

Chapter VII

Panel Discussion: The Strategic Imperative

Brigadier General Walter B. Huffman, JAGC, U.S. Army: Good afternoon. I'm Walt Huffman, the Assistant Judge Advocate General of the Army for Military and Operational Law. I am the moderator for the first panel of the Symposium. I am not going to take much of your time with my own comments, but I would like to say that I think that this is the perfect way to start the panel presentations with our panel entitled, "The Strategic Imperative and The Impact On The Environment," that is, what the military must be allowed to do in order to win across the spectrum of conflict. I think even more important is that Professor Grunawalt and his people were able to put together a panel with the breadth of experience and expertise represented here this afternoon. Because most of us in this room are lawyers or academicians of some kind, it is most important that we understand more than anything else what we are trying to do here. If we do not produce something that is relevant to these folks, to the operators, to the warriors, if you will; if it is not something useful to them, if it is not something viable in the context of the operations and missions that they must plan and execute, then it is simply irrelevant and whatever we say will have no bearing on the real world of operations in the military.

I think the three presenters on this panel will tell you there are a number of things in the real world that the military can do in terms of its planning and in terms of sensitizing soldiers and commanders to environmental concerns and considerations. They will talk about developing a systemic approach to environmental problems and environmental issues in the operational mission, and they are going to talk about that across the entire spectrum of potential conflicts and operations.

Our first presenter is Rear Admiral William Wright, U.S. Navy, Assistant Deputy Chief of Naval Operations, (Plans, Policy and Operations). Admiral Wright commanded the *Wasp* Amphibious Task Force during the intervention in Haiti and had an opportunity to see an environmental disaster across an entire country—close up. He has served on the National Security Council Staff and with the Arms Control and Disarmament Agency; assignments that obviously have immediate relevance to what we will be discussing at this Symposium.

We have Brigadier General Walter "Skip" Garrett, U.S. Army. I might add that he has been selected for promotion to Major General. Skip is the Director of Strategy, Plans and Policy in the Office of the Deputy Chief of Staff of the Army, Operations and Plans. Skip commanded the 11th Air Defense Brigade during the Persian Gulf War, and spent a fair amount of time in the smoke that we talked

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about in Kuwait. So he has experienced the effect of an environmental disaster on a military operation firsthand.

We also have Major General Robert Linhard, U.S. Air Force, Director of Plans, Office of the Deputy Chief of Staff, Plans and Operations. General Linhard has served as Special Assistant to the President for Nuclear Issues and Arms Control and has also chaired the U.S. Arms Control Support Group. Again, very relevant assignments to what we are going to be discussing today. Without taking any more of their time, I will turn the panel over to Admiral Wright, and ask him to make the first presentation.

Rear Admiral William H. Wright, IV, U.S. Navy: Thank you very much. Because it is right after lunch, I thought I would begin with a long stream of expletives, just to make sure everybody was listening but also to let you know what I think about trying to curtail military actions in conflict. But, now that I know that these proceedings are, word for word, being written down, memorialized and that they will be used in follow-on conferences, I am going to delete that and lead right into my presentation. I have a paper that covers aspects of the Navy's concern with further curtailment of our ability to effectively engage in war. I don't think I need to remind you that war is pretty much an all out affair. It ought to be bloody; it ought to be damaging; it ought to ruin just about everybody's day that is involved with it. I would say that if you are going to train for that kind of activity, you should not find your commanders second guessing their ability to be able to carry out a specific plan of attack. This is especially true if you believe the other commander is not thinking on the same wavelength that you are. Let me hit two items and then get off the net because I think the real value of this conference is not the long-winded papers that we put out but the type of exchange that goes on and, of course, the questions.

One, rules of engagement exist in the Navy today that have been around a long time. They constitute a very unique understanding between the commander and the young men and women that have to carry out the close-in actions; and they represent a very good dialogue over some very ticklish thresholds in engagements. As I was working up the *Saratoga* Battle Group, taking them out, it was very important for me to get face-to-face with our pilots and the commanding officers of our ships to talk through and watch their facial expressions as we talked about the "what ifs" and about "how are you going to comport yourself?"; getting their answers and a little bit of a measure of how well they understood the written rules. But more importantly, finding out how they were going to act under pressure. I had traveling with me, and I have had on each of my staffs, a JAG officer who was first and foremost the man who represented my operational interests. He understood the dialogue that I was going through and he would also be the guy who would represent me during discussions about crossing various thresholds. As

we think about curtailments that involve the environment, that kind of rules of engagement dialogue is very important. I think the answer is not more rules. The answer, quite simply, is to create a culture of awareness; a sensing that you do not have to devastate the environment to accomplish the mission. That resides today in the Navy; we have those kinds of considerations.

You heard Admiral Jim Stark and the dilemma that we placed him in as a commander charged with a U.N. mandate that said, "use all means necessary to accomplish the mission." Words like that, which come down with these mandates, are not very helpful when you are trying to put constraints on the commander. But, mandates of that kind are great because they tell him that he is to get the job done.

Admiral Jim Stark, the operator, was faced with having to decide whether to put rounds into that ship. The accuracy of naval gunfire is not such that he could knock the rudder askew and turn the target 90 degrees so it heads off the coast. But, he had a sensing of what was being asked of him.

I would like to turn briefly to deterrence and the nature of war, the nature of conflict. There is an element of deterrence that resides in the mind of the individual decisionmaker we wish to deter. He ought to be thinking about what he holds dear, and maybe some of what he holds dear is avoidance of long-term devastation of his environment. So, as you all look at what we ought to forswear, you are also dabbling with deterrence in its purest sense and that is, war should be devastating. We should be doing things of a preventive nature to cause that threshold not to be breached. To the extent that you lower that threshold by preserving some options, by forswearing that we will not endanger his environment, you are not serving deterrence. Thank you, this completes my comment for today.

Brigadier General Joseph G. Garrett, U.S. Army: It is a pleasure to be here today and have a chance to talk to you. My appearance here is explained in a relatively simple chain of events. You invited my boss to speak. He decided I should come. I will tell you from the discussions this morning, I probably fall into the "wild-eyed warrior" category of people attending the conference today. I have no background in the legal field and no background in the environmental field. I have only been to Ottawa once in my life and I was not there for the conference. After having said all that, let me talk to you a bit about Army operations.

In the aftermath of the Gulf War and subsequent operations in Somalia and Haiti, governments and international organizations have renewed the debate concerning military operations and their effects on the environment. People are now asking a lot of questions that are very difficult for us to answer. What are the long-term environmental impacts of those events and to what extent should military forces consider these as factors during planning and execution of military

operations? In peacetime, environmental compliance is paramount. But, to what extent will environmental considerations apply during war? How should the Army consider these issues in its doctrine and training?

Today I hope to examine some of those questions with you. First, I will talk a little about the Army's mission; what it must be able to accomplish to be successful on the battlefield and the possible environmental impacts of those actions. I will also talk briefly about how we currently include environmental considerations in our decision-making process. Finally, I will highlight some steps we are taking to integrate environmental considerations into the way we do our daily business and into our doctrine and training.

I will start with the Army mission. The United States Army exists for one reason and that is to support and defend the Constitution of the United States. It does that by deterring war and, if deterrence fails, by providing Army forces capable of achieving decisive victory as part of a joint team on the battlefield, anywhere in the world and under virtually any conditions. To do this, the Army must be capable of decisive victory in full-dimensional operations. That encompasses employing all means available within the laws of war to accomplish our missions across that full range of operations, both in war and increasingly, in operations we call military operations other than war, or MOOTW.

Victory is gained on the battlefield through swift and overwhelming application of the maximum available combat power. And combat power necessarily involves destructive action. It is destructive to people, it is destructive to equipment and it is destructive to the environment. But, that combat power is focused to minimize collateral effects as much as possible and to promote the peace which must follow.

Army commanders multiply the effects of firepower and maneuver of Army forces by integrating the efforts of Air Force, Marine Corps, and Navy forces. Firepower produces destructive force but it is essential in defeating the enemy's ability and will to fight. There are no easy solutions. Environmental damage is an inherent consequence of combat operations. In ancient times, the massing of armies destroyed the harvest and turned the battlefield to mud. In recent times, the destructive power of weaponry has made the environmental impacts of war more devastating and proportionally greater than at any time in history.

As von Clausewitz warned, there is no way that war can be made "nice." When a nation strives to make war nice, or accepts limitations on the use of force, it does so at its own peril. A less moral opponent will take advantage of that restraint, often to the detriment of the battle zone's civilian population, as well as to the army fighting with restraint. The Vietnam War contains many painful examples of this mistaken thinking.

Actions that inflict environmental impacts during the conduct of war can be divided into three broad categories: collateral damage, wanton and unnecessary impacts, and modification of the environment. Of course, the United States

condemns the later two types of impact. Next, I want to discuss the possible collateral damage of our operations.

To limit collateral damage we exercise disciplined operations. Discipline begins with trained leaders whose personal example and standards of conduct create well disciplined units and ensure proper conduct of operations on the battlefield. How an army fights is a mark of what it is and the principles for which it stands. Laws of war are only effective in reducing casualties and enhancing fair treatment as long as trained leaders ensure those laws are obeyed. The commander does this by building good training programs that reinforce the practice of respecting those laws and rules of engagement.

As Professor Grunawalt said in this morning's session, the most important thing is the behavior of those soldiers in the field. War is tough; it is uncompromising and unforgiving. But, the Army operates within established rules of engagement and conducts warfare in compliance with international law and within the conditions specified by the commander. The Army applies combat power necessary to ensure victory through appropriate and disciplined use of force.

During combat operations, emphasis must be placed on mission accomplishment. Any goal of minimizing environmental impacts is probably best achieved by applying the principles of war to achieve quick and decisive victory. The environmental impacts that are necessary and proportional to such a response must be allowed. That, in turn, requires that Army commanders have the maximum flexibility to maneuver against and surprise the enemy. So restricting the application of combat power to predictable patterns of behavior based solely on environmental considerations must be avoided.

The Army has historically integrated a number of other factors, such as protection of noncombatants and historical and cultural sites, into its planning process. Take for example the protection of cultural sites and artifacts. Many elements on the staff have responsibilities for these considerations. The Civil Affairs Officer will establish their location; the Fire Support Officer receives locations to prevent destruction by artillery; and the Staff Judge Advocate provides legal advice to assure compliance with the law of armed conflict. A similar process takes place for natural resources. And, we are moving today to establishing this process more clearly in our doctrine.

Let me briefly discuss some current efforts in doctrine and training. The Army is taking steps in both doctrine and training to prepare our soldiers and leaders for the increasing environmental challenges of Army operations. How we fight and how we train is all based on our doctrine. Doctrinal integration of environmental considerations is a significant focus of the Army's environmental strategy. It is a vital piece because how we train and how we fight is all doctrine based. At the same time, we are developing specific environmental requirements into our procedural or "how to" publications. In training, we are using a principle

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of integration, so rather than develop a lot of stand-alone courses, we are integrating a lot of environmental considerations into all levels of our existing training. Environmental instruction covers Army and unit environmental programs, applicable environmental laws and Army Regulations, soldier and leisure duties, and development of the environmental ethic.

I think we all view stewardship as the key element of the Army's environmental ethic. The Army is charged with protecting and defending the nation and that includes safeguarding the environment as well.

We are trying to integrate environmental considerations into specific military occupational training as well. For example, those soldiers who are fuel handlers, heavy equipment operators, mechanics and heavy weapons handlers require priority attention. We are taking steps now to address their immediate training needs.

The Army must be capable of decisive victory in full-dimensional operations; be able to employ all means available across the full range of possible conflicts. The acceptable level of these impacts is not finite. The Army applies the combat power necessary to ensure victory through an appropriate and disciplined use of force in accordance with international treaties, rules of engagement and guidance from commanders. In some respects, protecting the natural environment may seem to run counter to the warrior culture and may even be seen to be an impediment to battlefield success. But, I think today we realize that the incorporation of environmental ethics into how the Army plans its battles is important. A sound environmental ethic, and specific doctrinal guidance, will prepare our soldiers and leaders for operations into the 21st Century and the challenges that they will have to face. Thank you.

Brigadier General Huffman: Thank you General Garrett. Well, you have heard from our first two panel members, both of whom I would have to describe as adherents to what may be called the Colin Powell school of decisive victory. That is, once the political decision is made to go to war, you go to war to win immediately, decisively, without constraint. I believe Major General Linhard will give us a somewhat different view. I do know one thing, having read his paper, he is going to talk to us about something that is as important as General Garrett did in talking about the inculcation of environmental training and sensitivity into the Army's training and indoctrination publications and programs. General Linhard will talk about ensuring that environmental aspects of weaponry are considered in the acquisition process. So sir, with that I turn to you.

Major General Robert E. Linhard, U.S. Air Force: This is, as my colleagues have noted, a nice break for us. Both because its a good chance to hear a different part of the discipline and because the three of us tend to meet together at least twice a week in what is known as "The Tank." Since we are the Deputy Operations

Deputies for the services, we get a chance to meet and regularly agree on things that are myriad in scope and deep in substance. And once again, that is the case.

Quite honestly, as last of the three speakers here, I must say we fight jointly as a team and I agree with much, if not all of what has been said by my colleagues. But, I would like to put a little bit of an Air Force flavor on my remarks. At the same time, I would also like to re-touch upon some of the imperatives that we have talked about, highlighting the importance to us, as military professionals, of achieving military objectives that are appropriately set for us by our political leaders. The Air Force, like our sister services, has made a commitment to cleaning up and protecting the environment. This commitment does constitute a challenge given that our primary task is to conduct operations that are capable of unprecedented destruction. On the surface it would appear that we are stuck with a dichotomy. But in fact, in our public statements, in the development of our spending priorities, and in our day-to-day operations, the Air Force sets a high standard for environmental consciousness. Nonetheless, during Operation Desert Storm, and notwithstanding the precision targeting that was available to us, environmental damage was significant. My point is that environmental destruction is a fact of war, and protecting the environment cannot stand in the way of achieving legitimate military objectives set for us in the appropriate way by our political leadership through legitimate orders, achieving those objectives at reasonable and appropriate costs. I am concerned greatly about the environment, but I am more concerned about the sons and daughters that you entrust to us to serve in the uniform of our country. We would hope that if you put us into a situation in which we have choices to make, and we are positioned legally and appropriately, that you will allow us the judgment to balance how much your sons and daughters are worth, how much the sons and daughters of Coalition members, and even of the opposition, are worth in the grand scheme of that balancing act.

Air Force programs associated with the environment can be traced back to World War II. Air base construction by aviation engineer units provided efforts to protect the environment by limiting the negative impact of our base operations by reducing soil erosion and controlling dust around airfields. Unfortunately, I have to tell you that most of that also affected our ability to conduct air operations. So, we got there in a secondary way. In fact, minimizing the environmental impact of our combat operations during that period was largely beyond our capability. For example, in the course of our anti-oil campaign in Europe during WW II, our targeteers really did realize that hitting towers instead of oil storage tanks would both be militarily more effective and less harmful to the environment. But, our problem was that we required about 9,000 bombs to ensure the destruction of targets with a circular error of probable (CEP) of 3,000 feet. So you dropped an awful lot of ordnance, and you were grateful to hit any part of the refinery. Our

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efforts to do that mission led to the destruction of a lot of the surrounding countryside.

By Vietnam, our bomb accuracy had improved to a point where it took about 176 bombs to destroy a target with a CEP accuracy of about 400 feet. So, environmentally friendly bombing, if you want to call it that, was at least understandable, if not exactly feasible. Earlier in the war, we denied North Vietnamese allegations that we were bombing North Vietnamese rice irrigation dikes. We stated that we wouldn't do so. The North Vietnamese then moved anti-aircraft weapons onto the dikes, and although under international law we believe the North Vietnamese actions made their guns legal targets, we at first elected not to return fire against the anti-aircraft artillery (triple-A) batteries located on the dikes. Later we used cluster munitions to disable the guns and to kill the gunners without harming the dikes themselves. After the fact analysis suggests that perhaps the choice of attacks saved a good portion of the North Vietnamese dike network. Quite honestly, the recoil of the triple-A on those dikes may have caused quite a bit of the weakening and quite possibly the eventual destruction of some of the dikes.

By the Gulf War, our improvements in weapons accuracy made minimizing collateral and environmental damage more feasible. Still, it takes really smart targeting to realize the full benefits of "smart bombs" and improvements in this area also were made. For example, we destroyed electrical switch gears, not generators. This allowed us to turn off the Iraqi electrical system during the war in a manner that allowed it to be quickly repaired when the war ended. The feared cholera epidemic never happened, perhaps due to the speed in which sewage treatment plants were energized after the war because electrical power, in fact, could be quickly restored. Similarly, we hit the valves of the Iraqi oil system, reducing the mobility of Iraqi forces during the war. At least in one instance we somewhat protected the environment and permitted somewhat of a faster recovery of the Iraqi oil industry in a sense, by that activity. Additionally, we may have defeated one Iraqi attack on the environment when our aircraft destroyed the manifold needed for the Iraqis to callously pour crude oil into the Gulf.

Taken together, Coalition air attacks inflicted strategic paralysis on the Iraqis that supported and complimented the Coalition ground effort and probably reduced the time that ground operations were needed to successfully conclude the conflict. This obviously did minimize the environmental impact of our operations, but more importantly, it saved Coalition lives and, I would argue, lives in general.

After Operation Desert Storm, it became obvious to us that protecting the environment would become more of a priority for the Air Force. I am confident that both my colleagues on this panel would have the same comment. In 1991, Air Force Chief of Staff, General McPeak, made protection and enhancement of natural and cultural resources an environmental leadership goal for the Air Force.

To this end, we have made environmental compliance a mindset, to the extent that we can, for our daily operations. For example, in our acquisition programs we have reduced our purchasing of toxic substances and made a deliberate decision not to incorporate environmentally damaging substances into our future purchases. Also, we established a Commanders Environmental Leadership Course because we firmly believe that environmental management consciousness and techniques need to be a part of the tool kit of the commander. Commitment to the environment at this level comes at some cost. Impacts on spending levels for cleanup, compliance, normal operations and even acquisitions have been substantial. Our increased spending in this area is somewhat of a good news/bad news story with somewhat of a happy ending. Throughout the 1980's, we increased our spending on environmental compliance and cleanup and now are beginning to see, we believe, the benefits in our compliance and pollution prevention programs as we turn some corners. Spending, we believe, has peaked and our investments are paying off satisfactorily.

On the acquisition front the story is similar. A recent study was conducted on the impact of environmental factors upon our acquisition process within the Air Force. Offices that participated in that study said they are required to consider almost every aspect of the environment. Examples included ozone depleting substances, toxins, volatile organic complexes, noise, petroleum products, heavy metals, endangered species, thermal waste, and respirable fibers. Seventy percent of our program management officers reported adverse impacts on their programs attributed to these environmental interests. That's just natural; it does cost to do this. Primarily, the impacts were increases in costs and in significant delays in acquiring what we wished. The good news here is that most often we have found that we have been able to achieve positive results. Numerous success stories exist. For example, the new Joint Primary Aircraft Training System, a replacement aircraft for our primary initial jet trainer, has no ozone depleting substances and is almost completely free of toxins and dangerous heavy metals. Other success stories can be told of the track record of the C-17, the F-16 and the F-22.

So, as a service, and again I would note our sister services are equally as committed, we in the Air Force are committed to protecting the environment. But we must use and can use environmental programs in a way that will allow us to maintain and enhance readiness. It is imperative that we consider all aspects of the environment when we are conducting operations, to include the waging of war. But, we cannot consider the environment to the extent that protecting the environment will inhibit our ability to successfully conduct that mission for which we were primarily constituted. Damage to the environment during normal military operations, especially in war, is inevitable.

I would like to again say a few words about targeting. Earlier I said it does you little good to have smart bombs and not have smart targeting to allow you to

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reconcile the differences between the obvious damage that could be inflicted by military weaponry and the objectives that you need to gain. Although to some extent precision targeting can prevent, and has prevented, collateral destruction, I think we, along with the rest of the world, witnessed through the eyes of television, just how destructive war can be. We learned that environmental destruction during conflict can take at least two forms. In the Gulf War, for example, Saddam Hussein deliberately caused environmental destruction as an indirect way to achieve a military objective. At the same time, collateral environmental damage was inadvertently caused by Coalition Forces while conducting lawful military operations.

As your discussions this morning demonstrated, the laws of war reflected in custom and international agreements are clear and yet problematic in some respects in this area. The problem is the degree to which the intent of the attacker must be ascertained. If the intent of the attacker is the destruction of enemy capabilities and not devastating environmental side effects, different sets of concern basically come into play. Environmental effects have to be considered as part of the traditional balancing of military necessity against foreseeable damage to noncombatants and civilian property. That balance leads to some conclusions. Saddam Hussein's directive to deliberately spill oil into the Gulf, to blow up as many oil wellheads in Kuwait as possible and to leave those wells burning, seems to me to be a violation, and should be a violation of international law. Saddam's attack was on the environment, but we cannot forget that as the aggressor, he also had a penalty to pay. The equivalent in criminal law, I would think, is that a man who goes in to a store with the intent of robbery, and in the process kills the shopkeeper, is responsible for murder as well as robbery. In this sense, the problem is that we had an aggressor who, as a direct consequences of his actions, for whatever reasons, also committed a fairly significant degree of environmental damage.

In contrast, the United States and Coalition Forces tried to avoid, and did avoid reasonably well, environmentally sensitive targets. Nonetheless, the destruction that was caused by Coalition Forces was significant and lasting. Concern over environmental destruction during a military operation like Desert Storm must take a back seat to military objectives that are legitimate and correctly constituted. However, once the war is over, the focus shifts to the devastation and the need for remediation. Today, the United States and some of our Coalition allies are helping Kuwait clean up the residue and ravages of that war and are working together to ameliorate the damage that was done.

What then can a military planner do? As a military planner I would argue that we can ensure that positive steps are taken to consider the environment throughout the entire range of military operations. Environmental analysis and environmental planning should be incorporated into our plans in the sense the commander should

have environmental management expertise in his command tool kit and he should ensure that environmental planning plays an appropriate part in target selection and target analysis.

Additionally, I would argue that as military operations are prosecuted, whether in war or operations other than war, environmental concerns should remain part of the process. During these operations, we commanders must be conscious and stay conscious of the activities and the weapons being used and the destruction taking place. Environmental analysis should concentrate throughout the operation on two primary concerns. First, what recommendations could be made to higher authority—to the decision makers, to the senior military commanders, to the political leadership, to minimize permanent and lasting environmental damage and still accomplish the required mission. And second, what would be required for eventual remediation in the area of operation.

The idea here is not necessarily to advocate that environmental concerns be a primary focus. In fact, they should not be. At the same time, it is so obvious, and here I agree heartily with the comments made by my colleagues, that you can take actions that reflect some balance in this equation. Incorporating environmental management into the process is an option that allows us to minimize, to the extent that it is appropriately consistent with achieving legitimate military aims, without any permanent or long-lasting environmental damage.

The Air Force right now is in a transition phase. Our planning and review guides, which we use to conduct the way we train and fight, need to be reviewed and are being updated. Likewise, the core directives that we use to develop our plans are being updated to ensure we consider and manage the environmental impacts of our operations. I would cite Air Force Manual 10-142, our Operational Plan and Concept Development Directive, which was published in April 1994. This Directive provides an Appendix for our Civil Engineers that allows us, and details for us, environmental protection and compliance tasks to be addressed as specific and unique Air Force planning activities.

I also would cite the current Joint Chiefs of Staff Instruction 3122.03, entitled Joint Operations Planning and Execution, Volume 2, which talks about planning formats and guidance, and contains an extensive Environmental Assessment Appendix. There is activity here that shows that we in the military, although recognizing the primacy of achieving our principal mission, are not unaware of the requirements involved in protecting the environment.

Finally, I would say that most of my career has been involved in strategic nuclear weapons. We were always painfully aware of what the environmental impacts are. We had to deal with everything from the lessons learned from a Chernobyl, to the considerations of a “nuclear winter”. Good common sense practice is very much in keeping with a good military operation. I would also add one last point. This morning there was quite a bit of discussion about the difficult

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challenge to the commander and his responsibility to make judgments. There are ways that he can be helped. I think that in considering the choices that we have to make, it is clear that you have to approach it on a case by case basis; you need to consider the circumstances involved. I would argue that it is a different circumstance for a military in legitimate national defense in the face of a superior aggressor for which it had not initiated conflict. If the choice is saving the lives of your citizens and protecting your nation and in so doing a certain degree of environmental damage is necessary, that is quite different than the choice that we talked about this morning even if we were to assume that Saddam Hussein chose to burn oil wells to protect his forces from observation and strike. Again, Saddam must suffer the consequences of having started that aggressive action.

I think that we also have to recognize the responsibility that is placed on our political leadership. You can allow a military commander a bit more latitude in achieving his objectives in appropriate ways if we ensure, as mentioned by our moderators, that we have a good set of principles and make good choices on when you put the military in a position to achieve objectives. If our political leadership puts us in a position in which stated objectives cannot be achieved, it puts more pressure on the commander and you need to recognize that. Thank you for your time.

Rear Admiral Wright: It was interesting listening to all of this and I want to capture what I think is coming through three slightly different military cultures. You have to understand you have representatives here of Services that work in different environments. I am not trying to be cute about this but I thought all of us agreed that war is something that should be exempt, it should be awful, and the rules that we ought to look at need to be carefully considered. We all agree that mission accomplishment is important and that you do not want to put such weight on the mind of the man that is charged with carrying out the mission that he cannot complete it. The Navy culturally favors freedom of action. You probably have heard of our love of “*ad hoc*-ery”; our feeling that no rules are better than any rules. In contrast, the Army lives on the land in a very constrained environment. They are up close with the people. I thought I heard the Army saying, “Let us know what the rules are and we will develop them into our doctrine and the way we fight.” That is not to say they are going to accept crazy rules, but essentially it is an understanding of the reality of a constrained legal environment and it was going to be a fact of life. The Air Force, which has always valued precision, has said, I think, “Let us know the letter of the law so we can do exactly what we want to do, legally.”

Colonel Lyn L. Creswell, U.S. Marine Corps: If you are a Force Commander planning to deploy your forces into the field, would you put something in your “Commander’s Intent” regarding the environment, and if so what would you say?

Brigadier General Garrett: By the way, everyone should notice that there are no Marine Corps representatives on our panel this afternoon. In response to your question, unless there is some specific consideration that you want to highlight, I do not think you would put anything in your “Commander’s Intent.” If there was a dam, or if there was a pyramid, or there was something unique that required specific consideration, I think you would be well advised to mention it. But, in most cases, I think sound environmental practices are pretty well built into our standard operating plans and policies.

Major General Linhard: I agree. But, I also think we would find some coverage of environmental issues in the rules of engagement.

Brigadier General Garrett: If you go back to my personal experiences in Saudi Arabia, in our actual operations orders, there was nothing mentioned that had to do with the environment. But, if you looked at our field operating procedures, there were a lot of things built-in that dealt with environmental considerations.

Rear Admiral Wright: I would say, “no,” as well, because I think the “Commander’s Intent” really places overriding emphasis on the commander’s words. I would not want to put in the mind of the people I am requiring to carry out a mission an extra degree of uncertainty about what I expect. They ought to be able to make choices at their level without a “bias” in the statement of the “Commander’s Intent”.

Colonel James A. Burger, JAGC, U.S. Army: At a recent staff meeting at my command in Naples, my commander, who is a Navy Admiral, said the primary consideration in his mind, when he was approving the recent targeting list for the air campaign that went on against Serbian heavy weapons and other targets in Bosnia, was the prevention of collateral damage. And, of course, one of the reasons why he said that is because he had in mind that we had to follow a U.N. mandate. We had to keep together a coalition to have the support within NATO to accomplish this mission. We were trying to accomplish some very specific things to impress upon the Serbs why we were doing this, to change their minds, and to get them to do something. Of course, this is within the context of a very special mission that we were given. I just wondered if the members of this panel might comment on the new types of missions that we have and perhaps why we need to, or might need to, consider things like danger to the environment more in these

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types of missions than we would in the more traditional missions that the Navy, the Army, and the Air Force have been conducting?

Major General Linhard: Speaking as a U.S. military officer involved in “joint” matters, I believe we are looking at situations in the future where, hopefully, for some time to come, the homeland of the United States is not at risk. What is at risk, the political objective to which we have committed forces, is more limited. On the other hand, the group that we may be dealing with all too often operates in a much less limited environment. So I think you legitimately need these kind of checks and balances. The situation of a NATO war in central Europe, with a likely threat of escalation to a global war in which the upper end of the NATO triad obviously involves U.S. strategic forces, which brings both the Soviet Union and NATO directly and immediately at risk, that is a different environment. There was great risk in that setting and interest was very high. But, where you do inject U.S. military forces to achieve political objectives, it is absolutely right to have recognition of the need for some balance. I would hope that that recognition of balance occurs at the political level. When we go in militarily we have got to be sensitive to it. Let’s face it, when we talk about limited political objectives, once you are on the ground, as my friends in “green” often are, and we, in light blue, are on occasion, the individual soldier, sailor, or marine on that mission has one unlimited concern; he is putting his life on the line.

Rear Admiral Wright: Defining clearly the right targets, whether for environmental reasons or for cultural or spiritual reasons, allowed us to provide a technological demonstration of our capability that worked well on the people it was meant to work on. It was a measured, carefully orchestrated campaign.

Brigadier General Garrett: I would just say in general that in MOOTW we are finding a lot tighter control in the initial steps of the operation. I think there are some other considerations that come in to play when you are running an operation like that, especially initially. By the time you get the Army committed in the field with clearly defined military objectives, those limiting considerations do not apply quite like they do in circumstances such as those we have discussed as currently being in effect in Europe.

Dr. Glen Plant, London School of Economics and Political Science: I think no one here would disagree that war is unhealthy. It is bad for the health of humans, animals, plants, whatever. No one disagrees that the military have a job to do in wartime. Perhaps I am being a little unfair in suggesting this but I hope I am not. I think there is something implicit in what you say that misstates the question. If

I may use the usual trick, a Jesuit trick of rephrasing what you say in my own words. As you know, Englishmen are particularly fond of animals. If you are talking to an Englishman about the environment, he will immediately think you are talking about something cuddly and warm. A senior British military officer recently said to me, "I would not endanger the life of one of my men for a punch of animals or trees." If that is partly what you are suggesting, you are misstating the question. I would say that what we have to protect is certain fundamental environmental values, which, if they are thought about clearly, will put a new perspective on the value of your mission, or indeed the value of some of the lives of your men. Of course, nobody wants lives to be sacrificed unnecessarily. If there was a war that left large parts of Mexico an infertile desert, not only would you have the problems of massive disruption in population, which in itself could lead to widespread death and illness, you would also have the problem that the Englishman would be most concerned about. You would lose the Monarch Butterfly. In addition, you would lose things that make up important parts of what is known as biological diversity. You may lose substances that we might not even know of that are important for medical purposes if only we have the wherewithal to discover them; things that are important for various industrial uses. For example, substances that you could use to make new and important resins, *et cetera*. But I think that perhaps most important of all, you may endanger the world's food security. We all know about monoculture, the lack of genetic diversity among our major food crops. Well, it may be that we are going to wipe out some wild wheat strain that is the answer to some blight that may hit us like an Irish potato famine of the future. So if you start to think in those terms, it is not a straight forward question of man versus beast.

Major General Linhard: I expect St. Ignatius would be very happy the way you rephrased the question, but I would not accept that phraseology. I will give you that there are edges of the envelope that are easy to resolve. As professional military officers, it is a part of our job to engage in the use of force that entails the least risk of loss of life. What we are talking about is a different environment and I am not talking about an individual life here. I do believe there will be circumstances in which a choice must be made between achieving a military objective and protecting the wetlands with the casualty rate being significantly greater. You may be able to worry about the Monarch Butterfly, but I must be worried about the youngster from Kansas entrusted to me for his life and that is what I get paid for. All I ask is, listen to the case that the commander makes after it is done. If we, the military, made a bad call, a terrible call, we are culpable. But, I would also note, the body politic would be equally culpable. I am concerned with every life that is lost.

Brigadier General Garrett: I would say that if there are stated environmental concerns, then they will get factored into the planning process as much as possible. I mean, if somebody tells me that there is “X” amount of wheat out there, or “X” amount of butterfly habitat, or “X” amount of whatever, then you can factor that into the planning process. In the final analysis, depending upon what the requirements of the stated mission are, you may be able to accommodate those factors or not. But, to be able to go into combat and say, “Gee, there may be something there, or we might want to save this as a nature park 20 years from now,” is not going to happen. But if there is something that is known, I think the planning process will accommodate that consideration. But when, at the end of a mission, as General Linhard said, you balance the mission and protection of our soldiers and our forces versus pure environmental considerations, environmental considerations are not going to weigh that heavily.

Brigadier General Huffman: There are different levels of environmental decision-making. The decision-making Dr. Plant is talking about is at the level that Mr. Harper and his contemporaries may make which is always a factor, or Baghdad would be a nuclear waste-pile right now - not to be flip about it. Obviously, environmental considerations are a part of the strategic and military-political planning process. What our panelists are talking about is that once engaged, it becomes quite a different equation for the commander on the ground and his people.

Professor Myron H. Nordquist, Naval War College: Just as a follow-up to what you were saying, I have been stewing over what Mr. Harper said earlier. I am worried that our legal arguments, based on environmental concerns, may be used against us. For example, the International Court of Justice has been asked by the United Nations General Assembly whether nuclear weapons are legal or not. I am thinking about Saddam Hussein who, if you could believe his brother-in-law, was deterred from doing even worse things than burning or dumping oil because he knew we had nuclear weapons. I assume that we informed him that we would be inclined to use those weapons if he were to engage in biological and chemical attacks. I guess I am saying that it was good for us and the world that we had a deterrent for that. But, I am concerned if we are not careful about the legal arguments that we make when we talk about condemning environmental damage, that others, perhaps to include the International Court of Justice, might pick up some of the things we are saying and conclude that the environmental degradation that went on in the Persian Gulf area was so bad, just think how bad it could have been if there was a nuclear bomb exploded. I don’t know if anyone on the panel shares my concern, but I have been sitting here and stewing about it.

Rear Admiral Wright: I agree with you. If there is anything that you can capture about deterrence, and we are always looking at that murky area, it is that we understand strategic deterrence. And, we understand that somewhere below the strategic level there has to be a form of deterrence that still will hold off a very unfortunate exchange. To the extent that you invent rules that remove uncertainty from a potential aggressor's calculations, you are destroying deterrence. That seems to be at the heart of what you are saying; defining these things, making legal pronouncements such as no first use of nuclear weapons, thereby destroying deterrence.

Mr. Conrad Harper, Legal Advisor, U.S. Department of State: I would not want anyone to think that I did not have in mind the nuclear weapons cases in the World Court. Jack McNeill and I have been very much concerned about those cases. They will be argued beginning at the end of October or early November 1995. But, I think I can speak directly to your concern. The Court has before it, broadly speaking, these issues; whether or not the possession, the use, or the threat of use of nuclear weapons violates international law. At these abstractions, we take the view, among others, that the question first of all is not admissible, and that in any event, the court should not use its power to address the question. And, finally, as a matter of substantive law, it is not a violation of international law to use, or possess, or threaten to use such weapons, as such. Having said that on one level of abstraction, I will take it down to the Gulf War situation where I am perfectly prepared to say that, had there been dumped one gallon of crude oil into the Persian Gulf, I would not have argued that there was a violation of internationally accepted norms by Saddam Hussein. It is a question always of measure, of degree, of proportionality. And, just as I am not prepared to say that it would be a violation to dump one gallon of oil, I am not prepared to say that the use of one bomb would, in and of itself, constitute a violation of international law.

I have been struck, if I may proceed to a second topic, by the sense in which the panel has reinforced the notion that these legal norms are important. That is to say, when we look at the question of bombing a valve, or bombing a switch, instead of a tower, instead of a tank, we may be making an environmentally sound judgment. But, we are also making a judgment that saves ordnance, saves fuel, and deliverance of ordnance, and ultimately may prevent what would otherwise be a catastrophe later in time, such as a cholera outbreak, if in fact we have done maximum damage rather than that which was absolutely needed. So I see law as not always in tension with military necessity. Sometimes the law can reinforce, it can guide, it can discipline, and it can illuminate how we should act.

Professor Bernard H. Oxman, University of Miami: It occurred to me in reading some of the literature on the subject, including some more intensive reading that

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I did in preparation for this Symposium, that lawyers are very good at making strategic use of legal rules for their own immediate purposes. But, one of the things that struck me as odd about some of the literature in this field is that lawyers also tend to forget that others, including political and military leaders, can do exactly the same thing. I was wondering if any of the panelists ever felt that attempts were being made by an adversary to lure them into a violation of the laws of war, or into alleged violation of the laws of war, for example, with respect to targeting.

Major General Linhard: I cannot think of any situation that I participated in where I thought I was being led by the adversary into doing something like that.

Dr. John H. McNeill, Deputy General Counsel, U.S. Department of Defense: There was one instance of an apparent attempt by the Iraqi government to lure us into attacking fighter aircraft parked near the ancient Temple of Ur, an important cultural object. Of course we did not fall for it and it was obvious that as long as those aircraft were assigned the mission of being on static display next to that particular temple, they would be out of service as far as combat was concerned. So our need to neutralize them was accomplished just as well by not attacking them. Perhaps that is a crude example of what Professor Oxman is asking about.

Brigadier General Garrett: There are instances like that, but there is uncertainty over whether that is a serious and sophisticated effort to try to cause us to stumble into a violation of legal norms or if it is the action of an indecisive commander who is doing something basically crude. As an example, when the enemy emplaces "triple-A" on dikes, can we know his purpose? Is he trying to lure you into targeting a population center when he moves his military capability into that area or is it a matter of him trying to protect it because he does not see us going in after it. So, I am not sure if it is a lure as much as it is protection. I cannot think of any sophisticated examples.

Brigadier General Huffman: There were a number of instances, such as the dual use of a hospital in Somalia as a sniper's nest, and other things like that. Which is, of course, the analogy that is most often drawn between environmental considerations and the law of war in general, that is, collateral damage to civilians and to protected property.

Dr. Dieter Fleck, Director, International Agreements and Policy, Federal Ministry of Defense, Bonn, Germany: In contrast to some of you not majoring in this discussion, I doubt whether we should be too pessimistic. I consider these presentations this afternoon to be excellent examples for the necessity of

cooperation between operators and legal advisors in this field. I understand we will have ample opportunity to discuss these questions during the forthcoming days, but this is an opportunity to say that, yes, we should try to elaborate further details of military planning which remain subjective, which remain relative, in their importance. We are spelling out what has been said in the Additional Protocols and some of these rules are far exaggerated in their importance. I would strongly recommend that if you are considering ratification of the Additional Protocols, which I, as a German, would favor extremely, you must not concentrate solely on the environmental provisions. The most important legal principle in this field is not Article 25 or Article 45 of Additional Protocol I, it is not the ENMOD Convention - which I consider one of the most unimportant international conventions I ever came across. No, it is the simple principle of proportionality which has been spelled out by people like Professor Martens, or it is apt to have been said in this room by Admiral Mahan, in 1907. The question today is whether we respond to this challenge, whether we agree to elaborate new plans which would remain relative, or which would not be considered as one last word to interpret the rules. Indeed, operators and legal advisors should work together and they should never forget what they are fighting for, what they are defending. Certainly some of the examples made by Dr. Plant, for instances, are exactly the ones which we are interested in avoiding, both on the political side, and the military side, and definitely yes, on the legal side as well.

Rear Admiral Horace B. Robertson, JAGC, U.S. Navy (Ret.): One observation that Mr. Harper advanced for us this morning is that we have plenty of rules; the problem is enforcement. We have not addressed the question of enforcement this afternoon. I would like to hear what our operational compatriots have to say about enforcement.

Major General Linhard: I think the issue that will have to be resolved is a political question, that is, whether you wish to use military force to coerce a consequence; a price. Once you have decided to extract a price, there are a number of things that we can do depending on the violator. If we know that someone has violated international law, and if we know who that someone is, and once we are given clear political direction and achievable military objectives, we can and will act. But, I cannot suggest a specific action.

Rear Admiral Wright: One of the things that we have to consider is that this issue is of such a broad scope. Essentially, the environment can be thought of as a resource. We were talking about preserving bio-diversity and a slowing down of the evolution process. That is one end of the equation. There are going to be issues

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involving misuse of resources, things like fishing, even drinking water and the like. We have a huge umbrella under which to talk about environmental damage. I think you have to be specific. We focused on those things that impact our ability to carry out war-like missions, not day-to-day matters like taking care of the contaminated waste aboard ships, that sort of thing. We have comprehensive programs and we are enforcing them. Those kinds of housekeeping things are automatic. Sure, we have a spill from time to time of some fuel or other contaminant into the water, and we do a routine cleanup. There are lapses in our environmental awareness but they are quickly repaired, remunerated or perhaps even resolved in court. Now if you are talking about the war-fighting side of the equation and are asking whether we ought to have a Nuremberg tribunal for crimes against the environment as we do for crimes against people, my reply is, perhaps. I get back to the Golden Rule. If you can win the war and you can start inventing all the indignation you want, you can essentially take your former adversary to task using any hook you are looking for: too much smoke, fouling the atmosphere, etc. If you win, you can make him feel economic and political pain. But, if you lose, you better stand by, hire lawyers and be ready to repel boarders.

Brigadier General Huffman: Let me say this with regard to what U.S. forces will do about an environmental violator in its own ranks. There is no doubt in my mind that a person that intentionally violated our rules of engagement reflecting on environmental damage would be dealt with very harshly. There is no doubt about that.

Professor Jack Grunawalt, Naval War College: The U.S. Navy has developed some guidance along these lines that is now being promulgated to U.S. Naval Forces, Marine Corps Forces and Coast Guard Forces. I would like to read a statement to you and ask you if you are comfortable with what this guidance provides with respect to environmental considerations.

It is not unlawful to cause collateral damage to the natural environment during an attack upon a legitimate military objective. However, the commander has an affirmative obligation to avoid unnecessary damage to the environment to the extent that it is practicable to do so consistent with mission accomplishment. To that end, and as far as military requirements permit, methods or means of warfare should be employed with due regard to the protection and the preservation of the natural environment. Destruction of the natural environment not necessitated by mission accomplishment and carried out wantonly is prohibited. Therefore, a commander should consider the environmental damage which will result from an attack on a legitimate military objective as one of the factors during target analysis.

I ask in turn, whether from the Navy, the Army, the Air Force perspective, you are comfortable with that range of guidance?

Rear Admiral Wright: This gets back to the question of culture, and embedding in our commanders and our people in the Navy an appreciation for the environment. With all those right words such as “affirmative obligation,” “unnecessary damage,” “due regard,” “not necessitated by mission accomplishment,” and “factors during target analysis,” I sit down with a JAG officer, and we can go over the mission and bounce back and forth the considerations given and the other courses of action. I can live with that kind of broad guidance. It is broad enough that I do not think it would cause me to force an unworkable constraint on the people who are going to execute the small parts of the mission. What I do not want to do is put in their minds an additional level of uncertainty with regard to what I am expecting. I would interpret the need to protect the environment with regard to the mission and I would spell it out for them. And I think I could probably do that through my guidance.

Brigadier General Garrett: I think the guidance you mentioned is pretty explicit, but I would tell you, I do not think it is anything that does not already exist in the minds of commanders and staffs out there in the field today. I think they are all aware of the realities of having to deal with environmental damage. I think those considerations are being factored in.

Major General Linhard: I would agree. I worry more about being “helped” by someone adding to that kind of single issue rule when we, as commanders, do not live in a single issue world. If I have to make choices, I would prefer to have general guidance, some broad, common sense guidance and then be judged on the exercise of my judgment, my ability as a commander, rather than be “saved” from exercising my judgment by being given a set of specific rules which, though drafted in good conscience, may not fit the circumstances that I face. That, no commander should be forced to live with.