes to the villages of the Bent district in Nikshahr County including Osman Abad necessitated a reevaluation of our building strategy. The lengthy and gravel roads leading to these villages significantly increase the cost and difficulty of transporting weighty materials to the construction site. Therefore, after conducting a site visit and noting the prevalent use of in-situ concrete construction in the area, we decided to reconsider our initial plan of using prefabricated

columns and beams.

Ultimately, we opted to construct the school building using the same method employed by local residents for their own structures. This approach not only accommodated the local construction practices but also provided flexibility in the dimensions of columns and beams. This flexibility was crucial as it allowed us to avoid strict dimensional constraints imposed solely for the purpose of cost reduction.

Shading System

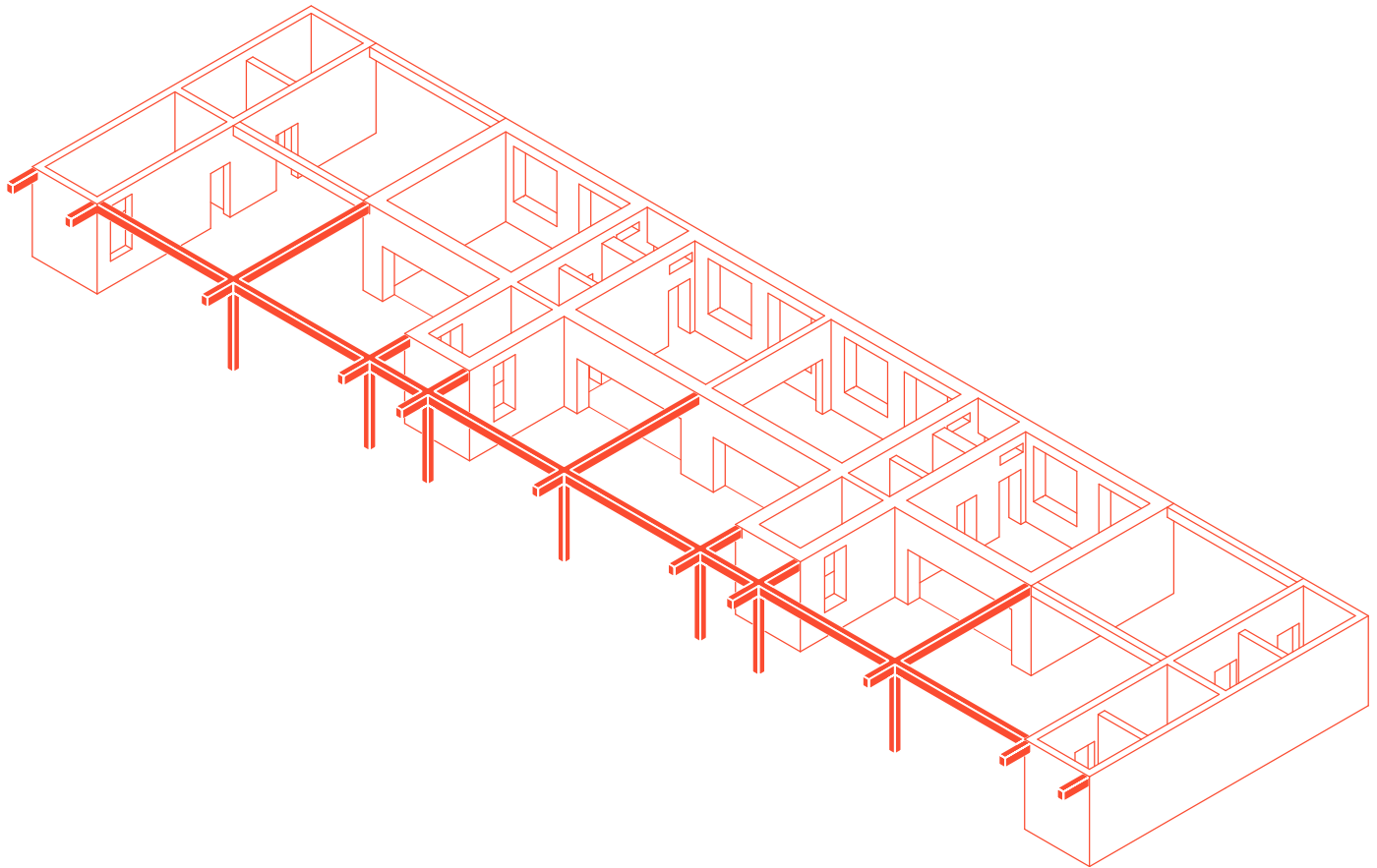
Locally Used: Wooden columns and beams

"A temporary Structure for social events. Kahnankesh"

Photo by the Author.



Design Proposal: Prefabricated concrete



The school building's structure is designed with dual purposes: providing stability for interior walls, including chimneys and windcatchers, and supporting the load and installation elements of the shading system. Adjusting the design to use cast-in-situ reinforced concrete (RC) frames instead of prefabricated concrete elements allows for flexibility in utilizing two structure types, each serving a distinct function.

While maintaining a unified structure, the

exposed structural elements supporting the shading can be substituted with tree trunks, commonly used locally. This aesthetic adjustment removes concrete elements from view, giving the school a more rural look, and enhances social engagement by utilizing local expertise, eliminating the need for outside specialists.

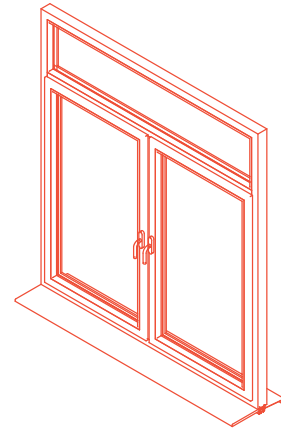
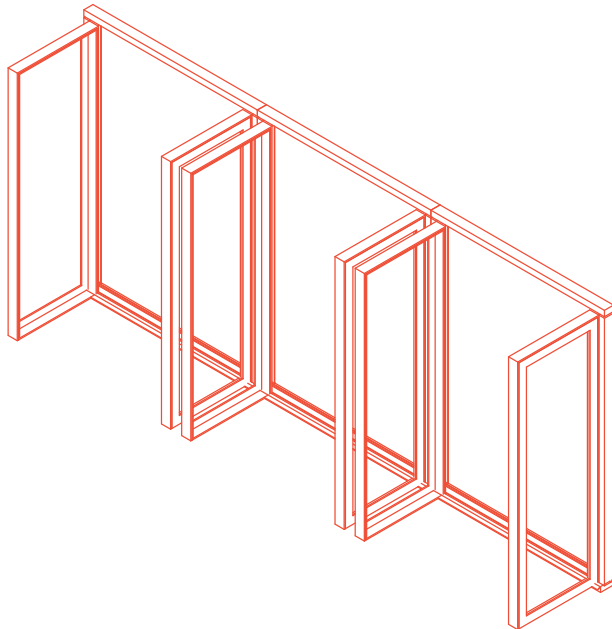
Openings

Locally Made: Wooden Patterned Frames

"Children holding handmade window frames with wood and wickerwork"
Hadi Aledavood. 2023.



Design Proposal: Steel Frame Doors and Windows



The proposal suggests using steel frame doors covered with wooden louvers made of palm wood. However, based on insights from the regional visit, wooden frames could potentially replace the steel ones. Additionally, UPVC windows contrast with locally made doors and can be substituted with wooden window frames covered with wickerwork (Hasir) that can be closed during non-operational hours. This adjustment in the openings enhances the school's rural aesthetic while also incorporating local

handicrafts and promoting social involvement in the construction process.

Mechanical Adoption

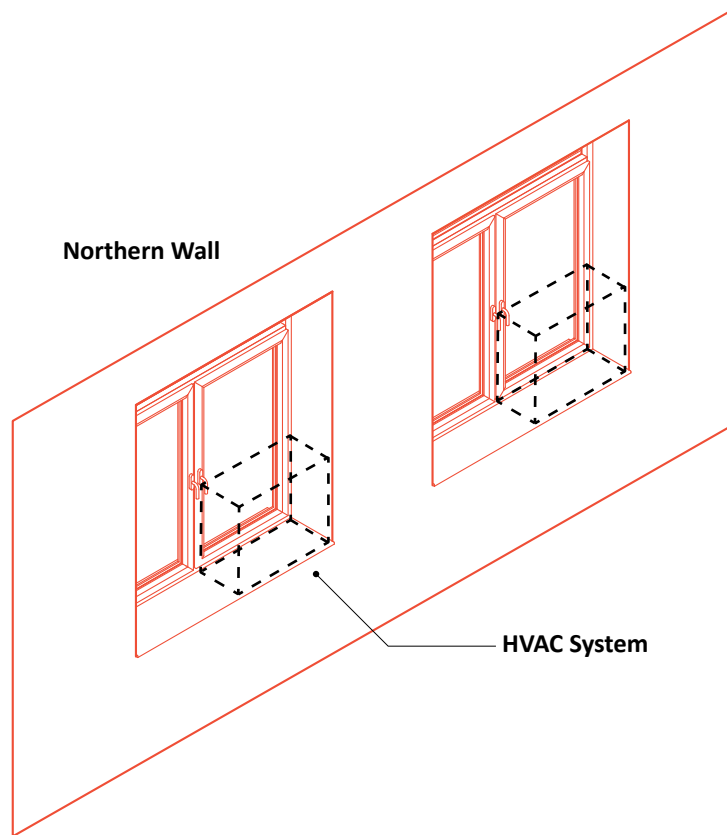
Locally Popular: HVAC Systems

"Air Conditioners of a school. Dooshinkouh"

Photo by the Author.



Design Proposal: Relying on passive strategies



The passive strategies incorporated into the design proposal aim to significantly improve the thermal comfort for students. However, the extreme heat in Sistan & Baluchestan may still necessitate the use of HVAC systems. While passive strategies can substantially reduce electricity costs and ensure the school's operation during frequent power outages, HVAC systems are still essential. According to local residents and social activists, the indigenous community is unlikely to show interest in buildings

without HVAC systems, considering them a necessity. Therefore, the regional visit prompted the inclusion of HVAC systems. In Sistan & Baluchestan, the most commonly used and preferred HVAC systems are made in Pakistan, providing both cooling and heating with minimal space and mechanical installation requirements. The shaded northern wall can potentially accommodate the HVAC systems, with the thickness of the walls allowing for the units to be seamlessly integrated within the wall structure.

Shading Material

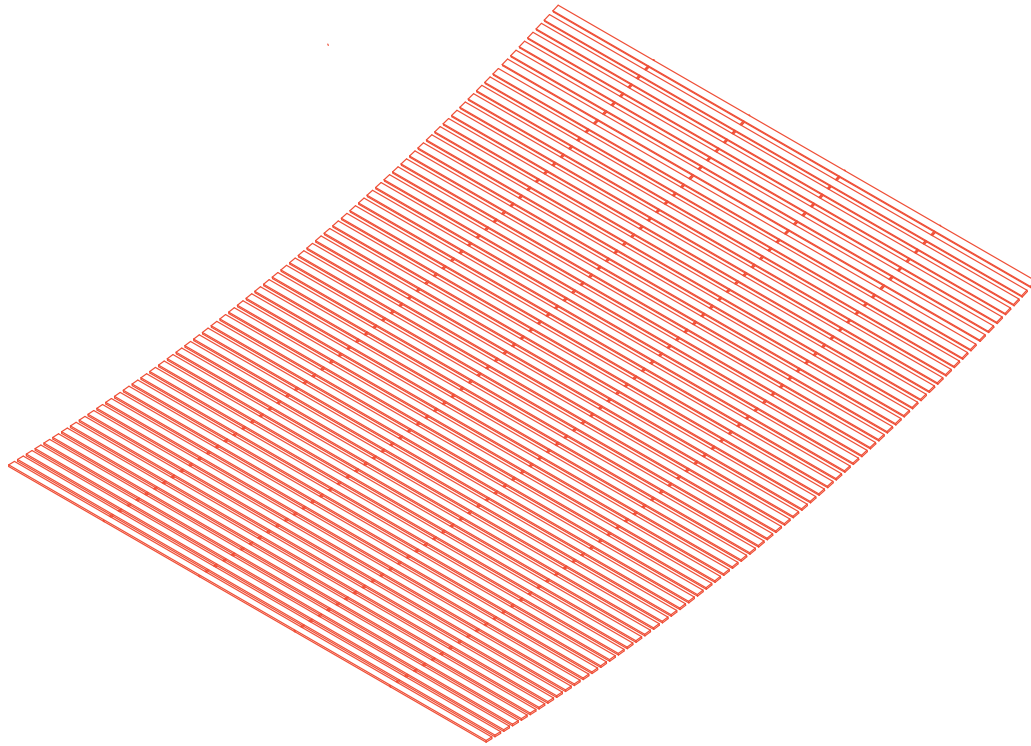
Locally available: Hasir made of palm leaves

"A Kapar dwelling. Dooshinkouh"

Photo by the Author.



Design Proposal: Hasir made of palm wood



The shading element in the design proposal is made of Hasir, a traditional wickerwork widely available in northern and southern Iran. Hasir can be crafted from palm leaves, wood, bamboo, reed, and other similar locally grown plants. The regional visit raised two concerns about this strategy. Firstly, the weight of Hasir is significant. The proposal suggests shading made from palm branches, which are notably heavy. While Hasir made from bamboo or reed is lighter, these materials are native to northern Iran

and would need to be imported to the site.

Locally, a lighter type of Hasir is used for covering Kapar structures. This type, made from palm or Daz leaves, is denser than the wooden variety and has a lifespan of up to five years. Secondly, to address practical concerns, the originally proposed 12x12 meter sections of Hasir should be divided into smaller parts. This adjustment will facilitate easier replacement in case of damage, as well as simpler assembly and installation.

The Executive Phase

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Nilag Association

Following the thesis and its objectives into the executive phase requires advanced steps to ensure the accuracy of the design proposal and its adjustments, as well as to secure funding in collaboration with charitable NGOs.

Regarding architectural design, it is crucial to accurately measure and simulate the passive design strategies' implementation to ensure their effectiveness. These simulations will help refine and adjust the design, improving the functionality and practicality of the passive design strategies. In addition, these simulations will provide insights into whether additional mechanical elements are necessary to enhance functionality, which can impact the overall construction budget and estimated operational costs post-establishment.

Furthermore, the building's structure needs simulation and modification to ensure stability under the adjustments made for passive strategies and various loads, including chimneys, wind catchers, and shading elements. Simulating passive strategies and structural integrity is essential for documenting the project by legal construction requirements set by the Organization for Renovation, Development, and Equipment of Schools. This process also helps in estimating the overall costs, including adjustments made during the design review.

Moreover, it is crucial to present the design

proposal and its cost estimation to charitable NGOs and philanthropists to attract potential collaborators for the construction and operation of the school. This presentation should aim to secure the necessary funding for the project.

Therefore, forming a multidisciplinary team of experts is essential to achieve these objectives effectively. A team that handles the necessary simulations enhances the proposal's credibility when approaching NGOs. Simultaneously, presenting the project as a collective effort from a certified group rather than an individual gains authority and legitimacy. Additionally, the assembled team can independently raise funds for the project, facilitating the transition to the executive phase and fulfilling its prerequisites. This comprehensive approach ensures detailed planning, precise documentation, and efficient communication with potential partners and funding organizations.

As a result, individuals with diverse skills in architecture, engineering, communication, law, and graphics were invited to join the lead architect and researcher of the project in forming a non-profit association. Named Nilag Association, after the hills surrounding the proposed elementary school building in Osman Abad, the association aims to advance the project to the executive phase as its primary goal.

“Championing sustainability, Nilag Association advocates for using local resources and implementing passive and vernacular strategies in our projects.”

About Nilag

Nilag Association is a non-profit organization dedicated to advancing education, training, and sustainable development in rural, underdeveloped regions worldwide. We focus on crafting research and design proposals and promoting social projects to drive meaningful change.

Our multidisciplinary team, comprising architects, engineers, and other professionals, collaborates closely with charitable organizations and funding institutions to bring our ideas to life. We aim to transform charitable social facilities by offering valuable insights to those dedicated to improving the lives of Indigenous populations. At Nilag, we prioritize community empowerment by involving users and stakeholders throughout our projects’ planning and implementation stages. By leveraging the knowledge and skills of local community members and providing them with training, we aim to blend traditional and modern techniques effectively.

Championing sustainability, Nilag Association advocates for using local resources and implementing passive and vernacular strategies in our projects. Our commitment lies in creating adaptable and sustainable solutions harmonizing progress with

environmental responsibility.

Nilag is dedicated to upholding the principles of equity, diversity, and inclusion. Our association comprises individuals from diverse backgrounds, cultures, and nationalities, bringing a wide range of skills and expertise. We prioritize effective communication with our audience by using English, Italian, and Farsi—the most commonly spoken languages within our team—and we aim to expand this linguistic diversity with new members. We are committed to promoting equal opportunities for all by amplifying the voices of the groups and individuals we work with, particularly sexual, gender, and ethnic minorities, while always respecting the rights and privacy of the communities we serve.

NILAG ASSOCIATION

Nilag APS

Type: non-profit association

Registration No.: 676

Date of Registration: 29/02/2024

Codice Fiscale: 97900710019

No. Of Members: 8

Establishment & Registration

Nilag Association was formally established on February 27th, 2024, in Turin, Italy, by legislative decree 117/2017, with its founding members and primary board of directors signing its status. Following the acquisition of the Fiscal Code, the association was officially registered by the Agenzia delle Entrate (Revenue Agency) on February 29th, 2024, commencing operations under the presidency of Farshad Sadeghi.

Subsequently, the initial board of directors convened to elect additional members, formalizing roles such as vice-president, treasurer, and secretary within the board structure. Once the association is registered and its board constituted, it must align its objectives with the Single National Register of the Third Sector (RUNTS). The association, focusing on constructing and fundraising for an elementary public school building, aligns with the criteria set forth for Social Promotion Associations (APS) under Italian law.

Social Promotion Associations (APS) were introduced by Law 383/2000 and are recognized as entities within the Third Sector. They must adhere to specific requirements, including non-profit status, the pursuit of activities of general interest, and registration in the RUNTS.

On June 3rd, 2024, Nilag Association received registration under the Social Promotion Associations section with directory number 139020 and protocol number 0025056. This approval integrated the acronym “APS” into its corporate name, officially becoming “NILAG APS.”

sione

Statuto ASSOCIAZIONE NILAG APS

Definizioni e Finalità

Principi generali

Non riconosciuta, ai sensi del Codice del Terzo Settore (D.Lgs 117/2017, di seguito indicato con "Codice"), e delle norme del Codice civile in tema di associazioni, NILAG (indicata anche come "la Associazione") ha sede legale in Corso Giacomo Matteotti 35, Torino.

La sede dell'associazione, una volta ottenuta l'iscrizione nella sezione Associazioni di Promozione Sociale del Registro delle Associazioni di Promozione Sociale (RUNTS) sarà integrata automaticamente con l'acronimo "NILAG APS". Il trasferimento della sede legale all'interno del medesimo Comune deliberato dalla Associazione comporta modifica statutaria, ma l'obbligo di comunicazione agli uffici competenti.

L'Associazione ha sede nel Terzo settore (ETS), è centro di vita associativa, autonomo, pluralista, apolitico, a partecipazione democratica e antifascista ed ha durata illimitata; non persegue finalità di lucro e non è finalizzata alla distribuzione anche indiretta di utili ed avanzi di gestione, fondi e riserve comunque dovuti, associati, lavoratori e collaboratori, amministratori ed altri componenti degli organi sociali, al recesso o di ogni altra ipotesi di scioglimento individuale del rapporto associativo.

L'Associazione ha finalità civiche, solidaristiche e di utilità sociale.

La finalità principale dell'Associazione è la promozione di progetti sociali connessi all'educazione, alla formazione e alla promozione sociale, sia all'interno che all'esterno del territorio dello Stato Italiano, nonché ogni attività che contribuisce a promuovere la partecipazione e lo sviluppo della comunità, come dell'intera comunità.

L'Associazione ha attività di interesse generale.

L'Associazione può esercitare, ai sensi delle leggi e degli strumenti rispettivi, le attività raccolte fondi ai sensi della legge.

Volontariato

L'Associazione si avvale del volontariato. La qualifica di volontario è riconosciuta al volontario e con ogni attività volontaria.

L'Associazione ha attività di interesse generale.

L'Associazione ha attività di interesse generale.

Pubblicazione

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al precedente articolo
Direttivo,

Teams

On March 6, 2024, Nilag Association held its first official meeting as a registered organization. This crucial and mandatory gathering aimed to select and vote for the board of directors and key roles within it. As a result, the board expanded to nine members, and the positions of vice-president, secretary, and treasurer were assigned based on the members' votes.

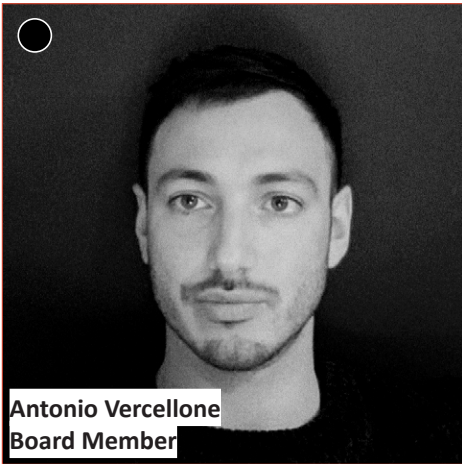
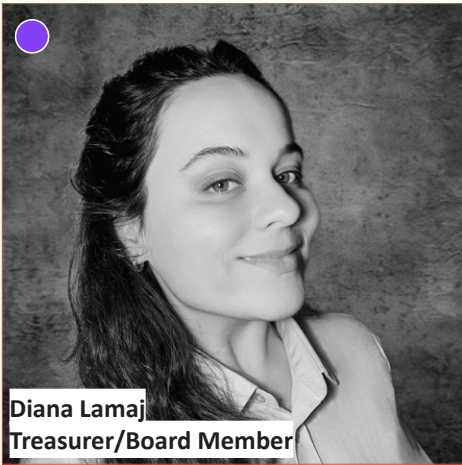
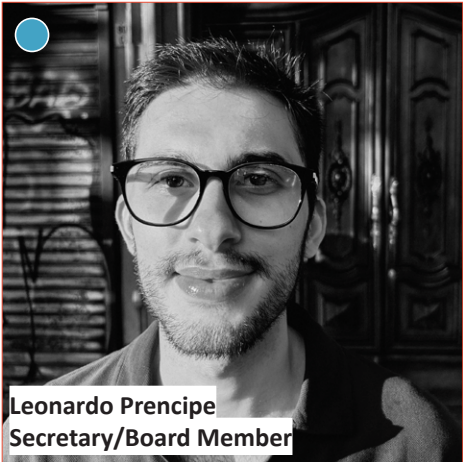
Consequently, Nilag Association commenced its operations with a diverse team of professionals from various fields, including Architectural Engineering, Building Engineering, Building Physics and Technology, Management, Communication, and Law. To clearly define roles and enhance collaboration among experts with shared interests and initiatives, several specialized teams were established. Each team contributes its expertise to the association and provides monthly reports on their assigned tasks, which are overseen by the president.

Currently, these teams are working closely together to further develop the architectural design of the Primary School building in Osman Abad, known as Nilag School. The architectural design team continues to advance the project based on data

gathered during the regional visit, while the Building Engineering and Building Physics and Technology teams are conducting simulations and measurements to ensure the building's components function effectively, using precise tools and software.

Simultaneously, the Graphic, Communication, and Legal Consultant teams are promoting the association to enhance and streamline communications with philanthropists and NGOs, seeking collaboration to secure funds for the executive phase. Additionally, they are fulfilling the legal requirements for fundraising, enabling the association to participate beyond architectural and construction practices.

Founding Members
(Board of Directors)



Distribution of Board of Directors and Their Associated Team

Research

The Research Team gathers, analyzes, and interprets data to inform the association's projects. They conduct field studies, surveys, and literature reviews to understand community needs and support strategic planning.

Design

The Design Team creates innovative and sustainable architectural solutions based on research findings. They focus on functionality, aesthetics, and cultural relevance to enhance the project areas.

Building Engineerings

The Building Engineering Team ensures the structural integrity and technical soundness of construction projects. They develop engineering plans that comply with local building codes and prioritize safety and durability.

Building Technology and Physics

The Building Technology and Physics Team integrates advanced technologies and scientific principles into construction processes. They optimize building performance and sustainability through innovative materials and energy-efficient systems.

Graphic

The Graphic Team designs visual content to communicate the association's mission and impact. They create brochures, reports, presentations, and digital media to engage stakeholders and the public.

Public Relations

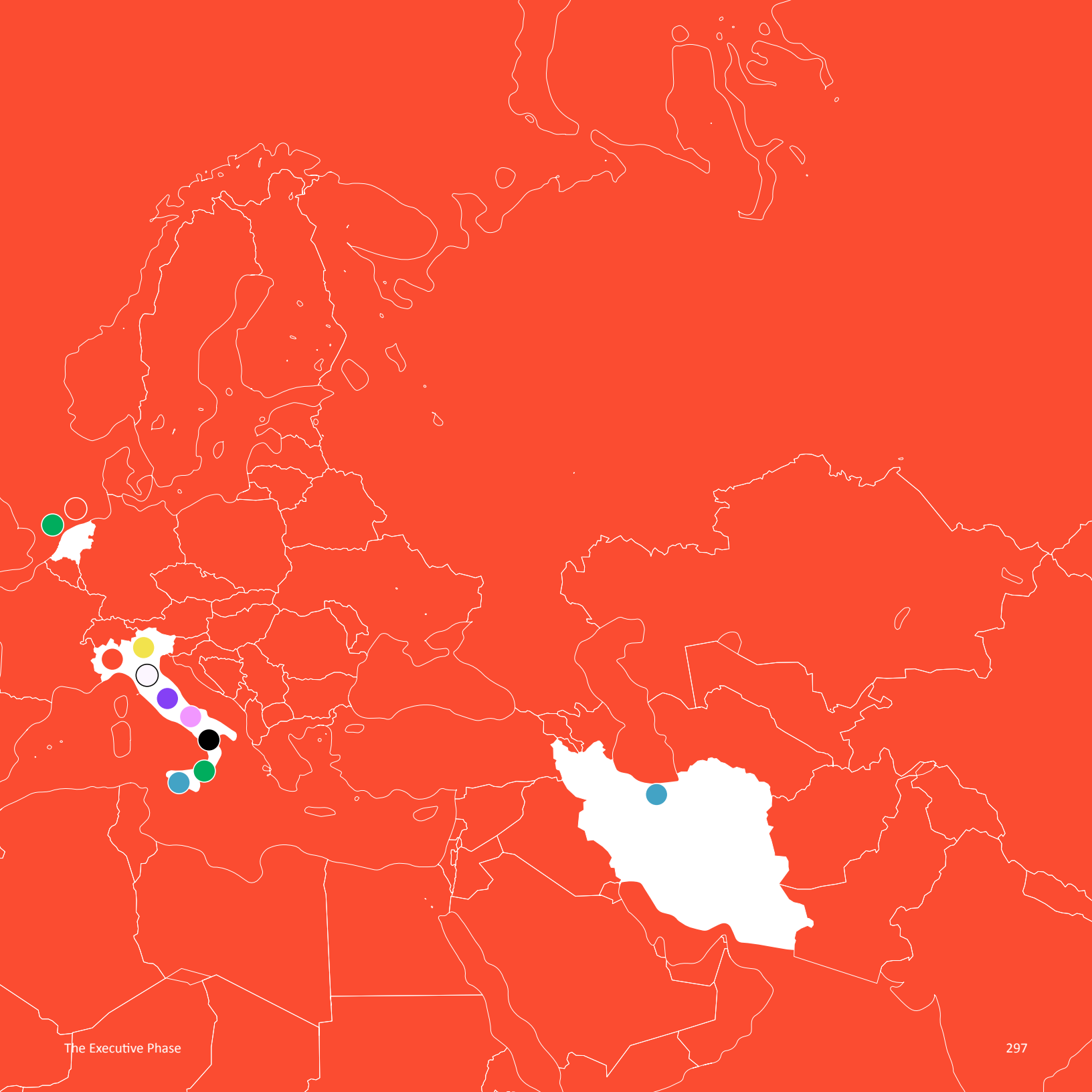
The Public Relations Team manages the association's public image and relationships. They handle media communications, social media, events, and community outreach to promote and support the association's work.

Legal Consultant

The Legal Consultant Team provides legal advice to ensure compliance with laws and regulations. They address contracts, intellectual property, employment law, and governance issues to protect the association's interests.

Management

The Management Team oversee the coordination and efficiency of all teams. They manage meetings, create reports, develop schedules, assign tasks, and build networks. They ensure that projects progress smoothly and that all team members are aligned with the association's goals.



Nilag's Organization - Board Members and Their Volunteer Affiliates by Team

NILAG
ASSOCIATION



Farshad Sadeghi



Shaghayegh
Shayan



Diana Lamaj



Hamed
Mozafarian



Parham Esmaeili



Nastaran Farahani

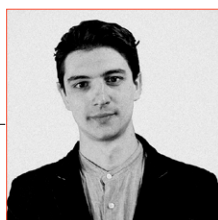


Leonardo Prencipe

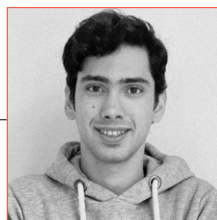


Antonio
Vercellone

Main Activities
Side Activities



**Daniele
Campobenedetto**



Faraz Akhlaghi



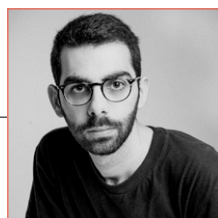
Hadi Aledavood



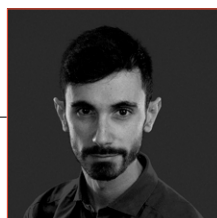
Carlo Micono



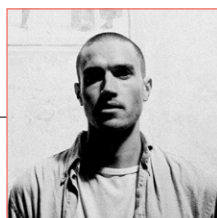
Marianna Nigra



Stefano Lucchetti



Mirko Matricardi



Phil Baber



Ario Tehrani

- Research
- Field Study
- Architectural Concept
- Architectural Planning
- Architeturational Photography
- Furniture Design
- Materials
- 3D Modeling
- Rendering
- Structural Design
- Structural Details
- Structural Simulation
- Structural Review
- Structural Documentation
- Technical Details
- Mechanical Adoption
- Construction Cost
- Passive Strategy Design
- Passive Strategy Implementation
- Passive Strategy Simulation
- Passive Strategy Review
- Graphical Identity
- Social Media Layout
- Website Design
- Brochure Design
- Registration
- RUNTS
- Verbale Documentation
- Tax Report
- Bank Account
- Communication & Networking
- Contacting NGOs & Philantropists
- Statuto
- Atto Costitutivo
- Legal Consultation
- Partnerships and Collaborations



Nilag Association's Online and presence meeting on the 28th of June 2024"
Photo by the Author.

Objectives

In addition to advancing the Nilag Primary School in Osman Abad through its executive phase and securing necessary funds, Nilag Association is committed to providing ongoing supervision and support by including an affiliate member present on the construction site to ensure the project's completion. To further support the school

and its academic initiatives, Nilag will engage in fundraising through donations, partnerships with non-governmental organizations, events, and Online campaigns. These efforts will also address design elements that may need enhancement after implementation or those not covered by the initial construction budget. Nilag is dedicated to creating an enriched learning environment and providing pedagogical support to enhance the educational experience for rural students.

The province of Sistan and Baluchestan faces numerous challenges stemming from historical marginalization by the state, socioeconomic disparities, political conflicts, and ethnic divisions.

Some Insights →

SISTAN & BALUCHESTAN

First Project

For our first project, Nilag has been looking into the day-to-day life and struggles of the local communities in the Sistan and Baluchestan province in south-eastern Iran. →

Community Engagement



Approach

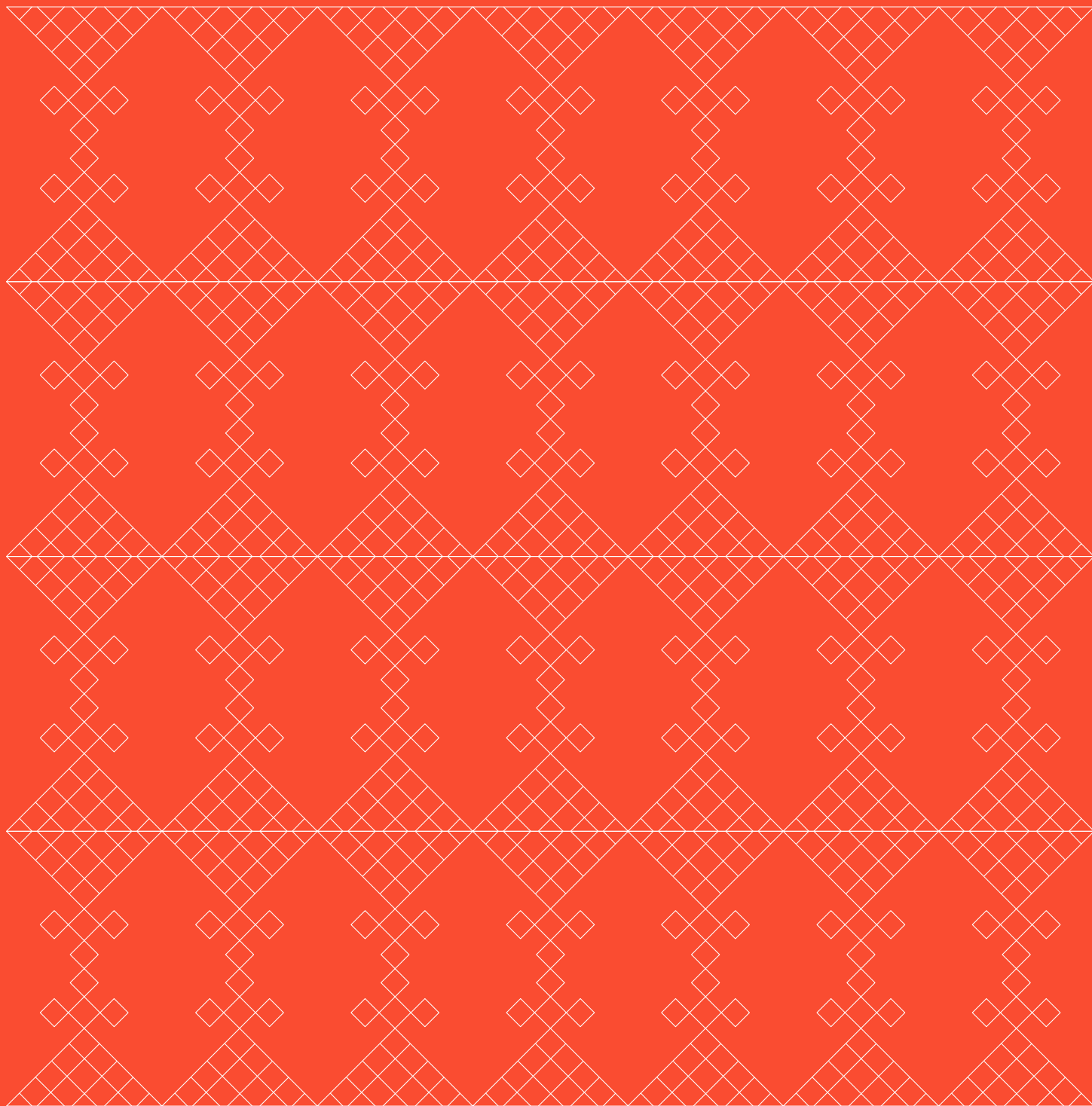
Championing sustainability, Nilag Association advocates using local resources and implementing passive, vernacular strategies on all our projects. →

NILAG ASSOCIATION

Instagram Page of Nilag Association

Moreover, Nilag Association aims to leverage the expertise acquired during the research, design, and execution phases of the Nilag School project to enhance educational facilities in impoverished regions of Sistan & Baluchestan province, Iran. Looking ahead, the association plans to extend its efforts to other areas worldwide facing similar educational challenges. By creating regionally and culturally tailored design solutions, Nilag seeks to transform charity-built school buildings, fostering

academic development and empowering indigenous communities. The association's initiatives are dedicated to engaging rural populations in charitable endeavors, ensuring a comprehensive understanding of remote education requirements while upholding sustainability principles suited to each context.



Looking Ahead...

In conclusion, this thesis has addressed the critical challenges impacting the effectiveness of charity-built schools in Iran, focusing on the broader national educational issues reflected in remote rural areas. Practical educational improvements in these deprived regions depend heavily on charitable initiatives. Remote rural schools face unique obstacles such as poverty, inadequate infrastructure, and entrenched cultural beliefs, all of which exacerbate educational difficulties, as exemplified by the province of Sistan and Baluchestan.

The field study conducted in Sistan and Baluchestan highlighted the cultural and social challenges associated with charitable activities, building upon the discussions from earlier chapters. This visit was essential for understanding local shortages, perspectives on charity, and the specific needs of each village and region. The findings from the visit, which primarily concerned cultural matters and were less relevant to architectural practices, were too broad to be included in this thesis. Consequently, they were communicated to the Nilag Association board members for consideration throughout the construction progress.

The regional visit also aimed to address the architectural shortcomings of existing charity-built schools and enhance the new design proposal that aligns with the unique characteristics of the context.

By utilizing vernacular construction techniques, available materials, and local skills, the proposed design intends to symbolize rural development while avoiding the spread of low-quality, identity-less buildings. Furthermore, this design seeks to deeply integrate with the community by involving locals in the planning, construction, and operation processes, thus rethinking conventional charitable approaches to educational development.

The ultimate goal of this thesis is to bring this design to fruition through collaboration with charities and non-profit organizations, requiring detailed simulations to validate its functionality. This validation process includes demonstrating the building performance, cost estimates, construction phases, and specific requirements to ensure a comprehensive justification for the project. Such meticulous validation is essential for securing partnerships and ensuring the successful implementation of the school building.

Achieving this goal necessitates coordinated teamwork to review the project from multiple perspectives, including those of a multidisciplinary team. Establishing Nilag Association, comprising experts from various fields, not only advances the Nilag Primary School in Osman Abad to the execution phase but also significantly enhances the project's credibility and objectives. This platform will enable

“While the thesis has addressed its initial question, it continues to progress towards its broader goals through the ongoing efforts of the Nilg Association.”

the application of gained experiences from this project to expand and develop educational centers in deprived areas of Iran and, ultimately, worldwide.

Following the completion and presentation of the thesis, the association plans to present the modified design proposal to philanthropists, charitable NGOs, and institutions to seek partnerships for the realization phase. The initial focus will be on Iranian NGOs to facilitate the legal and practical aspects of establishing the school. With the association now registered as an APS (Social Promotion Association) and equipped with the financial infrastructure to receive funds, it will organize events and pitch presentations with the support of other non-profit associations in Turin and across Europe. Additionally, the association aims to submit the architectural and structural documentation to the Organization for Renovation, Development, and Equipment of Schools to obtain the necessary certifications before moving to the execution phase.

While the thesis has addressed its initial question, it continues to progress towards its broader goals through the ongoing efforts of the Nilg Association. The association remains actively involved in refining the design proposal's quality and feasibility and validating its approaches.

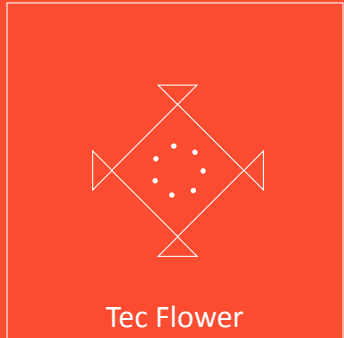
Ultimately, the efforts invested in this thesis aim to inspire individuals to contribute to educational

development in remote indigenous societies using their architectural expertise. The Nilg Association aspires to provide opportunities for more graduates and experts with diverse backgrounds to contribute their skills and participate in initiatives that create lasting impacts through innovation, creativity, and meticulous planning, thereby enhancing the educational quality of communities in need.

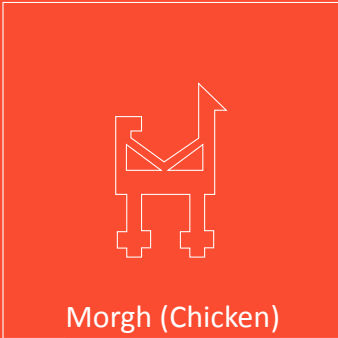
I hope this research and the new design proposal will offer valuable insights to volunteers in Sistan and Baluchestan, encouraging a reevaluation of charitable initiatives in school construction.



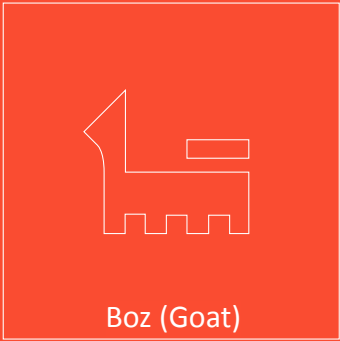
Chapter Page Opening Patterns
(Ghasemi, Mahmoudi, and Mousavi 2013)



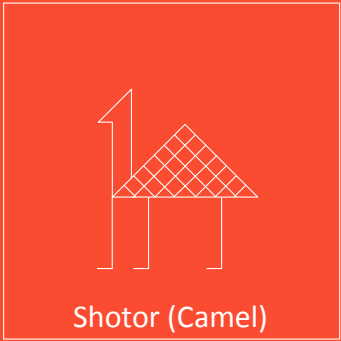
Tec Flower



Morgh (Chicken)



Boz (Goat)



Shotor (Camel)



Katarouk



Eight Leaves Flower



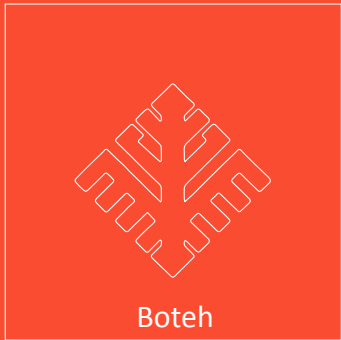
Bal-e-Kaboutar
(Pigeon Wing)



Chapras



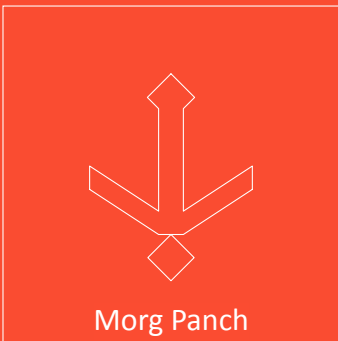
Ketar Padak



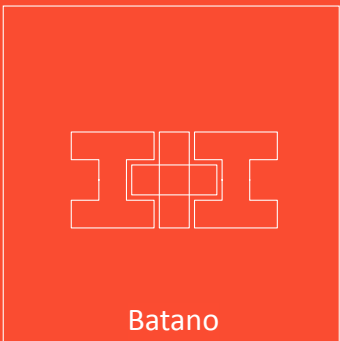
Botteh



Eight Leaves Flower



Morg Panch



Batano



Kapok



Each chapter opens with an illustration of patterns that illustrate figures used in Baluchi needlework, particularly those known in Saravan County of Sistan and Baluchestan. Suzandozi, or needlework, is a type of handicraft recognized by UNESCO and is among the most prevalent and distinctive arts practiced by Baluch women.

In the needlework figures of Saravan, many patterns and motifs are grounded in geometric principles yet intimately connected to the life, nature,

and unique perspective of the local people. The natural motifs in Baluchi needlework cover a diverse array of subjects, which can be broadly categorized into three groups: plant motifs, animal motifs, and those inspired by other aspects of nature.

Thus, this thesis honors this captivating art form by showcasing some of the most iconic motifs featured in the traditional clothing of the Baluchi people.

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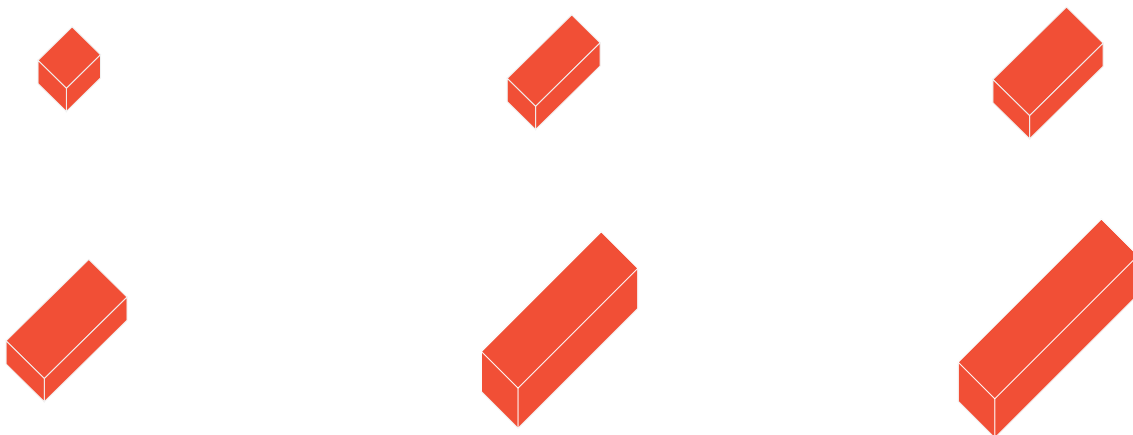
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**Architectural Typologies of Rural One-to-Six Classroom
Schools in Sistan & Baluchestan**