

## Life in the Negev

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Lead:

First comes Man, then the desert: In Israel, one of the cradles of our culture, desertification is anything but an unknown phenomenon. But here, human-induced desertification is a thing of the past. The Negev desert is on the retreat and has to make space for expanding cities. It is abused for military purposes and it's destroyed in its function as a unique natural habitat. And the people in the region also suffer from this development. Stefan Dege has more, and Nina Haase has adapted his report.

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### 1. O-Ton Atmo Negev Wüste (unterlegen)

The sun rises over the Negev desert. The first sunbeams bathe the mixed landscape of wind-torn rock, bizarre stone formations and softly sloping sand dunes in a greyish-violet light. Shapes and colours change from minute to minute. The Negev desert makes up more than 60 percent of Israel's land. The founder of the state of Israel, David Ben Gurion, called the battle against desertification „a national challenge“. That was 50 years ago. And the Jewish people have accomplished their mission – and continue to work on it:

2. O-Ton Atmo in car with O-Ton Yana Marcus German/ eng voice over:  
„We're now driving towards Beer Sheva, and in about 10 minutes we'll be in the forest of the German states. It was planted with the help of German donations.“

Driving along with Yana Markus who works for the Jewish National Fund. Our destination is one of the countless plantations in the semi-arid part of the Negev, not far from the desert's capital Beer Sheva, a two-hour's drive South of Tel Aviv. So far, around 300,000 trees have been planted here – they're fast growing and don't require special treatment. The majority of them is pine trees, which are barely able to regenerate. Hopes are that one day there will be 500,000 of them on the plantation.

### 3. O-Ton Atmo Schritte auf Steinfläche (unterlegen)

The air is filled with the spicy smell of resin. In Hebrew, the Jewish National Fund is called „Keren Kayemet Le'Israel“, in short KKL. The organisation is dedicated to the battle against desertification, in accordance with the wishes of David Ben Gurion. Reforestation projects are being undertaken on a grand scale here. In many locations, new settlements are surrounded by green belts The desert as living space for Jews, that's always been the Zionists' goal.

4. O-Ton Yana Marcus German/ Eng voice over:

„It's a small country, and we would suffocate if we weren't able to use this space for settlements. We have to make the south attractive to people.“

### 5. O-Ton Militärhubschrauber (unterlegen)

The village of Meitar North-East of Beer Sheva. It didn't rain a lot this winter, and so the uneven plain started to dry out at a very early stage this year. For weeks now, the dry riverbeds haven't seen a single drop of water. But when the rain does start to fall, the water runs down from the surrounding mountains producing powerful torrents for several hours. But not this year, says Yitzhak Moshé, KKL's head forester.

6. O-Ton Schafe (unterlegen)

7. O-Ton Yitzhak Moshé Eng:

„Because of overgrazing and mismanagement of the land we lose the soil. We can see here high density of gullies and the gully heads which are still active. And losing the soil means losing the potential for vegetation to grow for the next generations.“

In a nearby "wadi", a dry riverbed, the riverbanks have frayed, and the river keeps washing away precious soil. Here, the effects of centuries of human-induced desertification are clearly to be seen. Constant overgrazing, damage from animals' hooves, and erosion have left their mark on the landscape.

In their reforestation projects, Moshé and his people rely on local water resources. And they use ancient techniques to save water. Just like it would have been done 3,000 years ago, Moshé and his people direct the rain water into channels on the slopes, leading down to terraced plantations. The earth is banked up ankle-high to concentrate the precious water around the seedlings. This process makes ten times the amount of water available

8. O-Ton Music (unterlegen)

9. O-Ton Atmo: Bauern palavern/Geige (unterlegen)

Bier Milka lies in the Southwest of the Negev and is only a stone-throw away from the Egyptian border. A handful of desert farmers have gathered in a grove for an evening barbecue. Plastic tables and camping chairs have been brought out. Beef has been put on the barbecue. They are drinking red wine from grapes ripened under the Negev sun. One man gets his violin from his jeep and plays a tune from the old pioneers' days. The spirit of the settlers' movement can be clearly felt here. It's the eve of the Jewish weekend, the Shabat.

10. O-Ton Atmo Geige kurz hoch/ darüber:

One of the men sitting around the barbecue is Yakov Moskovitch, or Yankele as they call him. He's in charge of water distribution in this part of the Negev. He says that his 200 farmers use a water mix to water their land. It consists of fresh water from the Sea of Galilee in the North that is mixed with salt water pumped up from deep under the earth's surface, known as fossil water. The water is supplied by the state-owned water company. In fact, all of Israel's water resources are state property. And the state allocates Jewish farmers a certain amount of water at moderate prices.

11. O-Ton Yankele Eng:

“We know how to grow with this water tomatoes, melons, potatoes. And it’s going very good. And we export the tomatoes to Europe and the USA, also to Russia. If we have problems, we send the products to the local market, if we have problem with the export. We play in two markets. It’s very good here. We have water, we have land here. It’s a very good place (laughs).”

#### 12. O-Ton Atmo: Feldberegnung (unterlegen)

What Yankele doesn’t say is that the low water price is in fact due to high subsidies, which makes it a political price. Agriculture contributes a mere 5 percent to Israel’s gross national product, but at the same time it uses up more than two thirds of the national water resources. The farmers’ lobby has traditionally been very strong in the country, and they defend two political principles: securing the supply, and the Zionist settlers’ policies. In Israel, it takes complex and expensive methods to grow field crop sand plants in the desert. By exporting them, the Jewish state is also exports its scarcest resource: water.

Professor Katharina Thielbörger is a water scientist at Tübingen University in Germany. She heads a German-Israeli research project on water management near the river Jordan. And she is strongly opposed to this kind of water use:

#### 13. O-Ton Thielbörger German/ Eng voice over:

“Die Israelis benutzen Wasser zum Teil auch dafür, die Wüste grün zu machen. Das ist etwas, was der Desertifikation entgegensteht. Also da werden plötzlich Wüsten grün gemacht, aber das ist meines Erachtens nichts, was sinnvoll ist, um die Desertifikation zu bekämpfen. Denn wo Wüsten sind, da gehören Wüsten auch hin! Da muss man sie nicht bekämpfen!“

“Israelis partly use water to turn the desert into green fields. And that’s something that works against desertification. So deserts are turned into green fields, but I don’t think that’s a sensible anti-desertification measure. Deserts also have their part in nature. So why fight them where they are natural feature?”

#### 14. O-Ton Atmo: Wassergurgeln (unterlegen)

#### 15. O-Ton Appelbaum German/ Eng voice over:

“Als wir auf die Idee vor 15-20 Jahren kamen, hier in der wüste Fische zu züchten, da kamen wir dann zu den Landwirten und sagten: Wir schlagen Euch vor, fangt an, Fischzucht zu betreiben. Die dachten, wir sind verrückt. Wüste und Fischzucht- wie geht das zusammen? Aber dann haben wir die Realität gezeigt. Und zur Zeit züchten wir Fische in der wüste. Das verstehen viele Leute nicht. Aber das ist Realität und das ist wirklich das Beste vom Besten.“

„15, 20 years ago we had the idea of a fish farm here in the desert. We went to the farmers and suggested it and they thought we were mad. The desert and fish farming – how can the two ever go together? But then we showed them the reality. And currently, we ARE farming fish in the desert. Many people don’t understand. But it’s reality and in fact a top class project!“

Professor Samuel Appelbaum is the head of the fish farming station at the Blaustein Institute for Desert Research. The Institute belongs to the Ben-Gurion-University in

Jerusalem and it's situated in Sde Boker, deep in the Negev desert. In the summer months, temperatures can rise to more than 50 degrees Celsius in the shade. The heat in the grey tent barracks where the Institute keeps its fish basins becomes almost unbearable. That's because of the temperature of the fossil salt water that's used in the farming process.

Today, some 15 fish farms in the Negev rely on the outcome of Appelbaum's research projects for their work. Other scientific institutes conduct research in fields such as economical watering techniques and waste water treatment, but also in many other disciplines which help facilitate desert farming and/or make it more profitable. This is science with a direct application value of benefit, and in demand the world over.

#### 16. O-Ton Atmo steps (unterlegen)

Professor David Faiman is another researcher at the University in the Negev desert. He's the head of the department which has put up gigantic solar panels and mirrors, reaching high up into the blue desert skies. It's his vision to increase the use of solar power to an extent that the desert can become a centre of power generation not just for Israel, but for Western Europe at the same time.

#### 17. O-Ton Faiman Eng:

"Without energy you can't do anything, you can't pump water, you can't purify water. You can't do anything. So you need a source of energy. And the deserts are the natural sources of energy. That's where sunshine is richest and it is after all the sun which is the main driving force some provider of energy for the entire earth. Fortunately the oil is running out and we only have a few tens of years left in order to make a total infrastructure transition from a world that is driven by oil and coal and gas to one which is driven by renewable energies."

#### 18. O-Ton Atmo Interview (hoch, dann unterlegen)

#### 19. O-Ton Atmo: Folie wird runtergelassen (unterlegen)

The research premises of GLOWA are as big as a football pitch and they're located not far from Israel's capital Jerusalem. Wild oats, barley, different types of clover, mayweed, cyclamen, different types of iris, and tubers like the star of Bethlehem cover the ground, and some of these plants are already in bloom. The air smells of rain. Clara hurries to put the cover back on the plastic roof of the greenhouse. She's a 30-year-old vegetation-ecologist and – together with her fellow doctoral candidates - conducts experiments with annual plants.

#### 20. O-Ton Clara Eng:

"Reporter-Frage": "What were you doing today until now?" – "I was having a look on each of my plots. I have 160 plots here. And I want to see what happened to the plants I'm having there. And I was making sure what I will have to collect next time. And what is the state of each plot that's what I did. (Atmo)"

By opening and closing the plastic roof the scientists simulate drought and intense humidity. Computers use models to calculate the effects of climate change. From time to time, Rüdiger Prasse, Professor of Biology at Hanover University, pays the

research project a visit. He's one of the people in charge of the German-Israeli research project "GLOWA Jordan River", trying to find out what water resources will be available in the Jordan area in the future. And how water management will need to be adapted.

21. O-Ton Prasse German/ Eng voice over:  
"Wenn wir wissen, wie die Pflanzen auf Klimawandel reagieren..."

„Once we know how plants react to climate change we can develop scenarios on how to use land properly. We can then learn how we can still use land if the climate becomes drier, without provoking desertification. That means: by adapting our way of working, we can prevent desertification.”

22. O-Ton Music (unterlegen)

23. O-Ton Atmo Arabische Kinder spielen (unterlegen):

But there is one group who refuse to adapt, because they feel they're the victims of Israel's desert policies already. The Bedouins see themselves as a discriminated minority in Israel's deserts.

24. O-Ton Beduine Suleyman Hebrew/ Eng voice over:  
"Desert? To me this means landscape, empty spaces and – freedom! If I was younger I would move to Rahad. But I'm too old, so I can't. Moving there would be like going to prison!"

25. O-Ton Atmo: Muezzin ruft (unterlegen)

And so Slemman (=Suleiman) Al-Ataichah built his simple one-storey stone houses on a hill just outside the city borders of Rahad. But the house where he lives together with his wife and 12 children is soon to be torn down. The family has received a court order and they say the bulldozers could arrive any day now.

26. O-Ton Ariel Dloomy Eng:  
"The government and the Jewish people do not relate to them as people that deserve the same rights. We are looking at 150,000 people. Half of them live in established townships that were created since the late 60ies in order to concentrate the Bedouins in very small area and to vacate as much land as possible for future Jewish settlements. The rest of the population reside in some 45 unrecognised villages – meaning that these villages do not have access to water, to garbage collection, medical services. They have no access roads leading to the villages. And they don't appear on the official maps of Israel and we think we should change that situation.”

Today, those "unrecognised villages" are mushrooming all over the Negev, most of them on the borders of Israeli towns. They can be compared to slums –with people and animals squatting side by side in tents or shanties. Not much is left of the traditional lifestyle of these people who were once proud nomads.

Rahad is one of seven official Bedouin towns. Amraha Bohani works here as an official auditor. He studied economics in Germany and says that Israel only resettled the Bedouins without preparing them for a settled life and creating jobs.

27. O-Ton Atmo: Tischtennis im Gemeinde-Zentrum (unterlegen)

28. O-Ton Amraha German/ Eng voice over:

“... zweitens ist die Sache mit den vielen sozialen Strukturen...”

„... another thing is that social structures have changed because people have taken on different ways of living in their houses. They no longer live in distant villages, with the individual families and tribes distinctly separated. Today everything's mixed. And this must all be redefined of course!”

29. O-Ton Atmo Dusche/ Kreuzblende mit:

30. O-Ton Koreaner/ Lachen etc. (unterlegen)

A group of female tourists from Korea are wearing their bathing suits and are rubbing healing mud into the exposed parts of their bodies. The sulphurous soil is known to have a powerful healing effect especially for skin problems. It's a popular remedy, even though it smells strongly of rotten eggs. When the tourists are done they're shuffled into a small touristy train which takes the group to the Dead Sea beach which can be seen on the horizon.

31. O-Ton Atmo Bimmelbähnchen (unterlegen)

32. O-Ton Yusuf Eng:

„20 years ago the line of the Sea was just here where you can see the people that put the mud. And in 20 years you can see just run away ... (laughs). It's one kilometre, about 700 metres of high from here to the sea level today. And this is a problem.”

33. O-Ton Atmo: Bimmelbähnchen hält an (unterlegen)

Yousouf is the Operational Manager of Ein Gedi Spa, a traditional spa at the foot of the Dead Sea. After the Palestinian uprisings, tourists from all over the world more or less avoided the area for ten years. But now that business is starting to pick up again, Yousouf has another problem: The Dead Sea is dying!

Every year, its water level decreases by about one metre. And so the surface has already shrunk by one third in total. For several millennia the main water source and the lifeline for the saline Dead Sea was the River Jordan. It has dried up to just a trickle. Further upstream and in the Sea of Galilee, too much water is being pumped out.

Henrik Bruyns is a Dutch sociologist and desert scientist. He works for the University in Sde Boker in the Negev desert.:

34. O-Ton Henrik Bruyns Eng:

“You have in Israel the water management problems. Water is the main cause. Is it hydrological? Economical or political? And the answer is: political. That means for a number of reasons the government was not willing to cut back its pumping of water in order to give enough water to the agricultural sector.”

### 35. O-Ton Atmo: Salzknirschen, Meereswellen (unterlegen)

Twenty years ago, Gundi Schachal emigrated to Israel from Germany. She says Ein Gedi, the Kibbutz where she works as a teacher, has seen better days. Gundi works for the environment organisation "Friends of the Earth – Middle East". Where parts of the Dead Sea dries out, fresh water flowing in dissolves salt layers that lie beneath the surface. This results in hollows, which collapse under tectonic pressure. Funnel-shaped "sink holes" appear on the surface, turning the coast line into a landscape of craters, a bit like the moon.

### 36. O-Ton Gundi Schachal German/ Eng voice over:

"... mittlerweile ist vieles hier von solchen Löchern verschlungen worden."

„A lot has been swallowed up by these holes. And there are more and more of them. As you can see here the place looks devastated because everything that was still standing was naturally abandoned immediately. So much debris, like in a ghost town."

First it affected the camping site, then a date plantation belonging to the Kibbutz. Dozens of palm trees were literally swallowed by the earth over night. Another effect is that fresh water levels are decreasing, causing problems for the nature reserves in the North and South of the Dead Sea, and with them the migratory birds which feed on what the reservations have to offer. And so desert farming comes at a high cost, and the price is not just a political one- it's even higher on the ecological side.

And it could rise higher still because there are plans to build a water canal from the Red Sea to the Dead Sea. Israel and Jordan have been pushing this project with the help of the World Bank. Salt water would be led through the Arawa desert over a distance of more than 200 kilometres. It would pass through an area known to have a high risk of earthquakes. If the canal were damaged, the environmental impact is unthinkable. And nobody seems to know what would happen if saline sea water mixed with water from the Dead Sea.

The sun will continue to rise over the Negev. But who knows what kind of land it will shine on in the future? Rüdiger Prasse, the German desert researcher from Hanover University, has a word of caution:

### 37. O-Ton Rüdiger Prasse German/ Eng voice over:

"Die Wüste ist nicht das, was man gemeinhin darunter versteht..."

„There's a lot more to the desert are a lot more than the general assumption of arid empty spaces, with nothing there. Deserts are complex ecosystems and home to many different species of animals and plants. As human beings we have the right to decide which ecosystems we want and which we don't want. .... But our attempts to build agricultural systems in the desert, and to make it possible for people to settle in the desert, these are not sustainable systems. And so we are destroying systems that could exist for a long time and we're replacing them with something that isn't sustainable. And so one day we'll have a situation exactly like it's described in the Bible: that everything was desert, barren land and empty spaces."

It remains to be seen what will become of Ben Gurion's vision of a "blooming desert". A desert where people can live without destroying their water supply. And this will be a question of survival for both Israel and its neighbours.

Nina Haase, DW-Radio.