Informing Decision:

Strategic Research in the Serbia and Montenegro Ministry of Defence

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Executive Summary

The purpose of this Study, a joint effort by the Ministry of Defence of Serbia and Montenegro and the Jefferson Institute, in Belgrade, is to analyse the current state of strategic research in the Ministry of Defence, to assess its strengths and weaknesses and to propose a new research body based on the best practices of similar institutes in other democratic countries. The Study examines the on-going defence reform plan of the SCG defence establishment and the scientific research centres supporting the Ministry of Defence. It then analyses the Canadian experience of operations research and strategic analysis and the Slovenian Centre of Strategic Studies, which operated successfully in support of the Slovenian Ministry of Defence and the armed forces in the period 1991- 2002.

This Study draws lessons learned from the experiences of these very different countries and consolidates them into guidelines for the establishment of a Strategic Research Institute located within the SCG MOD.

The role of the Institute is to inform decision-making of politicians and senior civilian and military officials. It will identify emerging issues and provide sound analysis so that a common baseline for decision-making is established. It must also be prepared to defend its assessments.

In order to achieve this, the Study recommends a structure for the Institute and optimum location within the MOD organisation. It proposes a structure based on 5 functional divisions headed by a President. The President would report directly to the Assistant Minister for Defence Policy.

The organisational structure of the Institute would include a Secretariat and a Publications Section and five divisions:

- *'Security and Defence Strategy'*
- *'Security Challenges and Strategic Assessments'*
- *'Security Integration and Technical Analysis'*
- *'Civil-Military Relations and Defence Management'*
- *'Military History'*

Once this Study and its recommendations have been agreed by the stakeholders, it will form the basis for an Action Plan, which will constitute Phase 2 of the project. Phase 2 is the implementation phase designed to achieve initial operating capability of the Institute.

The Phase 2 implementation 'Action Plan' should include the following:
- *Consult with stakeholders on the findings of the Phase 1 Study to agree on the implementation Action Plan*
- *Confirm or modify and put in place the structure of the Institute*
- *Develop Terms of Reference for the Institute and each of its component parts*
- *Designate tasking and prioritising bodies and procedures*
- *Build internal capacity by:*
  - *setting research priorities*
  - *assigning responsibilities for the research*
  - *developing and promulgating an agreed methodology*
  - *facilitating the research process*
  - *designing standardised formats for various kinds of reports*
- *Develop links with local and regional academic institutions and other relevant research institutes in the region and further afield*
- *Develop a system for outsourcing and contracting work to universities and other institutes*
- *Initiate the creation of a network of internal and external research analysts and institutions*
- *Invite international experts to train researchers and to advise as necessary*
- *Set up, advise and monitor trials of longer term research and short term tasks for ministers and officials*
- *Follow through to assure reports are clear, concise and delivered promptly and in the agreed format*
- *Trial contracting and monitoring procedures by out-sourcing two different research projects*
- *Establish a new defence and security periodical to be published by the Institute*
- *Organise an inaugural conference for regional and international experts*

Follow on phases will test and verify the organisational level of the Institute, its structure and procedures and test and evaluate its products. Conferences, seminars and workshops will be conducted as educational and research vehicles, as networking and collaboration opportunities and to raise the profile of the Institute on a regional and international level.

I. Introduction

Background

Each state has its own unique history, geography and culture. As no two countries share an identical model of democratic governance, the same is true of their national institutions. A model that works admirably for one country may be inappropriate for another. This also applies to research institutes, especially those designed to inform and influence state policy. This notwithstanding, there are undoubtedly lessons to be learned from others' experiences, failures and successes.

Strategic decision-making depends on sound information and careful analysis. Analysis of security and defence issues in the former Socialist world was largely confined to the inner circles of the armed forces and the security services. The advent of civilian-led, democratically elected governments in almost all post-communist countries produced leaders with little experience in the field of defence and security. In Serbia and Montenegro, as in all democratic countries, elected politicians and civilian officials need the tools with which to make the strategic decisions that may have a profound effect on the well-being of their citizens. Hence, an independent professional source of information and research is essential to inform decision-making at the highest levels.

The Minister of Defence of Serbia and Montenegro requested the assistance of the Jefferson Institute, in Belgrade, to develop guidelines based on best practices and a model for a Strategic Research Institute within the Ministry of Defence designed to give him and his senior officials the necessary tools to make informed decisions on important policy issues. This Needs Study is the culmination of Phase 1 of a joint 3-Phase project by the MOD and the Jefferson Institute; it has been augmented by important contributions from international experts with wide experience in the field. Its findings, once agreed by the Minister, are intended to form the basis for a Phase 2 Action Plan to support the process of establishing the Institute and developing its method of operation.

Mission of the Strategic Research Institute

The mission of the Institute will be to monitor and anticipate security issues at the national, regional and global levels, to identify and track the security challenges, risks and threats and to analyse options for national defence strategy, the structure, organisation and sub-systems of the security and defence sectors and the Serbia and Montenegro Armed Forces (SMAF).

Scope of the Needs Assessment

This study analyses the current state of defence research in Serbia and Montenegro, explores its strengths and weaknesses and examines other nations' models to determine which elements should guide the formation of a Strategic Research Institute suited to the unique requirements of Serbia and Montenegro.

The Yugoslav Army had a proud tradition of efficiency and professionalism. It possessed a number of excellent research centres of various kinds. The Armed Forces and the Ministry of Defence of Serbia and Montenegro have inherited many of these institutions. However, neglect and a lack of resources in recent years have diminished the capacity of many of these centres to contribute to the direction of defence policy and to the technical efficiency of the SCG armed forces.

The Study will analyse the defence research experience of Serbia and Montenegro and of two very different countries:

- Canada, an old democracy with a long tradition of defence research and with armed forces of roughly similar size to those of SCG, provides a model from which useful lessons might be drawn.

- Slovenia is a new member of NATO and the EU and shares a common recent history with Serbia and Montenegro. Soon after independence, the Slovenian MOD set up a Centre for Strategic Studies. This Centre provided valuable research and advice to the MOD and the armed forces until its disbandment in 2002. We will examine the structure of the Slovenian CSS and its method of operating and explore the reasons for its demise.

Finally, the Study will attempt to bring together the experiences of defence research in Serbia and Montenegro with lessons learned in Canada and Slovenia to suggest ideas and options for an optimum structure and operating procedures for an SCG MOD Strategic Research Institute.

II. Reform of the SCG Defence System

Introduction

The defence policy of the member states and Serbia and Montenegro directs the reform of the defence system, taking into account real security challenges, risks and threats, constraints, and in conformity with international standards. The basic aim of the defence and SMAF reform is to build an efficient and economically viable defence system and a professional and modernised SMAF, equipped and trained to accomplish its missions and tasks assigned in the Defence Strategy and Military Doctrine.

Organisational changes of the scientific institutions in MoD and SMAF are part of the defence system reform and reform of SMAF. Analysis of the status of scientific institutions, their problems and recommendations for solving them is a complex task. In the SMAF, in last 10 years, the intellectual effort has been to create a single and unique system of scientific disciplines that is generally called "scientific research." By the end of 1999, the SMAF had begun its reorganisation.

This section contains a critical review on the scientific research system including an outline of the most important elements of the reform process. The aim of the process is to establish the organisational position, the structure, the authority and the program orientation of the new Strategic Research Institute. This Institute should accomplish on the state and military level key theoretical and practical research projects at a significantly enhanced level compared to current research capabilities. The structure of the Strategic Research Institute should be in accordance with the general principles of similar institutions in other democratic countries.

The Defence System of Serbia and Montenegro

The defence capacity of the member states and of Serbia and Montenegro is a direct function of its ability to respond to military and non-military security challenges, risks and threats, and the security integration processes.[1] The development

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[1] This topic is based on a draft version of the White Papers on Defence of the State Union of Serbia and Montenegro, Belgrade, 2005

of the defence system is based on realistic defence requirements and potential, as well as a desired level of integration in the Euro-Atlantic collective security system. The defence system aims to strengthen the peace and stability of the member states and of Serbia and Montenegro and the region in order to build defence forces that are able to respond to contemporary security challenges, risks and threats. The defence system is institutionally connected to other institutions of the member states and of Serbia and Montenegro.

Figure 1: The Defence System of Serbia and Montenegro
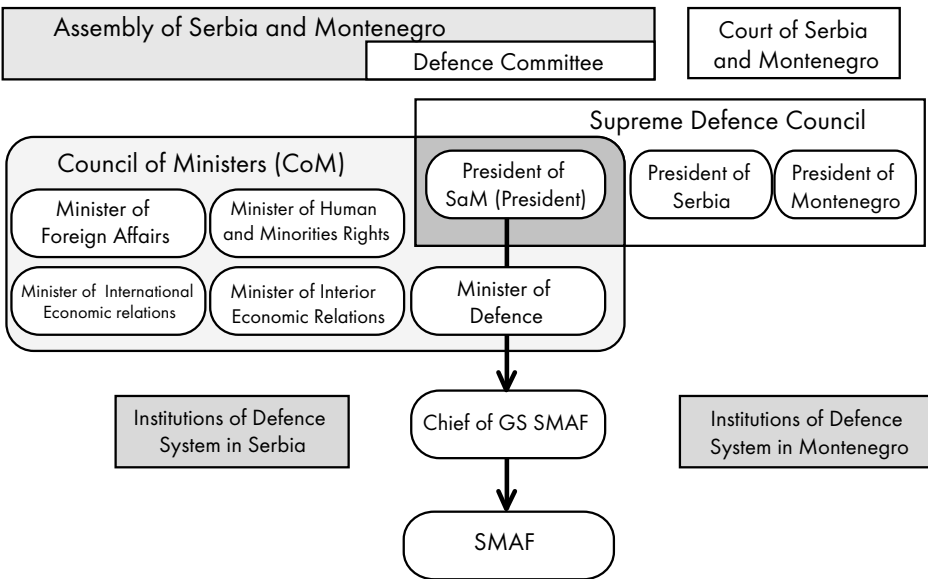
The main elements of the defence system are:

- The Federal institutions of Serbia and Montenegro established on the basis of the Constitutional Charter of the State Union of Serbia and Montenegro
- The SMAF
- National institutions of the member states established on the basis of the constitutions of the member states

The SMAF is the armed forces of the defence system. It is being reformed and restructured based on the best domestic and foreign experiences and scientific achievements in the defence area. The defence system, including scientific research, is managed by the Parliament of Serbia and Montenegro, the Supreme Defence Council, the Council of Ministers and the MOD on the basis of their respective powers established by law:

- *The Parliament of Serbia and Montenegro* enacts laws, decisions and other acts and oversees elements of defence system through parliamentary committees and commissions.
- *The Supreme Defence Council*, acts as the supreme commander, commands the SMAF and decides on its deployment. The Council reaches decisions by consensus.
- *The Council of Ministers and the MoD* manages and oversees the Armed Forces.

Managing institutions of the member states on the basis of their Constitutions is part of the management of the defence system of unified command. It is carried out on the level of the member states and local government.

The MOD is the highest management and expert organ of Serbia and Montenegro in the defence area. The General Staff (GS) is the highest headquarters organisation which implements the decisions of the Minister of Defence and the Supreme Defence Council by direct command of the operations of the SMAF in peace and in war.

The Serbia and Montenegro MOD is organised as shown in figure 2.

Defence System Reform

The SMAF is undergoing a radical reform process of its structure and tasks for the purpose of creating a more effective force to protect national and state values and interests.

Aim. The basic aim of the reform is to build an efficient and economically viable defence system and a professional and modernised SMAF, equipped and trained to accomplish its assigned missions and tasks.

Scope. The reform process is structured as follows:

- redefining organisational links with other elements and subsystems in the national security system
- improving measures of selecting and educating personnel
- developing legal regulations
- modernising the SMAF and equipping it with modern arms and equipment
- changing the training of officers and soldiers and equipping commands and units
- reviewing mobilization preparations and development
- initiating various other military programs according to agreed priorities in order to achieve a new qualitatively improved status of the SMAF.

Figure 2: Organisational Structure of the Ministry of Defence
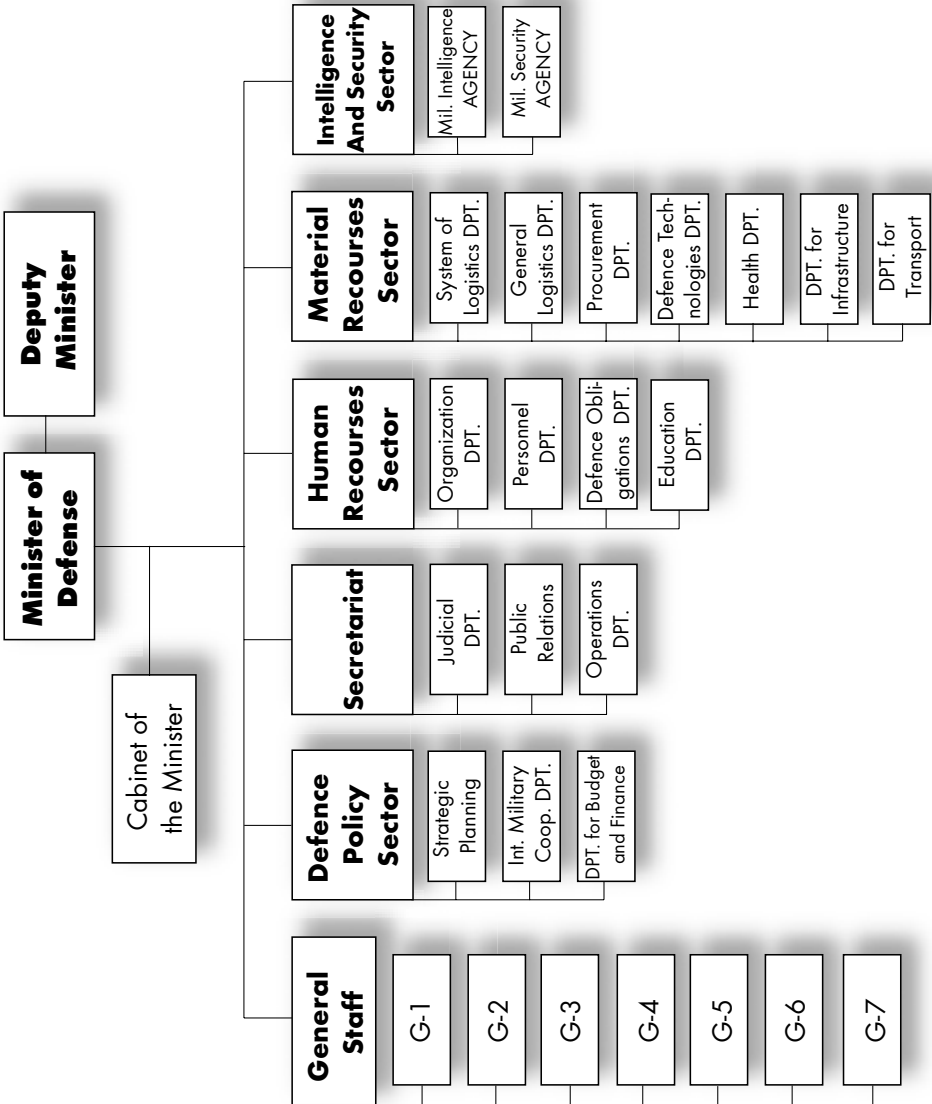
The success of the reform process depends to a large part on successful security integration. Other prerequisites include: political consensus, laws, funding, and public support. Despite the difficulties it has faced in recent years, Serbia and Montenegro has achieved significant success in the reform of the defence system. The following major elements have been achieved:

- the Defence Strategy of the State Union of Serbia and Montenegro has been adopted
- the Committee for the Defence Reform Coordination has been established at the MOD
- the Basis of the Defence System has been adopted
- a modern organisation of the MOD and GS have been established
- the Intelligence Department and the Security Department have been transformed into the Military Intelligence Agency and the Military Security Agency and both agencies have been subordinated to the MOD
- the number of tactical units has been considerably reduced and their manning and equipment have been improved through transformation and relocation
- various educational centres have been disbanded and a unified Military Academy has been established
- a Peacekeeping Centre has been established
- border security tasks on the territory of the Republic of Montenegro have been transferred to the jurisdiction of the Ministry of Interior of the Republic of Montenegro in 2004, and the transfer of jurisdiction on the territory of the Republic of Serbia began in January 2005
- the military judiciary system has been transferred to the jurisdiction of the civilian courts of the member states
- a Reform Fund has been established
- a large number of buildings of the SMAF have been handed over to member states and local municipalities

The accomplishment of these activities has created important preconditions for the continuation of the reform and the participation of the SMAF in the Euro-Atlantic security integration.

The reform and restructure of the SMAF is being conducted in three phases:

Phase 1 - to end 2004
Following the creation of a more stable security environment, units and institutions whose purpose and equipment became redundant have been disbanded and the manning and equipping of the remaining units has been improved through transformation and relocation.

Change in the SMAF has been accomplished through:

- **organisational changes** – disbanding, transformation, regrouping: the number of commands, units and institutions has been reduced by 30 %
- **reduction of armaments and military equipment** – outdated weapons and equipment have been phased out
- **reduction of the number of locations** – the number of garrisons has been reduced by nine
- **reduction of number of personnel** – SMAF personnel have been reduced by 29 %; the number of officers has been reduced by 26 %, non-commissioned officers (NCOs) by 12 %, contractual soldiers by 32 %, civilians by 5 % and soldiers by 33 %.

Phase 2 - 2005-2008.
In this phase, the reform process will speed up through the establishment of a modern organisation on the strategic and operational levels and the continuation of the process of rational restructuring at the tactical level. The organisational changes will provide considerable resources for establishing a modern structure and for creating the preconditions for undertaking the next steps aimed at converting the SMAF to a professional armed force.[2]

The organisational structure of the SMAF at the end of the second phase of reform is shown in Figure 3.

Phase 3 - 2007-2010
In this phase, the planned cycle of the SMAF reform will be completed and a significant modernisation of armaments and equipment will begin. Organisational changes will focus on establishing commands of the response forces, the main defence forces, the territorial forces and logistics. During Phase 3, the current branch style organisation of the SMAF will be abolished with considerable structural and functional changes at all organisational levels. Professionalisation of the SMAF will lead to a gradual disbandment of the main defence forces and their role will be taken over by the response forces and territorial forces.

The reform process will transform the existing organisation of the SMAF into rapid, mobile and flexible units, manned and equipped to achieve their missions and tasks, independently of or in cooperation with forces of partners, allies and other friendly states. In accordance with the plan, professional personnel will gradually be introduced to perform all the key military duties.

The priorities in the development of the Armed Forces are the strengthening and modernisation of anti-terrorist, highly mobile, helicopter, medical and engineering, and military police units, as well as the modernisation and the development of the system of command at all levels .

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[2] Ibid

Figure 3: Organisational structure of the Army in the second phase of the reform

II. Reform of the SCG Defence System
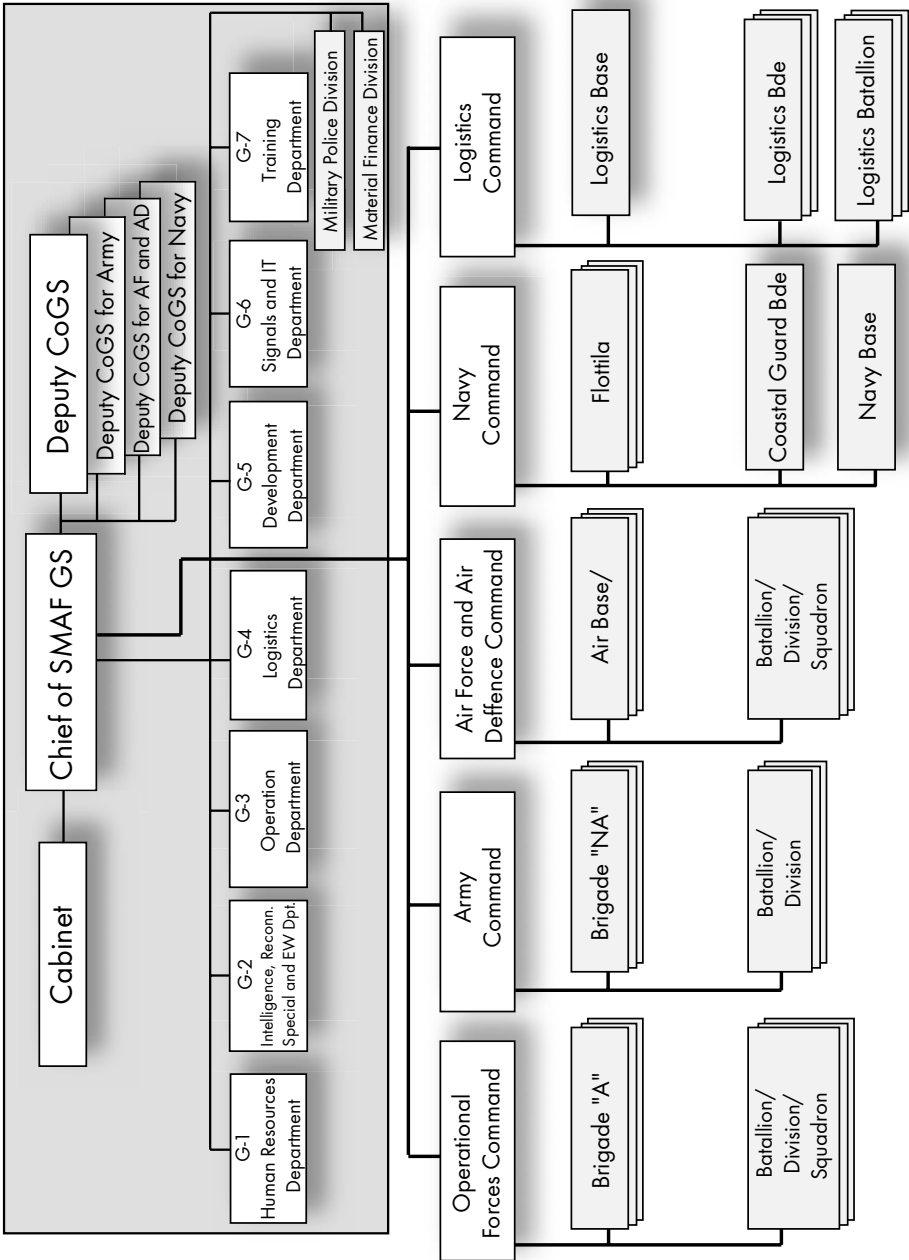
III. The Current Status of Defence Scientific Research

Scientific Research Institutions – General Background

The current primary scientific research institutions are:
- The Military Arts Institute
- Military History Institute
- Research capabilities of the Military Academy.

Selection of Tasks. The current planners of scientific research (SR) in the MOD and the SMAF are the Sectors and Departments. Scientific councils of military scientific institutions and faculty boards of the Military Medical Academy and Military Academy, as well as committees for SR within the Sectors and Departments consider drafts of proposed projects and make choices based on plans for scientific research in the MoD and the SMAF.

The organization of SR in the MOD and the Armed Forces has been established in such a manner that all organizational elements take part in defining "needs" in their respective fields and assigned responsibilities The MOD's Strategic Planning Department defines the scientific activity plan for the next calendar year. Assistant Ministers of Defence are involved in proposals within their respective areas of responsibility.

Types of Research. Military research work encompasses basic and applied research and SR work in the field of military arts, technical, medical-biological, social, economic and organizational questions.

Financial. Material and technical support for SR includes contemporary IT resources, new software and powerful hardware.

Personnel
- Academic Qualifications. 2,021 MoD members and servicemen deal with research and scientific work. There are 795 experts in various scientific areas and specialties of which 210 have academic titles. Most researchers employed in the Military Arts Institute and Military History Institute have post-graduate degrees in military sciences, political sciences, sciences of security and defence, organizational sciences, etc.

- Education. Advanced education of personnel working in SR includes post-graduate studies, developing and defending master and PhD theses, and advanced education of scientists in the country and abroad.
- Age Structure. Age structure of the scientists is weighted toward older researchers:

Table 1: Scientists according to age

Age	Personnel	%
BELOW 30	147	15,20
31-40	165	17,30
40-45	237	24,70
ABOVE 45	419	42,80
TOTAL	968	100

Status. In 2005, an initiative has been launched in the scientific military institutions and academic military schools to develop a draft law on SR and to change regulations in accordance with suggested legislative action to create a legal framework for defining the status of scientists.

Work Plan. The SR Plan proposal is formulated on the level of the MoD and the Armed Forces.

Final Approval. The Collegium of the Minister of Defence approves the SR Plan. It then becomes the basis for conducting research tasks.

Implementation. Scientific institutions, institutes, research and development units, the Military Academy and the Medical Military Academy carry out the research tasks. For each research task, research personnel are chosen, supported by the Plan. The greatest share of research tasks is carried out by institutes and military school departments within the military education system in collaboration with civil institutes and faculties, as well as experts from the other state structures and non-governmental sectors.

Reference Library. In the area of security, defence and military sciences, a large database at the military library has been developed, along with the Centre for Scientific and Research Documentation and Information.

Methodology. SR work is carried out by selecting research tasks, planning, project development, implementation, verification and issuing research results

Manning. Researchers are selected by public competition.

Further Education. Researchers have the right and the obligation to take advanced education. Researchers take their advanced education in postgraduate studies of military science and at other faculties in the society.

The Military Arts Institute

Short history: Research in military science has been institutionalized since 1977 with the establishment of the Centre for Strategic Research, which was directly subordinated to the Chief of General Staff of the Yugoslav Peoples' Army (YPA). The Institute for Strategic Research (ISR) was founded within the Armed Forces Centre for Strategic Research and Studies with an order of the Federal Peoples' Defence Secretary.

The Armed Forces Centre for Strategic Research and Studies was dismantled during the reorganisation of the military school system and research in the YPA. However, the ISR became an integral part of the Centre of Academic Military Schools without a change of name but within the new structure.

During the first phase of transformation of the military school system and research institutions in the Yugoslav Army, the ISR changed its name to the Military Arts Institute (MAI) merging the ISR, the Centre for Combat Command and Information Systems and the Division for Scientific Activity of the former Academic School for Military-Social and Psychological Studies and Research. The MAI's purpose was to conduct fundamental and applied research in response to Yugoslav Army requests.

Mission of the MAI: The MAI is a military scientific institution based on applied and development research for state defence in the areas of strategy, operations, and tactics.

MAI Organisation: After the reorganisation was completed in 1994, the MAI was composed of the following parts:

(1) Strategic Division,
(2) Operational Division,
(3) Tactical Division,
(4) Military System Section and
(5) Military Sociology and Psychology Section.

Figure 4: Organisational structure of the Army in the second phase of the reform
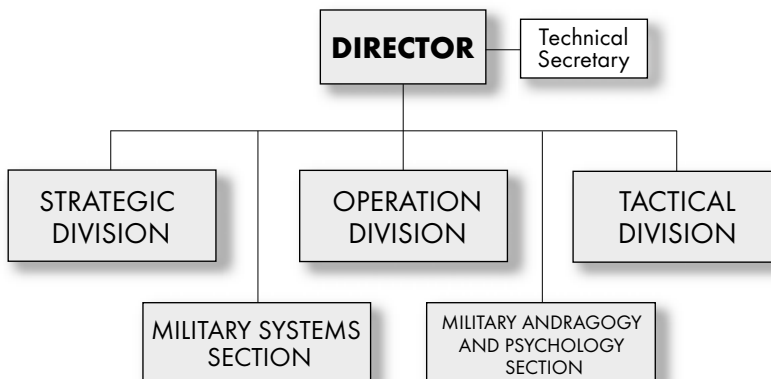
Personnel: 88 researchers (25 PhD, 31 MA). New researchers are selected from young graduate students from the civilian faculties and the Military Academy. The in-house training period lasts two years.

Tasks: The MAI has been engaged in research of developments over the dismantling of Yugoslavia, as well as those that preceded the NATO intervention in the FR of Yugoslavia:
- Analysis of confrontation theory, armed conflict and military doctrine theory
- Gaining and integrating new information on the effective preparation and engagement of units on the tactical, operational, and strategic levels
- Research on current problems and experiences from armed conflicts and changes in military doctrines internationally
- Problems in armed conflict
- Upgrading the military doctrine
- Problems at the strategic, operational, tactical, and command levels
- Development of theoretical and methodological foundations for determining combat system effectiveness at different command levels
- Structures of the MOD and the SMAF GS
- Research tasks conducted by the MOD and the Army organisational elements
- Publishing research results in public and internal publications
- Presenting research results at expert gatherings and round tables organised by the MAI and the Army at home and abroad
- Developing specific academic curricula for military schools for rapid transformation of theoretical principles into practice
- Enhancement of cooperation with other institutes at home and abroad
- Exchange of scientific data and joint projects with scientific institutions nationally and abroad
- Participating in teaching of post-graduate studies and other levels of academic education
- Analysis and development of military-strategic estimations required by the MOD

Symposia: During the last two years, the MAI organised or co-organised many significant international and domestic events.

Publications: Hundreds of books, textbooks, studies, monographs and scientific papers.

Work Planning: The Institute develops mid-term, annual and monthly work plans by subject, themes and time. Interdisciplinary teams are formed and external associates are engaged as necessary.

MAI Work Plans are created on the following basis:
- mid-term plans
- financial resources

- decisions on adding new tasks and changes of existing tasks
- tasks achieved
- evaluating current research tasks

Director of the Institute identifies team members, deadlines and methodologies.

The MAI Academic Council: The Academic Council considers different research issues in the Institute. It is composed of 15 members, 10 of which are fulltime employees of the Institute.[3]

MAI Academic Council members are proposed by the Director on the recommendation of the heads of organisational units from amongst those researchers with academic and teaching titles. Council members are researchers at the Institute and lecturers at the military academic schools with academic titles. Members of the Academic Council can also be retired persons with academic and teaching titles relevant to the Institute's work.

The Academic Council is led by the President who is chosen from the researchers with higher titles. The Council proposes the President and his deputy from the members.

Council Tasks:
- follows the development of military scientific work
- proposes innovations and improvements of MAI research plans
- studies MAI research results and proposes measures for their improvement
- initiates and confirms scientific research projects
- analyses organisation and results of the academic progress of individual researchers
- initiates the process of obtaining academic titles for researchers
- selects researchers as candidates for academic titles
- chooses external associates to work on MAI projects
- proposes practical implementation of research results

Quality Control: Quality control of the work of the MAI is carried out as follows:
- Results of scientific research are evaluated by the Commission for Scientific Research
- The Project Council verifies research results based on the Commission report
- Research results are published in public and internal publications
- Research results may be presented to academic gatherings
- Classified research results may be published in accordance with the regulations for confidential information

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[3] Based on the MAI By-law provisions

MAI Lessons Learned:

1) <u>English Language.</u>   Researchers require a working knowledge of English. This knowledge should naturally improve as younger researchers, military and civilian, are brought into the Institute.

2) <u>Language Training.</u> Researchers should be given priority for enrolment in the language school of the MOD and the Army.

3) <u>Cooperation.</u>   Cooperation and collaboration with other academic and research institutions and schools in the military school system, as well civil institutions, should be strengthened.

4) <u>Scientific Information System.</u> Databases, access to international library facilities (e.g. The Marshall Centre library) and internet access should be established as soon as possible.

5) <u>Personnel.</u> The Research structure should be revised in accordance with the role and tasks of a new institute.

6) <u>Career Development.</u>   Researchers must be motivated by promotions, improved benefits and access to self-education.

7) <u>Recruiting.</u>   Suitable researchers should be selected by public competition.

8) <u>Further Training.</u> Young researchers should receive advanced education at civilian faculties at home and abroad. Researchers should participate in exchange programs with researchers from abroad.

Military History Institute

Mission: The Military History Institute (MHI) is a military scientific institution in the field of military history and the history of military art. It develops archives and conducts applied research in the field of military thought.

Figure 5: Organizational Structure of the Military History Institute
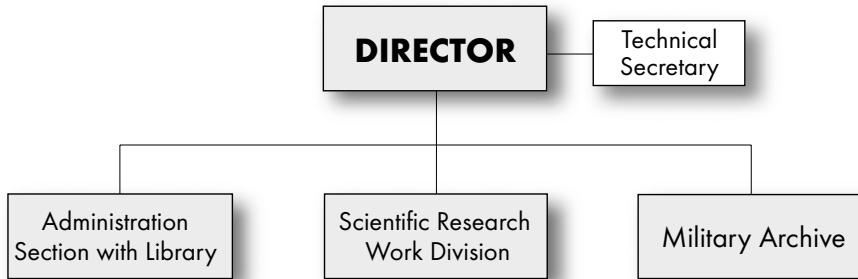
The Institute has a total of 45 professional staff. The Scientific Research Work Division has 14 researchers.

Personnel Policy: The Institute's personnel policy is based on selecting and employing younger historians, professional military officers or civilians, who can be trained and educated without obstacles to their careers and their further education. Their career progression should be wholly dependent on the value of their work within the Institute.

Manning: From 1990 onwards the Institute has suffered from inadequate manning. The Institute can only function satisfactorily with sufficient qualified personnel to allow it to fulfill its research work and simultaneously to develop and maintain the archives of the SMAF and the MOD.   Since 2001, its new structure and organisation have resulted in an improvement of its overall performance and efficiency.

Tasks of the Military Archives:
• Continue to collect relevant documents
• Sorting archive documents taken over in 2002
• Opening the archives from the period prior to 1956 to researchers
• Activating "The Archive", an electronic program for processing of archive documents
• Working with researchers at home and abroad
• Fulfilling official legal and personal requests
• Processing of not-yet-registered archive documents
• Organization of exhibitions
• Culling and destroying redundant files

Constraints: At present, the Military Archives cannot fulfill all of the above tasks due the following constraints:
- Lack of archival space
- Shortage of personnel
- Insufficient financial resources

The Future: Due to financial, human and material constraints, the Military History Institute cannot remain a viable independent scientific institution. Its future seems to lie in integration with the Military Arts Institute or into a new scientific institution.

Academic Military Schools

The Academic Military Schools are the Military Academy and the Military Medical Academy. These schools, when they attain certain specified requirements, may establish scientific institutes or research & development units.

The Military Academy consists of:
- The Military Academy Management
- The Sector for Education and Scientific Research Work
- The Unit for Postgraduate Studies
- The National Defence College

The Sector for Education and Scientific Research Work organises, plans, and provides education at the Military Academy and plans and organises scientific research work in the faculty departments. The Sector has 16 faculty departments employing scientific research personnel.

Challenges to the Current System of Scientific Research

Management: Inadequate manning of the managerial structure responsible for planning and coordination of scientific research. The Scientific Research Division in the Strategic Planning Department has not been adequately manned.

Financial: Funding for scientific research is inadequate. In addition, research institutes do not have financial authority for the allocation of resources for research. These funds are instead assigned to MOD sectors and departments.

Qualification Identification: Education and training requirements for research personnel have not been correctly and systematically defined. Academic titles need to be more uniformly defined.

Loss of Personnel: There is a steady drain of qualified personnel from the MOD and the SMAF.

Lack of Material Resources: Over the past five years, there has been no new investment in laboratories, offices, training grounds, prototype workshops, academic literature, hardware and software support.

Lack of International Cooperation: Scientific information exchange on the international level is poor. The basic website of the Military Academy, the Military Medical Academy, the Military Arts Institute and the Strategic Planning Department is sub-standard considering the number of academic personnel in these institutions.

Long Education: Post-graduate education takes too long and only a handful of students graduate with higher degrees each year.

International Training: Researchers are not able to further their education abroad.

Lack of Appreciation for Research: Defence research is not considered on a par with research at civilian faculties and academic institutions in the State Union of Serbia and Montenegro.

Poor Pay Structure: Qualified researchers in civilian academic institutions in the State Union receive 50% higher salary than those with graduate diplomas only. This is not the case with researchers in the SMAF. This leads to a loss of qualified academic personnel.

Poor Compensation: Research fees are extremely small. Mentorship of the post-graduate studies at the Military Academy and Military Medical Academy or involvement in commissions for grading research work or Master and Doctoral theses do not attract any financial compensation as is the case in civilian universities and institutions in other countries. There is therefore little incentive for creative scientific research work.

Out-of–Date Regulations: Transfer of the Scientific Activity Department from the SMAF to the MoD caused changes in the authority for decision making for scientific research. The Manual for Inventive Activity is therefore out of date and should be amended or replaced with a new book of regulations governing scientific research.

Lessons Learned

- <u>Bonus for Researchers.</u> Academic personnel in the Ministry of Defence and the SMAF should be encouraged by a bonus for scientific work as defined in the Decree on wages and other incomes. Researchers should receive financial rewards for particularly outstanding research.
- <u>Materiel Support.</u> Scientific institutions, academic military schools and institutes should be resourced for the supply, repair and maintenance of laboratory and computer equipment as well as conditions for efficient research.
- <u>Rationalisation of Administration.</u> Scientific institutions and academic military schools should be connected to the Automated Information System of Scientific Activity to create conditions for scientific activity effective planning, monitoring and task implementation, updating of Scientific and Research Personnel Records, Military Scientific Institutions Records and data for management of academic personnel, scientific titles promotions and records of research projects.
- <u>Law on Scientific Activity.</u> In coordination with the Ministry of Science and Living Environment of Republic of Serbia, a law should be developed on scientific activity within defence institutions to provide for the status, privileges and compensation of highly qualified researchers.
- <u>Define Qualifications.</u> Together with the Organisation Department in the Human Resources Sector, the education and training needs for academic personnel from all scientific institutions, academic military schools and institutes should be defined.
- <u>Earlier Qualification.</u> Streamline the education of post-graduate students at the MA level in order to improve the age structure of scientific and research personnel.
- <u>Appreciation of Value of Researchers.</u> In order to attract and retain high quality military and civilian researchers, the status of academic personnel within the defence establishment should be redefined. Only in this way will younger people be attracted to this activity.
- <u>The General Importance of Research.</u> Without a development of science, the SMAF is on the way back to dogmatism and to the loss of a very valuable creative resource. Only by recognising the real value of scientific research will the SMAF become a genuine partner with other militaries in Euro-Atlantic zone.
- <u>Organisation.</u> It is essential to find the best place for the Institute within the MOD structure
- <u>Civilian Hiring.</u> Overcoming the hiring freeze on civilians will open up the research area to qualified persons from a wider variety of backgrounds and ease the current shortage of personnel.
- <u>English.</u> Researchers should be encouraged and given the opportunity to improve their English and other foreign language capabilities to facilitate international cooperation and access to foreign research
- <u>Internet.</u> Regular internet access is imperative for researchers.
- <u>PIMS</u>. An attempt should be made to gain access to the PfP Information and Management System (PIMS)

VI. Case Study: The Canadian Experience of Strategic Research[4]

<u>History</u>

The Canadian Defence Research Board (DRB) was established in 1949 as a separate agency within the Department of National Defence (DND) in response to the outbreak of the Cold War. The Chairman of the DRB had deputy minister rank and was considered equivalent to the Chief of Defence Staff and the Deputy Minister within the defence hierarchy.

The DRB provided scientific support to the armed forces including defence laboratories and operational research. The Operational Research Group (ORG) was created based on the experience of British, Canadian and American scientists in Operations Research in WWII. In the 1970s, the DRB split into two parts: Research and Development under control of the Assistant Deputy Minister (Materiel) and the ORG responsible to the Assistant Deputy Minister (Policy).

<u>Organisation of the ORG</u>

"Organisationally, the ORG was divided into separate sections, several in Ottawa attached to the service HQs and several with field commands...Each OR section had military as well as civilian personnel. The staff of the military organizations to which they were attached determined their programs. But the Central OR Group retained control over personnel, and maintained a policy of rotation so that scientists acquired experience with army, navy and air force, and with both headquarters and field units."[5]

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[4] Unless otherwise noted, the information in this section is derived from discussions with Dr. John Leggat, CEO Defence Research and Development Canada and Assistant Deputy Minister for Science and Technology, DND, Dr. George Lindsey, former Director of the Operations Research Group, Mr Peter Anderson, former Director General Operational Research, Dr. Roman Jakubow, former Director of the Strategic Analysis Directorate, Dr. Martin Rudner, Director of the Canadian Centre of Intelligence and Security Studies, Carleton University and Mr. Tiit Romet, former Defence Scientist and Strategic Technical Analyst at DND. Conclusions and opinions are generally those of the author.

[4] George Lindsey, "Four good decades of OR in the Canadian Department of National Defence," Journal of the Operational Research Society (1998) 49, p. 327

[4] Ibid, p. 328

[5] George Lindsey, "Four good decades of OR in the Canadian Department of National Defence," Journal of the Operational Research Society (1998) 49, p. 327

At its peak, the ORG consisted of 78 civilian scientists out of a total strength of about 150, the remainder being military officers. There was an effort to staff the ORG with persons of appropriate scientific backgrounds, not necessarily mathematical.

Aside from evaluation of weapons systems, logistics became a major field of study. For example, "the cost of maintaining all-volunteer, professional armed forces coupled with changes in social expectations, posed problems that fell somewhere between economics and sociology, but were tackled by the newly created OR sections...As a result, the work came to be regarded as 'systems analysis,' 'policy analysis' or 'strategic studies.'"[6]

In the 1960s, the Directorate of Strategic Analysis was formed and in the 1970s, the Directorate of Social and Economic Analysis was added. In 1975, the title of the overall organisation became the Operational Research and Analysis Establishment (ORAE).

<u>Personnel</u>

The ORAE consisted of a strong centre with a number of dispersed units in the field over which it had administrative control of the personnel but not operational control for their tasking. Deployed defence scientists normally amounted to about 1/3 of the overall strength. This system gave the organization the flexibility to bring people together for major tasking. However, this structure could only work successfully if the centre and the dispersed elements had the overall aim of the organization foremost in mind rather than that of their own particular segment. In this way too, junior civilian scientists attached to field commands learned about the organization, problems and culture of the armed forces.

Some of the more experienced scientists were posted to international and allied organizations. This was invaluable for developing interoperability with allies in their areas of specialty. Allied scientists were also posted to Canadian OR units. Individual analysts within the organization were posted frequently and so gained wide experience in a number of areas.

Civilian scientists spent about half their careers in field units, on postings of 3 to 4 years each. The Strategic Analysis Directorate staff was, however, based at National Defence Headquarters in Ottawa. The Directorate had about 12 professional staff, civilian and military. Strategic analysts could be loaned to field commands for a specific project. The overall organization was big enough so that the civilian scientists could make a career within the ORG rising from a junior DS (Defence Scientist) 1 to DS 7 (Director).

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[6] Ibid, p. 328

It was considered important to have a number of military officers posted to the ORG: they were normally junior officers, captains and majors. These officers were not necessarily qualified by virtue of their academic background. They trained "on the job." This arrangement proved very successful and many of these officers volunteered to return to the ORG after subsequent postings to their field units or to other jobs.

The officers who joined the Strategic Analysis Directorate were normally "generalists" without specialist backgrounds. In fact, some of the best OR officers including those in the Strategic Analysis Directorate were educated as historians. The current Assistant Deputy Minister (Policy), a civil servant, was an historian who began his career in OR and later moved into Strategic Analysis.

For many years, it was considered essential to include military officers as a part of the organization so as to retain its credibility in the eyes of the military and to reduce the chances of friction between the organisation and the armed forces. There was also the belief that it would be more difficult for the armed forces to recommend to the minister reducing or abolishing an organization that contained military officers as well as civilians! The deputy to the civilian head of the ORG was a brigadier general. He, too, was normally a "generalist."

Defence Scientists are ranked by seniority from DS1, the most junior level, to DS7, the most senior grade. Defence scientists normally choose one of three streams or specialties; Technical Research (in a defence laboratory), General Analyst (Operations Research, Intelligence or Strategic Analyst), or Management. Promotion to senior ranks generally takes place within one of these streams although there is scope for moving from one stream to another depending on an individual's background and aptitude.

Today, the Directorate of Strategic Analysis is all civilian but includes several former military officers. The Directorate reports to and is tasked by the Assistant Deputy Minister (Policy) while the Operational Research Group (now the Operational Research Division) is under the operational control of the Deputy Chief of Defence Staff. Both groups are now administered for personnel functions like career planning and promotion by the Chief Executive Officer of Defence Research and Development Canada (DRDC) who is also Assistant Deputy Minister (Science and Technology).

Tasking

Some of the officers at field commands doubled as Scientific Advisors to the Commander. Initially in the field, projects had their origins in informal discussions between OR scientists and military staffs and then gradually gained a more rational structure. At headquarters, in Ottawa, the process was more formal: an annual research program was drafted and evaluated by the clients and the ORG and projects

were selected to match the workload with the available personnel. These were assessed in terms of man-months, making allowances for leave, sickness, and training. Considerable flexibility was retained in the expectation that new problems and requirements would appear during the year. The OR group could inject projects into the program as could the client.

Strategic analysis tasking is done through the Director who must maintain a 'feel' for the needs of the minister and the leadership. His aim is to ensure that the minister, the Chief of Defence Staff and the other senior officials and officers are not 'surprised' at home or abroad.

In practice, the Director of Strategic Analysis and the Head of Operational Research agree to the work plan. Both maintain close contact with the clients and therefore have a good idea of their requirements. They also canvas the clients formally for tasking for the following year. The analysts themselves also generate their own tasks based on their geographic or functional specialties. Priorities are established by what is seen to be most important to the client and the function of the product as well as the shape of the end result; e.g., a 5-page report, a 30-page report or something in between.

If the tasking exceeds the capabilities of the Directorate, it is either delayed, dropped, shortened in length, more people are brought in on short-term contracts, or the work is contracted out. Some flexibility is maintained in the annual work program for the short-term day to day requirements. The Director formally reviews the work program every month and keeps a close eye on progress on a daily basis.

<u>Reports</u>

The results are the property of the client: he or she controls distribution of the reports but generally reports are published for the defence community in general as well as for allied countries. The clients are the Minister and his office, the Chief of Defence Staff, the Assistant Deputy Minister (Policy) and his staff, the Operations Staff and the Assistant Deputy Minister (Materiel) and his staff although the Operational Research scientists normally advise the latter. The Deputy Chief of Defence Staff tasks the Directorate for studies involving future force structure and the revolution in military affairs. Foreign Affairs tasks and receives reports concerning arms control issues and reports often are sent to the Privy Council Office (equivalent to the Cabinet Office) for general background. Distribution is always subject to security considerations, national and international, but sometimes unclassified versions are published in the open literature.

<u>Classified and Unclassified Reports</u>

The information produced by the Defence Scientists of the Strategic Analysis Directorate is normally drawn from open sources and are for the most part unclassi-

fied. This has the advantage of ease of handling and exchange with other government departments, international institutes and possible publication. On the other hand, important intelligence information on the issue being researched may have a direct bearing on the analysis and would not normally be available to the researchers and so would not be included in their reports. This classified intelligence information reaches policy makers through defence intelligence and other agencies and may at times effect the conclusions of the unclassified reports.

This is a difficult issue. Some or all researchers could be cleared for access to secret information and their reports would remain classified with limited distribution. This course of action presents difficulties for the handling of classified material and ultimately for the process of recruiting researchers, especially civilians. The problem may be compounded by not having support staff that are cleared properly, especially if they are transferred in from other sections, departments etc. Because of the time and expense involved in obtaining security clearances it could become a long and drawn-out process. The alternative is to live with the dual reporting chain and leave it to the decision-makers to judge how the intelligence information they receive might qualify the unclassified reports.

Outsourcing

There was very little 'outsourcing' of military OR sometimes for security reasons and because there was often a lack of outside knowledge of the subject. When people outside the ORG were known to have suitable qualifications they were invited to spend the summer or a year with the ORG. In the case of Strategic Analysis, much of the expertise was located in the universities but in the early days, universities were reluctant to do research for any client especially for the government!

Universities

The Department of National Defence (DND) established a Military and Strategic Studies Program under which various universities receive grants to pursue strategic studies with the specific subjects and the management left to the universities themselves. Universities are given the latitude to select topics that match the expertise of their faculties. They tend to concentrate on international relations and history. Some of this work is not particularly useful to DND. Currently, 16 Canadian universities are receiving grants, each for a period of 5 years. The results are reviewed annually and every 5 years a decision is made on the level of funding, if any, to each university. After more than 25 years of existence, this program, now called the Security and Defence Forum, has produced a number of graduates who have made careers in strategic studies and universities. Several have joined DND or have served as consultants to the government. This system has also helped to build an awareness of defence and security issues in the community at large through the large numbers of students who benefit from the program.

The Directorate of Strategic Analysis also contracts out work on particular projects to universities. The analysts within the Directorate carefully define this work and its progress is followed closely. Academics can be very specialised in their own narrow fields and some may require close supervision if they are to produce the results desired by the Directorate. These outside contractors must be treated as an extension of the Directorate.

The National Defence College

The NDC, formerly located in Kingston, Ontario, was a 10-month course for bright colonels and civilians of different backgrounds and equivalent grade and potential. The course consisted of 20 military officers and 20 civilians. Six course members came from allied countries. The NDC encouraged 'free thinking' in its assignments on strategic issues and the students were required to produce research papers. This scholarship complemented the analytical work of the Directorate of Strategic Analysis.

Intelligence Studies

Although the Canadian Forces have a very strong defence intelligence component, the military intelligence community frequently relies on universities for their strategic studies background. The annual non-governmental Canadian Association of Security and Intelligence Studies (CASIS) brings in experts from across Canada, the US, UK and elsewhere to discuss intelligence-related topics in an open forum. Foreign experts may stay on for several days after the conference to help with various issues.

Research Areas

The Department of External Affairs (now Foreign Affairs Canada) led the verification of arms control agreements during the Cold War. This included the use of game theory and overhead surveillance by aircraft and satellites. Another important field was the planning, observation and analysis of training and major field exercises, including peacekeeping and internal security exercises such as for the Montreal Olympics in 1976. As the armed forces began to reduce in size as the Cold War neared its end, more attention was paid to "systems analysis" in planning for the next generation structure and equipment. A small OR section was detached to Emergency Measures Canada to help prepare for man-made or natural disasters.

With the reduction in size and unification of the armed forces, a special section of 6-8 scientists was devoted to personnel and logistic matters including looking for significant economies.

Recruiting for the Strategic Analysis and the Social and Economic Analysis Directorates concentrated on entrants with degrees in economics, history and political science. Examples of studies of these directorates included:

- analysis of the social and economic impact of military units on the communities in which they were located
- reserve forces
- ratio of expenditures of equipment to personnel
- priorities of construction projects
- the contribution of education and training of the armed forces to national development
- investigation of combat motivation

Today

Today, the Strategic Analysis Directorate resides inside DND under the control of the Assistant Deputy Minister Policy and is tasked directly by him. While the Directorate is under the direct operational control of ADM (Pol) it remains under the administrative control of the Head of the Operational Research Division (ORD) for personnel matters. The ORD is located in the same building as the Strategic Analysis Directorate and they share the same library and other facilities.

Lessons Learned

- A research organization within a large parent organization (the ministry of defence) can prosper by remaining flexible, recruiting scientists of varying backgrounds and dispersing them to local commanders who set priorities for their research
- At the same time, the careers of the scientists should be managed centrally to maximize and broaden their experience
- It is important for a variety of reasons to have a mix of civilian scientists and military officers within the organization
- Military officers and civilians within the organization need not be specialists on entering. Encourage recruitment of persons with different educational backgrounds
- If possible, both civilian and military members should get some field experience either by attaching them to field commands or by frequent visits
- Develop a career structure and training possibilities within the organization
- Exchange postings with researchers of allied institutes and organisations are invaluable for achieving the broadest perspective and for widening the horizons of the researchers
- The research organization should be ready to accept projects outside its area of study
- There is a danger that in time of general reductions top management and the staff will reduce "non-core" organizations like OR and Strategic Analysis in the belief that they themselves are just as capable as the research department of making assessments on strategy and policy
- If funds are available, the MOD should subsidise university faculties to engage in strategic and intelligence studies. This will have long-term benefits. In any

case, close links with university faculties in the relevant areas should be encouraged

- University faculties are free to think 'outside the box' and are largely untroubled by the political constraints of government when examining particular courses of action
- Many memoranda, working papers, briefings, submissions, speeches, and messages produced by government are not made public for reasons of security or political sensitivity. University researchers live by their publications and therefore could be very useful in bringing issues to public attention
- Specific strategic analysis projects can be outsourced to universities but close monitoring is needed to ensure the product is what was requested
- A defence college of higher learning can supplement the work of the research institute
- The closer the institute is organisationally to the minister's office, the more volatile it becomes and the more it is subject to the political vagaries
- The institute must find a balance: it serves the minister but it must not be or be perceived as part of the minister's office or in any way partisan politically. It must be as 'independent' as possible but it must also serve and be accountable to its clients
- The director of the institute must have a 'feel' for what the minister and the other senior members of the Ministry need. Ideally, the Director should have connections with someone of influence within the Ministry who has no stake in the results of the research
- The institute should have close contact with the client based on mutual respect. It should provide the client with what he needs to know not necessarily with what he wants!
- Alternative, free thinking, approaches may not be in conformance with government or ministerial policy. Senior bureaucrats can be sensitive about research results especially if this work subsequently appears in the public domain. There is a temptation on the part of politicians and senior bureaucrats to control the work of researchers too closely. This could have an adverse effect on the quality and ultimately the credibility of the research.
- The products produced by the institute should be available to the military leadership and its work should be seen to be of value to the military as well as to the staff of the MOD. The institute does not replace the staff but it does help to put decision-making in a broader context. To achieve this, research work must be academically sound but not academic.
- The research institute must not become just another part of the staff with little influence and ultimately little use. Its job is to ensure that the minister is not 'surprised' at home or abroad. Above all, its work must be useful!
- There should be a carefully chosen balance between size and capacity of the institute and the amount of research work that is outsourced to universities and other institutions. The more work research done outside the institute, the quicker society at large will gain an awareness of defence and security matters.

- Researchers require an effective methodology or research tools to make the best use of the limited resources.
- Research papers should analyse various options but should not provide recommendations! This is the job of the staff. Analysts must not become staff officers! If they do, they will lose their direct access to senior levels.
- Researchers should probably not deal with classified information. This would create issues of information handling and safeguarding and difficulty in recruiting civilian researchers.
- Rotation of serving officers from the armed forces and other parts of the Ministry provides fresh ideas and experience and builds up the pool of trained researchers.

V. Case Study: The Slovenian MOD Centre of Strategic Studies

Background

The Slovenian Centre of Strategic Studies (CSS) was created within the Slovenian Ministry of Defence in 1991, shortly after Slovenian independence. In 2002 it was disbanded as part of a reorganisation of the MOD.[7] The Centre operated successfully for over 10 years as part of the Office of Military Affairs. The Centre's primary customers were the Minister of Defence, the State Secretary for Defence Policy and the armed forces. In its 11 years of existence it was responsible for the preparation of basic defence and security policy documents and analysis of national, regional and European political, defence and security issues. This summary describes the organisation of the CSS, its role and tasks, its 'customers,' tasking procedures and the lessons learned from its experience.[8]

Mission

The mission of the CSS was to "...provide analytical support to the MOD Executive Staff in accordance with the long term requirements of the defence system of the Republic of Slovenia to allow for high level decision making in the areas of security and defence." [9]

Organisation

The CSS was organised as a "sector" within the Ministry of Defence. It operated as an independent unit with its own secretariat, financial department and other resources. The Centre was organised along the lines of similar institutes in Western countries but it was adapted to meet Slovenia's unique requirements. It had 3 research departments:

• Defence Policy
• Strategy
• Civil-Military Relations

The CSS Director reported to the Minister of Defence through the State Secretary for Defence Policy.

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[7] The reasons for this decision are discussed below.
[8] Unless otherwise noted, this section is based on information provided by Mr. Beno Arnejcic, the last Director of the CSS.
[9] Ivan Hostnik, "Ten Years of the Centre of Strategic Studies" Slovenska Voyska, Special Edition, May 2001.

Personnel.

The Centre had 18 experts at its peak; the large majority of them were civilians including some former military officers. The goal was to have a mix of civilians and military officers but in practice there were very few serving officers in the Centre.

The Director was a civilian except for a short period when the CSS was led by a naval captain with an extensive academic background.

In 1999, the Strategic Council of Slovenia was formed and the Director CSS took on the additional role of Secretary of the Strategic Council.[10]

CSS analysts were mostly recruited from the University of Ljubljana. They possessed a mix of qualifications including:

- Defence Studies
- Security Studies
- Linguistics
- Philosophy
- Sociology
- Technology
- Military Academy education

The analysts ranged in age and experience from a couple of senior analysts in their 50s and 60s to junior analysts in their 20s and 30s. The majority were in the 30 to 40 age group.

Analysts received the salary of normal civil servants in their respective grades. Apparently, financial incentives were offered to outsiders to join.

Research Work

Tasking for research came from the office of the State Secretary for Defence Policy. The Director CSS maintained direct contact with the State Secretary. Once a task was assigned, the Director met with his staff to develop the research plan.

The CSS work plan was organised on an annual, monthly and weekly basis. The Director held weekly meetings with the analysts to discuss the progress of the on-going work. There were also frequent requests for short notice reports and analyses.

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[10] The Security Council consisted on selected members of Civil Society including ex-Defence Ministers. They advised the government on defence issues.

The Centre was given the following tasks:
- Preparation of documents for the development and implementation of security and defence policy
- Analysis of defence policies in the wider environment of the Republic of Slovenia
- Completion of professional, organisational and administrative tasks for the MOD Council of Strategic Affairs
- Participation in the drafting of strategic and doctrinal documents
- Monitoring and analysis of political security situation in Europe, especially South Eastern Europe
- Analysis of the role, activities and development trends of international security organisations
- Professionalisation of the armed forces
- Analysis of Civil-Military relations
- Cooperation with scientific circles in Slovenia and abroad and with similar institutions as part of bi-lateral and multi-lateral cooperation of the MOD[11]

The Centre was tasked to contribute to the development of the six basic 'Strategic-Doctrinal' documents on National Security:
- National Security Strategy
- National Defence Strategy
- National Program for Protection against Natural and other Disasters
- Military Defence Doctrine
- Civil Defence Doctrine
- Protection and Rescue Doctrine[12]

The CSS maintained good relations and close liaison with the armed forces but all requests for assistance were channelled through the State Secretary for Defence Policy. The armed forces staff were closely involved in the production of the six basic strategic documents, listed above, as members of the individual working groups.

A number of CSS surveys, analyses and reports were published in national and international publications.

External Cooperation

Outside contracting of research work was an important feature of the Centre's operations. An assessment of the basic strategic documents requested by the MOD was conducted by the Defence Research Centre (DRC) of the Faculty of Social Sciences (FSS) of the University of Ljubljana,[13] in conjunction with special MOD

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[11] Ibid
[12] Beno Arnejcic, "Strategic and Doctrinal Documents of the Republic of Slovenia," Slovenska Voyska, GET DATE, ISSUE, PAGE.
[13] The DRC of the Faculty of Social Sciences at the University of Ljubljana consists of 4 - 6 analysts.

working groups and the CSS. A special inter-ministerial working group submitted proposals for developing these key documents. Later, the DRC FSS was tasked with preparing drafts of the National Security Strategy and the National Defence Strategy working in close consultation with the appropriate MOD working groups.

International Cooperation

The National Security documents of about 20 countries were examined during the formulation of the basic documents and foreign experts were called upon for advice. Professors from the George C. Marshall Center, in Garmisch-Partenkirchen, Germany, were invited to Ljubljana to review the work and to advise on the requirements.

The CSS also cooperated with a number of international institutions in conducting various research projects. For example it produced a report on 'Sociological Aspects of Multinational Forces' in conjunction with the Hungarian Institute of Security and Defence Studies (ISDS) and the Italian Centre of Strategic Studies (CeMiSS). It also published a report on 'Issues and Consequences of the EU's Enlargement toward the East' in cooperation with the Bertelsmann Foundation, of Germany.[14]

The Current Situation

The CSS was abolished in 2001 as part of a general reorganisation of the MOD in accordance with the "Concept of Defence Policy." In preparation for Slovenia's accession to NATO, personnel were reassigned from all parts of the Ministry to fill new positions then being created.

A group of 5 experts from the CSS, including the Director, were transferred to a new Department of Strategic Analysis and Planning. This department is currently part of Defence Planning 'Sector' and its head reports to the Chief of Defence Planning. The department is no longer administratively independent and has no direct access to senior authority. Its work focuses on the lower level day-to-day requirements of the Ministry.

It is also possible that the disbandment of the CSS was due to the fact that its 'independent' thinking was sometimes seen as being at variance with official MOD and government policy. Whether or not this was the case, this is a danger that faces all research institutes that are fully funded by public money.

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[14] Ivan Hostnik, "Ten Years of the Centre of Strategic Studies" Slovenska Voyska, Special Edition, May 2001.

Lessons Learned

- The CSS functioned most effectively when it was semi-independent and was tasked by and reported directly to the highest levels within the MOD.
- 'Independence' of thought was best achieved by having a civilian as director of the research institute.
- Ideally, there should be a mix of civilians and military officers in a strategic research institute; this mix provides 'legitimacy' within the defence establishment and makes use of the different talents and backgrounds of both civilian and military researchers.
- Analysts should come from a variety of academic backgrounds to enable the institute to take on a wide-ranging and flexible research program.
- The Strategic Research Institute should be intimately involved in but not necessarily lead in the development of basis strategic documents. This is the job of the defence staff.
- External national and international expertise can be very useful in obtaining the best research results in specific areas.
- Cooperation with experts from local and other universities is productive but care must be taken to avoid the development of an atmosphere of competition between the civilian faculties and institutes and the MOD strategic research institute.
- A defence research institute that is wholly funded by government can never be fully 'independent.' However, ministers and senior bureaucrats should encourage 'free thinking' to gain maximum value from the research and to maintain its credibility amongst other institutes and international organisations.
- Independent internal administration facilitates more 'independence' of research
- A simple internal organisation allows for flexibility of tasking and requires a smaller administrative overhead.
- Consigning the research facility too low in the MOD structure can deprive it of direct access to and dialogue with the tasking authorities.

VI. Reorganisation of Strategic Research within the SCG MOD

General: The MOD has decided that a merged Military Arts Institute and Military History Institute will form the basis for the new Strategic Research Institute.

The aims of the reorganisation are:
- rationalisation of personnel and organisational structures
- better focusing of research in accordance with the needs of the defence system and the SMAF
- improving research efficiency by more precisely defining the basic tasks
- improving research conditions and the quality of the research products
- establishing a better and more direct connection between research results and decision-making
- closer cooperation between the Institute and the Military Academy faculty
- improving cooperation with other scientific institutions and faculties at home and abroad

Objective of the Institute for Strategic Research:
The objective of the consolidated Institute is "...to deal with fundamental, applied and action research in response to the needs of the MOD of Serbia and Montenegro." Its core activity will be the conduct of scientific and research work in support of the country's defense strategy.

Tasks of the Institute:
- research problems in the field of the country's security and defence
- conduct analysis in the areas of conflict, security challenges, crises, armed conflicts, defence strategy, security integration, military history and sociological and psychological issues
- research issues in the field of management, leadership and command within the defence system
- research opportunities, obligations and modalities of joining and engagement of the security integration of Serbia and Montenegro into Euro-Atlantic security organisations
- analyse and comment on civil-military relations nationally and in other countries
- research psychological aspects of management in a military organization, psychological bases for the training system of military personnel and training in contemporary conditions

- explore opinion amongst the military and police, civil defence personnel and the population as a whole on issues relevant to the country's defence
- research morale of the Army and civilian population and the concept (model) of psychological operations
- research, study and scientifically elaborate the military history of Serbia, Montenegro and other countries
- collect, sort, analyse and catalogue historical archive documents of military origin
- conduct studies for the Serbian and Montenegrin MOD and the SMAF General Staff in the field of security and defence
- carry out military–strategic estimates for the Council of Ministers, the MoD, and the SMAF General Staff
- participate in and cooperate with scientific research tasks of other institutions in the country and abroad
- provide advanced education for scientists and experts in the field of scientific research
- cooperate with domestic and foreign institutions
- review of significant scientific works
- organise scientific and expert meetings
- create IT documentation and a data base in support of the Institute's basic activities
- prepare to publish magazines and other expert and scientific publications
- conduct other tasks important for the defence of the country.

Compilation of Lessons Learned as Guidelines in Support of the Formation of the New Institute

General

- There is no doubt, that as part of the government, the Institute will not be really independent and cannot openly criticise current government policy or that of its allies. It must maintain a significant degree of freedom to do what needs to be done but this does not extend to discussing policy shortcomings. It must walk a fine line between an apologia for government and a critique of it. This is no easy task.

- The Institute should inform decision-making of politicians and senior civilian and military officials. It should identify emerging issues and provide sound analysis so that a common baseline for decision-making is established and it must be prepared, if necessary, to defend its assessments.

- The Institute must find a balance: it serves the minister but it should not be or be perceived to be part of the minister's office or in any way politically parti-

san. It should strike a balance between 'independence of thought' and accountability to its clients.

- The Institute should preserve its links at senior levels through the its director. He or she should maintain a 'feel' for what the minister and the other senior members of the Ministry need. If this does not happen, the Institute may become just another part of the staff with little influence and ultimately little use. Its job is to ensure that the minister is not 'surprised' at home or abroad.

- There should be a carefully chosen balance between size and capacity of the Institute and the amount of research work that is outsourced to universities and other institutions. The more work research done outside the institute, the faster society at large can be encouraged to gain an awareness of defence and security matters. The lack of financial resources may also constrain outsourcing.

- The Institute cannot be fully 'independent' but ministers and senior bureaucrats should encourage 'free thinking' otherwise it could lose its full value to them and its credibility with other international institutions. The Slovenian CSS functioned most effectively when it was semi-independent and was tasked by and reported directly to the highest levels within the MOD.

- The eventual establishment of a financially independent think tank outside government, as a complement to the Institute, would provide a valuable balance to the views of a governmental body.

- New regulations governing Scientific Research should be drafted or current ones amended covering the official status and independence of the Institute and its researchers and the regulations for cooperation with outside institutes and organisations at home and abroad.

Organisation

- The closer the Institute is situated organisationally to the minister's office, the more volatile it becomes and the more it is subject to the political vagaries

- It is important to establish and maintain an open communications link between those engaged in operational research (within the General Staff) and the Institute.

- 'Independence' of thought is probably best promoted by having (the right!) civilian as director of the research institute.

- The National Defence College and the Military Academy learning should be used to supplement the work of the Institute.

- The research and teaching faculties of the War College, the General Staff Academy and the Military and Military Medical Academies could be a source of staff members for the Strategic Research Institute and of temporary support for specific projects.

- An independent administration allows for more independence of research; the higher the level the Institute is located within the Ministry, the better its capacity to control its own affairs, including financial management.

- The Institute's organisation should be as simple as possible to allow for maximum flexibility of tasking and smaller administrative overheads

Personnel

- Good quality researchers can only be attracted and retained if they are valued, given appropriate facilities and materiel support and adequate pay and conditions.

- Military officers and civilians engaged in research should be given certain privileges and social advantages to compensate them for their high level of qualifications and expertise. This must be laid down in appropriate new regulations.

- The careers of the scientists should be managed centrally to maximize and broaden their experience.

- It is important for a variety of reasons, outlined above, to have a mix of civilian scientists and military officers within the organization.

- The military officers and civilian researchers need not be specialists on entering the Institute. Recruitment of persons with different educational backgrounds should be encouraged. Strategic analysis is no longer only political. There is now a need for strong strategic analysis in technical and scientific areas. As a result the skills required within the Institute should extend beyond historians and policy experts to include researchers with scientific backgrounds.

- An attractive career structure within the organisation and opportunities for advanced education and training at home and abroad should be established.

- Careful recruiting and selection to produce a balanced age structure should gradually reduce the average age of researchers. Postgraduate education should be offered to officers of high potential immediately following their studies at the Military Academy in order to lower the age level of researchers.

- Rotation of serving officers from the armed forces and other parts of the

Ministry for limited periods of perhaps 3 to 4 years would provide fresh ideas and experience and build up the pool of trained researchers.

- Researchers should have a working knowledge of English and preferably at least one other foreign language.

- Military research should receive full national accreditation and researchers should be recognised and accredited nationally.

- Qualified civilians should be recruited by public competition.

- Pay structure for research scientists should be adjusted to reward experience and skills.

- Researchers should receive financial rewards for particularly outstanding research.

Education and Training

- Whenever possible, both civilian and military members should get some field experience either by attaching them to field commands or by frequent visits to the field.

- There should be an international exchange program for researchers.

- Selected researchers should be sent abroad for further training and experience.

- International experts should be regularly invited to lecture to Institute staff on both procedural and substantive issues.

Operations and Tasking

- Researchers require an effective, well-practised and agreed methodology to make best use of limited resources.

- The Institute should have close contact with the client based on mutual respect. It should aim to provide the client with what he needs to know not necessarily with what he wants!

- Research papers should analyse various options for decision-making but should not provide recommendations! This is the job of the staff.

- Analysts must not become staff officers! If they do, they will lose their special status and their direct access to senior levels.
- The products produced by the Institute should also be made available to the

General Staff. The Institute's work should be seen to be of value to the military. To achieve this, its work must be academically sound but not written in academic jargon!

- The Strategic Research Institute should fully support and contribute to but not lead the development of the country's basic strategic documents.

- The Institute should focus on unclassified, open source research for ease of information handling and sharing with other departments, external institutions and publication. Classified intelligence input can be made directly to decision-makers.

- A Research Review Board should be established from persons outside the Institute to prioritise and approve projects. Its chairman could be an outside academic, perhaps a member of the Academy of Sciences, or the Minister of Defence or one of his deputies.

- The Institute should have easy access to a database and library system.

- Researchers should have regular and easy internet access as a prime tool of their work.

- Research facilities and equipment should be upgraded as a matter of priority as funds become available.

- The Institute should be given responsibility for managing its own budget.

- The Institute should establish a comprehensive website which can be developed and expanded over time to include papers written by researchers.

- Researchers should have copyright protection for their published work.

- The Research Review Board should approve work for publication.

- The Institute should remain flexible and be ready to accept projects outside its normal areas of study.

Outsourcing, Contracting and Liaison

- If funds are available, the MOD should subsidise university faculties to engage in strategic and intelligence studies. This will have long term benefits. In any case, close links with university faculties in the relevant areas should be encouraged.
- University faculties are free to think 'outside the box' and are largely untroubled by the political constraints of government when examining particular

courses of action.

- Most memoranda, working papers, briefings, submissions, speeches, messages produced by government are never made public for reasons of security or political sensitivity. Independent university researchers could therefore be very useful in bringing certain delicate issues to public attention.

- Specific strategic analysis projects can be outsourced to universities but close monitoring is needed to ensure the product is in fact what has been requested.

- The Institute should take advantage of the skills and expertise of the defence academic institutions as a source of permanent researchers or on a temporary basis for particular project work.

- The Institute should establish close liaison with appropriate faculties at Belgrade University, selected independent research institutes and international institutions. Outside national and international expertise can be very useful in obtaining the best research results in specific areas.

- Cooperation with experts from local and other universities can be very productive but care must be taken to avoid the development of a competitive atmosphere between them and the MOD Institute.

Organisational Options for the Strategic Research Institute

Perhaps the most important organisational decision that must be made for the Strategic Research Institute is its precise location within the defence hierarchy.

There appear to be three realistic options for locating the Institute within the MOD organisation:

Option A.
"A Sector reporting directly to the Minister of Defence."

Advantages

- Direct access to the Minister
- Greater freedom to propose new and alternate approaches to issues
- High profile for and recognition of the Institute and its Director
- Separated from the day-to-day activities of the staff
- Flexibility as an administratively independent sector to conduct a large range of comprehensive activities

- Good position from which to establish external and international liaison and cooperation

Disadvantages

- Could be seen as too closely associated with the political leadership
- Danger of being manipulated for political reasons
- Consequent loss of objectivity and credibility at home and abroad
- Danger of being radically changed or disbanded with changes in political leadership

Option B
"A Department reporting to the Assistant Minister for Defence Policy."

Advantages

- At 'arms length' from the Minister of Defence's office
- At a high enough level to maintain close links with senior leadership
- Responsive directly to the civilian leadership
- Head and Institute maintain status and recognition
- Still allows for a comprehensive internal organisation
- Retains administrative flexibility as a Department
- Good position from which to conduct external and international liaison

Disadvantages

- Still a danger of appearing too close to the political leadership
- Institute would require a larger administrative staff than if it were at a lower level
- Potential for 'competition' with the Strategic Planning Department

Option C
"A Section within the Strategic Planning Department"

Advantages

- Better protected from real and perceived political influence
- Close coordination with the Strategic Planning Department
- Smaller administrative overhead required

Disadvantages

- Not as responsive and supportive of the political leadership
- Lesser status within the MOD and externally
- Danger of being diverted by everyday staff requirements
- The dividing line between the research institute and the staff could become blurred.
- Less flexibility and independence
- Not as easy day-to-day access to senior decision-makers
- Small internal administrative capacity makes it difficult to maintain a comprehensive range of activities
- Not as conducive to outside and international cooperative ventures

Proposed Structure of the Institute

The following proposal for the internal structure for the Institute is based on the observations of the Needs Study combined with the recommendations of the MOD staff:

a. A President (director of the Institute) manages the administrative and the research work of the Institute. He or she reports directly to the Assistant Minister for Defence Policy.

b. The Institute is organised into five Divisions plus a Secretariat and an Editorial Office for Publications. Each division is supervised and controlled by its own director.

c. The Military Arts Institute's Strategic Division would becomes the Security and Defence Strategy Division.

d. The MAI Operations Division, the Tactical Division and the Military Systems Section forms two divisions:
- Security Challenges and Strategic Assessments Division
- Security Integration and Technical Analysis Division

e. The Military Psychology and Sociology Section of the MAI is strengthened and reorganized into the Civil-Military Relations and Defence Management Division

f. The Military History Institute becomes a Division with two sections:
- Historical Research
- Archives

Figure 6: Proposed Structure of the Strategic Research Institute

VI. Reorganisation of Strategic Research within the SCG MOD
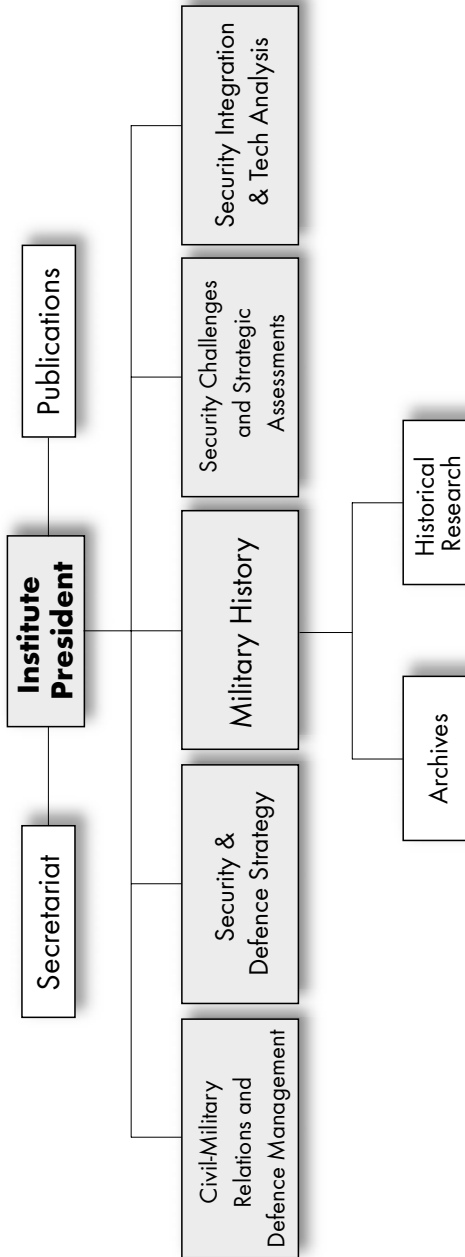
VII. Next Steps

Once the findings of this Study (Phase 1) are commented upon and amended and/or approved by the Minister of Defence and other stakeholders, an Action Plan to support the process of establishing the Institute and developing its initial operating capability (Phase 2) can begin.

The Phase 2 implementation 'Action Plan' should include the following:
- Consult with stakeholders on the findings of the Phase 1 Study to agree the implementation Action Plan
- Confirm or modify and put in place the structure of the Institute
- Develop Terms of Reference for the Institute and each of its component parts
- Designate tasking and prioritising bodies and procedures
- Build internal capacity by:
    - setting research priorities
    - assigning responsibilities for the research
    - developing and promulgating an agreed methodology
    - facilitating the research process
    - designing standardised formats for various kinds of reports
- Develop links with local and regional academic institutions and other relevant research institutes in the region and further afield
- Develop a system for outsourcing and contracting work to universities and other institutes
- Initiate the creation of a network of internal and external research analysts and institutions
- Invite international experts to train researchers and to advise as necessary
- Set up, advise and monitor trials of longer term research and short term tasks for ministers and officials
- Follow through to assure reports are clear, concise and delivered promptly and in the agreed format
- Trial contracting and monitoring procedures by out-sourcing two different research projects
- Establish a new defence and security periodical to be published by the Institute
- Organise an inaugural conference for regional and international experts

Follow on phases will test and verify the organisational level of the Institute, its structure and procedures and test and evaluate its products. Tasking bodies and procedures will also be evaluated. Conferences, seminars and workshops will be conducted as educational and research vehicles, as networking and collaboration opportunities and to raise the profile of the Institute on a regional and international level. Other actions include:

- Measure success of the Institute by independent and in-house quality control
- Follow the progress of research and analysis products to policy-makers and other end users
- Solicit feedback from stakeholders
- Apply lessons learned and adjust the structure and focus of the Institute where necessary
- Expand international contacts and collaborative tasking
- Expand the scope and depth of research as required
- Evaluate and provide feedback to the Institute regular magazine/publication by independent national and international experts

Annex A
Acts Pertaining to Scientific Research

Act on Copyrights ("Official Gazette SFRY[15]" No. 19/78. and 21/90). Regulates the author and author's work issues, content and ways of using the author's work, transfer of copyrights, means of fulfilling the rights according to author's work, copyright protection, and settlement of disputes in these areas.

Act on Scientific Research in Serbia. Determines the general interest in Scientific Research (SR) that is implemented with resources provided from the budget of Serbia as well as conditions for conducting SR with the purpose of achieving general interest. SR by this Act is defined as creative work or gaining new knowledge, in terms of this Act, with the aim of raising the general level of civilization in the Republic and using the knowledge gained in all areas of social development, including the development of technologies and their applications.

SR is implemented by developing and linking basic, applied and development research and the training of personnel for SR. Scientific creativity is liberated and open to scientific criticism.

Act on Patents. Regulates the protection of inventions and technical advancements as well as the protection of creators' rights for: creativity of modern domestic technology, improving the quality of products, procedures and services; conditions for spreading technological co-operation with other countries on the basis of equality and joining in the international division of labour in the field of technological creativity; and applying the inventions in manufacturing.

Act on Military Schools and Military SR Institutions. ("Official Gazette of FRY[16]", No. 80/94 and 74/99, hereby after Act on MS and MSRI). The Act is a regulatory foundation on conducting scientific work and the closing of scientific institutions; work of scientific and expert councils, the term - researcher, types of scientific military institutions, conditions for obtaining scientific and research titles; SR plans and programmes and records. This Act does not address the status of scientists.

Act on MS and MSRI D is mostly dealing with military schools whereas only provisions from Article 125 to Article 150 are dealing with scientific institutions with a focus on military scientific institutions rather than SR. In the member states (of Serbia and Montenegro) there are acts for all levels of education and particularly an act on SR, which focuses on SR with scientific institutions in the background.

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Annex B
Regulations Governing Scientific Research

A regulation on the record of researchers and trainees for research work in military scientific institutions, military research and development units and academic military schools ("Official Military Gazette", No. 3/96) is regulating the authorised organizational unit for keeping a record of researchers and trainees. It determines who is in charge of this work and in what way the record is kept, as well as obligations of those structures that have scientists.

The Regulation on the record of military scientific institutions and military research and development units ("Official Military Gazette", No. 3/96) is regulating also the methodology or procedure of data inputs into the record for military scientific institutions, as well as in what way record is kept.

The Regulation on criteria for obtaining scientific titles in military scientific institutions ("Official Military Gazette", No. 21/00) is regulating the area of keeping a record on creative activity of scientists, a methodology of calculating the quotient of scientific competence and its use in the selection of scientists for promoting to academic titles.

The Regulation on SR in the Federal MoD and Yugoslav Army ("Official Military Gazette", No. 9/2001) is regulating scientific areas of interest for the Army, authority of all participants in this process, regulating planning, programming and financing, organization and implementation, control and reporting as well as a part of keeping the record on total activity in the area of SR.

The Regulation on organizing postgraduate studies ("Official Military Gazette", No. 5/95), is regulating the organization of postgraduate studies, the means of taking an oral PhD exam, the means of submitting and defending a PhD dissertation, selecting commissions and using these works in military schools and scientific institutions.

The Decree on wages and other incomes of professional soldiers and civilians working in the Yugoslav Army ("Official Gazette of FRY[17]", No. 35/94, 9/96, 1/00 and 2/00) states that a civilian working in the Army, depending on academic and faculty title, has a part of their salary, according to the value of work, increased from 2% to 10%. This increased salary goes to the civilian that has an advanced academic title in an area directly related to his/her current job. Professional officers with advanced academic titles are not granted a similar salary increase, which can be considered a serious shortcoming.

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Annex C
Instructions for Scientific Research

Instructions for SR work are worked out in detail, simplified, and made more efficient in the methodological procedures of selecting research tasks, planning, project development, realization, verification and issuing research results individually within each the structures of the Armed Forces. Instruction is firstly dedicated to planners, organizers and implementers of SR work in the Armed Forces and then to departments at the academic military schools and ultimately to researchers in research teams.

Instruction on inventive activity is based on the Provisions Act of the Yugoslav Army ("Official Gazette of FRY[18]", No. 80/94 and 74/99), Act on Patents ("Official Gazette FRY[19]", No. 15/95), Decree on the procedure of recognizing a patent or small patent ("Official Gazette of FRY[20]", No. 15/95), Decree on determining classified inventions that are significant for defence and security of FRY ("Official Military Gazette", No. 10/97), Regulation on SR in the Yugoslav Army and the Federal MoD ("Official Military Gazette", No. 9/01) and Regulation on equipping the Yugoslav Army with armaments and military equipment in peacetime.

Research and scientific titles may be awarded to personnel serving in an Institute, as well as individuals not employed at an Institute but engaged in the implementation of a scientific research task run by an Institute.

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[20] Federal Republic of Yugoslavia