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Between Rock, Sea & Palm

- researching vernacular architecture on Qeshm Island

**ausgeführt zum Zwecke der Erlangung des
akademischen Grades einer Diplom-Ingenieurin
unter der Leitung von**

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Abstract

Vernacular architecture is an important part of a region's culture. It reflects the region's history, religion, surroundings, climatic conditions and mentality. As a communal good, it evolved over hundreds of years and changed with the residents. To understand this multifaceted construct in its entirety, methods from building research, cultural- and social anthropology and cinematic documentation were used.

The thesis "Between, Rock, Sea & Palm – researching vernacular architecture on Qeshm Island" concentrates on this, till now, barely researched topic. Qeshm is the biggest island in the Persian Gulf and located at a militarily important location at the mouth of the Gulf. This often put it at the centre for the struggle for dominance in the Gulf.

To ensure a comprehensive view and reach a broader audience, the thesis is split into a practical part in the form of a documentary film and a theoretical written part that constitutes the scientific base of the movie.

The general topics covered by this thesis are approaches and methods in building research, and the current state of the vernacular architecture on the island. These topics are covered with reference to a research project by the TU Wien in 2015, which was documented on film, and the existing literature.

A specific area of interest for this thesis is the stone-loam architecture found in the fishing villages on Qeshm's coast, including their village structure, the courtyard type, the water reservoirs and the palm garden houses.

Insight into the island's history and factors that have influenced life and architecture on the island are given. These include historical events such as the slave trade, the advent of Islam in the Gulf, access to new building materials and techniques through trade, tribal movement throughout the Gulf, as well as modern influences through globalisation, climate change and political intervention such as Geoparks and the Free Zones.

Globally, a striving towards an international style, that often disregards way of life and climatic condition and endangers cultural heritage, can be seen. More so now than ever, given the importance of sustainability and the scarcity of resources, a lot can be learned from vernacular architecture.

Abstrakt

Vernakuläre Architektur ist ein wichtiger Bestandteil der Kultur einer Region. Sie spiegelt die Geschichte, Religion, Umgebung, Klima und Denkweise der Bevölkerung wieder und ist kommunales Gut, das sich über hunderte Jahre entwickelt und mit den Bewohnern verändert hat. Um dieses vielschichtige Konstrukt in seiner Ganzheit zu verstehen, wurden Methoden der Bauforschung, der Kultur- und Sozialanthropologie sowie der filmischen Dokumentation verwendet.

Die Diplomarbeit „Between, Rock, Sea & Palm – researching vernacular architecture on Qeshm Island“ befasst sich mit dieser bisher wenig erforschten Thematik auf Qeshm. Sie ist die größte Insel im Persischen Golf und liegt direkt an dessen Mündung und stand durch diese strategisch wichtige Lage oft im Zentrum des Kampfes um die Vorherrschaft im Golf.

Um der gesamtheitlichen Betrachtung bestmöglich gerecht zu werden und die Thematik einem breiten Publikum nahe zu bringen, ist die Arbeit in einen praktischen Teil, in Form eines Dokumentarfilms und einen theoretischen, schriftlichen Teil, der die wissenschaftliche Basis des Films darstellt, aufgeteilt.

Hauptthemen der Arbeit sind das Vorgehen und die Methodik in der Bauforschung, sowie der derzeitige Stand und die Entwicklung der vernakulären Architektur auf der Insel. Diese wird auf Basis eines Forschungsprojekts der TU Wien in 2015, das filmisch dokumentiert wurde, und der vorhandenen Literatur aufgearbeitet.

Die Lehm-Stein Architektur der Fischerdörfer an der Küste von Qeshm; deren Dorfstruktur, der Hofhaustypus, die Wasserreservoirs und die Palmgartenhäuser werden genauer untersucht.

Es werden Einblicke in die Geschichte der Insel und Faktoren die das Leben und die Architektur beeinflusst haben gegeben. Zu diesen zählen historische Ereignisse wie der Sklavenhandel, die Islamisierung des Golfes, das Vorhanden werden neuer Baustoffe und Techniken durch Handelsverbindungen, Stammesbewegung durch den Golf, sowie moderne Einflüsse durch Globalisierung, Klimawandel und politische Interventionen in Form von Geoparks und Free Zones.

Weltweit kann man heutzutage das Streben nach einem internationalen Stil, der oft Lebensweisen und klimatische Bedingungen vernachlässigt und das baukulturelle Erbe bedroht, beobachten. Doch gerade in unserer Zeit, wo Ressourcenknappheit und Nachhaltigkeit wichtige Themen sind kann von vernakulärer Architektur viel gelernt werden.

Danksagung

Dieses Projekt hat mich über eine lange Zeit begleitet und wäre ohne die Hilfe vieler Leute nicht möglich gewesen, an dieser Stelle möchte ich mich bei ihnen bedanken.

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Auch bei allen Beteiligten der Forschungsreise, möchte ich mich bedanken:

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Bei meinen Studienkollegen in Österreich und im Iran, besonders bei Lisa Mattanovich, die mich auf der gesamten Reise und Teilen meines Studiums begleitet hat und Sebastian Pernegger der mir sein Ohr geliehen hat, aber auch bei allen anderen Studenten des Forschungsprojektes deren Arbeit das Fundament des Filmes darstellt; sowie den Projektbeteiligten vor Ort; den Bewohnern von Chahu Gharbi und Chahu Sharghi und Hasan Sharifi.

Des Weiteren möchte ich mich bei Herrn Ramin Sadighi für das großzügige zur Verfügung stellen der Musik bedanken. Die intensive Auseinandersetzung mit der Kultur, Musik und Natur von Qeshm Island ist in den Liedern der Musiker von Hermes Records spürbar und hat meiner Arbeit eine zusätzliche Tiefe verliehen.

Für die freundliche Unterstützung bei Übersetzungsarbeiten danke ich Frau Dipl.-Ing.ⁱⁿ Roya Ilkahani and Dipl.-Ing. Abdollah Eslami.

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1. Introduction

1.1. Why concentrate on the vernacular?

For me, the most interesting thing about architecture has always been how it influences and interacts with people. Humans alter their environment, or even build their surroundings from the ground up (or in some cases down) to fit their needs.

In different climatic conditions, cultures or times, these conditions change, influencing the built environment. If we look at how people build and ask questions—about why they do it in a specific way, why they use a certain material, or how things have changed over time—we can learn a lot of things about the society, their belief systems, gender differences, the occupations of inhabitants, building techniques and the availability of resources.

Today we live in a fast-paced world. Everyone is connected, everyone sees the same pictures and movies online and is striving towards some sort of idealised global style or mode of living. This has been mentioned in architecture for years as a sort of “international style” often showing great disregard for climatic conditions, cultural differences, the environment and the very basic things that make life and buildings diverse, unique and well established in their surroundings.

“Vernacular Architecture comprises the dwellings and all other buildings of the people. Related to their environmental contexts and available resources, they are customarily owner or community built, utilizing traditional technologies. All forms of vernacular architecture are built to meet the specific needs, accommodating the values, economies and ways of living of the cultures that produce them.”

- Oliver (2006: 30)

By taking a step back and looking at vernacular architecture—constructions far removed from building regulations and largely built by the people who live in them, with the material locally available—we can find new perspectives on our modern world and reflect on decisions we take when designing (or asking somebody else to design) our surroundings. It gives us a chance to revisit building techniques that evolved in harsh climatic conditions before they disappear, and add to our repertoire of possible solutions to the problems we encounter in today’s world. This knowledge can help us make well-informed decisions about the techniques and materials we choose without having to resort to a “one size fits all” approach at the expense of diversity, the environment and ultimately our own quality of life.

1.2. Why make a movie about a research project on an island no one has ever heard of?

Throughout my studies I have compiled a seemingly eclectic ensemble of projects, research projects and courses, from informal settlements in Jordan and research projects in environmental studies, to forays into different techniques such as programming, life-cycle assessment, and now documentary film. All of these choices have been driven by an interest in diversity, complexity and systemic thinking. Furthermore, these subjects can also be found in this project.

Diversity and complexity are inherent to vernacular architecture. We can see this with the barely researched vernacular architecture of Qeshm, where the built environment has been influenced by different cultures travelling through and settling in the Gulf, by the change in the natural resources available, and by the passage of time. Systematic thinking can be seen in the effort to make sense of vernacular architecture with the help of approaches from different disciplines (namely architecture and socio-anthropology) and the presentation of these findings in the form of a documentary film. For me this was an opportunity to not only immerse myself in a project that I find interesting and worthwhile, but also to communicate the findings and ideology behind it to a wider audience.

The exact topic of my thesis wasn't clear from the beginning, but evolved out of my participation in the trip to Iran (and research project on Qeshm Island, lead by Prof. Rieger-Jandl) and the soft skill "Architekturdokumentation und Präsentation" by Dr. Ulrike Herbig. The subject evolved in the semester before the excursion and was informed by conversations and discussions I had with Dr. Herbig, Prof. Lehner and Prof. Rieger-Jandl. After more research on Qeshm Island's history, and additional information given to me by Aidia Dephour (who was also part of the research project and had already participated in a project on Qeshm before) I decided that the film would concentrate on the research project part of the trip.

1.3. Outline of Iran trip and research project on Qeshm Island, 2015

The project began with some introductory lectures by Prof. Andrea Rieger-Jandl (on loam architecture), Prof. Erich Lehner (on Persian architecture) and an introduction to building surveys by Dr. Irene Doubrawa.

We flew out to Tehran in February 2015. After a short stop at the University of Tehran and lectures by Dr. Renate Bornberg, Prof. Erich Lehner, Prof. Hermann Mückler and Prof. Andrea Rieger-Jandl, we flew to Qeshm Island. (for location of Qeshm see fig. 5.1. - 5.3 on page 86-87)

During the first few days on the island we stayed in Qeshm Town, the biggest town on the island. Here the Austrian group was joined by the Iranian group. We visited some of the geological sites and drove through the villages of Laaft, Haft Rangoo, Zirang, Holor, Darghan, Paiposht, Zainabi, Karavan and Kosheg (see fig. 5.2. on page 86) to get an idea of how they are structured and what materials were used. This was also necessary to give us an overview with which we could compare the villages we were going to research. We visited a *lenj*¹ factory, a 126-year-old clay house in Ramkan, and the village of Laaft, which is known for its delicately ornamented wind towers.

As we went further west we stayed in Mr. Sharifi's guesthouse in *Haft Rangoo*. This guesthouse is also featured in the documentary as it is one of the few newer buildings which still use old techniques and local materials.

From here we drove to the villages of Chahu Gharbi and Chahu Sharghi where some of the locals opened their homes to us. Before our trip the mayor was contacted by our Iranian colleagues and he in turn talked to the inhabitants so that we could gain access to their homes. (Rieger-Jandl, 2015a)

In the Interview with Prof. Mückler for the film he explained how gaining access to houses is hard regardless of where we research. We have to consider how we would feel about letting someone we don't know into our homes to measure and photograph everything and ask a lot of questions. He also points out that on Qeshm (due to cultural and religious factors) dwellings are considered more private than we are used to, which can be seen as a bigger hurdle and makes a basis of trust between the researcher and inhabitants even more important. (Mückler, 2015)

When we arrived we weren't sure if and when we would be allowed into the houses, so we started by surveying the buildings in the abandoned palm gardens. In the afternoon we were able to start with the courtyard houses in the village (some abandoned and some still in use).

While some of the Farsi-speaking students conducted the ethnological interviews with the inhabitants, the rest of the students sketched, measured and photographed the buildings.

Back at the guesthouse in Haft Rangoo (see fig. 5.2. on page 86) we were welcomed by a feast with traditional music and cooking.

1 *lenj*: boat used in gulf trade



figure 1.1.
research group walking through palm
gardens
(Rieger-Jandl, 2015b)



figure 1.2.
local man showing the group a wooden door
(Rieger-Jandl, 2015c)



figure 1.3.
group navigating a village
(Rieger-Jandl, 2015d)

figure 1.4.
local man opening door for research group
(Rieger-Jandl, 2015e)





figure 1.5.
top: picture of research group and some
residents of Haft Rangoo, in Mr. Sharifis'
guesthouse in Haft Rangoo
(Herbig, 2015a)



figure 1.6.
left: filming a well in Chah-Kuh Valley
(Lehner, 2015a)

On the last day the students presented and discussed their findings at the Qeshm branch of the Islamic Azad University. After a festive meal with our Iranian colleagues we said our goodbyes and left for the mainland early in the morning.

The ferry brought us from Qeshm Island to Bandar-e Abbas, (see fig. 5.1. on page 86) where we took a bus to the city of Kerman to see some examples of traditional Iranian architecture in a dry and hot climate (as opposed to Qeshm which is humid and hot). We also went to Bam and Rayen to see further examples of clay architecture.

The Austrian group then split up, as some went home and others followed different routes in Iran. I travelled north towards Tehran and visited Yazd, Esfahan, Kashan and Abyaneh (see fig. 5.1. on page 86) with a colleague.

While this part of the journey is not shown in the film it was important to get a better understanding of the culture and architecture in Iran. It would be an oversimplification to suggest that visiting other parts of Iran allowed me to fully understand Qeshm's vernacular architecture, but it did give me a deeper insight into how different Qeshm Island is from the rest of Iran. It truly is a Gulf island.

2. Information about work

2.1. Subject

The thesis consists of a documentary film and a theoretical written part. The documentary primarily focuses on two subjects: architectural research and the findings of the research project on Qeshm Island.

Some of the questions this work tries to answer are:

How and why is architectural research done?

What methods from different fields are used? What can be found out?

Is there a specific vernacular architecture on Qeshm? If so what is it like and how did it/is it evolving?
What materials are used and where are they/did they come from?

Qeshm is mainly known for economical reasons (free zone, gas fields, industry, trading) and its natural diversity (geopark; species of corals, birds and fish). How are these two seemingly opposing things influencing how people live?

Is it possible to see the different cultural influences from trade and tribal movement in the architecture on Qeshm?

What are villages like on Qeshm? How do people live?

What is a wind tower? How does it work? Is it still used?

What is a water reservoir? How does it work? Is it still used?

What are the findings of the research project? What can be learned from them?

How is gender affecting architecture? Are there specific male and female roles? Are these changing?

How are changes in climatic conditions, occupancy and globalisation affecting the rural communities on Qeshm? How is it affecting the architecture? What are the problems the communities are facing in today's world and how do they deal with them?

2.2. Target audience

One of the main advantages to making a film was the possibility of reaching a wider audience than that of a scientific publication.

The film is mainly directed at a European audience that is interested in architectural research, vernacular architecture, and other cultures. While the aim was to make the film interesting to people with varied backgrounds and levels of knowledge on the subject matter, some assumptions on familiarity with the general area (for example geographically) had to be made to be able to focus on the findings of the project and the project itself.

Some methods of field work are explained, while other interesting topics, such as differences in the field work of ethnology and architecture, had to be shortened to the very basics.

In the course of the work the decision was made that it is more sensible to inform the audience about how to get additional information than to try to cover everything in the film. Additional information is available in this thesis or the publication on the research project “Traditional architecture on Qeshm Island/Persian Gulf, Iran”, Andrea Rieger-Jandl and Irene Doubrawa (2016).

2.3. Language

The project documented by this thesis was an interdisciplinary, intercultural project. It consisted of Austrian, Turkish, German and Iranian students, and architects and professors from Austrian, German and Iranian universities. Most communication, especially between team members, was therefore in English.

To make the information collected accessible to a broad audience the movie and the written part of the thesis (and the book publishing the findings of the research project) are in English.

Interviews were conducted in the interviewees’ native language (German/Farsi) to allow them to speak more freely and to represent the intercultural aspect of the project. Dipl.-Ing. Roya Ilkahani and Dipl.-Ing. Abdollah Eslami translated the Farsi parts, while the German interviews were translated by the author. The decision to use subtitles and not voiceovers for interviews was aimed at native speakers able to understand the original footage.

The original footage of interviews conducted in Farsi is very limited—in particular, shots of interviews with locals are sparse. This should not be an indicator of the importance of their opinions and stories. It is merely due to the difficulties of obtaining and working with footage of people whose language one does not speak. All locals were very patient and willing to answer questions for the research project and to show the team around; often there was just no time or translator available to ask additional questions and not everyone was comfortable with being filmed.

2.4. Music

Music is a very important part of film: it can enhance the visuals, convey emotion or carry the narration forward. This is especially true in documentary film, where it can provide an additional layer of information about the culture that is covered.

The music on Qeshm, like the clothes, architecture and culture, is unique and reflects the different influences on the island.

“The original Qeshm music is a living reflection of the conjunction of all those cultures [Iran, Arab, Indian subcontinent, Africa and Portugal], as if narrating the history of that Land [sic], as well as acting a mirror reflecting today’s life of the Qeshm people: sorrows and joy, life and death.”

-Christophe Rezai (2003)

Most pieces used in the film are from the 2003 Hermes Records album “Qeshm Island”.

In the booklet to the CD, Ramin Sadighi (2003) writes about how he and Ali Boustan stumbled across a musical contest on Qeshm and were so captivated, they had to come back and create an album. The topics they cover with their pieces range from rituals such as the *Zaar*² to specific locations on the island or interpretations of the modern and the traditional sides of Qeshm interacting with each other. (Hermes Records, 2003)

Most of the songs used in the documentary are without vocals (or the parts of the songs without vocals) and take into account the musician’s inspiration for the piece.

2.5. Drawings

The drawings used in the film are aiming for a field-sketch feel to enhance this aspect of the project. The plans and ventilation animation are based on drawings by students for the building surveys. (see fig. 2.2) They were redrawn by hand, scanned and then coloured in Photoshop by the author. The maps are based on Google Maps images. (see fig. 5.1. - 5.3. on page 86-87)

² *Zaar*: a ritual practiced in different countries to rid someone of a spirit, more under “slavery and religion” (Fahimeh et al., 2015)

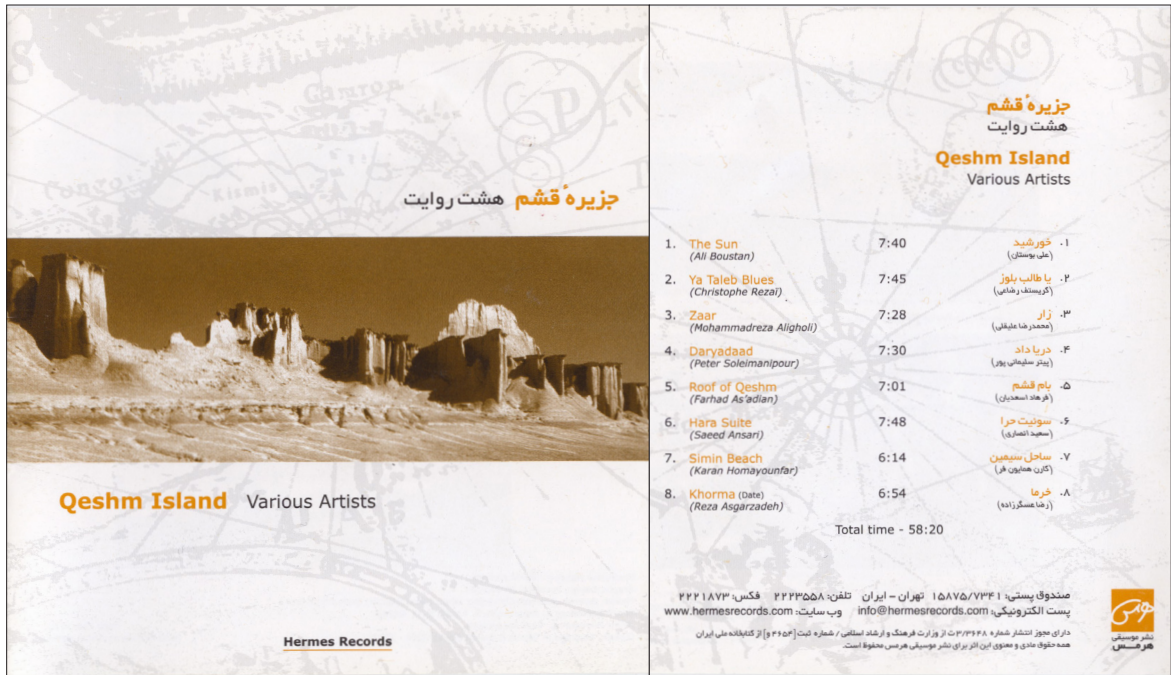
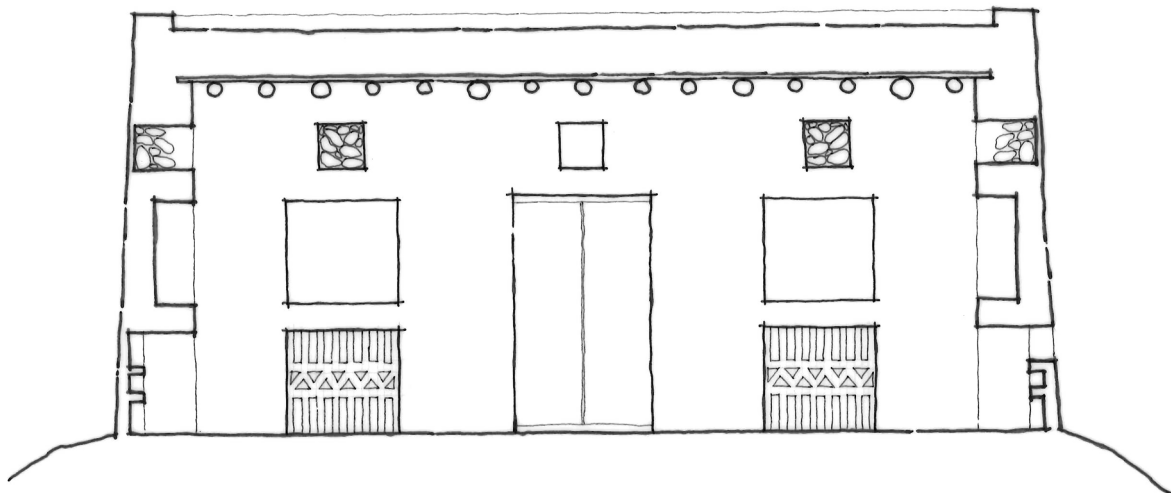


figure 2.1.
cover of "Qeshm Island" by Hermes Records
(Hermes Records, 2003)

figure 2.2.
sketch-style drawing used in documentary.
Based on plans produced by students after
research project
(Karner, 2017)



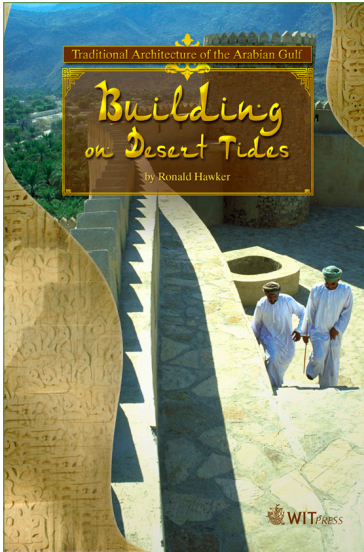


figure 2.3.
cover of "Building on desert tides. Traditional Architecture of the Arabian Gulf" by R. Hawker (2008)



figure 2.4.
student sketching a building on Qeshm Island (Rieger-Jandl, 2015f)

figure 2.5.
student interviewing resident (Karner, 2017)



2.6. Methodology

When analysing (and documenting) architecture, one has to consider it as an identity-forming cultural construct, shaped by a wide variety of influences. To dissect it strategies from different disciplines covering technical aspects as well as social and cultural factors have to be employed. (Rieger-Jandl, 2010: 477)

2.7. Scope and procurement of information

2.7.1. Literature

The information available on Qeshm Island and its vernacular architecture is very limited (at least for a non-Farsi-speaker). While there are countless papers, articles and books on Qeshm's geological sites, biodiversity, and business and tourism opportunities, the vernacular architecture is poorly covered. In the foreword to "Building on desert tides. Traditional Architecture of the Arabian Gulf" by R. Hawker, Nahayan Mabarak Al-Nahayan, the head of the United Arab Emirates Ministry of Culture, Youth and Social Development, states that "Academic interest in traditional architecture in the Gulf,..., is relatively recent." (2008)

The few publications available prior to the publication of the 2015 research project most notably include Hawker's (2008) book and the publication of the Iranian-led research project in Laaft that Aida Dephour (who was part of this project, as well as the 2015 research project on Qeshm) made available to the author. This meant that most of the information used in the film relies heavily on the 2015 research project led by Prof. Andrea Rieger-Jandl that was accompanied by the author.

2.7.2. Research project

Buildings surveys, sketches (see fig. 2.4) and photo-documentation are able to give a lot of insight into houses, materials and techniques. The students of the research project also used questionnaires to find more details about how they are/were used, and who by. The building surveys and questionnaires were conducted by Viennese and Iranian students during the research project and were made available to me for the documentary. (see fig. 2.5)

Houses and the people who live in them are inseparable. This is doubly true for houses built by the people who live in them (as in this case); they are tailored to their individuality and resemble their own and their families' history.

While it is possible to gather a lot of information from looking at these houses, it is also hard to find general rules. Each house has to be seen as an individual as well as part of a bigger pattern to find out what is typical for a region or era and what is due to the individuals who lived/live in these houses.

“... , we still need to analyze carefully how individual buildings have evolved and take into account the buildings’ complex history.”
- Hawker (2008)

2.8. Process

2.8.1. Finding a topic

This project began with the general idea to document the architecture seen in a trip to Iran, organised by Prof. Andrea Rieger-Jandl, on film. The trip consisted of a research project on the island of Qeshm (for villages visited see fig. 5.2. on page 86), with additional stops in different Iranian cities, situated mainly in the south (see fig. 5.1. - 5.3. on page 86-87).

After some research on Qeshm’s history it became obvious that concentrating on the research project on Qeshm Island would give the most unique and interesting documentary.

As mentioned under “2.7.1. Literature” the literature on Qeshm Island’s vernacular architecture (in English or German) is limited and not easy to find. At this point there was no definite idea of what the architecture on Qeshm looks like. So the first step was researching different types of mainly Iranian architecture like courtyard houses, qanats and water reservoirs and investigating Qeshm’s history. At this point it became clear that Qeshm is not so much an Iranian³ island as it is an island in the Persian Gulf that is part of Iran. This led to broader research including the history of the Gulf area, tribal movement, trade and architecture in the gulf. Viennese and English libraries as well as online databases were used.

2.8.2. Preparation for filming

As there was scant information about the vernacular architecture on Qeshm, it became clear that the film would rely heavily on the outcome of the research project and the film would have to evolve alongside it. This also constitutes the two main topics of the documentary: the research project and its findings.

³ Iran is a varied country, geographically as well as ethnically speaking. It covers the area from the Persian Gulf to the Caspian Sea and with it, deserts, high plateaus and different climatic conditions (Hawker, 2008) and is home to a variety of ethnicities and religions. (gulf2000, 2017) For these reasons the architecture also varies a great deal, but especially when considering Qeshm at the very edge of the Iranian border it is more accurate to view Iranian influence and Iran’s claim on the island as only part of the story. (For more information see 3.3. Short history of the Persian Gulf and Qeshm Island.)

The first one entails explaining the process, methods and intention of the research project, and the second communicates the findings and the essence of the life and architecture on the island.

Experts who were part of the research project were contacted and asked to be interviewed on site. Interview questions for experts, students and locals were prepared and a shot list and rough outline of topics was drafted.

During research for the film's content, additional research into how to organise, film, produce and edit a documentary was carried out.

2.8.3. On site

The footage used in the documentary was shot by Dr. Ulrike Herbig and the author. All footage was shot in Iran; two interviews were not shot on Qeshm but on mainland Iran due to scheduling difficulties.⁴

On site it was necessary to get a wide array of footage to cover most topics in the relatively short period of time that was available. It was a great advantage to have two people film. At the beginning the shot list was discussed with Dr. Herbig; as she is also the supervisor for this thesis she already knew the main idea of the documentary prior to the trip. While it is helpful to have an idea of what to shoot, a lot of situations were shot as they unfolded as there was no way of foreseeing them.

Most of the time the students were split up into smaller groups and the camerawomen tried following different ones. In this way it was possible to cover a lot of ground.

While there are many advantages to accompanying a research group, such as access to sites and information being readily available, there are also a few drawbacks. Groups are loud and attract attention, and it is hard to film when people are trying to take pictures and see what is happening. While a lot of this is part of the documentary's topic, it was also necessary to get more quiet shots and "undisturbed" streets. To achieve this the camerawomen often stayed behind to record ambient sound and get more natural shots. The shots of empty streets were by no means the result of waiting for extended periods of time until they were clear—rather, they capture the fact that quite a lot of the time, there was barely anyone around during the daytime. Getting shots of people, however, turned out to be more difficult, especially as the women frequently did not wish to be filmed for religious and cultural reasons, thereby explaining the lack of footage.

While filming the camerawomen mostly stuck with established guidelines of framing and shots—such as the rule of thirds⁵ and the 180° rule⁶—and also made sure to get different

4 One interview is not included in the film as there were issues with the quality of the recording.

5 rule of thirds: rule for filling a frame; for more information see webpage in bibliography

6 180° rule: covering only 180° of a scene with different shots, so as not to disorientate the viewer; for more information see webpage in bibliography

shot sizes, from extreme wide shot to extreme close-ups, of people and places (mediacollege, 2017). And tried to cover most details of houses in the same manner.

For pans, tripods were mostly used and a start and end point was decided on prior to shooting. Pans were often shot to later help connect different topics in the movie, like pans from wind towers to air conditioning units, or to give an overview of new locations.

For some parts of the film there already was a good idea what kind of shots were needed. The camerawomen tried to get as many different shots of specific features (such as wind towers, streets, beams, or ceilings) as possible to be able to put them in a montage style to showcase how different they sometimes were.

For the interviews shaded places that were quiet and a bit further away from the group were found. The backdrops were chosen to be interesting but not distracting, and link thematically to some of the topics of the interview. With the camera on a tripod, the shot was framed so that the interviewee would be positioned to the right with 'looking room'⁷ on the left, and focused on their eyes. The author (or the person asking the questions in Farsi) sat next to the camera and directed the interviewee to look at the interviewer. First the interviewee was directed to introduce themselves, to ease them in, and then the interview began. (Marine, 2016) The sound was recorded with a mobile phone (there were some problems with the sound from the microphone on the camera).

2.8.4. After filming

A total of fourteen hours of footage was shot on Qeshm. Back in Vienna the author watched and sorted through all shots and filled in the details of each shot, including location, content, and how well it was filmed, into a spreadsheet. This allowed to quickly find the shots needed later. The interviews were watched and notes on different topics were taken, including any memorable phrasings that were used. While all interviews were an important source of information, some footage is not used (as explained in 2.8.3. On Site)

A rough outline of the topics to cover was and what shots or which parts of the interviews needed was made. At this time the film was still without music.

2.8.5. Editing

The next step wasn't very straightforward. As this is a first attempt at telling a story through the medium of film, it involved a lot of trial and error. With a rough outline of the plot the author tried creating the narration, the visuals and the sound simultaneously. This process, failed to

⁷ 'looking room' refers to where the person in the shot is looking; usually you give the person in the shot some room to look to as breaking this rule can create a sense of unease. (asu, 2017)

produce a conclusive whole. It did help to sort through the visuals and get a better idea of the narration.

In December 2015 the right music for the film was finally found in form of the “Qeshm Island” album published by Hermes Records in 2003. The thesis supervisor suggested to concentrate on the visuals and the music first and create a trailer for the film, to be shown at the lectures organised in celebration of the publication of the research projects’ book (full title in 7. Bibliography). For the following two months the movie was put to rest and the efforts concentrated on the trailer using this new approach.

With the newly-gained knowledge from this smaller project and the new working method, the work on the film continued. By winter 2016 a rough cut was finished.

Then the narration was written, the drawings and the rest of the thesis was finished.

figure 2.6.
edit decision list (Karnar, 2017d)

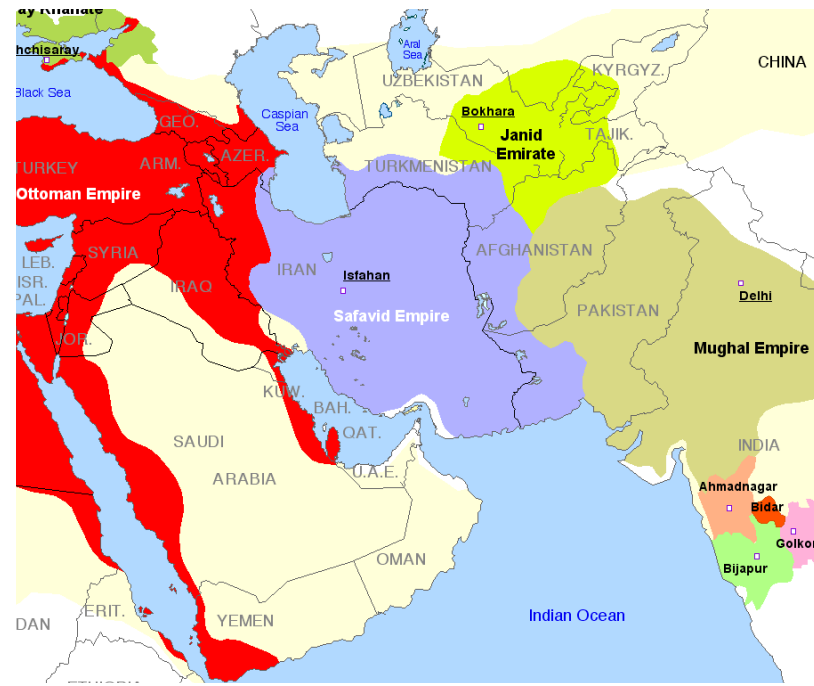
Edit Decision List Overview		Masterthesis Michaela Karnar Between Rock, Sea Palm - researching vernacular architecture on Qeshm Island		10.05.2017
02_Main Part 00:28:22 2	FDPC 1 - Village Structure Introducing the viewer to the dense structure of a town on Qeshm. Windowless streets, empty for but a few goats. Difference of public space Qeshm vs. European.	Duration: 00:03:17 10	00:11:40 15	
	Footage: still shots of empty streets without opening, researchers trying to navigate through town, introduction of "special buildings"			
	Narration: voice over, Hermann speaking about public space			
	Music: Roof of Qeshm: Farhad As'adian - Qeshm Island, Hermes Records (2003)			
	FDPC 2 - Identity Decorated doors and windtowers as an identifier in a town with monotonously plastered facades.	Duration: 00:01:33 16	00:13:14 6	
	Footage: different shots of decorated doors and windtowers			
	Narration: Prof. Erich Lehner: windtowers and doors as identifiers			
	Music: Roof of Qeshm: Farhad As'adian - Qeshm Island, Hermes Records (2003)			
	FDPC 3 - mosque mosque as a special building type and landmark, lunch break	Duration: 00:01:19 2	00:14:33 8	
	Footage: different shots of minaret in village setting, lunch break in mosque and family cooking			
	Narration: voice over: about special building types serving as landmarks			
	Music: none			
	FDPC 4 - water reservoir Waterreservoir as one of the two special buildings in a qeshmi town. Give an overview on hydroprotection, importance of water collection and different types of reservoirs and their context.	Duration: 00:02:18 2	00:16:51 10	
	Footage: shots of different styles of reservoirs, a man collecting water and the group explore them			
	Narration: VOIC over: with explanations about reservoirs			
	Music: none			
	FDPC 5 - Geopark Explaining concept of geopark, importance of tourism as an income opportunity. Glimpes of research team. Sundown.	Duration: 00:03:12 0	00:20:03 10	
	Footage: mangrove forest, stars valley, tourists sightseeing, geopark, sundown			
	Narration: voice over: geopark, importance of tourism to Qeshm			
	Music: Hara Suter: Saeed Ansari - Qeshm Island, Hermes Records (2003)			

Edit Decision List		Masterthesis Michaela Karnar Between Rock, Sea Palm - researching vernacular architecture on Qeshm Island		10.05.2017		
	windtower, minaret	MS	00:00:04 16	MVI_2080	dissolve	ambient sound, voice over
	street, mosque	MS	00:00:05 3	MVI_3026	cut	ambient sound, voice over
	street, mosque	MS	00:00:03 16	MVI_3027	cut	ambient sound, voice over
	roofs, wall	MS	00:00:03 16	MVI_2165	cut	ambient sound, voice over
	mosque, sabat	MS	00:00:03 16	MVI_2537	cut	ambient sound, voice over
	people sitting down	MS	00:00:07 7	MVI_1624	cut	ambient sound, voice over
	people handing out drinks	MCU	00:00:02 14	MVI_2384	cut	ambient sound, voice over
	people drinking	MCU	00:00:02 24	MVI_2387	cut	ambient sound, voice over
	people handing out food	CU	00:00:04 21	MVI_2388	cut	ambient sound, voice over
	people eating	MCU	00:00:04 2	MVI_1630	cut	ambient sound, voice over
	people cooking	MCU	00:00:04 14	MVI_2821	cut	ambient sound, voice over
	people cooking	CU	00:00:04 22	MVI_2822	cut	ambient sound, voice over
	people cooking	MCU	00:00:09 3	MVI_2820	cut	ambient sound, voice over
	people cooking	MS	00:00:01 3	MVI_2824	cut	ambient sound, voice over
	people cooking	MCU	00:00:06 9	MVI_2823	cut	ambient sound, voice over
	food	ECU	00:00:02 21	MVI_2829	cut	ambient sound, voice over
	food	WS	00:00:04 5	MVI_2830	cut	ambient sound, voice over
	dirty dishes	CU	00:00:03 15	MVI_1807	cut	ambient sound, voice over
	minaret, water reservoir	MCU	00:00:03 16	MVI_2437	cut	ambient sound, voice over
	water reservoir	MCU	00:00:03 16	MVI_2426	cut	ambient sound, voice over
	water reservoir	MS	00:00:03 16	MVI_2423	cut	ambient sound, voice over
	Laft village, water reservoir	EWS	00:00:10 17	MVI_1759	cut	ambient sound, voice over
	water reservoir, group	WS	00:00:05 15	MVI_1765	dissolve	ambient sound, voice over
	man getting water	WS	00:00:20 21	MVI_2548	dissolve	ambient sound, voice over
	man getting water	MS	00:00:23 4	MVI_2549	cut	ambient sound, voice over
	man getting water	MS	00:00:07 13	MVI_2550	cut	ambient sound, voice over
	inside water reservoir	MCU	00:00:08 1	MVI_1767	dip to black	ambient sound, voice over
			00:00:00 0		dip to black	
	inside water reservoir	MCU	00:00:06 10	MVI_2412	dissolve	ambient sound, voice over
	long reservoir	MS	00:00:04 7	MVI_2398	cut	ambient sound, voice over
	long reservoir, group	VWS	00:00:03 8	MVI_1644	dissolve	ambient sound, voice over
	long reservoir, group	VWS	00:00:07 17	MVI_1646	cut	ambient sound, voice over
	long reservoir, group	WS	00:00:03 8	MVI_2402	cut	ambient sound, voice over
	surrounding	WS	00:00:03 15	MVI_2407	cut	ambient sound, voice over
	surrounding, channel	WS	00:00:03 10	MVI_1652	cut	ambient sound, voice over
	surrounding, bays	WS	00:00:03 10	MVI_2395	cut	ambient sound, voice over
	long reservoir, channel	MCU	00:00:02 24	MVI_2405	cut	ambient sound, voice over
	long reservoir, group	MS	00:00:03 18	MVI_2405	cut	ambient sound, voice over
	long reservoir, group	WS	00:00:03 8	MVI_1658	cut	ambient sound, voice over
	long reservoir	drive	00:00:05 23	MVI_1592	dissolve	ambient sound

1. Introduction to Qeshm Island

“... modern Gulf that was at once tribal and cosmopolitan, deeply Muslim in belief and tolerant of others, and shaped by the ocean currents and wind-blown desert sands.”

- Hawker (2008: xiv)



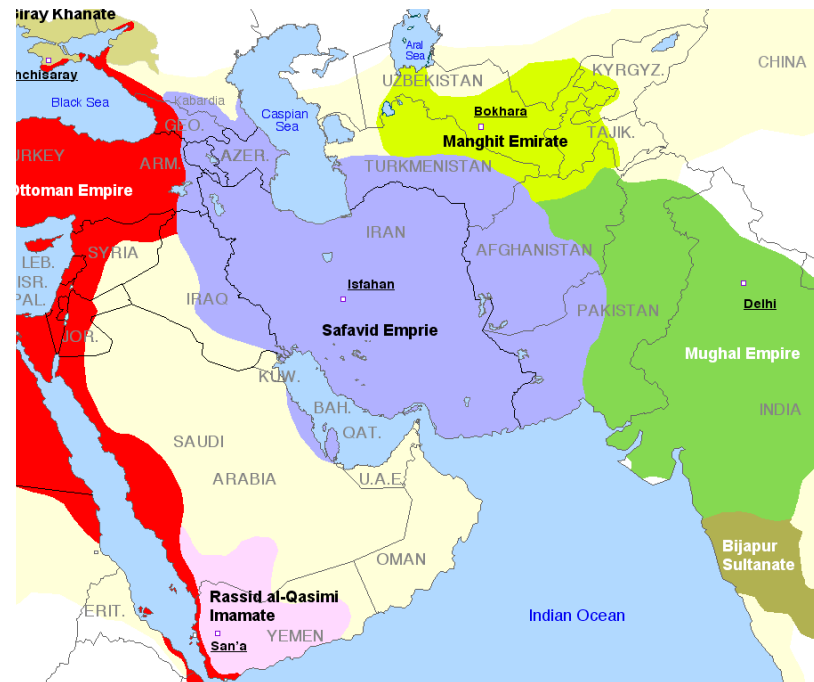
Section of:
Islamic States in
1600 CE

- Saadian Sultanate (Morocco)
- Durrani Kingdom (Afghanistan)
- Shaybanid Khanate (Central Asia)
- Mughal Timurid Empire (Delhi)
- Ottoman Empire
- Safavid Empire
- Giray Khanate (Crimea and vicinity)
- Adilshahid Sultanate of Bijapur
- Sultanate of Ahmadnagar
- Qutubshahid Sultanate of Golkonda
- Other Islamic states and administrative polities

RUSSIA Modern states and their borders

figure 3.1.
Map of the Islamic States in the Persian Gulf in 1600 CE, before the arrival of the Europeans. (Izady, 2016a)

figure 3.2.
Map of the Islamic States in the Persian Gulf in 1625 CE, a few years after the Europeans arrived in the Gulf. Qeshm Island is part of the Safavid Empire. map: (Izady, 2015b)



Section of:
Islamic States in
1625 CE

- Saadian Sultanate (Morocco)
- Imamate of Yemen
- Manghit Emirate (Central Asia)
- Mughal Timurid Empire (India)
- Ottoman Empire
- Safavid Empire
- Crimean Khanate
- Bijapur Sultanate
- Other Islamic states and administrative polities

RUSSIA Modern states and their borders



figure 3.3.
Star Valley (Karner, 2017)

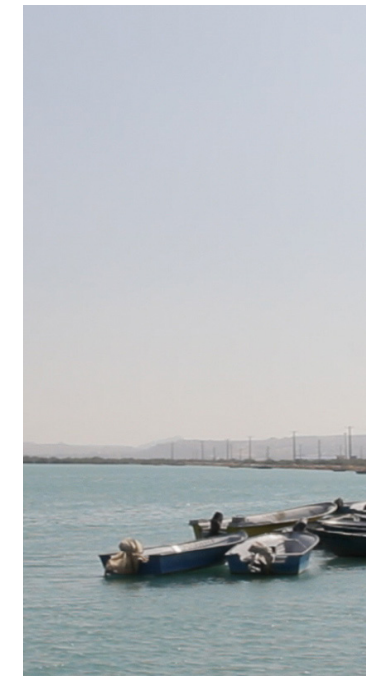


figure 3.4.
Boats near Hara forest (Karner, 2017)



figure 3.5.
Palm trees in Palmgarden (Furbach, 2015a)

figure 3.6.
woman cooking over fire (Karner, 2017)



figure 3.7.
men dancing and singing (Karner, 2017)



figure 3.8.
young woman selling henna tattoos to tourists (Karner, 2017)





figure 3.9. surrounding near a water reservoir, Zirang. (Karner, 2017)



figure 3.10. Qeshm Island, landscape. (Karner, 2017)



figure 3.11. Camels on Qeshm Island (Rieger-Jandl, 2017t)

figure 3.12. Palmgardens (Karner, 2017)



figure 3.13. Palmgardenhouse (Karner, 2017)



figure 3.14. Water reservoir (Karner, 2017)



Daily High and Low Temperature

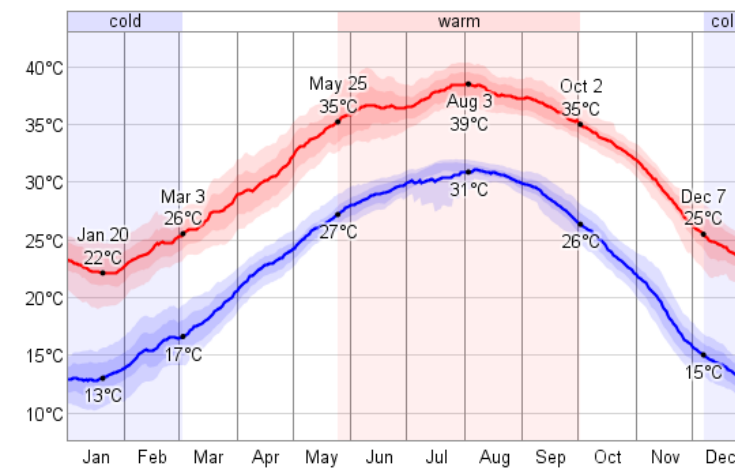


figure 3.15. Daily high and low temperature during a typical year on Qeshm Island. With the warm season lasting from the end of May to the beginning of October and the cold season from the beginning of December till beginning of March. (wheatersparks, 2014)

Probability of Precipitation at Some Point in the Day

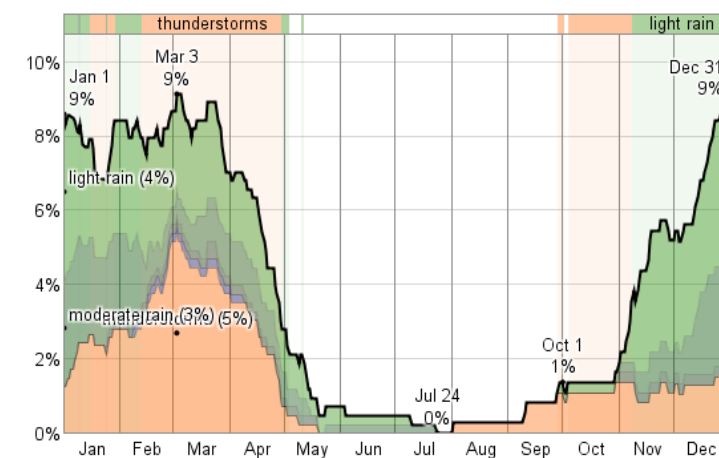


figure 3.16. Graph showing the probability of precipitation at some point during the day for a typical year on Qeshm. We can see that thunderstorms (at the bottom). (wheatersparks, 2014)

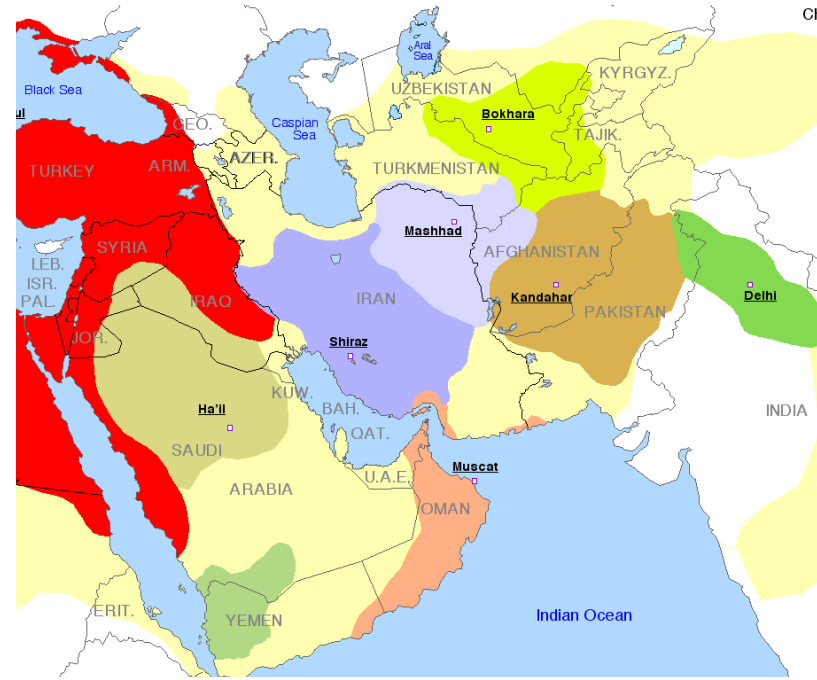
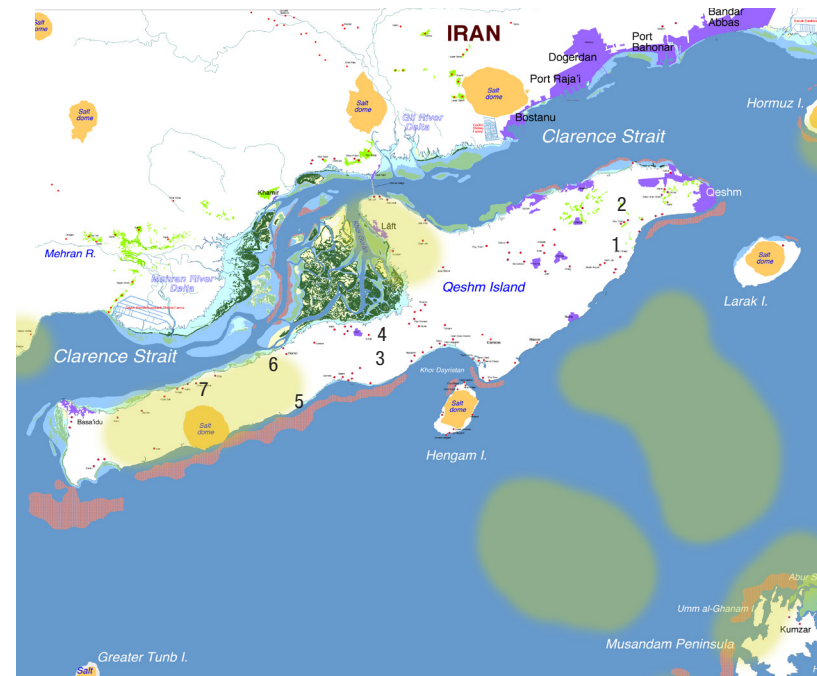


figure 3.17.
Map of the Islamic States in the Persian Gulf in 1750 CE, after the Qawasem tribe took control of Qeshm. Qeshm Island is part of the Busaidi Maritime Sultanate of Oman. map: (Izady, 2015c)

figure 3.18.
map showing Ecosystem, Gasfields (rough approximation) around and Geopark sights on Qeshm Island. (Izady, 2016d)



Section of:
Islamic States in
1750 CE

- Alaouite Sultanate (Morocco)
- Durrani Kingdom (Afghanistan)
- Manghit Emirate (Central Asia)
- Mughal Timurid Empire (Dehli)
- Ottoman Empire
- Zand Kingdom (Persia)
- Afshar Kingdom (Khurasan)
- Zaidi Imamate of Yemen
- Busaidi Maritime Sultanate of Oman and Zanzibar
- Al Ali Emirate of Shammar
- Other Islamic states and administrative polities
- RUSSIA Modern states and their borders

Ecosystem Clarence Strait, Qeshm Island

- Tidal flats, marshes
 - Mud flats
 - Shoals and sand banks
 - Mangrove forests
 - Sea grass
 - Coral beds
 - Salt dome
 - Farms/orchards
 - Urban areas
 - Villages
 - Gasfields
- 1 Star Valley
 - 2 Korркоora kuh
 - 3 Bame Qeshm
 - 4 Tandis ha Valley
 - 5 Shour Valley
 - 6 Chah-Kuh Valley
 - 7 Doulab

Middle East : Köppen
Climate Classification

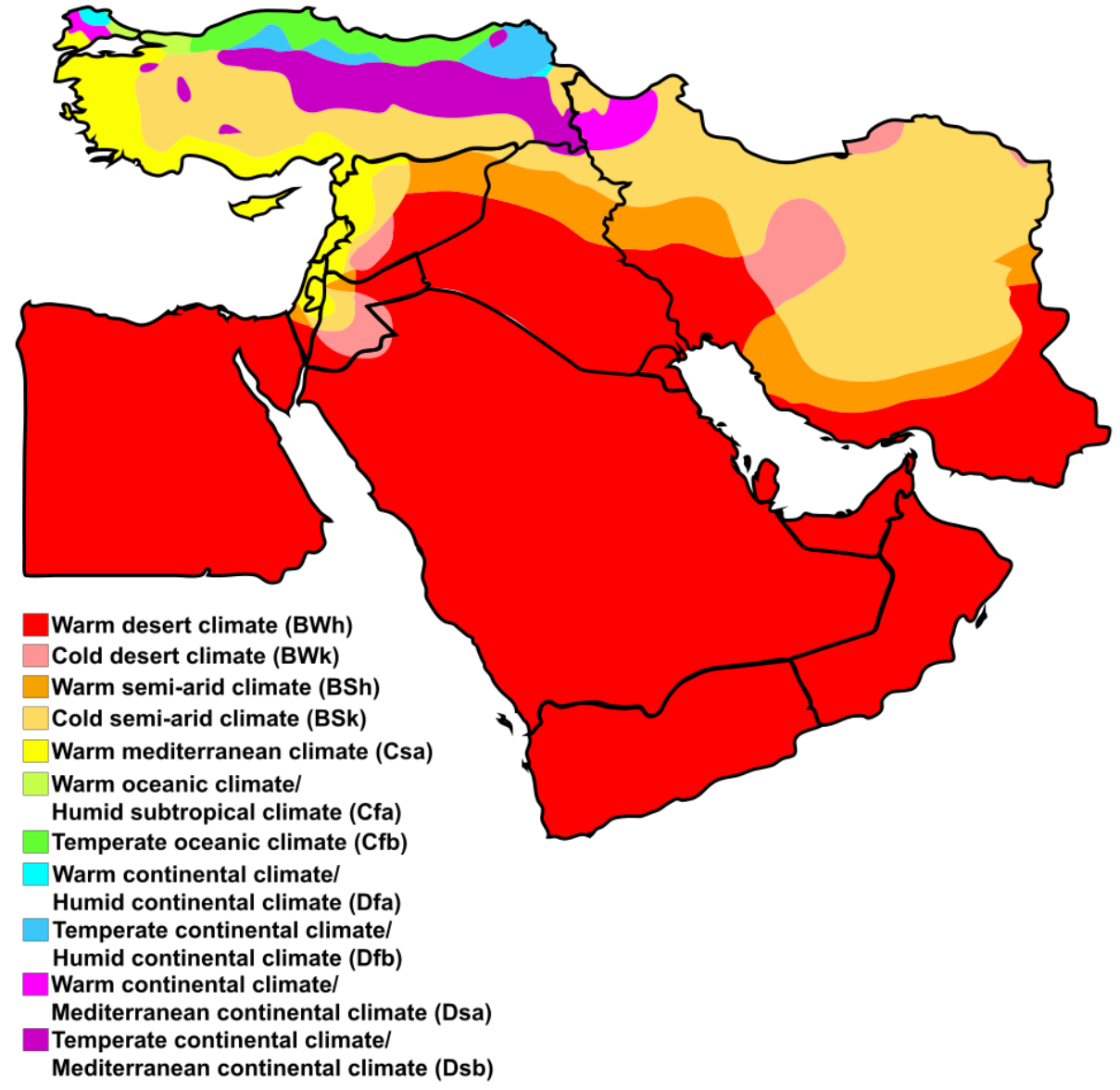


figure 3.19.
Köppen Climate Classification of the Middle East (Zifan, 2016)

3.1. Location

Qeshm Island is the largest island in the Persian Gulf. It is surrounded by the Clarence Strait (Strait of Khuran), which separates it from the Iranian mainland, and the Strait of Hormuz. (see fig. 5.1 -5.3. on page 86-87)

It stretches for 122km almost parallel to the Persian coastline and at the closest point is only separated by 2.5km of sea from the mainland. The nearest ports on the mainland are Bandar-e Abbas in the east and Bandar-e Lengeh in the west. (Potts, 2004) The nearest islands are Naz, Hormuz, Larak and Hengam Island. West of Qeshm are the coasts of the United Arab Emirates and Oman.

Other names for the island include Kishm, Qishm (Turner, 2005), Oaracta, Queiximi/Queixome/Queixume, Broco/Boroch/Beroho/Brocto, Abarkâwân, Bani Kâwân, Lâft/Lâfet (which survives as the name of the second largest town Laaft) Jazira-ye Qešm and Jazira-al-Tawila. (Potts, 2004)

3.2. Weather and climate⁸

In the Köppen climate classification, Qeshm Island is part of the hot desert climate (BWh). (vetmeduni, 2006) The temperature typically varies from 13°C to 39°C throughout the year and rarely drops below 10°C or rises over 39°C. The warm season lasts from the end of May to the beginning of October, with an average high above 35°C, while the cold season (beginning of December till beginning of March) has an average high below 24°C. (weatherspark, 2014) (see fig. 3.15.)

More important than the temperature difference is the precipitation. It most commonly comes in the form of thunderstorms or light rain during the cold season, while there is hardly ever any form of precipitation during the hot season. Snow is not unheard of (in recent years) but also very unlikely. (weatherspark, 2014) (see fig. 3.16.)

While Qeshm's climate belongs to the hot desert climate, it is also exceptionally humid. The relative humidity is on average between 39% and 93%. The average wind speed throughout the year is between 0m/s and 10m/s and mainly comes from the south west. (weatherspark, 2014)

8

The climate data available for Qeshm Island is quite limited, namely from 2006 to 2012.

3.3. Short history of the Persian Gulf and Qeshm Island⁹

According to Hawker “Early civilization in the Gulf developed in three nodes: at Falaika Island in Kuwait in the upper Gulf, along the islands and coastal edge of Saudi Arabia and Bahrain in the central Gulf, and along Oman’s Bainah Coast.” (2008: 2), while archaeological finds suggest that the lower Gulf was settled between 8000 and 3000 BCE. The Gulf region has had a long history of being shaped by trade—for example, during the bronze age it was used by Mesopotamia, Arabian and Persian littorals, and the Indus Valley Civilisation (Pakistan). (Hawker, 2008: 2)

In text Qeshm is first mentioned in 851 CE under the name of Abarkawan, and was considered part of Kerman prior to the advent of Islam. It was known as a station on the naval route to India and China, between Kish and Hormuz. (Potts, 2017)

From 1301 CE the island was an important dependency and later mercantile centre of the Hormuz Kingdom (Potts, 2017), which separated itself from the Kingdom of Kerman in the 1200s and exported minerals to China, while importing Chinese porcelain. It had strong ties to Julfar (later Ras al-Khaimah) on the other side of the Gulf, which gave them control over all trade leaving or entering the Gulf. (Hawker, 2008: 12 ff.)

After a Tartar attack, Baha-al-Din Ayaz moved his court and part of his population to Qeshm. The island also supplied Hormuz with drinking water. (Potts, 2017)

The Gulf was the junction where sea-borne and desert trade met; its ports connected *dhow*¹⁰ fleets and camel routes into the Iranian high plateau and as such were important to Indian Ocean shipping lanes and the silk trade routes alike. (Hawker, 2008: xvi)

“This trade paid for the buildings, provided the materials, transported the builders and, most importantly, connected the different sub-regions, spreading ideas about design and construction along its routes.”

-Hawker (2008: xvi)

When the Europeans arrived in the Gulf, the upper Gulf was under the control of the Ottoman Empire, while the lower Gulf was controlled by the Safavid dynasty of Persia. (Hawker, 2008: 13) (for Islamic states in the Gulf in 1600 CE see fig. 3.1. on page 31). In 1616 CE the English got as far as Jask, in the Gulf of Oman, where they established a factory. To disrupt their efforts at establishing further power in the Gulf, the Portuguese sent Ruy Freire de Andrade in 1619. (Potts, 2017)

⁹ for places mentioned see fig. 5.1 - 5.3 on page 86-87, for historical maps of Islamic States in the Gulf in 1600 CE (fig. 3.1), 1625 CE (fig. 3.2) on page and for 1750 CE (3.17) on pages 31 & 35.

These maps only show the official claims to areas at the specific times and might therefore not exactly mirror the written description.

¹⁰ *dhow*: type of sailing boat

When the Portuguese arrived in the Gulf, the lower Gulf including Qeshm Island was controlled by the Safavid dynasty in Persia. Through massacres on the Omani coast, Mustang and Hormuz, they were able to establish themselves as a major player in the Gulf. Portugal controlled the trade and were able to maximise their profit through harsh taxation. (Hawker, 2008: 13) In May 1621, Portuguese soldiers supported by 1,000 Hormuzi troops took over Qeshm Island and drove away the Persians. (Potts, 2017) The ruins of the Portuguese fort in one of Qeshm's major villages, Laaft, to this day bears testimony to the Portuguese's century-long rule over this region. Emam-qoli Khan, in charge of the Safavid's southern possessions, found a willing ally in an English East India Company squadron which had been sent to Jask to collect silk for export. In exchange for sole custody over the castle of Hormuz and other privileges, they stormed the fort in 1622 CE. Qeshm remained a significant location for those wishing to wield greater influence in the Gulf, and its trade routes.

Because of its military importance it was raided by the Portuguese during the winter of 1629/30 CE, which enabled them to pressure the Persians into paying tribute in return for the continued use of Qeshm. These payments continued till the death of Shah Abbas and the subsequent execution of Emam-qoli-Khan. Experiencing problems with their negotiations regarding trading terms with the Persians, the Dutch attacked Qeshm in 1645 CE. Although this attack led to better trading terms for the Dutch, they attacked Qeshm again when their trading became less profitable in the late 1670s and early 1680s and took over Qeshm in 1683. (Potts, 2017)

Meanwhile on the mainland, Persia lost important territory. Oman, on the other side of the Gulf, was able to expand, and attacked Qeshm in 1712 CE, overrunning it five years later. After the Portuguese assisted Persia in its effort to defeat the Omani forces and failed, Persia agreed to a treaty which returned Qeshm to Persian Control in exchange for use of a berth on the island by Oman as a naval repair yard. (Potts, 2017)

Not only did different countries compete for dominance on Qeshm, different gulf harbours were also rivals. Bandar-e Abbas was (and still is) one of the most important ports in the Gulf trade. It was challenged for a while by Basidu, a port on Qeshm's western end. Regarding this port, T. Potts refers to an Arab sheikh, Sheikh Rasid¹¹, who was the main force behind making the harbour attractive and therefore a threat to Bandar-e Abbas. (2017) Basidu's new position was first challenged by the English, who accused Arab vessels originating from Qeshm of attacking English trading ships, and later by Afghan forces pushing forward to Bandar-e Abbas, where Sayyed' Ali became *sahbandar*¹². By 1728 CE the English were using Basidu as leverage against Sayyed' Ali, threatening to abandon Bandar-e Abbas in favor of Basidu. After the Portuguese reappeared in the power struggle on Qeshm and plundered Basidu's custom house and Sheikh Rasid's belongings, they disappeared a year later, leaving the English in control again. (Potts, 2017)

11 This sheikh is presumably a Qawasem sheikh as Nyrop (1977: 29) refers to the Qawasem as founders of the port in Basidu, and there was a Sheikh Rasid of the Qawasem at this point in history.

12 *sahbandar*: a title meaning "governor of the port" (Potts, 2017)

The partners in the struggle for predominance in the Gulf trade change as quickly as the tides: presented by an opportunity to weaken the Dutch, the English deliberately let an Afghan force land on Qeshm. This strategy backfired when, in 1729 CE, the local population rose up against the Afghans. While the English and Dutch struggled to come to an agreement over Qeshm, Sheikh Sabona seized control. He was an Arab sheikh living on Qeshm, and made his pro-Afghan views shown by decapitating some of the rebels and sending their heads to Bandar-e Abbas. (Potts, 2017) The Afghans were able to gain a better foothold on mainland Persia, threatening the Safavid empire (Encyclopaedia britannica, 2017a), and Qeshm was raided again, this time by the Wakil of Muscat. (Potts, 2017)

Meanwhile on the mainland, Nader Shah¹³ was able to defeat the Afghans and reinstate the Safavid shah, Tahmasp II, as ruler. (Encyclopaedia britannica, 2017b) Sheikh Rasid, himself a supporter of Shah Tahmasp II, was blamed by the English and Dutch forces (allies of Nader Shah) for the escape of the Afghans. He was arrested and his ship seized and later released to return to Basidu. (Potts, 2017)

In 1741 CE, Nader Shah, who by this time was functioning as a regent in place of Tahmasp II's son, restored the fort on Qeshm. Nader Shah was assassinated by his own troops and died in 1747. His reign and death left the country's economy struggling (Encyclopaedia britannica, 2017b), and governors could not rely on the Shah any more and had to defend their own interests. (Nyrop et. al., 1977: 29)

In this new environment, Molla Ali-Sah, Nader Shah's former naval commander (Potts, 2017) and governor of Hormuz, formed an alliance with the Qawasem tribe to defend his governorship (Nyrop et. al., 1977: 29). They took control over Qeshm, from the (at this point) ruling *Ma'in* tribe and invaded *Laaft* in 1756. To secure their claims, marriage between the Qawasem Sheikh and the Ma'in chief's daughter was arranged (1777) (Potts, 2017).

In 1793 CE, the Omani became more prominent on Qeshm. The Imam of Muscat occupied Qeshm and Hormuz. He made a deal with the Persians, giving him control over Bandar-e Abbas and its dependencies (Jask to Bandar-e Lenge). In 1800 CE John Malcolm, a representative of the East India Company was sent to report on the region. He identified Qeshm, by then under the control of a sheikh paying tribute to Muscat, as the ideal location for a trading base. In 1806 CE Qeshm was, once again, attacked by Omani forces, who were threatened by the Ma'in tribe's connections to the Qawasem. The sheikh was seized by the Omani forces, and the English, by now allied with Oman, were sent to take control over Qeshm. The Qawasem were able to counter their attack and hold the fort. In 1808, being unable to take Qeshm by force, John Malcolm tried to negotiate with the ruler of the Qajar dynasty, Fath-Ali Shah, on behalf of the East India Company for control over Qeshm, Henjam and Kharg. As a reaction to the seizure of the *Minerva* (a Bombay Marine ship) in 1808, the

13 Nader Shah: also Tahmasp Qoli Khan; of the Turkish Afshar tribe was loyal to the Safavid shahs of Iran, military leader and later Iranian ruler and conqueror. (Encyclopaedia britannica, 2017b)

Bombay Marine sailed to Qeshm under the pretence of expelling the Qawasem. With the surrender of its inhabitants Qeshm reverted to the Imam of Muscat. (Potts, 2017)

In the Vienna Conference of 1815 CE, the Qawasem were declared “pirates” by European states with an interest in Gulf trade. (Hawker, 2008: 16) In their effort to ensure English dominance in the Gulf in 1820 CE, the “General Treaty of Peace with the Arab Tribes” was signed by the sheikhs in the Gulf area in Basidu (Potts, 2017), which demanded they (the Arab tribes) register their ships, have a visible flag and prohibited piracy and plundering. According to Petterson (2002: 14), “Actual occupation of Qeshm Island in 1820 proved short-lived as the garrison quickly fell prey to disease and entanglement in local politics and warfare.” It was relinquished two years later and replaced by Bombay Marine patrols to ensure compliance. (Petterson, 2002: 14) Qeshm stayed its base of operations till 1863 CE. The last sign of British presence on the island was the coal depot that was moved from Basidu to Henjam in 1912 CE. (Potts, 2017)

In the 1860s Qeshm exported salt and firewood, but lost its importance as a major mercantile harbour. (Potts, 2017) It suffered a devastating earthquake in 1898 CE. (Hawker, 2008: 162-163)

Qeshm is now part of Iran’s Hormuzghan Province. Even though tribal authorities along the Gulf shore have been replaced by a more localized central government and “...the institutions, language, and even religion of the Farsi-speaking people ... demographically and politically dominate the nation as a whole”(Hawker, 2008: xv), tribe and tribal ancestry is still an important factor. (Hawker, 2008: xv) About ten years ago Qeshm had a total population of 13,500 people (mostly in Qeshm Town and Laaft) with the majority living from fishing, navigation, boat building (Hawker, 2008: 162-163), date farming, and the rearing of livestock (Rieger-Jandl, 2016: 39). Another source of additional income seems to be smuggling (nowadays mainly gas, oil or goods), though it is hard to find any statistical data on this. With the climate changing and the weather becoming dryer in the past fifteen years, agricultural forms of income are losing their importance, with an increasing number of locals seeking to take advantage of the tourism industry. This might be illegal income, through smuggling goods to sell to tourists, or legal, by, for example, women selling handcrafted, traditional items in the Geopark shops.

3.4. Tourism and business

3.4.1. Geoparks

The term Geopark refers to “... a unified area with geological heritage of international significance.” (UNESCO, 2017) Geoparks are not only concerned with the unique geological phenomenon they promote, but often play a role in advocating culture, science and education as well as empowering women through women cooperatives. (UNESCO, 2017)

Qeshm Geopark became the first UNESCO Geopark in the Middle East in 2006. According to Bijan Rohani (2013), it was dropped in 2013 from UNESCO’s Global Geopark list after several warnings due to mismanagement.

Qeshm has eight major geological sites (see fig. 3.18 on page 35) which are all connected to the occurrence of a salt dome: Chah-Kuh Valley (see fig. 3.21 & 3.24), Star Valley (see fig. 3.22 & 3.25), A’li Channel, Tandis ha Valley, Shour Valley, Namakdan Caves and dome, Doulab and Korркоora kuh.

The valleys on the island, formed by erosion, are not only of interest to tourists and scientists; they also bear some significance to the local history and culture. The most famous one, known as Star Valley or Darreh-Setareha, is located in the north-east of the island. Locals believe it was formed when a star fell from the sky. The power of the sudden impact made the earth jump and freeze in mid-air. This is said to have formed the structures visible today. The area is also believed to be haunted at night. (Amrikazemi, 2005)

The Korbus caves—formed by erosion, but enlarged by man—are a hybrid between geological site and negative architecture. Located about 10km from Qeshm Town, they are one of the major tourist sites. They consist of human-sized holes in a marl-clay hill, some of which are joined together to form corridors from one to another, whereas some are only windows to the outside world. These caves are believed to have given shelter to people against enemies (Amrikazemi, 2005) (see fig. 3.20 & 3.23).

3.4.2. Biodiversity and research

Also part of the Geopark is the Harra mangrove forest which stretches for about 195km² on the northern side of the island. It is home to at least 200 species of waterbird and is agriculturally important to Qeshm. (Turner, 2005) (see fig. 3.29. on page 44 and for location fig 3.18 on page 35)



figure 3.20.
Korbous caves
(Rieger-Jandl, 2015g)

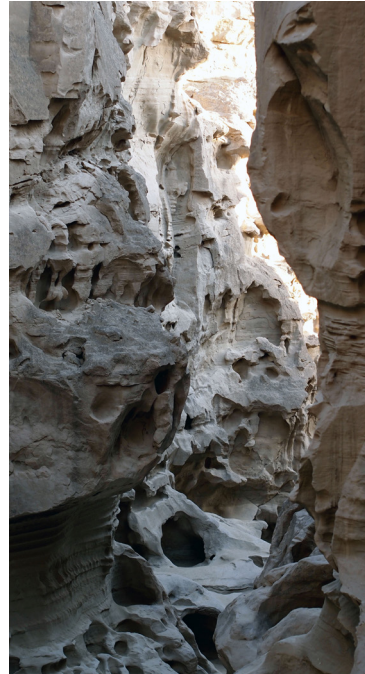


figure 3.21.
Chah-Kuh valley
(Mattanovich, 2015a)



figure 3.22.
Star Valley
(Rieger-Jandl, 2015h)

figure 3.23.
Korbous caves
(Kashani, 2015a)



figure 3.24.
Well and tourists in Chah-Kuh valley.
(Rieger-Jandl, 2015i)



figure 3.25.
tourists in Star Valley.
(Rieger-Jandl, 2015j)





figure 3.26.
shopping center in Qeshm town
(Rieger-Jandl, 2015k)

figure 3.27.
cargo ship in Clarence Strait
(Karner, 2017)



figure 3.28.
lenj in front of Hara forest
(Karner, 2017)



figure 3.29.
Hara forest
(Karner, 2017)



3.4.3. Free Zone, industry and Qeshm Town

The island is also accessible by commercial shipping (Turner, 2005) and located between two major natural gas fields (see fig 3.18 on page 35): Gurzin which provides two million cubic meters of gas and Salakh, which is untapped, but believed to be able to provide even more gas. It is also adjacent to oil fields and therefore considered a major asset to Iran. (open-iran, 2017)

Since 1989 Qeshm has been one of the seven “Free Zones”. According to the Free Zones homepage they (and the “Special Zones”) were “...created with the growth and industry approach in mind, transferring and attracting foreign capitals, increasing exports, attracting domestic and foreign liquidity, reaching advanced technology, and transferring the technology...”. (freezones, 2017) To enter Free Zones no visa is needed (for 14 days), custom charges are very low or nonexistent and investors are exempt from paying tax for twenty years. (freezones, 2017)

According to Turner’s report for UNESCO, “QFA (Qeshm Free Area) has factored in growth both industrial, commercial, and for tourism and it is now fast growing, which might be a recipe for disaster (at least ecological)...” (2005: 4) Though Qeshm Geopark’s disappearance from the UNESCO world heritage list and struggling local communities might be seen as indicators of a rather bleak future, the interest of the scientific community in Qeshm’s biodiversity, Geotourism (Farsani et. al, 2012) and different project with locals (GEF/SGP-Iran,2003) can be seen as a positive sign.

4. Field research¹⁴

— architecture, culture and identity

4.1. People

Locals are often described as Sunni Muslim with Arab ancestry, and clearly show influences of Indian and African heritage.

4.1.1. Arab tribes and language

Tribe - "...a social group of which all the members trace their descent from one common male ancestor."

-Hawker (2008: 22)

While the ruler on Qeshm changed often and also included European countries at times, the majority of the inhabitants is a different topic. In the literature there are different groups of people mentioned every time Qeshm's inhabitants are mentioned. In the online version of the Encyclopedia Iranica, it is noted that tribes of the Persian Gulf often raided southern Iran (Oberling, 2011), and in the entry for Abarkavan (late Sasanian name for Qeshm) the Abd-al-qays tribe is mentioned specifically (643–4 CE). (Kasheff, 2011) It belongs to the Arabian tribes and moved from al-Arez to Bahrain and the nearby coastal areas. Also in a later account the inhabitants are mentioned as being "almost exclusively Arab and Sunni ..., with substantial numbers coming from the Trucial Coast and a paramount sheikh from the Bani Ma'in tribe...". (Hawker, 2008: 162) These roots are also attested by the existence of a formal school for instruction in Arabic and Islamic theology. (Hawker, 2008: 162 pp.)

According to Mr. Sharifi, resident of Haft Rangoo, the locals have Indian and African ancestors. (Sharifi, 2015) It is reasonable to assume that an island in such a prominent military location, which has been taken over by countless countries and has been so easily involved in trade, must have had varied peaks of immigration from different areas, and people with roots in the ports of trading partners.

This is also apparent in the local language they speak. Generally it is considered a *Bandari*¹⁵ accent of Farsi, a dialect spoken in the Iranian Gulf ports with influences from Arabic, Baluch and English. On Qeshm the dialects are known to change from town to town and also include Somali words. (Hawker, 2008: 84) In addition to this, some, especially older men, who had been involved in trade, speak Arabic or Indian languages such as Hindi.

15 *Bandar* means port in Farsi

Sometimes there is further differentiation where *Bandari* is considered a Persian dialect spoken on the mainland and *Hormuzi* is used to refer to the group of languages spoken around the Strait of Hormuz, both (Persian and *Hormuzi*) are considered to be Southwestern Iranian languages. (see fig.4.3. and fig.4.4.)

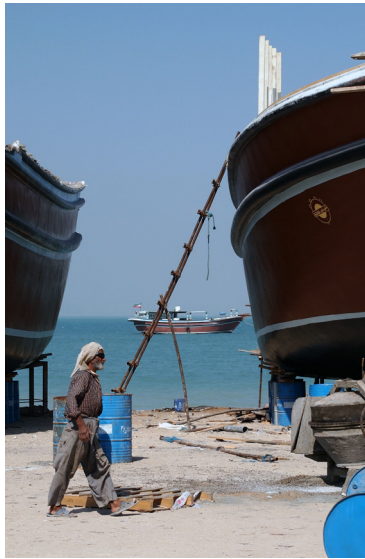


figure 4.1.
man working on a wharf
(Mattanovich, 2015b)



figure 4.2.
family in front of their house
(Mattanovich, 2015c)



Persian Gulf region:
linguistic composition



linguistic composition in
2014

- Indo-European Family, Iranic Branch**
 - Persian (Farsi, Luri, Bakhtiari, Bandari, Sistani, Qohistani, Khuzi, etc.)
 - Hormuzi (incl. Lari, Minabi, Qeshmi, Laraki, Jiroft-Hahnuj, Bashkardi/Bashagirdi, etc.)
- Semitic family**
 - Arabic (Khaliji, Iraqi, Kaviri, etc.)

figure 4.3.
top: section of “Persian Gulf region: linguistic composition”. Qeshm as being Qhismi and Arabic. (Izady, 2016e)

figure 4.4.
left: section of “Iran: linguistic composition in 2014” here Qeshm (called Qishm on the map) is shown to have Persian, Hormuzi and Arabic speakers. (Izady, 2016f)

Between Rock, Sea & Palm – researching vernacular architecture on Qeshm Island

Islam, branches and primary divisions

- Sunnism
- Shi'ism
- Ibadism
- Wahhabism/Salafism
- Other Islam
- Mixed faith areas
- Other religions

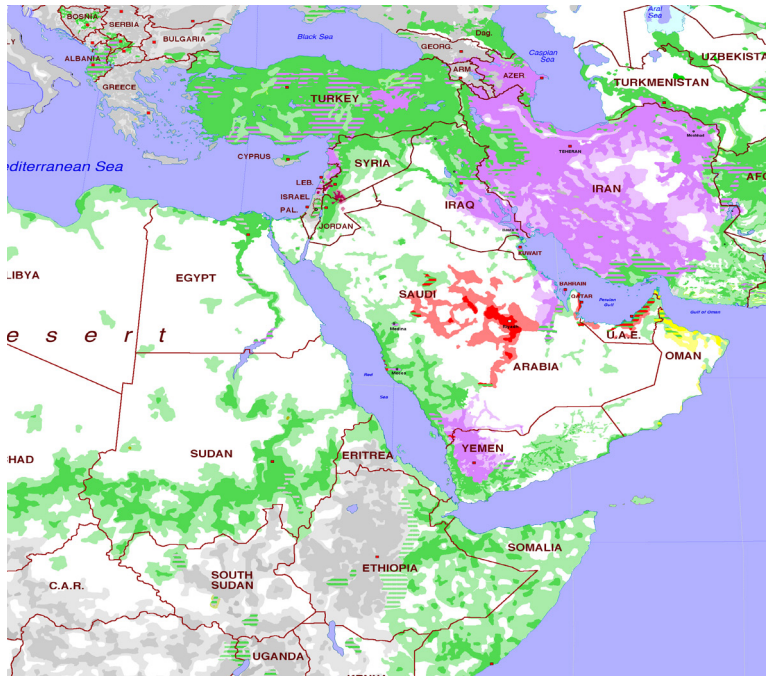


figure 4.5.
right: section of “Islam, branches and primary divisions” here Qeshm is shown be Sunni and Shia Islam, while most of Iran is shown as Shia Islam. (Izady, 2017a)

Islam, branches and denominations

- Sunni Islam**
 - Hanafi
 - Maliki
 - Shafi'i
 - Hanbali
- Shia Islam**
 - Imami/Ja'fari
 - Isma'ili
 - Zaidi
 - Gnostic faiths dissimulating as Shia Islam
- Other Islam**
 - Ibadi
 - Wahhabi/Salafi/Takfiri
 - Other religions in the majority

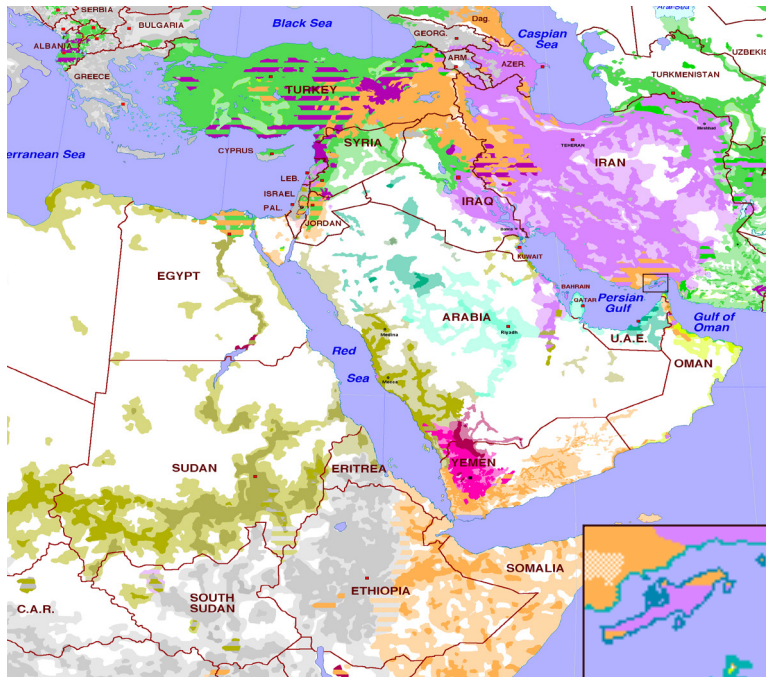


figure 4.6.
right: section of “Islam, branches and denominations” here Qeshm is shown be Sunni and Shia Islam, while most of Iran is shown as Shia Islam. (Izady, 2017b)



figure 4.7.
left: woman in trance at Zaar ceremony on Qeshm Island (Lafforgue, 2015a)



figure 4.8.
right: men dancing at a wedding ceremony on Qeshm Island (Lafforgue, 2015b)

4.1.2. Religion and slavery

One of the tribes mentioned specifically in regards to Qeshm, the Abd-al-qays tribe, was Christian before the advent of Islam in 610 CE. (Oberling, 2011) Depending on how long they had been settled on the island before they were invaded by the governor of Bahrain and Oman, they may have still been Christian when first settling there. Gulf tribes identifying as Christians prior to Islam are not uncommon due to Christian Nestorian monasteries and the influence of mediterraneans during that time. Islamic beliefs were likely brought to the island when the Omani defeated the Persian ruler (Shahruk) on Qeshm. (Hawker, 2008: 10-11)

Since at least the early 1900s the island has been majority Sunni Islam. (Hawker, 2008: 162) While this is considered a minority in Shia Islam Iran, it is the prevalent version of Islam on the south shore of the Gulf and North Africa. (see figure 4.5. & 4. 6. Izady, 2014-2017)

Locals have also preserved a set of rituals and beliefs that are of non-Islamic-origin. The men participate in rain dances, on platforms near water cisterns, and they have a week-long wedding ceremony in which the couple stays in a special wedding room. (Bornberg, 2015)

One of the most interesting ceremonies (with regard to the ancestry of the locals) that is still practiced is the *Zaar* ceremony (see figure 4.7.). *Zaars* are often described as spirits or winds possessing people, and—depending on where it is practiced—these can be exclusively evil or partly good. Forms of this ritual are common in northern and eastern African countries, and Middle-Eastern countries. It is practiced in predominantly Christian, Jewish and Muslim cultures. There are different theories on the spread and origin of this belief, some pointing to Persia, while others suggest that it was imported from Africa, possibly through slavery, to the Gulf region. (Mianji et al., 2015) Slaves from the north and east of Africa were brought through the slave-trade network. “Most enslaved Africans were shipped through the sea trade route of the Indian Ocean, which ran from the Swahili coast to Muscat, the Ottoman Empire, the Arab States, and Iran.” (Mianji et al., 2015: 228)

4.2. Island structure

The villages on Qeshm are mostly located along the shoreline, with the biggest settlement being in Qeshm Town (in the east). Sometimes villages are very close to each other, like Chahu Sharghi and Gharbi which are only separated by small hills, but for the most part they are separated by long drives through fallow land and mountains. These stretches of dry arid land seem to only be used by people herding camels.

The villages are usually adjacent to palm gardens, and have a mosque and some water reservoirs.

4.3. Village structure

The following part mainly concentrates on the villages of Chahu Gharbi and Chahu Sharghi and ignores Qeshm Town and the more recently-built settlements.

As in many Islamic cultures around the world, the prevailing house type on Qeshm is the courtyard house—the term in general refers to “a house constructed around and oriented towards one or more enclosed courtyards” (Doubrawa 2016: 27). They are valued for their privacy and are a good fit for these climatic conditions.

The type prevalent on Qeshm are single storeyed buildings enclosed by a roughly two-meter-high wall, often shared between neighbouring plots. The plots are of similar size, but the ratio of courtyard to house varies. These compounds used to be self-sufficient units enabling the residents to have livestock, gardens, and to collect water in the largest possible enclosed spaces with the highest amount of privacy. (recording 23, 2015) This type of building defines the village structure like no other, as it often also includes special functions like a school or a shop with an extra entrance from the street. The only other structures visible in the fabric of the village are mosques and water reservoirs.

The densely packed courtyard houses, often with wind catchers, and narrow streets, provide protective shade and enhance the wind flow through the streets. (Hawker, 2008: 162-163) They define the fabric of the village by creating empty space around them used as pathways and roads. These pathways are grown (vs planned) and often very narrow and only accessible by foot or motorcycle (the most common mode of transportation). Sometimes residents hinted at the labyrinthine structure being a form of protection against thieves, making their escape more difficult. (recording 17, 2015) Usually there are one or two main roads through the village accessible by car, often with pedestrian pathways. The village and house structure is very much defined by religious, cultural and climatic conditions as is the way of life on the island.



figure 4.9.
satellite picture of Chahu Ghabi
(Karner, 2017)

figure 4.10.
view over Laaft
(Rieger- Jandl, 2015)





figure 4.11.
street in Chahu Shargi
(Furbach, 2015b)



figure 4.12.
street in Laaft
(Lehner, 2015b)



figure 4.13.
street in Laaft
(Rieger-Jandl, 2015m)

figure 4.14.
street in Chahu Shargi
(Karner, 2017)



figure 4.15.
street in Chahu Shargi
(Lehner, 2015c)



figure 4.16.
street in Chahu Shargi
(Lehner, 2015d)



4.3.1. Inside/outside – public/private

Most openings of the courtyard houses are oriented towards the courtyard with traditionally only one entrance from the street. Doors on the opposite street side are usually arranged to limit the view inside the plot from a neighbouring plot or the street. It is clear that the compound is private, and within the compound different levels of privacy, often related to gender, unfold.

While there is a clear definition of inside and outside (the walls of the compound, occasionally broken up by shaded porches at the house entrance), the question of public space in these villages is a more complex one and can not be answered easily.

First we have to consider what we mean by public space.

In western societies' everyday language, the term often refers to space used or owned by the public (or no one in particular), accessible to anyone. At first glance it might seem that the streets are considered "public" in the sense of ownership, but further investigation shows that most of these are cared for by the inhabitants who are adjacent to them and that there are no communal waste disposal services. So while they are accessible to anyone, there is a sense of ownership of them. (Mückler, 2016: 82)

Public space in sociology is often defined by "its accessibility, both physically and psychologically". (Mückler, 2016: 82) In Islamic society the bazaar is traditionally the place where most social and economic exchange happens. But in the case of Qeshm, only Qeshm Town is big enough to have a bazaar. However, in his account of our research trip, Mückler points out that the small shops in the villages functioned as a meeting point for young men.

Another place where people meet outside of their private homes are the mosques: people, mostly men, walk to and from prayer and can be seen regularly. The mosques were also often used to greet the group and provide them with a place to eat and rest.

In Laaft, a town frequented by tourists, some kind of furniture could be seen around the village in the form of stone benches and stone bins. These were used by men and the research group. In addition, the area designated for the ceremonial rain dance had some benches and a metal framework for the stage.

In the case of Chahu Gharbi, Chahu Sharghi and other villages of a similar size it can be assumed that the public space mainly serves the close-knit community living there and that visitors from outside town are an exception. This also makes it harder to assess how locals might be using the space: as the large mixed-gender group drew a lot of attention and curiosity, their presence visibly impacted and altered the life of the locals for the duration of the stay. Locals passing the group every few minutes or young men on motorcycles following the group's cars to find out what was happening could be seen. A big group of male and female foreigners, walking through small villages regardless of midday heat, measuring and

taking pictures of everything, and asking numerous questions about the (to locals) most mundane things was surely a sort of entertainment. To be able to make more accurate and varied assessments of their everyday life, more time and a basis of trust would need to be established. (Mückler, 2015)

As Mückler points out “entertainment in everyday life might be limited ..., as a consequence, entertainment in public spaces is also limited to some degree” (Mückler 2016; p85). Villagers either leave their home for months, working away from the villages, or spend most of the day working. (Mückler, 2016: 81-89)

4.3.2. Identity – door/wind catcher

As mentioned under “Inside/outside – public/private” the outside (of the compound) is hardly furnished or decorated in any way. The compound walls are bare, with few openings, and the height of the walls makes navigation more difficult. The doors and wind towers (as well as minarets) serve as the only landmarks¹⁶ in these villages.

The entrance doors give the compounds a distinct identity, like a postal code. They are either 19th-century wooden doors with carved designs, (Hawker, 2008: 162-163) (see fig. 4.17.- 4.19.) or metal doors with ornaments made of flat iron and painted in different colours. (see fig. 4.20- 4.22.)

The other feature distinguishing one compound from another are the wind towers, called *badgir*. Not all villages on Qeshm have wind towers. While the team initially assumed that all of the houses used to have wind towers, but through interviews it was possible to establish that the very old houses did not have wind towers and that the concept was imported from the Iranian mainland to the island. According to Hawker (2008) the courtyard *badgir* house also has a very specific mercantile association and is primarily found in the towns associated with pearl fishing along the Gulf shore. Laaft, most popular for its wind towers, was a known pearling town, (Hawker, 2008: 162-163) so maybe this is also true for Chaku Gharbi and Sharghi.

In Laaft the design of the wind towers vary and some decorations give hints at the occupation of the owner, such as clocks scratched into a particularly prominent one. While in Chahu (Gharbi and Sharghi), a poorer community, the design was often very similar and did not have additional ornamentation. (Lehner, 2015)

16 landmark: a point of reference in a city structure, which may vary in scale (Lynch, 1960)



figure 4.17.
door in Chahu Sharghi
(Lehner, 2015s)



figure 4.18.
door in Chahu Sharghi
(Doubrawa, 2015b)



figure 4.19.
door in Chahu Sharghi
(Doubrawa, 2015c)

figure 4.20.
door in Laaft
(Doubrawa, 2015d)



figure 4.21.
door in Laaft
(Doubrawa, 2015e)



figure 4.22.
door in Chahu Gharbi
(Doubrawa, 2015f)





figure 4.23.
minaret behind a water reservoir
(Karner, 2017)



figure 4.24.
water reservoir with round base
(Karner, 2017)

figure 4.25.
water reservoir with rectangular base, Zirang
(Karner, 2017)



4.3.3. Special buildings – mosque

While the doors and wind towers can serve as landmarks in the immediate proximity, the minaret can serve as a landmark throughout the village. As mentioned before, the major religion in Qeshm is Sunni Islam and each village has its own mosque.

From the outside (which is most of the time the only view we got) they usually consist of a courtyard with a rectangular building and a colonnade around it, or a shaded porch. They usually have one minaret.

Depending on the villages they were sturdy looking loam (and possibly stone) constructions of a simple geometry, or had more delicate minarets with ornaments and colourful detailing on top of a lightly coloured plaster.¹⁷ (see fig. 4.23)

The mosque is usually located within the village structure, with some distance to the surrounding buildings in the form of wider streets or a sort of small square. Depending on the size of the village it might have more than one mosque located within the village structure, or on the border between village and mountain/palm garden.

4.3.4. Special buildings – water reservoir/cistern

In Laaft one of the mosques, Mosque of the Rasool, is wedged between a mountain and the sea. It is adjacent to the main square, the ruins of the ford and a water reservoir. This special building, also called *berkeh* (Rieger-Jandl et. al, 2016: 41), is a prominent sight on Qeshm, and supplies the villages with water.

Finding ways of storing water is vital for survival in an environment where rainfall and fresh water is not available throughout the seasons. On Qeshm there are public and private (in the courtyard) facilities for storing water during rainy seasons and also wells (for example near Haft Rangoo and in Laaft) which used to provide fresh (sometimes even cold) water to the inhabitants. (Sharifi, 2015)

The public reservoirs can be separated into two categories: ones with round (see fig. 4.24) or rectangular bases (see fig. 4.25).

With both types, the structures visible from the outside are merely the roof and entrances to a big underground cistern. These are covered to prevent evaporation, pollution and heating of the water. It is stored underground in deep tanks, plastered with a special water resistant loam mixture called *sarooj* (more in chapter “*sarooj*”). (Zaeimi et. al., 2014) The rainwater is collected in the surrounding area or plains in the mountains and brought near the reservoir via pipes/channels where it is collected and cleaned. It is then stored in the reservoir and used during dry periods for watering plants and animals, and it used to be used as drinking water. Often there is no pipe system for reaching the individual houses and the water is still

¹⁷ The research project mostly concentrated on the courtyard houses and palm gardens. While a detailed analysis of the mosques would be interesting, it could be a thesis in itself and is therefore beyond the scope of this one.

carried from the reservoir to the houses. (recording 4, 2015)

The smaller round ones can nowadays be found within the city structure. They have one, two or four entrances or air vents. They usually belong to a specific neighbourhood and are cared for by the inhabitants. They often come in clusters of twos or threes and are filled after each other. (recording 4, 2015)

The rectangular reservoirs are bigger and are located outside the villages. The structure consists of different chambers—if one gets polluted the water in the next one can still be used. They serve the village and are cleaned annually before the rain comes. (recording 5, 2015)

Some of the reservoirs on the island are said to be 400 years old and often still bear the name of the person who originally built them. (recording 6, 2015) As with most building types there is an evolution to these structures: the older type is the round one, originally often not covered (recording 11, 2015) and situated outside the village structure to prevent pollution (recording 4, 2015). Some resources also suggest that their location, close or within the villages, is to protect the villages from being flooded (Rieger-Jandl, 2016: 71-77). Most of the wells are now dried and with the lessening rainfall the reservoirs provide less water (Sharifi, 2015).

4.4. Courtyard house

While the reservoirs are a novel sight for Europeans, the structure that defines the villages on Qeshm like no other is the courtyard house. While cities like Yazd and Kashan are known for their opulent merchant courtyard houses, with countless rooms and ornamented ceilings (Bierbauer, 2014) the houses on Qeshm are smaller and more humble. One thing both have in common is that from the outside all of them look rather plain and simple, and the wealth of the inhabitants is only reflected on the inside. (Rieger-Jandl, 2015a)

The houses on Qeshm traditionally have one entrance to the plot from the street and each individual room is accessible via the courtyard. (Doubrawa, 2016)

4.4.1. Orientation

Repeated mentions of a specific layout by the locals suggests that there is an ideal orientation within the compound: the entrance to the plot in the south and the rooms on the opposite side, so that the entrances to each room are facing south. We were told that this was so that the entrance is cleaned by the sun's rays.

While houses (or the older parts of the houses) were often laid out in accordance with these rules, depending on their position within the village, or important areas of the village as well as modifications to the house, these rules were often broken. (Doubrawa, 2016)

4.4.2. The basics – summer and winter room

Traditionally, room in the courtyard house only refers to the structure of a room and not necessarily different functions. It still reflects a nomadic way of life, where the room changes from sleeping area to living room, enabled by a lack of furniture and makeshift beds stored in niches and chests. (Bierbauer, 2014 :84)

The basic house type (see fig. 4.26-4.27 on page 63) consists of a big walled-in courtyard for farming and only two rooms accessible directly via the courtyard. Of these rooms, one has a high ceiling and bigger openings, and is used in summer, and one has a low ceiling and smaller openings for easy heating in winter.

As with their mainland Iran counterparts, where inhabitants spent their days in different parts of the house according to the season (Bierbauer, 2014), there is still a nomadic idea to the permanent structure of the courtyard house, which also mirrors the locals spending their summers in the palm gardens and the winters up in the mountains before settling in the villages.

Each room is designed to make life in specific climatic conditions as comfortable as possible. The summer room's (comparatively) big, close to the ground openings are designed to ensure a constant airflow, cooling the house in summer. Views inside are usually blocked

by stones, or other things (for example swords of swordfish) wedged into the opening, forming a regular pattern.

The winter room has a lower ceiling and smaller, or no opening. There is often a small part walled off which was used for cooking and is nowadays often used as a bathroom.

While we were still able to see examples of this basic configuration, with a big courtyard, summer and winter room, small stables and a toilet (usually on the opposite side of the courtyard) most houses have undergone a lot of change during the years, evolving to more complex buildings with very individual characters.

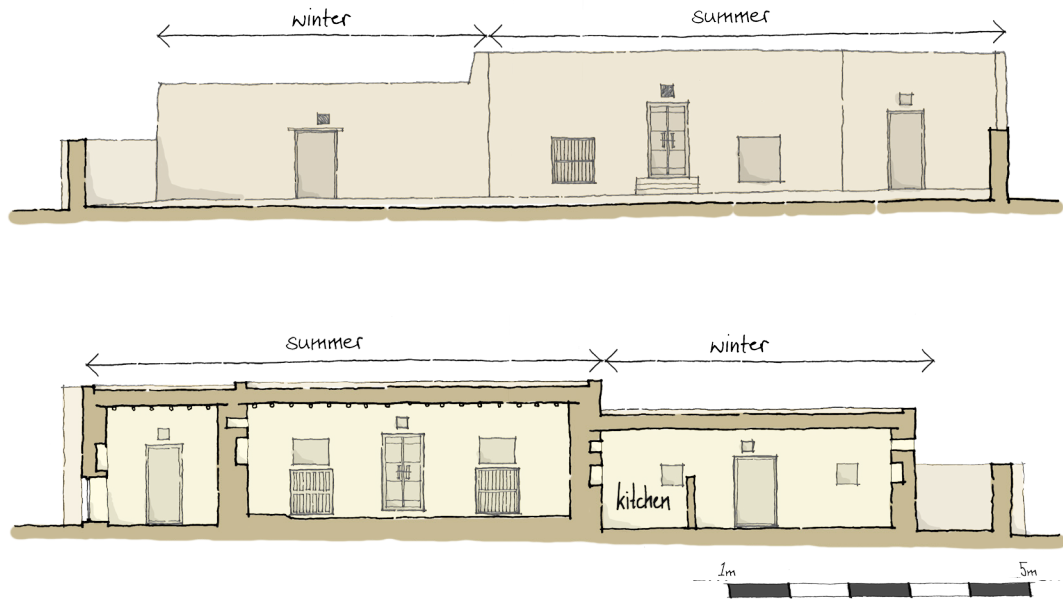


figure 4.26.
top: simplified elevation and section of a basic courtyard house in Chahu Gharbi (Karner, 2017c)

figure 4.27.
right: simplified floor plan of a basic courtyard house in Chahu Gharbi (Karner, 2017g)

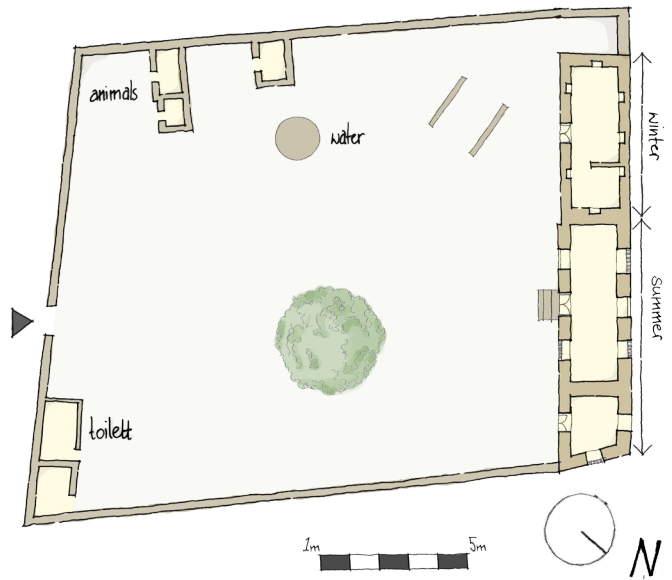


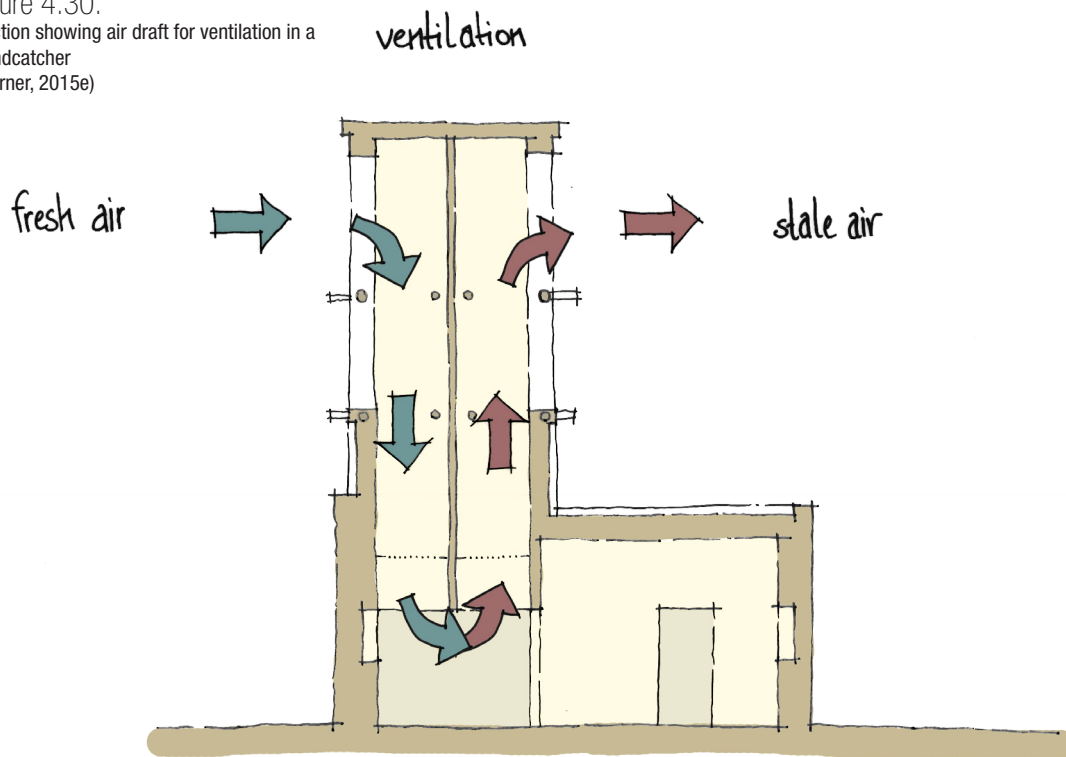
figure 4.28.
bottom: different rooms in courtyard houses on Qeshm Island from left to right (Doubrawa, 2015g), (Karner, 2017a), (Karner, 2017a)





figure 4.29.
windcatcher in Laaft, Qeshm Island
(Herbig, 2015b)

figure 4.30.
section showing air draft for ventilation in a
windcatcher
(Karner, 2015e)



4.4.3. Growth and Evolution¹⁸

Constant adaption of the house to fit the inhabitant's current needs ensures the growth and change of each compound. Rooms are added or torn away as needed. (Doubrawa, 2016)

Some of these changes are due to modernisation and new influences, like the addition of *badgirs*¹⁹ about a hundred years ago, and the more recent addition of AC units to most houses. The wind tower rooms, originally used to provide additional cooling to the summer room, are nowadays often used as a cool storage place. They represent the wealth and individuality of the inhabitants to the outside. (Doubrawa, 2016)

4.4.3.1. Windcatcher – ventilation

Most windcatchers on the island are rectangular with four shafts. They are rather small and stout in comparison to the ones found in cities like Yazd, on the mainland. This is due to the different climate, and the different purpose of the structure. While cities like Yazd have a dry and hot climate, where the main objective is to humidify and cool the air in the whole house, in hot and humid coastal areas, like Qeshm, they mainly need to catch the cooling breeze from the sea and directly cool the room under the wind catcher. (recording 12, 2015)

This structure, that looks like the tower of the fortress-like courtyard house, is a good way to catch a fresh breeze without permitting any glimpses into the compound. It is a cross-shaped structure, directly above the summer room (or one side of it). The four shafts are open to all sides, enabling the wind to flow in from one side and the old air to exit from the opposite shaft. The location of the wind catcher in the compound varies, but is always above the summer room (see “the basics – summer and winter room”).

The openings of the shaft are about 50cm above the level of the roof to prevent dirt and sand from being blown into the house. Where the shafts and the room meet, they have a sort of mesh to prevent animals or intruders from getting into the rooms. On the outside they often have wood protruding from the (traditionally) loam, stone and wood structure. Hawker (2008: 178) suggests that these are to maintain the structure (loam needs to be refreshed regularly).

¹⁸ The information here is quite limited. With more data and research it might be possible to find more detailed patterns to the evolution of the courtyard house type on Qeshm, or a specific village. Dates of when specific common extensions, such as the *sabat* were built could be collected and this could provide us with a typical evolution of these houses. Information like this was collected and mapped in Dr. Ing. Albert Distelrath's dissertation on Heracleia. - Distelrath (2011)

¹⁹ *badgir*: windcatcher or windtower

Other changes to the structure often have to do with the circumstances of the inhabitants changing. In muslim families living in courtyard houses, it is usual to add a new room to the compound when a son marries. This is where he and his new nuclear family lives. (Yazdanpanah et. al., n.d.: 264-267) While this seems to have been the case on Qeshm as well, the arrangements nowadays seem more varied. The inhabitants often express more need for privacy and separate rooms for different functions (living room vs summer and winter room, bathroom and toilet within the structure for living vs with the stables etc.). Nowadays the number of kitchens often represent how many nuclear families live within one compound. (Doubrawa, 2016)

Even with the extensions of most houses, a separation between living quarters of the family and stables, sometimes with guesthouses, is retained—most probably for hygiene reasons and to minimize foul odours. (see fig. 4.31)

While there are often separate rooms for men (meeting rooms, often accessible directly from the street) women only occasionally have a room to themselves. In their routines men and women often spend their time in different areas of the house, only crossing paths in the sabat. Traditionally men spend their time outside the compound working as fishermen, or even spending extended periods of time out of the village, while women take care of the house and bring up the children. (see fig. 4.31)

4.4.4. Gender²⁰

When most people think of the Middle East they think of very specific and strict rules related to gender, but understanding culture and traditions is often not so straightforward.

As customary in rural Iranian and Arabic culture, women are less visible in the streets and are in general less accessible to outsiders. While Islam and Persian culture are major players in gender roles²¹ there are distinct regional and tribal differences.

Sometimes, especially in the Gulf region, women take over work that would often be considered “men’s work”. This shift is often connected to men being absent for longer periods

²⁰ While the author is convinced that the research group was able to gain deeper insight and also interview some of the women because of the mostly female research group, it is uncertain if specific things weren’t possible for the group (like access to specific areas) because they also had men with them, are outsiders or weren’t there long enough to be trusted. It did seem as if the author, as a female, white, European researcher/student had a specific set of rules to abide by that differed greatly from the local women’s, but was also not exactly the same as for the male colleagues. All interviews of inhabitants were conducted by female students and it did not seem that anyone objected to this, though women were interviewed inside and without men, while men were interviewed in the courtyards, always visible to the rest of the group. It is also an important to consider that the people who decide to be part of a project like this and allow a research team to have a look into their very private living quarters probably rather belong to the more open minded and maybe less traditional side of the spectrum. Outside of the compound the group only interacted with local men. They were showed around by men (often holding prestigious positions within the community) and followed by groups of young men who were interested in what they were doing there.

²¹ A. Fadai writes in her dissertation on gender roles in Iran, that there are claims to a distinct difference between the role of women in the Persian culture vs. Islam. These suggest that before islamicization men and women were mostly equal, allowed to own property, be judges and take the leading role in religious rituals. While there were different areas accessible according to gender. (Fadai, 2011:59-63 & 95-97)

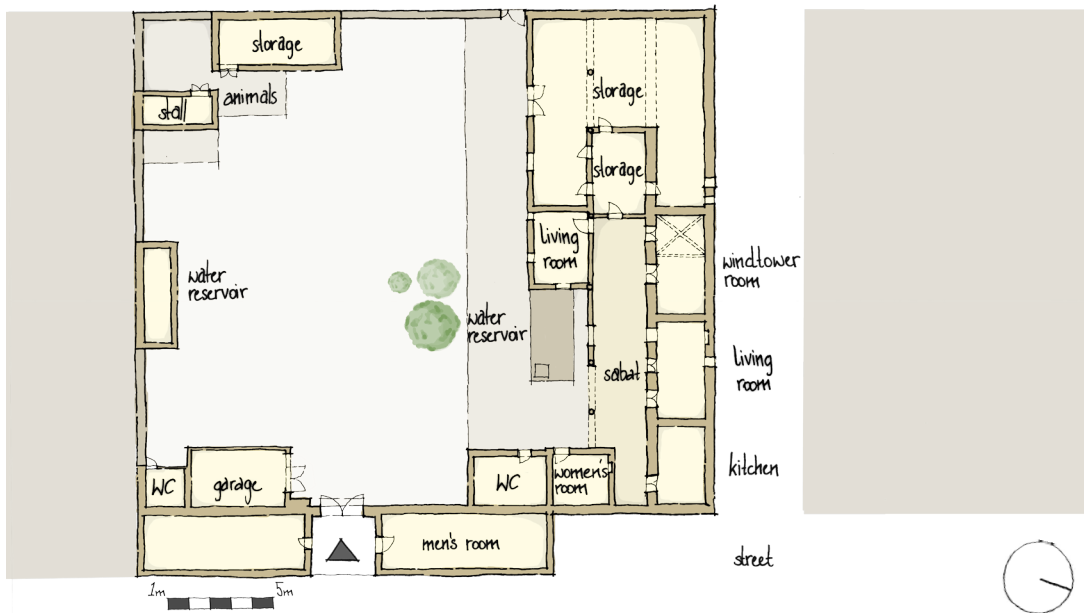


figure 4.31.
ground floor plan of a house with many
extensions in Chahu Gharbi
(Karner, 2017f)

figure 4.32.
women showing their crafts while being
interviewed
(Karner, 2017)





figure 4.33.
wedding room in Laaft
(Lehner, 2015)



figure 4.34.
girls sitting on a swing during celebration in
Haft Rangoo
(Winischhofer, 2015a)

figure 4.35.
men and boys dancing and making music
during celebration in Haft Rangoo
(Karner, 2017)



of time (not unlike wartime in the US or Europe), working on ships or on other Gulf shores as migrant labour. (The elderly women of the Al Zaabi tribe in Ras al-Khaiman, which lies south of Qeshm on the United Arab Emirates shore, regularly participate in building and maintenance work on the houses. (Hawker, 2008: 85) On Qeshm we were told that the maintenance of the inside (walls and floors) of the house in particular is done by women. (recording 8, 2015) And newlywed couples moving in with the bride's parents, as opposed to the man's family, was also not unheard of. The wedding ceremony on Qeshm is a week-long elaborate celebration, as part of which the newly wed couple spends time in a lavishly decorated wedding room (see fig.4.33.). (Bornberg, 2015)

Also with regard to daily life within the compound, gender roles are still an important factor. Women on Qeshm traditionally wear an often colourful *chador*²² and a *burqa*, a mask indicating that they are married. These masks have different styles in each town. (see fig. 3.6, on page 32, 4.7 on page 50 & 4.2 on page 49)

Inside their courtyard houses they don't wear the *chador*, which makes it even more important to limit views from the outside into the compound, or from semi-public meeting areas of the men, into the areas where the women reside. (see fig. 4.31) These rules of visibility often dictate where specific rooms are located within the compounds. It also means the entrances to the compounds are arranged in a manner to limit the view from one compound to another, sometimes with walls even in front of the entrance to the compound to limit views from the street inside the courtyard.

22

chador: a type of full-body covering veil that is held closed with one hand.

4.5. The courtyard

The courtyard has special significance to the way of life on Qeshm. It enables the inhabitants to live in a private, shielded way from the outside and be self-sufficient. It is important for farming and livestock and gives access to different rooms/parts of the house.

In the more traditional compounds, with only summer and winter room and maybe a few stables, the courtyard takes up the largest proportion of the plot, but with the addition of new parts this proportion is shifted.

4.5.1. Sabat

One such an addition is the sabat. It is a platform with columns and a roof, slightly elevated from the courtyard and functions as a shaded, covered connector of different rooms. When the houses are enlarged further the spacing between the columns is often closed, changing the sabat from a porch-like structure into a corridor connecting different rooms. (see fig. 4.31 & fig 4.36)

4.5.2. Water reservoir

The courtyard house's self-sufficiency is only enabled by access to water within the compound. This is achieved through small reservoirs or sometimes wells. (house 1)

With the little rainfall that Qeshm has, collecting water on the plot is prudent. The water is collected on the roof (see fig. 4.38) and directed into a reservoir, often near the stables. The water is sometime pumped or brought up with a canister and a string. In recent years these stores are often filled by trucks.

4.5.3. Farming and livestock

In recent years—due to less rainfall and shifts in fields of occupation—farming, and therefore the courtyard, have lost some of its importance. Most yards still have some plants, trees and livestock (mostly goats and chicken, sometimes cows) running free in the yard or streets during the day. (see fig. 4.36. & 4.37)

4.5.4. Other constructions on the plot

In the courtyard there often were sleeping platforms. (see fig 4.36) These are constructions, elevated (on loam walls or big tin cans) from the ground to ensure airflow and protect the sleeping person from animals. The basic form and height is constant, while the materials range from traditional loam to repurposed big tin cans for the base, while the only materials

used for the platform is wood and woven palm frond (presumably to ensure airflow). They are used in summer, to sleep on. (see fig 4.37, the walls in the courtyard top right)

As mentioned under “growth” and “village structure” there are often single rooms accessible from the street. These might house special functions such as shops, schools or meeting rooms for men that need to be separated from family life within the compound, or are used as garages. (see fig. 4.31)



figure 4.36.
top: courtyard with goats, sabat and outside sleeping platform in Chahu Shargi (Lehner, 2015f)



figure 4.37.
left: stables and goats in a courtyard (Rieger- Jandl, 2015n)

figure 4.38.
bottom: courtyard in Chahu Gharbi (Lehner, 2015g)





figure 4.39.
hatch for watering channel
(Rieger- Jandl, 2015o)



figure 4.40.
channel made out of sarooj for watering palm
trees
(Rieger- Jandl, 2015p)



figure 4.41.
thorn covered wall for protection of dates
(Doubrawa, 2015h)

figure 4.42.
Mr. Sharifi talking about his family's palm
gardens
(Rieger- Jandl, 2015q)



4.6. Palm gardens

An almost forgotten part of the settlements on Qeshm are the palm gardens. They are usually close to the sea, near the villages and used to be one of the most important sources of income and staple nourishment. (Rieger-Jandl, 2016: 39 - 45)

The palm gardens used to be the summer residence of the locals. Summer on Qeshm directly follows the rainy season (October-April). With the change of temperature and the time for harvesting dates approaching, the locals came down from the mountains or from the villages, leaving only a few family members behind to take care of the other settlement.

In the course of the research project two palm gardens were visited, the ones close to Chahu Gharbi and the palm gardens of Haft Rangoo. The village of Haft Rangoo is a comparatively newer settlement (established in the last decades). The inhabitants used to spend the winter in Tabl and settlements in the drier mountains, while the palm gardens were flooded.

4.6.1. Structure

Palm gardens mostly consist of areas where palm trees are planted, the built structures visible are palm garden houses, groundwater wells, water reservoirs and channels as well as the fences and walls separating and protecting the gardens from each other and the area around them. They are situated a bit lower than the surroundings and separated by ramparts and walls if the owners were wealthier.

4.6.2. Date farming

Most of the time during the summer months was spent picking and drying the dates, with even the small children learning how to climb the trees and pick them. The dates were then put on a simple platform and sun dried. As they were the main export good and a stable form of nutrition, they were very valuable and needed to be protected from animals and thieves. For this purpose the platforms were surrounded by a wall often topped with thorn bushes. (Rieger-Jandl, 2016: 39 - 45) (see fig. 4.41)

4.6.3. House

The palm garden's houses, located within the palm garden, served as a sheltered sleeping area for the family members working in the palm gardens. They are simple small (3.5 by 7.5m), rectangular buildings with one or two rooms and ventilation openings and niches. Most houses are constructed of stone and loam while very old houses (roughly two hundred

years old) are constructed of sun-dried loam bricks and earth mortar, often using palm trees as beams. (see fig. 4.42) on page 72

These structures were mainly used for storage purposes and shelter, and housed up to ten people. Most of the time in summer was spent outside, in the shade of the palm trees and with the cooling breeze from the sea. People mostly slept on ventilated platforms and dug a hole in the ground for cooking. (Rieger-Jandl, 2016: 39 - 45)

4.6.4. Channels and irrigation

The palm gardens are only made possible by the intricate irrigation systems. The water used is collected in the mountains and directed towards the palm gardens, where the main channel separates into progressively smaller channels to reach all the different parts of the gardens.

The channels are often wide enough to walk in, and the low, thin walls, constructed of *sarooj*, a very hard water resistant material (more under “Material/*sarooj*”), might allow them to be mistaken for paths. As they get closer to the individual gardens they get smaller and where the channels lead into the gardens they have little hatches or doors installed to control the waterflow. These were opened and closed at specific times to ensure each garden got enough water. (Bornberg, 2015)

The first surge of water was used to “clean” the gardens from the salt which accumulates on the soil from the sea, (Bornberg, 2015) while the following surges were used for irrigation and fertilization. To fertilize the palm trees, animal dung was placed at specific junctions in the channels and carried to the trees with the water. As mentioned under “Structure” the palm gardens are situated a bit lower than their surroundings, so water pools in them. This was especially important as the loamy earth from the palm gardens was used as a building material (more under “Material/loam”). (Rieger-Jandl, 2016: 39 - 45) (see fig. 4.39 & 4.40 on page 72)

4.7. Materials

Traditionally a variety of local materials such as stone from the mountains; loam, sarooj, palm and palm frond from the palm gardens; and wood and straw were used. With stronger trading ties to Zanzibar and Mumbai, wood began to be imported. In recent decades, increasing amounts of steel, concrete and concrete bricks have been used, influencing the footprint and thermal properties of the buildings.

4.7.1. Loam

Loam is a weathering product of stone and can be found on different continents and climate zones. (Gernot Minke, 2009: 11-12)

It is one of the oldest building materials used and it is still the material of choice for one third of the world's population. (Rieger-Jandl, 2015) Some of the properties which make it such a versatile building material include: its ability to regulate humidity (it can retain and release humidity when needed, keeping the air humidity in rooms constant and comfortable for humans), its ability to retain heat, and to absorb pollutants from the air. It is re-usable, doesn't need to be fabricated, has a low impact on the environment, (Gernot Minke, 2009: 11-12) and on Qeshm it is readily available making its embodied energy²³ very low.

Some of the disadvantages depending on the use of the material are that it is not water resistant, and it shrinks when it dries, often causing cracks (these can be prevented by reinforcement with materials such as straw). As a material composed of clay, silt and sand, the variance of its composition alters its consistency and properties, making them dependant on the place it is sourced from. (Gernot Minke, 2009: 11-12)

On Qeshm the loam used as a building material was taken directly from the palm gardens. For the earth "bricks" the inhabitants waited until the flooded ground dried up again and cracked. These "bricks" were then used for building the loam-only constructions. Most common on the island is the use of loam as earth mortar with stone, and on the roofs²⁴ of the houses. Here the loam was also taken from the palm gardens and then mixed with straw or the needles of the *gaz*²⁵ tree, as a sort of reinforcement to keep the surface from cracking during the drying process. (Rieger-Jandl, 2016: 39 - 45) (fig. 4.43 on page 76, top)

Even though loam is not the main building material, it still influences the thermal properties of the houses and is a good building material in these climatic conditions. (Rieger-Jandl, 2015)

²³ embodied energy: term used in life cycle assesment; reflecting "the direct and indirect energy requirements associated with a process." (Treloar, 1989: xv); includes energy used for gaining raw materials, processing, transporting, assembling, maintenance and repair deconstruction and disposal.

²⁴ The roofs are a simple construction of wood beams, palm frond mats and topped off with loam, they are often used to collect rainwater on the compound.

²⁵ *gaz*: tamerisk

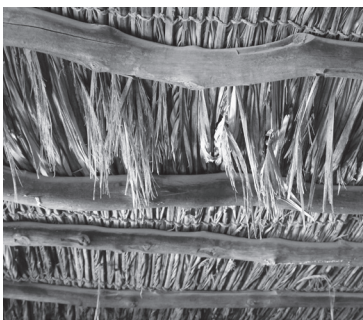


figure 4.43.

top: wall made of ston and loam with hay
(Doubrawa, 2015i)

middle: channel made of sarooj
(Karner, 2017)

bottom: ceiling with palm frond and wood beams.
(Doubrawa, 2015j)



4.7.2. Sarooj

While Loam and stone is a durable enough combination of building material on the island for most purposes, some structures, such as water reservoirs and channels, need to be more water resistant. *Sarooj* is a special loam mixture used in different regions with different recipes in each. According to Hawker (2008: 90) it is a red clay, mixed with manure and water. It was originally used by Persian and Omani masons and was imported to Arabia from Langeh²⁶ as *Langeh cement* in the 19th century.²⁷

On Qeshm it is a mixture between loam from the palm gardens and camel or donkey faeces and/or dried grass. This mixture is dried and then burned, through the exothermic reaction the materials properties are changed and it becomes more water resistant and harder which also means it does not need to be reapplied yearly like loam. This material is then mixed with water once more and used for the channels (fig. 4.43, middle) in the palm gardens as well as inside wind towers and water reservoirs. (recording 17, 2015)

4.7.3. Wood

While most structural components used in Qeshm's vernacular architecture were readily available on the island, others needed to be imported. Wood, except for palm trees and mangroves, is scarce. While the inhabitants did use these in early buildings (Sharifi, 2015) most wood has been imported since the late 19th century, when the trading routes became more secure. (Hawker, 2008: 78) The wood most often mentioned to us was sandalwood from Zanzibar; it is especially heavily featured in the village of Laaft

26 located on mainland Iran, near Qeshm's most western part

27 While some properties of sarooj on Qeshm overlap with what Hawker describes as sarooj (like more water resistance and stronger) the description of burning the mixture and remixing it is more reminiscent of what he calls alluvial limestone in which limestone is cooked and mixed with wood ash.

(recording 7, 2015), while other regions from which wood was imported include Mumbai, India (recording 12, 2015).

Most prominently it is used in the construction of the wooden doors and beams. (fig. 4.43, bottom)

4.7.4. Palm/palm frond

Despite palm wood being an unstable construction material (unless used as a column) there are countless examples of it being used in roof construction on the island. Prior to the availability of good quality wood for construction, the trunks of palm trees were used. Especially in the ruins of palm garden houses, old bent trunks under collapsed roofs were visible.

Palm frond was the primary material used in Gulf architecture for the last 4.500 years. (Hawker, 2008: 1) It has mostly been replaced by more durable materials and on Qeshm it is often found as woven mats in ceilings and on floors. Palm leaves are also used as a simple means of providing shade—for example for canopies. (fig. 4.44, top)

4.7.5. Stone

Without the opportunity to transport materials from afar, vernacular architecture heavily relies on using the materials that are readily available. For this reason most houses on Qeshm are built from stone, held together by a loam and hay mixture.

The stones were brought with camels from the mountains. Areas further away from the mountains, as well as very old buildings, also have constructions built solely of clay. In the course of the research project only a few such houses were visited, one in Ramkan (a 126-year-old courtyard house that also sported a local wood, *cahul*, as beams) (recording 7, 2015) and some ruins in the palm gardens of Haft Rangoo (approximately 200 years old). (Rieger-Jandl, 2016: 39 - 45)



figure 4.44.
top: palm frond
(Rieger-Jandl , 2015r)

bottom: stone used in walls
(Rieger-Jandl , 2015s)



4.8. Change

life

1.[mass noun] The condition that distinguishes animals and plants from inorganic matter, including the capacity for growth, reproduction, functional activity, and continual change preceding death.

-Oxford dictionaries (2017)

Life, by definition, is never stagnant and circumstances enabling life change constantly, making adjustments and modifications necessary for survival. In a time of climate change and globalisation, changes to local traditions and culture, the built environment, as well as sources of income, often happen very rapidly.

4.8.1. Water shortage

One of the most crucial changes Qeshm Island had to deal with in the recent past is that of water shortage. The island went from one of the main suppliers of drinking water to Hormuz and the Hormuz Kingdom in 1301(Potts, 2001) to importing water and resorting to desalination plants. With less and less rain over the past fifteen years desertification has set in, the groundwater level has sunk and many of the wells have dried.

This has had a great impact on the livelihood of many families. The palm gardens have been abandoned for years, annihilating a major source of income and destroying a whole building type. As mentioned under “Material/loam”, loam is basically earth and needs to be periodically refreshed to retain the form humans put it in. As the palm gardens became abandoned, the houses lost their purpose and started falling apart.

4.8.2. New building techniques and materials

In recent decades a shift in the prevailing building techniques and materials has happened. This is not only visible in Qeshm Town, with the many new building sites for shopping malls and hotels (using steel and concrete constructions), but also in the villages of the more rural areas.

In the villages old buildings plastered with concrete or entire new structures with concrete bricks trying to emulate the old houses can be seen. Walking through the villages and houses air conditioning units and fans are often used instead of wind towers, or gas and oil operated pumps where hand-drawn buckets were used previously.



figure 4.45.
new builds in Peyposht village
(Rieger- Jandl, 2015s)



figure 4.46.
ruins of a house in Laaft
(Furbach, 2015c)



figure 4.47.
Mr. Sharifi showing group around his family's
palm gardens
(Karner, 2017)



figure 4.48.
Prof. Rieger-Jandl taking pictures of the ruins
of a palm garden house
(Karner, 2017)

Sometimes this shift is also visible in the structure of villages, from courtyard houses on a grid layout (vs the grown fabric of previous settlements) to the import of what resembles suburban houses with sloped roofs.

Established building types in specific regions represent the culture, way of life and climatic conditions they evolved in and are inseparable from these. (Lehner, 2016 : 9) While it is only natural that the architecture changes along with these conditions and evolves in accordance with the new circumstances, imported materials and techniques just for the sake of novelty and superficial reasons might create more problems than they solve.

In particular, when asked about the shift from loam to concrete, inhabitants usually said that concrete is more durable and doesn't need to be freshened up periodically like loam. While this might seem a plausible reason at first, having a closer look at the issue, it becomes obvious that things are not that simple.

Buildings are systems: when changing one part such as the material, other properties of the whole can change as well. Loam has two properties that are particularly important in the prevailing climate on Qeshm, namely it regulates humidity and stores heat ensuring a comfortable climate inside the buildings. (Minke, 2009: 11-12) (Rieger- Jandl, 2015)

While concrete is also capable of storing heat the durability of concrete is strongly dependant on internal (ingredients) and external factors, such as temperature and humidity. (Stark et. al., 2001: 4-6) On Qeshm the combination of used concrete, temperature and humidity causes the concrete to crack and flake, which according to Jochen Stark (2001: 4-6) is a clear sign of insufficient durability. This means that instead of their yearly ritualistic refreshing of the loam, the locals have to knock off and re-do the old plaster in longer intervals. (Rieger-Jandl, 2015)

Other than the material's properties, the impact on the environment also changes when communities switch from loam to concrete or steel. Steel and concrete are made from raw materials, that have to be sourced and transported, and then transported from the factory to the building site. Loam by contrast is a local, reusable and low-impact sustainable material (Minke, 2009: 11-12)—all characteristics that are becoming increasingly important globally.

Most communities on Qeshm have a low income and are struggling to meet their basic needs, such as water. Loam is freely available and the locals know how to use it. There is no need to buy it or pay someone else to built you a house (as the knowledge on how to use it has been passed on for generations). This hints at another reason why recently people seem to prefer concrete on the island. When asked why not built with loam one of the locals said he wouldn't find a wife if his house was made of loam, suggesting that it's to do with status rather than making life more comfortable. (Rieger-Jandl, 2015)

4.9. Conservation

In these modern times, the other side of the world is but a few hours away, globalisation is progressing fast and we can see the implementation of an “international” architectural style with disregard for climatic conditions and cultural differences. (Lehner, 2016: 9) But in this interconnected environment a rising demand for eco-tourism and the desire to experience different cultures and places in a more immersed and true sense is also apparent.²⁸ This way of experiencing culture is inseparably tied to local building traditions. (Farsani et. al. 2012)

This means that some sort of tending to and preservation of vernacular architecture is in the best interest of local communities who want to establish their village as a destination for tourism. Some locals can be seen as pioneers (and hopefully trendsetters) in this regard, offering rooms in their loam-built courtyard houses. Our research team was lucky enough to be housed (for some of our trip) in such a location.

Hazar Sharifi, whose family has lived in Haft-Rangoo for generations, has built a hostel with regional materials and traditional techniques. The loam and palm used in the building is from his family’s palm garden, while the hay used as reinforcement is sourced from Ramkan (another village on the island). It is a traditional courtyard structure, and the rooms housing the tourists, individually accessible through the courtyard, are (as customary) minimally furnished with mats to sleep on, and provide niches in the walls for storing things. In front of the rooms is a sabat with elevated, ventilated seating (that was used to sleep on by some), in the middle is another shaded seating area with hammocks and tables, and there is also an outside cooking area and fireplace. Bathrooms and showers are also available, and meals take place, as customary, on rugs on the floor. The place is decorated with reused carved wooden doors and bits and pieces reminiscent of the fishing tradition. His example proves that it is possible to use regional knowledge and apply it to a new building type.

In Chahu Gharbi and Sharghi no housing for tourists was available (at the time of the research trip). The location, close to one of the major sites of the Geopark (Chah-Kuh valley) and the existence of the vernacular architecture in the form of badgirs and courtyard houses indicates that it would be a good location to establish itself as an eco-tourist location.

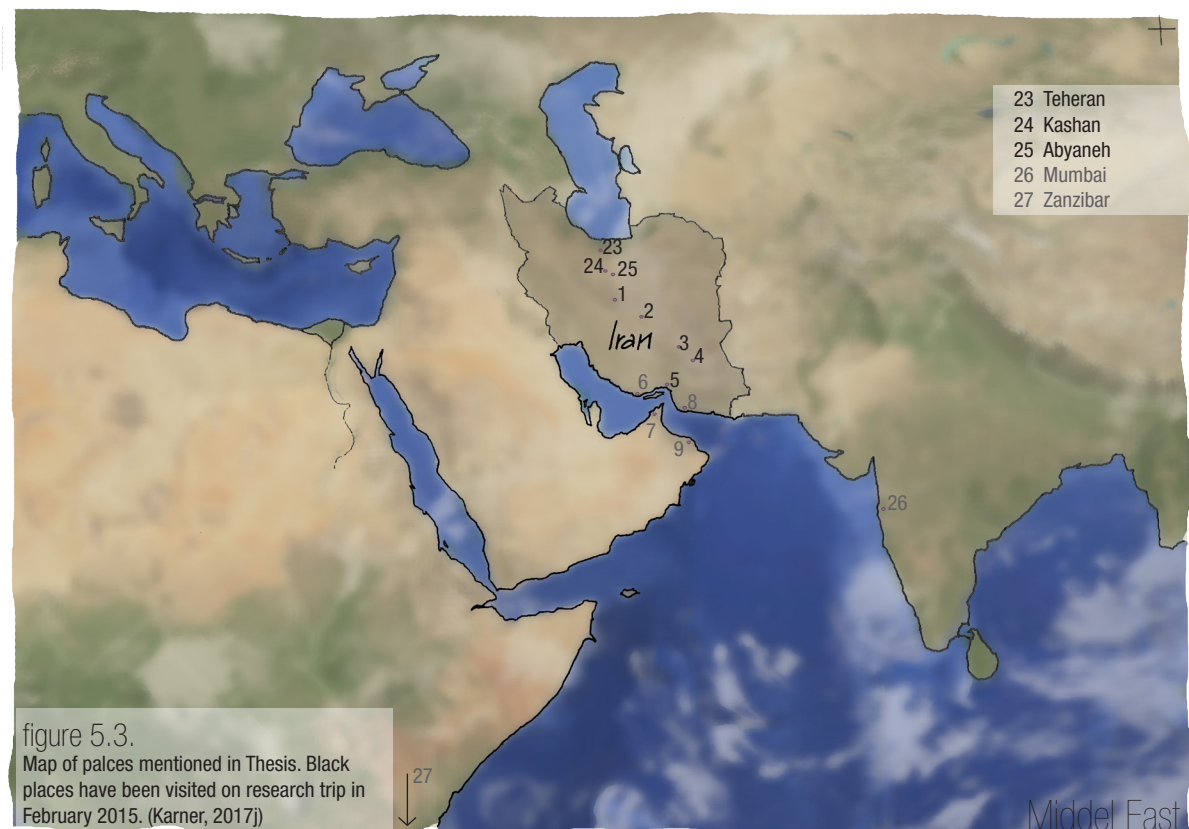
As Nahayan Mabarak Al-Nahayan wrote in the foreword to “Building on desert tides” (Hawker, 2008) “Academic interest in traditional architecture in the Gulf,..., is relatively recent.” (Al-Nahayan, 2008)

As Rieger-Jandl explained in the interview for the film, conservation does not necessarily mean freezing time and conserving the building culture, or building as is; it can also mean conserving the knowledge the vernacular architecture is based on, in an effort to understand and learn from truly sustainable, regional building traditions. (Rieger-Jandl, 2015) This can happen on a large scale, like in our case, with the involvement of different disciplines, universities and the inhabitants, or on a

²⁸ There could be a full philosophical discussion about if this is truly possible and what it would mean if it were, but that would go beyond the scope of this thesis.

smaller scale by the local community tending to their heritage.

At the core of this endeavour is always the local community and their built environment, as this is what we study and learn from. To be able to learn from their knowledge it is important to raise awareness within these communities of their own culture and traditions, of the importance and worth of their knowledge.



5. Geographical maps

6. Appendix

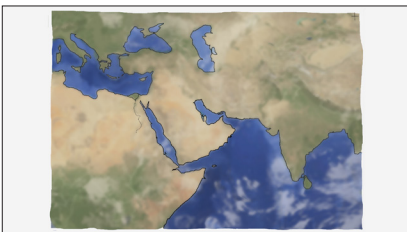
6.1. Narration of film



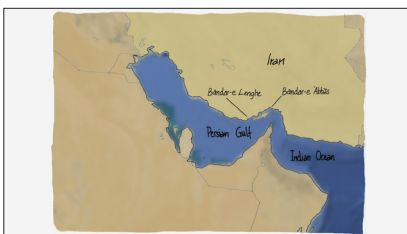
first frame



Title



We are in the Middle East. More accurately, we are in the Persian gulf.



At the mouth of the gulf lies its biggest island: Qeshm island. It stretches for 122km from Bandar Abbas to Bandar Lengeh, along the Persian coast. At the closest point it is only separated by 2.5km of sea from the mainland. Due to its strategic location at the mouth of the gulf it has been an important trading post in the gulf for decades. Whoever controlled the Strait of Hormuz, where the shallow waters of the gulf and the Indian Ocean meet, controlled most of the shipping routes in the gulf.



Control of the island changed hands often. It was fought over by Persian, Omani, Afghan, British, Dutch and Portuguese forces, attempting to establish their position in the Gulf. It has been under Persian control since 1719 and is nowadays part of the Hormozgan Province of Iran.



To get to the island you can either fly or take a boat from the Iranian mainland, from the port of Bandar Abbas.



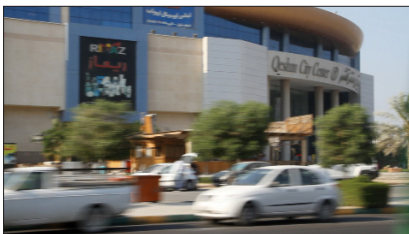
Most tourists travelling to the island with us are from this region. They often only stay for a few days to see the geological sites and take advantage of the free-zone. It was established in 1989 as an area meant to attract tourists and international investment, with perks like tax and visa exemption.



After about an hour of travelling through the waters of Clarence Strait we reach Qeshm town, the island's biggest and most modern settlement.



We are welcomed by buildings sites, and a statue of Imam-Quli Khan. He was an important military and political leader during the safavid dynasty, a time that is tied to the struggle of military dominance in the gulf, and often considered the beginning of modern Persian history.



None of this is visible here. Qeshm town has fully embraced modern trade and the free-zone. Its landscape is defined by shopping malls, hotels and building sites. But we are in search of a different story.



Our path leads us west, through the vast, dry and arid landscape that lies between the more traditional villages dotted on the shore of the island.



Here, the rhythm of life is still defined by the seasons. Throughout the year, the weather is windy, humid and warm, and the rural communities are strongly dependant on the rain brought by seasonal thunderstorms.



The vernacular architecture, like the dress, traditions and language, are strongly interlinked with the particular life on the island. They have been influenced by a long history of tribal movement and trade throughout the gulf.



In 2015, our research team, headed by Professor Rieder-Jandl, from the Technical University of Vienna, met up with an Iranian team, organised by Dr. Reza-Ghaneei, to find out more about this unique architecture.



Dr. Reza Ghaneei (translated): “The architecture that we see today is not made by an architect who simply finishes university and then designs something. Experiences, collected over hundreds of years, formed this architecture; they can provide answers in many ways.”



Prof. Rieger-Jandl: “Für uns als interdisziplinäres Team, also unser Team besteht aus Bauforschern, das heißt Architekten und Architektinnen, aber auch aus Anthropologen, es ist eine Vermessungstechnikerin dabei, steht die Bauforschung auf Qeshm Island im Vordergrund.



Bauforschung heißt wir versuchen möglichst viele Gebäude zu vermessen, die Materialien herauszufinden aus denen die Häuser gebaut wurden, herauszufinden wie die Menschen die Häuser auch benützen. Zusätzlich zur Bauforschung führen wir auch anthropologische Studien durch.



Das heißt wir haben eine Interview Fragebogen vorbereitet und führen semiformale Interviews mit den Bewohnern und Bewohnerinnen. Uns interessiert hier in erster Linie die Situation des Hofhauses, das ist hier sehr besonders.



Wie wird das Haus benützt, wie wird der Hof benützt, und dann ist auch noch das Element des Windturmes sehr interessant den es nur in sehr wenigen Dörfern hier gibt. Wir untersuchen die Funktionsweise, wir befragen die Leute inwieweit sie den Windturm auch noch benützen und wie er zu ihrer Wohnqualität beiträgt.



Wichtig sind aber nicht nur die Häuser selbst, sondern auch der Kontext, in dem die Häuser stehen, das heißt die Dorfarchitektur, welche Strukturen haben die Dörfer, sind alle Dörfer sehr ähnlich aufgebaut, haben die Dörfer jetzt spezielle Ausprägungen?"



The town structure in Qeshm is quite usual for these climatic conditions. It is a grown, maze-like structure, mainly defined by the high walls of the courtyard buildings.



The streets are aligned to ensure wind flow through the village. The high walls provide some shade, but locals only make their way through the village during the cooler hours of the day. When the sun is high, it is only some animals, and us, on the streets.



Prof. Mückler: "Was ganz klar auffällt ist, dass es hier eine strenge innen – außen Dichotomie gibt. Also der öffentliche Raum wird vergleichsweise wenig genutzt, ist daher auch deutlich weniger gestaltet als bei uns in europäischen Städten, die einzelnen Compounds, die Häuser sind blickdicht geschützt, das Privatleben ist von außen überhaupt nicht einsehbar. Und das ist schon ein markanter Unterschied der sofort auffällt."



Walking through the maze-like streets, it quickly becomes apparent that finding your way here is hard for outsiders.



Most streets here look alike: no street signs, no street furniture, bare, loam covered walls with few openings.



There is very little connection between the street and what is going on inside. No way of telling what's being those walls. Often the doors are the only openings, aligned in a manner to limit views and ensure the privacy of the residents.



Prof. Lehner: “Diese Häuser hier haben ein Äußeres das sehr, sehr anspruchslos ist, eine vollkommen anonyme Architektur, und jedes Gehöft, jede Ummauerung, jedes Haus sieht aus wie das andere.



Es gibt zwei Identität Merkmale; das eine Identitätsmerkmal ist das Tor, das heute üblicherweise aus Blech besteht, mit aufgeschweißten Flacheisen. Diese dienen als Identifikationsmerkmale. Das ist unser Gehöft, das ist unsere Familie.



Und auch die Windtürme; jedes Gehöft hatte einen Windturm, und viele Gehöfte haben heute noch einen Windturm. Und diese Windtürme sind in manchen Gegenden sehr einheitlich gestaltet und in andern Orten sind die Windtürme sehr sehr unterschiedlich gestaltet. Und man erkennt eigentlich an der Art wie ein solcher Windturm ornamentiert ist das Gehöft.”



Wind towers, a ventilation technique imported from the Persian mainland, are the most prominent feature on the one-storey courtyard buildings. Their height in the townscape is only exceeded by the minaret of the mosque.



Most people here are Muslim, but in contrast to the rest of Shia Islam Iran, there is a Sunni majority here. This hints at the tribal and trading ties to the Arabian Peninsula and North Africa where this branch of Islam is most commonly practiced.



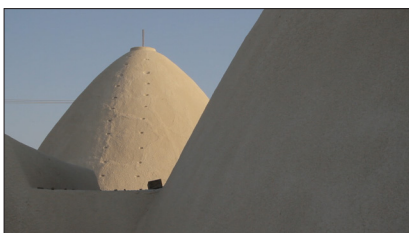
In absence of other big communal buildings, we were often invited to the mosque around noon for lunch. As customary, we ate our meals barefoot on the carpet.



The group effort of a local family provided us with traditional meals, often consisting of fish, chicken, rice, potatoes and dates. They gave us an insight in Qeshmian cuisine and hospitality.



After our meals, a lot of dishes need to be cleaned. For this, we need water. Here water usually doesn't come out of pipes, but is taken from water reservoirs.



Other than the mosque, they are the only special-function building, and therefore they are very visible in the villages.



Fresh drinking water is vital for survival in such a dry environment. The island used to be rich in this resource, from collected rainwater, and cool groundwater wells. It was even supplier to the Hormuzi kingdom. But the wells dried up, and the rains stopped coming. Nowadays, drinking water is mainly imported from the mainland. (The water from the reservoirs is mainly used for construction works and cleaning.)



From the outside, we can only see the roof of the structure. It protects the water from evaporation and pollution. There are multiple entrances to the big underground basin where the water is stored. Here we can find one with round or rectangular bases. The later ones have multiple chambers, are bigger, and usually located outside the villages.



The rainwater is collected in the mountains and surrounding plains. It flows in channels towards the reservoir and enters via an opening. It is then cleaned and stored inside for the coming year.



These reservoirs are a good example of community-built architecture, well adjusted to climatic and other environmental conditions. They used local materials and traditional techniques. This kind of architecture is called vernacular architecture. And to better understand it, it is often wise to take a step back and get a broader view of the surroundings. To do this we went on a trip to different parts of the island.



Our first stop is to the Harra forest. Harra is the local name for mangroves. These salt water-resistant trees are located between Qeshm's northwest shore and Iran's southern coast.



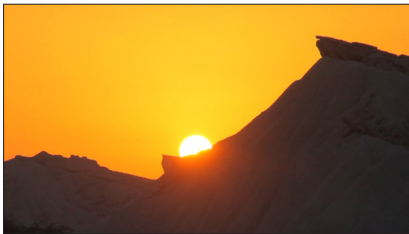
The forest roughly covers an area of six hundred hectares, and is home to at least two hundred species of bird. It is also important to locals as they still use the leaves to feed their livestock.



As one of Qeshm's major tourist attractions, it is also part of Qeshm's Geopark.



Most of the geopark's attractions are connected to the occurrence of a salt dome. They are valleys, caves and mountains formed by erosion. And are an important part of the local's history and culture and still hold special meaning for them.



After a long day and a lot of new impressions we drive to our guesthouse to spend the night.



As a token of traditional Iranian hospitality our hosts have organized a celebration for the team and some of the village's inhabitants. While the men play music and dance, some of the local women prepare food.



Most of the adults have dressed in the island's traditional dress, which is still worn everyday by women but not all men. Men wear long robe style-garments called thobe in Arabic and cover their head with scarves.



The women's dress consists of a chador (a full length cloak held close with one hand), colourfully embroidered trousers and a burqua (a mask worn by married women). Every village on the island has their own design.



Similar styles of clothing can be found around the Gulf shore, they are described as “Bandari” which refers to “Bandar” the Fars word for port. It can be used to describe dress, music, dance and language. The word is emblematic of a deep connection to seafarer heritage and the visibility of North African, Indian and Arabian ancestry.



After the musicians leave we have time to exchange our impressions with our colleagues, play cards, and let the night come to a close with renditions of Austrian and Iranian songs.



After a short night’s sleep, the time before breakfast is used to plan the tasks of the day and check the notes from the previous days.



Then people start flocking in for breakfast.



We usually have a quick simple meal consisting of flatbread, eggs, honey, carrot jam, and tea. On research trips like these the schedule is always tight, there is a lot to see and a lot of people to meet, so we soon leave to survey the courtyards houses.



While we have visited a few villages around the island, all of the houses surveyed are located in Chaho Gharbi and Chaho Shargi, two villages located on the North-West shore which are separated by a mountain.



Some of the houses, like this one, have been abandoned for years. It makes the house a good example of an early basic type of courtyard house. We have a big walled-in courtyard for farming and livestock, a well for water supply and three rooms located on the north side. They are individually accessible from the courtyard.



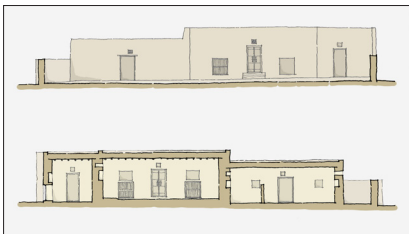
One of the groups stays here, while the rest leaves to survey other buildings. We separate out the tasks and start working.



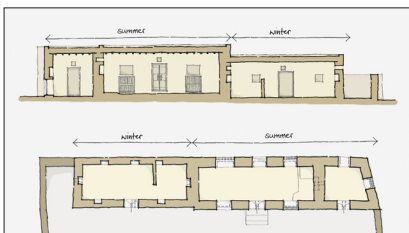
When sketching buildings we try to understand the overall geometry, materials and the construction of the buildings. We note anything that catches our eye, like a change of material or parts that seem to have been added later.



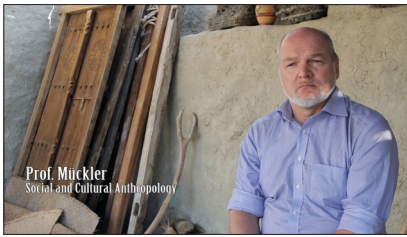
In this case, looking at the facade, we can notice a height difference of the rooms.



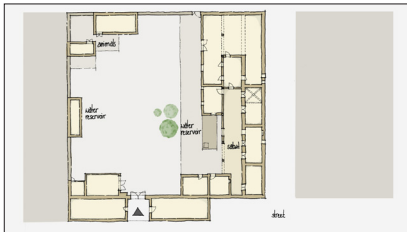
In Iran, moving with the seasons is quite usual. The higher room with ventilation openings was used in summer, while the lower room was used in winter. It is easier to heat and includes a kitchen.



For hygiene reasons there is an ideal orientation, with the doors of the rooms facing south and the stables and toilets as far from the living quarters as possible. This basic type is often still visible in more complex buildings.



Prof. Mückler: “In Gebäuden, in Häusern spiegeln sich so viele Dinge wieder die für die Ethnologie von wirklich grundsätzlichem Interesse sind. Beispielsweise die soziale Stratifizierung einer Gesellschaft. Auch Dinge die also mit einer Differenzierung im Bereich von Arbeit zu tun haben oder Gender Division würde man heute sagen.”



This is visible in the separation and location of gendered rooms within the house. While the men's room is accessible from the outside, the women's room is hidden away.



Women traditionally spent most of their time inside the compound, taking care of children and the house.



They are known for their colourful handmade garments and recently there have been initiatives to provide them with opportunities to sell these to tourists in special shops.



While they are in general not easily accessible to outsiders and often shy away from being photographed or filmed, the absence of men for long periods of time suggest that they might be in charge of more aspects of life than we can see at a glance.



While the women stayed in the village, men were often gone for months at a time, fishing, pearl fishing, smuggling goods or working on trading boats.



They traveled to places like Mumbai or Zanzibar and often speak Hindi. From their travels they brought home new materials and techniques.



They started importing sandalwood from Zanzibar which made more durable roof constructions possible on an island that barely has any timber.



Throughout the years the houses changed in many ways. New rooms were added for newly wed couples and additions such as the sabat, a shaded area in front of the rooms are also common.



Extensions like these can help us understand the evolution of courtyard buildings and give us hints at how old a building might be.



Working on projects like this helps us get a better understanding for the interconnectedness of buildings and makes it possible to learn from each other.



Some of the students are at the very beginning of their studies, while others are already finished and have participated in multiple projects like this.



Prof. Rieger-Jandl: “Für uns als Bauforscherinnen und Bauforscher der TU Wien ist es sehr sehr wichtig, dass unsere Studenten auch andere Kulturen, ganz andere Bauformen kennen lernen.



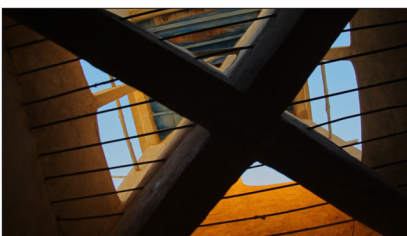
Es ist immer wichtig auch für die Reflexion der eigenen Baukultur. Sich anzuschauen was passiert irgendwoanders. Wie wird auf klimatische Bedingungen reagiert, wie wird auf das Vorhanden sein von Baustoffen reagiert, und wie verändert sich heute die Architektur.”



One feature that most of the Austrian students encountered on this trip for the first time is the wind tower.



Prof. Lehner: “Diese Windtürme die heißen Windfänger oder Windcatcher, Badgir und das sagt schon über die Funktion oder die Hauptfunktion des Windturms einiges aus. Die Hauptfunktion ist, dass er die Räume belüftet, das heißt diese Windfänger haben üblicher Weise und besonders hier auf der Insel haben sie immer vier Schächte.



So liegen einer oder zwei im Luv und einer der zwei im Lee je nach Windrichtung, man kann alle aufmachen, dann wird eine Verwirbelung stattfinden, das heißt zwei der Schächte üblicherweise würden drücken, würden einen Druck erzeugen und zwei der Schächte einen Sog und damit entsteht ein Luftwirbel der kühlend wirkt. Kühlend durch die Evaporation, das heißt durch die Verdunstungskälte die entsteht an feuchten Gegenständen.



Hier auf der Insel ist es sehr feucht, hier ist die Evaporation durch die Transpiration des Menschen, das heißt durch die Feuchtigkeit der Haut gegeben. Und man merkt sehr sehr deutlich eine Kühlung der Haut wenn man unter einem Windturm steht.”



The rooms are traditionally barely furnished, as most of the life here happens on the floor. Wall niches are used for storage, and makeshift beds are often stored behind curtains or in trunks.



The exact shapes of feature like niches vary from house to house. They can reflect a popular style at a specific times or the owner's taste.



Another common element here is a sort of gutter. They are usually located on roofs and walls and are directed towards the yard.



When it rains here it rains heavily for a period of time, so drainage is necessary to protect the loam structures. Often the water is fed into a small tank, but nowadays these are usually filled with imported water.



Even though people here are Muslim they still participate in rain dances and pre-Islamic rituals.



The importance of water often takes centre stage in life on the island. How exactly this resource is accessed, like the form of other features in the courtyard houses, depends on the wealth of the owner.



Many inhabitants still strongly rely on fishing, livestock and farming as a major source of income, but the missing rain of recent years had a devastating impact on their lives.



Especially the palm gardens, once a major source of wealth, are now abandoned.



We can still learn a lot from them—in particular about the loam mixture, called sarooj. It is unusually water resistant for loam and was used for water reservoirs and irrigation channels.



Prof. Rieger-Jandl: “Sarooj ist eine sehr interessante Technik, man vermischt den Lehm mit Stroh, teilweise auch mit den Fasern der Dattelpalme und brennt das Ganze. Nach dem Brennen wird es wiederum mit Wasser gemischt und ist dann ein extrem feuchtigkeitsbeständiges Material.



Now the channels lie dry and the thorn-covered walls still protect the unused gardens.



The locals used to spend their summer months here, picking and drying the dates to later sell them on the markets.



They spent most of their day working outside and often slept under the stars while the houses were used for storage.



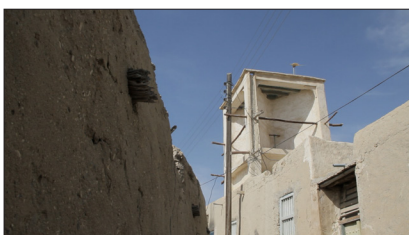
But in the last fifteen years the rain stopped coming and they had to give up on date farming. Uncared for, the stone-loam buildings are now slowly falling apart.



Prof. Rieger-Jandl: "Steinbau mit Lehmverputz hat den großen Vorteil, dass die Bewohner von Qeshm selber wussten wie man ein Haus errichtet, das heißt das Wissen darum wurde einfach von Generation zu Generation weitergegeben."



"Die Leute wussten wie man den Lehm mischt, wie man den Verputz aufträgt. Und dadurch sind eigentlich praktisch für den Hausbau keine Kosten entstanden."



Prof. Rieger-Jandl: "Heute findet man anstatt Lehmputze vorwiegend Zementputze vor. Das hat den Nachteil, dass es ökologisch oder auch von der Energieeffizienz nicht so günstig ist."



“Und vor allem sind die Menschen auf Qeshm abhängig geworden, dass sie ein Einkommen haben und Baufirmen beauftragen, die ihnen dann ihr Haus errichten oder auch die Putze immer wieder erneuern.”



“Für die touristische Erschließung der Dörfer ist es sehr wichtig diese Elemente zu erhalten.”



“Wir kommen einfach in die Dörfer um zum Beispiel die Windtürme zu sehen; um Hofhäuser zu sehen.”



“Bauliche Elemente die es in Europa kaum zu finden gibt. Wichtig ist es dabei nicht nur an die touristische Erschließung zu denken, sondern auch das Bewusstsein der Bewohner für den Wert auch ihrer eigenen Baukultur zu schärfen.”



The example of Mr. Sharifi's guesthouse, built in local materials, and with old techniques, proves that protecting heritage, sustainability, and finding new means of income can go hand in hand.





Prof. Rieger-Jandl: “Wie in vielen Regionen der Erde ist es auch hier auf Qeshm Island so, dass das baukulturelle Erbe sehr stark im Schwinden begriffen ist.”



“Es sind nur mehr relativ wenige Beispiele traditioneller Architektur vorhanden und für uns ist es wichtig diese Beispiele zu dokumentieren. Es ist wichtig, dass es eine lebendige Baukultur bleibt.”



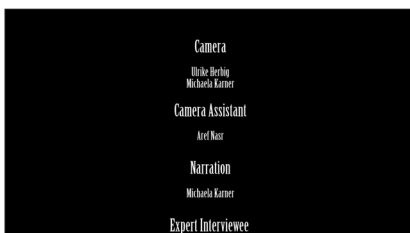
“Es geht nicht darum eine Baukultur einzufrieren, sondern das Wissen darum zu erhalten damit auch diese Baukultur für die jüngeren Generationen erhalten bleibt.”



final frame



dedication



credits

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