

# CHAPTER II

## SECURITY AND THE ENVIRONMENT: REGIONAL APPROACHES

### Introduction

Moderated by Dr. Kent Hughes Butts, Director, National Security Issues Branch, Center for Strategic Leadership, United States Army War College, the panel emphasized the direct relationship between the Environmental Security of the population and regional stability, promoted environmental cooperation between defense and environmental authorities, and stressed multilateral and interagency coordination opportunities. Additionally, it reinforced the conference objectives and end state through a review of the United States Central Command and Gulf Cooperation Council's Environmental Security efforts in the region.

### Opening Remarks

**Dr. Kent Hughes Butts  
Director, National Security Issues Branch,  
Center for Strategic Leadership  
United States Army War College**

Environmental Security is a topic with which many are familiar. Yet, it remains a new and often misunderstood role for the military.

Frequently people will ask, "Are all environmental issues security issues?" The answer is "No." Many environmental issues are not relevant to national or regional security interests. Those which relate to stability and conflict, or which may be used as confidence-building measures for a region or for a nation, are definitely security-related. When the United States pursues its national security strategy, it identifies its security interests. Any environmental issues that affect those interests positively or negatively are considered to be security issues, and variables such as the military, economic, or diplomatic elements of power, are directed

toward promoting those security interests and dealing effectively with those environmental issues.

Environmental Security is often associated with conflict: the conflict that may result or be triggered because states or groups are competing for scarce resources; or the tensions that result when pollution from one country spills into another; or conflict that is causing problems in the country that receives an influx of refugees due to a migration resulting from an environmental event. However, Environmental Security may also present an opportunity to promote confidence-building and communication between countries that may either be in conflict or in other ways have no reason to be working together.

Environmental Security advantages have proven themselves over the years, and they demonstrate why the environment is an important element of security. Environmental Security has been used as a medium for reaching out and communicating with countries all around the world. It is nonthreatening, it transcends tensions, it affects all countries, it is an appropriate military role, it is generally low cost, and it promotes international and interagency cooperation. All of these are critical elements for the military these days.

Environmental Security issues are often regional and transnational in scope. They do not respect borders. Disease, floods, and the effects of nuclear, biological, and chemical (NBC) weapons do not stop at borders. As a result, they require a multilateral response. An important objective of this conference is to identify both how to respond to these Environmental Security events and how we need to work with one another to do so.

The military has a particular advantage in addressing Environmental Security issues. They have good communications. This is why the United States military element of power has been called upon to address these over the years and why the U.S. Central Command (USCENTCOM) is working closely with many of the Gulf Cooperation Council (GCC) states to prepare for disasters. How many times have you worked with your civilian counterparts and found that they needed your short- or long-wave communication capabilities to reach their headquarters during a civil emergency? The military is also present on the frontiers, by necessity.

When the government needs to deal with problems in a distant area, whom could they call on, except for the military? The best transportation assets are usually required for the military, so that it is able to defend borders and travel the full length of the country. Technical expertise is resident in construction engineer battalions and other areas within the military. The military security mission is already defined, and the military has a well-accepted role in crises response. These are all valid reasons why the military should be involved in dealing with Environmental Security issues, prepared to manage the consequences of various forms of disaster events, and that is why we are participating here today.

A critical role for the military is participating in disaster response. However, doing so takes the military out of its very comfortable defense role and requires working with other militaries. Also, the military must work with the civilian government to receive direction, to seek advice on how to handle a disaster, and to determine how the environmental ministries, transportation ministries, and emergency management ministries want their objectives and missions to be supported by the military. The United States military has struggled for many years to communicate with their civilian counterparts. In fact, this is not a phenomenon restricted to the United States. The World Bank Environmental organization asked us to come to Washington to discuss environmental matters at one time. They said, "Our problem is that we do not know how to communicate with the military. If we have a failed state, we often have a disaster, typically an environmental disaster that has undermined the government and caused it to fail. The military is brought in and preserves law and order. But we do not know how to work with them to help them establish the infrastructure in that country so that, when they hand off to a civilian government, it is successful. We do not know how to communicate across that military cultural barrier." In our own Department of Defense and Department of State, we oftentimes joke with one another. Our Department of State rarely brings slides to a presentation. Our military always brings slides to a presentation. Ask the Department of State if they think the military can speak without slides. They will joke and say, "No." So, even in a culture that has promoted interagency cooperation on difficult international issues for years, we have different cultural norms, and so the military must prepare to work with the other agencies. Moreover, and perhaps more difficult and definitely equally important, when a disaster occurs the military must work with non-governmental

organizations, other countries, the donor community, and multilateral organizations. It is almost impossible to resolve a disaster without working with these groups. Other countries will be involved. They have priorities. How does their military go about its mission? What about the civilian agencies in that country? What about the relief organizations? Is the military prepared to deal with them? The U.S. military paid very little attention to relief organizations, non-governmental organizations (NGO), until we moved into Somalia to deliver relief aid in the early nineties. We found that the port of Mogadishu was managed by CARE, and managed very well. The stevedores responded to the leadership of the non-governmental organizations, and would only respond to our military if the NGOs were supporting. We needed the support of the NGOs to get the food aid to the regions that required it. We learned to value NGO participation. But they speak a different language. They have a different culture. It takes preparation ahead of time to ensure that the resources that are required to successfully respond to and mitigate a disaster are in place.

Many diverse events qualify as Environmental Security issues. The military must be prepared to address natural disasters, technological disasters, the employment of nuclear, biological or chemical weapons or the distribution of radioactive material, pollution problems (air and water), and public health—epidemics and drug resistant strains of diseases. These are all difficult problems with which our military communities must now deal.

Environmental degradation, a common problem in all of our regions, and resource conflict are issues that the military must be prepared to address, if they occur; in preparation for dealing with them, we may also promote communication and cooperation between the regions militaries, NGOs, other countries, donor organizations, and civil authority.

Consequence management is a particularly important element of Environmental Security because of the technical and political responsibilities involved. It encompasses a variety of difficult tasks that the military must execute: transport, communications, engineering, information sharing, planning, health and medical services, hazardous material management, and the legal aspects of all of these. During the

course of our conference, we will address many of these issues and their importance and how to successfully manage them.

This conference presents us all with the opportunity to better understand Environmental Security issues and to establish the working relationships necessary to make the militaries of the region effective when addressing these issues.

## **Report on Results of April 2000 Conference**

**Staff Colonel Nasser bin Salim Al Tamtami**  
**Director of Operations, Oman Armed Forces Chief of Staff**  
**Sultan's Armed Forces of Oman**

Dear Leaders, Officers and ladies and gentlemen, peace be upon you. Let me introduce myself, I am Colonel Nasser bin Salem Al Tamtami, head of delegation of the Sultanate of Oman, for the Armed Forces of the Sultan, to this conference. I will discuss and brief the results of the First Environmental Security Seminar for the Gulf Cooperation Council (GCC) countries conducted in Muscat from 16 to 17 April 2000, which focused on the role of the Armed Forces in protecting the environment and combating and managing environmental disasters. This presentation will provide an introduction, the objectives of the seminar, and a summary of the main topics discussed during the conference. The conference addressed four main areas: Environmental Security from the regional and the American point of view, the role of the armed forces in protecting the environment and environmental disaster management, the lessons learned from disasters related to Environmental Security, and a futuristic vision for Gulf-US military cooperation in protecting the environment in the region. I will outline the many achievements of the Armed Forces in the GCC countries, i.e., what was achieved after the conference and the role of the Sultan's Armed Forces. Finally, I will make a few concluding remarks.

Allow me to start my presentation with this special quote about the environment, from the Chief Commander of the Armed Forces:

Protecting the environment is a collective responsibility that does not stop at the political borders of the state. Therefore every human being wherever he is has a duty to contributing to the protection of the environment and to dealing with it wisely. Every one has to be aware of the many causes of the pollution, whether natural, biological, industrial, chemical or physical. Many nations must attempt to control random population increase and limit the effects of desertification and drought on whatever pastures and water resources they have left. We also urge the industrial world to limit their race for technology and to narrow the big gap in the world economy between the industrial world and the developing world,

in order to find the right balance between the desired development and the protection of a clean environment.

Those words were said during the International Conference for Development and the Environment in Brazil.

The environment today faces many great dangers that threaten it and its natural resources. This threat could be caused by man-made or natural causes. These environmental dangers affect all members of society, the military as well as the civilians. These dangers do not stop at a nation's border but may cross over borders without any restrictions. Therefore, the armed forces and various security administrations realized the seriousness of these dangers, their impact on society, and on security in particular. The armed forces and the security departments have expended tremendous effort and resources to confront these dangers by adopting military environmental strategies that correspond to their respective responsibilities.

The First Environmental Security Seminar, held in April 2000 in the Sultanate of Oman, focused on the importance of clarifying the roles of the armed forces and the various security departments in maintaining Environmental Security. The conference was conducted with the active participation of the armed forces in the GCC countries and the cooperation of the United States Central Command (USCENTCOM).

The aim of this summary is to enable the sponsors of this conference to link the previous results with the activities of this conference. As I mentioned before, the seminar of 2000 focused on four main areas. The first area was "Environmental Security: Regional and U.S. Perspectives." Environmental dangers today are too many to list. Nevertheless, everybody agrees that these dangers confront military planners with new, unexpected tasks, and they demand the formulation of new plans. The consequences for the environment might endanger national and regional economies, which would have an impact on security in general. These dangers could become new sources of internal and external conflicts, conflicts that would require military intervention to deal with. Environmental threats could result from natural or man-made disasters, or from shipping methods that are beyond the control of the responsible civil authorities.

Therefore, we have to study these environmental dangers and take them into consideration in order to find solutions and prepare plans to deal with the consequences before they take place. This is what is meant by Environmental Security. I believe that we are all serious in finding a common definition for the concept of Environmental Security and in activating the military to carry out their responsibilities adequately.

The second topic was the role of the armed forces in protecting the environment and in disaster management. In this session, two subjects were addressed: the everyday practices of the armed forces and the different security administrations.

The first sub-topic was the practices of the armed forces and security authorities and their role in environmental pollution. The armed forces do many things, inside or outside of their bases, which might harm the environment. This could be as a result of not abiding by the rules and regulations for environmental protection, not following the necessary standards for the protection of the environment, and/or complete disregard for correct planning for sustained development. During the previous conference, everybody focused on the necessity of protecting the environment inside the camps and military bases. This requires abiding by the environmental rules and regulations and standards when carrying out any project. It also requires proper planning for the available natural resources, in line with the responsibilities of the armed forces. This might require a request for coordination with civil authorities, especially those concerned with environmental protection, and for the establishment of environmental communication channels between the armed forces and these civil authorities. Commanders need to increase awareness of all environmental aspects at all levels in order to achieve the required goal, which is a safe environment for everybody and the protection of resources.

I should mention the importance of having an organization that oversees environmental matters in the armed forces, that is, an organization responsible for studying and monitoring environmental problems, finding suitable solutions, and supplying all the necessary financial and human resources. The second sub-topic was the daily practices of the armed forces and security authorities that would limit the impact of pollution. The armed forces can actively contribute in limiting the effects of pollution,

whether due to natural or man-made disasters. Armed forces have airplanes, ships, heavy equipment, expertise, and human resources that can play an important role in disaster response and prevention. Intelligence information available to the armed forces enables them to provide early warning of various polluting operations. Early warning limits the harmful results. This was the origin for creating regional and international communication channels to facilitate environmental intelligence and information exchange among the states, in order to activate environment protection operations.

The third area was the lessons learned from the disasters related to Environmental Security. Various national disasters related to security were discussed, including the principles for managing water pollution, the Exxon-Valdez accident, the sinking of the oil tanker Al-Jaziah and its effects on desalination plants, and finally the oil well fires from Operation DESERT STORM.

The fourth area was the futuristic vision for US-Gulf cooperation to protect the environment in the region. This section focused on the future perspectives of the previous three areas of discussion. The sponsors of the conference developed numerous recommendations:

- \* Develop a common definition of Environmental Security and its relevant aspects in order to avoid any misunderstanding in the future;
- \* Create an intelligence cell for Environmental Security and establishing information centers;
- \* Establish a regional monitoring and warning center to notify the national centers in order to help coordinate relief efforts;
- \* Organize a follow-on seminar to address issues of technology development for Environmental Security planning and enhanced military to military collaboration in technology research and development, weapons acquisition, and table-top command and control exercises, and to discuss the proposals and recommendations advanced at the Environmental Security Seminar in Oman;

- \* Invite civilian authorities with specialized environmental expertise from the United States and Gulf Cooperation Council member states to future seminars.

With respect to the United States, the suggestion was made that specific programs for United States–Gulf Cooperation Council Environmental Security cooperation could be developed and tailored to the needs of the Gulf States. These are as follows:

- \* Develop a working mechanism to identify the capabilities and roles of the forces of the GCC countries and the U.S. armed forces in the field of Environmental Security;
- \* GCC Member States should find ways to benefit from the expertise of the U.S. Army in Environmental Security, such as specialized training and conducting joint exercises to combat the consequences of pollution and environmental dangers;
- \* Assign GCC military personnel to attend courses run by the U.S. Coast Guard; and
- \* Exchange training expertise and support the preservation of environmental technologies.

I would like now to go over what has been achieved since the first seminar at the level of the armed forces in the GCC countries. A committee for Environmental Security was created at the level of the armed forces of the GCC countries that played an important role in this field. This committee has met twice: in Muscat, May 27-30, 2001 and Kuwait, March 10-13, 2002.

The seminar in Muscat had the following agenda:

- \* Unify the concept of Environmental Security from the military point of view in the GCC countries;
- \* Determine and outline principles and rules for the protection of the environment from the military point of view and ways of applying them;
- \* Raise the awareness among military personnel for the protection of the environment and publicize environmental awareness and

- educational programs in the armed forces;
- \* Prevent the negative effect on military personnel in the case of an environmental pollution incident;
  - \* Adopt environmental contingency plans;
  - \* Adopt a system for penalties, violations and inspections;
  - \* Follow up on the latest developments in the fields of protecting the environment and preparing rules, regulations and guidance and technical instructions.
  - \* Train, exchange experts, information, visits, seminars, coordinate in the various environmental fields, and promote a unification of attitudes towards international problems related to environment.

The agenda of the Kuwait meeting included the following points:

- \* General air, land and sea fields.
- \* The existing system for inspection, penalties and violations in the armed forces.
- \* Environmental rules, regulations, technical and guidance instructions.

The achievements of the Sultan's Armed Forces are as follows:

- \* The formation of a permanent committee for Environmental Security in the Sultan's Armed Forces and the activation of special operations for the protection of environment;
- \* Abiding by what was agreed upon in the special meetings for Environmental Security in Muscat and Kuwait;
- \* Activating the awareness role within the Sultan's Armed Forces through lectures, seminars and workshops in coordination with the Ministry of Regional Municipalities and Environment and Water Resources.

The protection of the environment and natural resources is a collective responsibility that is not limited by political borders. Therefore, one of the most important responsibilities of the armed forces is to protect the

environment and natural resources. This requires abiding by the rules and regulations and environmental laws and technical standards in all projects, while also observing the principles of sustained development in dealing with natural resources. It also involves the participation of all the specialized and responsible civilian authorities in case of any disaster of any kind. It is important to consider environmental dangers from a security point of view.

I hope that our meeting will be successful and that we will come up with beneficial results for our countries and armed forces, and thank you for listening.

**Interagency Training for Disaster Response Exercise,  
September 2002**

**Brigadier General Nasser Mohammed Al-Ali  
Special Assistant to the Chief of Staff  
Qatar Armed Forces**

In the name of God, the Merciful, the Beneficent. Peace be upon you.

Ladies and Gentlemen, my brothers, I would like to thank you for being in Doha and for your interest.

Prior to the exercise, a seminar was conducted to inform the attendees on the effects of a weapon of mass destruction (WMD) and the procedures and measures used by the State of Qatar to respond to a WMD event. The seminar highlighted the roles the government departments have before, during and after the use of a weapon of mass destruction. The State of Qatar conducted a Disaster Response Exercise on September 1, 2002 at the Al Khalifa Tennis and Squash Complex. The exercise was an application of this theoretical seminar, and the overall results were successful. What we usually see on television is what happens after a disaster, with an emphasis on the role of the military. Frankly, the civil defense and the civilian authorities play a major role in disaster response. When these civil organizations work with the military, the military is faced with a problem of varying levels of expertise, and that is what we faced in this practical exercise.

First I will discuss the role of governmental departments in confronting the use of weapons of mass destruction by an enemy; then I will discuss the role of the armed forces. The governmental departments must coordinate with each other to manage the consequences of the use of a weapon of mass destruction. They must conduct prior planning and coordination among the various departments. The plan must identify the responsible authority (the person in charge) and the civilian central command for the incident. This necessitate the availability of the following: a database that combines together all the information available to the state, such as, means and types of communications equipment,

numbers of trained personnel for initial planning, types and amount of suitable equipment, and an adequate command and control system.

The governmental departments that participate in the response to a WMD event are the Higher Council for Emergencies, headed by His Highness the Prince; the High Committee for Emergencies, which is affiliated with the Ministry of Interior; affiliated emergency committees; various departments of the Ministry of Interior, such as Civil Defense and Emergency; Ministry of Health; Ministry of Information; Ministry of Foreign Affairs; the Ministry of Labor and Social Affairs (Office of Civil Service); and Ministry of Municipal Affairs. Each and every ministry has a role before, during, and after the use of a weapon of mass destruction.

The Supreme Emergency Board is responsible for conducting prior planning, financial and material capabilities, approving and establishing contingency plans that are presented by the high council for emergencies, and emergency crisis management. The Board is the primary national body responsible for seeking assistance and aid from the International Agency for Atomic Energy and friendly non-governmental organizations through the Ministry of Foreign Affairs; and using plans and scenarios of the various action plans for crisis management.

The High Committee for Emergencies is responsible for conducting comprehensive planning for any incident that might happen through the use of various scenarios; supervises the emergency in the National Operations Center (NOC); supports the emergency committees; collects and processes information during the state of emergency; and prepares recommendations for adoption to the Higher Council for Emergencies.

The Emergency Committees consists of both administrative and management personnel (director and advisors), consultants, police services, civil defense personnel, transport companies, hospitals, radio and television stations, and chemical warfare experts. The tasks of these committees are: planning for emergencies and carrying out exercises and scenarios. These exercises should be as realistic as possible. Supervision of emergency work, so that the same people would supervise emergency work when the need arises.

The Emergency Committees includes a national network for radiation monitoring. In the Central Command Room there is a network set up to connect computers to radiation monitoring stations. The Committee has established a working group in the meteorology center to monitor possible climate changes, such as the movement of the wind that could affect the disaster area. There are central laboratories to conduct radiation and chemical analysis. The WMD Prevention Division, under the Supreme Emergency Board's direction, is responsible for providing guidance and advice and to conduct research before an incident. During and after the incident, the Division is responsible for detecting the types of gas used, continuing to collect information, and defining the radiation hazard area to establish security barriers in order to prevent people from approaching the location of the incident and to secure the area to reduce casualties.

The Ministry of the Interior is responsible, before an event, for training the civilian population on civil defense tasks and creating specialized technical cadres capable of intervening in case of an incident. Of course, the Civil Defense in the State of Qatar is very well trained and was very useful during the exercise. The aim of the exercise was to coordinate and ensure unity of effort among the various agencies and the civil defense personnel proved to be very experienced.

The Ministry's roles when a weapon of mass destruction has been used are to warn the citizens, control entry into and exit from the contaminated area, participate with the military in securing the areas to prevent extra casualties, keep the main roads open, organize movement, and in some cases, activate the fire fighters. The Ministry is concerned with keeping the internal security in case of incidents, because some elements might take advantage of the chaos that could take place. So the Ministry of Interior must maintain law and order, even in the case of such an incident.

The Ministry's roles after the use of a weapon of mass destruction are to supervise the roads, keep people away from the place of the incident, and find shelter for the refugees. The incident could happen in a commercial center or in a sports complex; in that case, these people should be taken away for further inspection to ensure their safety and

to ensure that that they have not been exposed to harmful effects. The Ministry would also help in supplying water, food, and shelter.

The Ministry of Health, prior to an event, is responsible for providing information about possible treatment. The Ministry of Health was represented by the Hamad Hospital's Emergency Department, which is very experienced in disaster response. The exercise included the use of private hospitals. These hospitals received some of the casualties and supplied us with additional information about possible treatment. The Ministry sets up specialized departments at the hospitals to isolate the casualties from existing patients in order to minimize cross-contamination. Various tablets were used for medical treatment to reduce the effects of the different gases. Lastly, the Ministry's task is to train the civilian population to cooperate with the media.

The Ministry, during the use of the weapon of mass destruction, is responsible to provide adequate medical care, distribute medications, and provide health care to the casualties. There is always a field hospital as well as Hamad Hospital for emergencies, and there is participation by all the departments at the Ministry of Health, whose personnel would take suitable measures before moving the casualties to the hospital. The tasks after the use of the weapons are to follow up with the long-term care of the injured, to continue providing medical care for the refugees, to take preventive and health measures, and to provide for mass cemeteries.

The Ministry of Information, before the use of a WMD is responsible for preparing and educating the civilian population through the media, radio, television, and newspapers, and publishing recommendations and instructions on how to deal with the effects of the weapons of mass destruction. The Ministry's tasks during the use of a WMD, is to focus on the media and provide the citizens with information. Here in Qatar, thank God, we have an open policy. Nothing is kept secret. Television should schedule and air scientific programs to reassure the citizens and educate them about the effects of these devices. Additional tasks include the formation of working groups, that includes trained broadcasters, to convey the actual reality to the citizens, continuing to air scientific programs, and continuing to broadcast updates and developments to the civilian population.

The Ministry of Foreign Affairs, before use of a WMD, is responsible for coordinating with participating departments on the emergency plan, in relation to our international responsibility. This includes coordinating and establishing communications with foreign and Arab governments and with international agencies. The Ministry's tasks, during the use of a WMD, are to provide the technical information received from the International Center for Security and to inform the international organizations. If needed, the ministry would ask for assistance from the international community. The Qatar Embassy will request experts from other countries to benefit from their experience in eliminating the pollution after the use of a WMD. The Ministry's tasks, after the use of a WMD, are to continue clarifying the situation at the international level as to how the incident happened and to coordinate with the sister and other friendly countries concerning technical and financial contributions.

The Ministry of Social Affairs and Labor (Civil Service Office) is responsible for coordinating with local organizations to provide tents and camps for the casualties and for preparing collection centers for collection of financial and other contributions.

The role of the Armed Forces in countering the enemy's use of a WMD is to provide trained personnel to ensure a proper response and expertise, to ensure that the Corps of Engineers cooperate with the civil authorities, to ensure that the Armed Forces have a sufficient number of camps that can shelter the refugees and provide medical treatment, to use expedient transportation methods for the evacuation and rescue of casualties and personnel, and to provide chemical defense units to detect chemical, biological, or radiological contamination and provide technical advice and expertise.

The peacetime roles of the Armed Forces in reducing the effects of a WMD event are to increase the level of education for the prevention of contamination for both military and civilian personnel and to improve the quality of communications equipment to expedite the early warning system. In the case of early warning, there should be a fast communications system to warn the citizens and the authorities responsible for the area where the strike is expected to take place. The Armed Forces is responsible for using and maintaining up-to-date detection and monitoring equipment. The Armed Forces creates

and establishes shelters for the State of Qatar's strategic targets. The Armed Forces are also responsible for equipping all equipment with filters to function in a contaminated environment, so that the work of vital government departments does not get interrupted; for linking the information network to a database and maintaining it with the latest information; and for using the capabilities of the Atmospheric Forecast Center to obtain the necessary information about the weather and the direction of the wind, so that the downwind hazard areas are warned and evacuated.

The various commissions and directorates of the Armed Forces have different roles to play, during the use of WMD, such as the administration of operations, personnel, supply and logistics, engineering, signaling, maintenance, military police, information, and intelligence. The Directorate of Operations and Training is responsible for the coordination among the branches of the Armed Forces and the allocation of weaponry, for gathering data, conducting planning, and for making the necessary modifications to address the changing situation. The Personnel Department would track losses and mobilize personnel as needed to make up for the ensuing shortage, so that there are enough personnel to carry out evacuation and the sheltering of casualties and the evacuated population.

Logistics and Supply would mobilize mechanized assets and equipment to respond to the WMD event. It is responsible for making up any deficiency in the food supplies due to contamination. Since this is the department responsible for the provisions of the Army, it could help support civil authorities in that task. The Directorate is responsible for providing a sufficient number of medical evacuation units and augmenting the capabilities of the deployed medical units. Medical services will fall under the supervision of the Armed Forces. However, the Directorate of Operations controls some of these medical evacuation units, but their role is secondary to that of Logistics and Supplies. Logistics and Supplies will provide tents and blankets for the shelters and supplement the means of transport for the provision of potable water, for the purposes of pollution remediation (decontamination) and life support.

The Corps of Engineers would contribute to decontamination efforts, repair any roads that have become unusable, retrieve all polluted

equipment, prepare necessary shelters, such as hangars, in the safety zone far enough from the affected areas, and coordinate with the intelligence personnel in the area to detect the locations, movements, and methods involved in the launching of the weapons of mass destruction. The intelligence services should be present to collect precise information about the location of the launch and the target.

The Signal Corps is responsible for maintaining communication equipment, providing rapid warning to other communication centers that constitute a potential target, and repairing any damages to communication equipment.

The Maintenance Corps is responsible for evacuating and repairing damaged equipment.

The Military Police regulate and control the movement to the shelters to avoid traffic congestion.

The Morale Guidance Directorate (Psychological Guidance) plays a major role in raising the morale of military personnel and civilians. They spread awareness in regard to weapons of mass destruction through the media.

The Information Corps and Military Security authorities' tasks are to coordinate among the intelligence personnel, define the polluted areas, assess the chemical damages and radiation, and take the necessary measurements to detect the type of gas used and the amount of time it would take to dissipate, as well as its likely effects. They take and send oil and water samples to the University and Hamad Medical Center for analysis, and they carry out necessary decontamination measures in the area. They are responsible for providing the Armed Forces with individual and collective protective gear and for coordinating with civil authorities to supply them with individual and communal means of protection.

This was the theoretical part of protection from weapons of mass destruction. We tried to apply these theories in practice during the Disaster Response Exercise conducted at Al Khalifa Tennis and Squash Complex. Thank God it was successful. The purpose of the exercise was to activate the Joint Defense Initiative with the U.S. side and assess

the immediate response from the ministries, authorities, and different administrations in the State of Qatar. As I mentioned earlier, each authority was used to operating alone, and at an earlier exercise at the Al Khalifa Stadium, each of the authorities, such as the civil defense and the Armed Forces, operated alone. However, during this exercise there was a total coordination and cooperation between the various authorities in the State, in order to assess their combined capabilities.

The exercise was conducted in two parts, the practical training on September 1 at the Al Khalifa Tennis and Squash Complex, and the theoretical training on September 2 at the Air Force base. The practical training started at 8:00 a.m., with twenty U. S. officers, civilians, and representatives from the Embassy and thirty officers from the State of Qatar, civilians, and non-governmental organizations (NGOs). In all, our side had more than 150 participants. The State of Qatar organizations included the Hamad Hospital Emergency Services, Ministry of Electricity and Water, Qatar Television, Ministry of Municipal and Rural Affairs, and the Red Crescent Society.

The exercise consisted of a simulated terrorist incident involving the detonation of a time bomb explosive containing mustard gas. We chose the Khalifa Tennis Complex because the first likely target would be that location or some commercial center, the Mall, City Center, or a similar place. Some of our citizens are quite unaware of this, so we preferred to hold the exercise in a closed place and follow with a public affairs statement in the media. Future exercises could be held in open areas, such as commercial centers, where you would find plenty of citizens. Also, we chose the Khalifa Tennis Complex to increase public awareness of this type of situation. In order to control the situation, we informed the Ministry of Interior. The Ministry, represented by the Civil Defense, arrived and helped evacuate the injured to the field hospital located at the internal triage area on site. The injured received first aid at the field hospital and then evacuated for additional treatment in the specialized departments in Hamad General Hospital. Doha airport contributed tents to the field hospital.

His Excellency, the Chief of Staff, sponsored the exercise and was very interested in following the progress of the exercise; this helped in making the exercise a success. We used all the available capabilities from

the Medical Services Administration of the Qatar Armed Forces and Civil Defense in addition to other authorities. We nearly used all the facilities available in the country. However, some assets and resources were unable to take part, although we do know they exist. We were able to take stock of all the capabilities within the state and how to best make use of them. The immediate response from the Administration of Civil Defense and Police, ambulance, and traffic patrols ensured the area of damage was isolated quickly and was conducted to the highest standards. Frankly, our Civil Defense is quite experienced in this field. They were very quick in responding; they secured the area and took the required measurements very quickly. The chemical investigation team from the Intelligence Agency and Armed Forces Security arrived at the appropriate time to detect and take numerous samples of the chemical agent for analysis. The Qatari Royal Air Force was very quick in responding. The Royal Air Force supplied the evacuation planes efficiently and evacuated the casualties to Hamad Hospital and other private hospitals.

Naturally there were some negative points, and we should mention them. It is important that the Civil Defense authorities distribute protective masks to the citizens at the site of the incident quickly in order to reduce the number of losses. These masks were unavailable or available in insufficient quantities. It is necessary to close all the doors and windows of all the ambulances at the incident site. We noticed that some of the ambulances were moving while the back door was unlocked. This is obviously due to lack of experience. Casualties were carried on ordinary stretchers, although they should have been transported in special bags for casualties in a contaminated environment. It is necessary to supply the Armed Forces and the Civil Defense with the necessary equipment for decontamination and to provide field laboratories to analyze the samples. These were the negative points, and we have made recommendations regarding them.

The participants on the first day were all from the Qatari side, while on the second day, the participants were from the Qatari and the U.S. sides. I mentioned that there were twenty personnel from the U.S. side on the first day, but these mostly stood aside, since their goal was to observe and assess the standards and training levels of our people. On the second day, both sides participated equally. There were ten U.S. and fifteen civilian and military Qatari personnel.

A brief description of the theoretical exercise; it was very simple: “The emergency center of operations receives several calls about an explosion of a time bomb at the Al Khalifa Tennis and Squash Complex. There are reports of fire, and the spread of a gas, among approximately three thousand spectators at an international tennis match. The incident results in two hundred deaths and six hundred injured spectators.” Obviously in the exercise we could not have three thousand people dead or injured, but the scenario was studied theoretically.

On the positive side, this was a test of efficiency, supervised by the Head of the Joint Committee. Their participation provided answers to some of the questions. The U.S. team tried to evaluate the readiness and capabilities of the Qatari site and asked comprehensive questions covering all aspects of the exercise. The scenario of the exercise was well planned. One of the negative points we noticed was the lack of experience because it was the first exercise of its kind. But the purpose of the exercise was to reveal such negative points.

We came up with several recommendations:

- a. Continue these exercises to reveal more negative points if there are any and to strengthen the positive points. We should especially continue holding theoretical exercises, since they do not cost much. All they would require would be inviting some guests to one location and getting together. We should increase the duration of the exercise. The committee recommended that the exercise should last from five days to one week.
- b. It is important to conduct training courses locally to raise the level of performance. Although we do run some of these courses, the U.S. side recommended raising the level of the courses.
- c. The committee reinforced the necessity of planning and importance of supplying the following:
  1. Appropriate reserve stock of special masks for civilians in order to supply them during a state of danger;
  2. Specialized bags, equipped with filters to clean the contaminated air, for transporting the casualties;

3. Serums and other necessary decontaminants for the treatment of victims of chemical injuries. Serums would be given after separating the casualties at the field hospital and before transferring them to the other hospitals in the country.
  4. Detecting equipment for chemical agents in the air and liquids, and a field laboratory to analyze these agents. There is also a need for special sterilizing equipment—not ordinary machines, which is what we used, since this was the first time we held such an exercise.
  5. References, books and scientific publications to increase the knowledge and awareness of weapons of mass destruction.
- d. It is important to appoint a public relations officer to respond to the queries of the casualties and to provide necessary statements to the media. This is the area of the psychological guidance department in the Armed Forces. This is very important if, heaven forbid, such an incident were to actually take place. It was not dealt with in this exercise because there was not enough time. The exercise was conducted at 8 o'clock in the morning and, as you remember, on the 1st of September the weather in Qatar was a little bit difficult, so we had to speed up the exercise. The exercise was supposed to last for two hours, but was conducted in forty-five minutes. For instance, the Civil Defense was supposed to respond in twenty minutes and we did it in five minutes to speed up the exercise while the very important persons (VIPs) were there. The main purpose was to coordinate among the participating units and establish working mechanisms.

This covers the seminar and practical and theoretical exercises conducted on 1 and 2 September. The seminar and exercises were a positive experience, and we salute the U.S. representatives who participated with us and gave us technical advice. We worked at the level of the state of Qatar. The experience encourages us to request similar exercises on a larger scale, at the level of the GCC countries, in coordination with the United States and other Allied States in the future.

