Catastrophes and Insurance
Lessons, Challenges and Trends

International ECO Symposium on Disaster Economics
AFAD- ECO - DPPI SEE
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www.dask.gov.tr
The devastating Earthquakes in Marmara region on 17th August and 12th November 1999

- Insured loss: around USD 800 million
- Economic loss: over USD 10 billion
- Low insurance penetration (especially for residential risks)
- Burden on public budget
- Decree law no 587 – compulsory earthquake insurance as of 27th September 2000 until 18th of August 2012
- As from 18th August 2012 new 6305 Catastrophe Insurance Law
<table>
<thead>
<tr>
<th>WHY</th>
<th>GOVERNMENT’S PRIORITIES</th>
</tr>
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<tbody>
<tr>
<td>- Reactive solutions versus proactive solutions</td>
<td>- A compulsory earthquake insurance system for homeowners</td>
</tr>
<tr>
<td>- Shortage of funds in immediate need</td>
<td>- Affordable price for every homeowner</td>
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<tr>
<td>- Allowance of funds to those in need is problematic</td>
<td>- True risk transfer mechanism</td>
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<tr>
<td>- Political and bureaucratic considerations may prevail</td>
<td>- Claims-paying capacity to limit government’s exposure</td>
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<tr>
<td>- Government priorities is on getting back to economic and social life</td>
<td>- Build national catastrophes reserves by time</td>
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<td></td>
<td>- improvement of risk culture and insurance consciousness in public</td>
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<td></td>
<td>- Rely on distribution channels of Turkish insurance industry</td>
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ESTABLISMENT OF TCIP

LEGAL AND FINANCIAL BASE OF TCIP

- Financed by Marmara Earthquake Emergency Reconstruction Project co-financed by:
  - Turkish Government
  - World Bank
  - European Bank for Reconstruction and Development
- Decree law no 587 – compulsory earthquake insurance as of 27th September 2000.
- Eureko Sigorta is tendered for the following 5 years till August, 2015
- As from 18th August 2012 new 6305 Catastrophe Insurance Law

PUBLIC-PRIVATE PARTNERSHIP
EARTHQUAKE INSURANCE

2002-2012 CAGR %8.3

- Total No of policies: 5.2 mio
- Annual premium: 310 mio USD
- Avg. Sum insured: 37.579 USD
- Avg. Premium: 59 USD
- Total Claim Files: 20,475
- Total claims paid: 84 mio USD
- Total Penetration: %30.8
30 INSURANCE COMPANIES
APPX. 27,000 USERS
REAL TIME ON-LINE
OPERATION

State of the art technology
99.9% service level
Investing into satellite and mobile technologies
Continuous improvement
Various level Back-up services, data and programs
Disaster Recovery Center is able to be in full operation within 2 hours
<table>
<thead>
<tr>
<th>ACHIEVEMENTS</th>
<th>NEW LAW</th>
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<tbody>
<tr>
<td>Improved penetration from 4% to 32%</td>
<td>Inforce since 18th of August 2012: flexible framework enabling improvements on product and structure</td>
</tr>
<tr>
<td>Increased public awareness for</td>
<td>Improve awareness and sign of state support</td>
</tr>
<tr>
<td>earthquake and insurance</td>
<td></td>
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<tr>
<td>Centralized marketing activities and</td>
<td></td>
</tr>
<tr>
<td>brand management</td>
<td></td>
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<tr>
<td>Kept pricing at affordable level</td>
<td></td>
</tr>
<tr>
<td>Claims-paying capacity: USD 4 billion</td>
<td></td>
</tr>
<tr>
<td>Solid reinsurance program</td>
<td></td>
</tr>
<tr>
<td>Operational efficiency</td>
<td></td>
</tr>
<tr>
<td>Improved coordinated work between</td>
<td></td>
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<tr>
<td>the public agencies, the insurance</td>
<td></td>
</tr>
<tr>
<td>industry, universities, etc.</td>
<td></td>
</tr>
<tr>
<td>Model structure for effective public-</td>
<td></td>
</tr>
<tr>
<td>private partnership</td>
<td></td>
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<tr>
<td>Finding quality capacity</td>
<td></td>
</tr>
<tr>
<td>Ethical sensitivity</td>
<td></td>
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<tr>
<td></td>
<td>Additional natural perils to be included in case of market shortage</td>
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<td></td>
<td>Treasury to act as the last resort by providing reinsurance support</td>
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<td>Able to establish alternative distribution channel</td>
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<td></td>
<td>Government aid being subject to having TCIP policy</td>
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<td></td>
<td>Other articles on cat response, scientific research, international coordination</td>
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</tbody>
</table>
TCIP IN NEAR FUTURE

- 6,000,000 policies
- Excelling in claim management
- Increased use of Technology
- Increased communication and public relation activities
- Increased Coordination between Institutions

TARGET 10,000,000
### LESSONS

- Less loss of lives in the countries with stringent building codes (Chile and New Zealand)
- Multiple events are not unusual (1999 Turkev and 2011 New Zealand)
- Secondary risk causing severe damages (tsunami, aquafaction)
- Modeling has it’s limitation
- Underestimated scenarios
  - Economic
  - Political
  - Demographic
- Ambiguity on expectations from insurance industry
- Importance of strong construction industry

### LESSONS

- Operational capacity is as important as financial capacity
- Outdated operational manuals
- Procedures must be simple and lean
- Application of sum insured or indemnity limits
- Necessity for collaboration between;
  - Industries
  - companies and public offices
  - cities-countries
- Lack of;
  - adjusting capacity
  - technology
  - Field knowledge

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- 12.01.10  7.0 Haiti Earthquake
- 27.02.10  8.8 Chile Earthquake
- 04.09.10  7.1 New Zealand Earthquake
- 11.01.11  Australian Flood
- 11.03.11  8.9 Japan Earthquake
- 22.02.11  6.3 New Zealand Earthquake
### RISK ASSESSMENT
- Strong and efficient client contact
- Emergency call center services
- Strong presence on the field
- Fast and accurate claim adjusting
- Claim adjusting resources
- Solidarity approach against the event
- Effective communication with public

### OPERATIONAL CAPACITY
- Technology is must
- Early assessment tools
- Continuous assessment of the event
- Pre-described roles and activities
- Clear and smart database
- Simple and lean procedures
- Strong operation center
- Trained adjusting capacity

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**Diagram:**
- CAT OPERATION
- DASK
- Risk Assessment
- Operational Capacity
- Strong and Efficient Client Contact
- Emergency Call Center Services
- Strong Presence on the Field
- Fast and Accurate Claim Adjusting
- Claim Adjusting Resources
- Solidarity Approach against the Event
- Effective Communication with Public
- Technology is Must
- Early Assessment Tools
- Continuous Assessment of the Event
- Pre-described Roles and Activities
- Clear and Smart Database
- Simple and Lean Procedures
- Strong Operation Center
- Trained Adjusting Capacity
**CLAIM PAYMENT CAPACITY**

- **Diversify the Tools**
  - Alternative solutions (cat bond, structured deals, swaps etc)

- **Diversify the Regions**
  - Spread through all regions

- **Diversify the Market**
  - More capacity from financial markets (credit lines, bonds etc)

- **Diversify the Currency**
  - Policy, construction industry, reinsurance program

- **Diversify the Payback conditions**

- **Ensure solvency of the system**

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**RISK ASSESSMENT**

- Increased risk perception causing higher loss estimates
- Ever increasing claim protection needs
- Increased sensitivity on removing burden on national budget
- Increased willingness to collaborate

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Reinsurance Program 2011-2012

- 1.780.000.000 € R/I protection
- 250.000.000 € priority
- “A” rated panel of Reinsurers
- One of the biggest R/I Program in the world

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<thead>
<tr>
<th>Year</th>
<th>R/I protection</th>
<th>Priority</th>
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<tbody>
<tr>
<td>2000</td>
<td>200000</td>
<td>2000000</td>
</tr>
<tr>
<td>2001</td>
<td>511000</td>
<td>3600000</td>
</tr>
<tr>
<td>2002</td>
<td>775000</td>
<td>775000</td>
</tr>
<tr>
<td>2003</td>
<td>840000</td>
<td>840000</td>
</tr>
<tr>
<td>2004</td>
<td>1150000</td>
<td>1150000</td>
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<tr>
<td>2005</td>
<td>1250000</td>
<td>1250000</td>
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<tr>
<td>2006</td>
<td>1325000</td>
<td>1325000</td>
</tr>
<tr>
<td>2007</td>
<td>1550000</td>
<td>1550000</td>
</tr>
<tr>
<td>2008</td>
<td>1575000</td>
<td>1575000</td>
</tr>
<tr>
<td>2009</td>
<td>1560000</td>
<td>1560000</td>
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<tr>
<td>2010</td>
<td>1575000</td>
<td>1575000</td>
</tr>
<tr>
<td>2011</td>
<td>1580000</td>
<td>1580000</td>
</tr>
<tr>
<td>2012</td>
<td>1575000</td>
<td>1575000</td>
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</tbody>
</table>
1. CAT EVENT
   - 1,000,000 INSURED

2. CLAIM ADJUSTMENT
   - 2,000-3000 ADJSUTER

3. MANAGEMENT OF OPERATION CENTER
   - CALL CENTER
   - 1,000,000 REPORTS

4. COORDINATION W/STAKEHOLDERS
   - Hazine Müsteşarlığı
   - Türkiye Sigorta ve Reasürans Şirketleri Birliği
   - Sigorta Şirketleri
   - AFAD Afet ve Acil Durum Yönetimi Başkanlığı
   - TOBB Türkiye Odalar ve Borsalar Birliği
   - Eksperler İcra Kurulu
   - İstanbul Valiliği - Acil Durum Başkanlıgı
   - AKOM
   - Çevre ve Şehircilik Bakanlığı
   - Valilikler, Belediyeler ve diğer yerel Yönetimler
   - Çağrı Merkezi Şirketleri
   - Taşıma ve Ulaştırma Şirketleri
   - Telekomünikasyon Şirketleri
   - Catering (yıyecek- içecek) Şirketleri
   - Oteller
   - Güvenlik Şirketleri
   - Kargo ve Kurye şirketleri
   - Mobil Banka Hizmetleri
<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>OBJECTIVES</th>
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<tbody>
<tr>
<td>Low insurance awareness</td>
<td>Increasing number of policies</td>
</tr>
<tr>
<td>Enforcement of new Catastrophe Insurance Law</td>
<td>Excelling in Cat Response</td>
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<tr>
<td>Low penetration rate</td>
<td>Establishing strong synergy between institutions</td>
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<tr>
<td>Restructuring of TCIP after a decade</td>
<td>Public offices</td>
</tr>
<tr>
<td>Aligning with national databases</td>
<td>Insurance companies, intermediaries</td>
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<tr>
<td>Effective control level in public offices</td>
<td>Claim adjusters</td>
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<tr>
<td>Ensuring sound reconstruction activities after claim payment</td>
<td>Increasing Reinsurance capacity</td>
</tr>
<tr>
<td>High cost of maintaining contingency capacity</td>
<td>Using alternative claim financing tools</td>
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<td></td>
<td>Implementation of new projects</td>
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SUCCESS CONDITION:
CONTINOUS PUBLIC EDUCATION
CONTINUES COMMUNICATION AND PUBLIC RELATION

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