



SYNERGETIC SOCIETY AND AGENDA 21

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II. CASE STUDY AND EXAMINING

THE MODEL OF SYNERGETIC DYNAMICS OF COMPLEX SOCIETY

RESEARCH SUBJECT: UNCERTAINTY, CHAOS AND SELF-ORGANIZATION
PROCESS AFTER THE EARTHQUAKES OF AUGUST 17th AND
NOVEMBER 12th 1999 IN TURKEY

RESEARCH AREA: EARTHQUAKE REGION WHICH INCLUDES KOCAELI,
SAKARYA, YALOVA, AND BOLU PROVINCES

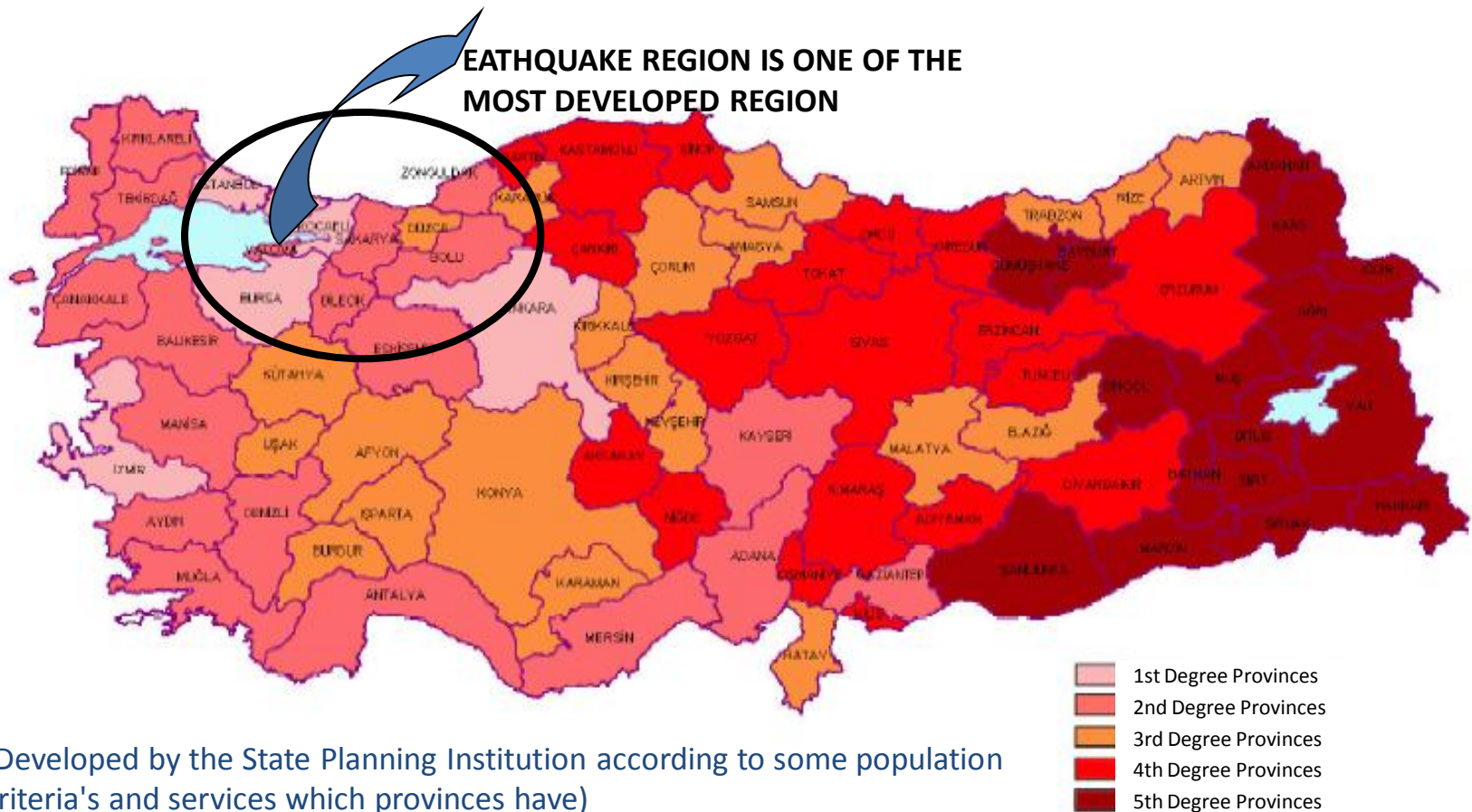
THIS REGION OF TURKEY IS

- THE MOST POPULATED AND DENSED
- THE MOST INDUSTRIALIZED
- THE MOST DEVELOPED

METHOD OF RESEARCH: FIELD RESEARCH (Flexible Method of Analysis)

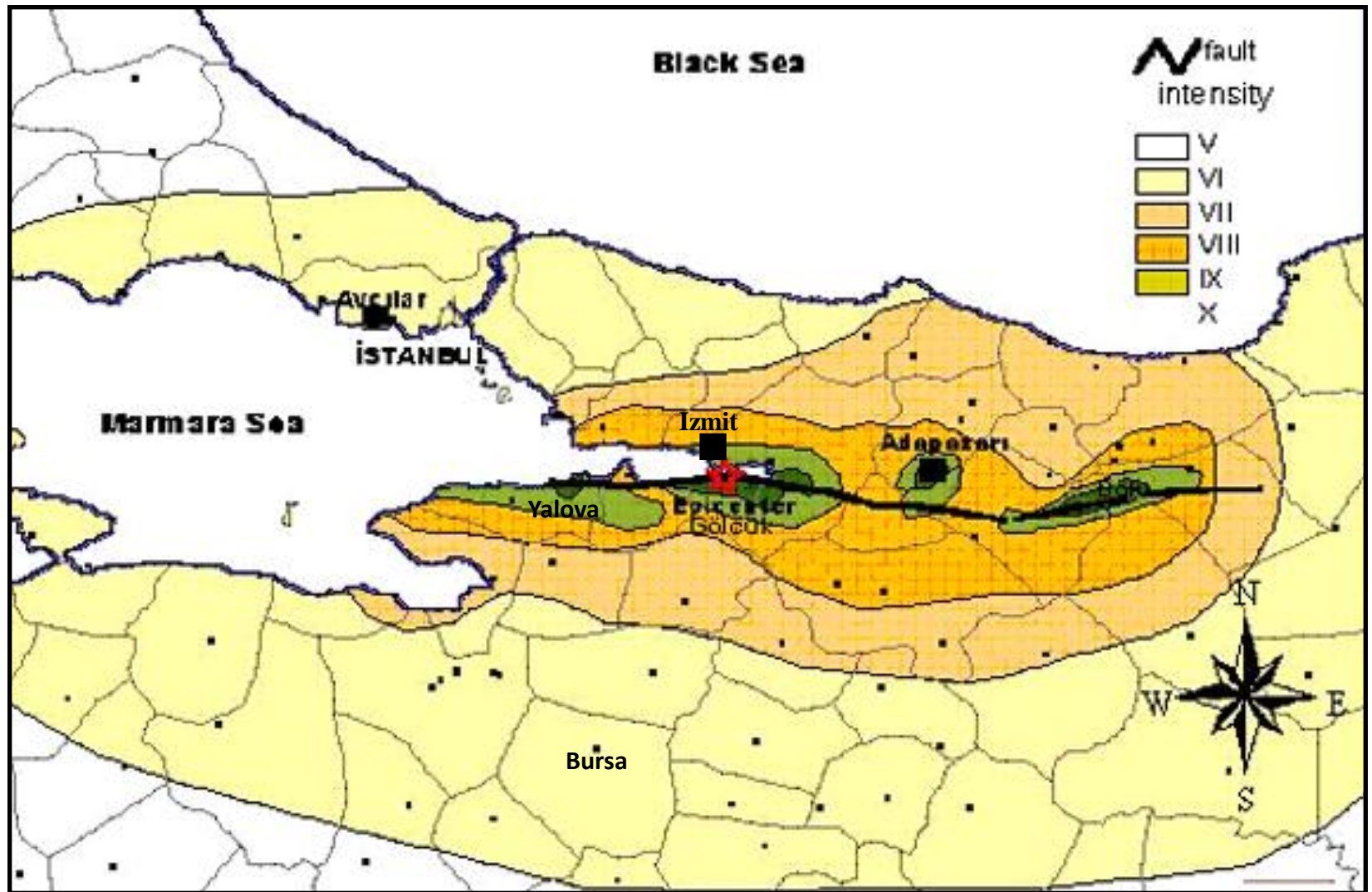
- DEEP INTERVIEWS
- CASE ANALYSIS
- OBSERVATIONS
- LITERATURE SURVEY ABOUT THE SUBJECT
- OPINIONS AND REPORTS OF ACTORS & INSTITUTIONS WHICH
HAVE TAKEN ROLES IN THE PROCESS

PROVINCES OF TURKEY ACCORDING TO THE DEVELOPMENT INDEX

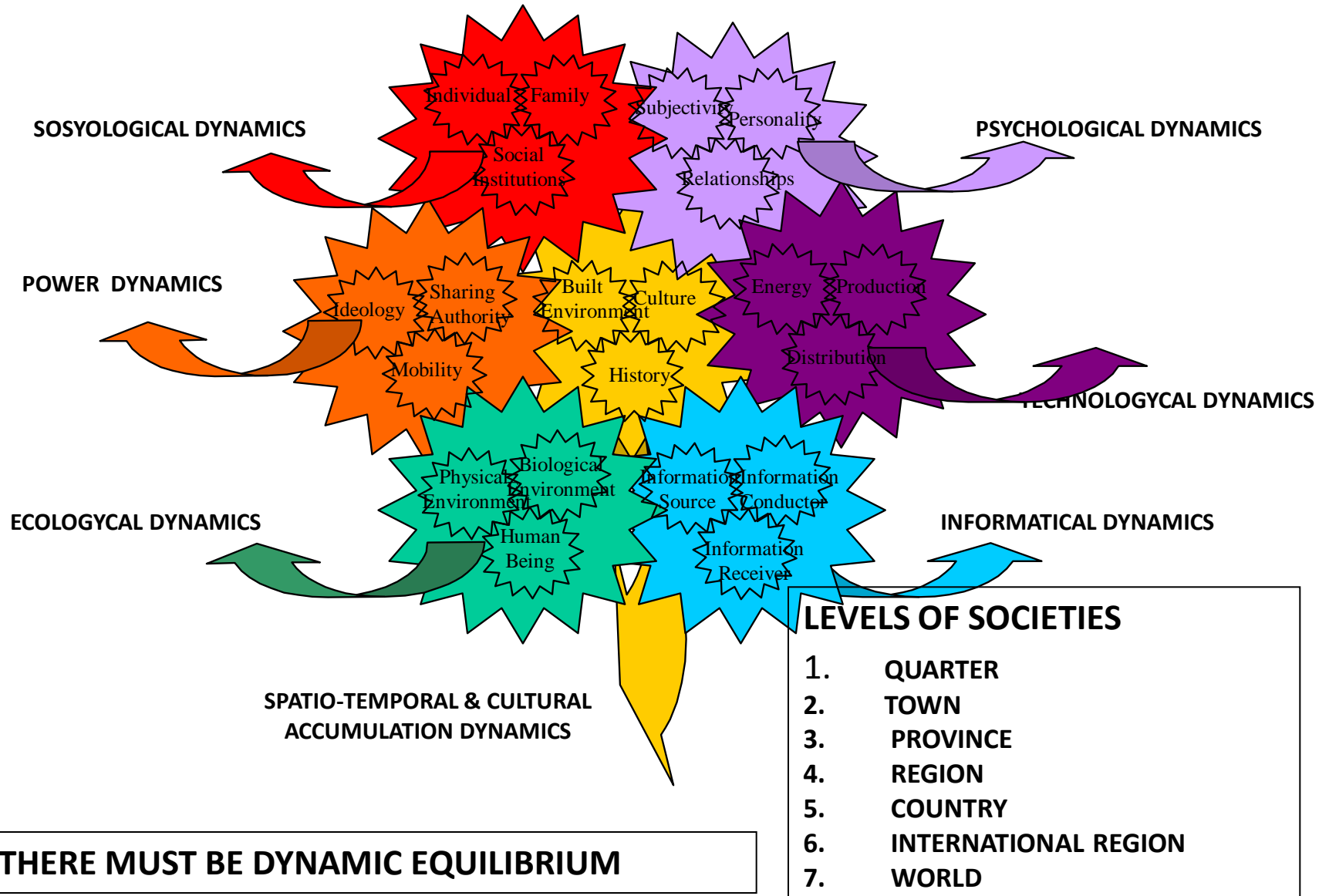


(Developed by the State Planning Institution according to some population criteria's and services which provinces have)

EARTHQUAKE EFFECTS



SYNERGETIC DYNAMICS OF COMPLEX SOCIETY



CHAOS AND SELF-ORGANIZATION PROCESS AFTER EARTHQUAKE

1st LOOP / CIRCULATION OF DYNAMICS: CHAOS SITUATION

AN UNCERTINTY FACTOR IN ECOLOGYCAL DYNAMICS

HAD BEEN OCCURED



GREAT INTERACTIONS WHICH HAVE STARTED IN THE REGION BUT
EFFECTS ALL DYNAMICS OF ALL LEVEL OF SOCIETIES (WAVES OF
CHANGE & TRANSFORMATION)

&

SOCIAL SYNERGY HAS STARTED TO DEVELOP

IN THE ACTIVITIES

WHICH ARE

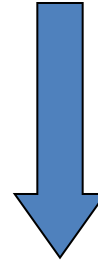
1. TO SEARCH & SAVE
2. TO BUILT TEMPORARY HOUSES
3. TO SUSTAIN PSCHOLOGICAL AND SOCIAL SERVICES

2nd LOOP/ CIRCULATION OF DYNAMICS: SELF – ORGANIZATION PROCESS

SOCIAL SYNERGY DEVELOPMENT IN COMMUNICATION & INTERACTION CHANNELS
BETWEEN PEOPLE AND NGO'S

SELF- ORGANIZATION

*PEOPLE & NGO'S COME TOGETHER FOR
HELP ACCORDING TO THEIR SIMILAR
CHARACTERISTICS AND COMMON
GOALS & OBJECTIVES*



THE DEVELOPMENT OF COMMUNICATION & COOPERATION CHANNELS BETWEEN
EXISTING PUBLIC ORGANIZATIONS & CIVIL ORGANIZATIONS

*BECAUSE LOCAL PUBLIC
INSTITUTIONS COULDN'T WORK
STATE ORGANIZE
A REGIONAL GOVERNMENT
FOR EMERGENCY SITUATION*



*GREAT SYNERGY HAD BEEN OCCURED
BETWEEN PUBLIC ORG. & CIVIL
SOCIETIES OF ALL LEVELS OF SOCIETIES*

AND COLLECTIVE WORKS FOR
HALF TEMPORARY / HALF PERMANENT
HOUSING AND SERVICE AREAS

3rd LOOP / CIRCULATION OF DYNAMICS: PASSING THROUGH THE NEW SOCIAL ORDER

SHARING THE EXPERIENCES HAD BEEN LIVED
IN EARTHQUAKE CHAOS



PROVIDES

SOCIAL SELF – LEARNING



STARTED TO

THE SEARCHES FOR NEW SOCIAL ORDER

Society is Improving the Models for New Organizations to Be Ready for
Possible Risks & Uncertainties

EFFECTS OF EARTHQUAKES IN BUILT ENVIRONMENT IN SPATIO-TEMPORAL CULTURAL ACCUMULATION DYNAMICS

(Built Environment, Culture, & History)

BUILT ENVIRONMENT

AREAS OF FUNCTIONS (Service, Production, Housing / Shelters)

Technical & Social Services

Transportation

Energy (electricity & heating)

Communication

Water & Sewer System

} Networks whether
demolished or got
hazards in different
levels

Taking away of wreckage (when the possibility of lives under the
demolished building had finished)

Building of temporary housing

CULTURE The Buildings of Social Services had been also demolished

HISTORY The Spatial Accumulations of History had been also lost

PROVINCES	DEMAGE SITUATION						TOTAL
	DEMOLISHED - HEAVY		MEDIUM		LOW		
	HOUSE	WORK PLACE	HOUSE	WORK PLACE	HOUSE	WORK PLACE	
BOLU	2334	219	6099	902	5767	1016	16337
BURSA	141	3	571	25	1371	5	2116
DÜZCE	16666	3873	10968	2573	13070	1605	48755
ESKİŞEHİR	90	21	167	18	398	32	726
İSTANBUL	3051	447	15102	2510	17870	2280	41260
KARABÜK	0	0	76	0	106	2	184
KOCAELİ	35845	5478	41091	5861	45606	6221	140102
SAKARYA	24678	5146	18406	3764	27230	2699	81923
YALOVA	13895	751	14540	1159	11663	1885	43893
ZONGULDAK	108	6	311	3	952	9	1389
TOTAL	96808	15944	107331	16815	124033	15754	376685

EFFECTS OF EARTHQUAKES IN TECHNOLOGYCAL DYNAMICS

(Energy, Production & Distribution)

LOOSES IN GROSS NATIONAL PRODUCT (GNP), PRODUCTIONS

TURKEY		EARTQUAKE REGION (Kocaeli, Sakarya, Yalova, Bolu)			
	GNP (Predicted)		GNP (Realized)		Looses in Production
	Million \$		Million \$		Million \$
	194 725		1 314		2 412

EFFECTS OF EARTHQUAKES ON HEALTH OF HUMAN BEINGS

IN ECOLOGYCAL DYNAMICS

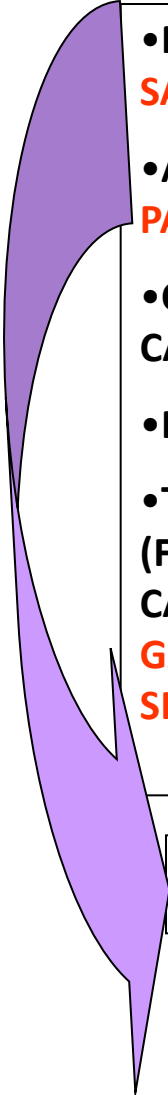
Physical Environment, Biological Env., Human Being)

PLACE	DATE	DEGREE	DEATH	INJURED
KOCAELİ	17.08.1999	7.4	17127	43953
BOLU-DÜZCE	12.11.1999	7.2	845	4948
TOTAL			17972	48901

ESPECIALLY WATER POLLUTION EFFECTS HEALTH OF THE ENVIRONMENT

BECAUSE OF THE INDUSTRIAL REGION THER HAD BEEN INFILTRATION FROM STOCK AREA AND TANKERS OF 18 FIRM

EFFECTS OF EARTHQUAKES IN PSYCHOLOGICAL DYNAMICS (Identity, Personality, Relations)

- 
- MANY PEOPLE HAVE LOST THEIR FAMILY AND FRIENDS WHICH CAUSED TO **SADNESS**
 - ALIVE POSSIBILITY OF THEM (UNDER DEMOLISHED BUILDINGS) CAUSED TO **PANIC** FOR HELP
 - COMMUNICATION AND TRANSPORTATION TO REGION HAVE BEEN CUT WHICH CAUSED TO **WORRY AND HELPLESSNESS**
 - POSSIBILITY OF FOLLOWING EARTHQUAKES CAUSED TO **FEAR**
 - TOO MANY PEOPLE STARTED TO TRAVEL FOR HELPING WITH THEIR STUFFS (FOODS, CLOTHES, DRESS, SHOES, DRUGS,... WHATEVER THEY COULD FOUND) CAUSED TO ROADS HAVE BEEN STOPPED UP. THIS SITUATION SEEMS LIKE **GANGRENE**. BECAUSE THIS HELPS CAUSED TO **NEGATIVE EFFECTS FOR HEALTH SERVICESS & EMERGENCY HELPS**

SOCIAL SHOCK

EFFECTS OF EARTHQUAKES IN INFORMATIONAL DYNAMICS

- COMMUNICATION TO THE REGION HAS BEEN CUT
- KANDILLI OBSERVATORY WAS THE ONLY ONE SOURCE OF INFORMATION WHICH COULD BE PERCEIVED
- MEDIA INSTITUTIONS HAVE TAKEN ON THE ROLE FOR ESTABLISHING THE SITUATIONS AND THE NEEDS OF REGION
- SOME BUILDINGS OF EDUCATION SYSTEM DEMOLISHED.

**EFFECTS OF EARTHQUAKES
IN POWER DYNAMICS
(Ideology, Sharing Authority, Mobility)**

INSTITUTIONS OF ADMINISTRATION (MUNICIPALITIES & PROVINCIAL
GOVERNMENTS)

COULDN'T WORK BECAUSE OF LOST OR INJURED EMPLOYMENTS OR THEIR
FAMILIES



STATE HAVE SELF – ORGANIZED AND ESTABLISHED NEW INSTITUTIONS DURING
THE CHAOS SITUATION

ADMINISTRATION CENTER OF CRISIS IN PRIME MINISTER'S OFFICE

- COORDINATION GOVERNMENT OF EARTQUAKE REGION
- CRISIS TABLES IN PUBLIC INSTITUTIONS

A PROCESS OF CONSTRUCTION OF A PRIMARY SCHOOL IN A "KILICKOY" VILLAGE IN YALOVA WITHIN THE SYNERGETIC DYNAMICS

HELPS

- A visit of Austrian President's Wife to Istanbul (35.000 \$)
- A graduated student had gathered from Italy (80.000 \$)
- Istanbul High School of Boys (80.000 D.M.)
- A Company between students' family and around (70.000 \$)
- Annual bonus prizes of the labours of a drug firm (10.000 \$)
- A company in schools & std. Families in Austria
- A company which had been started by the Dutch High School between Turkish families in Germany
- A member of the Society of Vincent de Paul in America who is the Establisher of Austrian High School in Turkey (50.000 \$)
- A Dutch Newspaper

A GROUP FOR HELP IN
ISTANBUL AUSTRIAN
HIGH SCHOOL

THE BRANCH OF
AUSTRIAN HIGH
SCHOOL
FOUNDATION IN
ISTANBUL (NGO)

PERMISSION FOR
GATHERING
MONEY FOR
SCHOOL

THE CRISIS CENTER
OF
PRIMEMINISTRY

THE MINISTRY OF
EDUCATION IN
TURKEY

A CONTRACT
FOR BUILDING
A SCHOOL

ONE OF THE TEACHERS
IN HIGHSCHOOL WHO
WAS FROM THIS
VILLAGE SUGESTED

200 STUDENTS ARE TAKING LESSONS
IN A SHED
(IT WAS ISOLATED UNTILL SCHOLL
HAD BEEB FINISHED)

A WARD OF THE
CONTRACTS FOR
• THE PROJECT &
• CONSTRUCTION

WINDOWS HAD BEEN
GRANTED FROM A
PRIVATE
CONSTRUCTION FIRM

VILLAGE OF
KILIÇKÖY /
YALOVA

CONSTRUCTION

May 2000

MOVING FROM SHED
TO SCHOOL

December 2000

LEGAL
OPENING

May 2001

- 8 classroom – 240 students
- Laboratory of Computer
- Laboratory of Science
- Library
- 16 teachers
- 4 house provided for teachers

INTERNATIONAL LEVEL

SOCIOLOGICAL &
INFORMATICAL
DYNAMICS

NATIONAL LEVEL
POWER DYNAMICS

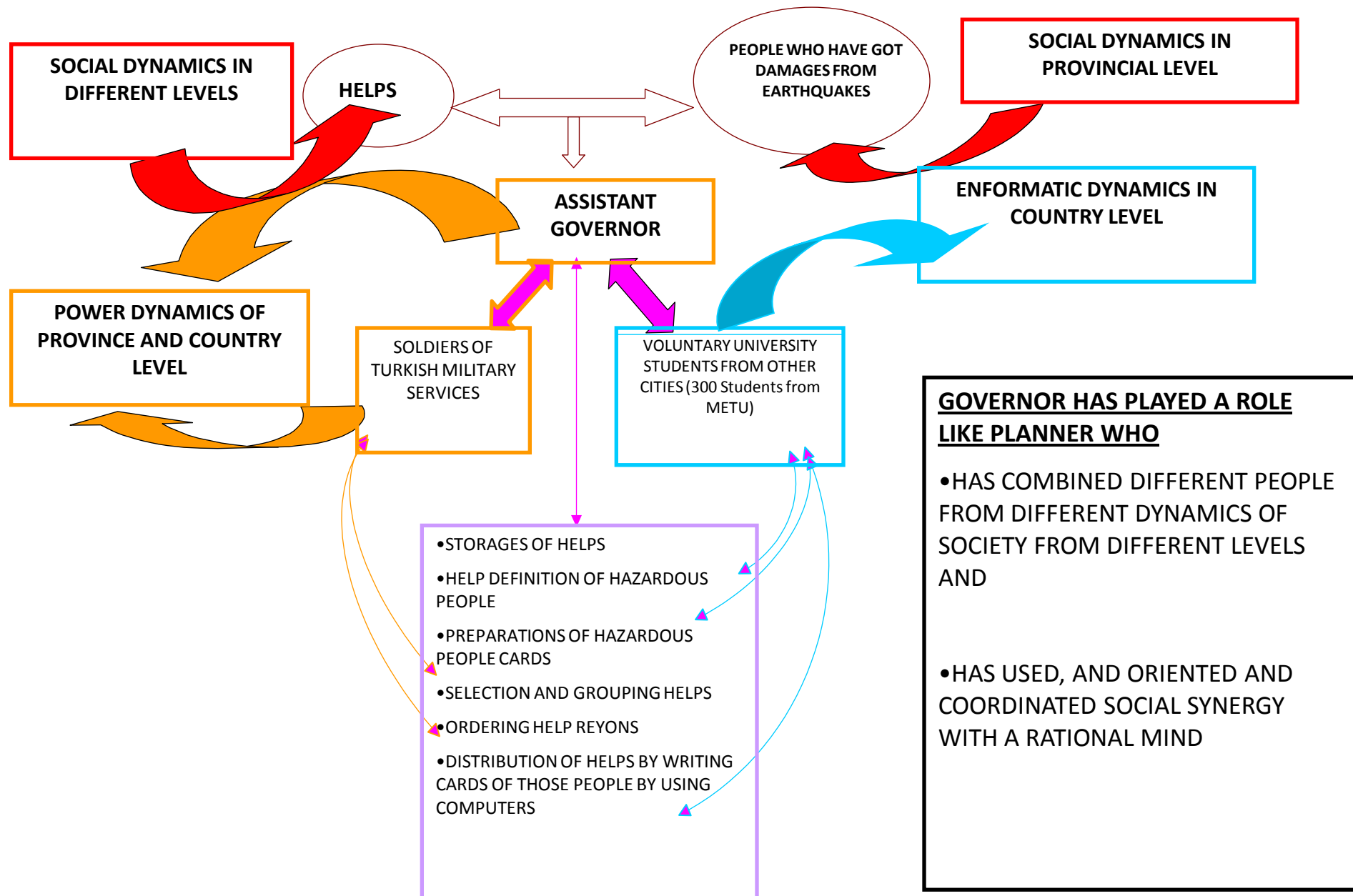
VILLAGE LEVEL

FORMAL & SPATIAL
CULTURAL DYNAMICS

VILLAGE LEVEL

SPATIAL
CULTURAL
DYNAMICS

VILLAGE
AREA



SYNERGY ACTORS HAVE OCCURED AFTER EARTHQUAKE

THE LEVEL OF INSTITUTION / KIND OF INS.	WORLD	INTER- NATIONAL	NATIONAL		REGION	CITY	TOWN	QUARTER	TOTAL
			ABROAD	TURKEY					
PRIVATE				3					3
PUBLIC			5	15		25			45
NGO's	6	32	27	68		32	7	18	190
INTERNATIONAL UNIONS	12	8							20
UNIONS OF LOCAL AUTHORITIES	1				1				2
TOTAL	19	40	32	86	1	57	7	18	260