



INNOVATION

In
TURKEY & WORLDWIDE

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Related Terminology

- R&D**
- High Technology**
- Entrepreneurship**

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- **Countries focusing on R&D have an improving Innovation Index.**
 - **Out of 142 nations, Turkey ranks 68th highest in innovation.**
 - **In Global Competitiveness Index Turkey ranks 44th out of 148 nations.**

In 2013

Expenditures on R&D as a share of GDP is 0.95%.

R&D personel per million population is 2250.

In 2023

Planed Expenditures on R&D as a share of GDP will be 3%.

Expected R&D personel per million population will be 6000.

Incentives Given To Promoting R&D and High Technology

- **Past 5 years universities and industry have been encouraged to build science parks. There are about 60 parks now.**
- **Industry employing 30 or more R&D personnel have very high tax and social security exemptions.**
- **Any person or company which has developed a high tech product thru R&D is backed up by a large investment support.**

Immediate results are increase in quantity of innovation but not quality.

INNOVATION CAPABILITY

- **R&D personel per million population.**
- **Scientific publications per million population.**
- **Literacy rate.**



EDUCATION

- **Funds.**
- **Time.**
- **Level.**

Time Factor In Education

Short Courses, Certificate programmes in

- ❖ **Innovations**
- ❖ **Entrepreneurship**

Curriculum Changes in undergraduate programmes

- ❖ **Innovations**
- ❖ **Entrepreneurship**
- ❖ **High added on value products**
- ❖ **High Technology products**

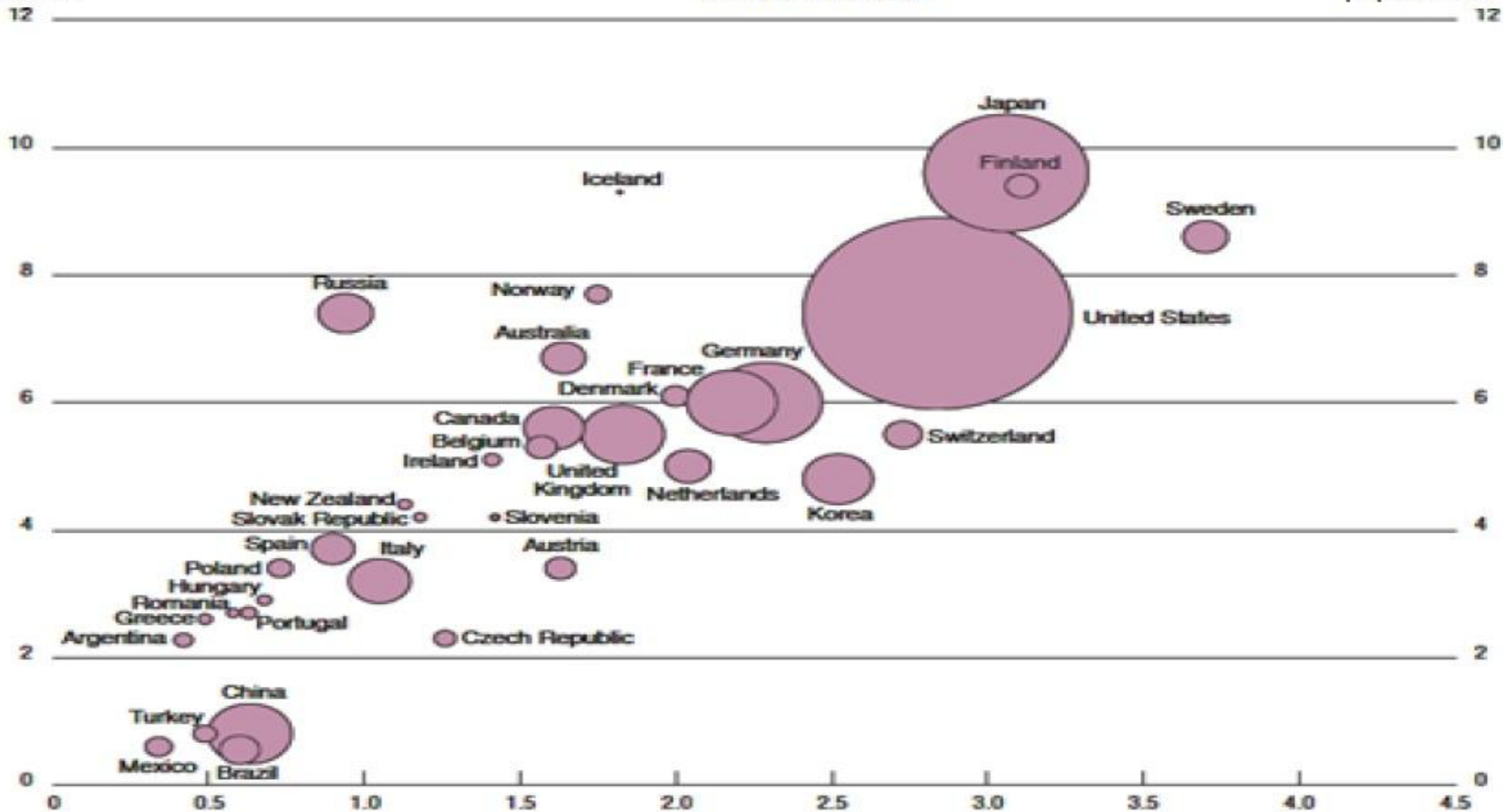
Early High School Education

- ❖ **Innovations**
 - **Innovative Ideas**
 - **Innovative Products**


R&D Personal per 1000 population

● R&D expenditures in Billion Dollars

R&D Personal per 1000 population



% Expenditures of R&D to GDP



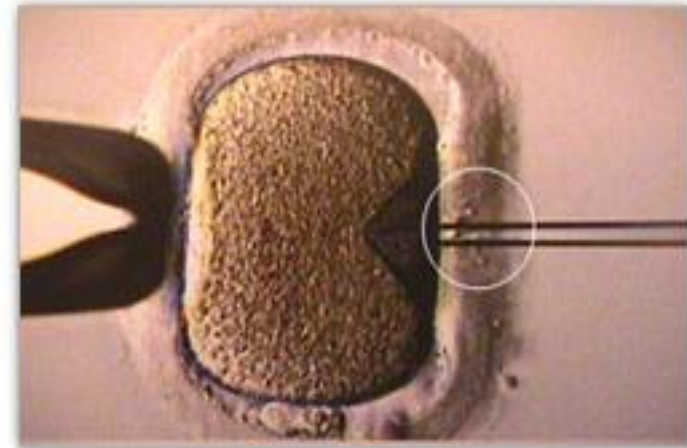
HISTORY OF INNOVATION and LESSONS LEARNED

- **Discovery**
- **Innovation**
- **Social Impact**

Freon Deodorantlar



Artificial Insamination



Star Wars



Games

				8			4
	8	4		1	6		
			5			1	
1	3	8				9	
6		8				4	3
		2			9	5	1
		7			2		
			7	8		2	6
2			3				



Toys



Refrigerator (Fridge)



Vacuum Cleaner (Hoover)



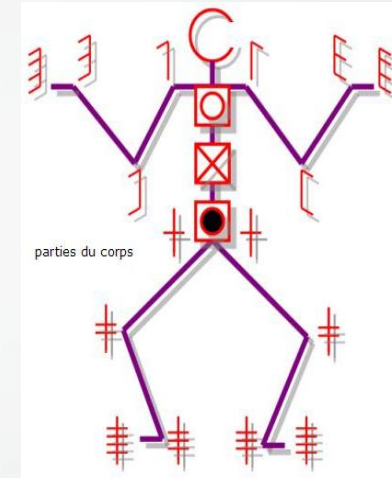
Photocopier (Xerox)



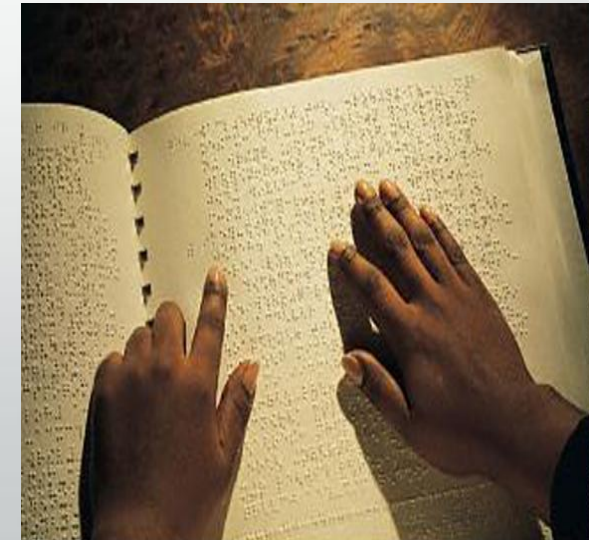
Music Notes



Laban Notation



Sign Language



Braille Alphabet

Fig. 22: ECOLOGICAL FOOTPRINT PER PERSON, BY COUNTRY, 2005

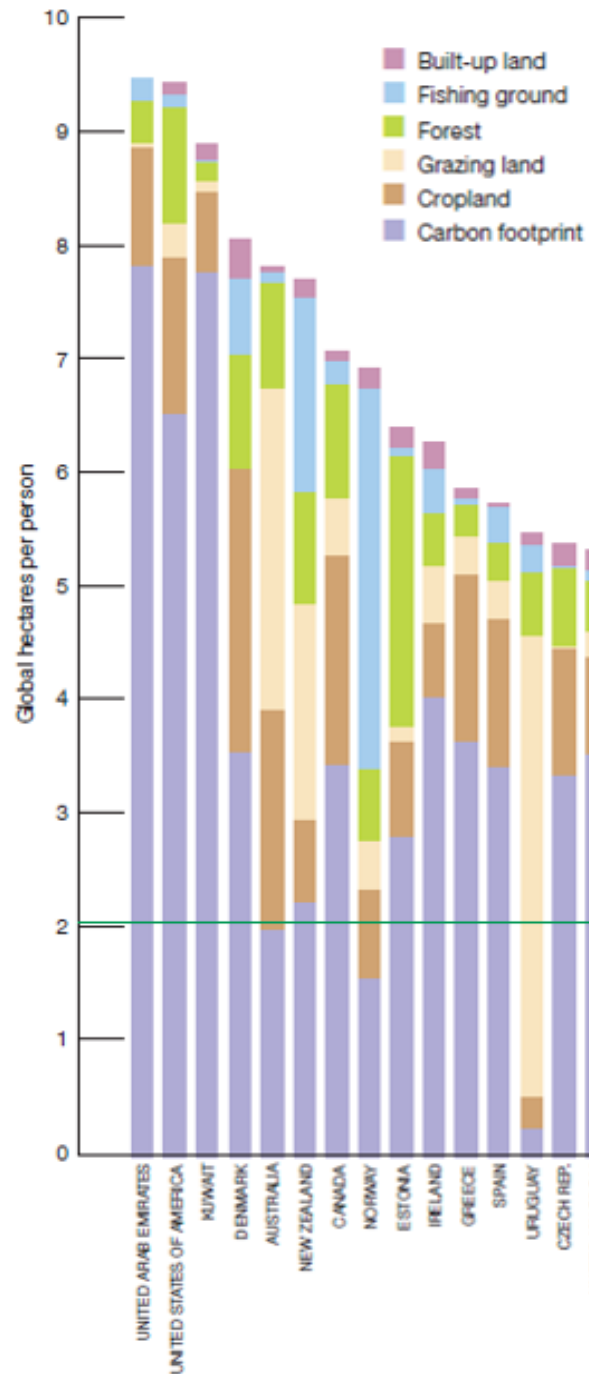


Fig. 23: ECOLOGICAL FOOTPRINT BY COMPONENT, 1961-2005

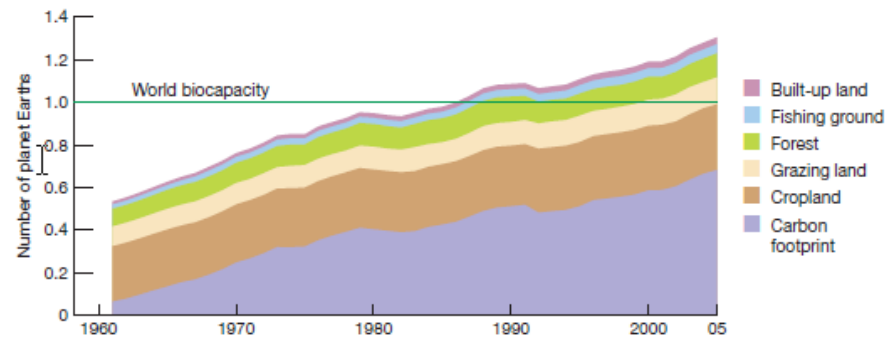
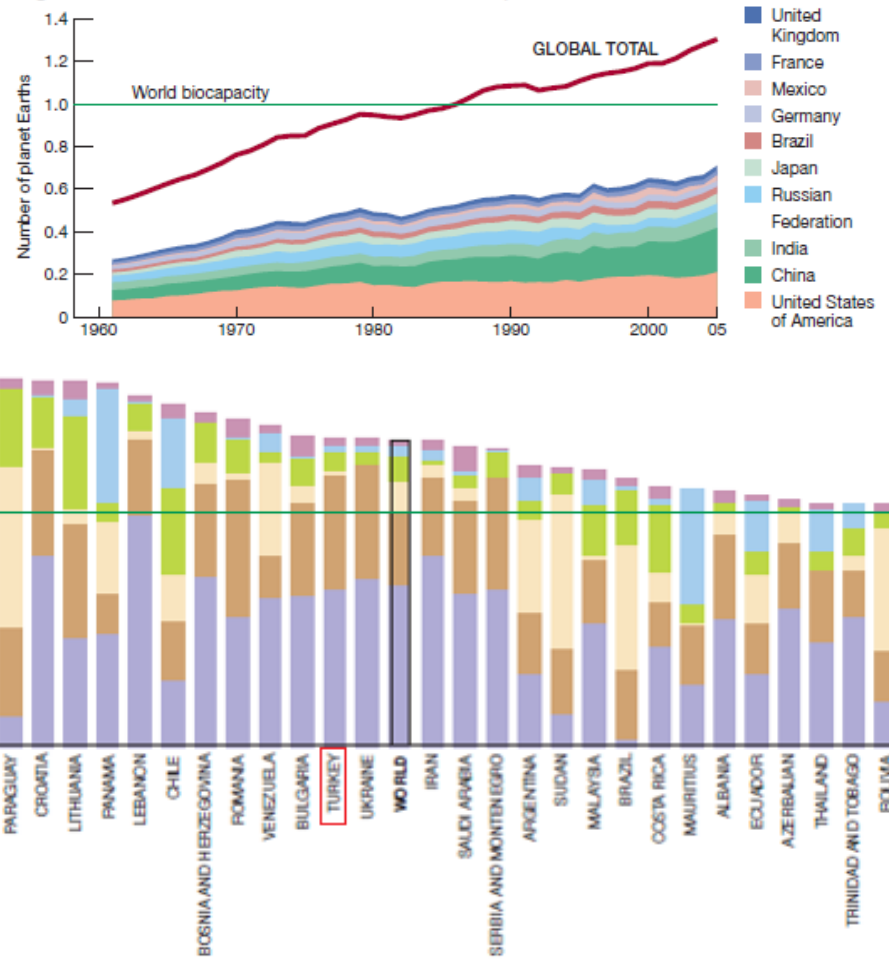



Fig. 24: ECOLOGICAL FOOTPRINT BY COUNTRY, 1961-2005





**I BELIEVE
IN THE DIGNITY OF LABOR,
WHETHER WITH HEAD OR HAND;
THAT THE WORLD OWES NO MAN A
LIVING BUT THAT IT
OWES EVERY MAN AN
OPPORTUNITY TO MAKE A LIVING**

J. D. ROCKEFELLER, JR.