



**Organization for Security and Co-operation in Europe
Forum for Security Co-operation**

FSC.MDS/37/11
12 July 2011

ENGLISH only

Conference Services

OSCE HIGH-LEVEL SEMINAR ON MILITARY DOCTRINE

Vienna, 24 and 25 May 2011, Vienna

CONSOLIDATED SUMMARY

**WELCOMING REMARKS BY THE CHAIRPERSON OF THE FORUM
FOR SECURITY CO-OPERATION**

**WELCOMING REMARKS BY
THE CHIEF OF THE III DEPARTMENT (MILITARY POLICY
AND PLANNING) OF THE DEFENCE STAFF OF ITALY**

REPORTS OF THE SESSION RAPPORTEURS

TABLE OF CONTENTS

	<u>Page</u>
Dates of the OSCE Seminar on Military Doctrine (FSC Decision No. 5/10).....	1
Agenda, timetable and modalities for the OSCE high-level Seminar on Military Doctrine (FSC Decision No. 1/11)	2
Annotated agenda of the OSCE Seminar on Military Doctrine.....	6
Welcoming Remarks by the Chairperson of the Forum for Security Co-operation	10
Welcoming Remarks by the Chief of the III Department (Military Policy and Planning of the Defence Staff of Italy	12
Reports of the Session Rapporteurs	
Session 1: Doctrinal change.....	16
Session 2: Technological change	20
Session 3: Impacts of doctrinal and technological changes.....	24
Session 4: Issues/lessons identified and future objectives.....	27



**Organization for Security and Co-operation in Europe
Forum for Security Co-operation**

FSC.DEC/5/10
7 July 2010

Original: ENGLISH

616th Plenary Meeting

FSC Journal No. 622, Agenda item 3

**DECISION No. 5/10
HOLDING A HIGH-LEVEL MILITARY DOCTRINE SEMINAR**

The Forum for Security Co-operation (FSC),

Determined to enhance the security dialogue in the OSCE,

Recognizing the need to address the challenges identified in the OSCE strategy to address threats to security and stability,

Recalling paragraph 15.7 of the Vienna Document 1999, encouraging participating States to hold periodic high-level military doctrine seminars, as well as paragraphs 30.1 and 30.1.2 to improve mutual relations and promote contact between relevant military institutions,

Decides to hold a High-Level Military Doctrine Seminar (HLMDS) in Vienna on 24 and 25 May 2011 to inform and discuss doctrinal changes, technological changes and their impacts on defence structures and armed forces.



**Organization for Security and Co-operation in Europe
Forum for Security Co-operation**

FSC.DEC/1/11
2 February 2011

Original: ENGLISH

634th Plenary Meeting

FSC Journal No. 640, Agenda item 3

**DECISION No. 1/11
AGENDA, TIMETABLE AND MODALITIES FOR THE OSCE
HIGH-LEVEL SEMINAR ON MILITARY DOCTRINE**

24 and 25 May 2011, Vienna

The OSCE will hold a high-level military doctrine seminar in Vienna on 24 and 25 May 2011, the sixth of its kind within the CSCE/OSCE, to examine changes in military doctrine derived from evolving threats, changing forms of conflict and the emergence of new technologies. These changes shall be addressed with regard to their impact on armed forces and their defence structures. Conclusions and recommendations issuing from the Seminar will be considered by the OSCE/FSC.

This Seminar will be held in accordance with FSC Decision No. 5/10 (FSC.DEC/5/10 dated 7 July). Such seminars are encouraged in the Vienna Document 1999 of the Negotiations on Confidence- and Security-Building Measures and seek to improve mutual relations between participating States by fostering the process of transparency, openness and predictability.

I. Agenda and timetable

Tuesday 24 May 2011

- | | |
|----------------|---|
| 10 a.m.–1 p.m. | Opening remarks: Introduction by the Seminar chairperson (Italy) |
| | Session 1: Doctrinal change |
| | – Introduction by session moderator |
| | – Keynote speakers |
| | (i) Changing threats and changing forms of conflict: Their nature, dimension and their effects on the OSCE area |
| | (ii) Hybrid threats and challenges: The increasing occurrence of asymmetric warfare, along with conventional/non-conventional weapons and tactics on the battlefield. |

- (iii) Implications on military doctrine and the comprehensive approach of politico-military instruments to deal with such challenges
- Discussion with panel and participants from the floor
- Moderator's closing remarks

3–6 p.m.

Session 2: Technological change

- Introduction by session moderator
- Keynote speakers
- (i) Technological advancements: Assess the benefits and challenges of technological change for military doctrine and operations
- (ii) In an era of increased specialization and highly complex military systems, what are the implications for defence capabilities, interoperability and multinational operations?
- Discussion with panel and participants from the floor
- Moderator's closing remarks

Wednesday, 25 May 2011

10 a.m.–1 p.m.

Session 3: Impacts of doctrinal and technological changes

- Introduction by session moderator
- Keynote speakers
- (i) Implications of doctrinal and technological changes, including the Internet, on military structures and activities
- (ii) Implications for security and defence policy including arms control and confidence- and security-building
- Discussion with panel and participants from the floor
- Moderator's closing remarks

3–6 p.m.

Session 4: Issues/lessons identified and future objectives

- Summary by session moderator
- Discussion
- Conclusions and recommendations
- Closing remarks by Seminar chairperson

II. Organizational modalities

Preparation for the Seminar

Chiefs of defence/general staff or other senior officials and relevant academics from participating States will be invited to attend the Seminar. Following appropriate consultations between the FSC Chair, delegations, and the Seminar co-ordinator, the Chairperson of the FSC will invite relevant international organizations, institutions and personalities. The Mediterranean Partners for Co-operation (Algeria, Egypt, Israel, Jordan, Morocco and Tunisia) as well as the Asian Partners for Co-operation (Afghanistan, Australia, Japan, Republic of Korea, Mongolia and Thailand) will also be invited to attend the Seminar.

The Chairperson of the FSC will nominate a moderator and a rapporteur for each session. He will also select keynote speakers and panellists for each session from among the names proposed by participating States. Keynote speakers will be requested to submit their presentation for circulation to delegations no later than Monday 18 April 2011.

A final preparatory meeting will be organized on 23 May 2011 between the FSC Troika, Seminar chairperson, and moderators, keynote speakers, rapporteurs and panellists to discuss in detail the conduct of the Seminar and how to best to manage it to achieve the desired results.

The Secretariat, in accordance with its departmental responsibilities, will support the Seminar chairperson and the FSC Chairperson in administrative and budgetary preparations for the Seminar.

An evening cocktail reception will be organized by the FSC Chair on the 24 May 2011.

Other necessary organizational arrangements will be dealt with by Working Group B of the FSC.

Conduct of the Seminar

The Seminar will be chaired by the FSC Chairmanship (Italy) and will begin with a short introduction (as part of session 1).

A key objective of the Seminar is to have interactive dialogue inspired by the keynote speakers and panellists. With this in mind, to promote interactive discussion, delegations are requested not to read any prepared general statements during the Seminar.

Each working session will be introduced by the session moderator (up to five minutes), followed by presentations by up to two keynote speakers (up to fifteen minutes each), after which discussion will take place. The debate will be stimulated by appropriate interventions from up to four panellists per session (up to five minutes each). Interventions from the floor will be very welcome and should be limited to a maximum of five minutes per speaker. In order to ensure the effective conduct of the Seminar, the moderator of each session will facilitate and focus the discussions and stimulate an interactive debate by introducing questions related to the topics dealt with by that session or by reordering the sequence of interventions. The moderator is also responsible for ensuring equal access to the

floor and for providing all participants with the opportunity to intervene within the established time frame of the session. During each session, the moderator may adjust the above time limits depending on the number of requests for the floor and the time available at that session. Speakers who exceed the set time limits will be notified by the moderator.

Prior to session 4 of the Seminar, each rapporteur, after appropriate consultation with the relevant session moderator, will submit a brief report to the moderator of session 4 covering the issues addressed during their respective working sessions.

The moderator of session 4 (who will have observed the entire Seminar) will provide an overview of the three preceding sessions and will contribute to the discussion on emerging findings. Seminar participants may also offer observations on possible issues for future OSCE/FSC consideration.

On the basis of the reports provided by the rapporteurs for each of the four sessions, the FSC Chairperson will present a summary report of the discussions (after the completion of the Seminar) that will be brought to the attention of the FSC.

Interpretation will be provided between the official languages of the OSCE.

Other OSCE rules of procedure and working methods will, *mutatis mutandis*, be applied to the Seminar.



**ANNOTATED AGENDA
OF THE OSCE HIGH - LEVEL SEMINAR ON MILITARY DOCTRINE**

24 and 25 May 2011, Vienna

Agenda and timetable**Tuesday, 24 May 2011**10:00-10:30 OPENING SESSION

Welcoming remarks by:

- FSC Chairman, Ambassador Gianfranco Varvesi
- Italian Chief of Defence Staff representative, Lieutenant General Paolo Magro
- Representative of Austria, Deputy Chief of Defence Staff, Lieutenant General Christian Segur – Cabanac

10:30-13:00 SESSION 1: DOCTRINAL CHANGE (with coffee break)

- (i) Changing threats and changing forms of conflict: Their nature, dimension and their effects on the OSCE area.
- (ii) Hybrid threats and challenges: The increasing occurrence of asymmetric warfare, along with conventional/non-conventional weapons and tactics on the battlefield.
- (iii) Implications on military doctrine and the comprehensive approach of politico-military instruments to deal with such challenges.

Introductory Statement by Mr Marc Perrin de Brichambaut, Secretary General of the OSCE

Moderator: Mr Marc Perrin de Brichambaut, Secretary General of the OSCE

Rapporteurs: Col. Louis de Courtivron, Permanent Representation of France to the OSCE
Col. D. Vanderpot, United States Mission to the OSCE

Keynote addresses by:

- Air Vice-Marshal Paul Colley, Assistant Chief of the Defence Staff (Development, Concepts and Doctrine), United Kingdom, on “The Changing Character of Conflict and its Implications”
- Maj. Gen. Vincent Lafontaine, CICDE, France, on “The French vision on comprehensive approach and its impact upon military doctrine”
- Maj. Gen. Mart de Kruif, Deputy Commander of the Royal Netherlands Army on “War amongst the people, a Dutch perspective”

Panellists:

- Vice Adm. Juan Francisco Martínez Núñez, Deputy Chief of Staff for Plans and Strategy , Joint Defence Staff, Spain
- Col. Gen. Oleg Salukov, Deputy Chief of the Armed Forces of the Russian Federation
- Mr. Francis C. Hoffman, Senior Director, Naval Capabilities and Readiness, Department of the Navy, USA
- Col. Gen. Anatoly Nogovitsyn, First Deputy Head of the CSTO Joint Staff

- Discussion with panel and participants from the floor
- Moderator’s closing remarks

15:00-18:00

SESSION 2: TECHNOLOGICAL CHANGE (with coffee break)

Moderator: Ambassador Heiner Horsten, Permanent Mission of Germany to the OSCE

Rapporteurs: Gen. Carlo Landi, Senior Military Adviser, Italy
Mr. Patrick O’Reilly, Permanent Mission of Ireland

- (i) Technological advancements: Assess the benefits and challenges of technological change for military doctrine and operations.

- (ii) In an era of increased specialization and highly complex military systems, what are the implications for defence capabilities, interoperability and multinational operations?

Keynote addresses by:

- Maj. Gen. Pertti Salminen, Permanent Military Representative to EU and NATO, Finland on “Finland’s Comprehensive and Military Defence doctrines responding to Emerging threats and new technologies”
- Prof. Dr. Holger H. Mey, Vice President of the European Aeronautic Defence and Space Company, EADS on “The Role of Technology in Future Conflicts - Limitations and Opportunities”
- Dr. Andrea Nativi, Military Expert, Italy on “New technologies, new requirements, new doctrines: how defense technology is adapting to and affecting changes in military doctrines and operations”

Panellists:

- Dr. Thomas X. Hammes, Senior Research Fellow, Institute for National Strategic Studies at the National Defence University, USA
- Dr. Alessandro Marrone, Institute for International Affairs, Italy

- Discussion with panel and participants from the floor
- Moderator’s closing remarks

Wednesday, 25 May 2011

10:00-13:00

SESSION 3: IMPACTS OF DOCTRINAL AND TECHNOLOGICAL CHANGES (with coffee break)

Moderator: Ambassador Miroslava Beham, Permanent Mission of Serbia to the OSCE

Rapporteurs: Capt. (Navy) Uwe Hovorka, Military Adviser, Permanent Mission of Germany to the OSCE
Lt. Col. Niels Poul Petersen, Senior Military Adviser, Mission of Denmark to the OSCE, IAEA and CTBTO

- (i) Implications of doctrinal and technological changes, including the Internet, on military structures and activities.
- (ii) Implications for security and defence policy including arms control and confidence- and security-building.

Keynote addresses by:

- Lt. Gen. Mark Hertling, US Army Europe (USAREUR) Commander, USA on “How Lessons Learned and Technology Changed U.S. Army Doctrine and why it matters”
- Lt. Gen. Markus Bentler, Commander, Response Force Operations Command, Germany, on “Doctrinal Change and Technological Change: Consequences for Arms Control”

Panellists:

- Mr. Ara Mesrobyan, Deputy Director of Defence Policy Department, Armenian Ministry of Defence
- Dr. Thomas X. Hammes, Senior Research Fellow, Institute for National Strategic Studies at the National Defence University, USA
- Dr. Anatoli Rozanov, Faculty of International Relations, State University, Belarus

- Discussion with panel and participants from the floor
- Moderator's closing remarks

15:00-18:00

SESSION 4: ISSUES/LESSONS IDENTIFIED AND FUTURE OBJECTIVES (with coffee break)

Moderator: Ambassador Alyson Bailes, University of Iceland

Rapporteurs: Col. Anders Byren Military Adviser, Permanent Delegation of Sweden to OSCE
Ms Natalie Slovikovski, United States Mission to the OSCE

Introductory Statement by:

- Ambassador Alyson Bailes, University of Iceland

Final remarks from the floor:

- Maj. Gen. (ret.) Vladimir Nikishin, Counsellor of the Military security problems department of the CSTO Secretariat
- Mr. Francis C. Hoffman, Senior Director, Naval Capabilities and Readiness, Department of the Navy, USA

- Discussion with panel and participants from the floor
- Moderator's closing remarks

CLOSING SESSION

Moderator: FSC Chair

Final remarks from the OSCE Chairmanship:

- Ambassador Renatas Norkus, OSCE Permanent Representation of Lithuania

**WELCOMING REMARKS BY
THE CHAIRPERSON OF THE FORUM FOR SECURITY
CO-OPERATION, AT THE OPENING SESSION OF THE OSCE
HIGH-LEVEL SEMINAR ON MILITARY DOCTRINE**

Vienna, 24 and 25 May 2011

Excellencies,
Dear colleagues,
Ladies and gentlemen,

It is truly a pleasure and an honour for me to welcome you today to this prestigious venue on the occasion of the sixth High-Level Seminar on Military Doctrine. It is not often that military doctrine is updated. Between the idea and its transformation of the concept into a new strategy, with a change in tactics on the ground, years, often decades, elapse, during which choices are made that will have repercussions for succeeding years. Hence, there is a need to organize, at least every five years, a seminar based on the principles of transparency and mutual confidence-building enshrined in the mandate given in Madrid and Helsinki, and later reflected in practice in the measures contained in the Vienna Document. The purpose of such a seminar is to share ideas, promote debate and increase co-operation through an open discussion of highly topical military matters.

Italy, which holds the Chairmanship of the Forum for Security Co-operation (FSC), today shares the pleasure of welcoming you to this venue with Lieutenant General Christian Segur-Cabanac, Deputy Chief of the Defence Staff of Austria, representing the authority of the State hosting this event, and with Ambassador Marc Perrin de Brichambaut, Secretary General of the OSCE. I sincerely thank both of them for having honoured us with their presence today.

This seminar comes at a difficult time for the OSCE. We are witnessing a phase characterized by a re-emergence of frictions, of inactivity and sometimes tensions, which I, taking an optimistic view, would tend to attribute to the taxing growth phase that our Organization is going through. In every organization, such phases are usually characterized by shocks, by pauses for reflection, and sometimes also by retreats, which then make it possible to return to the common path with renewed vigour and enthusiasm. We certainly do not wish to hide the current difficulties from ourselves, but rather to face them and endeavour to resolve them, first and foremost with the instruments at our disposal.

The seminar is one of the instruments recommended by the Vienna Document in the context of measures designed to increase transparency and mutual confidence among all participating States. It is precisely this context that I should like to recall in order to place this seminar in its proper framework. The fact of allowing the highest-ranking representatives – or their colleagues – of the armed forces of participating States and Partners for Co-operation to meet one another, exchange information and ideas, formulate thoughts and requests and, last but not least, forge direct and personal relationships, already represents a success in the efforts to achieve greater mutual understanding, and this positive factor should not be underestimated.

We wish to foster co-operation among all and sundry from a shared and indivisible perspective. This is the essential basis for lasting stability in our Euro-Atlantic, Eurasian and Euro-Mediterranean region. With this in mind, we draw inspiration from the organizational framework of the seminar, which has as its themes doctrinal change and technological modernization – themes already dealt with five years ago and represented in the seminar because they are considered to be even more topical now than before.

In the organization and planning of the event, we wanted to give as much space as possible to the debate. We were prompted to do this by the “food for thought” sent by the panels and enriched by the delegates’ replies and experiences, because we are hoping for a lively debate during the various sessions of the seminar. To maximize this effort, we have made use of the valuable experience and availability of each organization and country in the OSCE area. I should like to take this opportunity to thank all the countries and organizations that responded enthusiastically to our invitation to collaborate in the programming of the event and that helped the Italian Chairmanship to organize it, making their high-level, qualified representatives available to fulfil the difficult role of moderators, speakers and panellists at the various sessions of the seminar. I also thank the rapporteurs for their willingness to take on a difficult task, and, lastly, those countries that, despite not having had an opportunity to contribute actively to the planning of the sessions, have provided support in the form of thought, materials, experience and the participation of high-level delegations, which, I am sure, can only enrich and raise the quality of our debates.

From this two-day marathon, I hope to obtain a quality result. The introductory statements and the panellists’ notes are intended essentially to elicit responses from the audience and to give rise to an innovative and interactive discussion that will yield results. This is precisely the spirit in which the speakers’ table will operate: paving the way, and leaving as much room as possible for the debate, which will be facilitated by the speakers’ texts having been circulated in advance, since the day before the opening of the seminar. I hope that all of you will share this approach, and that I can count on everyone’s co-operation, so that our work over these two days will go in the direction I have outlined and be successful.

We are also confident that the numerous social events planned for today and tomorrow will provide opportunities to deepen direct and personal contacts and will foster a climate of mutual understanding and confidence.

I could not conclude these remarks without also thanking the OSCE Secretariat, and specifically the FSC Support Section of the Conflict Prevention Centre; Conference and Language Services; the Press and Public Information Section, for its excellent co-operation and valuable assistance, both organizational and conceptual; and, once again, the Austrian armed forces, which agreed to the use of the prestigious Arsenal (military history museum) for our social gathering this evening. Without them, it would not have been possible to organize this seminar.

Thank you. I now give the floor to Lieutenant General Paolo Magro, Chief of the III Department (Military Policy and Planning) of the Defence Staff of Italy. He will represent General Biagio Abrate, Chief of the Defence Staff of Italy, who conveys his sincere regrets that he was unable to attend this event, where he would have met many of his friends and colleagues from OSCE countries.

**WELCOMING REMARKS BY
THE CHIEF OF THE III DEPARTMENT (MILITARY POLICY
AND PLANNING) OF THE DEFENCE STAFF OF ITALY, AT THE
OPENING SESSION OF THE OSCE HIGH-LEVEL SEMINAR
ON MILITARY DOCTRINE**

Vienna, 24 May 2011

Having had the honour of opening this High-Level Seminar bestowed on me, I would like to take this opportunity to express a few thoughts about the overarching theme of “Doctrinal change – a comprehensive approach.”

At my age and given my military experience, I am personally convinced that any human endeavour, or subset of it, needs some *mantras* to serve as “instruments of thought”, in order to ensure its own intellectual improvement. The comprehensive approach, together with the conceptual and doctrinal implications, belongs to this category.

History affords many examples of forms of comprehensive approach towards conducting military operations. We might think, for example, of a number of post-Cold War counter-insurgency cases. But only more recently, together with the recognition of the “complex” and “multidimensional” nature of the modern operational environment, has this concept been revitalized.

Starting mainly with the experience of Afghanistan and Iraq, a consensus has emerged that the military instrument cannot operate in isolation, and successful operations and enduring outcomes will involve a wide range of actors and contributors.

However, although the expression of “comprehensiveness” conveys the idea that a one-dimensional approach is counterproductive in tackling complex crises, it has proven to be very difficult to find a commonly agreed doctrinal definition of a comprehensive approach and what it exactly entails.

In addition, the multiplicity of terms and acronyms currently employed to address the combination of civilian and military efforts – also referred to as elements of national and international power¹ – and their effects on the so-called common “engagement space” (known as the PMESII domain²) poses additional challenges, since each actor will use and refer to the comprehensive approach differently depending on the context and the historical and professional background. This creates terminological confusion and poses significant bureaucratic challenges as well as giving rise to discrepancies regarding priorities, activities, means and suggested end-states, especially in a crisis-management context.

But even if resource, policy, and bureaucratic impediments can be resolved, there still remain practical co-ordination challenges, especially at the operational and tactical levels,

¹ Usually summarized as DIME (diplomatic, informational, military and economic) or DIMEFIL (diplomatic, informational, military, economic, financial, intelligence and law enforcement), etc.

² Political, military economic, social, information, intelligence.

where these difficulties are exacerbated by approaches to planning and management that significantly differ between the military and civilian organizational cultures.

To this extent, given the assumption that most of the stakeholders understand the importance of “all getting along”, the real challenge is effectively institutionalizing and socializing the comprehensive approach among the community of interests and, most importantly, making it work.

In its simplest possible formulation, a “comprehensive approach” implies the pursuit of a method designed to blend civilian and military tools and to enforce a given degree of co-operation, co-ordination and coherence among all the actors involved, not only with a view to delivering security and stability in operations, but more broadly, in order to deal with most of the challenges and threats to security emerging in the twenty-first century.

Without a doubt, coping with the current complex international crisis calls for the adoption of an “all inclusive” approach model serving as a tool for comprehensive analysis, planning, execution and measurement of effectiveness, making possible a more effective and efficient delivery of well defined national and international capabilities, including heavily tasked military and civilian assets.

To show its effectiveness, the comprehensive approach has to leave the conceptual dimension to be used for what it really is, not an end to be reached but rather a means for pursuing common objectives. Put in another way, what is needed is a new mindset to be adopted in designing sound solutions to any given complex situation.

And here we come to the utility and the added value that I believe could be afforded by the military doctrine. These reside in an opportunity to provide a shared understanding of all the multifaceted aspects of the current and future operational scenarios, including the multidimensional character of the related forms of threat, ranging from conventional to hybrid.

This is what is meant by the “doctrinization” of the comprehensive approach: In other words, the shared process aimed at supporting its implementation and socialization by designing practical solutions and mechanisms for understanding and accommodating the disparate types of priorities, actions and expectations of all the partners concerned.

In general, military doctrine provides the fundamental principles that guide the actions of military forces. But most importantly, as the best way to guide military affairs, doctrine provides a standard against which to measure our efforts. In the context of a comprehensive approach, doctrine should therefore be thought of as a yardstick, an indicator for analysing both success and failure. It cannot replace policy – which defines who is responsible for doing what – but it can support and positively influence the decision makers. Experience, lessons learned and best practices feed the development of doctrine and bring the strategy and doctrine relationship full circle.

But this common level of mutual understanding can only be reached if accompanied by proper organizational and cultural changes. And this may also imply the need to define some new “rules”, a sort of code of “comprehensive” conduct to be used to create a collaborative-thinking domain where everybody can recognize himself and his portion of space for action. Of course, the development of new technologies may also play a key role in

this respect and create opportunities in support of doctrinal and structural innovations, as well as new challenges.

Also, NATO is currently struggling with the codification of doctrine, procedures and fresh thinking within the alliance, by exploring plug-and-play solutions with other actors in order to facilitate the formulation of common operational objectives and strategies, as well as joint planning, implementation and evaluation in all operational phases.

This is especially referred to the field of stabilization and reconstruction, where a doctrinal gap has been identified. The NATO doctrinal community has been tasked with urgently developing a doctrinal publication on stabilization and reconstruction, at operational level, with a specific focus on a non-NATO target audience. This will work as a sort of test bed for where to implement a practical mechanism to share and integrate civilian and military responsibilities, with a certain degree of flexibility, from a bottom-up perspective. The bulk of the discussion revolves around the appropriateness of the military role in conducting tasks which civilians are better suited to execute, and it calls for additional civilian capabilities to perform nation-building tasks.

This will hopefully overcome the confusion and ambiguity that have arisen regarding civilian and military roles and the sharing of responsibilities, which have led to a misguided interpretation of interagency expectations on the ground. I would just mention the example of the “soldier diplomat” tag, which in Afghanistan and Iraq has provocatively addressed the call for a civilian doctrine and an unconventional diplomat.

Although the prospect of close co-operation with the military has the effect of blurring the distinction between the civilian and military efforts, it is far less desirable for governments to continue to invest heavily in a country such as Afghanistan, only to find that, due to the level of insecurity, civilians cannot engage, and, due to lack of guidance, the military cannot deliver, or worse, that tensions may be exacerbated by a haphazard delivery of aid.

On political matters, soldiers must yield to civilian guidance at all levels. This means granting civilians unequivocal authority at every stage of the design and implementation of stability operations, even if such activities are carried out by the military. It does not matter whether the military makes the “right” political decisions; these decisions are simply not for the military to make.

I would like to approach the conclusion of these introductory remarks by recalling a thought of the British professor Malcom Chalmers, expressed while discoursing on the comprehensive approach. The challenge is to develop an approach which, while recognizing the complexity of a given problem, identifies clear lines of command and an organization of work that addresses specific skills and competencies. This means that the comprehensiveness is to be attained at the planning level, at a relatively high level of discussion, but reaching down to the military units, civilian field officers or whoever has a job to do, so that they can get on with it, without necessarily needing to consult constantly with their counterparts.

Let me conclude with the following thoughts:

- Clearly, each nation tailors its own doctrine to its national interests and to its political, military and developmental capabilities. The respective policies and doctrines often

run separately, but in order to effectively operationalize the comprehensive approach, it is indispensable to confer on the doctrine the proper relevance in the eyes of the decision makers. The United Nations Capstone Doctrine, for example, reflecting the largest international organization, denotes the belief that this doctrine could be used to provide the framework within which all the other relevant international organizations – aware of their specific roles and responsibilities – could, or better, should adjust their own doctrines;

- In the light of developing common civil-military synergies, the idea of the comprehensive approach is not the solution, but an evolutionary path and a dynamic process to innovatively organize, plan and conduct modern military affairs;
- The current speed with which military adaptation in the field is translated into formal doctrinal change has important implications for changes to training and education and for the complete dissemination of the lessons of operational experiences, not only limited to the military domain;
- The impacts of technological and structural innovation on operations have to be properly “weighted” and explored before implementation.

Far from intending to give any ready-to-wear solution, I would also like to add some additional “how”-based topics to the discussion:

- How to develop mechanisms for common feedback processes so that all the actors involved (civilian and military, international and local) learn to exchange and thus develop practices for mutual understanding;
- How to develop interpersonal links to prevent possible cases of cultural shock, which are typical of the “tactical”-level phase of implementation of the comprehensive approach;
- How to define a catalogue of harmonized terminology, vocabulary and definitions;
- How to productively capture, share and exploit multinational best practice and developments;
- How to exploit experiments, exercises and operations as opportunities to influence and observe the practical application of the comprehensive approach;
- How to develop specific doctrinal bridging which may systematically influence training, education, operational planning and concept development and experimentation.

I hope these thoughts may help to stimulate the debate. I thank you for your kind attention and I wish you all a very productive and pleasant work.

Session 1: Doctrinal change

Vienna, 24 May 2011

In accordance with the provisions of the Vienna Document 1999, the Forum for Security Co-operation held a High-Level Seminar on Military Doctrine on 24 and 25 May 2011, in Vienna. The presence of numerous general officers from the participating States and international organizations such as NATO and the Collective Security Treaty Organization (CSTO) afforded a unique opportunity for open discussion of international concepts relating to a strategy for future operations.

In the opening session, the FSC Chairmanship's guest speakers stressed the importance of the so-called comprehensive approach from the very beginning of military operations, with reference to recent past experience and ongoing international military operations. The points touched upon by the guest speakers were intended to initiate the discussion.

The first keynote speaker developed concepts linked with the operational environment: military capacities, besides being material, also had a moral and conceptual content. The fiscal requirements also represented a constraint to be taken into account. The friction between the nature of warfare and its character was highlighted. The nature of warfare had not changed over time; it remained a violent combination of chance, risk and politics; however, its unpredictable character had evolved through time. Current issues that influenced its character included globalization, interdependence and inequality between the "haves" and "have-nots." Defence and security challenges were modified by some traditional dynamics, but the human environment had the ability to morph the existing character of warfare.

The speaker elaborated on the emerging persistent themes of the human environment and shocks or game-changers in current operations. Not only States, but also individuals, could drive global events. Those themes were difficult to predict, often resulting in reactionary measures in response to "what-if" scenarios. Future conflict would be fought across the full spectrum of operations and would be complicated, with areas that would be more congested (urban, littoral, no traditional battlefields), cluttered (technology will not lift the fog of war), contested (all domains: air, land, sea, space), connected (networks as a source of strength or vulnerabilities) and constrained (legal, moral and ethical; international law should be a baseline).

The military could no longer be alone in conflict. A comprehensive understanding of the adversary and its objectives was imperative to future success. Acquiring that understanding required more than military expertise: academics and universities offered increased situational awareness of the complexity faced in the conflict. In current environments, the power to influence the population was of utmost importance to the achievement of success.

The second keynote speaker focused on the French vision of a comprehensive approach. That was an old idea which was arising anew in the scope of future threats and challenges. Since influencing local populations lay at the heart of the conflict, military operations were not sufficient to achieve the desired end-state. Local actors must take the

lead in both military and civil actions; the population must not feel international pressure imposed on them.

The need was currently to react to the metamorphosis of crisis and hybrid threats that concerned several population groups and wider fields of confrontation by focusing on three pillars: governance, security and development (social and economic).

The application of those pillars should be developed in the context of the national level and experience, and of the operational theatre ground. The theatre of operations must have civilian and military synergy plus the tools to bring influence to bear. The global approach must be instituted as soon as possible in order to help avoid conflict. The approach should embody elements to monitor, contain, and intervene when necessary to create the conditions to restore security.

However, that was difficult to implement because every State had its own vision, cultural differences and technical difficulties. A suggested plan for achieving success in a comprehensive approach would include a common strategy, strong leadership, dedicated funds and a mix of bottom-up and top-down options. The comprehensive theme: no development without security and no security without development.

Social media had completely changed the environment, according to the third keynote speaker. They had the ability to influence the operational environment both negatively and positively. Although not new, successful execution of counter-insurgency was one of the foremost challenges in the current strategic environment. Doctrine taught how to think but not what to do. Counter-insurgency operations could not be conducted without a coalition and integrated lines of operation: governance, rule of law and security.

Initially, the main effort must concentrate on security and later on turn towards changes to reconstruction, rule of law and governance. Military effects impacted the social environment, which remained asymmetric; consequently, friendly forces took advantage of better training and technological advances, while the adversary focused on asymmetric tactics and less constrained ethics.

That was why the Netherlands armed forces were rethinking operational planning to define effects, governance and rule of law. Planning should be led by civilians not the military; it further required concepts for increasing interoperability through autonomy and technology.

The fourth keynote speaker underlined the fractured nature of conflict, in addition to its unpredictability. Military doctrine was only a tool with no direct implications. Conflicts required decentralized operations based on networking. New equipment was a matter of long-term process and technology surpassed it. Realistically, there was no silver bullet.

Globalization, according to the panellist from Russia, gave rise to interrelations that had positive impacts, but it exacerbated problems between States. It created a breeding ground for transnational threats, such as terrorism, organized crime and drugs, and favoured proliferation. Reliance on force often led to emerging asymmetric threats. Indivisibility was one of the key elements of joint national security, with monitoring of the OSCE region, early identification of threats, and early forecasting and remedying when necessary of issues/conflicts. There was an increased need for international co-operation. Even if Russia

was currently undergoing military reform, it was very happy to vigorously engage in updating of the Vienna Document on a more balanced basis.

A second panellist reminded the participants to be cautious about doctrine. It reflected the past, but it was still good to exploit and to draw conclusions. For example, counter-insurgency theory remained. Indeed, military culture reflected service experience, but allowed it to remain in its comfort zone. That required a mandate to take into account the acceleration of changes, because circumstances did change. He expressed some concerns about the comprehensive approach, because the contested battle space made it more difficult and dangerous for non-governmental organizations to operate; moreover, civilians might be implicated: therefore, cognitive factors like precision or discrimination with regard to targets might have more influence. Coalitions had a key role to play, but finding a common goal was difficult; therefore, it could be preferable to move from fixed alliances to flexible unions. Alliances had proven not to achieve their end goals, which were typically utopian; flexible unions offered an opportunity to join together to attain short-term solutions.

Doctrine might not be effective in that it put adversaries into categories. Indeed, the enemy did not always fit into a single box. He concluded provocatively by saying: “War is too important to be left to the generals; perhaps doctrine should not be left to them either.”

The historical background and objectives of the Collective Security Treaty Organization (CSTO) were presented by the fourth panellist. It was necessary to focus more on transnational threats and to have flexible answers to them. The CSTO was not a modern version of the Warsaw Pact, thus no one was viewed as a potential foe. The philosophy of the Organization was a completely pragmatic approach, which was embodied by a union between members willing to co-operate between themselves and others who shared the same objectives. The CSTO believed in transparency, mutual benefits and will. Military doctrine was a living organism.

During the ensuing discussion with interventions from the floor, Ukraine discussed its common co-operative efforts free from dividing lines and its will to define a military tool sufficient for its defence. However, it reminded the audience that it had no desire to join any alliance. Azerbaijan said that its military doctrine had been shaped by special needs and the strategic environment. Azerbaijan called attention to its view that traditional threats were just as important as the asymmetric ones, which complicated the security situation. The keynote speaker in his reply clarified the balance between traditional and non-traditional warfare.

A rapidly changing security environment might make necessary more frequent military doctrine seminars, according to Tunisia.

In the closing remarks, the first keynote speaker partially agreed with the second one on the issue of doctrine. Inter-agency capacity was a requirement. If the doctrine was to be more credible, non-military agencies must produce it.

The third keynote speaker concluded with the question of how much should be invested in future programmes, given the general increase in technology. He referred to the increasing interest in demographic factors. He noted “the great return” of the one State power organization, compared to the international organizations of today.

Another keynote speaker considered a downgrading of the unity of command in favour of unity of effort across the lines of operations.

A keynote speaker concluded by stating that the United States army had received abundant international and media support relating to the recently developed field manual on counter-insurgency. That input was critical, however, it still fell short of what was currently needed. In conclusion, he pointed to the influence of regional factors and globalization, which must be addressed.

The Secretary General of the OSCE concluded by pointing out that the keynote speakers had echoed the spirit of the OSCE's three-dimensions approach to dealing with crises.

Session 2: Technological change

Vienna, 24 May 2011

The second working session of the High-Level Seminar on Military Doctrine took place in the afternoon of 24 May. Impressive presentations by three high-level keynote speakers and two panellists ensured a lively, productive and forward-looking discussion, with a large number of interventions from the floor.

The first keynote speaker, a representative from the defence industry, noted that technical superiority could only take military operations so far. The key was to successfully exploit the advantages that technology created. In the same way, technology was only as relevant as the mission it served – there was little point in having an advanced air defence system if the enemy had no air force. Likewise, every technological advance was followed by a countermeasure, and a counter-countermeasure, etc., meaning that today's state-of-the-art technology was tomorrow's standard equipment.

Technology, therefore, made it possible to punish an enemy who exposed himself on the battlefield. However, the adversary could counter that by mingling in urban areas or using hospitals/schools as shields, or by using alternative means to mount an attack, such as terrorism, hacker attacks or even weapons of mass destruction.

The speaker discussed the uncertainties caused by what he called the “four megatrends” – nanotechnology, biotechnology, artificial intelligence and robotics/cybernetics. Coupled with the cyberrealm, it was extremely difficult to gauge where those technologies might lead, and what impact they might have on military forces.

Finally, he recalled the quality vs quantity debate. Quantity was itself a virtue, depending on the operation and the mission. On balance, however, quality was better, especially in the case of deployment in large numbers.

The second keynote speaker provided a concrete example of how the military doctrine in one participating State had responded to emerging threats and new technologies. That participating State still maintained a so-called “traditional” defence posture, with over 90 per cent of its military resources directed towards fulfilling the primary role of military defence of the territory and of the country's independence. However, as with all military forces, it had had to take account both of emerging threats and of technological trends. By forging close and ongoing ties with domestic high-tech industry, the military had been able to incorporate technological advances into its doctrine in a controllable and step-by-step manner. That had been particularly fruitful in enhancing command-and-control and network leadership and management, where the leadership was no longer tied to a particular geographical location.

By preparing for the worst-case scenario, it was understood that the military would be prepared for other threats and scenarios which might arise as a result of technological advances or changes in geopolitical realities. For example, in complying with its international commitments under the Ottawa Convention on anti-personnel landmines, the military would need to procure alternative equipment that provided a suitable defence capability, such as

faster and better protected land vehicles, non-precise artillery ammunition (avoiding collateral damage), etc.

Finally, the emergence of new threats had led to a change in approach towards participation in international peace-support missions. Previously, the country's force protection approach had largely depended on good relations with local populations. However, its recent experiences had led it to develop better "hard" means of force protection, including better means of defence against improvised explosive devices.

The third keynote speaker warned against "technology hubris" and stressed the need to use the right technology for the right mission. In particular, he cautioned against using overly complex and high-tech weapon systems, particularly when the enemy was himself using low-tech means. By way of example, he described the "wisdom" of one air force which had procured a low-tech aircraft for counter-insurgency (COIN) operations, which would be far more cost-effective in that role than advanced fast jets.

He also referred to the impact of what he termed the "political correctness effect" on military technology and doctrine. For example, smart weapons had been developed for sound military reasons – to allow a smaller number of platforms to hit a larger number of targets. However, for reasons of political correctness, smart weapons were now being used even when there was no military sense in using them. He argued that, in that sense, only richer countries could afford to wage "politically correct" wars.

Looking at emerging technologies, he noted that unmanned vehicles were increasingly being used in sea and air operations, while the advance of robotics had been somewhat slower on land. In his view, the trend towards robotics was positive, since it allowed for a more sensible use of resources (deploying an unmanned surface vehicle would be more sensible than deploying a missile destroyer to defeat a group of pirates armed with assault rifles in a rigid inflatable boat). However, he reminded the audience that machines were still only as smart as they were constructed to be.

The first panellist noted the increasing proliferation of private contractors and called for norms and standards to govern their use. He also raised the challenges posed by cyberwarfare. The cyberrealm was one which almost by definition could not be controlled by the State, unlike the land, the sea and the air. He agreed with the first keynote speaker about the role of industry in driving technological change, and in particular, expressed the view that nanotechnologies and biotechnologies posed a major challenge to military forces. Speaking about unmanned aerial vehicles, he underlined the need to dominate the electromagnetic spectrum.

He disagreed with the third speaker about the use of smart weapons. The first rule of counter-insurgency was to do no damage to those you were trying to help. In those cases, using smart weapons, with their ability to limit collateral damage, was a sensible military option. However, he recalled that the standard counter-insurgency manual had been developed in the colonies by former colonizing countries in the 1950s, and that the time had come to examine the assumptions that it was based on.

The final speaker drew attention to the way in which the pace of technological change had become more rapid and unpredictable. An important trend in technology was the decreasing role played by the State, via State-funded research and development, as the central

driver of technological change and innovation. Increasingly, it was the civilian industry and the rise of dual-use applications that were coming to the fore in research and development, leaving armed forces and ministries of defence to play “catch-up”.

That rapid change could create a time lag. It took time to militarize civilian applications for military purposes (equipment had to be made more rugged, with better battery life, etc.). In the meantime, however, a flexible enemy would use off-the-shelf products. For example, Google Earth could be used to help plan terrorist attacks.

He also agreed about the danger of technology hubris. The assumption that technology would win the day ignored the human aspects of conflict. Machines might be able to replace people on sea, in the air and even on the land, but machines could not teach capacity-building to local security forces. Finally, he reminded the participants that it was in the nature of war to be intertwined with politics.

In the discussion that followed, a number of themes emerged, including arms control, the question of legitimacy, the increasing use of contractors and the over-dependence on technology.

The representative of one participating State asked about the relevance of arms-control regimes and confidence- and security-building measures (CSBMs) in the context of modern technological advances. Current regimes were based on yesterday’s doctrine, so the question was whether the wrong things were now being looked at. One of the speakers agreed, noting that it was easy to count the numbers of tanks or aircraft, but that that traditional approach was useless in the area of cyberwarfare, for example. The capabilities of the platforms must also be taken into account. Another speaker suggested that parliamentary budget committees, by demanding reductions in defence spending, had a far greater impact on arms control than any international instruments had had.

The representative of another participating State disagreed, pointing out that a politician whose constituency included a defence manufacturing plant might have a different approach. Legally binding treaties were useful guides for governments and parliaments in the conduct of their business. The same representative recalled that the efforts of the Forum for Security Co-operation were focussed on upholding the idea of the military significance of the OSCE’s CSBMs, for if the concept of significance was lost, so was the confidence-building nature of the measures. Another speaker suggested that arms control was important for public opinion, and spoke of the difference between threats and risks. Threats were easier to perceive and act against, and arms control was a valid instrument to combat threats, but risks, such as that of cyberattack, were more difficult to perceive and guard against. Another speaker also agreed about the need for arms control in the future, although a refocusing would be required.

One participating State called attention to the importance of maintaining legitimacy. Most modern conflicts, he argued, had not been conflicts of the traditional type, but rather operations to provide stability in another country. In the case of those types of missions, it was essential to avoid losing legitimacy in the eyes of the local populations. Smart weapons helped military forces to maintain legitimacy by avoiding collateral damage and, in increasingly complex urban battle spaces, could enhance force protection. In addition, the importance of maintaining legitimacy at home was also highlighted. One speaker underlined

the need to educate public opinion and especially political leaders about the realities of combat.

The position of contractors was also raised in the discussions, with the representative of one participating State pointing out that States took the blame for the actions of private military security companies. One of the speakers agreed that the “privatization of the battlefield” was indeed a problem, and that the FSC might provide a useful forum for discussing norms and standards in that area. Another speaker suggested that the issue was a political one. Military forces did not have enough soldiers to do all the jobs they were being asked to do, so the only answer was private military security companies.

The representative of one participating State asked whether modern armies would be able to function without advanced military technology. A number of speakers and representatives of participating States agreed that it remained essential to train soldiers in basic skills so that they could adapt successfully to those types of problems.

Session 3: Impacts of doctrinal and technological changes

Vienna, 25 May 2011

The third session took place in the morning of 25 May, and discussed the “Impacts of doctrinal and technological changes”.

The first keynote speaker described the United States army’s new military doctrine and how it had been adapted to recent extensive changes on the battlefield. The focus was on how the military could adapt better to those rapidly changing conditions. In particular, the importance of co-operation among coalitions, especially with regard to joint training, was emphasized and a “comprehensive approach” was named as the solution to today’s challenges. While the speaker conceded that the enduring nature of conflict remained, radical changes in the way operations were conducted were underscored.

He first gave an overview of the changes he had observed on today’s battlefields. Threats had expanded to include non-State actors, such as terrorists, militias and criminals (asymmetric enemies). Another major factor was the changing role of information operations and the media. The constant 24/7 news cycle had a strong impact on the new doctrines, since commanders had to take into account the fact that public networks and information networks could no longer be separated. Significant shifts had also taken place concerning the gathering and sharing of information (“intel-fusion versus intel-collection and intel-dissemination”), which were attributable to technological changes and the number of platforms. In summary, he characterized today’s threats as dynamic, diverse, fluid, networked and constantly evolving, requiring an increased flexibility of the military.

He further described the main features of the United States doctrinal changes. Firstly, he referred to new tools used for doctrinal publications and education, such as DVDs, YouTube videos, interactive training devices and mobile phone applications. Secondly, he explained the central term “mission command”, as opposed to command and control, and pointed out that a commander of coalition forces must view the total mission instead of limiting his view to the battle or the command and control of armed forces. In that regard, a bottom-up approach was supported.

The address then turned to the presentation of concrete implementation matters. The focus was on training with coalition partners in projects such as the Joint Multinational Training Command, which included partners from Poland, Italy, Germany, France, Bulgaria and Albania. He pointed out that the training programmes, together with other multinational exercises, helped to promote the exchange of doctrinal advances, tactics, techniques and procedures. That was in conformity with the key message that, in order to ensure a successful co-operation in coalitions, “action mattered most”.

The second keynote speaker touched upon the impact that doctrinal and technological change had had and would have on arms control. He called attention to the significance of the comprehensive approach as a doctrinal guideline, with regard to which armed forces were only one instrument of many. Furthermore, he emphasized the need to use the virtual information space, but at the same time pointed to its fragility. In that respect, he mentioned the problems related to combining an efficient verification regime with a potential cyberwarfare limitation treaty, and stressed that other multilateral approaches to the problem

must therefore be found. That objective could perhaps be achieved through information exchange, common norms, technical co-operation and CSBMs. In his view, confidence-building measures should be expanded to include military doctrines.

Against the background of the complexity of modern conflicts, he made reference to the theme of quality versus quantity and called for more of the former and less of the latter. He also focused on information-sharing as one element of network-enabled capabilities, and numerous examples of current national actions in terms of international co-operation and co-ordination were presented. In that context, sustainable multilateral co-operation, including non-military actors as well as the use of coalition forces, was described as promoting transparency and more cost-efficient operations. Furthermore, he advanced the view that the changed characteristics of threats made well co-ordinated international coalitions a necessity.

Although he considered that it was in need of adaptation, he did not call the indispensability of arms control into question. In addition to deployments abroad, the defence of the home country still constituted one of the core tasks of armed forces. That would require the assessment of military potential in one's own region. In that regard, the organizations and treaties dealing with arms control and CSBMs (CFE Treaty, Vienna Document, Treaty on Open Skies) would contribute to reducing the threat level. As a consequence, he was confident that there was no need to prepare for a traditional military conflict in Central Europe in the near future. However, there was a need to overcome impasses and adapt documents and treaties to the current security level in order not to have to compensate for the lack of information in other more expensive and more confrontational manners. He also suggested that existing arms control treaties should be extended to cover new technologies.

The panellists commented on the various issues raised in the keynote addresses as follows:

The first panellist agreed with both speakers with regard to the importance of co-operation with all relevant actors. Moreover, he noted that the training of partner troops was relevant. Concerning arms control, he reiterated several points made by the second keynote speaker, in particular, the great significance of CSBMs, and also the fact that, in some regions, the quantity of forces was still a relevant security factor.

Another panellist referred to the complexity of modern conflicts and the interaction of economic, political and social conditions in that regard. He said that doctrines must be more comprehensive and provide for an "all of society" response by including not just government representatives, but also commercial and civil-society actors. Furthermore, he pointed to the need for merging of intelligence.

A third panellist suggested that it was desirable not to remain within the conventional matrix when designing new doctrine, but to develop far-sighted, alternative visions of doctrinal and technological changes and their impact on arms control and security. He then turned to United States military doctrine and, against the background of the difficult counter-insurgency operations the United States was facing in Afghanistan and Iraq, identified what he believed to be a blind spot in the United States army's doctrinal vision, namely, that it was culturally resistant to creating effective doctrine for counter-insurgency operations, preferring to focus on large-scale conventional operations. He also emphasized his conviction that smart

power was preferable to hard power, especially in view of the limits to what hard power could achieve on its own.

In the following discussions, one focus was on arms control and, in particular, on the difficulties of measuring quality. The view was expressed that that could only be achieved through co-operation, burden-sharing and transparency, whereas other speakers denied the possibility of measuring quality at all.

Another topic referred to the need to adapt the definition of military responsibility, especially in the cyberworld, while also realizing that the role of the military had evolved to include the functions of diplomats and economists.

The discussion then turned to exploring the challenges associated with the comprehensive approach, such as the allocation of leadership and authority, as well as the understanding of the culture of coalition partners.

Further comments referred to the role of the media. In that regard, it was suggested that commanders needed to understand that sharing information with certain media might have the side effect of distortion by other networks for propaganda purposes. In that context, participants also emphasized the military's will to co-ordinate with the media, NGOs and other civil actors.

Finally, Ambassador Beham raised the question of the role of women in developing doctrines, and there was general agreement that no limitations should exist in that respect.

Session 4: Issues/lessons identified and future objectives

Vienna, 25 May 2011

Ambassador Bailes stated that the past five years had led towards a more cautious, complex, broader and longer-term outlook on the role of military forces. The military had struggled during those years with conflicts more complicated and frustrating than expected. Many had also faced cuts in finance and capacity, while being uncertain that the loss of quantity could be fully offset by quality. Greater interdependence, more diverse and mobile risks, growing diffusion of technology, and shifts in power balances between both State and non-State actors were further factors. She also stressed that powers like China and India might ultimately affect the participating States' common future more than anything that could be agreed at the present time.

She summed up the discussions in the three preceding sessions, and set out four conclusions on technology: firstly, that technological hubris was a risk in itself; secondly, force planning and doctrine should aim for a mix of high-tech and more traditional capacities, of hardware and software and of basic human resourcefulness; thirdly, if the sharing of technological power between State and non-State or non-traditional players had already gone so far, it could be exploited by new partnerships with well-meaning actors. Lastly, greater efforts were called for to close the gap in regulation of new destabilizing technologies, and of private security and defence companies, even if the OSCE itself might not be the primary locus in that respect.

The comprehensive approach must be a doctrine for the whole of government and arguably also for society as a whole, not least since more and more of the conditions for success depended on non-State providers. New doctrine, technology and action had an impact on arms control, disarmament and confidence-building. The broader security goals could be undermined by weakening the stability that was relied upon at home when taking more risks abroad. If that happened, it could mean shifting the balance of resources back from new challenges to older fears, at a time when resources were scarcer than ever. A quantitative approach to arms restraint failed to capture factors of quality, including key force multipliers.

She concluded that, for the OSCE, military dialogue and transparency remained crucial for serving common security purposes. So long as not all the conflicts, tensions, and factors of inner instability had been banished from the OSCE area, challenges of confidence and stability remained to be faced. Concerning arms control and confidence- and security-building, there was a case to be made for exploring how the OSCE's existing documents, instruments, mechanisms and processes could be adjusted to capture and control the new elements of change and potential instability. The OSCE might find other ways to continue discussion aimed at transparency, understanding and sharing of best practices on generic issues such as cyberspace, private business actors in defence, or the role of women.

The first keynote speaker observed that the Seminar had paid a great deal of attention to military doctrine and strategy, focusing on dealing with conducting conflicts rather than preventing them. That observation was supported by one participant, who thought that doctrines must be first and foremost seen as an instrument for preventing war. Furthermore, peacekeeping was intended to be humanitarian, to avert bloodshed, and to prevent the parties from engaging in conflict; the selective use of force was one concept and a sufficient use of

force was another. Since it was very easy to start a war but difficult to end one, it was important to know what the final goal was. The development of military doctrine was bound up with the production of weapons and equipment; and regarding arms control and CSBM issues, the way in which military forces were developing needed to be taken into account in order to move forward in a manner useful to all.

The second keynote speaker suggested that the hybrid conflict/convergence of the battlespace meant that there was a blurring of military and civilian issues, combatant and non-combatant, public and private sectors. The role of doctrine was to learn from history and to provide best practices. The nature of war had not changed, but there was a permanent need for adaptation: For instance, if non-State actors were playing important roles, doctrine might have to take that into account. When values were disregarded, the result was a loss of influence and legitimacy. With regard to technology, robotics were coming and could be combined with other techniques, within smaller tactical networks. The aim was to achieve an advantage in the battlespace, not to seek technology for its own sake. Security co-operation and arms control had a future, but would be greatly challenged by cybertechnology and biotechnology. Monitoring and controlling the development of small and powerful technologies could pose a challenge to transparency due to national or commercial interests in some countries. The myth of post-heroic warfare – that conflict could be conducted without casualties and collateral damage – was a dangerous one. Heroes were still needed.

In the United States, there were four prevailing and competing schools of thought/strategic approaches:

- Crusaders: focusing on most likely scenarios, insurgency, failed States;
- Conservatives: focusing on existential, conventional threats, such as to the country's sovereignty;
- Full-spectrum operators: focusing on adaptability, prudent force planning, agile educated leaders;
- Division of labour: focusing on specialization, one-third on stability (army/USMC), and two-thirds on conventional conflict.

The FSC Chairperson said that the current crisis in the updating of CSBMs could also be seen as reflecting a sense of diminished urgency, since the major East-West conflict had been overcome. The financial crisis itself had had the effect of curbing the arms race. There were still threats that existed, coming from outside the OSCE area, and vigilance must be maintained. Even if the picture was slightly different, work with CSBMs could be continued. However, if there were threats from outside, then the CSBMs needed to be further strengthened to ensure readiness to meet those threats effectively. He concluded that, if peace was desired, CSBMs must be prepared for.

In the closing session the, OSCE Chairmanship thanked all the participants for taking part and stressed that confidence-building had always been a cornerstone of the OSCE; the mutually reinforcing web of CSBMs offered participating States an opportunity to draw attention to their security concerns. Last year at the Astana Summit, the Heads of State had recognized the importance of confidence-building for stability, predictability and transparency. They had also called for the updating, revitalizing and modernizing of core

instruments in that area, and in particular, the Vienna Document. The new threats and challenges required new forms of co-operation, where OSCE could play an important role. Finally, the OSCE Chairmanship hoped that the conclusions and recommendations emanating from the Seminar would serve as a basis for further action in the FSC.

The CPC showed a film entitled “Promoting Security and Stability”, which reflected SALW and SCA destruction and stockpile-management projects in the OSCE area and called for financial support.

The Italian FSC Chairperson thanked all the participants for taking part and expressed appreciation to those who had planned and organized the Seminar. The politico-military dimension had special importance in the current year because of the Ministerial Council meeting in Vilnius, where it could be hoped to update the CSBMs and demonstrate progress.

The Seminar was then closed.