

APPENDICES

Appendix A – Literature Review Summary on Decision-Making in Emergencies

Authors	Level of Analysis	Cases Analyzed	Research Focus	Hypotheses/ Assumptions/ Theories	Decision-Making Models/Methods Proposed/Utilized	Significance of Research
Allison, Graham T (1971); Allison, Graham T; Zelikov, Philip (1999)	Individual, Organizational	Cuban Missile Crisis	Decision-making during crises	Propose three models of decision-making: 1)Rational actor: based on analytical decision-making 2)Organizational process: based on limitations and procedures set by organizational structure 3)Government politics: based on characteristics of a leader and his/her ability to control decision-making process	Rational actor; Organizational process; Government politics	Focuses on the forms a government decision may be taken during crises
Bier, Vicki M; Haimes, Yacov Y; Lambert, James H; Matalas, Nicholas C; Zimmerman, Rae (1999)	Organizational		Risk assessment		Expected utility decision-making	Events should be treated in accordance with their risk value
Boin, Arjen; Hart, Paul't; Stern, Eric; Sundelius, Bengt (2005)	Individual, Team, Organizational		Coordination via networks	Best form for government to deal with crises is networks. Decentralization and possibility of improvisation is a must for the purpose of coordination. To foster coordination effective information sharing, knowledge and capacity, and, formal rules and procedures are necessary.		Focuses on the importance of coordination using networks, which are decentralized structures allowing for improvisation.
Carley, Kathleen M; Lin, Zhiang (1997)	Organizational		Information distortion and organizational performance	Rather than technology and training, an organizational structure is more important in terms of performance.		Focuses on the importance of organizational structure for organizational performance in decision-

				Decentralized organizations relying more on experience, rather than procedures are performing better		making
Cosgrave, John (1996)	Individual		Decision-making in emergencies	Emergency decision-making is constrained by three factors: time, limited information, and decision load		Focuses on the factors negatively affecting decision-making in emergencies
Crichton, Margaret T; Flin, Rhona; Rattray, William A R (2000)	Individual	Scottish prison service; Nuclear power generation industry in U.K.	Training	Non-technical skills like decision-making should be developed in decision-makers by training		Focuses on the importance of decision-making skills of decision-makers in emergency situations
Danielsson, Mats; Ohlsson, Kjell (1999)	Individual	Study on firefighters	Distributed decision-making in emergencies	In complex environments characterized by complexity and time pressure it is a viable strategy to delegate decision-making authority. Different positions require different types of information.		Focuses in importance of information type and distributed decision-making in emergencies
Driskell, James E; Salas, Eduardo (1991)	Group	Study on U.S. Navy students	Effects of stress on group decision-making	Under stress group leaders are prone to rely on input from others, especially subordinates, rather than centralized decision-making		Focuses on effects of stress on decision-making in group environment
Fiore, Stephen M; Jentsch, Florian; Bowers, Clint A; Salas, Eduardo (2003)	Team, Organizational		Shared mental models			Focuses on the importance of shared mental models to enhance inter-team and intra- as well as inter-organizational coordination in crisis responses
Flin, Rhona (2001)	Individual	Piper Alpha disaster in U.K. (1988)	Decision-making in disasters	Recognition-primed model involves: 1) Recognition of the condition 2) Fitting them into mental models or experiences 3) Implementing appropriate measures	1) intuitive/recognition primed 2) rule/procedure based 3) analytical option comparison 4) creative (where a new response option must be designed)	Focuses on the factors affecting decision-making process during disasters

Flin, Rhona; Slaven, Georgina; Stewart, Keith (1996)	Individual	Piper Alpha Disaster	Training in emergency management	Based on the analysis of experience, mental models, communication, time pressure, emotional response, pre-planning, distributed decision-making and organizational context, the case presents a recognition-primed model of decision-making	Recognition-primed	Previous experience and training is essential for effective decision-making
Flueler, Thomas (2006)	Individual		Socio-technical systems	<p>Phased decision-making model involves:</p> <ol style="list-style-type: none"> 1) information gathering (planning as a mental preparation) 2) decision (problem solving) 3) organization (implementation of the decision) 4) problem formulation (control of whether the problem is solved in terms of difference between initial and final states) <p>Following points are of importance regarding effective decision-making:</p> <ol style="list-style-type: none"> 1) “an increase of attributes enhances the confidence of the deciders in the judgments and choice” 2) “time pressure raises the error rate” 3) “concrete information is preferred by the deciders to implicit information” 4) “clear information facilitates deciding and is utilized more readily” 	Phased (and cyclical) decision-making	Focuses on socio-technical systems
Forster, Malcolm R (1999)	Individual		Fast and frugal learning	Simplicity to make rational decisions is possible at the		Focuses on the importance of heuristic knowledge to

			(decision-making)	expense of complexity at lower levels of decision-making cognition		make rational decisions
French, Simon (1996)	Organizational	Chernobyl; RODOS decision support system	Decision support systems in decision-making	Multi-attribute risk analysis can enhance decision-making through higher level of involvement of concerned parties.		Focuses on the importance of decision support systems in emergency management, emphasizing its benefit in enhancing decision-making
Gigerenzer, Gerd; Todd, Peter M (1999)	Individual		Heuristic Decision-Making	Under conditions of limited time, limited information, pressure and constraints decision-makers should utilized fast and frugal decision-making method	Heuristics-based fast and frugal decision-making	Focuses on the importance of heuristics when deciding in emergencies. Internal feelings and experience matters much
Government Accountability Office (2005)	Organizational	U.S. ports and critical infrastructure	Risk management	For effective risk management five phases are important: 1) setting strategic goals and objectives, and determining constraints 2) assessing the risks 3) evaluating alternatives for addressing these risks 4) selecting the appropriate alternatives 5) implementing the alternatives and monitoring the progress made and results achieved		Presents a tool to address risk management for critical infrastructure
Grabowski, Martha; Roberts, Karlene H (1999)	Organizational		Risk mitigation in virtual organizations	High-reliability of virtual organizations is possible via four processes: 1) Organizational structuring (adjustments for adaptivity) 2) Communication (adjustments for clarification, social support) 3) Organizational culture (adjustments for unified cultures and alignment of goals)		Provides steps to develop an effective and high-reliable virtual organizations

				4) Trust (adjustments to develop shared commitment)		
Hamalainen, Raimo P; Lindstedt, Mats R K; Sinkko, Kari (2000)	Organizational	RODOS decision support system	Decision support systems in decision-making	Multi-attribute risk analysis can enhance decision-making through higher level of involvement of concerned parties.		Focuses on the importance of decision support systems in emergency management, emphasizing its benefit in enhancing decision-making
Inzana, Carolyn M; Driskell, James E; Salas, Eduardo; Johnston, Joan H (1996)	Individual	Study on U.S. Navy personnel	Pre-emergency training	Preparatory information provided before stressful situations enhances effective response, reduces anxiety and increases task confidence		Focuses on the importance of pre-emergency training and preparatory information for effective decision-making under stress
Janis, Irving L; Mann, Leon (1977)	Individual		Performance under stress, risk and uncertainty	Vigilant decision-making model is more effective than hyper-vigilant, since it allows for more comprehensive search for alternatives and evaluation of the context and environment.	Vigilant decision-making, hyper-vigilant decision-making	Focuses on vigilant type of decision-making characterized by careful evaluation of alternatives under stress, uncertainty and risk.
Keinan, Giora (1987)	Individual		Effects of stress on decision-making	Stress can result in non-systematic evaluation of alternatives at hand.		Focuses on the importance of stress factor in decision-making
Kunreuther, Howard; Meyer, Robert; Van den Bulte, Christophe (2004)	Individual, Organizational		Risk management			Extreme events are characterized by interdependency of risks; public-private cooperation is essential
Lin, Dyi-Yih M; Su, Yuan-Liang (1998)	Individual		Training vs. heuristics	Training provides accurate results, while heuristic decision-making can result in errors		Focuses on importance of training before crises that are characterized by time pressure
Lindell, Michael K; Prater, Carla S; Peacock, Walter Gillis (2005)	Individual, Organizational		Communication and decision support systems	Evacuation decisions are characterized by uncertainties which should be minimized, if not eliminated, by better communication between parties concerned and by decision support systems		Focuses on importance of communication and decision support systems in emergency management
Mandell, Myrna;	Organizational		Evaluation of	Networks decision-making is		Evaluates networks and

Keast, Robyn (2007)			networks	flexible, but should not be rule-free organizations should be aware of interdependency which would lead to cooperation		the interaction of network members
Mendonca, David; Fiedrich, David (2004)	Individual, Organizational		Improvisation, Training in emergency management	Flexibility in form of improvisation is essential for the success of organizations during emergencies. Two stages for that: 1) Identify if current plan works 2) Develop required procedures		Organizations have to be flexible enough to let improvisation; moreover, decision-support tools and pre-emergency training can enhance effectiveness. Combination of laboratory and field based methods is best
Moynihan, Donald P (2008)	Organizational	Exotic Newcastle Disease in the State of California in October 2002	Network learning in crises	Learning in emergency networks should be based on inter-crisis (past) and intra-crisis (ongoing) experiences		Presents tools to eliminate uncertainty for better decision-making in networks
Quarantelli, Enrico L (1997)	Organizational		Disaster management	For proper decision-making the following should be avoided: 1) “loss of higher-echelon personnel because of overwork” 2) “conflict over responsibility for new disaster tasks” 3) “clashes over organizational domains between established and emergent groups” 4) “surfacing of organizational jurisdictional differences”		Presents a framework for effective disaster management based on past literature
Raiffa, Howard; Richardson, John; Metcalfe, David (2002)	Individual, Organizational		Collaborative decision-making	Raiffa et al. define three types of decision-making: <i>individual decision-making</i> (individual decides based merely on his own analysis and not affected	Individual decision-making; Interactive decision-making; Joint decision-making	Focuses on collaborative decision-making, saying that cooperation is most viable option.

				by other parties); <i>interactive decision-making</i> (individual is aware of others' interests and decisions and, thus, makes his/her decisions contingent upon others'); <i>joint decision-making</i> (individual understand the importance of cooperation and makes decisions based on agreement with other parties)		
Rosenthal, Uriel; Kouzmin, Alexander (1997)	Organizational		Crisis management	Present a five-step framework for governmental crisis decision-making: 1) Perception of threat 2) Necessity to respond to threat 3) Necessity for government decisions 4) Promptness of decisions 5) Government authorities in active crisis decision-making		Presents a framework for crisis management with emphasis on government's role
Salas, Eduardo; Burke, Shawn C; Samman, Shatha N (2001)	Team		Command and control teams	Principles for effective command and control teams: 1) clear and concise communication 2) common understanding of coordination requirements 3) team leadership 4) pattern-recognition based decision-making 5) shared situation awareness 6) adaptability 7) performance monitoring	pattern-recognition based decision-making	Focuses on the factors that make up effective command and control teams
Samurçay, Renan; Rogalski, Janine (1993)	Individual, Team		Cooperation in emergency management	Coordination of tasks is imperative. They propose a Method for Tactical Reasoning (MTR) which consists of the following steps:	Method for Tactical Reasoning (MTR) based decision-making	Focus on the importance of cooperation and distributive decision-making for effective response of teams in

				<ol style="list-style-type: none"> 1) “define and evaluate current state 2) anticipate evolutions and risks 3) specify goals and sub-goals 4) identify appropriate means 5) define possible solutions 6) combine criteria, evaluate solutions 7) choice” 		emergencies
Saunders, Teri; Driskell, James E; Johnston, Joan H; Salas, Eduardo (1996)	Individual		Stress	Stress inoculation training reduces performance anxiety, reduces state anxiety, and enhances performance under stress		Focuses on importance of stress inoculation training in regard to individual’s performance
Takada, Asako (2004)	Team	Tokyo subway sarin poisoning (1995); Sumitomo Electric Industries after Hanshin Awagi earthquake (1995); United Airlines Flight 232 accident (1989)	Flexibility in crisis management	Conventional emergency management, characterized by top-down decision-making, strong leadership and tendency to return to the former situation, should be adjusted to a new framework with non-hierarchical structure and empowerment		Focuses on the importance of flexibility and non-hierarchical structures during crises
Therrien, Marie-Christine (1995)	Organizational	The Saint-Amable Fire; The Saint-Leonard D’Aston train derailment	Inter-organizational networks	Inter-organizational networks in disasters may help overcome turbulence and uncertainty that are main problems during emergencies		Focuses on potential of networks to reduce turbulence and uncertainty to make effective decisions and provide better response in emergencies
Useem, Michael; Cook, James; Sutton, Larry (2005)	Individual	South Canyon fire (1994)	Leadership	<p>Three things a leader should take into account during decision-making</p> <ol style="list-style-type: none"> 1) Safety of the responders 2) Speed of the response 3) The technical decisions 		Focuses on the effective tools for leadership decision-making during crises

				regarding actual response of the responder		
Wallace, William A; De Balogh, Frank (1985)	Individual, Organizational		Decision support systems in decision-making	Decision support systems are a good way to reduce stress and enhance cognitive process		Focuses on the importance of decision support systems in emergency management, emphasizing its benefit in enhancing decision-making

Appendix B – Literature Review Summary on Collaborative Decision-Making in Emergencies

Authors	Research Focus	Hypotheses/ Assumptions/ Theories	Challenges/ Requirements	Opportunities
Aldunate, Roberto G; Pena-Mora, Feniosky; Robinson, Gene E (2005)	Distributed Decision-Making	Collaborative decision-making during emergencies based on distribution of decision-making authority to experts would enhance the emergency response processes	- How to match plan to reality	- Flexibility - More "connectivity"
Ansell, Chris; Gash, Alison (2007)	Collaborative Governance and Consensus-Oriented Decision-Making	Collective decision-making is prerequisite for governance practices. Public interest oriented collaborative governance should involve as many stakeholders as possible. Dialogue, trust building, commitment and shared understanding are the basic items of the concept that should be included in any collaborative practice	- To create interdependence that would enhance trust building, shared understanding, strong commitment and dialogue	- Consensus-based relationships constructing strong collaborations
Ball, Michael O; Hoffman, Robert; Chen, Chien-Yu; Vossen, Thomas (2000)	Collaborative Decision-Making	Collaborative Decision-Making is possible through distributed decision-making, which allows from situational awareness and shared mental models	- To share information in the most effective way	- Most relevant information provided to decision-makers
Barnes, Kimberly; Cobb, John; Ivezic, Nenad (n.d.)	Collaborative Decision-Making	Collaborative computing can provide a shared mental model to facilitate the response and help agree on general picture	- To make different stakeholders agree on common goal	- Interoperability
Baumgart, Leigh A; Bass, Ellen J; Philips, Brenda; Kloesel, Kevin (2006)	Collaborative Decision-Making	Collaboration in terms of information provides alternative sources to support decision-making during emergencies	- To get necessary and relevant knowledge during emergencies from other stakeholders	- Increase in confidence, accuracy and speed of decision-making during response
Boiney, Lindsley (2008)	Collaborative Decision-Making	The core of collaborative decision-making is the intersection of three domains (system perspective): responders (e.g. decision-makers), systems (e.g. technological and other tools) and environment (e.g. organizational culture and goals). The intersection of the three is the highest point of inter-dependence	- To bring the three spheres together in a best possible fit	- Inclusion of every factor into the decision-making picture, thus, leaving no variables outside

Brehmer, Berndt (1991)	Distributed Decision-Making	Distributed decision-making focuses on coordination, while collaborative decision-making focuses on collaboration. Holistic approach to decision-making is impossible due to variety of task-environment combinations	<ul style="list-style-type: none"> - To create shared mental models - To have strong communication tools 	<ul style="list-style-type: none"> - Ever-updated knowledge based for better decision-making
Canos, Jose H; Alonso, Gustavo; Jaen, Javier (2004)	Decision-Support Systems in Collaborative Decision-Making	Field expert ideas should be taken into account during emergency response. Communication and the use of several decision-support systems is vital to achieve interoperability and flexibility	<ul style="list-style-type: none"> - To derive necessary and relevant knowledge from field experts 	<ul style="list-style-type: none"> - Interoperability - Extensibility
Cosgrave, John (1996)	Decision-Making in Emergencies	Collaboration with stakeholders is essential to provide best response in emergency situations	<ul style="list-style-type: none"> - Acceptance by others 	<ul style="list-style-type: none"> - More relevant response and less cost - More effective response overall
Danielsson, Mats; Ohlsson, Kjell (1999)	Distributed Decision-Making	Because emergency situations are dynamic and require distributed decision-making, hierarchy-based coordination of response is essential to provide best results.	<ul style="list-style-type: none"> - Information availability, reliability and relevance 	<ul style="list-style-type: none"> - Shared mental models
Diniz, Viviane B; Borges, Marcos R S; Gomes, Jost Orlando; Canos, Jose H (2005)	Collaborative Decision-Making Through Information Sharing	Inter-organizational information dissemination mechanisms should be in place to facilitate communication and, thus, the whole decision-making and response process	<ul style="list-style-type: none"> - To filter and provide the most relevant contextual knowledge 	<ul style="list-style-type: none"> - Interoperability - Extensibility
Eng, Richard F (2008)	Collaborative Decision-Making	Failure to respond effectively in major disasters like 9/11 is the result of lack of collaborative decision-making. Information sharing and access is a key	<ul style="list-style-type: none"> - To provide an autonomous information-sharing environment everybody would use 	<ul style="list-style-type: none"> - Situational awareness
Gerencser, Mark; Napolitano, Fernando; Van Lee, Reginald (2006)	Megacommunities	Traditional decision-making paves way to multi-organizational inclusive and collaborative decision-making approaches, which constitute megacommunities.	<ul style="list-style-type: none"> - To create capacity for megacommunity 	<ul style="list-style-type: none"> - Consensus-oriented approach to solving problems - Reduced complexities
Haynes, Steven R; Schafer, Wendy A; Carroll, John M (2007)	Collaborative Technologies	Collaborative efforts in terms of information technology can close the gap between the plans and real situations	<ul style="list-style-type: none"> - To use both set plan and personal experience towards best fit 	<ul style="list-style-type: none"> - Best plan-situation fit

Hills, Howard (2004)	Collaborative Decision-Making	Collaborative decision-making is viable only when there is a clear acceptance and tolerance of alternatives, others' ideas and constructive feedback procedure	- To get everybody to table, which would be constructive even if there are conflict of ideas	- Use of alternative ideas to support and facilitate collaborative decision-making
Jankowski, Piotr; Nyerges, Timothy (2001)	GIS-based Collaborative Decision-Making	Decision-support tools can facilitate decision-making for complex problems, especially at the analytical/integrating level of problem solving. Participatory and collaborative decision-making is already a must for cross-sector decision-making	- To determine the level of commitment needed between actors: communication, cooperation, coordination or collaboration	- Speeded and more accurate decisions - Input of others in the ultimate decisions
Karacapilidis, Nikos; Papadias, Dimitris (2001)	Collaborative Decision-Support Systems	Argumentative collaborative decision-making provides alternatives to analyze, so that the ultimate decision is the optimal. Decision-support systems can provide a forum for such value and idea discussions	- To bring and keep the actors with different values and competing interests at the table	- Team perspective on the issues - Analysis of different values and interests - Involvement of multiple stakeholders
Kraemer, Kenneth L; King, John L (1988)	Group Decision-Support Systems	Decision-support systems increase the speed of decision-making without harming its quality. Information is a key factor affecting group decision-making, which would be provided and maintained using decision-support technologies	- To create proper mechanism that would manage information for better group decision-making	- Increased accuracy and speed of decision-making
Mackenzie, Colin; Hu, Peter F; Fausboll, Carsten; Nerlich, Michael; Benner, Thomas; Gagliano, David; Whitlock, Warren; Lam, David; Xiao, Yan (2007)	Decision-Support Systems in Collaborative Decision-Making	Collaboration through decision-support systems is vital to create shared situational awareness	- To find the most appropriate decision-support system for better response	- Synchronization of knowledge - Shared situational awareness - Interoperability
Mendonca, David; Jefferson, Theresa; Harrald, John (2008)	Information and Communication Technology Based Collaborative Decision-Making	Collaboration in terms of communication is vital and is needed for improvisation and flexibility (emergent operability) at lower levels. The technology-task fit is important for best results.	- To find a good technology-task fit for communication	- Flexibility

Panzarasa, Pietro; Jennings, Nicholas R; Norman, Timothy J (2002)	Collaborative Decision-Making	Collaborative decision-making is a process involving cognition and interaction, which are inter-dependent.	- To reason about own and agents' mental models, and to influence others' mental models (social mental shaping)	- Decisions based on consensus with multiple agents
Paula, Souren; Seetharamanb, Priya; Samaraha, Imad; Mykytyn, Peter P (2004)	Collaborative Decision-making Among Virtual Teams	Virtual teams are a tool for flexibility when collaborative decision-making is concerned. The base for this concept, though, is to have sophisticated communication technologies	- Heterogeneity of teams with different values - Use of non-standard communication technologies - Trust which is generally low among virtual teams	- Flexibility
Raiffa, Howard; Richardson, John; Metcalfe, David (2002)	Collaborative Decision-Making	Joint decision-making based on agreements with others is the best strategy, though interactive (contingent upon others) and individual (independent) decision-making strategies should also be used when needed	- Payoff dependence on others' decisions - Value differences - Power differences - Time preference differences	- Creativity - Alternatives
Rochowiak, Dan; Purves, David (2008)	Simulation of Collaborative Decision-Making	Simulation can facilitate real-life collaborative decision-making		- Pre-emergency training and simulation reduces uncertainty and anxiety during real situations
Smari, Waleed W; Weigand, Kirk; Petonito, Gina; Kantamani, Yoga; Madala, Rajitha; Donepudi, Sirisha (2005)	Collaborative Decision-Support Systems	Collaborative decision-support systems are a good way to support and facilitate decision-making if timely and relevant information is provided. The authors, thus, provide such system which is supported by information elicitation mechanism.	- To create effective information elicitation mechanism - To provide a shared information and decision alternatives base to the cross-functional groups	- Shared mental models - Enhances decision-making
Smith, Wally; Dowell, John (2000)	Coordinative Decision-Making	Distributed decision-making may help provide better results if coordinated well. Constant update of information to provide shared mental models is a key	- To create shared mental models	- Distribution of responsibility - More accurate assessment at group level

Appendix C – Federal Response Plan (FRP) – 1999

ESF/ Agency	Transportation	Communications	Public Works and Engineering	Firefighting	Information and Planning	Mass Care	Resource Support	Health and Medical Services	Urban Search and rescue	Hazardous materials	Food	Energy
USDA	S	S	S	P	S	S	S	S	S	S	P	S
DOC		S	S	S	S		S			S		
DOD	S	S	P	S	S	S	S	S	S	S	S	S
DOeD					S							
DOE					S		S	S		S		P
HHS			S		S	S		P	S	S	S	
HUD						S						
DOI		S	S	S	S					S		S
DOJ					S			S	S	S		
DOL			S				S		S	S		
DOS	S									S		S
DOT	P				S		S	S		S		S
TREAS	S				S		S					
VA			S			S	S	S				
AID								S	S			
ARC					S	P		S			S	
EPA			S	S	S			S		P	S	
FCC		S										
FEMA	S	S		S	P	S	S	S	P		S	
GSA	S	S			S	S	P	S			S	
NASA					S		S		S			
NCS		P			S		S	S				S
NRC					S					S		S
P: Primary Agency- Responsible for coordination of ESF												
S: Support Agency- Responsible for supporting the primary agency												

Appendix D – List of Organizations Involved in Bali 2002 Bombings Response

Operations

Organization Name	Abbreviation
Australian Federal Police Joint Task Force	AFPJTF
Air Paradise International	API
Australian Attorney-General's Department	AAGD
Australian Bomb Data Center	ABDC
Australian Consulate in Bali	ACB
Australian Customs Services	ACS
Australian Defense Forces	ADF
Australian Defense Imagery and Geospatial Organization	ADIGO
Australian Defense Intelligence Organization	ADIO
Australian Defense Signals Directorate	ADSD
Australian Department of Defense	ADD
Australian Department of Family and Community Services	ADFCS
Australian Department of Foreign Affairs and Trade	ADFAT
Australian Department of Immigration and Multicultural and Indigenous Affairs	ADIMIA
Australian Embassy in Jakarta	AEJ
Australian Federal Police	AFP
Australian Federal Police Forensic Major Incident Room	AFPFMIR
Australian Foreign Ministry	AFM
Australian Government	AG
Australian Governor-General	AGG
Australian Inspector-General of Intelligence and Security	AIGIS
Australian Labor Party	ALP
Australian Ministry of Justice	AMJ
Australian Ministry of Tourism	AMT
Australian National Crime Authority	ANCA
Australian National Party	ANP
Australian National Security Committee	ANSC
Australian Office of National Assessments	AONA
Australian Prime Ministry	APM
Australian Professional Firefighters Foundation	APFF
Australian Protective Service	APS
Australian Quarantine and Inspection Service	AQIS
Australian Red Cross	ARC
Australian Secret Intelligence Service	ASIS

Australian Security Intelligence Organization	ASIO
Australian State Police	ASP
Bali Inter-Agency Taskforce	BIAT
Bali International Medical Centre	BIMC
Bali International Women's Association	BIWA
Bali Police Department	BPD
British Foreign Office	BFO
British Government	BG
Canadian Government	CG
Canberra City	CC
Central Intelligence Agency	CIA
CrimTrac	CT
Dutch National Police	DNP
East Timor Foreign Ministry	ETFM
East Timor Government	ETG
East Timor President	ETP
Federal Bureau of Investigation	FBI
French Government	FG
Garuda Airlines	GA
German Bundeskriminalamt	GB
German Government	GG
Indonesian Defense Ministry	IDM
Indonesian Foreign Ministry	IFM
Indonesian Government	IG
Indonesian Military	IM
Indonesian Ministry of Health	IMH
Indonesian National Police	INP
Indonesian President	IP
Indonesian Red Cross	IRC
Indonesian Security Ministry	ISM
Indonesian State Intelligence Agency	ISIA
Indonesian Tourism Companies	ITC
Indonesian Ulama Council	IUC
Israel Security Agency	ISA
Japanese Government	JG
Jetset Travelworld Group	JTG
Malaysian Government	MG
Malaysian Police	MP
Malaysian Security Forces	MSF

McDonald's	McD
Mission Australia	MA
New South Wales Police	NSWP
New Zealand Air Force Hercules	NZAFH
New Zealand Embassy in Jakarta	NZEJ
New Zealand Government	NZG
New Zealand Ministry of Foreign Affairs and Trade	NZMFAT
Northern Territory Police, Fire and Emergency Services	NTPFES
Optus	Opt
Pacific Asia Travel Association	PATA
Papuan Police Department	PPD
Qantas Airlines	QA
Royal Australian Air Force	RAAF
Royal Darwin Hospital	RDH
Satgana Bali	SB
Scotland Yard	SY
Singapore Airlines	SA
Singaporean Government	SG
South Africa FM	SAFM
Sturt Football Club	SFC
United Nations	UN
United States Department of Forensic Science	USDFS
United States Embassy in Jakarta	USEJ
United States Government	USG
United States Police	USP
United States Secretary of State	USSS
United States State Department	USSD
United Way South Australia	UWSA
Victorian State Inquiry Centre	VSIC
Vodafone	Vod
Zonta Club of Perth	ZCP

Appendix E - Emergency and Crisis Management System in Australia¹

The recent frequency and scale of emergency and crisis situations the world has faced raised issues of responsibility and accountability, and proved one more time that Emergency Management is an ever-evolving process which requires a continuous review of functions and structures in order to better tackle these problems. Terrorist attacks such as September 11, 2001; 2002 and 2005 Bali bombings; Madrid Bombings of 2004 and London Bombing of 2005; and, natural disasters such as the Indian Ocean Tsunami in 2004, Hurricane Katrina and the Pakistan earthquake in 2005, the 2003 Canberra Bushfires and Cyclone Larry in Queensland in March 2006 in Australia are obvious examples of the impact, size and scope of manmade and natural disasters that any government can face at any time (Emergency Management Australia, 2008c).

Although there are plenty of agencies in Australia responding to crisis situations that threaten lives and properties, the scale or unusual nature of these events and disasters require the participation of more agencies to improve the effectiveness of disaster response; besides, there is a need for the assistance of others with special skills and resources. A well-organized coordination is needed in order to effectively regulate these agencies (Emergency Management Australia, 1999). Emergency Management can be described as a scope of measures used to manage the risk of technological, natural, human-caused disasters and other crisis situations that affect communities and the environment, this includes four elements. These are prevention, preparedness, response, and recovery. The primary focus of emergency management is to establish safety, flexibility and capability when dealing with the variations of size and scope of risk that communities and all levels of government can face (Emergency Management Australia, 2008a).

¹ This study has utilized the report "This Is EMA" published by Emergency Management of Australia as the main source of information about Emergency Management System of Australian Government.

Emergency Management of Australia (EMA) is the primary emergency management organization of the Australian Government which functions under the Attorney General's Department (AGD) of Australia. EMA implements the functions and roles of coordination for assistance provided by the Australian Government in response to disaster or emergency situations; rather than assuming the role of the first responder agency, and maintains the activation of overall government response to natural, manmade and other disaster situations (Emergency Management Australia, 2008a). This assistance is provided when the local government is not capable of dealing with emergencies or disasters. Therefore, the government requests assistance from State or Territory governments if it is not able to handle the crisis situations (Emergency Management Australia, 2008c). The main regulatory board under which EMA functions is the Director General (DGEMA) and three Assistant Secretaries with an approximate overall staff of 140 people. Before any response-related action EMA needs the approval of the Attorney General (Emergency Management Australia, 2008a). After a formal approval from the Attorney General, EMA can request resources from departments of the Australian Government or from State and Territory governments (Emergency Management Australia, 2008c).

The mission of EMA is to “[p]rovide national leadership in the development of emergency management measures to reduce the risk to communities and manage the consequences of disasters” (Emergency Management Australia, 2008c, p. 4). The vision of EMA is to provide “safer, sustainable communities” (p. 4).

The primary role of the Australian Government in emergency management is to support States and Territories in developing their ability and capacity to deal with natural, technological and human caused disasters. The Australian Government plays vital role in providing physical

assistance to requesting States or Territories when they cannot manage the impact, aftermath and risk during or after an emergency situation. The Australian Government with close cooperation with EMA supports a comprehensive approach to emergency management. EMA establishes a cooperative and collaborative relationship with Australian Government agencies and considering the possibility of natural and manmade disasters that were stated above an "all agencies" and "all hazards" approach became an important focus in Australian emergency management in order to conduct effective prevention of disasters, preparedness for their impact, and response to possible consequences (Emergency Management Australia, 2008b).

The history of EMA goes back to the 1950s when the Minister of Interior and Works opened the Australian Defense School in July 1956. After initiating a new structure in 1976 the renamed Australian Counter Disaster College was established by the Minister for Defense in 1978. The Natural Disaster Organization (NDO), which was created in 1974 within the Department of Defense, included the functions of the Australian Counter Disaster College. The primary function of NDO was to bring together all elements and attributes of commonwealth, but after the impact of Cyclone Tracy the focus on natural emergencies and disasters increased and it became the primary aim of the organization. Two decades later after renaming NDO to EMA in 1993 the aspects of emergency management were extended by broadening the concepts of prevention, preparedness, response and recovery. Consequently the college was renamed to Australian Emergency Management Institute (AEMI) (Emergency Management Australia, 2008c). Until 2001 EMA functioned as a part of Department of Defense (Emergency Management Australia, 2008a). The main change took place in 2001 when EMA was transferred from Defense to the Department of Attorney General and AEMI became the EMI Institute. The focus of EMA now is not only on natural disasters, but on technological and manmade disasters

as well. The role of EMA in ensuring national security has extended in 2008 by gaining a more active role in preparedness, mitigation and recovery in disaster management, the main reason of which is the broadened responsibility in the Natural Disaster Mitigation Program, the Bushfire Mitigation Program and the National Disaster Relief and Recovery Arrangements. EMA has proved itself as the primary agency of the Australian Government in building capacity, creating partnerships and relationship with different levels of government, exercising, coordinating and planning response activities of government (Emergency Management Australia, 2008c).

EMA has been working actively and developing new approaches to deal with natural and human-made disasters. EMA has broadened its relationship with local governments, community organizations, State and Territory emergency agencies, different individuals and businesses, volunteers, and international agencies and governments to better understand, to make appropriate decisions, and to respond in disaster or pre-disaster situation. It continuously changes its aspect of natural and manmade disasters by taking into consideration the spreading risk of terrorism and the impact of climate change. As stated above, because of the significantly large frequency of terrorist attacks that occurred during the last decade, including the terrorist attack in Bali in 2002 that took enormous number of lives of Australians, there were vital changes in emergency management and national security of Australia. These cases have changed Australia's approach to national security resulting in a number of arrangements between national security and the emergency management agency, the main focus of which is to establish public safety and respond effectively after a disaster situation to prevent maximum loss of lives and property (Emergency Management Australia, 2008c).

Under the Attorney General EMA's role in civil defense is to coordinate and develop the Australian Government's civil defense responsibilities, programs and policies. EMA conducts

the courses and exercises of civil defense and establishes State and Territory involvement in these programs. In order to provide civil defense, EMA conducts physical support, assistance, planning and training programs to the States and Territories. Under the Australian Constitution the primary focus of States and Territories is to ensure security and protection of life and property of their citizens. There are a number of organizations that are involved in Civil Defense such as; police, fire, ambulance, hospitals, public utilities, transport, communications, engineering, local government, State Emergency Service (SES), Bushfire, Wireless Institute Civil Emergency Network (WICEN), St John Ambulance, and other welfare agencies, including religious organizations (Emergency Management Australia, 2004).

The main emergency management and disaster responsibility of State and Territory governments is to protect and preserve the lives and property of their citizens. State and Territory governments exercise control over functions through legislative and regulatory arrangements within communities and various agencies, provision of police, fire, ambulance, emergency services, medical and hospital services, government and statutory agencies that provide services to the communities, etc. to achieve effective disaster prevention, preparedness, response and recovery strategies. The role of the Commonwealth Australian Government is to provide guidance and support to these State and Territory governments to develop their capacity and to provide assistance and resources to deal with the impact and aftermath of natural and manmade disasters (Emergency Management Australia, 1999).

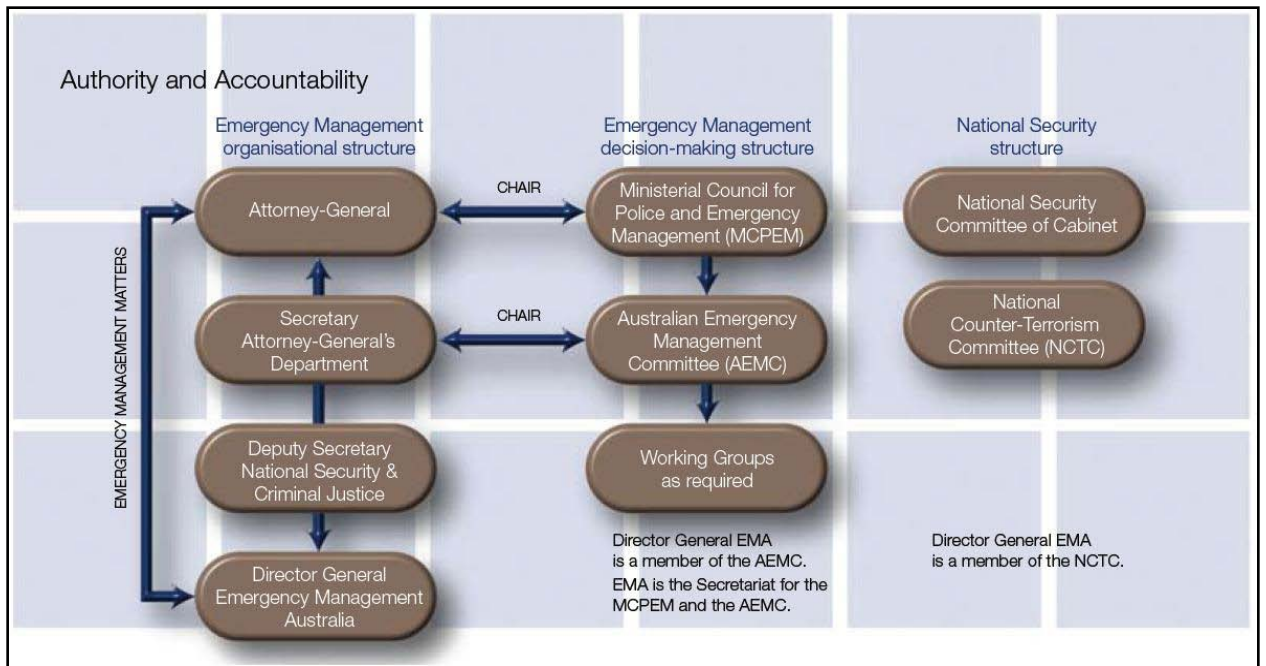


Figure E-I. Emergency Management Structure in Australia

Source: Emergency Management Australia (2008c)

Figure E-1 briefly represents the Emergency Management organizational structure, Emergency Management decision-making structure and the National Security structure of Australia. There are five main issues that are important, in the aspect of EMA, to deal with continuously because of the frequently changing environment of natural and human-caused disasters (Emergency Management Australia, 2008c). These are: strategic leadership, strategic partnership, developing community capacity and resilience, developing emergency management capability, and managing the consequences of disasters.

Strategic Leadership

National security is one of the main issues in Emergency Management Strategic Leadership. In order to provide national security EMA works closely with stakeholders to develop disaster mitigation, education and training, research, information management, and

consequence management strategies of national importance (Emergency Management Australia, 2008c).

EMA has many responsibilities some of which are implementing the policymaking process of emergency management, providing strategic coordination, and facilitating the implementation of the Council of Australian Governments (COAG). EMA provides the secretariat for the Australian Emergency Management Committee (AEMC), for the Ministerial Council for Police and Emergency Management (MCPPEM) and for the Remote Indigenous Communities Advisory Committee (RICAC) which can partly be seen in the organizational chart as well. The primary function of RICAC is to facilitate the development and implementation of emergency management and to develop network collaboration (Emergency Management Australia, 2008c).

Communication in a crisis situation has been identified as one of the primary requirements for increasing performance among first-response agencies (Comfort, 1999; Kapucu, 2006b). The National Forum on Emergency to the Community (NFEWC), which is regulated jointly by EMA and the Bureau of Metrology, is a measure that is implemented by the Australian Government to support communication processes in a possible crisis situation. Furthermore, the National Community Safety Working Group (NCSWG) that functions within AEMC focuses on community education, awareness and engagement programs in order to provide community safety for natural hazards. The primary goal of NCSWG is to develop community self dependence and to provide effective community safety, behavior change, perception and attitude toward natural disasters. In addition, EMA is a member of The National Security Committee of Cabinet and the National Counter-Terrorism Committee (NCTC) that

establishes the bond between crisis and consequence management (Emergency Management Australia, 2008c).

EMA also initiates mutual agreements with different Australian agencies such as Geoscience Australia, Australian Broadcasting Corporation (ABC), etc. in order to effectively access, disseminate, and assist in terms of information and warnings regarding natural disasters. EMA implements a program that is part of the Australian National Action Plan (NAP), the main idea of which is to enhance education and security, to build capacity and social cohesion, to raise awareness, and to help culturally and linguistically diverse communities to prepare, recover and respond to incidents, crises and other emergency situations (Emergency Management Australia, 2008c).

The following strategies were approved by the National Emergency Management Committee as primary strategies for development of emergency management in Australia (Emergency Management Australia, 1999).

- Development – EMA should develop its capabilities to reduce the impact and the size of risk to communities from natural, technological and human-caused disasters
- Partnership – there is a need for cooperative partnership at all levels of government to develop national approach to emergency management
- Education and Training – development and management of education and training in emergency management in order to meet the needs of communities, state and territory governments
- Community Awareness – developing national approach to increase community awareness and involvement in mitigation, preparedness, response, and recovery processes
- Civil Defense – developing Australian civil defense capability

Strategic Partnership

Partnership plays a vital role in establishing a successful emergency management system. Without partnerships EMA cannot function effectively. In order to provide successful emergency management EMA implements partnership with a broad network of various Australian agencies (Emergency Management Australia, 2008c). These agencies include: State/Territory government

organizations, Local government organizations, Volunteers, Non-government organizations, Businesses, Professional bodies, International agencies, and Individuals.

The main focus here is to strengthen emergency management by integrating skills, knowledge, expertise, disciplines, leadership, and framework. Furthermore, to provide and develop a network of knowledge, EMA maintains partnerships with the Australian Disaster Information Network Internet Portal (AusDIN), the National Forum for Emergency Warnings to the Community, the Emergency Management Spatial Information Network Australia (EMSINA), and Australasian Libraries in the Emergency Sector (ALIES).

Australia has been engaged in international partnerships to provide better sharing of information, to grant humanitarian aid in disaster situation, to establish and develop policy in order to decrease the impact of possible emergency situations, and to act effectively. EMA plays key and vital role in accomplishing these acts. There are a number of ways through which EMA represents Australia's concern in its partnership with international countries. EMA takes a place at international emergency management forums as Asia Pacific Economic Cooperation (APEC) and activities of United Nations are trying to represent interests of Australia. Moreover EMA implements and establishes development of partnership with a number of international or local organizations such as the Bureau of Meteorology or the Australian Agency for International Development (AusAID) to build capacity, to provide better sharing of learned lessons from past experiences, to establish better practices, and to develop strategic relationship with Pacific Island countries. With the support of the Department of Defense EMA Institute manages seminars, forums, education programs for military and civil servants, for emergency management delegations from Australia and from other international countries. EMA cooperates with the U.S.A., U.K. and Canada to provide better policy in chemical, biological and radiological (CBR)

management. Moreover, EMA has assisting and cooperating measures with APEC via support of APEC Task Force for Emergency Preparedness (TFEP), and XUEAPEC Pandemic Response Exercise 2006 (Emergency Management Australia, 2008c).

Developing Community Capacity and Disaster Resilience

Developing community capacity and self-resilience at the local level is an important phase of preparedness to increase public awareness, community engagement, public preparedness, and education both in natural and manmade disasters. Through partnership of the Australian Government with State, Territory and local governments a new policy initiative named Working Together to Manage Emergencies was adopted in 2004. The key issue of the initiative was to fund local governments and communities in order to establish community safety by developing community self-reliance, which meant to increase Australia's capability to be prepared and to respond and recover from any type of natural and manmade disasters at local levels. The initiative is administered by EMA's Community and Sector Development Branch. Development of self-reliance for local government communities is also done through provided courses by EMA such as Risk Based Land Use Planning (Emergency Management Australia, 2008c).

With the help of the Bureau of Meteorology, Geoscience Australia and State and Territory emergency service agencies, EMA provides free education publications to enhance public awareness and knowledge of background information about disasters, to give advice about preparedness and to give information about how to deal with major natural hazards such as storms, floods, tsunamis, earthquakes, etc. (Emergency Management Australia, 2008c).

Developing Emergency Management Capability

EMA also takes a number of actions to assist the development of emergency management capabilities through the concepts of mitigation, preparedness, response and recovery. EMA works with state and territory emergency management organizations through programs such as the Urban Search and Rescue Capability Development Program, the Chemical Biological and Radiological Enhancement Program, and the Australian Tsunami Warning System Project to ensure the development of national capability, which increases the development of preparedness of Australia to natural and human-caused disaster events at state and local levels (Emergency Management Australia, 2008c).

The National Aerial Firefighting Centre (NAFC) is an organization which also plays an important role in the development of the emergency management capability of Australian Government. NAFC provides effective firefighting capability of national aerial. It helps to establish effective firefighting measures and aircrafts against major bushfires which are quite usual in Australia (Emergency Management Australia, 2008c).

One of the main key points that EMA is trying to develop is to establish a national approach to emergency management. EMA manages research and innovation programs to strengthen the relationship between practice and disciplinary knowledge. Therefore, the EMA Institute provides professional education, development and leadership for emergency management. By offering a student-centric learning environment EMA is trying to concentrate the knowledge, experience, practitioners, decision-makers, and leaders on emergency management issues (Emergency Management Australia, 2008c).

EMA provides a number of plans for emergency and disaster situations in order to respond effectively to emergencies or disasters. There is a relatively large number of accepted plans that aim to assist the need of State or Territory requests in an emergency situations. The

Commonwealth Government Disaster Response Plan (COMDISPLAN) is an example, where the main focus is to assist the Australian Government through EMA in an emergency situation. Furthermore, EMA also provides hazard-specific plans that comprise different actions such as providing care for Australian citizens who were injured or killed overseas, coordinating responses and actions to different disasters such as an aviation disasters, and providing different services to people who were evacuated to Australia from neighboring countries because of disasters (Emergency Management Australia, 2008c).

Managing the Consequences of Disasters

The last and one of the most significant aspects of EMA is the management of disaster/ consequences, which includes protecting and restoring human injuries and facilities, restoring damaged services and providing assistance to businesses and individuals that were injured or affected due to natural or human-caused disasters. Therefore, EMA is the main agency in Australia cooperating with first responder agencies such as the police, fire agencies, ambulance services, etc. to deal with and manage the possible consequences of disasters and emergencies at the state and local level. The focus of EMA, in this regard, is to guarantee the establishment of appropriate arrangements of consequence management, to create partnerships with security agencies at the national level, to develop a network of communication among all security agencies, to conduct public safety and to decrease the impact of threats for the nation (Emergency Management Australia, 2008c).

The Department of Foreign Affairs and Trade (DFAT) manage the Australian Government assistance in coordinating support at the national level and overseas. To provide awareness of all hazards to EMAs Incident Management Facility (IMF), the Attorney-General's Department Coordination Centre (AGDCC) was established in July 2007. The Australian

Government Inter-Departmental Emergency Task Force has a role of facilitating government assistance to emergency situations (Emergency Management Australia, 2008c).

EMA takes into consideration different measures for providing recovery assistance. It manages the Natural Disaster Relief and Recovery Arrangements. This includes grants to relatively small businesses and communities, which shares 50%-57% of state expenditure on recovery costs. Recovery is being made mainly in 5 areas (Emergency Management Australia, 2008c). These are: Community, Infrastructure, Psychosocial, Economy, and Environment.

EMA also has partnerships with State and Territory community service departments. EMA works with Centrelink and the Australian Government's Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) (Emergency Management Australia, 2008c).

Appendix F – Major Laws/Regulations Related to Disasters and Respective

Responsible Ministries in Turkey

Name of the Law	Year/Law Number	Related Ministry/Institution
Protection against surge and flooding Law	1943/4373	Executive body (the cabinet) is responsible implementing the law
Measures to be put into effect prior and after earthquakes' and known as foundation of disaster management in Turkey	1944/4623	Ministry of Public Works / Kandilli Observatory
Civil Defense Law	1958/7126	General Directorate of Civil Defense (under the Ministry of Interior)
Law on Measures and Assistance to be Put into Effect Regarding Disasters Affecting the Life of the General Public (Disaster Law)	1959 / 7269	Council of Ministers, Ministry of Public Works and Settlement, Provincial and District Governments
Law Related to Precautions and Aids for Disasters Effect Life in General Public	1968/2479	Ministry of Public Works and Settlements
Law of Turkish Atomic Energy	1982/2690	Prime Ministry / Turkish Atomic Energy Agency
Decree with the Power of Law on Organization and Duties of the Ministry of Public Works and Settlement	1983/180	Council of Ministers, Ministry of Public Works and Settlements,
Extraordinary Situation Law	1983/2935	Council of Ministers
Law on Organization and Duties of the Ministry of Home Affairs	1985/3152	Ministry of Interior
Construction/Development Law	1985/3194	Ministry of Public Works and Settlements, State Planning Organization, Provincial and Local Governments
Regulation on Emergency Response Organizations and Planning Principles for Disasters	1988/12777	Chamber of Ministers, Ministry of Interior, Ministry of Public Works, Turkish General Staff, Related Ministries, Turkish Red Crescent
Regulation on Management of Prime Ministry Crisis Center	1997/8716	Council of Ministers
Regulations on Additional Items on Disaster Effect	1999/580	Council of Ministers
Regulations on Disaster Mitigation	1999/582	Council of Ministers
General Directorate of Turkish Emergency Management	1999/583 and 1999/600	Council of Ministers General Directorate of Emergency Management (under the auspices of the Prime Minister's office)
Civil Defense and Municipality Law	1999/586	Council of Ministers
Decree with Power of Law on the Obligatory Earthquake Insurance (DASK)	1999/587	Council of Ministers Natural Disasters Insurance Administration (Under the auspices of the Treasury)
Regulations on Residence Funds	1999/588	Council of Ministers
Regulation on Construction Code Enforcement	1999/595	Council of Ministers
Regulations on Civil Defense Law	1999/596	Council of Ministers
Regulations on the Law Related to	1999/597	Council of Ministers

Precautions and Disaster Aid	1999/598 1999/599	
Mandate on Establishment of the Independent National Earthquake Council	2000/2000-9	National Earthquake Council
Law on Building Inspection	2001/4708	Council of Ministers Ministry of Public Works and Settlement, Provincial and Local Governments, Building Inspection Firms
Decree on Working Procedures and Principles of Natural Disasters Insurance Administration	2001/ Official Gazette No. 24600	Natural Disasters Insurance Administration (Under the auspices of the Treasury)
Law on Municipalities	2004/5272	Council of Ministers Ministry of Interior
Decree on Design Principles for Buildings in Disaster Regions	2006/ Official Gazette No. 23098	Ministry of Public Works and Settlement

Source: adopted from Ural (2006) and Ganapati (2008)

Appendix G – List of Organizations Involved in Istanbul 2003 Bombings Response

Organization Name	Abbreviation
1st Directorate of Istanbul Saving Cultural and Natural Treasures	ISCNT
AKA Search Rescue Research Team	AKA
AKUT- Arama Kurtarma Dernegi	AKUT
American hospital	AH
ATV	ATV
AYCELL	ACELL
Besiktas Fire Group Directorates	BskFGD
Beyoglu Fire Group Directorates	BFGD
Beyoglu Municipality	BeyMun
Bogazici University	BU
British Foreign Office	BFO
British Airways	BA
British Government	BG
British Prime Minister	BPM
Central Bank	CB
Civil Defense Team	CDT
Counter Terrorism Branch of Istanbul Police	CTIP
Crime Scene Investigation branch of Istanbul Police	CSIIP
Crisis Center	CC
Department of Religious Affairs	DRA
EU Commissioner of Expansion	EUComE
EU Council	EUC
Fatih Fire Group Directorates	FFGD
Foundation of Turkish Psychology	FTP
GEA Yeni Yuksektepe Search and Rescue Ecology Organization	GEA
General Staff intelligence dept	GSI
German Foreign Ministry	GFM
Governorship of Istanbul	GOI
House of Commons	HoC
HSBC	HSBC
IETT Bus and Tram Company of Greater Municipality	IETT
IGDAS Natural Gas Co.	IGDAS
Israel Foreign Ministry	IFM
Israel Government	IsrGov
Israel Prime minister	IPM
Istanbul 1-1-2 EMS	112 EMS
Istanbul Emergency Operation Center	IEOC
Istanbul Fire Department	IFD

Istanbul Health Department	IHD
Istanbul Police Department	IPD
Istanbul Stock Exchange	ISE
Istinye Fire Group Directorate	IFGD
Izmir Police Department	IzPD
Lloyd's Insurance Company	LIC
Map Directorate	MD
Medical Bureau	MB
MOSSAD	Mossad
National Intelligence Agency	NIA
National Security Council	NSC
NTV	NTV
President	PRS
Press Directorate	PD
Prime Minister	PM
Seyrantepe Fire Group Directorate	SyrFGD
Show Radio	ShowR
Sisli Etfal Education and Research	
State Hospital (SEERSH)	SEERSH
Sisli Fire Group Directorates	SFGD
Sisli Municipality	SisMun
Social Services Directorate	SSD
State Security Court	SSC
Structural Engineers of the Earthquake Disasters Directorate	SEEDD
Structural Works Directorate	SWD
Syria Government	Sgov
Taksim Education and Research State Hospital	TERSH
The Crisis Center of Istanbul Medical Works Directorate	CCIMWD
Traffic Directorate of Greater Municipality	TDGM
Transportation Co.	TC
TRT	TRT
TURKCELL	TCELL
Turkish Air Lines	TAL
Turkish Foreign Ministry	FM
Turkish Government	TG
Turkish Red Crescent	TRC
UEFA	UEFA
United Nations Security Council	UNSC
US President	USP
Vakifbank	VB
Yeditepe University	YU

ZAKA

ZAKA

Appendix H – List of Organizations Involved in Madrid 2004 Bombings Response

Operations

Organization Name	Abbreviation
Belgian National Police	BNP
British Government	BG
British Intelligence Agency	BIA
European Union	EU
Feria Internacional de Madrid	FIM
French Intelligence Agency	FIA
French National Police	FNP
German Intelligence Agency	GIA
Israeli Intelligence Agency	IsIA
Italian Intelligence Agency	ItIA
La Empresa Municipal de Transportes	EMT
Madrid Cabinet of Crisis Communication	MCCC
Madrid Dean of the Courts	MDC
Madrid Fire Department	MFD
Madrid Police Department	MPD
Ministry of Health and Consumption	MHC
Moroccan Intelligence Agency	MIA
National Intelligence Center	NIC
Office of Mental Health	OMH
Police Special Operations Group	PSOG
Red Cross	RC
Renfe Operadora	RO
Servicio de Asistencia Municipal de Urgencia y Rescate	SAMUR
Servicio de Urgencia Médica de Madrid	SUMMA
Spanish Antiterrorism Officials	SAO
Spanish Army	SA
Spanish Civil Guard	SCG
Spanish Embassies	SE
Spanish Foreign Ministry	SFM
Spanish Government	SG
Spanish Interior Ministry	SIM
Spanish Media	SM
Spanish National Police	SNP
Spanish Prime Ministry	SPM
United Nations	UN
US Central Intelligence Agency	USCIA

Appendix I – List of Organizations Involved in London 2005 Bombings Response

Operations

Organization Name	Abbreviation
7 July Assistance Service	7JAS
BBC	BBC
British Government	BG
British Transport Police	BTP
Cabinet	Cbnt
Cabinet Office emergency committee (COBRA)	COBR
Cable and Wireless	CW
Camden City Council	CCC
Casualty Bureau	CASB
Central Ambulance Service Control	CASC
Centrecom (the bus service control centre)	CCOM
Conservatist Party	CP
Department of Culture	DoC
European Governments	EUGOV
European Union	EU
Gold Control Group	GOLD
Health Protection Agency	HPA
Home Office/ Home Secretary	HS
Humanitarian Assistance Unit	HAU
Intelligence Agency/Secret Intelligence Service (SIS)	SIS
Intelligence and Security Committee ISC	ISC
Joint Intelligence Committee (JIC)	JIC
Jordan Government	JORG
JTAC (Joint Terrorism Analysis Centre)	JTAC
Local Education Authorities	LEA
London Ambulance Service	LAS
London Assembly	LA
London Chamber of Commerce and Industry	LCCI
LONDON FIRE AND EMERGENCY PLANNING AUTHORITY	LFEP
London Fire Brigade	LFB
London Helicopter Emergency Medical Service	LHEMS
London Hospitals	LH
London Municipality	LMUN
London Resilience Team	LRT
London Underground Emergency Response Unit	LUER

London Underground Transportation	LUT
Metropolitan Police Service (MPS)	MPS
MI5	MI5
MI6	MI6
Muslim Association of Britain	MAB
Muslim Council of Britain	MCB
Network Control Centre	NCC
NHS London Development Centre	NHS
NHS Trauma response service	NHST
O2	O2
Parliament	PAR
Peterborough City Council	PCC
Prime Minister	PM
Royal London Hospital	RLP
Saudi Arabia	Saudi A
The Cabinet Office Briefing Rooms (COBR)	COBR
The City of London Police	CLP
The Metropolitan Police Family Liaison system	MPFLS
U.K. Security Ministry	SECMIN
University College Hospital	UCH
U.S. Government	US
Vodafone	Voda
Westminster City Council	WCC

Appendix J – List of Organizations Involved in Mumbai 2008 Bombings Response

Operations

Organization Name	Abbreviation
US State Department	USSD
Indian Government	IGOV
Pakistani Government	PGOV
Pakistani Army	PARMY
US Armed Forces	USARMY
Indian Ministry of Foreign Affairs	IMFA
Pakistani Ministry of Foreign Affairs	PMFA
British Foreign Office	BFO
French Ministry of Foreign Affairs	FMFA
Beijing Special Armed Police Unit	BeiPol
Chinese Ministry of Public Security	CMPS
Indian Armed Forces	IARMY
High Commissioner of Pakistan in India	HCPI
Mumbai Police	MumPol
US Federal Bureau of Investigation	FBI
Australian Government	AGOV
Australian Ministry of Foreign Affairs	AMFA
Australian Federal Police	AFedPol
British Metropolitan Police	BMetPol
British High Commissioner in India	BHCI
European Union Foreign Affairs	EUFA
Inter-Services Intelligence (Pakistan)	ISI
Mahashatra Chief Minister	MCM
Congress Party	CP
Pakistani Police	PakPol
Pakistani Defense Ministry	PDM

Appendix K: Additional Sources for Disaster Management and Selected Terrorism

Cases

For General Disaster Management Topics

Center for Creative Leadership. 2010. "Stepping the Void." Accessed September 16, 2011 from <http://crisisleadership.blogspot.com/>

Department of Homeland Security (DHS) .2002. "Homeland Security Act of 2002." Accessed September 16, 2011 from http://www.dhs.gov/xlibrary/assets/hr_5005_enr.pdf

Federal Emergency Management Agency (FEMA). 2007. "Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, and Related Authorities as of June 2007, FEMA 592." Accessed September 16, 2011 from http://www.fema.gov/pdf/about/stafford_act.pdf

Federal Emergency Management Agency (FEMA). 2010. "Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep) Resource Center." Accessed September 16, 2011 from <http://www.fema.gov/privatesector/preparedness/>

International Association of Emergency Management (IAEM). 2007. "Principles of Emergency Management Supplement." Accessed September 16, 2011 from <http://www.iaem.com/publications/documents/PrinciplesofEmergencyManagement.pdf>

McCharty, FrancisX. 2011 "FEMA's Disaster Declaration Process: A Primer. Congressional Research Service 7-5700, RL34146." Accessed September 16, 2011 from <http://www.fas.org/sgp/crs/homesec/RL34146.pdf>

NAPA. 2006. “National Research Agenda for Intergovernmental Relations–2006.” Washington DC: NAPA. Accessed September 16, 2011 from <http://www.napawash.org/wp-content/uploads/2006/06-15.pdf>

National Health Services (NHS). 2009. “Heatwave Plan for England: Protecting Health and Reducing Harm from Extreme Heat and Heatwaves.” Accessed September 16, 2011 from <http://www.iaem.com/regions/iaemeuropa/documents/HeatwavePlanEnglandDOH2009.pdf>

The National Governors Association (NGA). 2010. “A Governor’s Guide to Homeland Security.” Accessed September 16, 2011 from <http://www.nga.org/files/live/sites/NGA/files/pdf/1011GOVGUIDEHS.PDF;jsessionid=997F6FBA6AD8515CC31E2386460F044>

9-11 New York Attacks

9/11 Commission. 2004. "9/11 Commission Staff Statement No. 3: The Aviation Security System and the 9/11 Attacks (Jan. 27, 2004)." Accessed September 16, 2011 from <http://news.findlaw.com/hdocs/docs/terrorism/911comm-ss3.pdf>

9/11 Commission. 2004. "9/11 Commission Staff Statement No. 4: The Four Flights (Jan. 27, 2004)" Accessed September 16, 2011 from <http://news.findlaw.com/hdocs/docs/terrorism/911comm-ss4.pdf>

American Red Cross. 2006. "September 11th Response and Recovery." Accessed September 15, 2011 from <http://www.redcross.org/911recovery/>

Federal Emergency Management Agency. FEMA. 2010. "Perspective on Preparedness: Taking Stock Since 9/11." Accessed September 16, 2011 from http://www.fema.gov/pdf/preparednesstaskforce/perspective_on_preparedness.pdf

Government Accountability Office (GAO). 2002. "More Effective Collaboration Could Enhance Charitable Organizations' Contributions in Disasters. Report to the Ranking Minority Member, Committee on Finance, U.S. Senate. GAO-03-259." <http://www.investigativeproject.org/documents/testimony/217.pdf>

House of Commons. 2001. "11 September 2001: The response. Research Paper 01/72." Accessed September 16, 2011 from <http://www.parliament.uk/documents/commons/lib/research/rp2001/rp01-072.pdf>

Kasapoglu, Aytul, Dennis Mileti, and Mathieu Deflem. 2007. "Is the United States Ready for Future Catastrophes? Estimating the Effectiveness of Organizations for Hazard

Mitigation Since 9/11.” *Journal of Homeland Security*, September 2007. Online:
<http://www.homelandsecurity.org/journal/Default.aspx?oid=164andocat=1>

Roberts, Bryan. 2009.

The Macroeconomic Impacts of the 9/11 Attack: Evidence from Real-Time Forecasting.”
Accessed September 16, 2011 from
http://www.dhs.gov/xlibrary/assets/statistics/publications/ois_wp_impacts_911.pdf

Rubin, Claire B. and Irmak Renda-Tanali. 2002. “The Terrorist Attacks on September 11, 2001: Immediate Impacts and Their Ramifications for Federal Emergency Management.” Quick Response Research Report #140. Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado. Accessed September 16, 2011 from <http://www.colorado.edu/hazards/research/qr/qr140/qr140.html>

Tierney, Kathleen. 2005. “The 9/11 Commission and Disaster Management: Little Depth, Less Context, Not Much Guidance.” *Contemporary Sociology*, 34, 2: 115-120

2002 Bali Bombings

Arnold, C. 2003. "Working in the 'hot zone'," *Police Life*, October, pp.11-12.

Asia-Pacific Regional Space Agency Forum (APRSAF) n.d. "Disaster Management in Indonesia." Accessed September 16, 2011 from www.aprsaf.org/data/aprsaf13_data/2_1_INDONESIA_DM_1515day1.pdf

Callinan, Rory. 2008. "Inside the manhunt." *Time Magazine*, 7 July 2008, pp.36-41. Accessed September 16, 2011 from <http://www.time.com/time/magazine/article/0,9171,1818067,00.html>

Gurtner, Yetta. 2004. "After the Bali Bombing- the long road to recovery." *The Australian Journal of Emergency Management*, 19(4), 56-66. Accessed September 16, 2011 from [http://www.ag.gov.au/www/emaweb/rwpattach.nsf/VAP/\(3273BD3F76A7A5DEDAE36942A54D7D90\)~AftertheBali.pdf/\\$file/AftertheBali.pdf](http://www.ag.gov.au/www/emaweb/rwpattach.nsf/VAP/(3273BD3F76A7A5DEDAE36942A54D7D90)~AftertheBali.pdf/$file/AftertheBali.pdf)

International Committee of the Red Cross (ICRC). 2002 "Indonesia: Red Cross Response to Bali Bombing." Accessed September 16, 2011 from <http://www.icrc.org/eng/resources/documents/misc/5ezgy3.htm>

McKinnon, Rod. 2005 "Australian Red Cross : making a difference." *Australian Journal of Emergency Management*, 20, 4: 22-26.

Paul, Lisa. 2005 "New levels of responsiveness : joining up government in response to the Bali bombings." *Australian Journal of Public Administration*, 64, 2: 31-33

Peters, Ekong J. and David McEntire. 2011. "Emergency Management in Australia: An Innovative, Progressive and Committed Sector." In *FEMA Comparative Emergency*

- Management Book Project*. Accessed September 16, 2011 from
<http://training.fema.gov/EMIWeb/edu/CompEmMgmtBookProject.asp>
- Sherlock, Stephen. 2002. "The Bali Bombing: What it means for Indonesia?" Current Issues Brief no. 4 2002-03. Accessed September 16, 2011 from
<http://www.aph.gov.au/library/pubs/cib/2002-03/03cib04.htm>
- U.K. Bali Bombings Victims Group. n.d. "Homepage." Accessed September 16, 2011 from
<http://www.ukbbvg.co.uk/>
- United Nations Development Program (UNDP) Indonesia n.d. "Lessons Learned: Disaster Management Legal Reform: Indonesian Experience." Accessed September 16, 2011 from
<http://www.undp.or.id/pubs/docs/Lessons%20Learned%20Disaster%20Management%20Legal%20Reform.pdf>
- Wise, William M. 2005. "Indonesia's War on Terror. Published by United States-Indonesian Society." Accessed September 16, 2011 from
http://terror.workforceconnect.org/images/Indonesia%27s_War_on_Terror.pdf
- World Bank. 2011. "Indonesia: Disaster Management." Accessed September 16, 2011 from
<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/INDONESIAEXTN/0,,contentMDK:21481594~pagePK:141137~piPK:141127~theSitePK:226309,00.html>

2003 Istanbul Bombings

Akman, Petek. 2010. Psychosocial intervention in response to bombings in Istanbul. *Procedia - Social and Behavioral Sciences*. 5, 1716-1720

Christofis, Nokos, Christos Kollias, Stephanos Papadamou, and Apostolos Stagiannis. 2010. "Terrorism and Capital Markets: The Effects of the Istanbul Bombings. Economics of Security" Working Paper 31, Berlin: Economics of Security. Accessed September 16, 2011 from http://www.diw.de/documents/publikationen/73/diw_01.c.356873.de/diw_econsec0031.pdf

Corbacioglu, Sitki. Naim Kapucu. 2005. "Intergovernmental Relations in Response to the 1999 Marmara Earthquake in Turkey: A Network Analysis." *International Journal of Mass Emergencies and Disasters*, 23(3), 73-102.

Ipek, Hasan. 2009. "Emergency Management System of Turkey." Accessed September 16, 2011 from http://www.proventionconsortium.org/themes/default/pdfs/Forum09/Forum09_WS1_Ipek.pdf

Istanbul Technical University Center of Excellence for Disaster Management. 2005. *Disaster Management Perspective of Terrorist Attacks in Istanbul on November 15 and 20, 2003*. Istanbul: ITU Press.

Ozeren, Suleyman, and Huseyin Cinoglu. 2006. "The Turkish Counter-Terrorism Experience." In *National Counter Terrorism Strategies*, edited by Robert W. Orttung and Andrey Makarychev, 155-164. Amsterdam: IOS Press.

Pacific Disaster Center. 2005. "Disaster Risk Management Profile." Accessed September 16, 2011 from <http://emi.pdc.org/cities/CP-Istanbul-09-05.pdf>

Rodoplu, Ulkumen, Jeffrey Arnold, and Gurkan Ersoy. 2006 "Terrorism in Turkey: Implications for emergency management." *Prehospital Disaster Medicine*, 18, 2: 152-160.

Ural, Derin. N. 2011 "Emergency Management in Turkey: Disasters Experienced, Lessons Learned, and Recommendations for the Future." In FEMA *Comparative Emergency Management Book Project*. Accessed September 16, 2011 from <http://training.fema.gov/EMIWeb/edu/CompEmMgmtBookProject.asp>

2004 Madrid Bombings

BBC. 2007. "Madrid Train Attacks." Accessed September 16, 2011 from

http://news.bbc.co.uk/2/hi/in_depth/europe/2004/madrid_train_attacks/

Boin, Arjen, Paul 't Hart, and Allan McConnell. 2009. "Crisis Exploitation: Political and Policy Impacts of Framing Contests." *Journal of European Public Policy*, 16, 1: 81-106

Canel, Maria Jose and Karen Sanders. 2010. "Crisis Communication and Terrorist Attacks: Framing a Response to the 2004 Madrid Bombings and 2005 London Bombings." In *The Handbook of Crisis Communication*, edited by Timothy Coombs and Sherry J. Holladay. Wiley-Blackwell, Oxford, UK.

Frykberg, Eric. 2004. "Terrorist Bombings in Madrid." *Critical Care*, 9(1), 20-22. Accessed September 16, 2011 from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1065102/>

Gordon, Philip H. 2004. "Madrid Bombings and U.S. Policy." Accessed September 16, 2011 from http://www.brookings.edu/testimony/2004/0331europe_gordon.aspx

IBM. 2010. "City of Madrid: Coordinated emergency response raises public safety to a new level." Accessed September 16, 2011 from <http://public.dhe.ibm.com/common/ssi/ecm/en/odc03154usen/ODC03154USEN.PDF>

Open Sources Information. 2006. "JTIC Terrorism Case Study No.1 : The Madrid Rail Bombings." Accessed September 16, 2011 from <http://www.opensourcesinfo.org/journal/2006/1/29/jtic-terrorism-case-study-no1-the-madrid-rail-bombings.html>

Turegano, Fernando. n.d. "Terrorist Bombings in Madrid." Accessed September 16, 2011 from

<http://www.taleofourcities->

[newyork.com/presentations/Day1/Fernando%20NY%20March%202011.pdf](http://www.taleofourcities-newyork.com/presentations/Day1/Fernando%20NY%20March%202011.pdf)

2005 London Bombings

BBC. 2008. "London Attacks." Accessed September 16, 2011 from

http://news.bbc.co.uk/2/hi/in_depth/uk/2005/london_explosions/default.stm

British Red Cross. 2005. "London Bombings 2005." Accessed September 16, 2011

<http://www.redcross.org.uk/What-we-do/Emergency-response/Past-emergency-appeals/London-bombings-2005>

Hines, S., A. Payne, J. Edmondson, and A. J. Heightman. 2005. "Bombs' under London: the EMS response plan that worked." *Journal of Emergency Medical Services*, 30(8), 58-66.

Hughes, G. 2006. "The London bombings of 7 July 2005: what is the main lesson?" *Emergency Medicine Journal*. 23, 9: 66. Accessed September 16, 2011 from

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2564202/>

Lockey, D. J., R. Mackenzie, J. Redhead, D. Wise, T. Harris, A. Weaver, K. Hines, and G. E. Davies. 2005. "London bombings July 2005: the immediate pre-hospital medical response." *Resuscitation*, 66, 2: ix-xii.

London Resilience .2010. "7 July Bombings." Accessed September 16, 2011 from

<http://www.londonprepared.gov.uk/londonplans/july7/>

Kapucu, Naim. 2011. "Emergency and Crisis Management in the United Kingdom: Disasters Experienced, Lessons Learned, and Recommendations for the Future." In *Comparative Emergency Management Book Project*, edited by FEMA. Accessed September 16, 2011 from <http://training.fema.gov/EMIWeb/edu/CompEmMgmtBookProject.asp>

Smither, J.L. 2009. "A look back at the London transport bombings." *Crisis Response Journal*, 5, 3.

Strom, Kevin J. and Joe Eyerman. 2011. "Interagency Coordination: Lessons Learned From the 2005 London Train Bombings." Accessed September 16, 2011 from

<http://nij.gov/nij/journals/261/coordination.htm>

2008 Mumbai Bombings

BBC. 2010. "Mumbai Attacks." Accessed September 16, 2011 from

http://news.bbc.co.uk/2/hi/in_depth/south_asia/2008/mumbai_attacks/default.stm

Control Risks. n.d. "The Mumbai Terrorist Attacks - a case study." Accessed September 16,

2011 from http://www.control-risks.com/PDF/mumbai_case_study.pdf

McElroy, Damien. 2008. "Mumbai attacks: foreign governments criticise India's response."

Accessed September 16, 2011 from

<http://www.telegraph.co.uk/news/worldnews/asia/india/3533279/Mumbai-attacks-foreign-governments-criticise-Indias-response.html>

RAND. 2009. "The Lessons of Mumbai." Accessed September 16, 2011 from

<http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA493061andLocation=U2anddoc=GetTRDoc.pdf>

Safe Access. n.d. "Mumbai Attacks: The Likely Impact for Humanitarians." Accessed

September 16, 2011 from

http://www.saferaccess.org/documents/sa_impact_of_the_mumbai_attacks.pdf

The Economic Times. 2008. "Why did NSG take 10 hours to arrive?" Accessed September 16,

2011 from http://articles.economictimes.indiatimes.com/2008-11-30/news/27703778_1_nsg-commandos-nsg-men-il-76