

India-Israel

15 Years of Diplomatic Ties



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FOREWORD

H E David Danieli

Ambassador of Israel to India

So much has been achieved over a relatively short period of time. Israel-India bilateral relations mark their 15th anniversary with a sense of satisfaction and fulfillment. The State of Israel and its people are embracing India whole heartedly. Israel views its relations with India as most valuable and aspires to bring it to ever higher heights in every possible field including culture, art, education, and people-to-people contacts. Israelis love India and its people and they manifest it also by repeatedly travelling to India in large numbers. Apparently, besides Indian unique qualities, they observe many commonalities and similarities.

I am completing my four-year term in India with a deep sense of a great personal experience and professional satisfaction. India is both challenging and rewarding.

I am confident that the next 15 years of our bilateral relations with India will witness even greater mutually beneficial accomplishments.

I am grateful for *Diplomatist's* initiative of bringing up this Anniversary Issue.

With best wishes to all our well-wishers and Indian friends.

A handwritten signature in black ink that reads "Danieli". The signature is written in a cursive style with a long, sweeping tail on the letter 'i'.

David Danieli



Introducing Israel

Location

Israel is located in the Middle East, along the eastern coastline of the Mediterranean Sea, bordered by Lebanon, Syria, Jordan, and Egypt. It lies at the junction of three continents: Europe, Asia, and Africa.

Geography

Long and narrow in shape, the country is about 290 miles (470 km) in length and 85 miles (135 km) in width at its widest point, totalling 8,020 sq miles (20,770 sq km) in area.

Although small in size, Israel encompasses the varied topographical features of an entire continent, ranging from forested highlands and fertile green valleys to mountainous deserts, and from the coastal plain to the semitropical Jordan Valley and the Dead Sea, the lowest point on earth. Approximately half of the country's land area is semi-arid.

Climate

Israel's climate is characterised by much sunshine, with a rainy season from November to April. Total annual precipitation ranges from 20-30 inches (50-70 cm) in the north to about an inch (2.5 cm) in the far south. Regional climatic conditions vary considerably: hot, humid summers and mild, wet winters on the coastal plain; dry, warm summers and moderately cold winters, with rain and occasional light snow, in the hill regions; hot, dry summers, and pleasant winters in the Jordan Valley; and semi-arid conditions, with warm to hot days and cool nights, in the south.

Flora and Fauna

The rich variety of Israel's plant and animal life reflects its geographical location as well as its varied topography and climate. Over 500 kinds of birds, some 200 mammal and reptile species, and 2,600 plant types (150 of which are endemic to Israel) are found within its borders. Over 150 nature reserves and 65 national parks, encompassing nearly 400 sq miles (almost 1,000 sq km) have been established throughout the country.

Water

The scarcity of water in the region has generated intense efforts to

maximise the use of available supply and to seek new resources. In the 1960s, Israel's freshwater sources were joined in an integrated grid whose main artery, the National Water Carrier, brings water from the north and center to the semi-arid south. Ongoing projects for utilising new sources include cloud seeding, recycling of sewage water and the desalination of seawater.

Population

Israel is a country of immigrants. Since its inception in 1948, Israel's population has grown five-fold. Its 7.2 million inhabitants comprise a mosaic of people with varied ethnic backgrounds, lifestyles, religions, cultures, and traditions. Today, Jews comprise some 76.4 percent of the country's population, while the country's non-Jewish citizens, mostly Muslims, number about 23.6 percent.

Lifestyle

About 91 percent of Israel's inhabitants live in some 200 urban centers, some of which are located on ancient historical sites. About 5 percent are members of unique rural cooperative settlements - the *kibbutz* and the *moshav*.

Main Cities

Jerusalem, Israel's capital (population 675,000), has stood at the center of the Jewish people's national and spiritual life since King David made it the capital of his kingdom some 3000 years ago. Today it is a flourishing, vibrant metropolis, the seat of the government and Israel's largest city.

Tel Aviv-Yafo (population 360,000), which was founded in 1909 as the first Jewish city in modern times, is today the center of the country's industrial, commercial, financial, and cultural life.

Haifa (population 272,000), a known coastal town since ancient times, is a major Mediterranean port and the industrial and commercial center of northern Israel.

Be'er Sheva (population 180,000), named in the Bible as an encampment of the patriarchs, is today the largest urban center in the south. It provides administrative, economic, health, education, and cultural services for the entire southern region.

System of Government

Israel is a parliamentary democracy with legislative, executive, and judicial branches. The head of the state is the president, whose duties are mostly ceremonial and formal; the office symbolises the unity and sovereignty of the state. The Knesset, Israel's legislative authority, is a 120-member unicameral parliament which operates in plenary session and through 15 standing committees. Its members are elected every four years in universal nationwide elections. The Government (cabinet of ministers) is charged with administering internal and foreign affairs. It is headed by a prime minister and is collectively responsible to the Knesset.

Education and Science

School attendance is mandatory from age five, and free through age 18. Almost all three- and four-year-olds attend some kind of preschool programme.

Israel's institutions of higher education include universities, offering a wide range of subjects in science and humanities, and serving as research institutions of worldwide repute, colleges offering academic courses and vocational schools. The country's high-level of scientific research and development and the application of R&D compensate for the country's lack of natural resources.

Health

The National Health Insurance Law, in effect from January 1995, provides for a standardised basket of medical services, including hospitalisation, for all residents of Israel. All medical services continue to be supplied by the country's four health care organizations.

Life expectancy is 81.2 years for women and 77.3 years for men; the infant mortality rate is 5.3 per 1,000 live births. The ratio of physicians to population and the number of specialists compare favorably with those in most developed countries.

Social Welfare

The social service system is based on legislation which provides for workers' protection and a broad range of national and community services, including care of the elderly, assistance for single parents, programmes for children and youth, adoption agencies, as well as prevention and treatment of alcoholism and drug abuse.

The National Insurance Institute provides all permanent residents (including non-citizens) with a broad range of benefits, including unemployment insurance, old-age pensions, survivors' benefits, maternity grants and allowances, child allowances, income support payments, and more.

Culture

Thousands of years of history, the ingathering of the Jews from over 70 countries, a society of multi-ethnic communities living side by side, and an unending flow of international input via satellite and cable have contributed to the development of an Israeli culture which reflects worldwide elements while striving for an identity of its own. Cultural expression through the arts is as varied as the people themselves, with literature, theater, concerts, radio and television programming, entertainment, museums and galleries for every interest and taste.

The official languages of the country are Hebrew and Arabic, but in the country's streets many other languages can be heard. Hebrew, the language of the Bible, long restricted to liturgy and literature, was revived a century ago, accompanying the renewal of Jewish life in the land.

Conventional Long Form: State of Israel

Independence: 14 May 1948

Location: Middle East, borders with Egypt, Jordan, Lebanon, and Syria

Area: 20,770 sq km

Population: 7,200,000

Capital: Jerusalem

Head of State: President Shimon Peres

Head of Government: Prime Minister Ehud Olmert

Main Languages: Hebrew and Arabic

Religions: Judaism (76.4%), Muslims (16%), Arab Christians (1.7%), Druze (1.6%), others (4.3%)

Literacy: 97.1%

Monetary Unit: 1 new Israeli shekel (NIS) = 100 new agorot

GDP Per Capita (ppp): \$20,000 (2006)

GDP Growth Rate: 4.9% (2006)

Foreign Investments: \$24.4 billion (2006)

Major Agricultural Produce: Citrus, vegetables, cotton; beef, poultry, and dairy products.

Major Industries: High technology products (including avionics, telecom, computer-aided design and manufactures, medical electronics, fiber optics).

Industry Growth Rate: 8.6%

Exports: US\$42.86 billion (fob)

Imports: US\$47.8 billion (fob)

Data and Achievements

- Bank of Israel interest: 3.75% - lowest since October 2005
- Inflation in 2006: (-0.1%)
- Israel ranked 15th worldwide in competitiveness (2006); 23rd (2005)

Challenges

OECD: The prestigious organisation of the industrialised countries has invited Israel, May 2007, to open negotiation to become a full member

- Reducing the high public 87.7% debt to GDP ratio in 2006 (OECD: 54% (GDP weighted average [pop. 1M-50M], 2005)
- Reducing unemployment: 8.4% in 2006. (OECD: 6.0%)
- Increasing participation rate in labour force: 55.6% in 2006. (OECD: 70.0%)

Continuing Reforms

- Reducing corporate tax - from 31% in 2006 to 25% in 2010
- Introducing negative income tax (EITC)
- Privatisation process: privatisation of the Haifa oil refinery (estimate US\$1 billion)

Infrastructure Development

- Five-year plan for intercity highways – (US\$4 billion during 2006-10)
- Israel Railways – (US\$6.5 billion, completion estimate: 2010)
- Light train in Jerusalem – (US\$750 million, completion estimate: 2010)
- Tel-Aviv subway – (US\$2.5 billion, completion estimate: 2014)
- Natural gas – laying the Ashkelon-Dead Sea pipeline
- Carmel Tunnel – (US\$250 million, completion estimate: 2010)

Economy



Israel is recognised as being at the forefront of high-tech innovation, built on a sound infrastructure and consisting of an educated and creative workforce.

Israel has continued its steady economic growth, rising from 4.3 percent in 2004 to 5.2 percent in 2005 and based on the further increase already seen in 2006, we expect this trend to continue. A major contributing factor is the increase in demand by the international market for Israel's technological expertise, with high-tech exports representing 45 percent of total industrial exports in 2005.

Israel's legislative policies continue to support an ever-expanding free-market environment. The government will continue to encourage industrial R&D, broaden international economic agreements, constantly striving to elevate Israel's position in global competitiveness rankings.

Foreign investments continue to play an important role in Israel's economy. There are over 60 venture capital funds in Israel, pumping a steady stream of the necessary resources into the technology sector. On the NASDAQ, there are more Israeli companies traded than any country outside North America.





“For Microsoft, having an R&D centre in Israel has been a great experience ... The quality of the people here is fantastic.”

— Bill Gates

**Chairman and Chief Software Architect,
Microsoft Corporation
October 2005**

In addition, the world’s leading multinational corporations have chosen to establish research and development centres in the country.

The ongoing expansion of groundbreaking developments and discoveries in fields such as information technology, software, life sciences and security, gives great cause for optimism.

Global Centre for Breakthrough Technology

Top Companies Choose Israel

A highly educated, talented and diverse workforce, proven track record of developing profit-driving technologies, high-level of scientific research, modern infrastructure and supportive government programmes create a fertile environment for innovation. **Microsoft, Cisco, Motorola, Intel, HP, Siemens, GE, Philips Medical, IBM, and eBay** are just a few of the internationally renowned multinational companies that have already chosen to invest in Israeli technology.

Entrepreneurial Spirit

Israeli entrepreneurs are driven to be the next global success story like **Checkpoint** (leading firewall internet security systems) and **Teva Pharmaceuticals** (largest generic drug manufacturer in the world).

Always Innovating

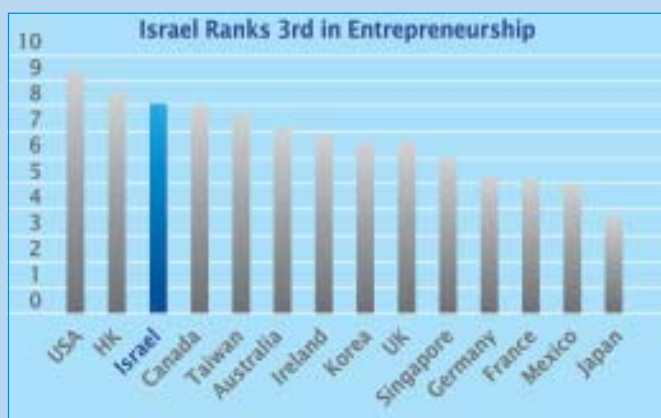
Israel has the highest rate of research and development investment per GDP in the world. Deeply committed to nurturing

entrepreneurship and innovation, Israel’s twenty-three high-tech incubators support young companies with 200 active projects and 735 graduated projects in the last ten years.



At 4.8 percent of GDP, Israel has the highest rate of R&D investment in the world

Source: OECD and Central Bureau of Statistics



Source: IMD World Competitiveness Yearbook

Highly Educated and Diverse Workforce

Top Academic Education

With one of the most **highly educated workforces** in the world, it’s no surprise that there are so many profitable innovations are



Multi-lingual Workforce

Understanding your language and business culture, Israelis speak English and many more of the world's languages. The annual flow of tens of thousand of well-educated, ambitious immigrants further eases cross border communications.

Outstanding Record

Proven Record

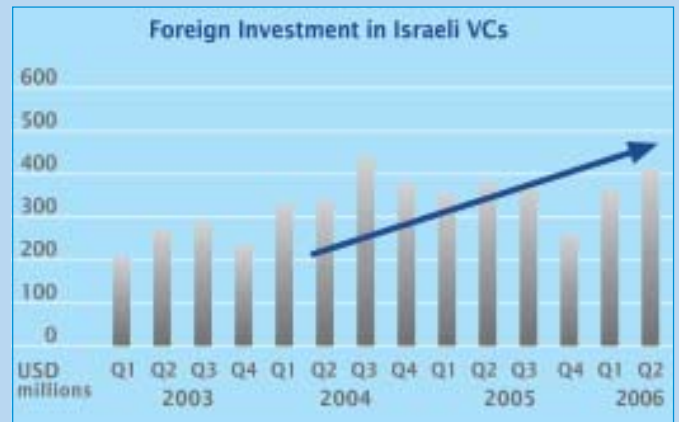
Israel has a long track record of market-creating, **profit-driving innovations**. Israeli companies that have become well-known around the world include **CheckPoint, Teva Pharmaceuticals, Comverse, ECI Telecom, Keter Plastic, Iscar, Netafim, Amdocs, Orbotech**, and many others.

Israel's track record has captured the attention of the global investment community. Foreign investments grew from US\$600 million in 1993 to US\$6 billion in 2005 with total venture capital investments since 1993 exceeding US\$10 billion. International rating agencies have consistently sustained Israel's credit ratings and reaffirmed their confidence in Israel's economy.

from Israel. Israel enjoys the highest ratio of engineers in the workforce, and the highest ratios in the world of university degrees and academic publications per capita.



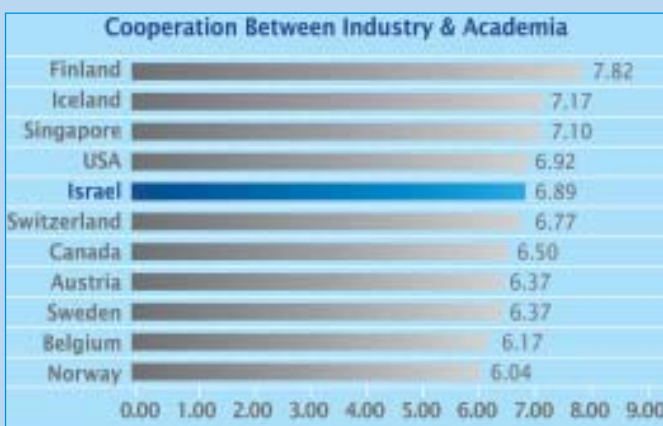
Source: IMD World Competitiveness Yearbook, 2004



Source: IVC Online

Collaboration Between Industry & Academia

Israel's Weizmann Institute of Science is third in the world in creating revenue from technology transfer.



Knowledge Trasfer (Universities - Industry)

Source: IMD World Competitiveness Yearbook, 2004

“The language of technology here is so evolved that things happen faster.”

— **Michael Jablon**
 Senior Director of Product Marketing,
 Time Warner Cable
 June 2005

Solving Problems ... Creating Opportunities ...

Converging excellent problem-solving skills with exceptional creativity, many of Israel's finest innovations have their roots in the Israel Defense Forces. Highly trained graduates of the Israel Defence Force apply cutting edge defense technology to market-changing civilian applications.





Source: Bank of Israel

Israel's Competitiveness

Country Rank	1st	2nd	3rd
Total expenditure on R&D as percentage of GDP	Israel	Sweden	Finland
Number of mobile telephone subscribers per 1000 inhabitants	Israel	Luxemburg	Hong Kong
Total public expenditure on education as percentage of GDP	Denmark	Israel	Canada
University education meets the needs economy	Finland	Israel	Singapore
Skilled labor availability	Denmark	Iceland	Israel
Total R&D personnel in business per capita, full time work equivalent (FTE) per 1000 people	Luxemburg	Ile-De France	Israel

Source: IMD World Competitiveness Yearbook, 2004

Leader in Profit Driving Innovations

Israel's M-Systems was the first to offer **Disk-on-Key and Disk-on-Chip Flash Memory** products, and changes the way people store and handle information.

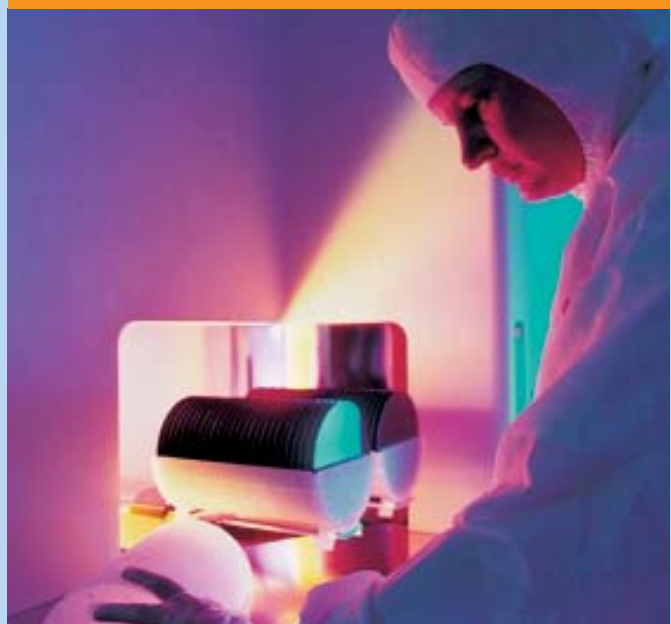
GE Healthcare in Israel was responsible for bringing to market the world's first miniaturised **Portable Cardiac Ultrasound System**.

The Philips Brilliance **CT Scanner**, developed in Israel, takes a comprehensive picture of a patient in seconds instead of minutes, in the emergency room where every second counts.

IP Telephony was invented by two Israelis who founded VocalTech.

“Israel enjoys the highest concentration of hi-tech companies in the world, outside of Silicon Valley.”

— Robert Greifeld
President & CEO, Nasdaq
November 2004



Zip Compression Technology was developed by two professors at the Technion, Israel's Institute of Technology.

Israel's Given Imaging developed the first **Ingestible Video Camera** to view small intestine from inside, and help doctors diagnose cancer and digestive disorders.

The technology for the **AOL Instant Messenger ICQ** was developed in 1996 by four young Israelis.

Israel's Comverse invented **Voice-Mail**.

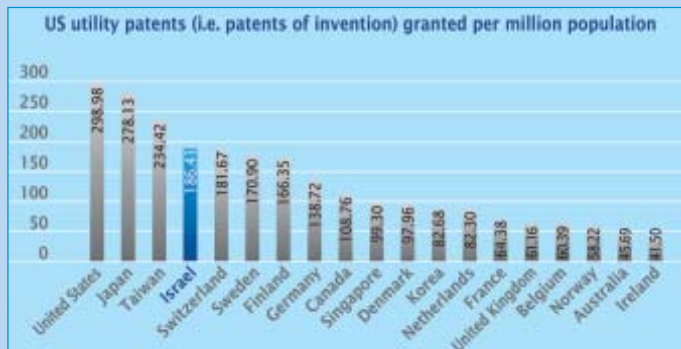
Israel's InSightec Image Guided Treatment developed a **Non-Invasive Way to Destroy Tumours** by focusing ultrasound waves on the target.

Professors Aaron Ciechanover and Avram Hershko from the Technion in Haifa won the **2004 Nobel Prize in Chemistry**. Their work toward identifying the Ubiquitin system is a breakthrough for research in cancer, degenerative brain diseases, and many other diseases.

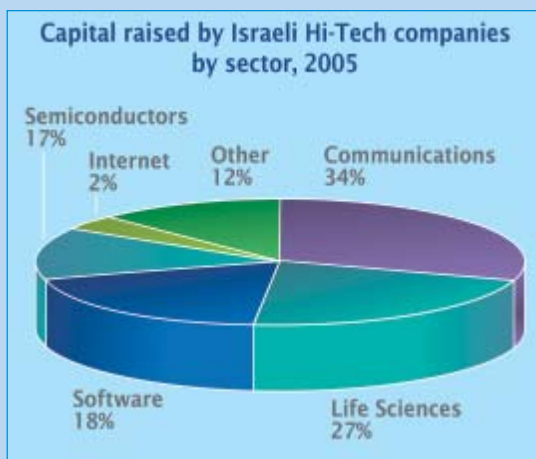
Prof. Robert Aumann from the Hebrew University of Jerusalem won the **2005 Nobel Prize in Economics**. Aumann is an internationally known researcher in the field of game theory.

Israel's Field of Excellence

- Agrotechnology
- Biotechnology
- Computer aided education
- Data security
- Homeland security
- Internet technologies
- Medical equipment
- Nanotechnology
- Optics
- Semiconductors
- Software
- Telecommunications
- Water technologies



Source: WEF Global Competitiveness Report, 2005



Source: IVC Research Center

Supportive Environment for Business Development International Trade and Economic Cooperation

Israel has an extensive network of agreements with countries throughout America, Europe, and Asia, that include:

- Free Trade Agreements that cover close to 80 percent of Israel's foreign trade.
- Joint R&D programs to promote industrial cooperation that provide up to 50 percent of costs for projects.
- Treaties for the avoidance of double taxation.

Modern Infrastructure

Israel offers the modern infrastructure and services required to conduct business efficiently and effectively, including:

- Efficient, sophisticated communications system.
- Reliable energy infrastructure.



“Investing in Israel is exciting. It’s an incredibly smart and well-educated population, and way advanced in terms of technology and business acumen.”

— Alan Hevesi

New York State Comptroller
September 2005

- Well-developed transportation system with modern, international gateways.
- Protection of trademarks, patents, and other intellectual property.
- Highly developed and transparent financial system and legal system based on common and corporate law.
- Active and sophisticated capital markets: companies can dual list on the Tel Aviv Stock Exchange and foreign exchanges.

Israel adheres to the OECD Declaration on International Investment and Multinational Enterprises. The declaration creates a framework of good practices for international investment.

Government Support

Committed to encouraging the success of foreign direct investment, Israel has liberalised its economy through a series of regulatory changes:

- Implemented liberal foreign currency regulations that eased the raising of capital both in Israel and abroad.
- Reduced both tariff and non-tariff barriers.
- Reformed tax laws to reduce labour tax, capital income tax, and global taxation; and created incentives for investments in the high-tech sector.
- Privatized state-owned companies to promote the growth of the private sector and to enhance competitiveness.

Israel offers substantial **investment grants, tax benefits, and exemptions for foreign investors** through the Law for the Encouragement of Capital Investments.

The Law for the Encouragement of Industrial R&D offers conditional R&D grants of up to 50 percent of approved programmes.



IT: Israel's Success Story

Israel has emerged as a leading player in the global software industry. Highly-skilled human resources coupled with a competitive environment and world-class quality standards have transformed Israel into a global powerhouse in information technology (IT) software services and solutions. According to Amiram Shore, Chairman of Israeli Association of Software Houses, "Israel's remarkably successful software industry is based on the incisive ability of the country's specialists to identify market needs and develop innovative software products and packages to meet those requirements."

Israeli companies such as Check Point, Comverse, Mercury Interactive, Nice Systems, and VocalTec have come up with innovative software solutions, thereby giving the Israeli software industry its reputation for innovation, diversity, and creativity. According to the figures of Israeli Association of Software Houses, Israel's software exports have grown by 78.6 percent from 1998 to 2003. Israeli software exports reached US\$2.68 billion in 2003, and are growing rapidly. Sales from Israel's exports of software and related technologies more than doubled in 2004, as compared to that of 1998.

Israeli software companies develop and manufacture a wide variety of software solutions. According to a UK Trade and Investment report, Israel dominates the software-testing field. The report identifies niche markets as the areas where the country can dominate globally, citing companies like ICQ-Mirabilis (instant messaging) and Ex Libris (library management). However, it is not only the amazing technical prowess of its domestic software industry that has given Israel a prominent position in the global software industry. Israel has also attracted the presence of global software giants, which include names like HP, IBM, Intel, Microsoft, Oracle, and Sun—all these conglomerates have set up their operations and manufacturing centres across this ancient land with a modern face. Today Israel has deservedly earned the reputation of being known as the world's 'Second Silicon Valley',

and there is no reason it will not keep this enviable reputation in the years ahead.

Currently the country's software community includes more than 3000 software houses and about 1000 start-ups. Significantly, after the US, Israel has the largest number of start-up companies (relative to population) in the world. Major foreign software firms have also stepped up their merger and acquisition activities in the country. Shore states, "Israeli companies have attracted billions of dollars in investments from overseas partners, either through direct investments or through issue of shares on foreign stock exchanges. Over one hundred venture capital funds have targeted Israeli start-up companies. These investment funds have not only generated new technologies and products, but have also enhanced Israeli companies' marketing capabilities worldwide."

However, all said and done, Israel's software success story has not been a product of solely private enterprise. Initiatives undertaken by the Israeli government have also facilitated Israel's growth as a world's leading software centre. Israel's Office of the Chief Scientist (OCS) of the Ministry of Industry, Trade and Labour is responsible for implementing government policies regarding the support and encouragement of industrial R&D. It is the aim of the OCS to leverage technology in Israel as a means of boosting the economy, supporting innovation and R&D, utilising Israel's skilled resources, enhancing the knowledge base of Israeli hi-tech industries, and promoting cooperation in R&D, both nationally and internationally. The government sponsors and supports a number of programmes and technological incubators to encourage high-tech entrepreneurship. It has also set up technology parks and implemented software development projects.

Healthy government incentives in the software sector are also attracting foreign capital investment. Among the benefits are subsidised long-term loans with reduced interest rates, direct grants as a percentage of total investment, R&D financing, and tax discounts and rebates. However, it should be borne in mind that

Israel's burgeoning progress in the field of technology is not confined to the software industry. Israel's telecom industry is also characterised by innovative solutions and state-of-the-art technologies. Israeli telecom companies have become world leaders in developing technologies suitable for voice, video, and data communications.

Some of the major players in Israel's telecom industry are ECI Telecom, Motorola Israel, Comverse Technologies, Amdocs, Ness Technologies, TTI Telcom, BATM, and Tadiran Communications. ECI Telecom has introduced key telecom technologies like voice comprehension, SDH, DSL and the establishment of global networks, which together have changed the world of telecommunication for the better. Motorola Israel, which is a subsidiary of Motorola Inc. is a 3G technology leader and its technological arsenal has mobile data systems, semiconductors for communications equipment, custom-designed voice, video and data communications applications and billing solutions to stay ahead of the competition. Redux Communications has introduced a single-chip, generic and programmable content-aware traffic processor, and CopperGate has developed chipsets for communications gear, which are targeted at PCs and PC peripherals. Both of these recent developments, along with many others of this kind, have given an impetus to home networking.

In fact, all of these above mentioned telecom conglomerates, along with many more, have contributed to the technological revolution in Israel, a country which excels in faster broadband technologies and greater storage capabilities. However, Israel's telecom revolution is not a product of technology alone. Behind the technological innovations is an outstandingly skilled workforce, which is perhaps the greatest asset of Israel. Israel has one of the largest bases of science-skilled human resources. In this context, it should be kept in mind that the migration of highly trained

engineers and technicians from the Israeli defense sector to civilian telecom and datacom companies, has also contributed to Israeli telecom sector's growth and development over the years.

It can be said that Israeli technology firms have succeeded mainly through identifying the needs of the market, and then producing products and solutions which are tailor-made to cater to those requirements. No wonder, with such an impressive telecom base, Israel has been attracting billions of dollars of foreign investments, through IPOs, private placements, and VC funds. Israel's leading role in the telecom and software sectors since the past decade has played a major role in enabling Israeli venture capital funds to raise nearly 11 billion USD. Many of the Israeli telecom companies, such as ECI, Comverse, NDS, Radware, NICE Systems, TTI, Alvarion, BATM, Gilat, Metalink, VocalTec, etc. trade on overseas markets.

Though Israel's telecom industry has fostered the economy of the country in a big way, and has immensely contributed to making Israel a world leader in telemedicine and distance learning, but its impact in the country's security cannot just be overstated. In fact, in the sensitive area of security applications, the role of Israel's telecom industry is the most pronounced. Here it deserves a mention that Check Point Software Technologies is a global leader in providing policy-based management solutions for active networks whose most important component is to enable secure enterprise connectivity. There are more. Cyota has developed online payment security solutions with platforms that support modular deployment of security protocols, while FireBit is developing a next generation security platform that includes an array of application level services such as anti-virus, firewall, selective browsing, denial of service (DoS), etc.

In the near future, Israel's telecommunication muscle will develop new applications for the convergence between fixed-line and mobile communications through such advanced technologies as Wi-Fi and Wi-Max as well as the merging of mobile phones and Internet use.

LEADING ISRAELI JOINT VENTURE COMPANY PROVIDING TOTAL SOLUTIONS FOR GREENHOUSE TURNKEY PROJECTS IN IRRIGATION, FERTIGATION, AUTOMATION, CLIMATE CONTROL AND SPECIALISED IN ADVANCED APPLICATIONS LIKE HFDI & ULVI.



Fertilizers



Fogger Low Flow



Hydro P. C. N. D.



Supertif



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Water Management for Prosperity

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India & Israel

Why is it so Successful?

■ Amir Hayek

One of my American friends asked me lately: “What is the secret behind the great relations between Israel and India?”

My answer was taken from a well-known speech of Bill Clinton, the former President of the United States of America, who said: “it’s all the economy...”

My answer was short and simple but I must admit that there is much more behind the India-Israel warm relationship and in order to understand that, one should remember that the two nations established their diplomatic relations only 15 years ago (1992), one year after the economic reform that was announced in India and initiated the impressive growth of the Indian economy.

If we will take a close look at the trade figures between Israel and Asia between 1985 and 2005 we will notice the importance of these trade relations for the Israeli economy and not only for the economy:

In 1985, Israel’s total import was 8.02US\$ billion and the total export was 6.08US\$ billion, most of it (import and export) from the bilateral trade with the US and Europe.

The total trade of Israel with Asian countries was very minor with 285US\$ million import (which represented 3.55 percent of the total Israeli import) and 585US\$ million export (which represented 8.79 percent of the Israeli export).

Twenty years later, in 2005, Israel’s total Import was 44.9B US\$ and the total Export was 42.6B US\$ - the total Import from Asian countries was 8.2B US\$ (represented 18.28% of the total Israeli Import) and the total Export to Asian countries was 7.7B US\$ (represented 18% of the total Israeli Export).

In 1985, the trade with India was very poor (at that time, there were no diplomatic relations between the two nations) – the total Import from India was 13US\$ million (represented 0.16 percent of the total Israeli import) and the total export to India was 17US\$ million (represented 0.28 percent of the total Israeli export)

Twenty years later with the back wind of great diplomatic relations, the total Import from India was 1.28US\$ billion (represented 2.84 percent of the total Israeli import) and the total export to India was 1.22US\$ billion (represented 2.87 percent of the total Israeli export).

Today, the numbers keep going at the right direction but there is even more to it.

The numbers (excluding the figures associated with defense cooperation) only represents the vast variety of joint ventures

between companies from both countries, mainly in agro technology, telecom, software, medical devices and large number of bilateral agreements for joint R&D, manufacturing, sales & marketing.

The active bilateral economic cooperation between companies from both countries was supported by bi-lateral frameworks that were created by both governments, such as: MFN (most favourite nation) Agreement, Tax Agreement, Investments Protection Agreement, Industrial R&D Cooperation Agreement, and many others.

So, the question still remains, with all these great results in such a short time, is it just the economy?

The former Israeli Prime Minister, Shimon Peres, once said that “peace is the perfume of economy” and we can add here that in our case, “The economy is the perfume of peace....”

While extremely simplifying the scenario, I would say that there are three main foundations on which the India-Israel relations rely on:

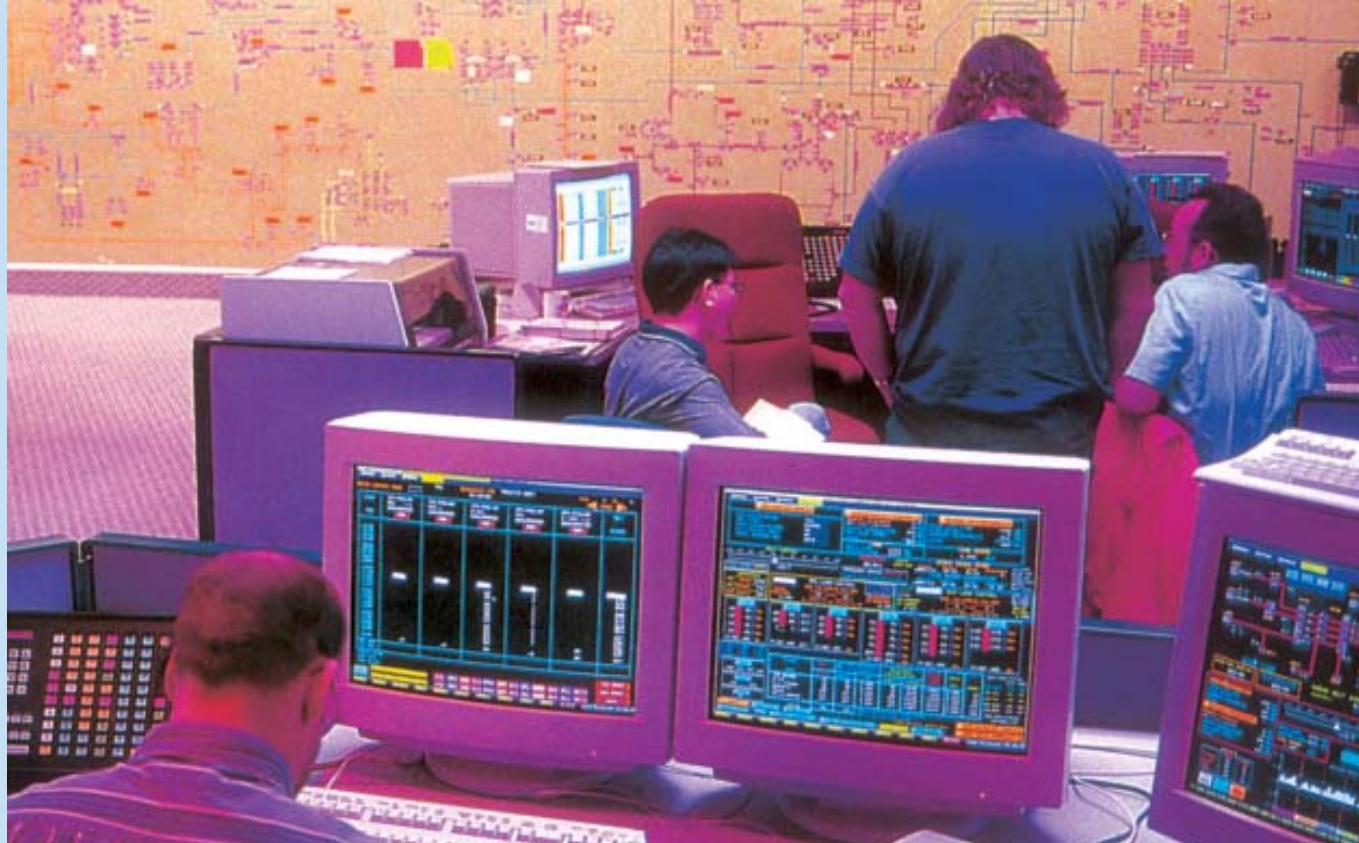
- Diplomatic interests
- Defense interests
- Economic interests

When we, Israelis, are looking at India, we capture the enormous potential mainly while comparing it to other markets:

- Enormous population of young workers (**50 percent are under the age of 25**).
- The largest English speaking IT talent pool in the world - over 120,000 trained IT professionals.
- Over 380 universities; 11,200 colleges; 1,500 research institutes.
- Annual growth: **30-40 percent in the telecom sector**.
- **2.5 million** new mobile subscribers added **every month**; growth is **60 percent** per year.
- The number of mobile phones has reached **101 million** (June 2006.)
- Infrastructure: forecast for requirements **US\$250 billion** in the next five years.

And this must be my detailed answer to my American friend.

Amir Hayek is the former Director General of the Ministry of Industry & Trade, Israel and currently he is the President and CEO of Electronics Line 3000 and the President of Israel - Asia Chamber of Commerce.



India-Israel Trade Relations

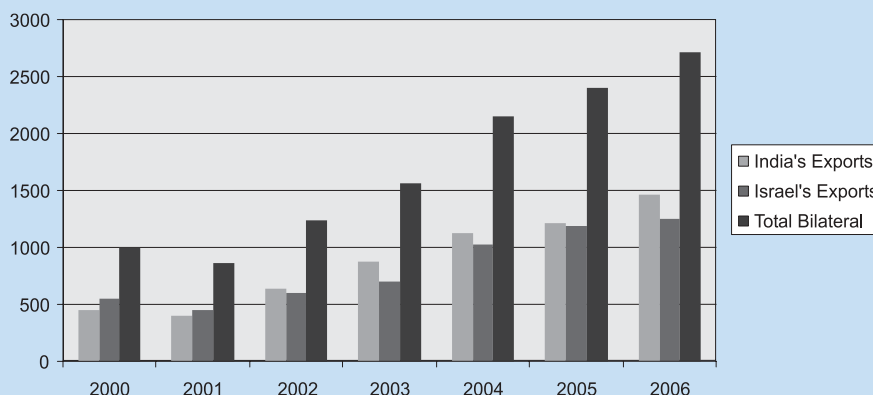
India-Israel trade relations are prospering and expanding in every respect. The bilateral civilian trade between Israel and India has grown significantly from less than US\$200 million a decade ago to US\$2.7 billion in 2006. The two countries propose to take their bilateral trade to five billion dollars in the next five years.

If the year 2002 can be termed as a 'bounce-back' year wherein the trade jumped by 43 percent to recover from the earlier slump caused mainly due to a global economic downturn, the years 2003 and 2004 can be described as consolidating years as the trade has grown consistently. The growth in the year 2003 reached 25 percent to touch the US\$1.5 billion mark and in 2004 the growth reached 36 percent to touch US\$2.15 billion bilateral trade and another 10 percent growth in 2005 for trade to reach US\$2.4 billion. During the year 2006, the bilateral trade reached US\$2.7 billion. India is currently Israel's largest Asian export destination and second largest Asian source of imports.

Current bilateral trade between the two countries forms a very large basket of articles ranging from precious stones & diamonds, through chemicals, telecom equipment, agriculture inputs, precision tools and medical equipment to the high-tech sector. Over 100 Israeli companies are operating in India either directly or through joint ventures, collaborations, and technological ventures and there is a long list of companies planning to establish themselves here. In addition, numerous specialised delegations from both countries visit each other every year, promoting trade and investment in such fields as telecom, agriculture, venture capital, environment, home security, and more.

RECIPROCAL VISITS BETWEEN ISRAEL AND INDIA also indicate the growing strength of the trade relations. India's Minister of Commerce and Industry, Mr Arun Jaitly, visited Israel in January 2004 as the head of the Indian delegation for the third meeting of the Joint Economic Committee in Jerusalem. Israel's Vice Prime Minister and Minister for Industry, Trade, Labour & Communications Mr Ehud Olmert, with a large business delegation, visited India from 6th December to 9th December 2004. In the field of scientific cooperation, the two countries have put into operation a joint Industrial Research & Development Fund, signed during the visit of India's Science and Technology Minister Mr Kapil Sibal to Israel in May 2005. The initiative provides funds to investors and entrepreneurs undertaking joint commercial development of innovative scientific projects. Mr Kapil Sibal and Mr Ehud Olmert signed the

Trade Statistics (US\$ million)							
Year	2000	2001	2002	2003	2004	2005	2006
India's Exports	445	403	633	869	1128	1215	1462
Israel's Exports	551	454	601	698	1023	1191	1246
Total Bilateral	996	857	1234	1567	2151	2406	2708





Elbit Medical Imaging Ltd. (EMI) of Israel entered into a strategic tie-up with Ambuja Realty Group to develop a chain of multi-specialty, tertiary hospitals in India. The Agreement was signed in Kolkata by the Managing Director of Ambuja Realty Group Mr Harshvardhan Neotia and by EMI's Chairman, Mr Moti Zisser in the presence of the Honorable Chief Minister of West Bengal, H E Buddhadeb Chattarjee and the Ambassador of Israel H E David Danieli.

agreement under which each side will contribute US\$1 million each initially to provide risk-free grants to entrepreneurs from both sides. The two ministers outlined cooperation in the areas of nano-technology, bio-technology, water management, non-conventional energy and space and aeronautics as five priority areas of "common interest" for enhanced collaboration. India's Minister for Commerce & Industries Mr Kamal Nath visited Israel in November 2005 during which a Joint Study Group (JSG) was established in order to boost bilateral trade to US\$5 billion by 2008. On 10th November 2005, Mr Kamal Nath and Mr Ehud Olmert signed agreed minutes on the implementation of an action plan proposed by the economic JSG for finalising a comprehensive Economic Cooperation Agreement between the two sides, which would further boost trade in goods and services, mutual investments and cooperation in R&D. India's

Minister of Agriculture, Mr Sharad Pawar visited Israel from 13th to 19th November 2005, and in a meeting with his Israeli counterpart, Yisrael Katz, the two Agriculture Ministers agreed to set up a Joint Working Group (JWG) to identify institutions in both countries that can collaborate in agro-scientific research. Some of the areas outlined for emphasis are crop technology, micro irrigation, dairy, food processing, and joint marketing of food products.

A sizable Indian delegation led by Agriculture Minister Mr Sharad Pawar visited Israel again in May 2006 on the occasion of the Agritech 2006 Exhibition. The delegation comprised the chief ministers of Rajasthan, Gujarat, and Nagaland and included senior officials from other Indian states. During the visit, a three-year Work Plan for Cooperation in the Field of Agriculture was signed by the two governments.

Israel's Deputy Prime Minister and Minister of Trade, Industry, and Labour Mr

Eliyahu Yeshai visited India with a delegation of 50 prominent Israeli entrepreneurs in December 2006 to expand bilateral trade and investment relations building on the strengths of the two economies and began talks on a preferential trade agreement (PTA) based on the recommendations of the JSG.

Israel's Deputy Prime Minister & Minister of Transport & Road Safety Mr Shaul Mofaz, accompanied by a senior delegation from the Ministry of Transport in Israel, visited India in March 2007. He held meetings with Mr Lalu Prasad Yadav, India's Minister of Railways; Mr Praful Patel, India's Minister of Civil Aviation; and Mr T R Baalu, India's Minister of Shipping, Road Transport & Highways. Mr Shaul Mofaz visited leading infrastructure companies and had a meeting with the officials of MMRDA - Mumbai Metropolitan Region Development Authority.

Bilateral Agreements at a Glance

1. Establishment of Full Bilateral Diplomatic Relations (1992)
 2. Cultural Agreement (1993)
 3. Agreement for Cooperation in the Field of Agriculture (1993)
 4. Air Transport Agreement (1994)
 5. Agreement concerning Cooperation in the Field of Telecommunication and Posts (1994)
 6. Agreement on Trade and Economics Cooperation (1994)
 7. Agreement for the Promotion and Protection of Investments (1996)
 8. Convention for the Avoidance of Double Taxation and for the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital (1996)
 9. Bilateral Agreement regarding Mutual Assistance and Cooperation in Custom matters (1996)
 10. Memorandum of Intent on a Joint High-tech Agricultural Demonstration Cooperation Project (1996)
 11. Umbrella Agreement on the Development of Cooperation in the Field of Industrial & Technological Research & Development (1996)
 12. Agreement on Technical Cooperation (1996)
 13. Executive Agreement for a Programme of Cooperation in the Field of Agriculture. (1997)
 14. Agreement on Cooperation in Space (2002)
 15. Memorandum of Understanding on Telecom & Hi-tech (2002)
- During Israeli Prime Minister's visit to India in September 2003, the following agreements were signed:-**
16. Delhi Statement on Friendship and Cooperation between India and Israel
 17. Agreement on Environment Protection
 18. Agreement on Cooperation in Combating Illicit Trafficking and Abuse of Narcotic Drugs and Psychotropic Substances
 19. Agreement on Visa Free Travel for Diplomatic, Official, and Service Passport Holders
 20. Agreement on Cooperation in the fields of Health and Medicine
 21. Exchange Programme on Cooperation in the field of Education
 22. Exchange Programme on Cooperation in the field of Culture
 23. Memorandum of Understanding with the Indian Space Research Organization (ISRO) for the launch of the Israeli TAUVEV UV telescope on an Indian demonstrator Satellite GSAT-4 (2003)
 24. Agreement to set up a joint Industrial Research and Development Fund to encourage investment and joint ventures (2005)



An Overview of Agriculture in Israel

Israel is a small country located on the edge of the desert. Israel's population is about seven million; its GDP is close to US\$120 billion; GDP per capita - US\$25,000. Israel's total land area is approximately 21,000 sq km of which only 440,000 ha—about 20 percent—are arable. Cultivated area is 360,000 ha, and under irrigation—180,000 ha. More than half of Israel's land mass is classified as arid. It faces harsh climatic conditions and serious water constraints, yet it has succeeded in achieving positive results. This is in no small measure due to the creativity and enterprising spirit of the agricultural sector and the synergetic relationship between agriculture and the agro-technology industry.

Agriculture in its purest form, food production, was the original basis of Israel's economy. At the establishment of the State of Israel in 1948, the main exports were citrus fruits under the label Jaffa. The transition from a largely collective economic system, based on agricultural products and traditional products at its conception, to a liberalised marketplace trading a wide variety of manufactured goods worldwide that we know today, was achieved in a remarkably short period of time.

Israel has advanced from the simple ways of cultivating land, and dairy and meat production, to more sophisticated methods based on its own, innovative research and development. These advanced methods include revolutionary irrigation technology, land reclamation and the use of saline water to enable the utilisation of the desert.

Israel's Agro-technology industry is characterised by intensive research and development of innovative systems that mostly stem from the need to overcome the scarcity of natural resources in the country, in particular water and arable land. The constant growth in Agro-technologies is due to the close cooperation between researchers, extension agents, farmers, and agriculture-related industries. These cooperative efforts have led to breakthrough achievements and methods in all branches of agriculture and have fostered a market-oriented agribusiness that exports its agro-technology solutions worldwide. The result is modern agricultural methods, systems, and products in a country where more than half the area is desert.

Few Examples

- With half of all of its agricultural land irrigated, Israel is the country that has the highest proportion of agricultural land under irrigation. The Israeli-developed-computer-controlled-drip-irrigation system saves huge quantities of water and also provides for the ability to supply fertilisers with the irrigation ('fertigation').
- Israel has developed sophisticated greenhouse technologies that are particularly suitable for hot climates and are used for high value-added crops. Greenhouse systems, including specialised plastic films and heating, ventilation, and structural systems, enable Israeli farmers to grow between 3.5 and 4.5 million roses



In the early 1950s, one full-time agricultural employee supplied food for 17 people. In 2003, one full-time employee supplied food for 90 people.

per hectare per season and an average of 400 tonnes of tomatoes per hectare—four times the yield of those grown in open fields.

- Israel's dairy industry has developed and employs advanced technologies that have transformed the industry. Average milk production has increased two and a half times since the 1950s—from an annual average of 4,000 kg—to close to 11,000 kg per dairy cow.

Despite the decrease in the number of farmers and the share of agriculture in the GDP (2 percent in 2002), agriculture plays a significant role as a major food supplier to the local market. The number of people who are directly employed in agriculture represents 2 percent of the country's total labour force (2004). In the early 1950's one full-time agricultural employee supplied food for 17 people. In 2003, one full-time employee supplied food for 90 people.



Much of Israel's agriculture is based on cooperative settlements, which were developed in the early 20th century. The kibbutz is a large collective production unit. Kibbutz members jointly own the means of production and share social, cultural, and economic activities. At present, most of the kibbutz income comes from industrial enterprises owned by the collective unit. Another type of settlement is the moshav, which is based on individual family farms that are organised as a cooperative society. The residents in both types of settlements are provided with a package of municipal services. A third type of settlement is the moshava, which is a village of private

farmers. The kibbutz and the moshav currently account for 83 percent of the country's agricultural produce.

Irrigation and Water Management

Water is regarded as a national asset and is protected by law. Users receive their annual allocation from the Water Commission. The entire water supply is measured and payment calculated according to consumption and water quality. Farmers pay differential prices for potable water to encourage water saving. Lack of water is a major constraint in Israeli agriculture. Only half of the arable land is irrigable due to the shortage of water. Over 500 km, from north to south, Israel's annual rainfall ranges from 800 mm to 25 mm. The rainy season lasts from October to April, with no rain during the hot summer. The average annual water application per hectare has decreased from 8000 m³ to 5000 m³ over the past fifty years, while agricultural output has increased twelve fold (in 2004 US\$3.9 billion).

Irrigation Technology

Since the early 1950's, intensive efforts have been invested in irrigation research. It was clearly shown that water use is much more efficient in pressurised irrigation than in surface irrigation. An irrigation equipment industry was established which developed innovative technologies and accessories such as drip irrigation (surface and sub-surface), automatic valves and controllers, media and automatic filtration, low-discharge sprayers and mini-sprinklers, compensated drippers, and sprinklers.





Fertigation is routine in most of the irrigated areas. Fertiliser producers have developed highly soluble and liquid fertilisers which are compatible with this technology. Most of the irrigation is controlled by automatic valves and computerised controllers. The innovative irrigation industry has a worldwide reputation, and more than 80 percent of its production is exported.

Irrigation Regime

Farmers in Israel appreciate the fact that water is a precious and limited resource and should be conserved and handled carefully in the most efficient manner. Modern irrigation equipment enables better control and monitoring of irrigation, which can be translated into higher water-use efficiency. A countrywide network of agrometeorological stations delivers real-time weather data to farmers. The data are used to adjust the irrigation regime.

Future Trends

The expanding urban population, as well as potential political developments, will likely further reduce the fresh water supply for agriculture. The solution lies in the desalination of brackish water and high-level water reclamation. A more significant part of annual crops will be grown under cover, where recycling will become routine.

Research and Development

Today, Israel's agriculture is largely based on research and development. Modern agriculture faces many challenges such as market competition, declining water availability and quality, environmental concerns, and availability and cost of human labour. All these require ongoing innovation and close cooperation with the scientific community.



Particular challenges facing by agriculture in Israel, such as limited availability of arable land and water resources, as well as high labour costs, also act as stimulants for increased research and development.

Israel's allocation of financial resources to research and development is high. Some US\$90 million are invested annually in R & D, representing 3% of the agricultural GNP. As a result of this research effort, Israeli agriculture has become a model for efficient use of water, land, and human labour, accompanied by record yield of high-quality products.

Biotechnology

Emerging biotechnologies, which have undergone a dramatic development over the last twenty years, promise to break through the constraints of conventional methodologies and provide complementary procedures and products.

Below is a description of some current studies in major areas of agricultural biotechnology:

- Plant biotechnology with a focus on major crops
- Microbial agribiotechnology: plant pest control; use of beneficial microorganisms (for biofertilisation and improved root growth)



- Environmental biotechnology; use of plants for bioremediation
- Livestock biotechnology: breeding and genetic manipulation (for improved growth, milk and egg production); DNA marker-assisted selection
- Aquatic and marine biotechnology

Agricultural biotechnologies are making inroads, thereby both overcoming the constraints of conventional breeding and cultivation procedures, and providing complementary procedures.

Agricultural Extension Service

The Agricultural Extension Service of the Ministry of Agriculture and Rural Development played a vital role in the early days of agricultural development in Israel. It provided training to the inexperienced farmers, enabling them to attain advanced agriculture using the limited resources at their disposal.

Over the years, agriculture was developed through a rapid transfer of practical information from research to the field and the farmer. Work teams were set up around the country, providing a skilled and competent nationwide training system. This training system has become a central factor in the professional advancement of agriculture in competitive market conditions. It promotes the production of quality agricultural output and increases the ability to exploit the relative advantages of the country's different regions, both for the export and the local market. As a result, agricultural extension and research have become an integral part of Israel's agricultural infrastructure.



Israel places great emphasis on international cooperation with developing countries in a wide range of areas encompassing training, demonstration project development, joint research, know-how transfer, and exchange of experts.

Post-Harvest Technologies

There is a growing requirement in agricultural markets for high quality produce, which is free of pests, pathogens, and pesticides. The main objective of the Institute for Technology and Storage of Agricultural Products in the Agricultural Research Organization (ARO) is to solve current and anticipated problems of post-harvest agriculture in Israel, in order to enable the marketing of such high quality produce.

Many post-harvest developments are the result of requests by the local food industry and related bodies. Others are the result of anticipated industry needs. Some of the developments are related to the protection of both locally-produced and imported dry agricultural products, and the preservation of fodder for livestock.

Post-harvest research concentrates on protection, preservation, treatment, processing, storage and transportation of fresh, dried and processed foods. The research activities related to post-harvest science of fresh produce are concerned mainly with maintaining the quality of fresh fruits, vegetables and floral and ornamental products after harvest, in order to improve marketability of export.

Fertilisers and Fertigation

Israel's southern region, and in particular the Dead Sea area, is rich in mines that provide potassium, phosphorous, and magnesium for the agricultural sector. Some of the mined material is exported as raw material to fertiliser manufacturers throughout the world, and some is processed in Israel as ready-to-use fertilisers for agriculture in Israel and for export.



Israel is among the world's largest manufacturers of potassium nitrate, a highly soluble fertiliser that is suitable for a wide variety of plants and crops. Potassium nitrate can be delivered through fertigation systems or by foliar application. The fertiliser is sold in powdered or granulated form. Other highly soluble fertilisers manufactured in Israel include MAP (mono-ammonium phosphate) and MKP (mono-potassium phosphate).

Fertiliser manufacturers also develop and produce controlled release fertilizers (CRFs). These are coated in polymers to ensure slow, prolonged release and delivery via diffusion. CRFs allow for better exploitation of the fertiliser material and less groundwater pollution.

These fertilizers can effectively match the needs of many crops during the growing periods. While CRFs are more expensive than common compound fertilizers by one factor or more, they have the potential to replace conventional fertilizers in greenhouse production. This is due to their ability to reduce the enormous nutrient losses in current fertigation practices, which cause groundwater pollution (where fertigation water is not reused).

International Agricultural Cooperation

Israel places great emphasis on international cooperation with developing countries in a wide range of areas encompassing training, demonstration project development, joint research, know-how transfer, and exchange of experts. The hallmark of the international cooperation programme is Israel's own professional and operational achievements, and experience in agriculture, rural development and human-capacity building. International cooperation is implemented on a government-to-government basis, as well as with international organisations, institutes, and NGOs. In this context, over the past five decades, the State of Israel, under the auspices of the Ministry of Foreign Affairs' International



Cooperation division (MASHAV) and the Ministry of Agriculture and Rural Development's centre for International Agricultural Development Cooperation (CINADCO), has been actively involved in formulating and conducting international cooperation programmes. These programmes are based on international agricultural training courses in Israel and on-the-spot courses overseas, and joint agricultural research projects, as well as development of various demonstration-oriented agricultural projects.

The above mentioned aspects of Israel's agriculture sector highlight both the achievements and constraints for future development of this sector in my country. Agriculture is more than food production. It carries a high national value. Our ability to provide most of our needs in fresh agricultural products, dairy, and poultry has more than an economic value. The blossoming of the desert which is half of Israel's territory and making it habitable and attractive for people to settle in, is a major Israeli national goal.

India and Israel, Then and Now

■ Eric Silver

When I worked as a British journalist in India 20 years ago, an adviser to Prime Minister Rajiv Gandhi assured me that Israel, my previous foreign posting, was “an aberration.” The official, who had better remain anonymous, rose later to a seat in the Cabinet.

Like other bureaucrats in the heyday of the Nehru-Gandhi dynasty, he was articulating an anti-Zionist policy that dated back to the Congress founding fathers. In an often-quoted rebuke, Mahatma Gandhi wrote to Chaim Weizmann, the head of the World Zionist Organisation and future first President of the Jewish state: “The problem of one persecuted people cannot be solved by persecuting another people.”

Jawaharlal Nehru contended that the Palestinians had as much right to Palestine as the French had to France. His daughter, Indira Gandhi, was implacably hostile to Israel. When Yasser Arafat came to New Delhi for a conference of the Non-Aligned Movement in the mid-eighties, the exiled chairman of the Palestine Liberation Organisation was garlanded as an anti-imperialist hero.

After Rajiv Gandhi replaced his assassinated mother in 1984, the emphasis shifted to explaining why India couldn't establish diplomatic relations with Israel even if it wanted to. Wheelers and dealers warned Congress leaders that it would cost them the Muslim vote. Diplomats feared that it would jeopardise the jobs of thousands of Indians working in the Gulf states; provoke the Arab-Muslim bloc to gang up on India when the United Nations debated Kashmir; and alienate India's allies in the Non-Aligned Movement, which was then a cornerstone of New Delhi's diplomacy.

The attitude of the general public was more benign. I soon learned that for the Hindu majority, Jerusalem was not the centre of the world; Israel was not *their* Holy Land. The Bible was not part of *their* heritage. When I booked a telephone call to Jerusalem, international operators often asked, ever so courteously: “In which country is that?” Some thought I meant Dar Es-Salaam.

The few ordinary Indians who knew anything about Israel were usually, even naively, well-disposed. A retired army officer managing a hotel in the Kulu valley had a shelf of books by and about the legendary Israeli general Moshe Dayan. A video library in the Khan Market did thriving business with a bootleg cassette of Otto Preminger's “Exodus”, a propagandist Hollywood epic on Israel's birth pangs.

After my three-year tour as *The Guardian's* South Asia correspondent, I returned to Israel, where I now work as a freelance. I came back to New Delhi this spring to write about the 15th anniversary of diplomatic relations for *The Jerusalem Report*, an Israeli news magazine. The change was palpable.

Officials no longer bridled at the very mention of Israel. I found no great love for it, but a strong sense that the relationship was good for India. Israel was a fact of international life. Critics focused on specific issues, rather than questioning either Israel's legitimacy or the wisdom of the diplomatic link.

By common consent, diplomatic relations have gone well. The Indians are hard-headed about it. Bilateral civilian trade has expanded tenfold to \$2.7 billion in 2006. Israel is unofficially estimated to sell India 1.5 billion dollars' worth of advanced weapons annually. However discreetly, the two countries are cooperating in counter-terrorism.

India's 150 million Muslims didn't storm the Israeli embassy or

withhold their votes from Congress, the party that took the plunge in 1992. The Arab bloc did not turn on India. With its privatised economy growing at 9 percent a year, India is less fearful now of being penalised by its old Third World partners. The Non-Aligned Movement is less central to its diplomacy. After the demise of the Soviet Union, India is looking to the West. The world needs India as much as India needs the world.

“Times have changed,” argued G. Parthasarathy, a former government spokesman, over lunch at the New Delhi Golf Club. “The Arabs have tried to intrude on Kashmir, but we told them to lay off. We have an open economy. We're no longer dependent on foreign assistance or suffer from a shortage of foreign exchange. With the Gulf countries, we have a very good relationship. We import 70 percent of our oil from there; 3.8 million Indians work there and send home their earnings. That's what matters to us.”

India continues to oppose the occupation of Palestinian lands. But it does not preach. It argues for a viable Palestinian state alongside Israel, but it draws no borders. Rather than initiate, it stresses the need for a solution negotiated between the parties concerned.

“You don't have to conduct your foreign policy entirely on principles,” Virendra Gupta, the diplomat who opened the Indian embassy in Tel Aviv in May 1992, told me on the lawn of the India International Centre. “The principles have to be seen in the context of your own national interest.”

I must be the first Jew from Israel to lecture in the Yasser Arafat Hall of Jamia Millia Islamia, New Delhi's Muslim university. Sitting at the head of a long elliptical table in a bright modern seminar room, I addressed 40 faculty and political science graduates for an hour on why the Israeli-Palestinian peace process was getting nowhere and was unlikely to do so any time soon. I placed a fair share of the blame on the eponymous Yasser, whose portrait beamed back from the wall.

They listened politely and attentively. Nobody heckled, nobody shuffled. When I finished, they asked practical questions. Why didn't Israel talk to Hamas and encourage it to be more moderate? Why did Ariel Sharon disengage from the Gaza Strip?

My only critic was an elderly Kashmiri, who accused me of bias. I prepared for the worst. Would he denounce me as a running dog of Zionist imperialism? But no. I was, he said, too pro-British. Perfidious Albion was responsible for all the woes of Kashmir and of Palestine – and the Brits had to come back and sort it out. Pronto.

It's hard to imagine any speaker from Israel having as gentle a ride on a European campus, let alone a Muslim university anywhere else. Indians are more concerned with their own unresolved problems: very rich versus very poor, Hindu versus Muslim, high caste versus untouchable. Not to mention their conflict with Pakistan.

They don't wake every morning and ask what happened yesterday in the Nablus kasbah or a Gaza refugee camp. I had to look hard for any news from Israel-Palestine in the Indian media, which rely on news agencies and syndication services for their coverage.

After 20 years back in the cauldron of Middle East politics, Delhi felt like a holiday.

Eric Silver was *The Guardian's* Israel correspondent 1972-83 and South Asia correspondent 1984-87. He is now a freelance journalist based in Jerusalem.



High-Level Interactions

Israeli Prime Minister Mr Ariel Sharon with Indian President Dr APJ Abdul Kalam in New Delhi on 09 September 2003



Indian Minister of State for Science & Technology Shri Bachi Singh Rawat and Israeli Minister of Science and Technology Mr Eliezer Sandberg holding delegation-level talks on scientific cooperation between the two countries in New Delhi on 22 December 2003



Israeli Prime Minister Mr Ariel Sharon with Leader of the Opposition Smt Sonia Gandhi in New Delhi in September 2003



Indian Minister of Commerce and Industry Shri Kamal Nath and Israeli Deputy Prime Minister and Minister of Industry, Trade, Labour and Communications Mr Ehud Olmert at the function 'Enhancing Trade and Investment Flow' organised by the Federation of Indian Chambers of Commerce and Industry (FICCI) in New Delhi on 08 December 2004



Israeli Deputy Prime Minister and Foreign Minister Mr Silvan Shalom with Indian Prime Minister Shri Atal Bihari Vajpayee in New Delhi on 11 February 2004



Israeli Deputy Prime Minister and Foreign Minister Mr Silvan Shalom with Indian Deputy Prime Minister Shri LK Advani in New Delhi on 10 February 2004



Indian President Dr APJ Abdul Kalam giving away the Pravasi Bhartiya Samman Award to Israeli agricultural scientist Mr Eliahu Bezale at the Pravasi Bharatiya Divas in Hyderabad on 09 January 2006



Former Israeli Prime Minister Mr Ehud Barak with Indian Prime Minister Dr Manmohan Singh in New Delhi on 17 November 2005



Israeli Deputy Prime Minister and Minister of Industry, Trade, Labour and Communications Mr Ehud Olmert with Indian Minister of Communications & Information Technology Shri Dayanidhi Maran in New Delhi on 08 December 2004



Israeli Vice Prime Minister Mr Ehud Olmert with Indian External Affairs Minister Shri K Natwar Singh in New Delhi on 08 December 2004



Israeli Deputy Prime Minister and Minister of Industry, Trade, Labour and Communications Mr Ehud Olmert with Indian Minister for Science & Technology and Ocean Development Shri Kapil Sibal in New Delhi on 08 December 2004



Israeli Deputy Defence Minister Mr Zeev Boim with Indian Minister of State for Home Affairs Shri ID Swami in New Delhi on 04 February 2004



Gujarat Chief Minister Shri Narendra Modi and Indian Minister of Agriculture Shri Sharad Pawar at Agritech Israel held in Tel Aviv in May 2006



Indian Minister of State for Industry Dr Ashwani Kumar with Israeli Vice Premier Mr Shimon Peres in Egypt on 23 May 2006



Israeli Deputy Prime Minister and Minister of Industry, Trade and Labour Mr Eliyahu Yishai with Indian Industrialist Mr Kumar Mangalam Birla in Mumbai on 04 December 2006



Israeli Deputy Prime Minister and Minister of Industry, Trade and Labour Mr Eliyahu Yishai being welcomed at a meeting organised by FICCI in New Delhi on 06 December 2006



Israeli Deputy Prime Minister and Minister of Industry, Trade and Labour Mr Eliyahu Yishai being welcomed at a meeting organised by FICCI in New Delhi on 06 December 2006



Israeli Deputy Prime Minister and Minister of Industry, Trade and Labour Mr Eliyahu Yishai with Indian Minister of State for Mines Dr T Subbarami Reddy and FICCI President Mr YK Modi at a meeting organised by FICCI in New Delhi on 06 December 2006



Israeli Deputy Prime Minister and Minister of Transport Mr Shaul Mofaz with Indian Minister of State for External Affairs Shri Pranab Mukherjee in New Delhi on 20 March 2007

Indian Minister of Shipping, Road Transport and Highways Shri TR Bалу with Israeli Deputy Prime Minister and Minister of Transport Mr Shaul Mofaz in New Delhi on 21 March 2007



IsrArts-The Vibrant World of Israeli Arts

Israel is a modern nation with a rich cultural mosaic, which has enriched and evolved, survived and thrived over the course of three and half millennia. It is a country which has a perfect blend of oriental and occidental cultures. It is a country where the technology of the future is at peace with the religious tenets of the past.

Israeli art had its beginnings in the early part of the 20th century when the idea of a Jewish State in the Land of Israel was beginning to take shape.

Israel's school of the arts—the Bezalel Academy of Art and Design—was established in 1906 by sculptor Boris Schatz, and was originally called the Bezalel School of Arts and Crafts. The establishment of Bezalel is considered to be the first major milestone in the history of Israeli art. The Jerusalem school bears the symbolic name of Bezalel Ben Uri—the first artist mentioned in the Bible.

Israeli art is displayed in museums and galleries in the three major cities in Israel and in other locations, and art lovers can enjoy numerous permanent and temporary exhibits.

Jerusalem, the capital city of Israel, has served as its cultural and economic center for centuries. The city has numerous art and archeological museums which relate its history. Those who prefer the outdoors to indoor galleries and museums with a city generous in displaying its history in the streets in settings of unique beauty that led to the Talmudic proverb: "Ten measures of beauty descended to the world. Nine were taken by Jerusalem and one by the rest of the world."

The Israel Museum

The Israel Museum is the largest and most important museum in the country, and is located in the Kiryat ha-Muzeonim (museum campus) at Givat Ram. The museum has numerous wings that exhibit archeological findings, historical artifacts, 20th century art, impressionist art, South American art, and a youth wing. The sculpture gardens and galleries display exhibitions from Israel and abroad.

A special, separate wing known as the Heikhal ha-Sefer (The Shrine of the Book) houses the Dead Sea Scrolls from the time of the Bar Kokhva rebellion in the year 70 and some of the scrolls discovered in the caves in Nakhal Kumran near the Dead Sea. The white building has a dome-shaped roof that is shaped like the lids of the clay containers in which the scrolls were found.

Many other museums are located all over the country with their unique outlook on art and history: The Bible Land Museum, Ticho House, The Jerusalem artist House, Museum on the Seam, the Rockefeller Museum, the Land of Israel Museum, Diaspora museum, and many others.

Statute Garden- Israeli Musuem



Tel Aviv is the second capital city of Israel. Devoid of any historical or religious significance, it is a new, modern city on the Mediterranean coast that serves as the center of a large metropolitan region called Gush Dan. Tel Aviv was established in 1909, and was originally named "Akhuza Bayit" or "Homestead." The city continued to expand and develop next to Jaffa (Yafo), the neighboring Arab city to the south.

The concentration of business, art, and public institutions has made Tel Aviv a cultural center well-known both in Israel and abroad. Israel's two large theaters, Ha-Bima and the Kameri are located in Tel Aviv together with the Tel Aviv Art Museum, the Opera House, the Conservatory, and the Cinemateque. The city has numerous art galleries that exhibit works by Israeli artists, and there are numerous sculptures in public areas throughout the city. Parks and public centers host street shows, and the city has a wide variety of night clubs that music for every taste. Tel Aviv's stature as an art center has grown over the years and many artists of caliber from abroad chose to exhibit or perform in the city

Music

Israel's music is very rich, and it synthesises the elements of western and oriental music to create its own distinct identity. Hassidic songs, Asian, Arab pop—especially by Yemenite singers—Israeli hip hop, and heavy metal constitute the important aspects of Israeli music. Israel is also home to several world class music ensembles like the Israeli Philharmonic Orchestra and the New Israel Opera. Israeli maestro Zubin Mehta, of Indian origin, has been closely associated with the Israeli Philharmonic Orchestra since 1968, and since 1977 in the capacity of Music Director.

The Israeli Philharmonic Orchestra- has been Israel's national orchestra since its establishment in 1936. Its musical director Zubin Mehta, of Indian origin, is considered to be one of the greatest conductors and musicians in the world. The orchestra hosts renowned guest conductors and musicians, and appears in concerts throughout Israel and abroad. Most concerts are held in the Mann Auditorium (Heikhal ha-Tarbut) in Tel Aviv.

The Jerusalem Symphony Orchestra- was established in the 1940s and was originally called "Tizmoret Kol Yisrael" (The Voice of Israel Orchestra). Its musical director is Leon Botstein. The orchestra belongs to the Israel Broadcasting Authority and performs in the Henry Crown auditorium in the Jerusalem Theater. All concerts are recorded and broadcast on Israel's classical music station.

Other orchestras in Israel include the Haifa Symphony Orchestra, the Ramat Gan Orchestra, the Be'er Sheva Simfonetta, and the Israeli Chamber Orchestra.

The Israeli Opera Company- performs in the new Israeli opera house located in the Merkaz le-Omanuyot ha-Bama in Tel Aviv near the Tel Aviv Museum. Its repertoire includes classical compositions and modern operas as well as contemporary versions of operas written for the European opera.

Termed in Hebrew שירי ארץ ישראל ("songs of the land of Israel"), folk songs are meant mainly to be sung in public by the audience or in social events. Some are children's songs; some combine European folk tunes with Hebrew lyrics; some come from military bands and others were written by poets such as Naomi Shemer and Chaim Nachman Bialik.



Members of the Israeli Idan Raichel Project together with the Indian Rajasthan Roots during a concert in Nehru Park, New Delhi, to mark the 15th anniversary of the Indo-Israeli bilateral relations

India-Israel Cooperation- The world-known composer, conductor and pianist Gil Shohat has performed in Delhi and Mumbai together with tabla artist Akram Khan to celebrate the 15th anniversary of Israeli-Indo relations. The audience was especially touched when the two musicians played an original version of the famous Indian song “*Dil toh pagal hai*”.

Another popular Music trend in Israel is World Music, based upon ethnic tunes from different countries. The Idan Raichel Project is a great example for this type of music.

The project burst onto the Israeli music scene in 2002, offering a message of love and tolerance that resonated strongly in a region of the world where the headlines are too often dominated by conflict. With an enchanting blend of Ethiopian and Middle Eastern flavours coupled with sophisticated production techniques and a spectacular live show, the Idan Raichel Project has become one of the most unexpected success stories in Israeli music today.

The members of the band represent the diversity and the essence of world music since they come from different ethnicities: Ethiopia, Europe, Sudan, and Iraq. The Idan Raichel Project toured in India,

performing in Kolkata, Mumbai, and Delhi in April this year. They received a warm and loving welcome from the local crowd and expressed their wish to return to India. In an interview to a local news paper Idan said: “While a lot of my peers have had the pleasure of visiting this beautiful and culturally rich country, this is my first time here and I’m so glad I got this opportunity to come”.



Israeli Composer and Pianist Gil Shohat and Tabla Artist Akram Khan at a performance in New Delhi, December 2006

Theater

Israeli theater is the product of many cultural origins, and consists of numerous small and large theater groups of various styles and genres.

The first theater professionals in Israel were immigrants who came to the country from Europe and Russia and found a Middle-Eastern culture. These people created a legacy that maintains an intense dialogue with innovative modern theatrical thinking.

Ha Bima Theater- originated in Russia, and is now considered to be Israel’s national theater company. The group moved from Vilna to Moscow and its actors and producers eventually immigrated to Tel Aviv.



The Ha-Bima Theater group presents both classical and contemporary plays. It was the only theater group in the country until 1945 when the Kameri Theater was established in Tel Aviv.

Ha-Kameri, which was the first municipal theater company, offered a local, Israeli alternative to Ha-Bima. Its actors were younger, their Hebrew was more fluent, and the plays they presented differed from Ha-Bima, which was influenced by Eastern European theater. To this day the two theater groups differ in style. Ha-Kameri attempts to deal with social and political issues and to place emphasis upon the contemporary, daring aspects of the theater, while Ha-Bima continues to combine classical plays with original Israeli material and contemporary plays from Europe and the United States.

Other theater companies in Israel include:

Tsavta, in Tel Aviv, presents mainly fringe theater.

Gesher caters to the Russian-speaking and Eastern European theater audience.

The Haifa Theater is a large, contemporary theater group which organizes an annual theater festival of children's plays, and also presents plays in Arabic.

The Jaffa Arab Jewish Theater presents local material of an alternative nature.

The Beer Sheva Theater presents a variety of plays for all audiences.

The Khan is a unique theater company that performs in the Khan - a building in Jerusalem that was formerly a Turkish Bath. The building provides an intimate atmosphere to the Khan Company's performances.

Dance

Israeli dance has won much recognition in the past few decades, but unlike Israeli theater, it is not identified with well-known institutions and is not closely tied with the Israeli essence or life style.

The Israeli Ballet

In 1970, the official school of The Israel Ballet, The Classical Ballet Center, first opened its doors in a small basement studio situated on the Kikar Hamedina of Tel Aviv. The school has developed over the years to be the leading school for the study of Classical Ballet in Israel and today many students of age around seven are taught by the best teachers from Israel and abroad. In

the summer of 2004, after moving to the new studio center, the school was able to expand its operations and hold classes every day, particularly during the afternoons and evenings. There are lessons for students who would simply like to learn the secrets of the art of classical ballet, for those who want to make ballet their career and also for professionals seeking to improve their skills. The classes are divided according to age and ability. Many former students of The Classical Ballet Center have gone to dance as soloists with The Israel Ballet while others have found a home in companies in Europe and America. The repertoire of the Israeli Ballet group for this season includes: The Sleeping Beauty, Written in the Sand, Don Quixote, Paquita, Bach Divisions, Onegin, Giselle, and Optimus.

Bat Sheva: An internationally renowned modern dance company established by the famous Martha Graham in 1964.

The Bat Sheva dance company is based on people, their creativity and wish to excel in their art. The 35 dancers along with a small technical and administrative team form a united body which produces 250 shows per year in Israel and around the world also providing educational programmes for the community. The company comprises of two groups. The senior group of 18 dancers from Israel and different places from the world, is the home for choreographers Ohad Naharin and Sharon Eyal works. The younger group called ensemble Bat Sheva has 17 excellent dancers who are at the beginning of their professional careers. Nominating Ohad



Baharin as the Manager of the company in 1990 opened a new area. His innovation and originality created the group world wide reputation. The Bat Sheva dance company performs in prestigious halls and festivals worldwide.

The Kibbutz Dance Company: A popular dance company that originated in the northern kibbutz Ga'aton, the company stages performances for adults and children that are choreographed by Rami Be'er. Its performances of modern dance have been acclaimed throughout the world.

Other well-known dance companies include Bat Dor, Inbal, the Noa Dar Company, and Miyumana.





Hora Dance

The Suzanne Dellal Center in Nave Tsedek in Tel Aviv hosts dance performances and festivals.

Israeli folk dance was brought to the country by the early settlers in the 1920s, for which dance became a medium of creative expression to voice their desire to return to their cherished home land. Therefore, the performance of Israeli folk dance reflects the longing of the people to return to their homeland. Israeli folk dances are influenced by the traditional dances of various ethnic groups of Israel and are performed by barefoot dancers in loose clothing, accompanied by leaping and running. Today, Israeli folk dance is seen around the world—not only in Israel, but also in Europe, South America, the United States, Canada, Australia, and even Japan. Thousands of people participate in Israeli dance classes as a recreational outlet.

One of the chief folk dance forms of Israel is called Hora. Here, every participant gets in a circle, holds hands and starts stepping forward toward the right with the left foot, then followed by the right foot to match. They bring the left foot back again followed by the right foot. All this is done while holding hands and circling together in a fast and cheerful motion to the right. In large groups, you can create several circles while the smaller circles are inside the bigger circle and so on. A performance of Hora is customary in Jewish weddings and celebrations.

Festivals

Travelling festivals and local productions take place in Israel throughout the year. They include art-oriented festivals such as stringed-instrument festivals, children's theater, festivals for promoting citizens' rights through visual arts, numerous film festivals, and street festivals featuring food and drinks. Visitors should find out which festivals are taking place during their visit.

The Israel Festival: The Israeli festival is held in Jerusalem each year during May and June. The festival features performances of music, dance, and theater from around the world.

The Karmiel Dance Festival: Held in the northern city of Karmiel each July, the festival includes dance performances and public folk dancing sessions.

The Acre (Ako) Alternative Theater Festival: The city of Acre hosts a festival of alternative theater each year during the holiday of Sukkot. Alternative theater productions are staged indoors and on the street.

The Eilat International Jazz Festival takes place during the last week in August in the southern city of Eilat. Frontline jazz musicians gather at the event, which is of interest to jazz lovers and musicians from Israel and abroad.

Cinema

The year 2006 anchors the upswing of Israeli cinema in the last few years and is characterised as the year in which Israeli cinema clearly positioned itself as an integral part of Israeli culture. After years of relentless efforts Israeli cinema is no longer an exceptional art form or a cultural commodity looking for audiences. The statistics of cinema attendance in Israel show that the local audience appreciates enjoys and encourages Israeli filmmaking. In 2006 more than 900,000 Israeli viewers bought tickets to Israeli films. This is almost double the figure of 2005. For the first time in several years Israel's biggest box office success was an Israeli film.

Worldwide, Israeli cinema continues to gain attention and acclaim. In the 2006 Cannes film festival, Israel was selected for the "*Tous les Cinemas du Monde*" section and was one of the countries which presented its films and film industry in this category. Israeli films were also screened in Berlin, Toronto, Pusan, Tribeca, Moscow and many more international film festivals. Foreign investment in Israeli feature films in 2006 totaled US\$5 million and co-productions with Germany, Italy, France, Canada and for the first time with Australia continued and intensified this year.

Israeli films, which bring the stories and vision of the Israeli filmmakers to the screen, have developed during recent years a voice, a character, and an identity of their own.

Just recently, the Israeli Embassy held the annual Israeli Film Festival; seven movies portraying different aspects of Israeli society were screened at the India Habitat Center. The inaugural film "*Two States of Mind*", by director Shira Richter, described the journey of two women—an Israeli and a Palestinian—in a jeep rally in Morocco. After the film, the director held an open discussion with the audience. The festival will be hosted in six other states across India: Assam, West Bengal, Rajasthan, Uttaranchal, Uttar Pradesh, and Chandigarh.

The Israel Film Fund is committed to further develop the conditions for a sustainable, creative, and vibrant Israeli film industry. The Fund puts special emphasis in strengthening the ties between Israeli cinema, local audiences and international audiences, encourages co-productions and has been instrumental in strengthening cooperation between Israeli filmmakers and filmmakers around the world.



ISRAEL

A World Water Leader

■ Prof. Avner Adin

Water Situation

The Middle East countries can be divided into those countries which have surplus of water, such as Turkey, Iraq, and Lebanon, and those who are poor in water, such as Jordan, Israel as well as the Palestinian Authority. Israel's natural water resources are exploited completely, as the country enjoys rapid urban growth which generates municipal wastewater and industrial wastes, sludge of all kinds, increasing ground water salinity, nitrates, and also some other contaminants such as heavy metals and organics. Israel's neighbours are also not taking care of environmental matters and pollutants from Palestinian areas, seeping into its drinking water.

Israel's annual water needs are approaching 2000 mcm (million cubic meters) per year, out of which about 50 percent is consumed by agriculture. In good years, about two thirds are produced from the aquifers (groundwater) and about one third is surface water pumped from the Kinneret (sea/lake of Galilee), of which 50,000 cm/year are committed to the Kingdom of Jordan. Most of the water is being distributed from north to south through the National Water Carrier system, which is an example of high-level engineering and complex integrated water management. Mekorot-National Water Company is responsible before the National Authority for Water and Wastewater for the water supply and for taking care of its quality.

The natural water reservoirs cannot support the growing demand of the country. Recent draught events and 30 years of groundwater over-pumping have resulted in a new, challenging water management programme. The programme relies on the fact that Israel already recycles about 75 percent of its wastewater, with future plans for upgrading all of it into tertiary and, eventually, to a full desalination treatment. Israel is a world leader in sea water

and brackish water desalination, although most of the projects have been performed by the Israeli companies overseas.

Alternative Solutions

A semi-political decision to import water from Turkey as a partial solution to the water problem was abandoned mainly due to the fact that the cost of such an operation was about double that of sea water desalination. Israel has had to cope with the above problems using its scientific and technological capabilities. The way it is being done is by generating more water, keeping its independence in and control of that valuable resource in the most possible economic way. The main solutions here are primarily the reuse of waste water, mainly municipal wastewater reuse for irrigation and, seawater and some brackish water desalination. Water conservation, rain enhancement, and storm water utilisation have also being developed. The core of the Israeli Water Commission programme is a 10 years development of the alternative, non-conventional water resources, most of which are water reuse projects and SWRO (sea water reverse osmosis) and some brackish water desalination plants. Each one of the latter is planned to supply 20-25 percent of the total water quantity mentioned above, i.e. 400-500 mcm per annum. These projects are being skillfully integrated into the existing national water system.

Water Reclamation and Reuse

The water scarcity and sea pollution in Israel have served as the major driving force towards the development, adaptation, and application of water recycling and reuse across the country. Wastewater is looked upon in Israel as a sustainable water resource. In the absence of environmentally safe recipients for the effluents, irrigation is regarded as a sanitary mean of disposal, which makes wastewater treatment economical. The nutrients content of

municipal effluents is also appreciated and, where appropriate, can save on costs of fertilisation. Water scarcity in Israel has driven farmers, engineers, scientists, and government officials to collaborate in developing wide scale water reuse operations and associated equipment and control methodologies.

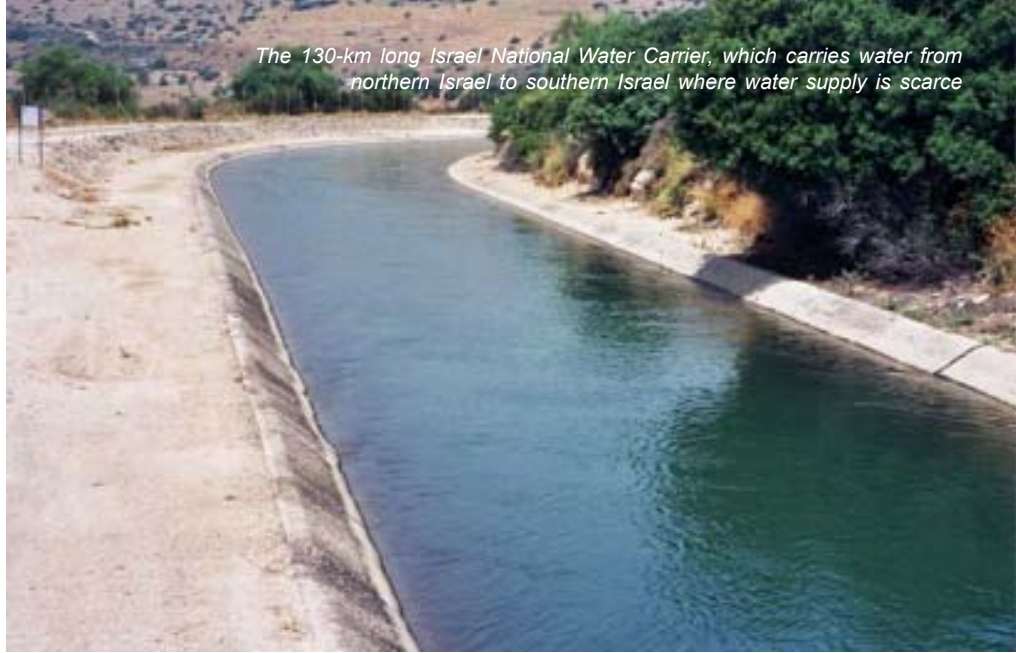
In the world known SHAFDAN project, wastewater from Tel-Aviv and its satellite cities (about 20 percent of Israel population, 120 mcm) is collected, transported, biologically treated and, artificially recharged into the ground, pumped out and transported to the southern part of the country for “unrestricted” irrigation. Another example is the Kishon Project for Haifa and its surroundings (12 mcm), where water quality control is based on conventional treatment in association with a dual open reservoir in-series, self-purification system. The problem of sludge in Israel is becoming more serious as more wastewater treatment plants are constructed or expanded. More sludge filtration sites have been established in order to prevent sludge from the treatment facilities from polluting our drinking water and to enable its economical reuse as agricultural fertiliser.

Some attention has been given in Israel to acute and potential environmental hazards attributed to long-term effluent irrigation. Soil salinity, which already caused a two-year interruption in the Kishon Complex project and large expenses in financing drainage operations to correct it, is one. Others are soil contamination by heavy metals, enhanced transport of various contaminants in groundwater due to binding to dissolved organic molecules in the effluent and infiltration of DBPs (disinfection by-products). Various solutions are proposed, however, some of them involve water wastage (e.g. soil flushing) and money and others need further research. On the other hand, thorough investigation performed in the 80's eliminated the risks associated with direct microbiological and viral contamination by effluent irrigation. All-in-all, the idea of adapting a policy of desalination of all effluents intended for irrigation is gaining more and more popularity.

Water reuse, supported by policy and research, is and will be a major water source for Israel at least for the first half of this century. As in Australia, California and other places, Israel is expanding the hydrological cycle. Instead of having only water resources like rain from the atmosphere, waste water reclamation is entering into the hydrological cycle as this is also a water resource. Urban use, still developing, will follow the agricultural use. In the arid and semi-arid Mediterranean basin, water reuse can also serve as a promoter of peace and economic stability.

The Water Desalination Programme

The first large-scale sea-water desalination plant, located in southern Ashkelon, has started to operate in 2005 for half capacity



of 50 mcm/year, and has reached its full 100 mcm/year capacity within several months, 20 percent of which is planned for supplying the Gaza Strip population. A second plant, about half the size, is at an advanced construction stage now in Palmachim, between Ashkelon and Tel-Aviv, while a bid has been finalised for another 100 mcm/year capacity desalination plant in northern Hadera, between Tel-Aviv and Haifa, with plans for future expansion for possible regional supply to Jordan and Palestinian Authority.

Pursuant to an extensive bid process that started in July 2000, the State of Israel, through the Ministries of National Infrastructures and Finance, has awarded on the 03 September 2001, the 25 years BOT (build, operate and transfer) project in Ashkelon, South Israel, to V.I.D. (Vivendi/Veolia-IDE-Dankner) Desalination Company Ltd., a single purpose company created especially for this project. The BOT contracts, at the initial price of US\$ 52.7/m³, were signed in Jerusalem on 25 November 2001 (for the first 50 mcm/year) and on 28 April 2002 (for additional 50 mcm³/year). The sea water desalination plant in Eilat, the southern point of Israel near the Red Sea, with a current supply of 13.3 mcm/year, has been operative since 1997. This plant had the cheapest cost for water desalination in the world (75 ¢/m³), until the latest bids from the very large plants in Ashdod, Ashkelon, and Haifa came along. Production of Ashkelon plant is sold to the Water and Desalination Authority (WDA), whose obligations under the BOT agreement are deemed to be the obligations of the State of Israel. Following termination of the Agreement, the facility will be transferred to the State.

Various Israeli Actions and Activities at a Glance

To preserve the environment and public health, the following regulations and standards have been issued, updated, and progressively enforced:

- Wastewater quality for unrestricted irrigation
- Wastewater quality for disposal to streams
- Industrial effluent quality
- Drinking water quality
- Desalinated water quality
- Materials and equipment in water applications

To Further Promote the Israeli Water Industry

- The government has declared the water industry as a strategic area of Israel
- A special fund has been created to support R&D (research and development)
- The fund particularly supports development of self-innovative industrial products
- WATEC, an international exposition and conference in water

Drip Irrigation System





technology and environmental control, will take place in Tel-Aviv on 30 October 2007 and later years.

Israel is world known for pioneering the drip irrigation systems, sea water desalination technologies, and water security. R&D and innovation areas that Israel has specialised in for agriculture, urban areas and in industry, resulting from fruitful industry-academy-government-funds cooperation, are numerous, some are listed below:

- Water saving devices and installations, including households
- Water leakage detectors in water networks
- Water and wastewater treatment methods
- System management and optimisation models
- Computerised systems and automatic control for water management
- Monitoring water quality and early warning systems

The major universities in Israel that have been involved in industrial water research are The Hebrew University of Jerusalem, Technion-Israel Institute of Technology, Ben-Gurion University of the Negev. Other universities and governmental research centers are also involved in this growing challenge. WATERFRONTS is an NGO that promotes water industry-academy-venture capital cooperation. The Israeli Water Association is an NGO that promotes professional capacity-building and other water issues of national importance.

Conclusion

Water scarcity in our region has always been, in the history of our nation, a cause for war and misery. Starting from Abraham the Patriarch fight upon the well of Beer-Sheva, through the suffering for centuries in Egypt, till the wars with Syria over the Jordan River sources and quarrels with the Palestinians after our independence. The modern approach of Israel towards the water issue should minimise if not eliminate that negative impact. This modern approach can be summarised in the following points:

- Wastewater is a sustainable water resource
- Sea water provides a water resource which is unlimited by quantity yet relatively expensive by quality
- Irrigation is a sanitary mean of wastewater disposal, which makes wastewater treatment economical
- All water, including wastewater effluents, belongs to the state
- The water industry is regarded as a strategic area of the country and should be supported as such
- Standards are a major driving force in environmental quality control as well as in the development of water industry
- Innovation and R&D are primary means to get to a water problem

free future for Israel as well as contributing to the Middle East region and to the world

Water and MASHAV

MASHAV - Israel's international development cooperation programme—established in 1957—marks 50 years of collaboration with the developing world and societies in transition to promote poverty reduction, economic growth, food security, approaches to desertification, community development, gender equality and empowerment, access to education, healthcare, as well as water safety and security. Today, MASHAV, a department within Israel's Ministry of Foreign Affairs, is responsible for mobilising Israeli resources toward world efforts in realising the UN Millennium Development Goals (MDGs).



Computerised Irrigation System

The Aim: Water Safety and Security

MASHAV combines technology transfer, research & development, and hands-on experience with hi-tech expertise from leading Israeli institutions – ranging from the public/government sectors to academia as well as to the business community. To improve the services needed to provide access, safety, and security in countries facing serious water challenges, MASHAV is poised to share the knowledge and modern technologies gained during Israel's own development process in subjects including:

- Water resources management
- Advanced irrigation techniques
- Sea and wastewater desalination
- Urban water losses
- Sewerage and brackish water treatment
- Water security

Models of Implementation

MASHAV will avail its professional training programmes in Israel and on-site, as well as in-country project development toward meeting regional and country development strategies. The most experienced experts are called upon to impart necessary skills and practical training whether in Israel or abroad (short and long-term consultancies) in a Public-Private Partnership (PPP).

* Department of Soil and Water Sciences, Faculty of Agricultural, Food and Water Quality Sciences, The Hebrew University of Jerusalem, Israel.

Source: Ministry of Foreign Affairs, Israel
Center for International Cooperation, MASHAV

Israeli Nobel Laureates



Shmuel Yosef Agnon (17 July 1888 – 17 February 1970) one of the central figures in modern Hebrew fiction. He was awarded, together with poet Nelly Sachs, the Nobel Prize in Literature in 1966. He was the first Hebrew writer to win the Nobel Prize in Literature. His works are published in English under the name S.Y. Agnon. His works deal

with the conflict between traditional Jewish life and language, and the modern world. They also attempt to recapture the fading traditions of the European shtetl (village). In a wider context, he also contributed to the narrator's character in modern literature.



Menachem Begin (16 August 1913 – 09 March 1992) the first Likud Prime Minister of Israel. His electoral victory in 1977 symbolised a new social realignment in which hitherto marginalised communities gained public recognition. Begin's significant achievement as Prime Minister was the signing of the peace accord with Egypt in 1978. He was awarded, together with

President Anwar Sadat, the Nobel Peace Prize in 1978.



Yitzhak Rabin (01 March 1922 – 04 November 1995) politician and IDF chief. He was the fifth Prime Minister of Israel with two periods in office, from 1974 until 1977 and from 1992 until his assassination in 1995. In 1994, during his second term Rabin won the Nobel Peace Prize together with Shimon Peres and Yasser Arafat, for their efforts towards peace, which culminated in

the Oslo Accords. He was assassinated by a right-wing Israeli radical who had strenuously opposed Rabin's signing of the Oslo Accords. He was the first local-born Prime Minister of Israel.



Shimon Peres (born 02 August 1923) is a senior statesman with a political career spanning more than 65 years and is the 9th President of Israel. He was first elected to the Knesset in November 1959.

He was Prime Minister of Israel three times (once as acting prime minister) and served in 12 Israeli cabinets. In 1994, Shimon Peres won the Nobel Peace Prize together

with Yitzhak Rabin and Yasser Arafat for the peace talks that produced the Oslo Accords. Peres participated in these talks as the Israeli Foreign Minister, under Prime Minister Rabin. On 15 July 2007, Peres was elected by the Knesset for the presidency and sworn into office for a seven-year term.



Yisrael Robert John Aumann (born 08 June 1930) is a mathematician and works at the Center for the Study of Rationality in the Hebrew University of Jerusalem in Israel.

Aumann was awarded the 2005 Nobel Prize in Economics for "having enhanced our understanding of conflict and cooperation through game-theory analysis". He shared the

prize with Thomas Schelling. Aumann's greatest contribution is in the realm of repeated games, which are situations in which players encounter the same situation over and over again. Aumann was the first to define the concept of correlated equilibrium in game theory, which is a type of equilibrium in non-cooperative games that is more flexible than the classical Nash Equilibrium. Furthermore, Aumann has introduced the first purely formal account of the notion of common knowledge in game theory.



Daniel Kahneman (born 05 March 1934), is a psychologist, notable for his pioneering work on behavioral finance and hedonic psychology. With Amos Tversky and others, Kahneman established a cognitive basis for common human errors using heuristics and in developing prospect theory. Currently, he is a faculty member at Princeton University and a fellow at Hebrew University. He is the winner

of the 2002 Nobel Prize in Economics for his work in prospect theory despite being a research psychologist and not an economist. In fact, Kahneman claims to have never taken a single economics course.



Avram Hershko (born 31 December 1937) is a biologist. Along with Aaron Ciechanover and Irwin Rose, he was awarded the 2004 Nobel Prize in Chemistry for the discovery of ubiquitin-mediated protein degradation. He is currently a Distinguished Professor at the Rappaport Family Institute for Research in Medical Sciences at the Technion (Israel Institute of Technology) in Haifa and Adjunct

Professor of Pathology at New York University. The ubiquitin-proteasome pathway has a critical role in maintaining the homeostasis of cells and is believed to be involved in the development and progression of diseases such as cancer, muscular and neurological diseases, immune and inflammatory responses.



Aaron Ciechanover (born 01 October 1947) is a biologist. Along with Avram Hershko and Irwin Rose, he was awarded the 2004 Nobel Prize in Chemistry for the discovery of ubiquitin-mediated protein degradation. He is currently a Professor in the Unit of Biochemistry and Director of the Rappaport Family Institute for Research in Medical Sciences at the Technion (Israel Institute of

Technology) in Haifa. The ubiquitin-proteasome pathway has a critical role in maintaining the homeostasis of cells and is believed to be involved in the development and progression of diseases such as cancer, muscular and neurological diseases, immune and inflammatory responses.