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Institut für Zukunftsstudien und Technologiebewertung
Institute for Futures Studies and Technology Assessment

**Future Studies and Research
in Egypt –
Overview, Examples, Perspectives**

Dr. Edgar Göll

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Autor:

Dr. Edgar Göll

IZT - Institut für Zukunftsstudien und Technologiebewertung

Institute for Futures Studies and Technology Assessment

Schopenhauerstr. 26, 14129 Berlin

Tel.: 030-803088-44, Fax: 030-803088-88

E-Mail e.goell@izt.de

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Kurzfassung

In der vergangenen Dekade wurden in Ägypten verschiedene Aktivitäten in Bezug auf Zukunftsforschung unternommen und es wurden entsprechende Institutionen und Kapazitäten geschaffen. Wenngleich diese nicht immer hohen wissenschaftlichen Standards genügen, bieten die Ergebnisse solcher Diskurse und Studien wichtige und fundierte Elemente für zukunftsorientierte gesellschaftliche Diskussionen und politische Entscheidungen. Nicht zuletzt wegen der Revolte vom Januar 2011 und den seither stattfindenden komplexen und konfliktreichen gesellschaftlichen Auseinandersetzungen in Ägypten dürften sowohl der objektive Bedarf als auch die Nachfrage nach fundierten und systematischen Zukunftsdenken und Zukunftsstudien weiter zunehmen. Daher wird in diesem Bericht ein Überblick über die Ausgangsbedingungen, Erfahrungen und Formen von Zukunftsforschung in Ägypten gegeben. Die wesentlichen Herausforderungen und Themen werden beschrieben. Im Zentrum steht die Kurzbeschreibung der wesentlichen Institutionen, die Zukunftsforschung betreiben, deren Projekte und darüber hinaus zwei konkrete Praxisbeispiele, die auf unterschiedliche Weise Zukunftsfähigkeit umzusetzen versuchen. Abschließend werden aus der ägyptischen Zukunftsforscherszene noch (selbst)kritische Einschätzungen und Perspektiven vorgestellt.

Abstract

During the last decade there have been several distinct activities and efforts with regards to future research in Egypt. Several institutions and capacities have been created. Although these capacities do not always meet high scientific standards, their results and studies offer important and well-grounded elements for future-oriented discussions and political decisions. Not least because of the Egypt revolt which started in January 2011 and the ongoing complex and conflicting societal struggles in Egypt the objective needs as well as the demand for systematic future thinking and future studies will very likely increase further. For that reason this report presents an overview about the context conditions, experiences and forms of future research in Egypt. The major challenges as well as the major issues are described. The main part is the description of the most important institutions, which are conducting future research, their projects and in addition two concrete projects, which try to practice Sustainable Development in different ways. Finally, several (self-)critical assessments and perspectives from selected experts of the future research community in Egypt will be presented.

Inhalt

Kurzfassung	3
Abstract.....	3
1 Introduction.....	5
2 Background, Conditions and Context	6
3 Institutions, Organisations and Experts	10
3.1 Frustrated Beginnings in Egypt	10
3.2 Center for Future Studies at IDSC	15
3.3 Al-Ahram Center for Political and Strategic Studies.....	17
3.4 Institute for Futuristic Studies at the University of Assiut.....	18
3.5 Egyptian Arab Futures Research Association.....	18
3.6 Miscellaneous	19
3.6.1 Institute of National Planning	19
3.6.2 National Research Center	19
3.6.3 International Center for Future & Strategic Studies	20
3.6.4 Future Foundation.....	20
4 Challenges and Activities	21
4.1 Example for future-oriented Practice: SEKEM	30
4.2 Example for future-oriented Practice: Desertec.....	33
5 Impressions and Perspectives	35
6 Literature and References	37
7 List of Appreviations	43

1 Introduction

Due to the increasing complexities and dynamics of modern societies the number and quality of challenges is rising and is provoking a stronger attention and thorough reflection about future developments, alternative paths for development, better decisions and policies, and the prevention of crises and negative effects.

Therefore, in many countries future research activities are developing, new institutions are established, new approaches are tested. In Egypt this trend has started slowly and only recently: "Future studies are a new field in Egypt. Though such studies help rediscover the country's resources and choices, and actually work as an early warning system to avoid mistakes in future, only four futuristic studies were carried out in Egypt during the last 25 years," said El-Essawy professor of economics at the Institute of National Planning, Cairo (Al Ahram weekly, 4 - 10 May 2006).

And like with other fields of development, "Western" views and perspectives are dominating the whole field of that discipline. Developments in "other" countries beyond the North-Atlantic hemisphere are widely ignored. Especially vis-à-vis the Middle Eastern region the West holds strong clichés and performs strong resentments. At least, there is an enormous lack of knowledge and of understanding those cultures and those societies. This immense deficit seems to have deep historical roots as well as reasons in the geopolitical positions of the West and oriental countries (see Edward Said: "Orientalism"). Simple but very influential factors for this still existing Western ignorance are the very few translations and the limited dissemination of works from oriental authors and countries.

With this paper I intend to shed light at some of the conditions, institutions, characteristics and trends of future research in the biggest and most influential country in the Arabic-Islamic region, Egypt. This paper is based on a two-year working period at the Center for Future Studies (CFS) within the Cabinet Information and Decision Support Center (IDSC) in Cairo, an important think-tank working for the Egyptian cabinet. During that time I learned some aspects about the society and the young discipline of future research in that country. Here, I try to share my impressions with interested readers.

I would like to thank all my colleagues at the CFS and at the IDSC very much for their kindness, support and patience. A special thank you goes to the chairperson Dr. Magued Osman, who has lead the IDSC into a future oriented and highly professionalized direction, continuously strengthening its capacities and abilities. I also would like to thank Ambassador Mohamed Elkamel and Dr. Mohsen Tawfic with whom to discuss and cooperate always was a pleasure. A special thanks goes to Dr. Mohamed Mansour, foremost for his invitation to the University of Assiut, which was a very nice and interesting journey. I also thank the three consecutive Deputy Managers of the CFS for all their support and their efforts – Dr. Abeer Shakweer, Ms. Nahla El Sebai, Dr. Nisreen Lahham, who had to carry most of the workload, communication and the arrangements. Last not least I thank all my interview partners for sharing their expertise and impressions with me.¹

It has to be mentioned that the larger part of this report was researched and written before the revolts in Egypt began in January 2011, starting a still-ongoing transformation process in Egypt and the region – which would be a topic for another report.

¹ I would like to thank Svetlana Kuzmenko and Mara Junge for their support with editing and layout.

2 Background, Conditions and Context

Paying attention to the future, thinking about alternative options and possibilities or necessities is an activity as old as human cultures. It is a deeply human characteristic and a means to protect from possible problems and catastrophes, to prepare for challenge and threats. Some of the better known early examples were practiced in the Middle Eastern region, some of them specifically in Pharaonic Egypt. Different kinds of prophecies and early forms of astrology can be cited, or the famous “Oracle of Siwa” in the Western Desert of Egypt, where Alexander the Great was asking about his personal fate and the prospect for his plan to conquer the whole region as far as Northern Indian empires (331 B.C.).

An interesting example has been put into a wonderful literary form. The German literature Nobel Prize laureate Thomas Mann tells the classical story about Joseph (Yussuf), son of Isaac, in his three-volume work “Joseph and his Brothers”. Joseph was taken away from Palestine to Pharaonic Egypt some 3.400 years ago. After some other activities and an amazing career he once had – so the biblical variation of the story goes – two important dreams of Pharaoh Amenophis IV are analysed. („Echnaton“), explaining that with regards to agriculture there would be 7 good years, followed by 7 bad years. He suggested that the pharaoh should prepare the country for these future challenges. The young Pharaoh trusted the impressive young wise man from Palestine, and ordered to build many storage houses all around Egypt and filled them with the surplus of the harvest of the first 7 years. Due to this smart preparation, Egypt was able to survive the severe crisis years which brought big troubles to other peoples around Egypt.

Modern thinking about future still relies to a certain extent on such sensitivity and intuition, but is of course much more systematic and scientific. Modern future research uses all types of modern capacities, resources and tools for data gathering, research, analyses and reflection.

- Modern future thinking started in the U.S. military after World War II (RAND-corporation) for strategic purposes and in corporations (like Shell)
- Kybernetic models were used by experts like Norbert Wiener and Herman Kahn, and in 1972 by Dennis Meadows et al. („Limits to growth“)
- Discursive-participatory approaches were developed since the 1970s by Robert Jungk etc.

A major misunderstanding within the general public as well as among some decision-makers is the expectation that future research can or intends somehow to predict “the” future. This – of course – is not and cannot be the case. But future research can attempt to fulfill other important functions. “We can not define the future but we can produce and use scientific future knowledge in order to comprehend (possible, probable and desirable) futures, in order to act by means of participatory-democratic processes on minimizing risks/catastrophes and to produce the best future.” (Rolf Kreibich)

In a similar vein, Anita Rubin argues that:

- The future is not predictable. The only thing we can do is to build images and ideas on the events ahead of us – here we speak of many alternative futures.
- The future is not predestined. We can only consider the probability of events and things, when we think about the possibilities.

- We can affect the future with our actions and choices. Therefore it is important to know what is possible, what is probable, and what is preferable. The meaning of values and value discussions is thus unavoidable, when the alternative futures are considered.²

Before giving a brief and selective overview of future research in Egypt we will try to describe some basic characteristics of the Egyptian society, because this is the foundation for any understanding and for grasping the potentials of future developments in Egypt. Despite the revolt in Egypt which started in January 2011 and the enormous changes that took place since then and are still ongoing, it becomes clear after one year that a full fetched system change will take more efforts and more time. Especially the socio-economic situation and structures will be difficult to improve in a more favourable direction. Considering experiences with other societal transformation, i.e. those in Eastern European or in Latin American countries, and taking into account a concept like “path dependency” (Michael Porter) it might be obvious that the manifold kinds of changes and transformations necessary on all levels of the Egyptian state in within all segments and milieus of the society will need more time for realization, based on the traditions, experiences and insight of the Egyptian people.

Several years ago an expert observed: “At first sight, modern-day Egypt is an unruly and chaotic place, a cacophony of sounds, an overload of smells, and a visual theatre, all of which can be taxing on the senses. Ancient church domes and medieval minarets share the same space with fast-food chains and Internet cafes. (...) As in many developing countries, only certain aspects of this traditional and deeply conservative society have been affected by modernisation. One can pay telephone bills on the Internet, though more than half the population are illiterate.” (Zayan 2007: 8f.)

In the background of this polarized and multifaceted situation and development social scientists and intellectuals in Egypt find a certain tape of policies, a certain intended or unintended strategy, a kind of hidden agenda, which many other countries have gone through or are still going through in their process of change and survival and progress. In Egypt, nevertheless, a high degree of frustration and fatalism among the citizenship can be sensed, connected to the activities of a political and security elite which reproduces many of the still existing problems and challenges. To quote just one example from an academic study about the social situation and health conditions in Egypt:

“Probably one of the fundamental policy challenges facing Egypt today is how to make economic reform policies more humane. However, bemoaning the neglect of the non-economic aspects of life while supporting economic reform serves two counter-productive purposes. First, such a stance perpetuates the culture of defeat Egyptians already have towards their lot in life, especially in relation to the role of the state in their lives. Second, it creates a false kind of argument in an interconnected world, where economies rather than human concerns dictate policies. (...) In Egypt, modernization occurred in the form of isolating social groups and categories into encapsulated social entities. Thus, everyday life and illness practice became a manifestation of social discrimination in identity, social systems, built environment, social relations, and space, with control over the family, control over 'informal' associations and control over participation in the macro-political sphere, restrictions on the freedom of affiliation have also become the defining principle of the project of modernity and civilization in Egyptian culture. The state, through shaping the structure of the economy, shapes the quality of social life of people, particularly as it fosters the basic structure of income inequality and social stratification in society. Health and illness then become trapped in an agenda of inequality

² One of the most comprehensive definitions for future research has been formulated by IZT-director Rolf Kreibich: “Futures Research is the scientific work on possible, probable, desirable future developments (Futures), their realization options, as well as their preconditions in the past and the present.”

where value is not placed on achieving equity in health care but on reasserting the person's or the group's disposition as a 'civilized' entity." (Montasser Kamal 1998: 311-312) Observations and analyses like this could be quoted from many other reliable sources.

My own subjective observations and impressions, based on many encounters with a broad variety of Egyptian people in very different situations and various contexts can be formulated in the following simplified and generalizing way. They are not meant to be "judgements" by any means but rather examples for attitudes and behaviour I often encountered and most of which are also described in studies and literature (like Galal Amin's great books).

- Egyptians display a strong friendliness and general openness, especially when approached in a kind and fair way. "They" can be extremely supportive and helpful, they have much patience and an enormous degree of tolerance.
- Egyptians are very "humane" – with all the positive and "negative" side effects of that quality. One of it being the high relevance of the feeling and importance of "convenience". This seems to be the major desire and goal: to be as long as possible in a "state of convenience" and not to allow things to interfere into a good mood (motto: "stay away from things that ask for too much effort").
- Among Egyptians there seems to be a gulf between the highly important and influential family culture and the outside world, especially the modern work culture with the need of a complex system of different forms and configurations of relationships and role-models. There is a strong split between the private and public spheres.
- Egyptian people practice a high level of flexibility and creative problem solving; pragmatism is very strong. There are very few prescriptions which are followed. Even the Holy Quran is interpreted in everyday life in a convenient and pragmatic fashion.
- There are many rules on paper but no adequate oversight and enforcement. In addition there is no adequate support for following the rules, the incentive structure for positive behaviour is insufficient. Most Egyptians are used to circumvent regulations and ethical standards, they even do not complain against violations.
- A high degree of frustration about living conditions and quality of life is wide spread and still increasing. There seems to be very little optimism into the future, there is little hope for change and improvement of the situation. Although many Egyptian people are basically optimistic about their own situation, the feeling of uncertainty about the general future is very strong (i.e. socio-economic polarization, unemployment, progress).
- There is a very low degree of trust for the government, state agencies and business elites, very often based on many negative experiences in the past.
- The general attitude vis-à-vis problems is to blaming the others instead of looking for a solution or looking for one's own part of the problem and the needed changes. Collective action is extremely rare, and only on occasion successful. One reason for this fact is the oppression of other, alternative views and opinions by the state apparatus and its security forces.
- There are few opportunities for free and open discussions and unconditioned participation and decision-making of people and organizations beyond traditional hierarchies. This originates in the traditional power-mechanisms ("pharaonic", tribalism), the attitudes on the top of the society as well in the lower classes (arrogance vs. submissiveness), and this is effecting and an effect of the specific education style (mere repetition instead of debate and analysis).

Many of these characteristics and features can be found in most other contemporary societies to a certain extent and in one form or the other.

What also has to be mentioned here is the demographic development of Egypt: due to the still high – although decreasing – birth rate the growth of population poses an extraordinary challenge to the future development since many of today's policies and programs and their sometimes positive effects are getting reduced or even nullified by that population growth. Again, this is a feature Egypt shares with many other developing countries.

Another overall feature of today's Egypt is a dominant conservative and autocratic approach to citizen's participation and democratic procedures which results in developmental deficits. Several development reports underline this aspect, like the recent UNDP study: "Human development is a way of looking at development that is about much more than the rise and fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. It is about understanding that people are the real wealth of nations, and that investing in their human development is the surest way to achieve sustainable, stable economic growth." (Amat Al Alim Alsoswa, in: Arab Human Development Report 2009, p. v)

One final aspect of Egyptian society and the overall culture is to be found in the sphere of work. In a study about work ethics in urban Egypt one of the main results is: "The work style and leadership style is a determinant of work and work ethics. It can be described as a "control-fear-symbiosis": Control and fear perpetuate each other and create a rather hostile working environment with low productivity, low motivation and fear of innovation and change. Communication, information flow and reflection would be essential steps to break this vicious circle." (Al Amry 2008)

Overall, in the realm of collective action, cooperation and work we detect some kind of general mistrust and in-transparency. There seems to be a lack of group identity, of collective culture and solidarity, of responsibility and appreciation of individual achievement. But these are features which are necessary for strong collectives and functional institutions, as is being proclaimed by management experts: „Every institution and every team needs simple, definite and unifying goals. The mission has to be sufficiently clear, but also ambitious enough as to produce a common vision. Without engagement for a common vision there is no institution; in that case there is only a bunch of people.” (Peter Drucker)

Some of the effects of such deficits in Egypt are an "underutilization" of people and their abilities, a high fluctuation of staff, especially experts with high qualifications and aspirations in many institutions. What lies behind these sub-optimal features is a lack in good management, especially with regards to personnel, education and qualification. "In management the focus is on people. The task of management is, to enable the people to deliver collective accomplishments, to make their strengths effect-full and to make their weaknesses insignificant." (Peter Drucker)

In sum, many institutions and organizations in Egypt – including those which are on the forefront of future thinking and future activities – could and should be improved on three levels:

1. On the individual level – through development and nourishment of "Team spirit" [mentality, attitudes] based on good capacities and motivation, strong relations and bindings, reliance, trust
2. On the organisation level – through more "reflexive management" [information-flow, learning organisation], formal and informal structures, processes, relations, incentive structures, participation
3. Opportunity structure for interaction and learning – through creation of spaces and times for interaction (horizontal & vertical – formal & informal), adequate settings for communication, more orientation about the work and perspectives

Reflexive, holistic and future-oriented thinking is not foreign to the whole region, rather, it seems to be buried under many convenient ideologies and conservative interests. One example for the early advancement of societal thinking in the region: More than 600 years ago the great Arab social historian and “first sociologist” Ibn Khaldun defined „politics“ in his famous book „Al-Muqaddima“ in the following way:

„It encompasses the management of the home and the community according to morale and wisdom, in order to induce the people to a behaviour which guarantees the protection and preservation of the species.“ (Khaldun 1992) That means that Ibn Khaldun already had an almost modern understanding of societal change, of politics and policies, of leadership, and that the protection of humankind was a central concern for him – meaning, that the long-term conditions for life should not only be respected by politicians and politics but also deliberately and proactively protected!

Progressive intellectual and human traditions like this could be re-incorporated in public discourses and activities.

3 Institutions, Organisations and Experts

In the following chapter, some sketches about the beginnings of scientific future research in Egypt are presented. The major subchapter will describe a selection of institutions, organisations and experts in the field of future research in Egypt. These are the Center for Future Studies at the IDSC (CFS), the (ACPSS), the IFS in Assiut, the National Research Center (NRC) and at the end of the chapter a brief overview of others. As will be shown there are very few “future research institutions”. Most of the mentioned institutions have only a small team or even single experts who are engaged in future research or serious future thinking.

3.1 Frustrated Beginnings in Egypt

Looking into the future has a long history, one prominent example from ancient Egypt has been mentioned in chapter 2 above. That example shows an important feature of future thinking: it is not a trivial activity and it has the function to inform and to help to legitimate decisions. Therefore it is often a source for power, at least an instrument for decision-makers. Modern future thinking has utilized modern scientific methods and concepts in order to understand the drivers, factors and systemic pattern of societal changes.

One basic feature of modern future thinking and social science is the concept of “contingency”, meaning that not only the future but also the present could be different, that there are alternative options all around us. For decision-makers it is therefore a challenge if they are getting confronted with the idea of “contingency” and alternative future options. Their decisions and the related arguments are implicitly, if not explicitly challenged. This is a special challenge for static and authoritarian regimes and their leaders. It seems, that the more open and democratic a political system, the more welcomed is future thinking and research in the administrative as well as in the public discourses.

The following facts about the history of Foresight activities in Egypt are based mainly on Shakweer 2007 and Khallaf 2006. After the coup d’etat in 1952 by Nasser and the other “young officers” and during the 1960s Egypt was witnessing a certain realization of importance of a futuristic perspective within some approaches to planning. But this happened mostly on a small scale.

Starting in the mid-seventies three important studies were conducted on the national level:

- 1975 -1977: a study based on a multi-sectoral macroeconomic simulation model to explore the consequences of alternative development strategies
- 1977: a study within the framework of the OECD “Interfutures” project where three alternative scenarios for Egypt were formulated
- 1980 -1982: a study to produce prognoses about the consequences of alternative development policies.

During the same time period additional future activities went on within the region

- 1980 -85: The Arab Alternative Futures (AAF) study which was sponsored by the United Nations University and carried out by the Third World Forum. It was led by Saadeddin.
- 1980's: The Interdependence project sponsored by the Organization of Arab Petroleum Exporting Countries (OAPEC)
- 1985 – 88: "Exploring the Future of the Arab Homeland" by the Center for Arab Unity Studies in Beirut

The most important milestone for futures studies in Egypt started in September 1995: The project was entitled “Egypt 2020”. It was conducted by the Third World Forum (TWF) and provided an analytical futuristic view of Egypt in the year 2020. The prominent economist Ismail Sabri Abdallah, chairman of TWF invited a group of 16 scholars and researchers to participate. The team agreed upon the need to initiate studies to evaluate the developmental aspects in Egypt through the last 25 years, and in parallel to foresee the future of current developmental plans all through the coming 25 years.

The economist Ibrahim Saadeddin was one of the main supervisors. The project Egypt 2020 includes 12 fields, representing a wide spectrum of topics including agriculture, governance, scientific research, housing, culture and media, economic transactions with foreign countries, education, social structure and social change powers, and work on the regional and the global context.

Ibrahim El-Essawy, professor of economics at the Institute of National Planning, Cairo, and principal investigator of the Egypt 2020 project. "In practice, intensive work began informally in September 1997. However, due to financial difficulties, project activities were suspended till March 2000. However, project leaders continued to work on a voluntary basis. As a limited amount of funding became available by mid-2003, work was resumed on two studies. However, the project is still faced with severe financial and technical problems which may impede the completion of the final report," El-Essawy added. (Khallaf 2006)

"This in itself has been one of the big challenges facing us. Therefore, we initiated this project with an aim to participate in building our future, and with a belief that Egypt's future should not be left to uncertain and vague policies, or subject to foreign policies declared clearly by the United States at that point of time (in 1995). We have to create our own future before others plan it for us." (Khallaf 2006)

"Our goal," he continued, "is to provide Egyptian society and its scholars with a database that offers insight into the future and functions as guidance for decision-making circles. Equally important is the need to create and encourage a public interest in futuristic plans and studies, or simply encourage the culture of futuristic studies."

"Studies in each field are based on five prospected scenarios: the reference scenario, new capitalism scenario, new socialism scenario, Islamic state scenario, and a popular/ social consensus/social solidarity scenario," explained El-Essawy. The broad features of these scenarios are described in issue no. 2 of the Egypt 2020 papers series, Starting points of alternative paths to the year 2020 -- Initial conditions of the principal scenarios of project Egypt 2020, published in December 1998.

To date, the project has published 22 key papers, which many academic studies in Egypt and the Arab world have referred to. The project motivated similar attempts in Jordan and Syria. Moreover, the Egypt Human Development Report for 2005 was in part based on studies by the Egypt 2020 project.

Important and substantial impulses for considering long-term trends came also from publications of the UN, especially from the 2005 Human Development Report for Egypt. This was organized by the UNDP with Egyptian experts, and it explored the future of several sectors to the year 2015.

Besides military strategic thinking in Egypt the Ministry of Planning published its plans and projects, but with little discussion. So a group of Egyptian scholars of the "Arab Alternative Futures" (AAF), which was sponsored by the United Nations University and carried out by the Third World Forum (TWF) in Cairo led by Economist Ibrahim Saadeddin conducted a future study during the 1990s.³ This research project was entitled "Egypt 2020" and was intended to provide an analytical futuristic view of Egypt in the year 2020. The project started in 1995, when prominent economist Ismail Sabri Abdallah, chairman of TWF invited a group of 16 scholars and researchers to participate in that study. The participants planned to initiate studies to evaluate the developmental aspects in Egypt through the last 25 years, and to foresee and discuss the future of current developmental plans all through the coming 25 years. A critical and sceptical discussion about this project and future research in Egypt began among intellectuals, parts of which are quoted in Khallaf 2006:

Raouf Hamed of the National Organisation for Monitoring and Medicine Research, said that prevailing illusory and chaotic thinking in such a conservative culture hinder the path of scientific research in Egypt. (...) Hamed echoed that the main reason for Egypt's backwardness is that the government is "anxious of the power of science, scholars, and objectivity. What happens in Egypt now is an organised making of chaos. Government officials are only interested in attaining their personal gains at the expense of the future of this country." (...) Prominent critic and professor Abdel-Moneim Telleema, (...) said, "Society's pressure groups are the only vehicles that can regain the influential position of Egyptian culture. Egyptians, therefore, should work collaboratively towards eliminating the monopoly of the solitary political power. The administration of cultural organisations should be tackled by individuals, not by the government."

In a similar stance, Ibrahim El-Issawy, a Professor of economics at the Institute of National Planning in Cairo, who was the principal investigator of Egypt 2020 and is a leading future researcher and expert, assessed the situation in Egypt critically, based on empirical evidence and long professional experience:

"Egypt has been lagging behind comparable developing countries in the field of futures studies. Evidence abounds. Very few future studies were produced in the second half of the 20th century. Some of these were either hastily completed or abruptly terminated for one reason or another. Some turned out to be wanting in methodological rigour and scientific depth. Very, very few were carefully evaluated or utilised in setting up development plans.

In spite of the apparent surge in futures studies since the mid-1990s, Egypt's dispiriting engagement in futures research has remained. One major study, the Third World Forum's project *Egypt 2020*, had to struggle to produce more than 30 publications, most of them outstanding scientific landmarks, before outstanding difficulties forced the project to close down before completing its mission. The state of Egypt's futures research has not been significantly improved by the production of four studies in the present decade,

³ This first sections is primarily based on Khallaf 2006

namely the 2022 vision of the Ministry of Planning, the 2015 vision of the 2005 Egypt Human Development Report, and the 2025 and 2030 visions of the Cabinet's IDSC. These studies varied greatly in scope, depth and methodological rigour, and demonstrated little if any progress in the exercise of futuring. The current five-year plan is said to be based on these studies though that remains open to question.

WEAK LINKAGES: If there is a genuine need for futures research in Egypt why has its input into planning and decision-making been so weak? Part of the answer lies in the weaknesses of future research, a relatively nascent activity in Egypt. Qualified personnel, data bases, funding, researcher discipline and institutional arrangements are all lacking, as, more importantly, is the necessary political commitment. The last two elements are crucial for the continuity of futures research, a necessary condition for its advance and for enhancing its usefulness for planning and decision-making.

Futures research suffers from neglect in Egyptian universities and research centres. A Google search of educational programmes in futures studies amply demonstrates Egypt's backwardness in this respect. Government programmes for sending Egyptian students abroad for postgraduate degrees do not include futures studies, creating a debilitating human resource gap.

Successful future studies are participatory in a double sense. First, they are a team exercise. Second, sufficient room must be allowed for popular, or stakeholders', participation in conducting future studies and in discussing their outcomes. Egypt fares badly on both counts. Team work, which is properly defined by collective effort and interaction rather than by a multiplicity of researchers, is rare in Egypt. As for popular or stakeholders' participation, its scope is constrained by the severe limits on democratic practice in Egyptian political life.

In short, neither the education and scientific research environment, nor the political climate, is conducive to serious futures research. In such circumstances social demand for future studies tends to be weak or absent.

The other part of the answer to futures research's remoteness from decision-making processes is to be found in the mind-set and attitudes of those in charge of planning. Here the government stands as a central culprit, being either disinterested in, or insufficiently enthusiastic about, futures research. Since the *infatih* (open door) policy was adopted in the early 1970s planning has been neglected in the belief that the market could perform its functions more efficiently. In spite of an apparent revival in planning at the beginning of Mubarak's rule, including the resumption of five-year plans, planning continued to be lax, its role in any case subordinate to that of the market. The adoption of neo-liberal economic policies (the Washington consensus/ structural adjustment package) since the early 1990s has reinforced the trend towards marginalising planning. Nothing exemplifies this trend so much as the re-naming of the Ministry of Planning. It became the Ministry of Economic Development, its status was downgraded by assigning the portfolio to a minister of state.

Economic liberalisation, privatisation and the rush to integrate into the globalised capitalist system, combined with a systematic contraction of the economic and social functions of the state, contributed to a frame of thinking in which Egypt's development and future is believed to be shaped by the policies of external powers and the interests of foreign and local businesses. In other words, no room is left for the Egyptian masses to influence their future. If this is the case, there is obviously no need to bother about futuring and planning." (El-Issawy 2010)

El-Issawy articulates here a broad spectrum of factors and context conditions for the explanation of the rather backward situation of future research in Egypt, pointing at international hegemonic circumstances and features:

“The failure of neoliberal economic policies in enabling Egypt to achieve self sustaining development was clear before the current global economic crisis threw the consequences of these policies into such startling relief. Abundant evidence of this failure, and, indeed, of the inappropriateness of the capitalist model of development, has been documented in my book *The Egyptian Economy in Thirty Years*, a product of the project *Egypt 2020*. The global economic crisis further underlined the fragility and vulnerability of the Egyptian economy under neo-liberal capitalism, the alleged 7.2 per cent growth just before the crisis notwithstanding. Apart from occasional spells during which temporary or exceptional factors boosted growth, the long view shows that growth has lacked speed, vigour and sustainability.

Although the need for a break with the Washington consensus -- in both its old and new formulations -- has become increasingly apparent, the ruling party and its government has continued to adhere to discredited and outdated modes of development and economic management. As a consequence any break from the vicious circle of underdevelopment and dependency towards achieving sustainable development has remained as elusive as ever. If current policy trends continue it will be easy to predict the outcome: a bleak future in which underdevelopment and dependency persist.” (El-Issawy 2010)

From an external and global perspective the situation looks a little different. In a new study about think-tanks in that region a team of US-experts comes to the following conclusion:

“With the eyes of the whole world on it, the social and political landscape of the Middle East is rapidly changing. While traditionally most think tanks concentrate on issues pertinent to the home country, this seems to be even more heightened when it comes to research in the Middle East, where recent events have led think tanks to turn their attention inward. The increase in the number of states researching democratization, governance and international cooperation shows that this troubled region is working inwardly to solve its problems.

However, it is important to note that the majority of these institutions currently reside in countries that have strong political and economic ties to the U.S. and Europe. Indeed, the small number of think tanks in some of the more important states is a cause for concern in national development. In order for these states to develop such institutions there needs to be increased political and economic liberalization and the state’s embrace of a civil society.

While a rise of think tank activity is a big sign of the steps some of these nations have taken, there are still many sectors that need to be improved via sound public policy. Moreover, poor legal infrastructure seen in many of the nations presents a roadblock to increased civil society activity. That said, the last few decades have proven to be quite exciting as the region tries to find its niche in the international system and continued think tank activity can help close the gaps that prevent other kinds of activity.” (Foreign Policy Research Institute 2007:7)

What is articulated here in this quote with regards to think-tanks in the Middle East holds also for the future research institutions in that region – among them some think-tanks, and it holds for the cases in Egypt.

3.2 Center for Future Studies at IDSC

The most important and advanced institution for future research in Egypt is the Center for Future Studies (CFS) (<http://www.future.idsc.gov.eg/>), which is one of the 33 departments of the Cabinet Information and Decision Support Center (IDSC).⁴ IDSC is a government institution for information collection, preparation and decision support for the Egyptian cabinet, in certain functions similar to the chancellors office of Germany (Bundeskanzleramt). His tasks encompass the production of studies and statistics on major policy areas, conducting public surveys, preparing concepts and recommendations for central societal problems and challenges, like adaptation and dissemination of information and communication technologies, risk management, etc. IDSC was established in 1985 by Cabinet Order, is not based on a law and could only be shut down by the Cabinet. In concert with other official advisory institutions in Egypt like the various “Supreme Councils” IDSC used to have one of the leading roles in formulating innovative recommendations and projects for the Cabinet and the ministries. IDSC collaborates on the preparation of the World Value Survey and the production of the Egyptian Human Development Reports like that of 2008. IDSC has around 500 employees, most of which are academics.

The Center for Future Studies (CFS) was created in 2004 based on ideas and proposals by several young staff members of IDSC. CFS works directly for the Chairperson of IDSC, which traditionally has very close working relations with the Prime Minister and members of the Cabinet. Former Chairmen of IDSC have become minister or even prime minister. The recent intention of IDSC is to develop more toward a think tank, to become more independent from Cabinet and to cooperate with similar foreign and international institutions.

The CFS has around 13 academic staff members and is considered one of the more „progressive“ departments at IDSC, not least because future researchers are expected to come up with new, innovative, even provocative ideas and suggestions – although within the framework and conditions of the ruling government and the political system. Many of the central development issues of the Egyptian system and society are relying on some sort of future thinking and future studies. Therefore CFS is working on central issues and problems like energy, water, climate change, socio-economic development, building urban areas in desert regions, etc.

The CFS seems to be still in a consolidation phase, its structure and working procedures are improved continuously. The management and the academic staff is being professionalized. The leadership of IDSC has high expectations regarding the future functions and possibilities of the CFS. In a presentation for a UNESCO-Workshop Prof. Mansour, CFS-Director has said: “Anticipation and Foresight will become more important than they are today. Because it has to be thought about the complex effects of new technologies, about the effects of their interaction, about the effects of shortages in food and other basic resources, about the effects of conflicts on peace, about pollution and its effects on human health, about advancing intercultural education and language skills, about changing cultural pattern like hyper-consumption, etc.” (Mansour 2008)

The official vision of CFS is to be “a distinguished Egyptian think-tank in the field of exploring the future” and its mission: “To be effective in continuously improving the awareness, understanding,

⁴ Aufgrund der teilweise gewalttätigen Auseinandersetzungen und Revolten in Kairo Regierungsviertel wurde die Tätigkeiten im IDSC vorübergehend eingestellt (Stand Januar 2012).

development, and successful utilization of futuring methods and studies to serve society's goals." The self-proclaimed objectives are

- Formulating a future vision for the Egyptian society that incorporates all strata of the society.
- Effectively building a public opinion concerned with the future.
- Achieving integrity between all future studies centers in Egypt.

The scope of the intended work of CFS encompasses the following points:

1. Constructing a number of alternative future visions for the Egyptian society on both holistic and sectoral levels and identifying the possible paths that would lead to each vision.
2. Providing training courses and workshops to enhance scientific skills and experience of practitioners in the field of future studies.
3. Conducting frequent meetings, brain storming sessions, and conferences to spread awareness of the importance of future studies.
4. Develop a viable network connecting all the centers and institutes working in the domain of future studies in Egypt and the world.

The major and most prominent project of CFS has the title "A Future Vision for Egypt". This project's goal is to formulate a desirable future vision for Egypt in the year 2025, and adopting future scenarios and mechanisms. The Center has carried out many activities in this domain, the most important of which is the organization of annual conferences such as its first, entitled "Towards Formulating a Future Vision for Egypt", and preparing several papers for the vision. This key project involves participation of elite experts and civil society's organizations. 'The Best Use for Egypt's Geographic Location' and establishment of a new capital for Egypt are among the issues that have been discussed for the future vision.

Other projects and publications (most in Arabic only) of CFS are among many others the following:

- "The Future of Water in Egypt": Research Project aimed at formulating alternative future scenarios for the water sector in Egypt and defining its driving forces. The methodology was based on conducting dialogue between specialists in the field of future studies, either through workshops, focus group meetings or through the Delphi process.
- "The Quest of Foreign Direct Investment Related R&D: Background Paper": This paper is a background paper for the INNFORMED Success-Scenario Workshop on "Structural Foresight for R&D-Related Foreign Direct Investment" held in Cairo (2008).
- "Towards an Efficient Use of the Egyptian Geographic Location": Given the strategic distinct location of Egypt that can be used in accentuating its regional and international status, this study aims to present the best opportunities for utilizing Egypt's location (North Africa, Middle East, EU).
- "The Egyptian Society and the Moral Matrix: A Critical Present-Future Review": This paper addresses the "Moral Matrix" that has become a pressing issue in different institutions and research centers. This is done through monitoring and gathering views of Egyptian intellectuals.
- "The Future of the Palestinian Country and Key Success Factors": This study proposed a set of future ideas for one of the most important issues in contemporary Arab history which is "The Palestinian Issue". For this purpose, the study identified five scenarios.

- “The Global, Regional and Egyptian Futures”: This edition of "Future Issues Series" is to warn against "The recent forms of loosing State sovereignty", a phenomenon that is faced by a number of modern national states in the Arab world recently.
- “The Future Vision of the Capital of Egypt 2050”: As a result to the chronic problems that are facing Cairo nowadays, the study is an attempt to formulate the future vision for Egypt's 2050 capital. For this purpose, it developed a set of alternative criteria and moved into the nearby desert area.

The CFS organizes its annual conferences usually in May or June of each year. Most conferences focus on a specific topic of major interest. For instance, the conference in 2008 had the title “Future of Energy in Egypt”, others have been: “The Role of Civil Society Organizations in Formulating Egypt's vision 2030”, "Towards Formulating a Future Vision for Egypt".

The international cooperation is well developed. The CFS is member of the World Future Studies Federation (WFSF) and member of the World Future Society (WFS). CFS has signed protocols with the University of Bergen in Norway and with the Center for Future Studies in the United Kingdom. It has a co- operation with Progetive French Center in Paris, and signed a Memorandum of Understanding (MOU) with the French Cultural Center, and one with the Institute for Future Studies and Technology Assessment (IZT) Berlin.

3.3 Al-Ahram Center for Political and Strategic Studies

The Al-Ahram Center for Political and Strategic Studies (ACPSS) is seated in Cairo and was established in 1968 as an independent research unit functioning within the framework of Al-Ahram Foundation.

The Center has has focussed in its early times with studying Zionism and the Israeli society, but then expanded to studies of international and strategic topics, with a special focus on developmental issues of the international system, interactive trends between Arab countries and the international system, the regional framework surrounding them, and relations amongst the countries. The Center focuses now on studying the Egyptian society and its various political, economical, military and social dimensions. The programs of the center are the result of collective efforts built on a framework of democratic scientific research planning.

ACPSS intents to spread awareness to the Arab and Egyptian public opinion about strategic issues of the world in general, and of the Arab world and Egypt in particular to aid in the decision-making process. ACPSS cooperates with university professors and researchers on both regional and international levels. It communicates with major think-tanks in many countries and organizes lectures and workshops which are open to the public. It undertakes multidisciplinary research dealing with regional and international developments, as well as Egyptian strategic, political, economic, and social affairs. Thus, the center is interested in communicating with political leaders, decision makers, legislative bodies, political organizations, parties and government, scientific and international politics circles, political analysts and researchers, the press and media, and the general population.

The internal structure of the ACPSS consists of the following units and programs which show the thematic variety of the center's work: Arab Research Unit, Political Systems Unit, International Relations Unit, Economic Research Unit, Sociological Research Center (incl. History Unit) – was established 2009, Military Research Unit, Historical Research Unit, Mass Communication Research Unit, Egyptian Revolution Research Unit, Israeli Studies Program, Gulf Studies Program, Internet & IT studies

Many of the issues, especially the political ones are very often related to future developments and future options and perspectives. There are no specializations with regards to future research and no specific futureresearch methods used besides expert interviews and workshops.

3.4 Institute for Futuristic Studies at the University of Assiut

The Institute for Futuristic Studies (IFS) at the University of Assiut in Upper Egypt was established in 1993 in a period of tensions and violent activities of groups against the government and minorities. The task was to organize discourses and communication about this delicate issue and to bring together experts and representatives of various relevant backgrounds. For that purpose annual conferences and workshops have been organized and several related publications (books, magazines) have been produced and disseminated.

The major topics were related to the growing activities of fundamentalism and terrorism in that part of Egypt. There was an attempt to discuss alternative perspectives of better dealing with this and integrating this and other kinds of discontent. Institute for Futuristic Studies functioned as an arena for debate and for policy proposals. One example was to support equality for Koptic men in the Egyptian army. Because of this rather progressive-liberal stance members of the IFS have received death-threads. Being part of the University the IFS had certain freedoms for doing such activities.

The founder and director of IFS is Prof. Dr. Mohamed Ibrahim Mansour, who is also the director of the CFS at IDSC in Cairo. In a speech for UNESCO in Paris he articulated his assessment about the state of Future Studies in Egypt:

“There are many important issues for the wellbeing of people, and these issues exist in almost all countries. Several important results came out of our study. Because most of them may sound familiar for people from other countries (...) please allow me to quote the conclusions from that report:

- There is a lack of future studies expertise
- Huge investments are required before any results can be achieved
- Weak institutional framework for co-operation in Egypt and the lack of co-ordination between the various stakeholders
- Lack of public awareness on the importance of futures studies

That kind of situation might be different in a few countries, but it seems that most countries share this situation. This means, that mankind is not well enough equipped with future research capacities and future thinking abilities.” (Mansour 2008)

The personal and financial capacities of IFS are very small. Besides the director there are an assistant and a secretary working part-time for the institute. There is no original and scientific research done. The work is centered on conferences or seminars. More recent issues are the Middle East Peace process, the Future of Jerusalem, nuclear politics in the region. It seems unclear what will happen with the IFS after the retirement of Prof. Mansour.

3.5 Egyptian Arab Futures Research Association

An important communication network for exchange of ideas and for discussion of future issues is the Egyptian Arab Futures Research Association (EAFRA), Cairo. It is a group of academics, among them some of the leading intellectuals of Egypt. For many years its director was Prof. Dr. Kamal Zaki Mahmoud Shaeer, a medical doctor and professor of medicine at the Cairo University. At that university he also has lead a “Futures Research and Study Center”, but it existed only until 2004.

Some leading experts in EAFRA are Prof. Kamal Zaki Mahmoud Shaeer (Secretary General), Prof. Mohamed Mansour, Prof. Farouk Ismail Ahmed (former Vice-Chancellor of Cairo University), Sayed Yassin (Al Ahram Newspaper, Strategic and Political Studies Center Advisor).

The members of EAFRA meet usually four times per year. Major issues discussed there are water, education, energy. Another topic was „culture of the youth“ and they established a sub-group called „Junior Futurists“.

One function of EAFRA is the contact with the UNU Millennium Project. EAFRA is their Node in Egypt and has for that reason 15 board members. Their important task is translating the annual State of the Future Report into the Arabic language and disseminating it (<http://www.millennium-project.org/millennium/cairo.html>).

In this context EAFRA conducted with the Millennium Project in the spring of 2011 a so-called Real Time Delphi online-project (RTD). The Egyptian Node of The Millennium Project, and the Egypt Arab Futures Research Association and its Collaborative Partners tried to explore new directions for Egypt. The results of the Real-Time Delphi questionnaire are going to be used by EAFRA and its partners to create future scenarios of Egypt and produce a State of the Future of Egypt report. The results are included in the 2011 State of the Future report. This study is designed to collect judgments about future elements or seeds of the future of Egypt, exploring new directions for the country and the new revolution of January 25, 2011. These seeds of the future were identified by an initial group of futurists, historians, sociologists and professionals from a variety of fields. This initial group submitted suggestions about emerging trends, technologies, and revolution genres or formats.

3.6 Miscellaneous

3.6.1 Institute of National Planning

The Institute of National Planning (INP) was founded in 1960 after two years of preparation. Under the Egyptian President Gamal Abdel Nasser the INP was important because of the orientation towards planning and the soviet model of economic and social policies. There were intensive international contacts especially with the COMECON-countries of Easter Europe. During the administration of President Anwar Al Sadat the course and contacts shifted towards the USA and Western Europe.

An important task of INP for many years started in 1994 when the institute worked on The Egypt Human Development Report and published several editions of it with the support of the United Nations Development Programme (UNDP). The issue areas of some of those reports were education, energy, demographics, socio-economic development. Most of those reports dealt with the perspectives in all those issue areas, and therefore included some sort of future studies and future thinking.

The leading future research expert Ibrahim Hasan El-Issawy is Professor of Economics and a senior researcher at INP. He was a member of the research team who was conducting preparatory studies for the above mentioned Project Egypt 2020 (see Chapter 1). In the international periodical Futures Research Quarterly he published an interesting article where he explains his eloquent view on Futures Studies in general and in Egypt specifically (see Issawy 2005). Like many other experts he expressed some frustration about the underdeveloped situation and status of future studies in his country and the whole region.

3.6.2 National Research Center

The National Research Center (NRC) was established as an independent public organization in 1956, with the aim ”to foster basic and applied scientific research, particularly in industry, agriculture, public

health and other sectors of national economy” (www.nrc.sci.eg). It is the largest institution affiliated to the ministry of Scientific Research, employing 4300 research staff. Between the sixties and eighties of the last century six divisions of NRC developed into independent research institutes, among them the national institute of standards, the Petroleum research institute and the Electronic research institute.

According to its self-description the NRC has passed through three evolutionary phases:

1. The initial stage extending to 1968 focused on basic sciences research and capacity building.
2. The second stage (1968-1973) was characterized by a growing interaction with the production and service sectors.
3. The third stage (1973 till now) concentrating on customer oriented research to serve specific needs of end users.

The NRC Vision is expressed as follows: “The NRC has to correspond to the country’s key production and services sectors through the research conducted in different areas of science and technology, scientific consultation and training as well.” Its Mission is: “The NRC mission is to conduct basic and applied research within the major fields of interest in order to develop production and services sectors.”

Due to its big size the organizational structure and management system is rather complex. The NRC consists of 13 divisions including 107 departments that can be sub-divided into 4 main sectors: divisions oriented towards the Industrial Sector, divisions oriented towards the Agricultural Sector, divisions oriented towards Health and Environment, divisions of Natural and Basic Sciences.

One of the experts at NRC who are engaged in some form of future thinking is the bio-chemist Prof. Dr. El-Fouly, who has studied at the TU Munich. He received some basic impulses for his future thinking (systemic theory) from Frederic Vester, with whom he had worked for around two years in Saarbruecken. He now is involved in projects with foreign organisations.

3.6.3 International Center for Future & Strategic Studies

ICFS – International Center for Future & Strategic Studies (www.icfsthinktank.org) is an independent research foundation that has committed itself to study issues of strategic interest associated with global changes and their impact on the national, regional and international level. ICFS has been founded in 2004 and lead by Ahmed Fakhr. It organizes programs dealing with socio-cultural, economic and IT aspects as well as Peace studies. Through scholarships and the realization of research programs ICFS wants to contribute to the social development in Egypt.

3.6.4 Future Foundation

The Future Foundation (www.futurefoundation.org.eg) is located in Cairo. Its vision is stated to be: “Better Quality of Life for the Underprivileged in Egypt” and its mission: “Future Foundation is established with the purpose of improving the quality of life of new and existing low-income urban and underprivileged areas in Egypt. To this end, Future Foundation provides its beneficiaries with decent affordable housing, basic services, and sustainable development programs, through its collaborative efforts with government and civil society and mobilization of the private sector to assume its social responsibility.”

4 Challenges and Activities

As mentioned above Egypt has to overcome several dimensions of underdevelopment and is exposed to a wide array of challenges. Most of the analyses, studies and reports in the broadly defined field of future studies in Egypt are therefore focussed on those challenges. The motivation and expertise to focus on those issues and trends exists, but the resources for their realization are not always available. Most of the financial support for such studies comes from state agencies and public institutions, some of the more critical issues are also funded or co-funded by foreign institutions like the United Nations and its suborganisations, the World Bank, foreign national development organisations and international NGOs. In this chapter several of these issues and trends will be described using recent studies and reports.

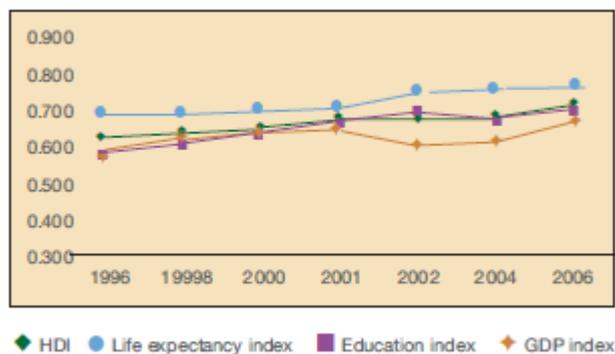
HUMAN DEVELOPMENT

A major problem for the selection of topics and related reports is the fact that most texts are available in Arabic only or not available for the public. Therefore the described studies and issues below are only a segment of the interesting research work. On the basis the following issues have been chosen: human and social development, gender, economic competitiveness, urban development, air pollution, gas emissions, climate change and sea level rise, water, and desalination.

The most important and pressing challenge for Egypt as for many other countries is the social development, as articulated and presented by the Human Development Index of the UN in its Egypt Human Development Report in 2008. Already the first report on Arab countries and Egypt in 2002 and 2003 had started a hot debate about the bad conditions of the once so powerful country and its stagnation. The following figure shows that several of the major indicators are either stagnant or improving very slowly.

Changes in the Egypt Human Development Index

FIGURE 2.1 TRACKING HDI BASED ON EHDRs, 1996 – 2006



Source: Egypt Human Development Reports, various issues.

(Egypt Human Development Report 2008:33)

In the general Human Development Report 2010 (“The Real Wealth of Nations: Pathways to Human Development”) Egypt is ranked 101 out of 169 countries. The overall assessment at that time, including democracy was rather weak, only in some specific areas was Egypt advancing, i.e. school participation of young girls from the lower classes and income strata.

GENDER

The overall situation of women in Egypt is very bleak, although among the young generation and since the rebellion of 2011 some changes seem to accelerate. Nevertheless, in the Global Gender Gap Report 2007 published by the World Economic Forum in 2007 the “Gender Gap Index 2007” ranks

Egypt on play 120 (out of 128 countries). Its score is 0.581, where 0.00 would mean inequality, and 1.00 would express equality.

COMPETITIVENESS

In another study by the World Economic Forum of the same year, the “Competitiveness Report 2007” assessed 128 countries according to a broad spectrum of indicators with regards to global competitiveness – see the figure below. In several categories Egypt is in the middle range or little below. This is a very likely a result of the rather “business-friendly” last two governments of Egypt, who encompassed several business leaders and top managers.

Global Competitiveness Index 2007

	Overall rank (out of 128)	Score (1–7)
Global Competitiveness Index 2007	65	4.1
GCR 2005–06 (out of 117 economies).....	52.....	4.1
Basic requirements	64	4.6
1st pillar: Institutions.....	50.....	4.2
2nd pillar: Infrastructure.....	56.....	3.7
3rd pillar: Macroeconomy.....	111.....	3.7
4th pillar: Health and primary education.....	51.....	6.5
Efficiency enhancers	75	3.6
5th pillar: Higher education and training.....	77.....	3.7
6th pillar: Market efficiency.....	66.....	4.1
7th pillar: Technological readiness.....	80.....	3.0
Innovation enhancers	65	3.6
8th pillar: Business sophistication.....	57.....	4.2
9th pillar: Innovation.....	83.....	3.0

(World Economic Forum, Competitiveness Report 2007:138)

URBAN DEVELOPMENT

As in other “developing countries” Egypt has a high birth rate and a high rate of land-city-migration. The consequence of these trends is the immense growth of urban agglomerations. The table below shows the population numbers of the three major Egyptian cities, and prognoses for the year 2015.

TABLE 2 URBAN AGGLOMERATIONS POPULATION SIZE AND GROWTH RATE

Estimates and Projections (thousands)

	1985	1990	1995	2000	2005	2010	2015
Egypt Alexandria	2,835	3,212	3,648	4,113	4,586	5,051	5,525
Egypt Cairo	7,691	8,572	9,533	10,552	11,605	12,664	13,751
Egypt Shubra El-Khemia	661	789	906	1,033	1,163	1,294	1,430

(AFED 2006:36)

Especially the size and ongoing growth of Cairo is increasing the already critical situation for its inhabitants today: traffic, housing, infrastructure, air and water pollution, waste management.

AIR POLLUTION

One serious example for the increasing problems in a megacity like Cairo is the air quality. In the mentioned study by AFED from 2006 the numbers for Cairo are very high – see table below. A very specific syndrome concerning Cairo's bad air quality is the “black cloud”. This is a thick layer of dark brown particles in the sky above Cairo, which was first visible in the late 1990s always in late fall. The causes for this seasonal phenomenon are manifold. The explanation is that the combination of the usual industrial and traffic emissions of the megacity interact with the exhaustion of the huge fires surrounding Cairo when the farmers burn their rice straw in fall. Due to several programs and activities of the governorates (buying the straw and use it for other purposes) the black cloud is slowly diminishing.

Air pollution in Cairo

TABLE 7 AIR POLLUTION IN CAIRO		
Pollutant	Standard (ug/m ³)	Peak values
PM ₁₀	70 (annual)	300
SO ₂	150 (24 hour)	351
NO ₂	150 (24 hour)	164
Ozone	120 (8 hour)	380
CO	10mg/m ³ (8-hour)	34
Pb	1 (annual)	1.6

Source: EIA World Carbon Dioxide Emissions from the Use of Fossil Fuels

(AFED 2006:50)

GAS EMISSIONS

In the mentioned report by AFED numbers about gas emissions are published for Egypt, especially about gases which are having a very negative impact on the climate. There it has been estimated that emissions of those so-called greenhouse gases (GHG) in Egypt are around 0.6% of estimated total world emissions of this type. “Measurements inside urban areas and close to industrial complexes have sometimes recorded pollution levels higher (sometimes 6 to 8 times) than the limits set by Environmental Law 4 (ratified in 1994). Egypt has an average concentration of SO₂ of around 69µg/m³ (compared to the WHO standard of 50µg/m³) (Anderson, Loeb, Nasralla, 2001; El Raey, 2006). The peak levels recorded, however, are much higher than recorded averages. High particulates concentrations are generally caused by the climatic conditions and winds blown from the desert. Measurements, however, also showed that smaller particulates that cause major health problems are generated from industrial complexes and power plants. These particle levels are also accompanied by high sulphur concentrations, an indication of the burning of fossil fuels in these complexes. Levels of PM₁₀ have reached 580µg/m³ in Cairo and 450µg/m³ in Alexandria. A sample of recorded concentration levels of various major air pollutants in comparison to national standards is shown in Table 7.” (AFED 2006: 50)

CLIMATE CHANGE AND SEA LEVEL RISE

Various studies and prognoses about climate change and its regional patterns and shapes underline that Egypt will be highly affected by climate changes in negative ways. There are two important negative

effects discussed in the literature. First mentioned is the sea-level rise (SLR) at the north coast, especially the Nile delta. The second effect will very likely be the fluctuation of the Nile river.

Because of the high impact of climate change for the peoples and their wellbeing in the Arab region the latest Egypt Human Development Report described those changes in clear words:

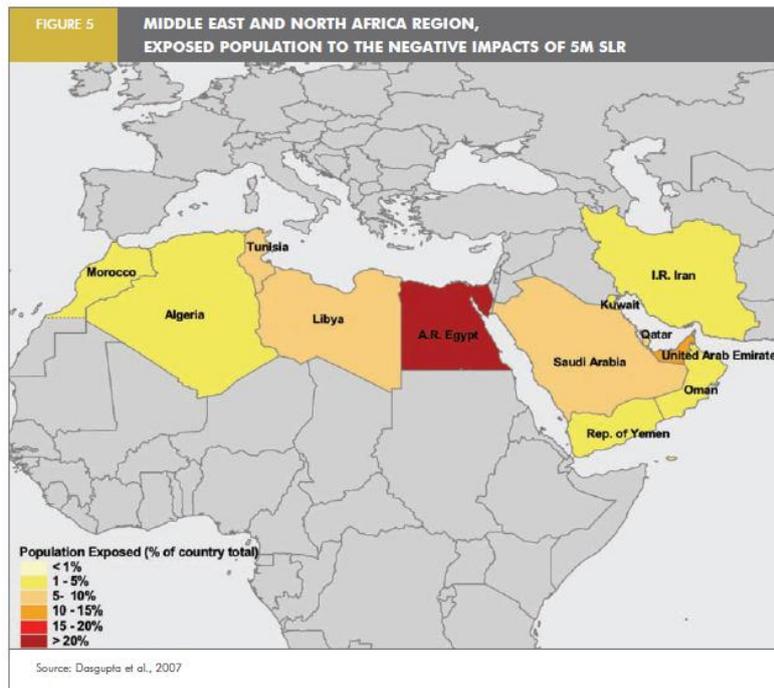
“As identified in the Initial National Communication (INC) report to the United Nations Framework Convention on Climate Change (UNFCCC), Egypt’s most vulnerable sectors to climate change are i) coastal zones, ii) water resources, and iii) agriculture. In Egypt, climate change would inflict serious damage to human settlements, large parts of the productive agricultural land and industrial areas in the North Coast. Estimates show that 0.5 m Sea Level Rise (SLR) would lead to the permanent submersion of 1,800 km² of cropland in low land of the Nile Delta, and accelerate trend of desertification in the form of increased soil salinity in the remaining land. This could lead to economic losses in excess of US\$35 billion and the displacement of 2 million people. A one-meter rise in sea level could possibly displace six million people and flood 4,500 km² of farmland. This poses a serious threat to livelihood security and has a tendency to reverse progress in human development.

Climate change could also cause significant variation in annual Nile flood, which provides Egypt with more than 97% of its renewable water resources. Available hydrological and statistical models have predicted an increase of 30% or a decrease that can reach 70% (highest convergence) in the annual Nile flow. These two scenarios can have serious implications in terms of increased flood risks or droughts that could lead to cultivated land shrinking associated with decrease in food production and increase in number of jobs lost and water conflicts. Temperature rises will be likely to reduce the yield of the major crops and increase their water requirements.

The combined effect of temperature increasing, SLR, water shortage and other environmental conditions could be a general reason of agriculture-system failure in many regions in Egypt.

The country is developing an institutional response through a high-level ministerial committee led by the Ministry of the Environment. Meanwhile, Egypt is preparing the Second National Communication Report to UNFCCC which will further identify the vulnerable sectors and will include a national adaptation strategy to climate change. But the sheer magnitude of the climate risks will require far-reaching policy reforms across all sectors of the economy.” (Egypt Human Development Report 2008:222)

Exposed Population to the Negative Impacts of Sea Level Rise in North African Countries of 5 Meter



(AFED 2006:131)

With regard to Egypt there are various positions on the necessary contingency planning for rising sea levels. In a media information from IRIN (12 Mar 2008) the discussion is described:

“The rise in sea levels due to global warming threatens Egypt's densely populated coastal strip and could have grave consequences for the country's economy, agriculture and industry. Combined with growing demographic pressures, a rise in sea levels could turn millions of Egyptians into environmental refugees by the end of the century, according to climate experts.

Despite the possibility of such a scenario, scientists and government officials disagree on what contingency plans, if any, to make. The Nile delta, one of the most heavily populated and intensely cultivated areas on earth, is considered in the 2007 fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC) to be a key societal hotspot of coastal vulnerability. According to Mohamed Al-Raey, professor of environmental physics at the University of Alexandria, a rise in sea levels of 9-59cm could lead to the inundation of many low-lying coastal zones in Egypt.

Egypt's coastal area extends for more than 3,500km along the Mediterranean and Red Sea and is home to over 40 percent of the country's 80 million people, most of whom live in the urban centres of Alexandria, Port Said, Damietta, Rashid and Suez.

Worst case-scenario for Alexandria

Taking the city of Alexandria as a worst-case example, Al-Raey estimated that a rise in sea levels of 50cm would lead to the loss of about 194,000 jobs and the displacement of about 1.5 million people. Flooding would threaten freshwater supplies due to salt water intrusion, destroy agricultural productivity and industrial areas, and harm the tourism industry.

By using a coarse digital terrain model and global population distribution data, the 2007 IPCC assessment report estimated that over one million people

would be directly affected by 2050 in three of the world's megadeltas: the Ganges-Brahmaputra delta in Bangladesh, the Mekong delta in Vietnam and the Nile delta in Egypt.

Current sea level trends in Egypt

The Coast Research Institute in Alexandria is currently collecting data at three monitoring stations to measure sea level rise on Egypt's coast: in Alexandria, Burg Al-Burullus and Port Said.

According to Ibrahim Al-Shenawy, director of the institute, "current measurements indicate a sea level rise of 1.6mm per year for Alexandria, 2.3mm for Burg Al-Burullus and 5.3mm for Port Said. These figures include sand subsidence (estimated at 0.4mm per year in Alexandria, 1.1mm in Burg Al-Burullus and 3.35mm in Port Said). The net rise of sea levels is 1.2mm in Alexandria, 1.2mm in Burg al-Burullus and 1.95mm in Port Said."

The 2007 IPCC report said global sea levels had been rising at an average rate of 1.7mm per year during the 20th century. It warned that, with continuing increases in greenhouse gas emissions and global warming, sea levels could rise within a range of 1-3 metres during the present century.

Al-Shenawy said that if in Egypt temperatures were to increase by 1.8 degrees centigrade by the year 2100, which is expected to happen, sea levels would rise 72cm in Port Said, 28cm in Alexandria, and 35cm in Burg al-Burullus.

Scientific climate projections by IPCC working groups indicate a rise in average global temperatures of 2-4.5 degrees centigrade by the end of the century.

How to respond to the threat?

The Egyptian Environmental Affairs Agency (EEAA) said that several measures could be put in place to deal with the impact on the coastal zone corridor, including beach nourishment (deposition of sand onto the beach), construction of breakwaters, tightening of legal regulations to restrict development in vulnerable areas, changes in land use and Integrated Coastal Zone Management (ICZM).

The objectives of ICZM, an approach also promoted by the UN Development Programme (UNDP) in Egypt, are to protect the coast's natural resources and promote sustainable development. According to the European Commission, ICZM is a relatively new, multidisciplinary and evolving concept which focuses on information collection, planning, decision-making, and monitoring of implementation.

Mohamed Bayoumi, a UNDP environment specialist, said the Egyptian government had been working for the past 30 years on sea erosion reduction and shore protection measures, particularly by constructing dams in the Nile Delta.

He said: "These hard structures to protect shores against sea erosion can now be used for adaptation to climate change and rising sea levels."

But according to Al-Shenawy, "there is no urgent need at the moment to take measures against sea level rise, the situation is not alarming. The process is very slow, it's only about a couple of millimetres per year. Only certain areas will suffer from sea level rises, not all. But we will continue our research and collect our data, otherwise we invest for nothing and too much money would be wasted."

While a cost assessment for contingency measures has not yet been conducted in Egypt, the 2007 IPCC report suggests that adaptation costs for climate change would be much lower than post-event costs.

Some call for urgent action

In contrast to Al-Shenawy, other environmental specialists say a shift in public policies, and the implementation of national adaptation strategies to protect vulnerable areas, need to be put in place urgently.

For Al-Raey, the contingency plans suggested by the government aim to protect the tourism industry in the first place but are not directly related to the impact of climate change and global warming.

"Additional adaptation measures are needed to target climate change. This will be less expensive for the tourism industry than losing the beach completely. We are now working with different cultural organisations to raise awareness and get better answers from decision-makers," he said.

The following two pictures of the Nile Delta visualize the consequences of SLR for two different levels of rising: 0,5 meters and 1 meter. These pictures produced for the UNEP also include estimates for the then affected population and the loss of cropland.

Potential Impact of Sea Level Rise on the Nile Delta

Potential impact of sea level rise: Nile Delta

Population: 3 800 000
Cropland (Km²): 1 800



Population: 6 100 000
Cropland (Km²): 4 500



Sources: Otto Simonett, UNEP/GRID Geneva; Prof. G. Sestini, Florence; Remote Sensing Center, Cairo; DIERCKE Weltwirtschaftsatlas.

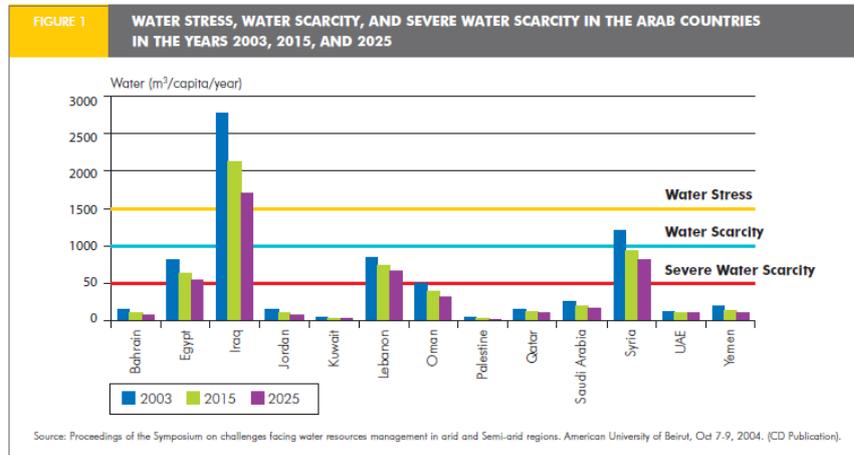
(Source: <http://www.grida.no/climate/vital/34a.htm>)

WATER PROBLEMS

With the great exception of Iraq all other countries in the Arab countries are already living under conditions of water scarcity of even severe water scarcity. And for all those countries the situation will worsen in the coming years.

One example for such a prognosis is a AFED report from 2006, which differentiates three points in time and estimates the water problems for each of the 13 countries. For Egypt the water situation is already hard, as a study of the CFS has shown (in Arabic only). In the following picture the deterioration is underscored clearly.

Water Problems in Arab Countries



(AFED 2006:64)

The geopolitical location of Egypt is rather special. It is located on the continent Africa, neighboring Asia and Europe. The closeness to Israel and Palestine, the Suez Canal, the Nile (with 9 countries it is “feeding”), and the border to civil war-driven Sudan are indications of a complicated constellation. Therefore a major issue and continuous challenge is national security and strategic issues. Many institutions – and of course intelligence and military experts – focus on this complex topic. The most prominent, oldest and most influential institution with this focus is the Al Ahram Center for Political and Strategic Studies (ACPSS) which is also the largest think-tank in the region. Since studies regarding such sensitive issues and future oriented thinking are almost never translated or available to the public, I refrain from citing them here. This would afford a special chapter and more resources.

Another topic is related to political culture and policy styles. In the AFED report on Sustainable Development in the region it was stated, that there was an changing imbalance between short- and long-term thinking and action in Egypt and similar countries: “In the past, short-term planning was a major obstacle to environment and sustainable development policy making. Today, some attempts go to the opposite extreme, ignoring pressing current environmental challenges while setting longterm grand plans, in a practice which could be termed ‘fleeing forward’. While looking forward to the future is needed for sound environmental planning, ignoring current problems will not solve them, however noble the long-term goals might be. Problems unaddressed in the present will multiply, creating even bigger challenges in the future. Some excellent grand schemes announced in the region regarding key issues as renewable energy, water and coastal management, with global ambitions, should not divert attention from simple measures urgently required at the local level to ensure more efficient and sound use of resources.” (AFED 2006: XXI)

It will be seen, whether the upheavals in the Arab region have led or will lead to a more mature political culture and political style, where the short- and long-term logics and considerations are more in balance than in the past.

4.1 Example for future-oriented Practice: SEKEM

In addition to all those intuitions, research activities and issues mentioned it seems worthy to tell a practical success story from the middle of an Egyptian desert, which might sound like coming from future times in Egypt.

In 1977 a young Egyptian travelled through the desert area northwest of Cairo, carrying with him a vision and some amount of idealism, experience and creativity. Ibrahim Abouleish had studied chemistry, pharmacy and medicine in Graz (Austria) and worked there in that sector for several years. Now, that he returned after many years in his home country, he was shocked by the state of affairs, by the meager and low standard of living for most of his people in Egypt. "During my journey through Egypt I noticed desolation everywhere in the population, a desolation which these people did not even feel themselves. But I felt this physical and spiritual-soul emptiness in their stead, and thus I experienced myself as their representative. Because of this awareness I wanted to establish new social forms for the Egyptian people." (Abouleish 2005: 67) „This had deeply moved me, as I knew that people's surroundings mirror their soul's disposition. I felt compassion for these people who could not be made responsible for their situation, but were forced to bear it and had learned to carry it. My work with anthroposophy led me to sense a way that could liberate them from their misery." (Abouleish 2005: 67) He decided to realize an extremely ambitious vision in the middle of the desert, in the middle of hot sand: concrete development for humans, earth and society, for a peaceful co-existence of diverse cultures. So SEKEM has been built. The term is the translation of the hieroglyph with the meaning „the life-giving force of the sun“ (Abouleish 2005: 13) and more general „vitality“ (SEKEM brochure).

This project is in the making for more than 30 years of intense work and efforts. It took the support of ever more interested, motivated and engaged people. After steps of progress, after overcoming of obstacles and problems, after learning to deal with the circumstances and cultural patterns as well as political structures („path dependency“) Sekem and his director received prestigious international awards and financial grants: in 2003 the Right Livelihood Award (so-called alternative Nobel prize) and the award „Outstanding Social Entrepreneur“ of the Schwab Foundation (partner organisation of the World Economic Forum at Davos). Mr. Abouleish is also founding member of the World Future Council since 2007.

During the years Sekem has become a holding which manages various corporations and units (see: www.sekem.com). Step by step new businesses have been created, units have become separate corporations. The holding makes high growth rates and now has around 1.200 employees. In the beginning there just was the bio-dynamic agriculture project and the cultivation medical herbs and the production of „green pharma-products“ and teas; then came the branches food and textile production. Today the corporation LIBRA manages the farming sector and coordinates a huge network of farmers around Egypt. A variety of phyto-pharmaceutical drugs are produced by ATOS, and organic food are produced and nationally as well as internationally marketed by ISIS. Other corporations are specialized in manufacturing of organic cotton textiles (Naturetex), packaging (Hator), software (Salis). 30 % of food and 80% of the textiles are exported.

The vision and the standards on the production and services and its effects are very high. Director Abouleish articulates the philosophy in his book: "We established the term 'economy of love'. We consciously want our agricultural business to be based on the principles of love, that is, a responsibility towards the earth, the plants and animals and to create trust among the people. Even when the market price was much lower than the price agreed upon, we always bought the produce of the farmers at the previously agreed price." (Abouleish 2005: 134)

Establishing SEKEM and its advancing it to a business holding has been a rather complicated and ambitious endeavour, and had to overcome some frictions and obstacles. One dangerous hurdle is described here because of its exemplary character. In the starting phase the Army got involved: after several thousand trees had been planted in the desert territory, military vehicles approached and destroyed the tree plantations without any communication or prior warning – an Army general wanted to occupy that very area for military purposes, although gigantic areas in that region already were in use by the military. It took Ibrahim Abouleish and its colleagues and friends several weeks of strong intervention and discussion with political decision makers before the Army finally retreated. There was no compensation for the damage done, because there was/is no such concept in Egypt when members of the elites are involved. Looking back Abouleish said there were several skills necessary to overcome these and many other problems: “three abilities that had grown within me throughout my life, wherever they may have come from: the ability to learn, social skills and my energy for doing things.” (Abouleish 2005: 67)

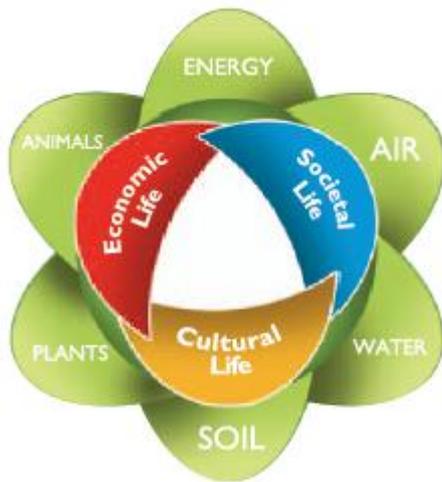
The project SEKEM has some prometheic logic since it is the intention to achieve something very complicated and to realize it. It was the „idea of an oasis in the middle of a hostile environment“ (Abouleish 2005: 13), to create life in the middle of very bad conditions. This metaphor can be interpreted not only in a biological-ecological or agrarian sense, but also in a societal-cultural and even political sense, that is, a metaphor for an ambitious development project in the middle of a negative context, an underdeveloped environment, where self-reflection, critical and emancipatory advancement is not learned, is not welcomed, is not taught. To deal with this rather static conditions and to reform behavioural patterns can be considered as being even harder than dealing with legal or political obstacles: „I slowly learned that many of the people I dealt with had no concept of time, or to put it differently, experienced time in a different way. But it is possible to plan ahead, set goals, analyse, correct oneself or reflect on one’s actions with this concept of time. At the same time I saw the amazing warmheartedness and openness of these people who lived completely in the moment in their feelings, who dealt out of their current state of mind.“ (Abouleish 2005: 76) The most important lesson learnt for Abouleish and its team was to live all learning steps as a role model themselves and to hope for the people’s ability to imitate. The SEKEM pedagogues, trained in the philosophy of Rudolf Steiner, followed the motto „outer forms help towards developing the mind.“ (Abouleish 2005: 76) At the same time SEKEM utilizes and uses modern management methods, for instance, for improving the overall performance the holding uses „Key Performance Indicators“ (Abouleish 2005: 210) and “Total Quality Management” (Abouleish 2005: 212).

Education and learning plays a central role in SEKEM. There are 600 pupils going to school, around 60 teachers are offering the classes, pre-school children are playing and learning in three kindergardens. There are special courses for drop-outs from the surrounding villages, vocational training programs in seven professional fields like wood processing and electronics, additional adult education, a training school for disabled children. In addition there is a medical center with a pool of sixteen doctors, and a pharmacy. Several years ago the Academy for Applied Arts, Sciences and Technology was established, which has cooperation agreements with several Egyptian and foreign universities. Two years ago a university has been created which follows the principles of Sustainable Development in all its departments: in 2009 “Heliopolis University for Sustainable Development” receives its acknowledgement by the “Presidential Decree No. 298”.

For the social interaction there exists a cooperative of the Sekem employees (CSE) and a SEKEM development foundation (SDF). Abouleish writes: „Sometimes I wonder whether it was just good luck that I met all these splendid, inspired people, or whether heaven helps people who strive towards an ideal.“ (Abouleish 2005: 125) It is intended that the experiences, insights and methods of SEKEM should support the overall changes and future developments in Egypt in a positive way. Helmy

Abouleish, the Managing Director of SEKEM Group, writes in his foreword for the Sustainable Development report: “This is the beginning of a new era in Egypt; our country will change and we in SEKEM will do our very best to steer this change towards a more sustainable future and provide a living example for long-term competitiveness.” (SEKEM Group 2011: 2)

At the end of 2011 SEKEM published its fourth Report on Sustainable Development. This report presents the progress made, as well as the existing and upcoming challenges of the holding in relation to each of the four dimensions of sustainable development as defined by SEKEM: Economic Life, Societal Life and Cultural Life, embedded in the planet’s Ecology.



SEKEM Sustainability Flower (SEKEM 2011: 2)

The Sustainability Flower (SF) represents a communication and information management tool symbolizing the concept of sustainable development in its four dimensions (ecology with its six sub dimensions, societal life, cultural life, and economic life). In addition and for measuring changes with regards to those goals the SEKEM Sustainable Development Scorecard (SDSC) was developed.

“We perceive 2010 as an important milestone in our sustainable development reporting activities as the first threeyear cycle of target setting has come to an end. We definitely learned how to improve our target setting process and will apply this in the upcoming period. We succeeded in matching our Sustainability Flower with the GRI standard as well as with the ten principles of the UN Global Compact. For the year 2011, we are planning to focus on further developing and revising our reporting in accordance with the Sustainability Flower. Also we want to explore further potential to align our reporting to the recently published ISO 26000 guidelines.” (SEKEM Group 2011: 2)

The overall assessment of the last year of SEKEM seems to have been very positive, i.e. sales increased by 15.7% with a profit margin of 7.9%. “We have developed our sustainability risk assessment and gap analysis on a company level, as well as monitoring and strict alignment to our sustainability strategy. Our cultural activities were highlighted by the first bachelor graduates in eurhythm in the whole of Egypt. Moreover, we have 17 running R&D projects in various different topics such as phyto-pharmaceuticals, soil-born pathogens and the development of educational materials for Egyptian schools.” (SEKEM Group 2011: 2) Despite the successes the management of SEKEM wants to go further, like in the ecological dimension: “Although our ecological footprint is – compared to conventional agricultural cultivation and companies – relatively low, we are still aiming to decrease it further, mostly through assessment, monitoring and evaluation of our full impact in order to implement comprehensive long-term solutions that adhere to best-practice standards.” (SEKEM Group 2011: 2)

The example of SEKEM proves that amazing advances can be achieved even under adverse and complicated circumstances – if the management acts according to principles like those of Sustainable Development.

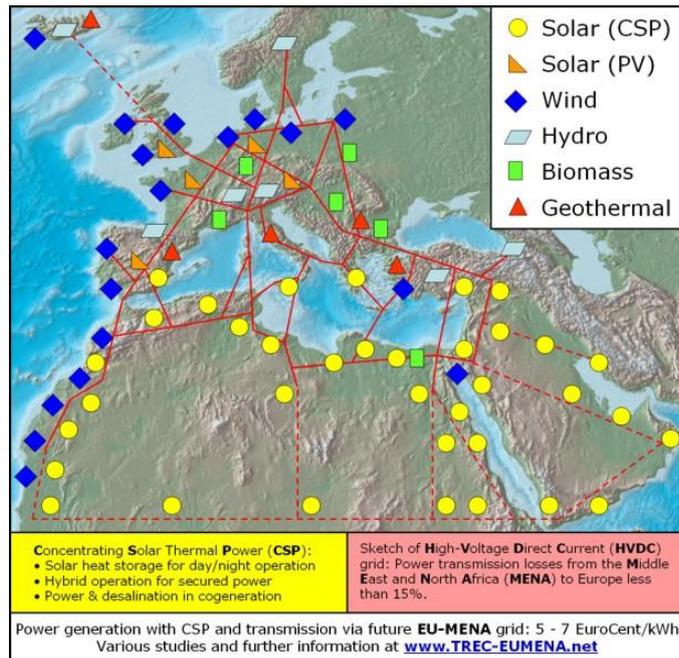
4.2 Example for future-oriented Practice: Desertec

In the fall of 2009 a project gained momentum which has been under discussion for several years. In its own words the so-called Desertec Concept would make use of the largest, technically accessible source of energy on the planet which is to be found in the deserts around the equatorial regions of the earth. It is designed to bring deserts and existing technology into service to improve global security of energy, water and the climate. To this end Desertec proposes Europe, the Middle East and North Africa (EU-MENA) begin to cooperate in the production of electricity and desalinated water using concentrating solar thermal power and wind turbines in the MENA deserts, parts of which are located in huge parts of Egypt. These technologies can meet the growing demands for power production and seawater desalination in the MENA region, and produce clean electric power that can be transmitted via High Voltage Direct Current (HVDC) transmission lines with relatively little transmission loss to Europe (10-15%). It is expected that in 2050 around 15 % of the EU's energy demand are satisfied by such transfer from the Sahara region.

The technologies necessary to realize the Desertec concept have already been developed and some of them have been in use for decades. The Trans-Mediterranean Renewable Energy Cooperation (TREC) was founded in 2003 by The Club of Rome, the Hamburg Climate Protection Foundation and the National Energy Research Center of Jordan (NERC). TREC has developed the Desertec Concept and completed the necessary research in cooperation with the German Aerospace Center (DLR). TREC is now making this concept a reality in cooperation with people in politics, industry and the world of finance. A Desertec Foundation to strengthen and support these activities and give guidance for reaching the quality social and ecological goals has been formed.

The core of TREC is an international network of scientists, politicians and other experts in the development and implementation of renewable forms of energy. The members of TREC, approximately 60 in number (including His Royal Highness Prince Hassan bin Talal of Jordan), are in regular contact with national governments and private investors, with the aim of communicating the benefits that may be obtained from the cooperative use of solar and wind energy and promoting specific projects in this field (see <http://www.trecers.net/>).

Euro-Supergrid with a EU-MENA-Connection: Sketch of possible infrastructure for a sustainable supply of power to Europe, the Middle East and North Africa (EU-MENA).



(Source: www.trec-eumena.net)

On the basis of the Desertec-concept in October 2009 a unique industry network was established in Munich/Germany. This is an initiative to develop a reliable, sustainable and climate-friendly energy supply from the deserts in the Middle East and North Africa (MENA). The DII GmbH (Desertec Industrial Initiative; limited liability company) was founded by a group of founding members consisting of twelve companies and the Desertec Foundation. The DII aims at accelerated implementation of the Desertec concept, as developed by the Desertec Foundation. The DII intends to collaborate closely with the Mediterranean Solar Plan (MSP), an initiative launched in 2008 by the French presidency of the Council of the European Union within the framework of the "Union for the Mediterranean". The Mediterranean Solar Plan aims at the creation of a new balanced north-south relationship based on the promotion of sustainable energy projects. Both initiatives - the MSP as a political initiative and the DII as a private industry initiative – share similar goals and can therefore mutually support each other.” (<http://www.desertec.org/en/press/press-releases/091030-01-formation-dii-gmbh/>)

The World Bank declared in December 2009 its support for solar power construction in North Africa: “This Clean Technology Fund Investment Plan proposes CTF co-financing of \$750 million, which will mobilize an additional \$4.85 billion from other sources, to accelerate global deployment of Concentrated Solar Power (CSP) by investing in the CSP expansion programs of five countries in the Middle East and North Africa (MENA): Algeria, Egypt, Jordan, Morocco and Tunisia.”

In the last years the pros and cons, the chances as well as the risks of such a monumental project have been debated, at least in small circles of experts and interested groups. During a “Future Conversation” of the IZT in November 2009 several of the critical aspects have been discussed, questions like:

- Will DESERTEC just exploit the solar energy, water and land sources in North Africa for European interests? Or does the project offer new and adequate development opportunities for the Sahara region and its societies and people itself?

- Are the participating energy providers intending to dry up the eco-electricity home market with gigantic power stations in the Sahara? Or is electrical power from deserts economically and ecologically more rational than the micro-production of renewable energies through German rooftops and coastal areas?

In the meanwhile, first implementation of single projects is in preparation in Tunisia and Morocco. With Egypt there are also discussions ongoing. This initiative might influence the national energy strategies and policies toward more renewable energies in the North African countries as well as in European countries and beyond.

5 Impressions and Perspectives

The economic, social, ecological, political, cultural and religious challenges for Egypt are immense. The struggle for coping with problems and for many citizens for sheer survival is consuming most of the intellectual energies and other resources of that country. Still, some kind of short-term orientation is dominant as in most other countries, the pressure for immediate action - and be it symbolic - is high. At the same time there is the pride about the rich and amazing past of Egyptian civilization and there are high ambitions – especially for big projects like the Assuan Dam or an idea like the relocation of the capital into a desert area.

In his very informative and brilliant assessment of the pre-revolt Egypt the expert Bradley explained in his book "Inside Egypt – The Land of the Pharaohs on the Brink of a Revolution" (2008) that recently, 50 years after the military coup by Gamal Abdel Nasser the country was in the same circumstances: "The same grievances that led the people to rebel, and the Free Officers to take advantage of that rebellion to seize power, are now at the root of new street protests and bitterly expressed articles in the emerging opposition media: an end to colonialism and its agents, and the domination of government by exploitative capitalists; an end to the disregard for social justice; and the need for a democratic system of governance that pays more than lip service to the demands of the people." (p. 22)

The broad and deep changes which are going on after the rebellion of January 2011 are enormous, yet, they have not shown improvements in everyday life of the Egyptian people. Whereas the self-consciousness of most people has strengthened considerably, the institutions and political-administrative structures have not changed. A coalition of the old elites – especially between the military, parts of the Muslim Brotherhood and business leaders – has developed and is blocking further progressive advancement, civil empowerment and democratic state building.

With this background it can be expected that future thinking and future research might become more important in Egypt and that capacities for such thinking will be created in different kinds of institutions and fields – be it in literature, social sciences, the media etc. There is a great openness for foreign knowledge and experience, for successful cases and good practice. Mainly on the part of the young generation there is a strong eagerness to learn and to experience new things, and the orientation towards "the West". This is problematic, because this means the motivation to repeat a path of development which is destructive vis-à-vis social, economic and cultural relations, and which will transform them into a consumerist and capitalist system, exploiting nature and other sources.

The future researcher El Issawy reflected on the future of his country in 2010 thoroughly and discussed several of the major problems and challenges:

"A BETTER FUTURE: Is it a fantasy to believe that Egypt can become a developed country in three or four decades? Of course it is not, though two important provisos must be attached to this answer.

One, a deeper and more comprehensive conception of development is needed. Development means much more than rapid economic growth and equitable distribution of its fruits, though these are essential ingredients. Development must be viewed as process of human emancipation and of nation building, or transformation. Second, past development experiences need to be re-evaluated with an open mind, free from preconceived ideas and antiquated notions of development. This is a necessary condition for drawing the real lessons of successful development experiences.

Vigorous and sustainable development is not the result of magical formulae or miracles. The key engines of such development are not difficult to identify.

One key prerequisite is self confidence, freeing national decision-making from the constraints of foreign domination. A second key is self reliance, ie faith in our ability to develop by depending in the first place on our energies and capacities, particularly our human resources and domestic savings. This was what attracted foreign investment in the Asian tigers and China, not untimely appeals to foreign businesses to invest in weak and fragile economies.

The third key requires an active concept of development, one that does not confine its efforts to improving the infrastructure and facilitating private enterprise in a free market but that takes development seriously by initiating, singly and jointly with the private sector, productive investments in key industries, and opens up new avenues for technological progress. The developmental state does not wait passively for market outcomes. Its job is to "govern the market" (...).

A fourth key is heavy investment in education, training, scientific research and technology. This is essential for any knowledge-based economy, believed to be a vital condition for survival in the 21st century. A fifth key is that sustained growth requires a good measure of social justice and democratic participation. Poverty, concentration of income and wealth and authoritarian regimes are not only symptoms of underdevelopment, they are also enemies of sustainable progress. Finally, the sixth key to good development is patience, perseverance and a willingness to sacrifice immediate gain for the few for the future good of the majority. Clearly, the burdens of the struggle for development are more willingly borne when they are democratically agreed and equitably shared. This underlines once more the importance of equity and popular participation.

This set of keys to successful and durable development must be complemented with a future-oriented culture and a clear vision of the long-term goals and of the path leading to a more desirable future. This is where futures research comes in." (El-Issawy 2010)

Whereas the need for more future thinking as well as future research seems to be obvious and "objectively given", and after the ongoing rebellion even more pressing than before, the conditions in Egypt for such advancement seem rather bleak, as some of the leading future scholars of that country have expressed. A future researcher of the young generation, Abeer Shakweer, has the following assessment about problems facing Foresight Activities in Egypt (Shakweer 2007). There is:

- a lack of human resources and skills in the field
- a long time span for building a reliable, comprehensive future vision might not be a politically acceptable period
- a weak institutional framework for co-operation in Egypt and the lack of co-ordination between the various future studies centers.

Nevertheless, even with these obstacles and challenges in mind, there is no better way as to improve the status quo. And there seem to be options. To quote the Director of the Center for Future Studies (Cairo), Mohamed I. Mansour quoted in a presentation for UNESCO in Paris from a CFS-report on Foresight:

“There are several recommendations made for Egypt, which might also be helpful for other countries and for future activities of UNESCO:

1. Raising awareness on the importance and role of future studies in imagining and preparing for the future,
2. Developing a culture of "futures thinking" and orient people to think of their alternative futures,
3. Capacity building in the field of futures studies is crucial,
4. Developing an academic discipline for futures studies in universities,
5. Boosting futures thinking through organized competitions.” (Mansour 2008)

A strong argument for establishing future research in a poorer country like Egypt was expressed by El-Issawy:

“Given unequal power structures and the formidable means available to the big powers to influence the direction of change in developing countries, the risks of being subjected to external pressures are greater for developing countries, especially those that occupy strategic positions in their regions or in the world. Unless such countries -- of which Egypt is a good example -- take the initiative to create their own future, i.e. to shape it according to the interests of their people, external powers will carry out this task for them, leading, of course, to a future serving the interests of those powers.” (El-Issawy 2010)

In a time, when most Western capitalist countries which have been at least in the ideological or the theoretical sphere been something like a model or orientation for many other societies, especially in the global South, are under severe financial and economic pressures (crisis in the EU, USA, Japan etc.) It seems the more important and necessary for all other countries to develop their own specific and adequate path into a better, a Sustainable future.

In several EU-countries governments, civil activists and scientists are working on Transformation concepts in order to find ways for a Sustainable Development. Those concepts include time frames of about 40 years. This is not a luxury. It is becoming a necessity - for poorer countries like Egypt even more than for the rich societies. There are many lessons learnt which can be utilized on both sides of the Mediterranean Sea.

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7 List of Abbreviations

- AAF – Arab Alternative Futures
ACPSS – Al Ahram Center for Political and Strategic Studies
AFED – Arab Forum for Environment & Development
CFS – Center for Future Studies (of IDSC)
CSP – Concentrated Solar Power
CTF – Clean Technology Fund Investment Plan proposes (World Bank)
DII – Desertec Industrial Initiative
EAFRA – Egyptian Arab Futures Research Association
EEAA – Egyptian Environmental Affairs Agency
EHDR – Egypt Human Development Report
HDR – Human Development Report
HVDC – High Voltage Direct Current

GHG – Greenhouse Gases
ICZM – Integrated Coastal Zone Management
ICFS – International Center for Future & Strategic Studies
IDSC – Information and Decision Support Center
IFS – Institute for Futuristic Studies (University of Assiut, Upper Egypt)
INP – Institute of National Planning
IPCC – Intergovernmental Panel on Climate Change
IRIN – Integrated Regional Information Networks (UN Office for the Coordination of Humanitarian Affairs)
IZT – Institute for Future Studies and Technology Assessment (Berlin)
MENA – Middle East and North Africa (Algeria, Egypt, Jordan, Morocco, Tunisia)
MSP – Mediterranean Solar Plan (Council of the European Union)
NERC – National Energy Research Center
NRC – National Research Center
RTD – Real Time Delphi
SDSC – Sustainable Development Scorecard
SLR – Sea Level Rise
TREC – Trans-Mediterranean Renewable Energy Cooperation
TWF – Third World Forum
UNDP – United Nations Development Programme
UNEP – United Nations Environment Programme
UNFCCC – United Nations Framework Convention on Climate Change
WHO – World Health Organisation (UN)
WFS – World Future Society
WFSF – World Future Studies Federation