

ECCE General Assembly Meeting
Riga, May 24, 2008

Social & Economic Impacts of SOUTH-EASTERN ANATOLIA INFRASTRUCTURE DEVELOPMENT PROJECT

G. Özdemir & T. Tankut

OUTLINE

- * Note on Compliance
- * Project
 - Region Concerned
 - Object & Scope
 - Progress
- * Impacts
 - On economy
 - Social
- * Concluding Remarks

COMPLIANCE WITH SESSION

- * The title of the session is specific:
"Effects of Infrastructure Development on the Building Market"
- * Our interpretation is broader in scope:
"Effects of Infrastructure Development on the Society in Every Respect"
- * It should be noted that the presentation was prepared with this understanding.

PROJECT

PROJECT

Overall Project

- * The largest, the most ambitious and the most daring project realised in Turkey.
- * An integrated regional development project through sustainable development of the soil, water and human resources of the South-eastern Anatolia region.

PROJECT

Engineering Dimension

- * A basin management project, unique in the sense that it involves Euphrates and Tigris basins as well as Harran plain all together.
- * A basin management project to control 29% of the surface water of the country, when completed.

PROJECT

Time Table

- * Planning started in the sixties,
- * Engineering execution started in 1977,
- * Expected completion in 2012.
- * Social, industrial, educational etc. activities will naturally continue.

REGION CONCERNED

- * Region covered by the project includes nine provinces out of 81 in the country which correspond approximately to
 - 10% of the land and
 - 10% of the population. However,
 - 29% of the surface water.
- * Various figures to be given later should always be compared with this 10% share.

REGION CONCERNED



REGION CONCERNED



OBJECTIVES

- * Improvement of the income level and
- * The living conditions in the region;
- * Elimination of inter-regional differences;
- * Contribution to the national economy and
- * To the stability in the region.

TARGETS

- * Irrigation of 1.8M ha (18 000 km²) land
(imagine a rectangular area, 90 km x 200 km)
- * Hydro-power generation 27B kWh pa
- * Increase of per capita income by 209%
- * Employment for 3.8 million people

SCOPE

- * Engineering aspect of the project involves
 - Construction of 22 dams
 - 19 hydro-power plants
 - 7 500 MW installed power capacity
 - A huge irrigation system (18 000 km²)
 - Two 8m dia 27 km long water tunnels

FINANCE

- * **Total cost of construction ~ USD 30Bil'n**
(~10% of total yearly GNP of Turkey)
- * **Share in the investment budget**

- Total	~ 7%
- Energy	~30%
- Irrigation	~15%
- Agriculture	~18%

PROGRESS (as of 2007)

	<u>Planned</u>	<u>Realised</u>
* Dams	22	15
* Hydro-power plants	19	9
* Tunnels (8m dia 27 km)	2	2
* Installed cap (GW)	7.5	5.5
* Power gen (Bil'n kWh pa)	27	13
* Irrigation (x1000 km ²)	18	2.7
* Investment (Bil'n USD)	30	18

PROGRESS



PROGRESS



PROGRESS



PROGRESS



IMPACTS

EFFECTS ON ECONOMY

Agriculture

- * Cultivable land, 25 000 km²
- * Irrigable land, 21 000 km² (25% of Turkey)
Project target, 18 000 km²
Progress 2007, 2 700 km² (15% of target)
- * Number of tractors in the region,

<u>1989</u>	<u>1999</u>	<u>2005</u>
~ 31 000	~ 47 000	~ 49 000

EFFECTS ON ECONOMY

Agriculture

- * Effect of irrigation in the Harran plain

	<u>Irrigation</u>	<u>Added value pc</u>
- Before irrigation		~ USD 600
- 1995	~300 km ²	~ USD 1 600
- 1998	~900 km ²	~ USD 2 000
- 2003	~1200 km ²	~ USD 1 300

EFFECTS ON ECONOMY

Energy

- * Energy generation in Turkey

<u>Thermo-</u>	<u>Hydro-</u>	<u>Others</u>
62%	37%	1%

- * Project share (at ~70% completion)
50% of hydro-power generation or
20% of total energy generation.

EFFECTS ON ECONOMY

Energy

- * Energy generation within project, 2006
Energy, 21.4 Billion kWh(77% of target)
Equivalent, 1.3 Billion USD

- * Energy consumption in the region (GWh)

<u>2002</u>	<u>2006</u>
~ 6 600	~ 8 900

EFFECTS ON ECONOMY

Industry

- * **Org'd Ind Districts (OID)** in the region
 - 8 in operation, 4 partly in operation
 - Housing and serving ~ 1 000 SME's
- * **Small Ind Sites (SIS)** in the region
 - 25 in operation, 12 partly in operation
 - Housing ~ 10 000 workshops

EFFECTS ON ECONOMY

Industry

- * Enterprises in the region,

<u>1997</u>	<u>2004</u>	<u>2006</u>
~ 830	~ 1 610	~ 1 840

- * Employment in these enterprises,

<u>1997</u>	<u>2004</u>	<u>2006</u>
~ 45 000	~ 69 000	~ 81 000

EFFECTS ON ECONOMY

Industry

* Export share of the region,

2003
2.1%

2005
3.0%

2007
2.9%

* Import share of the region,

2003
1.7%

2005
1.6%

2007
1.6%

SOCIAL EFFECTS

Demography

	<u>Region</u>	<u>Turkey</u>
* Population, 2000	6.6 M	67.8 M
* Population, 2006	7.3 M	72.9 M
* Pop density (per km ²)	88	88
* Urban population	62.7%	64.9%
* Rural population	37.3%	35.1%
* Avr household pop	7	5
* Children per family	5	3
* Infant fatality,	4.8%	4.3%

SOCIAL EFFECTS

Literacy

	<u>Region</u>	<u>Turkey</u>
* Total, 1985	56%	73%
* Total, 2000	77%	88%
* Female, 1985	40%	68%
* Female, 2000	60%	81%

SOCIAL EFFECTS

Education

Number of Primary School Students

	<u>Region</u>	<u>Turkey</u>
* 1997	0.91M (10.9%)	8.37M
* 2006	1.51M (13.9%)	10.85M

SOCIAL EFFECTS

Education

Pre-School Level (2006)

	<u>Region</u>	<u>Turkey</u>
* Schools	2 000 (9.8%)	21 000
* Students	75 000 (11.7%)	641 000
* Teachers	1 700 (6.7%)	25 000

SOCIAL EFFECTS

Education

Primary School Level (2006)

	<u>Region</u>	<u>Turkey</u>
* Schools	5 500 (15.9%)	34 700
* Students	1.51M (13.9%)	10.85M
* Teachers	42 800 (10.6%)	402 800

SOCIAL EFFECTS

Education

Intermediate School Level (2006)

	<u>Region</u>	<u>Turkey</u>
* Schools	500 (6.4%)	7 900
* Students	0.30M (8.6%)	3.39M
* Teachers	11 400 (6.0%)	187 700

SOCIAL EFFECTS

Health (2006)

	<u>Region</u>	<u>Turkey</u>
* Hospitals	75 (6.5%)	1 156
* Hospital beds	9 400 (5.3%)	176 800
* Beds per 10000 pop	13.9	24.5

CONCLUDING REMARKS

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- * The present presentation was prepared by two amateurs in a short time on the basis of a limited literature survey.
- * They realise, indicators of especially the social impact are far from being comprehensive and satisfactory.
- * However, they hope to be tolerated, since the aim of the presentation is no more than to give just an impression.

THANKS

for your attention...

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