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KENYA NATIONAL ASSEMBLY

DEPARTMENTAL COMMITTEE
ON
EDUCATION, RESEARCH AND
TECHNOLOGY

REPORT

ON THE OFFICIAL STUDY VISIT TO STATE OF ISRAEL BETWEEN 9TH AND 14TH JUNE 2010

Parliament Buildings
National Assembly
Nairobi

June 2010

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1.0. INTRODUCTION

Mr. Speaker Sir,

The Departmental Committee on Education, Research and Technology was constituted at the commencement of the Tenth Parliament pursuant to the provisions of Standing Order No. 198 and has executed its mandate in accordance with the provisions of the said Standing order, 198(3) which mandates the Committee to:

(a) Investigate, inquire into and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned ministries and departments;

(b) Study the programme and policy objectives of the Ministries and departments and the effectiveness for the implementation;

(c) Study and review all legislation referred to it;

(d) Study ,assess and analyze the relative success of the ministries and departments as measured by the results obtained as compared with its stated objectives;

(e) Investigate and inquire into all matters relating to the assigned Ministries and departments as they deem necessary and as may be referred to them by the House or a Minister ;and

(f) Make reports and recommendations to the House as often as possible including recommendation of proposed legislation.

The Committee overseas the following Ministries:

i. Ministry of Education
ii. Ministry of Higher Education, Science and Technology

Mr. Speaker Sir,

Four Members of the Committee and one officer visited the State of Israel between 5th and 14th June 2010. The objective of the visit was to:

i. Familiarize themselves with the operations of the Departmental Committees in Parliaments of the host countries and specifically those Committees with similar dockets as those in Kenya;

ii. Study the education system, management, funding, administration, curriculum and exam policies in Israel;

iii. Visit learning and research institutions with a view to learn their operations and for benchmarking; and

iv. Hold meetings with Government officials and other stakeholders' in the education and research sectors.

Mr. Speaker Sir,

The delegation of the Committee comprised the following:

The Hon. David K. Koech, MP - Chairperson

The Hon. (Dr.) Wilbur Ottichilo, MP

The Hon. B. C. Muturi Mwangi, MP

The Hon. Shakila Abdalla, MP

Ms. Mary. J. Chesire - Clerk Assistant/Secretary to the Delegation

The Committee held fruitful discussions with senior officials of the State of Israel including Members of Parliament.

The Committee is grateful to the Speaker and the Liaison Committee for allowing them to undertake the visit and the Office of the Clerk for providing the necessary technical support. The Committee would also

wish to thank the staff of the Kenyan Embassy in the Tel Aviv and particularly, Charge D' Affairs Mr. S .M. Lorete for providing logistical and technical support during their visit to the State of Israel.

The Committee would not forget to thank the Israeli Ambassador in Nairobi, H.E. Jacob Keidar, who despite of his busy schedule had the honour to pay a courtesy call on the Committee prior to its visit to Israel. This gave an insight of the Committee expectations during their visit to Israel.

Mr. Speaker Sir,

On behalf of the Committee I beg to lay on the Table of the House the Report of the Committee on the above visit, pursuant to the Standing Orders No. 181(3).

HON. DAVID K. KOECH, MP
CHAIRPERSON, DEPARTMENTAL COMMITTEE
ON EDUCATION, RESEARCH AND TECHNOLLOGY

2.0. MEETING WITH ISRAEL AMBASSADOR TO KENYA, H.E. AMBASSADOR, JACOB KEIDAR

2.1. Prior to the visit to the State of Israel the Ambassador of Israel to Kenya, H. E. Jacob Keidar, paid a courtesy call to the Committee on 11th May 2010. The meeting was significant to the Committee as it gave an overview of the Committee expectations during their visit to Israel.
He informed the Committee that Education Committee in the Knesset (Israel Parliament) was very important and was rated second to national security in terms budgetary allocations and other government priorities.

2.2. Israel gained its independence in 1948 and its area is about 20, 000Km^2 with a population of about 7.3 million people of which 80% are Jews and 20% are Arabic, Muslims, Christians and other races. The Jews people have migrated from various regions back to their ancestral land of Israel with major migrations noted in 1989/90.
The Israeli economy stands between USD20, 000 and 27, 000 GDP per capita. The economic strength moved from agriculture to industry in the 1990s and has developed daily to date. Kenya has partnered with Israel since 1963 by exchanging agricultural technology especially green house technology, water conservation and other educational skills. The Country is very conservative in its national budget expenditure.

2.3. Education is free from primary to secondary i.e. grade 1-6 (Primary); grade 7-9 (Intermediate) and Secondary grade 10-12. After high school at age 18 all students join the Israel Army as a government requirement where boys train and serve for 3 years and 2 years for girls.

2.4.There are no private schools in Israel apart from few exceptional cases. All schools are government owned or the government owns majority shares. The Ministry of Education has very tight rules for one to qualify to have a private school. It makes every effort not to allow private schools. All universities are public. There are also 6-7 higher education institutions which train students who don't meet university admission where the thresh hold is quite high. The colleges mostly specialize in law courses, music, dance, nursing among others. Universities offer specialized courses in engineering, architecture and

research oriented courses in chemistry, physics, life science and mathematics. Israel is one of the leading countries with the highest sophisticated research facilities in the world. Other courses offered include doctorate degrees, technological and applied science courses.

2.5. Universities in Israel have the highest number of incubators turning theory students into practicing ones in electronics and computers with largest laboratories in the world making models like IBM among others. Children are very much encouraged from kindergarten to think on their own, be creative and be research oriented.

2.6. The Ambassador however informed the Committee that Israel has faced a number of challenges amongst them are: (i) high number of children per class– around 40 per class (ii) some indiscipline cases are in high schools (iii) 10% of ultra religious Jews people think they are separate from other communities and want their education system to be based on religion and different from regular system of government (iv) school going is compulsory up to age 16 after which one decides to drop from school or continue with higher education.

2.7. Research and Technology Development funds are availed by the state to public universities and it is at the university that Research Academy Board requests for the money apart from funds they get from other sources.

3.0 MEETING WITH DIRECTOR, TECHNOLOGICAL DISCIPLINES, MINISTRY OF EDUCATION

3.1. The Committee met with Mr. Gershon Cohen, Director, Technological Disciplines in the Ministry of Education who informed the Committee that technological and vocational and training (TVET) is the responsibility of the Ministry of Education.

3.2. In Israel, education plays a major part in the life and culture of the country. Israel has a comprehensive education system with an emphasis on progressive educational trends. In terms of expenditure education accounts for approximately 10% of Gross Domestic Product

and most schools are subsidized by the State. Because of its historical background schools in Israel are divided into state, state-religious and Arab with majority of the children attending state schools. State-religious schools caters for children from the Orthodox Jewish sector which offer intensive Jewish studies programs. Schools in the Arab sector teach in Arabic and offer a curriculum that emphasizes Arab history, religion and culture.

3.3 The education system was structured in four levels. Preschool is available to children between the ages of three and six; it is obligatory from age five. Primary education runs from grades one to six; grades seven to nine were handled in intermediate or junior high schools. Secondary education comprised grades ten through twelve. Secondary schools were of three main types: the general academic high school, which prepared students to take the national matriculation examination, passage of which was necessary to enter university; vocational high schools; and agricultural high schools. The vocational agricultural schools offered diplomas that allowed holders to continue in technical or engineering fields at the postsecondary level. At the postsecondary level, there are training institutions of several different kinds, offering preparation for primary school teaching, nursing, and other technical and semiprofessional careers.

In secondary education, students undergo matriculation exams before joining the universities which covers various academic disciplines which includes Hebrew language, English language, mathematics, scripture history, state studies and literature. Before joining the university students are conscripted into the Israel Defence Force (IDF).

3.4. The curriculum throughout the Israel educational system is highly standardized and centralized through the Ministry of Education and Culture. The Ministry over-sees all levels including higher education. The Council for Higher Education controls programmes in the universities. The curriculum addresses the diversity of the population in a number of different ways above and beyond the basic divisions in the state, state-religious schools and private schools.

3.5. Regarding curriculum development, the Committee was informed that there was a team led by the universities, the army and the teachers in the field which is charged with reviewing curriculum in the Ministry. The team meets four times in a year and presents their findings to the Ministry for approval. Upon approval teachers are introduced into the new curriculum and are given 28-50 hours to learn. Teachers are rated depending on the capability to adapt to the new curriculum and are remunerated according to their ability. The Ministries of Labour and Agriculture share with the Ministry of Education and Culture some responsibilities for curriculum and support of vocational and agricultural schools.

3.6. The Committee also learnt that in order to ensure that the products of the education are relevant to the market the Ministry of Education listens to what the market demands by relying heavily on the daily newspapers. This enables them to be within or without the market. The Ministry has a special computer which scans newspapers on a daily basis to know the needs of the market. The Committee recommends Kenya's Ministry of Education should borrow a leave with a view to training people depending on the market demands.

3.7. The Committee was informed that in Israel learning of science encompasses three stages which include:-

1. General science of thinking
2. Basic science
3. Advanced subjects/specialization

This allows students to concentrate on their areas of specialization depending on their capabilities from kindergarten up to the universities.

4.0 MEETING WITH CHIEF INSPECTOR, ENGLISH LANGUAGE EDUCATION, MINISTRY OF EDUCATION

4.1. The Committee met with Mrs. Judy Steiner, Chief Inspector of Language Inspection of English. The Committee was informed that in Israel learning English is compulsory from the fourth grade; however, most elementary schools start teaching English in the third grade.

4.2. The requirement for teaching English in Israel requires that English teachers must have knowledge of Hebrew. It requires teachers to be able to speak, read and write in Hebrew. It is also a requirement that new immigrants are encouraged to enroll in training courses to study Hebrew organized by the Ministry of Education. Courses take place throughout the country and studies generally last for 6-9 months. With regard to academic degree, teachers are required to have a degree from a recognized academic institution, which needs to be approved by the Israel Ministry of Education. For immigrants coming from non-English speaking countries, they must have studied English.

4.3. She informed the Committee that before any subject, and in particular English, is taught in the Israel schools there is always a blue print for preparing course books, syllabi, teaching materials and lesson plans. They also investigate curricular models used in other countries which incorporate principles already refined by national educational systems to develop higher education standards of foreign language teachings in other fields. The aim of the curriculum is geared towards affirming the need to set standards for equipping pupils with the knowledge of English that the modern world demands.

4.4. She stated that in order for the introduction of the new language to the Israeli system an organization of the curricula is presented to the Ministry of Education for approval. Some of the curricula areas include principles of learning, the choice of materials, topics and tasks and assessment in the classroom. The standard for each domain (areas of language ability and knowledge), is defined which describes the levels of progression and specific benchmarks and criteria. The needs of the pupils are also catered for by incorporating the student's diversity and final recommendation for schools to implement the recommendations.

5.0 MEETING WITH VICE CHAIR OF THE EDUCATION, CULTURE AND SPORTS COMMITTEE OF THE KNESSET

5.1. The Committee deals with policy on civilian Research & Development (R&D), advanced technologies, environmental R&D, academic scientific research, chief scientists in Ministries, National

Council for R&D, research foundations and information (computer technologies).

5.2. Education in Israel is a precious legacy. Following the tradition of past generations, education continues to be of fundamental value and is recognized as the key to the future. The educational system aims to prepare children to become responsible members of a democratic, pluralistic society in which people from different ethnic, religious cultural and political backgrounds coexist. It seeks to impart a high level of knowledge, with an emphasis on scientific and technological skills essential for the country's continued development.

5.3. Since the establishment of the State of Israel in 1948, the education system has faced enormous challenges of integrating large numbers of immigrant children from over 70 countries worldwide. In addition to meeting urgent demands for more classrooms and teachers, special tools and methods have had to be developed to help absorb youngsters from different cultural backgrounds into the school population.

5.4. Education in Israel begins at a very young age in order to provide children with an augmented head start, particularly in terms of socialization and language development. Kindergarten for five year old is compulsory.

5.5. The curriculum aims at teaching fundamental skills including language and numerical concepts, to foster cognitive and creative capacities and to promote social abilities. The curricular is guided and supervised by the Ministry of Education aimed at ensuring a solid and well-rounded foundation for future learning.

School attendance is compulsory/mandatory and free from age 6 to 18 years. Formal education starts in:-

1. **Primary school - Grade 1-6**
2. **Intermediate School - 7-9**
3. **Secondary School - 10-12**

5.6. Ministry of Education is responsible for school curricular, educational standards, supervision of teaching personnel and construction of school buildings. Local authorities are charged with school maintenance as well as acquisition of equipment and supplies. Teaching personnel at the kindergarten and primary school level are employees of the Ministry of Education. Those at the upper grades are employed by local authorities who receive funding from the Ministry according to the size of the school population.

5.7. Gifted children, who rank on the top three of their classes and have passed qualifying tests, participate on enrichment programmes ranging from full time special schools to extracurricular courses. Children with physical, mental, or learning disabilities are placed on appropriate frameworks according to the nature of their handicap, to help them eventually achieve maximum integration into the social and vocational life in their community.

5.7. Majority of secondary schools offer academic curricular in science and in the humanities leading to a matriculation certificate and higher education. Other secondary schools offer specialized curricular, which lead to a matriculation certificate and/or vocational diploma. Technological schools train technicians and practical engineers on three levels with some preparing for higher education, some studying towards a vocational diploma, and others acquiring practical skills. Agricultural schools, usually in a residential setting, supplement basic studies with subjects relating to agronomy. Military preparatory schools train future career personnel and technicians in specific fields required by the Israel Defence Forces.

5.8. Higher education plays a pivotal role in the economic and social development of the country. Like in Kenya institutions of higher learning operate under the authority of Council for Higher Education. It is headed by the Minister of Education and includes academicians, community representatives, and a student representative. It grants accreditation, authorizes the awarding of academic degrees, and advises the government on the development and financing of higher education and scientific research. Most Israel students are over 21 years when they

begin their university studies, after three years of compulsory military service for men and two year for women.

6.0 MEETING WITH THE SCIENCE AND TECHNOLOGY COMMITTEE OF THE KNESSET

6.1. The Chairman of the Science Committee of the Knesset Mr. M. K. Meir Sheetrit, briefed the Committee of its mandate which includes science and technology issues such as genetic, research and science. He stated that in Israel people are allowed to excel and be innovative and maximize their capabilities and their potentials. This opens room for competition leading to creativity.

6.2. He informed the Committee that like many other small countries, Israel has sharply designed scientific and technological policies aimed at enhancing its competitive position. In science, it encourages the establishment of Centres of excellence around outstanding scientists while developing a level of quality across the broad spectrum of scientific fields.

6.3. Israel's large reservoir of qualified personnel is primarily responsible for its scientific and technological attainments. R & D in Israel is carried out primarily at seven universities, dozens of government and public research institutes, and hundreds of civilian and military enterprises. Government and public bodies are primary sources of R & D funding, providing financial support for well over half of Israel's R & D activities.

6.4. Education in Israel is the key to every opportunity and it leads to excellence in technology and high scale education. Almost 4% of the GDP is allocated towards research institutions where private industries promote research with the support of the Government.

6.5. Israeli scientists have contributed to the advancement of agriculture, computer sciences, electronics, genetics, medicine, optics, solar energy and various fields of engineering. Israel is home to major players in the high-tech industry in the world and has one of the world's most technologically-literate populations. Israeli universities are ranked

among the top hundred in the world in scientific disciplines e.g. physics, chemistry, computer science, mathematics, natural sciences, engineering and life sciences among others.

6.6. The Committee was informed that the research conducted at Israeli universities and institutes is shared with the private sector through Technology Transfer (TT) units. Research in such fields as arid and semi-arid zone agricultural engineering is transferred to kibbutzim and private farmers on a gratis basis, and agricultural knowledge is shared with developing countries.

7.0. VISIT TO KIBBUTZ NAAN

7.1. The Committee had the opportunity to visit one of the Kibbutzim in Israel to learn about the drip irrigation technology in Israel. The Committee observed that the technology was suitable for the Kenyan farmers as it is tailored to flourish in dry environments hence the need to research to ensure the crop adaptability in specific areas.

7.2. The Kibbutz has linkages with many universities to do research on the farm products. The universities, after researching on a scientific product, hands it over to the Kibbutz to produce the final product which is then tested in the field. Thereupon the universities sell the idea to the manufacturers for production and commercialization.

8.0. VISIT TO ORGANIZATION REHABILITATION & TRAINING (ORT) COLLEGE IN TEL-AVIV

8.1. The Committee had the opportunity to visit Organization Rehabilitation & Training (ORT) College in Tel Aviv. The Committee was informed that the main objective of (ORT) is to advance science and technology education initiatives with a view to empowering graduates to positively empower their communities. By introducing the skills and knowledge necessary to foster economic self-sufficiently, mobility and sense of identity through the use of state of the art technology, ORT Israel delivers tailor made educational solutions which

empower entire communities to efficiently build capacity through technological arena.

8.2. The Committee also learnt that the ORT Israel delivers world class science and technology education projects which make a long-lasting impact on the economic growth of the countries in which they operate. Working hand in hand with local, regional and national governments to assess specific requirements in science and technology, ORT Israel develops end to end tailor made pedagogical solutions that are designed to propel much needed technological growth throughout entire region, thereby stimulating national fiscal independence.

8.3. The Committee learnt that, spearheaded by fundamental organizational values of professionalism and integrity, ORT Israel engages effective partnerships with governmental bodies to develop the human capacity for innovation and creativity. By creating solid educational infrastructures revolving around cutting-edge technology, ORT provides a new generation with the tools to address the challenges of today's ever-changing dynamic world while driving a better quality life for today's entire populations.

8.4. In terms of teacher training and student environment, ORT Israel constantly revises its pedagogical methodologies by introducing new and exciting approaches to empower teachers to motivate students. The organization provides teachers with a complete set of educational tools from cutting edge e-learning platforms to assisting teachers to become personal coaches to their students. One of the main objectives of ORT is to focus on improving educator leadership skills inside and outside of the classroom thereby producing graduates who drive technological revolutions on the national level within their home countries.

8.5. By involving parents and the community in the educational successes of students, ORT parlays a holistically empowering experience for students. Tapping into student's capabilities, their programmes motivate and challenge them, arm them with the skills to bring life-changing technology right to the populations which benefit from it most.

8.6. In areas of learning environment design, ORT Israel's experts create a customized work plan for the design of classrooms and laboratories as well as for the acquisition of professional equipment and pedagogical materials. A carefully laid out and planned work space is conducive to effective learning and quality education so that graduates are well-prepared to meet the technological challenges awaiting them in their own communities.

8.7. ORT Israel pedagogical curriculum experts and e-learning developers devise engaging and challenging curricula adapted expressly to the future technological needs of each individual population. Working with local authorities to design curricula according to culture, certification and teaching methods of each specific community, ORT bring decades of pedagogical experience on national levels. ORT Israel develops curricula for the long term and subsequently offers extensive pedagogical support as long as it is required.

Over the years ORT has developed curricula for biological engineering, air and space, environmental science, Nano-biotechnology, plastics and mechatronics.

9.0. APPOINTMENT WITH DIRECTOR WEIZMANN INSTITUTE OF SCIENCE AND TECHNOLOGY

9.1. The Committee held discussions with Mr. Yehuda Ben Hur of the Weizmann Institute of Science and was informed that the main interest of the institute is to encourage successful implementation of curricula materials, integration in innovative science, technology and mathematics. Their main goals are to promote science, technology and mathematics, teachers regarding contents, pedagogy and use of modern technologies. They also do updating of teachers on advancement, new ideas and innovations and enhancing their interest in the three fields.

9.2. The Weizmann Institute presently trains students in mathematics, computer science, physics, chemistry, biological chemistry and biology, as well as several interdisciplinary programs. In addition to its academic programs, the Weizmann Institute runs programs for youth, including science clubs, camps and competitions. It differs from other Israeli

universities in that it offers only graduate and post-graduate studies in the sciences.

9.3. The curriculum emphasizes on the development of inquiry skills. The main goals of the college is to promote the professional development of teachers, enrich the knowledge of high school teachers and students in modern science and expose high school teachers and students to modern and advanced inquiry laboratories in science.

9.4. The Committee further leant that science education at the college has had a long tradition of organized projects, activities and research which are aimed at promoting excellence in science and for the future citizens as well as future scientists. Their activities include curriculum development and implementation, research, evaluation, development of teachers, and informal extracurricular projects. The leading-teachers, who take long courses at the national centres, coordinate similar courses for science teachers in their regions and thus have established a network of high-level science education throughout the country. These valuable experiences along with their expertise gained, are used as models for establishing similar frameworks for leading science teachers in other places around the world.

10.0 .APPOINTMENT WITH INFORMATION TECHNOLOGY (IT) WORKS

10.1. The Committee met with Nir Kapuloshnik of the Information Technology (IT) Works. IT Works is a professional IT products and services company involved in providing network hardware, manages services, secure network design, wireless networking among others.

10.2. The Committee learnt that IT education is everything and each person should be given chance to be part of the global village to reduce the digital gap.

10.3. That going digital has 3 components which include cellular, internet and government availability. Before connectivity becomes a reality infrastructure is the first objective. Infrastructure involves education, service and safety.

10.4. For installation to be successful in any country, the country should be divided into portions and installation done in phases as it is expensive to roll out the programme at once. When rolling out the programme there is also need to configure the computers to ensure that unwanted literature is prohibited from access. This calls for designing of the project on its usage, maintenance and management.

11.0 MEETING WITH DIRECTOR, VOLCANI CENTER

11.1. The Committee met with Dr. Sarah Spigel, Director of the Volcani Centre who informed the Committee that the country's lack of conventional energy sources has spurred extensive research and development of alternative energy sources. Israel has developed innovative technologies in the solar energy field. This has made Israel become the world's largest per capita user of solar water heaters in the homes. A new, high-efficiency receiver to collect concentrated sunlight has been developed, which will enhance the use of solar energy in industries.

11.2. Israel's agricultural sector is characterized by an intensive system of production stemming from the need to overcome the scarcity in natural resource, particularly water and arable land, in a country where more than half of its area is desert. The growth in agricultural production is based on close cooperation of scientists, farmers and agriculture-related industries. This has resulted in the development of advanced agricultural technology, water-conserving irrigation methods, anaerobic digestion, greenhouse technology, desert agriculture and salinity research.

12.0. MEETING WITH DIRECTOR, GALILEE COLLEGE

12.1. The Committee met with Dr. Joseph Chevel, the President of the Galilee international Management Institute (GIMI). He informed the Committee that GIMI is a centre of innovation, pursuing inquiry, discovery and application through excellence in teaching and learning. The college provides career-oriented international programmes with primary focus on programmes that are both innovative and responsive to the needs of managers and leaders.

12.2. GIMI also gives advanced leadership, management and capacity seminars to professionals coming from all over the world. Some of the courses offered include agriculture, business administration, education, environment, health, human resources, national security, transport and tourism. One of the core objectives of GIMI is to share Israeli practices and innovations that are applicable to participants own nation-building requirements. It also provides an international meeting place from professionals to learn from Israeli's top academicians apart from sharing among themselves.

12.3. Since its inception in 1987 GIMI has trained over 8000 planners' senior managers and decision makers from more than 159 countries. The institute conducts on-site training in Africa, Asia, Central and Eastern Europe and Latin America, among others.

12.4. The College boasts of having twenty years experience in designing and implementation of advanced leadership and management training programmes and capacity building seminars for decision makers and planners.

12.5. GIMI's core curriculum focuses on training senior administrators and decision-makers responsible for the planning, development, management and reform in the following:

- Higher Education Institutions
- National Security
- Human Resources
- Public Administration and Civil Service
- International Banking
- Agriculture
- Health Systems
- High-tech Industries
- Small Businesses and Industries
- Tourism Infrastructures and Enterprises
- Environmental Agencies and Organizations
- Community Based Prevention, Management and Treatment of HIV/AIDS
- Non-Governmental Organizations (NGOs)

- Community Oriented Education
- Port and Maritime Transport Systems
- Public Transportation Systems
- Judicial Systems
- Rural Communities
- Urban Economies

12.6. One of the reasons for this experimentation is rooted in the widely varying backgrounds of the immigrants who came to Israel during this period. In 1948 the population of Israel was less than one million whereas today the population has expanded to over 6 million. This vast immigration came from over 150 different countries with different philosophies, cultures, languages and often-different managerial styles and traditions.

12.7. The Israeli public sector, due to the relatively large budget allocated to security in the early years of the State, managed most of the economy with very substantial government and public sector intervention. This structure has been changing steadily during the years with less government intervention in each of the sectors of the Israeli economic system and society. These changes have not occurred in a one-time or one-step method but rather, through gradual and experimental approaches. Each of the Israeli sectors (economic, social, welfare, health, etc.) have undergone these changes and most organizational structures had been analyzed and studied in depth prior to changes that were introduced.

12.8. Today, every aspect of the Israeli market differs in its stage of adapting to environmental changes. On the one hand structural modifications are required due to the technological changes and on the other hand they are a result of new philosophies regarding management of the public sector.

12.9. The health sector is only one example of such modifications. The Israeli Health system was entirely public in the early years of the State. The structure has changed gradually in that most hospitals became independently managed public entities. The Ministry of Health is no longer involved in the day to day management of hospitals (as was the

case in previous years) but rather, sets policies, is responsible for health planning and supervises the quality of medical services.

12.10. The National Transport infrastructure has also gone through major changes in its philosophy and degree of government intervention. The enormous investment required to construct a much-needed new cross-country motorway was contracted out to a private company, who will regain their costs by managing and tolling the road over the next 30 years. The same applies to the new Mt. Carmel Tunnel, in which a private firm is to invest heavily and will toll and manage the tunnel for 25 years. Similarly, the new International Airport has been contracted out to a consortium of private firms.

12.11. In the economic sector, the Israel Government is no longer the only player and its role is becoming relatively less important. The large government investments in the 1950's aimed at the creation of new jobs for the hundreds of thousands of immigrants are no longer the norm. This policy has been replaced by a policy of assistance to small and medium size enterprises through the development of business incubators, loans to small business and tax benefits to export companies.

12.12. The Israel experience in establishing different cooperative organizations (Kibbutzim) which were started as an agricultural experiment by socialist societies has immensely contributed to the economic growth in Israel. The Kibbutz has proved to be essential to economic and social development. It is almost impossible to imagine the present social and economic structure of the Israeli system without the important and vital contribution of the different cooperative systems. Such cooperative structures seem to be appropriate in some cases in certain stages of economic development and growth. Analyses of such case studies can be beneficial to certain African organizations responsible for the development of small businesses and industries.

12.13. The main goal of their seminars is to teach about the Israeli experience in each of the development fields, to review the successes as

well as the failures, to evaluate the problems of application and to examine the applicability of the Israeli experience to each participant's unique environment.

13.0. MEETING WITH DIRECTOR OF THE CENTRE FOR INTERNATIONAL COOPERATION OF THE MINISTRY OF FOREIGN AFFAIRS (MASHAV)

The Committee met with Ms. Beth-Eden Kite, Director, Ministry of Foreign Affairs, and informed the Committee as follows:

13.1. That since the establishment of the State of Israel in 1948, through MASHAV, International development progress had directed some of its finest human resources towards the alleviation of hunger, poverty and human suffering. As a matter of fact Israel's international development programme draws mainly on its development experience, applying accumulated know-how, innovative technology and creative, tested solutions for rapid development. After its independence Israel faced overwhelming development challenges, for instance the absorption of hundreds of thousands of refugees from a devastated Europe, mass migration from North Africa, Jewish communities, disease, food shortages, desertification, education and community building, all in a land poor in natural resources.

13.2. She stated that in many places all over the world, Israel's hands on expertise has given Israel a comparative advantage allowing it to share its experience with developing countries with a view to helping them design solutions to problems through community development, early childhood education and micro-enterprise creation.

13.3. She elaborated that in 1958 Israel launched its official overseas development programme with the aim of sharing with the rest of the developing world the know-how and technologies which provided the basis for Israel's own rapid development. Over the years MASHAV has consistently made its priority the aims of poverty alleviation, provision of food security, empowerment of women and upgrading of basic health and education services hence putting Israel's own creative solutions at the disposal of the developing world.

13.4. The Committee was informed that MASHAV was the body responsible for Israel's official humanitarian assistance programme/disaster management as well as dealing with human capacity building, improving health services and upgrading education, among others. Israel, through tragic circumstances, was possibly the world's leading expert in dealing with mass casualty situations. In essence Israel had gained vast experience in responding to such situations resulting from war or terror, leading to the development of extremely effective response in case of emergency. It is an experience, which has enabled Israel to quickly dispatch field hospitals and medical, search and rescue teams to countries in an immediate aftermath of both natural and man-made disasters.

13.5. Since its inception in 1958, MASHAV has trained over two hundred thousand course participants from approximately 140 countries, Kenya included, in Israel and abroad and have developed dozens of demonstration projects worldwide in fields of Israeli expertise.

14.0. COURTESY CALL ON THE KENYA EMBASSY IN ISRAEL KENYA

4.1. The delegation paid a courtesy call on the Kenya Embassy in Tel Aviv and were met and welcomed by Charge D' Affairs, Mr. Stephen Lorete. The Committee was briefed on the staff welfare and the Kenya/Israel relations. The delegation was informed that the Embassy has been in existence since 1994. He elaborated that Kenya and Israel have had cordial relations for many years which ruptured in 1973 when the OAU member countries, Kenya included, resolved to sever ties with Israel because of the Arab- Israeli war of 1973. However, in 1998 Kenya re-established diplomatic relations with Israel and the first Ambassador was appointed in 1998.

14.2 On technical and economic cooperation, the Committee was informed that the Kenya/Israel relations have been further cemented through the signing of the agreement on technical, cultural, educational and scientific cooperation. To date Israel has assisted Kenya in a number

of projects, including technical assistance in the fields of agriculture, livestock and water development, for instance, the Kibwezi demonstration Farm Project of 1997. The project is dormant since Israeli withdrawal from its management and the subsequent transfer to the Nairobi University. Furthermore the Israel Ministry of Foreign Affairs through Centre for International Cooperation (MASHAV) had always provided a sufficient number of training opportunities for Kenyans in the fields of agriculture, related science, urban and rural development, medicine and public health, education and community development, economic and social development.

14.3. Kenya should pursue enhanced cooperation with Israel in development cooperation. Priority focus should be in the areas of research and development, training, exchange of science and technology because Israel is a world leader in several technological fields.

14.4. In promotion of bilateral cooperation, potential exists for further expansion of trade between the two countries, although largely in favour of Israel. Currently there are about 50 companies in Kenya owned by Israelis or representing Israeli firms and have invested in Kenya and selling Israeli products in the fields of agriculture, telecommunications, construction, irrigation equipment among others. On the other hand Kenya's main exports to Israel includes live animals and animal products, wood and wood manufacture products, plant and vegetable products, precious stones and metals, prepared foodstuffs, rubber, paper and paper products, plastics, hides and leather etc. To bridge the gap, Kenya needs to narrow in on the balance of trade. Kenya needs to modernize the agricultural and industrial sectors and produce high value products. He stated that the potential for increasing bilateral trade and investment could be pursued through joint venture activities between Kenya and Israel firms.

14.5. In the tourist sector the number of Israel tourists to Kenya has drastically declined for instance in 2004 following the terror attacks on Israeli interests in Mombasa in 2002. Israel's most concern at home and abroad are security threat against its interests. Israel is still concerned by what it perceives as high level of insecurity in Kenya. Israel remains

seized on the overall security situation in Kenya's international airports. The much desired reintroduction of direct flights between Nairobi and Tel Aviv is also tied to early and comprehensive security upgrading of the Jomo Kenyatta International Airport (JKIA).

15.0. COMMITTEE OBSERVATIONS AND RECOMMEDNATIONS

15.1. The Committee was impressed with the introduction of science subjects from kindergarten to University level in Israel. The Weizmann Institute has designed a programme where basic scientific experiments are displayed and pupils/students and the general public visits the centre to learn basic scientific explanations. **The Committee therefore recommends that the Ministry of Education borrow a leaf not only to establish demonstration centre but also start teaching of science from kindergarten. This system allows the country to encourage and students talents to get the best scientists in the country.**

15.2. The Committee observed that the Ministry of Foreign Affairs through the Agency for International Development Cooperation (MASHAV) provides significant number of training opportunities for Kenyans in various specialized fields; **the Committee recommends as follows that:**

i) The Ministry of Education should liaise with the Government of Israel so that the training available opportunities to Kenyans are enhanced in the various disciplines in Israel academic institutions. These opportunities through the Ministry of Education, whether short or long courses, should be advertised to benefit willing Kenyans.

ii) For Kenyans to benefit the technological advancement in Israel the Government should enter into bilateral agreements with Israel to enable students access universities and centers of excellence in Israel.

15.3. The Committee, after visiting the many institutions in Israel unanimously agreed that there are many opportunities for Kenyans in Israel which include:

a) Israel's experiences in overcoming harsh climatic conditions, scarcity of water and limited arable land as well as diverse social and economic problems are a model for many developing countries. Kenya can benefit from Israel technical know-how and expertise in water and environmental management through more intensive technical and scientific and research cooperation.

b) Joint venture activities in manufacturing in order to take advantage of Israeli's superiority in the field. Focus should be on manufacture of electronics, software, medical equipment, horticultural production and solar energy.

c) The transfer of technology and further development of business link could also be achieved through sub-contracting of the manufacture of various Israeli products to Kenya companies. In particular, products where expensive Israeli labour costs could be substituted with cheaper labour costs in Kenya. These include products like plastics and textiles.

15.4. Technology companies in Israel raise money through the stock market within and without Israel to fund research. The Committee was informed that almost 4% of the GDP in Israel is allocated towards research institutions where private industries promote research with the support of the Government. **The Committee recommends that**

(i) The Government should enhance allocation to research at least to 1%. This is a requirement which is internationally recognized.

(ii) Kenyan universities and research institutions should also strive to raise funds through their own initiatives in collaboration with the private sector.

(iii) Kenyans should be encouraged and opportunity to research on their fields of choice depending on their capabilities.