

Clima4Future

WHITEPAPER

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Our contribution to the green planet.



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1.SUMMARY

The company Clima4Future was founded to make visions come true, such as the promotion of nature and social projects that have a positive effect against climate change. Our concern is to make an important step for the preservation of **t h e** earth for our grandchildren and their children's children.

Our visions and actions shall be perpetuated by Clima4Future.

The ultimate goal is to jointly drive CO2 reduction and create a win-win situation for people, companies and the environment.

For this purpose, the digital currency, the Co2Coin (CCC) was created. The Co2Coin (CCC) is a digital token with a green footprint. The revenue generated by the sale of the Co2Coin is used to support climate-related projects.

Through these subsidies Clima4Future receives CO2 certificates. The CO2 certificates, futures, options, etc. are deposited to the Co2Coin. The further sale of the Co2Coins generates further income and promotes new projects.

Even though the purchase of the Co2Coin promotes climate-relevant projects, it can still be traded on the stock exchange. The price here is determined by the market.

Clima4Future is working on projects to use the Co2Coin in a target-oriented way for selected companies and retailers (stationary&online).

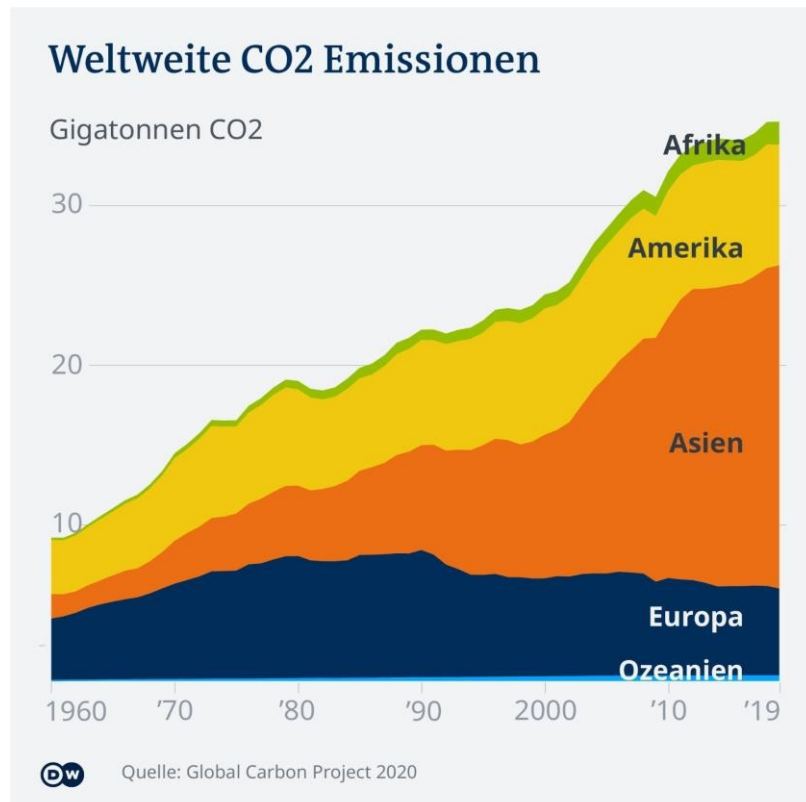


2.INTRODUCTION CLIMATE CHANGE

Climate change is present worldwide. Mankind already feels this in its own body through e.g. persistent droughts, floods, storm disasters, melting of glaciers.

For example, the International Energy Agencies report that energy-related carbon dioxide emissions in 2021 were at an all-time high, increasing by 6%.

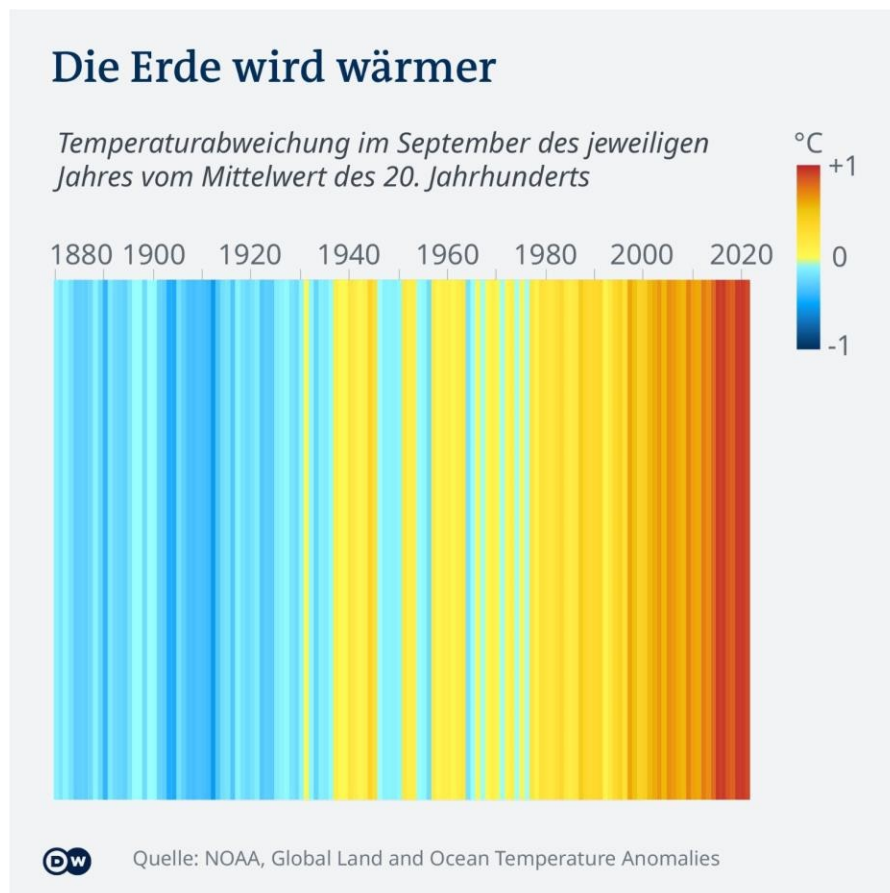
Worldwide, 36.3 billion metric tons of energy-related CO₂ equivalents were emitted. A historic record high. Since the 1950s, the amount of CO₂ has increased by an average of four times each year.



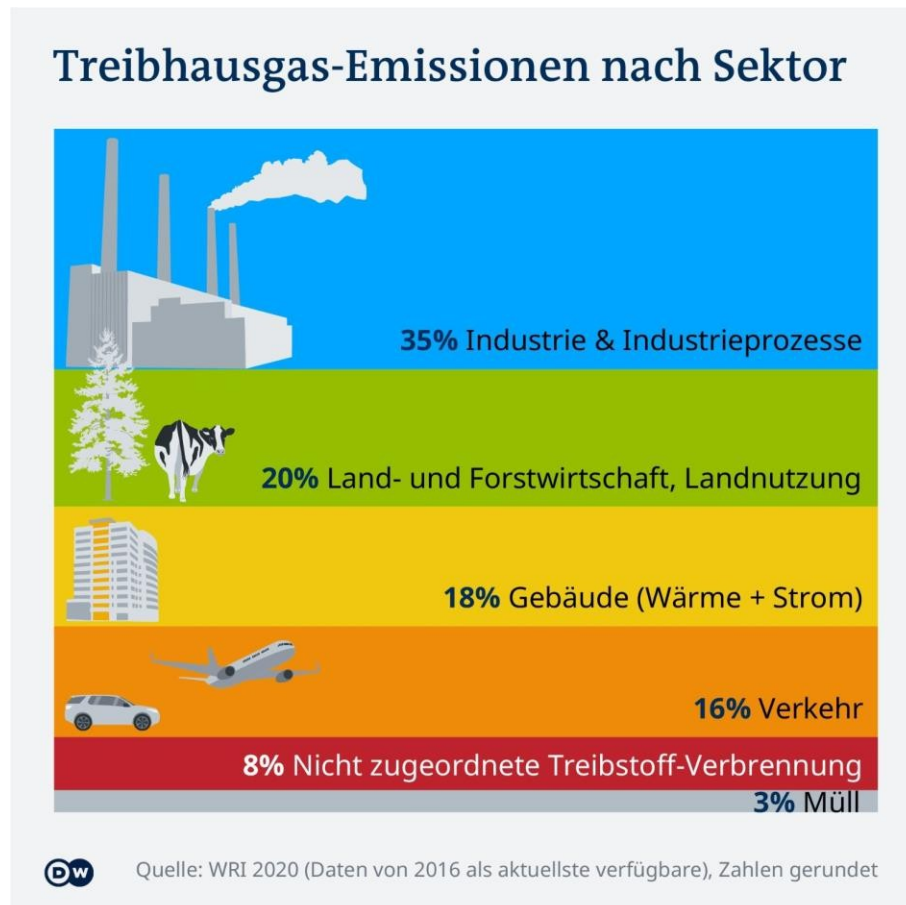
Numerous studies conducted around the world show that man-made greenhouse gases are the cause of current climate change.

The top 10 countries with a high volume of CO₂ emissions are: China (27.92%), USA (14.5%), India (7.18%), Russia (4.61%), Japan (3.04%), Iran (2.14%), Germany (1.93%), Indonesia (1.69%), Korea (1.69%), Saudi Arabia (1.6%).

The increase in CO₂ emissions worldwide and the associated rise in temperature have dangerous consequences for humans, animals and nature.



There are many reasons for this increase. The main reasons are energy production, transport, industry, agriculture and waste, and this with a quadrupling of the population in the last 100 years.



That is why people and environmental organizations around the world are calling for mindful action, more sustainability in production and renaturation to protect plant and animal life and the well-being of humanity.

Only if industry, politics and every single person does something against climate change, there is a chance to stop and reverse the negative development.

Climate change, climate protection and climate neutrality are THE central issues of the future.

3. CLIMATE PROTECTION CLIMA4FUTURE

The company Clima4Future was founded to make a valuable contribution against climate change. Only together will we be able to preserve a livable planet for our children's children.

The ultimate goal is to jointly drive CO2 reduction and create a win-win situation for people, companies and the environment.

Within the framework of the usual mechanisms of our economies worldwide, Clima4Future focuses on the promotion of climate-relevant projects within the framework of private, private-sector, as well as public engagement.

A key element of the promotion is the sale of the Co2Coin.



4. THE CO2COIN (CCC)

What distinguishes the Co2Coin:

- In total, only a maximum of 100 million can be created.
- The Co2Coin is a fungible token according to the ERC20 standard.
- Since the Ethereum blockchain switched to the CO₂-efficient Proof of Stake standard, the Co2Coin has been available on Ethereum.
- The Clima4Future app on iOS & Android will give an overview of funding projects, acts as a wallet and thus allows the transfer of Co2Coins (CCC).
- The Co2Coin will be listed on the stock exchange from September 2023.
- The free rate is determined via the stock exchange.

What makes the Co2Coin green- Positively deposited Co₂

- The proceeds of the Co2Coin are used to promote environmental projects and thereby purchase CO₂ certificates from green partners.
- Each Co2Coin will be compensated amounts of CO₂ are allocated.
- The Transaction costs (ca. 0,07kg CO₂ /transaction) of the Co2Coin are compensated by the positive deposited CO₂.



Co2Coin (CCC) -Technical data

Coin name: Co2Coin

Coin Ticker: CCC

Co2Coin launch: September 2023

Maximumcoin volume: 100,000,000

CCC

Explorer: <https://etherscan.io>

Website: www.clima-coins.com

Whitepaper:<https://clima-coins.com/whitepaper.pdf>

Blockchain Type: Ethereum (since Proof of Stake is active)

We regularly present the successes and new projects in our **Clima4Future app** or on our website <https://www.clima-coins.com> before _



5. THE CO₂ - CERTIFICATES

What is a CO₂ certificate?

The Kyoto Protocol, which came into force in 2005, is the first binding global treaty. Here it was decided to curb climate change. It defined the permitted amount of CO₂ emissions and stipulated that CO₂ may only be emitted with an authorization in the form of emission rights.

CO₂ certificates stand for emission-reducing measures that include a calculated compensation of CO₂ emissions for 1 metric ton of CO₂ per certificate. This is achieved by promoting climate protection projects, such as forest conservation and agricultural projects.

CO₂ certificates are allocated by governments to companies and are at the heart of the fight against climate change. To ensure the quality and integrity of the certificates, minimum prices are set so that only an increase in price is possible. In addition, there are monitored standards and verification procedures by independent institutions. Today, CO₂ certificates are also traded through various institutions and on stock exchanges.

The polluter pays principle applies. Anyone who emits climate-damaging greenhouse gases in excess of the permitted amount must purchase emission rights in the form of CO₂-certificates.



The number of permits or allowances is based on the total greenhouse gas emissions during regular operation.

Emissions trading takes place in the regulated market. Thus, a CO₂ certificate purchased in emissions trading entitles a company to produce one ton of carbon dioxide within a certain period.

In addition, there are companies that are allowed to issue CO₂ certificates through CO₂ bonding.

For clarification, a presentation by the Federal Environment Agency from 2004

Operator		
CO ₂ emissions	5.000 t	5.000 t
Available certificates	4.500 t	4.500 t
Actual CO ₂ emissions	4.000 t	5.000 t
Trade	Sale 500 t	Acquisition 500 t

Fig. 1 UBA 2004

6. USE CASES/APPLICATION AREAS

Co2Coin (CCC)

Private individuals, public institutions, as well as small and large companies buy the Co2Coin to make their contribution to the environment. By "keeping" the Co2Coin, the CO₂ amounts remain compensated by the buyer.

In the event of a liquidity shortage, acquired Co2Coins can be sold by the market at a later date.

Some examples



Martin S. , Germany

I am a nature person and bought Co2Coins. The environment is my element. I want to lead by example and inspire others with my CO₂ positive life.



Damir P. , Croatia

I invested in the Co2Coin because, as a captain, I value the cleanliness and purity of the oceans.

The fact that the Co2Coin is a green and clean purchase confirms my decision.



Rachel K. , France

My life is great. But I'm afraid of the future of our planet.

With the Co2Coin I can directly help to change this positively.



Tobias Z. , Germany

Everyone talks about the bad development of the climate. I have looked at the projects of Clima4Future and now regularly buy a few Co2Coins. So you can not only passively help the climate.



Martin R. , Germany

In our bistro, we very quickly reached the limits for CO2 neutrality. Now I regularly buy Co2Coins and thus provide an additional compensation and can show my guests the projects that I support with it.



Olaf P. , Netherlands

We sell in our online store many small parts for the industrial middle class in Europe. By buying Co2Coins we show our customers transparently how we compensate CO2 and support projects with every order.

7.ROADMAP



We regularly present the successes and new projects in our **Clima4Future app** or on our website <https://www.climacoins.com>.

8. TEAM

Team members of the Clima4Future project

The Clima4Future team consists of several members who deal with administrative and informational matters. In addition, the broad network of advisors in the climate-sensitive community helps us find the best projects and solutions to move forward and make a positive impact on the climate.

9.FUNDING PROJECTS

Since the start of the initiative, Clima4Future supports the project "SEKEM" in Egypt. Other projects are also supported by Clima4Future. The number of projects to be supported depends largely on the sales of the Co2Coin (CCC). It is important to us not to fragment the volume of support too much in order to marginalize the support for the individual projects.

Below we present the Sekem Project. It started in 1977 and besides the inspiring vision, it has proven to work successfully over the last decades. Only through the stronger support of such projects we can significantly increase the magnitude of the positive impact on the entire ecological system of the Earth.

The vision of sustainable development in the desert has become reality!

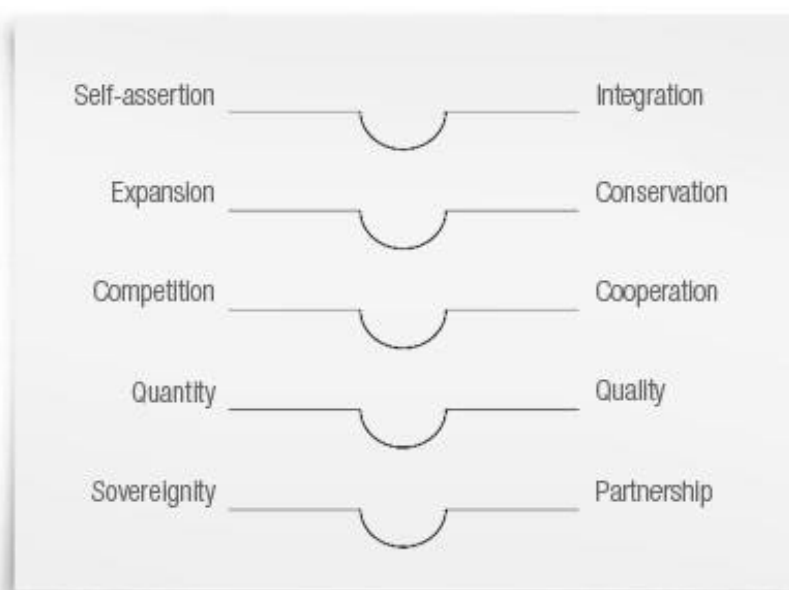
Sekem's Vision:

"Sustainable development for a future in which each person can develop his or her individual potential; in which humanity lives in social forms that reflect human dignity; and in which all economic activities are in harmony with ecological and ethical principles."

Ibrahim Abouleish

Sekem's values:

In nature, each organism is independent and at the same time linked to other organisms. Inspired by ecological principles that represent the wisdom of nature and the universe, we continuously strive to gain, maintain and integrate into our development a harmonious balance between the following polarities.



Sekem's mission:

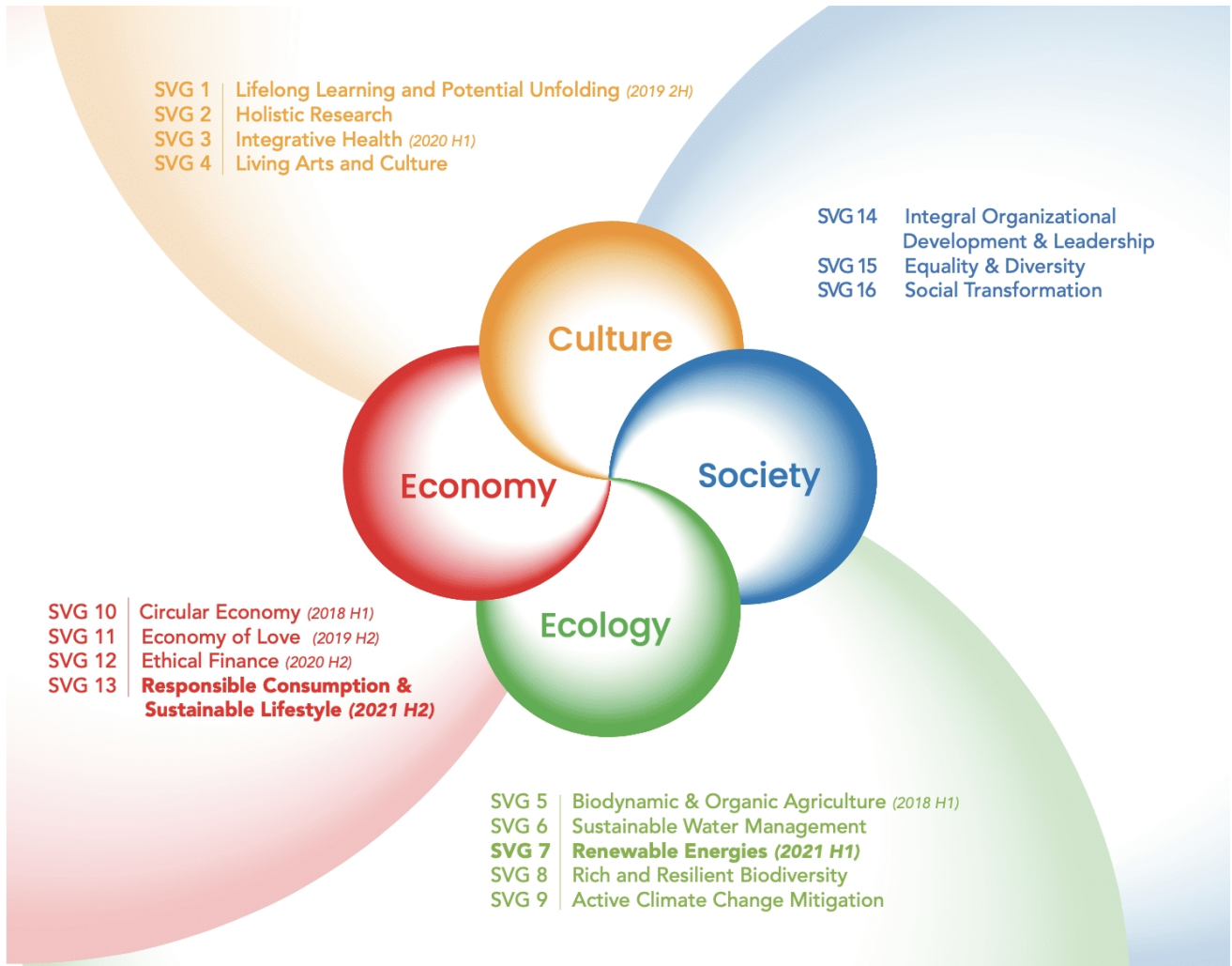
To realize our vision of holistic and sustainable development in Egypt ...

- we are establishing biodynamic farming methods as a competitive solution to meet the challenges of the 21st century, in the environmental, social and food sectors,
- we support individual development through holistic education and medical care,
- we create fair and reliable jobs that reflect human dignity and support the individual development of each employee,
- we create business models according to ecological and ethical principles,
- we invest in sustainable development through research,
- we advocate locally and globally for a holistic approach to sustainable development.

Sekem's Vision 2057:

After SEKEM celebrated its 40th anniversary in 2017 and the passing of its founder Ibrahim Abouleish, the SEKEM community has further developed its vision, mission and goals with a view to the next 40 years. Vision 2057 articulates how SEKEM intends to sustainably transform Egypt in the coming decades.





Agriculture in the desert - A pretty big task

SEKEM Agriculture acts as an umbrella for SEKEM's agricultural activities and enterprises. From reclamation of desert land through SEKEM For Land Reclamation, to natural pest control through Predators and planting through El-Mizan, to livestock management and composting through Libra, the full cycle of agriculture is covered.

Agriculture is more than planting the soil

Biodynamic agriculture is a method of organic farming based on the holistic understanding of life processes. One of the first sustainable agriculture movements, it treats soil fertility, plant growth and livestock as ecologically interrelated and emphasizes spiritual and cosmic perspectives.

The basic idea of Biodynamic Agriculture is the sustainable management of animals, plants and soil as a single system. A wide variety of plants and animals should be present on the farm: Trees, diverse plants of different seasonality and different animals - for example, birds, insects and small animals, such as hedgehogs, lizards and others. It is important to keep the balance between flora and fauna, not to disturb the life cycle on the farm and support it with the respective contributions needed. Thus, they strengthen each other and contribute to the nutrition of man and themselves. Therefore, the cultivation plan takes into account a crop rotation related to the circumstances of each farm. An astrological cultivation calendar is used to keep the right time for farming. The basic principle of crop production is the creation of a compost from plant residues and animal manure from the farm. This mixture is treated with six biodynamic compost preparations made from medicinal plants. In addition, there are two biodynamic field preparations used in the cultivation of the fields. The biodynamic preparations improve all bacterial, fungal and mineral processes present in the organic farming system. Therefore, they are helpful for sustainable agriculture.



From the desert to the supermarket

Holistic agriculture - combined with processing companies in a closed value chain - enables SEKEM to produce the highest quality products with full transparency and traceability: for Egypt and the world.

First impression: Impressive!

From 2007 to 2009, SEKEM acquired three new areas of desert land (total area of 6000 feddan) to establish model farms. These are intended to prove that biodynamic agricultural methods are the best option for desert land reclamation, food security and sustainable development for Egypt. They will also secure SEKEM's growing demand for pure and biodynamic raw material.

From the first year to 2013, SEKEM has reclaimed and developed about 1600 feddan -including the necessary infrastructure and community centers for sustainable development on all three farms.

Healthy plants can only grow in healthy soil

The soil is a living organism. The solid and confined surface of the earth is the habitat of countless organisms and provides stability for plant roots. Soil is the fundamental basis for food production. In the future, the global earth's surface will only be able to produce enough food for all people if we preserve its fertility, avoid erosion, and allow sufficient water storage capacity.



Vital soils

SEKEM transforms each and every feddan cultivated from desert land into living soil. Today, the top layer of SEKEM's first farm soils (between 0 and 30 cm deep) is rich in organic matter and has a broad spectrum of microbiological life - an essential prerequisite for increased water absorption capacity. In addition, the microorganisms are important for making nutrients such as potassium, phosphate or nitrogen accessible to the plants. To ensure this vitality in the soil, three techniques help us: first, the application of compost, compost tea and other organic fertilizers; second, the rotation of crops; and third, the use of biodynamic preparations.

Compost as an organic fertilizer

To build up the first organic matter in empty desert soils, we use compost that we produce in our own farm (see below). Continuous treatment of the field with compost tea (a mixture of compost; molasses and water, aerated for 16 hours) maintains and accelerates the activity of microorganisms in the compost. In some cases we need to add other organic fertilizers.



Plant rotation creates vitality

By rotating nitrogen-consuming and nitrogen-enriching crops, such as legumes, we prevent soil depletion. Instead, the roots of clover and beans, for example, can build up more organic matter. In general, we plan to always plant at least 20% of the farm acreage, and at least every fifth season, to legumes on the same plot or in the same greenhouse.

Biodynamic preparations

One difference from other organic farming methods is the use of eight biodynamic preparations in the cultivation of plants. SEKEM uses horn manure (cow manure filled in cow horn and buried in our soil in winter) and horn silica (silica filled in cow horn and buried in our soil in summer). Both are sprayed on the field. For the compost, SEKEM uses six different medicinal plants that are produced in a special way: They connect to cosmic forces that vitalize the plants. All preparations function as fertilizers.



What is Biodynamic?

Plants form the dress of the earth. In many parts of the planet, they reflect the seasons. More than 500,000 species are rooted in the earth and build their substance through sunlight, carbon dioxide and water. By producing the necessary oxygen, forests can be considered the lungs of the earth. With all their parts, plants provide food and serve as medicinal remedies as well as multifunctional raw materials. They can be preserved in their diversity and developed in their effectiveness through careful management.

Plants and their fruits are the essential ingredients of SEKEM products - whether herbs for medicine or oranges for juice. Following Demeter requirements, we do not use chemical fertilizers or pesticides when growing. Instead, we rely on natural solutions for pest control and grow a variety of plants for maintaining the natural balance.

Each plant has its own role in the soil and ecosystem, such as beneficial organisms and natural enemies in different types of plants. To maintain the natural balance, it is important to avoid monocultures and instead combine different plants on a farm - also through green corridors between individual fields.



Natural pest control

We use the extract of neem trees to stop the growth of caterpillars and other pests, and also use pheromones to trap or irritate insects. In 2010, we started to grow useful organisms under the name "Predators Production Company" and in collaboration with the Danish companies EWH Bio Production and Envision. The organisms are used on SEKEMS own fields. But they are also sold on agricultural markets as an efficient alternative to regular pesticides or other artificial chemical products that are harmful to soil, plants, air and people.

GMO free organic seeds & seedlings

On the issue of future food security, conventional food companies often justify the development and use of genetically modified organisms (GMOs). We follow a strict "No GMO" policy.

Humans pollute the air every day, even though we cannot live without it



The air of our atmosphere is important for all aerobic creatures. Only in an environment with clean air can humans and animals live healthily. Global warming drastically illustrates how important balanced conditions and temperatures are for the atmosphere. Stabilizing these temperatures is the best way to avoid natural disasters related to climatic conditions.

The climate above the surface of the soil is a factor that determines how quickly soil deteriorates and water evaporates. By planting trees around the fields, we achieve several effects in addition to a pleasant smell: The trees break the wind so it can't blow away the top soil. The shade brings cooler and more humid air, which creates a microclimate between the surrounding rows of trees in a field. Photosynthesis by the trees uses carbon dioxide and releases needed oxygen instead. Also, in the long run, the water table slowly rises due to the cooler surface, bringing additional microclimatic changes.

From green waste to CO2 credit

By processing green waste into compost, as opposed to conventional waste recycling methods, SEKEM and the surrounding farms significantly reduce greenhouse gas emissions. In 2011, the TÜV certification body issued a total of 79,500 VERs (Verified Emissions Reductions) for SEKEM's methane-avoiding composting method. One credit (= one VER) offsets one ton of CO2 emissions. We then trade these received carbon credits internationally.



More than an additive in your drink. Water is the basis of all life

Water forms the basis of all life. The hydrological cycle of planet Earth is similar to the human circulatory system: water evaporates, falls back as rain, and runs from freshwater rivers into the salty oceans. Without human influence, water clears and purifies itself along the way. 71% of the earth's surface is covered by water - primarily salt water. Drinking water is a scarce resource and must not be wasted or polluted.

SEKEM needs water to irrigate crops in the fields and green corridors, as well as for processing and for employees. We use three sources of water: Nile water, government-distributed water, and well water. All farms and operations have certain rules for water consumption, although they are not yet established by written regulation. Wastewater from all operations, after treatment, is reused as irrigation water for the trees on the SEKEM farm.

We support the CEO Water Mandate, a United Nations Global Compact Initiative. As Egypt will be severely affected by global water scarcity, we consider it one of our highest priorities to raise awareness of the careful and efficient use of the country's water sources.



Wastewater treatment with effective organisms

Effective microorganisms (EM) are an aqueous mixture of 84 aerobic and anaerobic species, such as those from the yeast family, lactic acid bacteria and photosynthetic bacteria. Applied to wastewater, two effects can be observed: The activities of the microorganisms drastically reduce the odor and the sludge in the wastewater treatment plant is reduced by half. We get our high quality EM from a company in Germany and process it only twice to avoid uncontrollable mutations.



Impressions





In fact, this is only a small excerpt from the large SEKEM project. Even during our personal visits to Egypt, it quickly became clear to us that the extensive approach and the positive effects can hardly be surveyed in a short time.

You can also find out more information directly via the following link: <https://www.sekem.com/de/sekem-agrikultur/#>

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