



Estonian National Defence College  
**SELF-EVALUATION**  
**REPORT**



Tartu 2013

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## Glossary of terms

<b>APEL</b>	Accreditation of prior and experiential learning
<b>BeST</b>	A programme financed by ESF for creation of an integrated e-learning support system and for supporting the creation of the content of internationally recognized e-learning that compiles with quality requirements
<b>CAR</b>	Centre of Applied Research
<b>CAX</b>	Computer-assisted Training Exercises
<b>DoRa</b>	A programme of Doctoral studies and internationalization
<b>DRA</b>	Recruitment Centre of the Defence Resources Agency
<b>EDF</b>	Estonian Defence Forces
<b>ENDC</b>	Estonian National Defence College
<b>Military ERASMUS</b>	The European Union Member States initiative for the exchange of young officers
<b>ERIS</b>	Estonian Research Information System (ETIS)
<b>ESC</b>	Education Support Centre
<b>ESF</b>	The European Social Fund
<b>EU</b>	European Union
<b>ILIAS</b>	e-learning environment
<b>JOC</b>	Junior Officer School
<b>MoD</b>	Ministry of Defence
<b>NATO</b>	North Atlantic Treaty Organization
<b>NCO School</b>	Non-commissioned Officer School
<b>NDDP</b>	National Defence Development Plan
<b>OHS</b>	Occupational Safety and Health
<b>PRIMUS</b>	A programme financed by ESF for raising the quality of the education of institutions of higher education and the competitiveness of the graduates
<b>RDA</b>	Research and Development Activities
<b>SIS</b>	Study Information System (ÕIS)
<b>SOF</b>	Special Operations Force
<b>URRAM</b>	On-line library catalogue

# 1. MANAGEMENT AND FUNCTIONING OF THE ORGANISATION

## General Data of the Estonian National Defence College

Name	Estonian National Defence College (ENDC)
Address	Riia 12, 51013 Tartu
Legal Status	Institution of professional higher education of national defence within the area of government of the Ministry of Defence, directly subordinated to the Commander of the Estonian Defence Forces.
Establishment	Founded on the 29 <sup>th</sup> of August 1923, re-founded on the 17 <sup>th</sup> of March 1998.
Formal Education Curricula and their registration numbers in the Estonian Education Information System (EHIS)	<p>Vocational education:</p> <ol style="list-style-type: none"> <li>Senior Non-commissioned Officer Military Leadership Curriculum, Reg. No.106184</li> </ol> <p>Professional higher education:</p> <ol style="list-style-type: none"> <li><a href="#">Land Force Military Leadership</a>, Reg. No. 80045</li> <li><a href="#">Air Force Military Leadership</a>, Reg.No.120243</li> <li><a href="#">Naval Military Leadership</a>, Reg. No. 109247</li> </ol> <p>Master's education:</p> <ol style="list-style-type: none"> <li><a href="#">Land Force Military Leadership</a>, Reg. No. 80204</li> </ol>
Basic financial data	The total budget for 2012 was 8 037099 €, out of which personnel costs about 57%.
Infrastructure	Dedicated surface area 49366 m <sup>2</sup> (including study buildings, barracks, simulation centre, firing range, parking facilities, warehouses)
Number of students (as of the 1 <sup>st</sup> of March 2013)	205 (including 29 students of vocational education, 149 students of professional higher education, 16 students of Master's education, and 11 students of junior officer continuing education)
Number of Graduates (as of the 1 <sup>st</sup> of March 2013)	476
Number of Employees (as of the 1 <sup>st</sup> of March 2013)	213, including 107 active servicemen and 106 employees with employment contracts.
Contact	Evely Timuska Quality Manager e-mail: <a href="mailto:evely.timuska@mil.ee">evely.timuska@mil.ee</a> tel: +372 717 6118

## History and General Development

The ENDC was founded following the Government of the Republic of Estonia's decision of the 29<sup>th</sup> of August 1923. The ENDC operated in Tondi, Tallinn until it was closed down by the

Soviet authorities in 1940. In 1998, the ENDC was re-established based on the Training Centre of the Headquarters of the Estonian Defence Forces (EDF) and the Defence College of the Estonian Academy of Security Sciences by Government of the Estonian Republic regulation No. 52 of 17<sup>th</sup> March 1998. After its re-establishment the ENDC operated on the territory of the Estonian Academy of Security Sciences in Tallinn until the autumn of 1999 when it was moved to Tartu.

Over the 15 years of its existence the ENDC has faced changes in both higher education and the EDF itself. In 1998 the ENDC began as an institution of higher vocational education studies and diploma studies for land force officers. From the academic year 2003/2004, higher vocational education studies and diploma studies were replaced by 3.5-year professional higher education studies, a system which was in turn modified with the move to the 3+2 system of study in 2004/2005. In 2005 the Master's curriculum for land force officers was opened as a continuation to professional higher education studies. According to the needs of the EDF, for entering Master's studies one should have 3-6 years of service experience to ensure the necessary knowledge and skills for completing a Master's education, and in addition to meet the needs of the EDF career system by having leaders with the adequate qualifications occupying posts at different command levels. In 2008 the air force military leadership curriculum was opened, followed by the naval military leadership curriculum in 2010. With the establishment of the naval curriculum, the needs of the EDF were met for providing officer education for all armed services. To cut personnel and administrative costs in the EDF, the Non-commissioned Officer School (NCO School) of the EDF was joined with the ENDC. The aim of the NCO School is to train non-commissioned officers and reservist platoon commanders. For the EDF, integrating non-commissioned and commissioned officer training into a single institution enables the synchronization and harmonization of officer education for different command levels by making it more efficient.

## **1.1 General Leadership**

### **Standing, Tasks and Fundamental Documents of the ENDC**

The ENDC is an institution of professional higher education for national defence within the area of government of the Ministry of Defence and is directly subordinated to the Commander of the Estonian Defence Forces. According to the Estonian Defence Forces Organisation Act the ENDC is a unit of the centralised Estonian Defence Forces, while also being an institution of higher education under the Institutions of Professional Higher Education Act.

The ENDC is the only educational institution in Estonia to prepare officers and non-commissioned officers for the Estonian Defence Forces and Defence League. Pursuant to [the ENDC Statutes](#), the tasks of the ENDC are as follows:

- ✓ Provision of higher education based on the curricula of professional higher education and those of Master's studies (officer training);
- ✓ Provision of vocational education after secondary education based on the curricula of vocational education (non-commissioned officer training);
- ✓ Provision of continuing education, including reservist training;
- ✓ Research and development activities and applied research in the field of national defence and related fields.

The principles and overall organisation of leadership, as well as the position of the ENDC in the structure of the EDF, are determined by the Statutes of the Estonian Defence Forces. The general organisation of the ENDC, its management, fields of activity, areas of responsibility, tasks of its departments, and the principal rights and responsibilities of its students and personnel are set forth in the Statutes of the ENDC.

[The Development Plan of the ENDC](#) is compiled within the framework of the long-term development plans of the EDF. In compiling the development plan and formulating its objectives, the interests of the EDF as primary employer, as well as the ideas and needs of various interest groups of the ENDC (e.g., academic staff, students, employees), are taken into account.

The [Development Plan of the ENDC 2011–2015](#) and its detailed Action Plan describe the activities to be carried out with their accompanying criteria in order to meet the objectives set forth in the ENDC development plan. The action plan forms the basis for compiling annual reports for monitoring the achievement of the objectives. On the initiative of the Commandant of the ENDC, from 2010 seminars for executive employees of the ENDC have been organised to analyse the strategic activities of the ENDC and assess possible changes and amendments. Since by now a new national defence development plan 2013–2022 has been approved, this has highlighted the need for updating and reviewing the ENDC development plan as soon as autumn 2013 to meet the detailed needs of its employer, the EDF. A review of the ENDC development plan is scheduled for the second half of 2013.

The fulfilment of the objectives set out in the ENDC development plan (including the simultaneous fulfilment of the EDF’s requirements and educational requirements) is complicated by the fact that military science as a separate field of study does not as yet exist in the Republic of Estonia (with a defined field of research, researchers and research literature). Although the ENDC has personnel with the sufficient academic or military backgrounds for teaching, research and development activities, there is an insufficient number representing both fields to systematically develop and expand military science in Estonia. To address this issue, the ENDC is currently drawing up a national military education 20-year plan. This would be based on long-term planning documents, yet looks further into the future and, among other things, aims to find solutions for the establishment and development of military science in Estonia.

**Structure, Processes and Key Results of the ENDC**

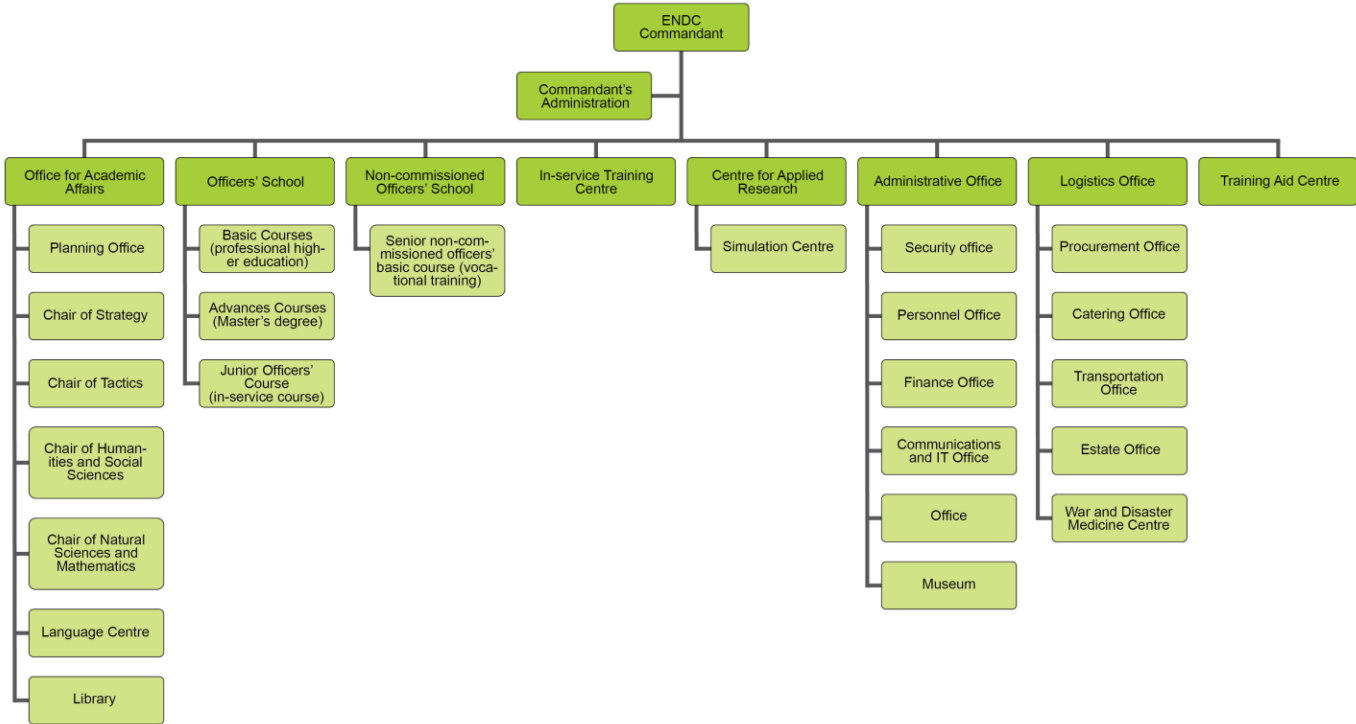


Figure 1. Structure of the ENDC

The ENDC is led by the Commandant of the ENDC, while the accomplishment of its various tasks is achieved by ENDC departments and their subunits (see Figure 1). The work of its departments is regulated by statutes. The ENDC, being a unit of the EDF, is assigned additional tasks by the EDF. The fulfilment of such tasks for the EDF is reflected in the structure of the ENDC, composition of its personnel, as well as in the tasks of its departments and the allocation and use of budgetary funds.

The departments of the ENDC and their tasks pursuant to the Statutes of the ENDC are as follows:

- ✓ Education Department – organisation of studies and instruction for higher education and continuing education.
- ✓ Officer School – organising the service and instruction of students. Subunits of the Officer School include different courses for all armed services.
- ✓ Non-commissioned Officer School – organisation of studies and instruction for vocational education pupils and for continuing education course participants.
- ✓ Centre for Continuing Education – organising the continuing education carried out by the ENDC and developing continuing education of the EDF as a whole.
- ✓ Centre for Applied Research – coordination of research studies within the area of administration, based on the funding of the Ministry of Defence, and linking the study process with research and development activities.
- ✓ Education Support Centre – compilation of study materials and study aids for the ENDC and EDF.
- ✓ Administration Department – organisation and coordination of routine administrative support for the ENDC.
- ✓ Logistics Department – organising and providing logistical support for the ENDC.

From 2012, the ENDC has contributed considerably to the development of a comprehensive quality system. In order to ensure the coherent and systematic functioning of the ENDC through cooperation between its departments, the ENDC has described its basic and support processes (see Figure 2). These processes are regulated by various documents and checked through internal evaluations.



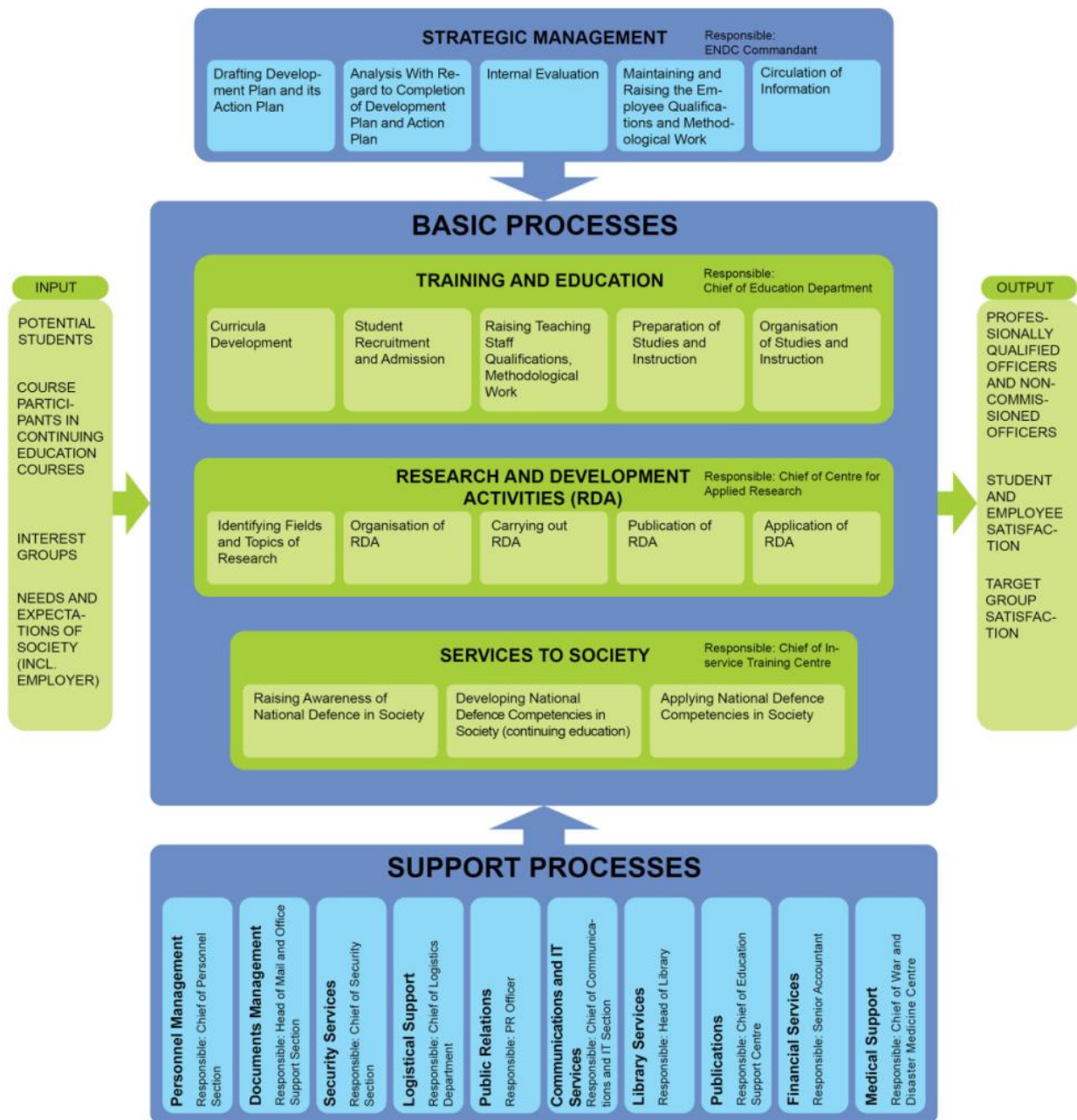


Figure 2. Basic and support processes

In order to monitor the how these processes function, to ensure the synchronization of the objectives and activities of the ENDC, and to evaluate the results of the activities afterwards, the ENDC has defined its [key results](#). The ENDC takes guidance from its own [defined values](#): creativity, instruction and efficiency.

The evaluation of the achievement of key results takes place through annual reporting and feedback from employees, students and interest groups on a regular basis. In previous years the ENDC had already organised employee satisfaction surveys, but a comprehensive feedback monitoring plan was additionally drafted in 2012 to involve different target and interest groups (see Table 1). Although the current plan definitely requires further elaboration, it will, however, ensure a continuous comparison of feedback results for the ENDC with their consequent application, all in order that the processes of the ENDC might continue to be improved.

Table 1. ENDC Feedback Monitoring Plan

Type of feedback	Interest group	Aim of investigating interest group satisfaction
Student candidate questionnaire	Student candidates	Communication, planning and enhancement of admission and study process.
Subject feedback questionnaire (in Study Information System (SIS))	All students	Improvement of study process, curricula development, developing students' self-analysis skills.
Subject feedback questionnaire (in SIS)	Teaching staff	Designing activities for improvement of study process and curricula development; encouraging teacher self-analysis.
Student satisfaction survey	All students	Designing and carrying out the activities for the improvement of the learning environment and study process.
Employee satisfaction survey	All employees, including teaching staff	Improving work environment, organisation of work, circulation of information, employee involvement, management etc. aspects.
Feedback on final paper supervision	Students of professional higher education and Master's education.	Improving the writing process, supervision and reviewing of final papers, as well as the work of defence committees.
Feedback on continuing education course	Continuing education course participants	Planning the activities with regard to the improvement of the study process and curricula development, as well as with regard to feedback on subjects to teachers.
Feedback on practical placement	Cadets, pupils of vocational education	Improving the organisation of practical placements.
Feedback from graduates	Graduates from ENDC professional higher education and Master's studies	Improving the content (incl. curricula), quality and applicability of studies, identifying fields of cooperation.
Feedback from employers		Improving the content (incl. curricula), quality and applicability of studies, identifying fields of cooperation.

### Management and decision-making

The activities of the ENDC are guided by the strategic documents of the EDF, while education-related laws and relevant requirements apply to education matters, and research and development activities and the management and routine activities of the ENDC are regulated by the

guidelines, regulations and orders of the Commandant of the ENDC (see Figure 3). The management of ENDC activities (incl. circulation of information) (see Figure 4) is ensured by the chiefs of departments directly subordinated to the Commandant and the heads/chiefs of their respective subunits. Pursuant to legislation and fields, different decision-making bodies have been established at different levels that are formed by representatives of different interest groups (incl. students and teaching staff). This makes such bodies comprehensive and ensures the involvement of different interest groups in decision-making with regard to issues related to the development of the ENDC. The highest decision-making body of the ENDC is the Council of the ENDC which operates in accordance with the Statues of the ENDC and [Rules and Procedures of the Council of the ENDC](#).

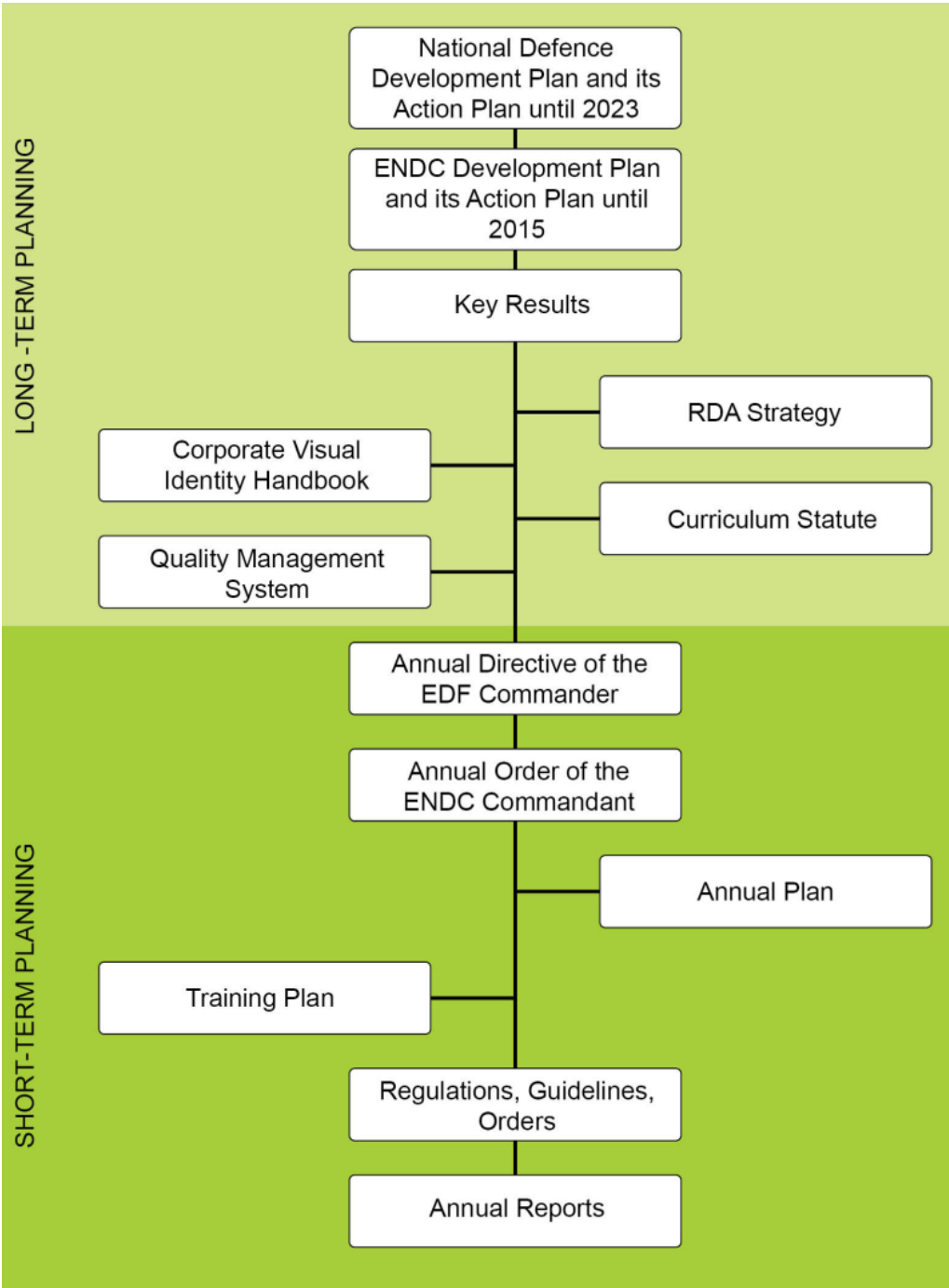


Figure 3. The ENDC activity planning model

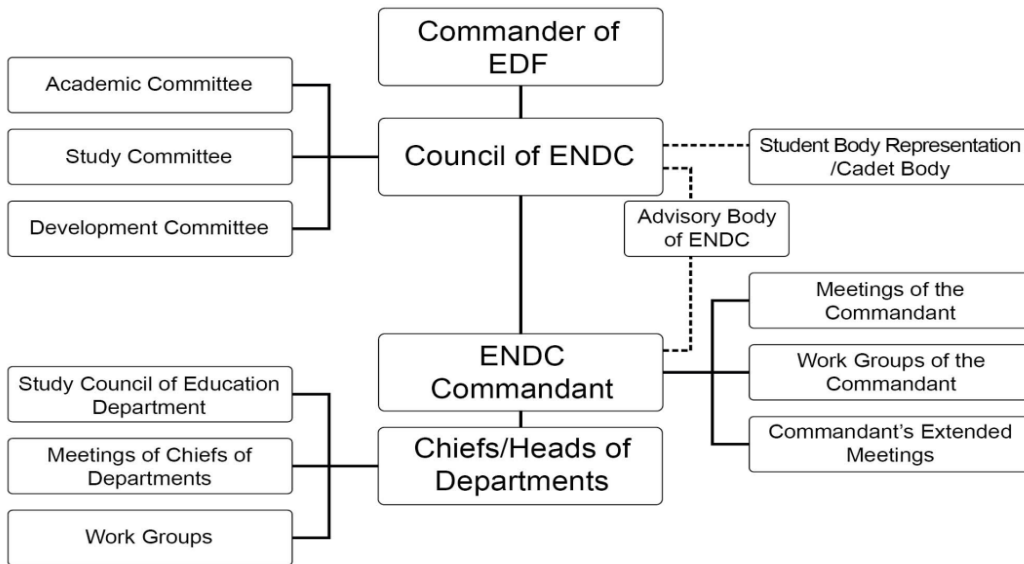


Figure 4. The ENDC management model

### Internal and external communication of the ENDC

The main documents regulating the internal and external communication of the ENDC are Corporate Visual Identity of the ENDC and Concept of Information Circulation in the EDF. The planning of internal and external communication is based on the annual directive of the ENDC Commandant with the annual plan, training plan and academic calendar as its appendices.

For internal communication, channels such as mailing lists for e-mails (external e-mail) and mil.intra (internal e-mail), Intranet of the EDF and the electronic document management system “Postipoiss” are used. For sharing study and teaching materials and other important documents, both students and employees can use network storage opportunities. To share information between departments there is a weekly meeting of department chiefs followed by meetings within each department when required. In addition, there is a monthly meeting of department chiefs with extended participation and a general meeting for all employees (excluding students) to ensure an even better circulation of information.

According to the employee satisfaction surveys carried out in 2012 and 2013, 70% of all employees of the ENDC are quite satisfied or very satisfied with information circulation in the ENDC. Comparing the two surveys, overall employee satisfaction has been trending upward. (see Figure 5)

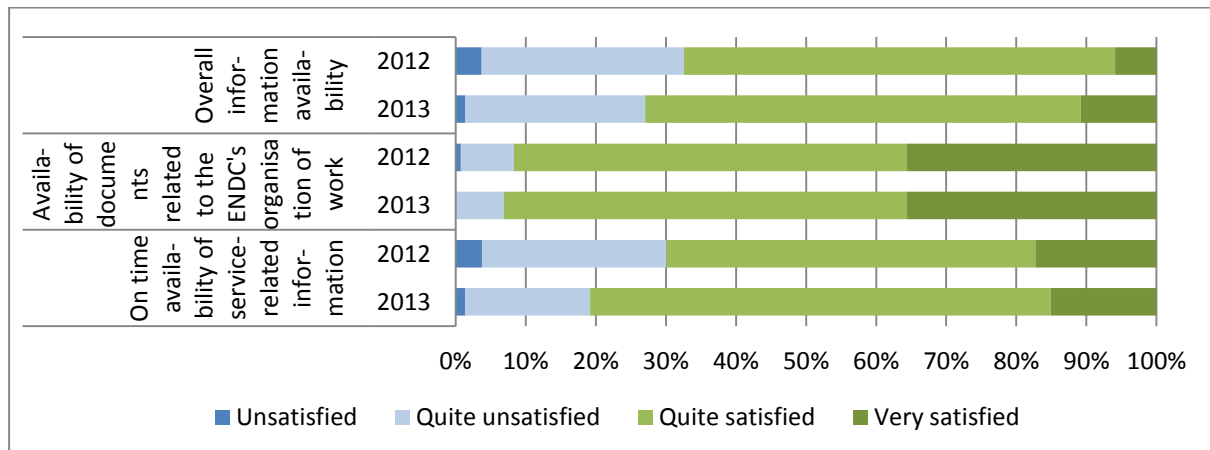


Figure 5. ENDC employee satisfaction with information circulation, 2012 and 2013

Internal communication for students is also facilitated by the [ENDC Student Body](#) and its sub-organisation the Cadet Corps. In addition to participating in different decision-making bodies of the ENDC, these organisations perform an instructional function: on the initiative of senior cadets, younger cadets are introduced to the underlying principles of the profession of officer and the traditions of the Cadet Corps are also shared and upheld.

For external communication, the ENDC cooperates with the Defence Resources Agency (see Ch. 4, Public Relations). The main means for external communication is a new ENDC homepage developed in 2011. This homepage is subdivided into two parts, based on the level of studies: the website of [the Officer School of the ENDC](#) and that of [the Non-commissioned Officer School](#).

To have as close communication as possible with its target groups, the ENDC also uses the social media channel *Facebook*, where different information is posted for potential student candidates. In addition to general information about the ENDC, press releases and photos are uploaded to the ENDC website.

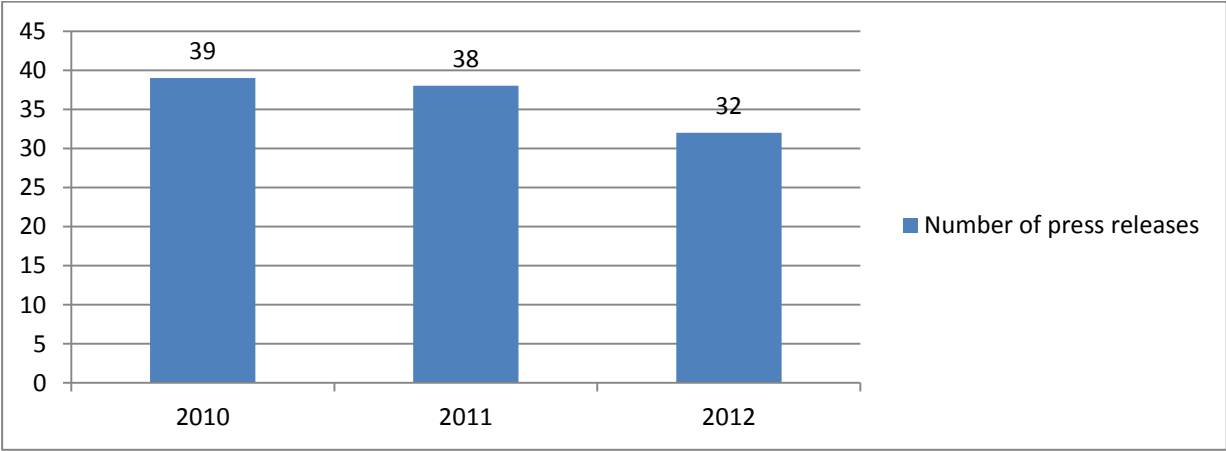


Figure 6. Press releases on the ENDC 2010–2012

The ENDC publishes commercials and articles on a regular basis about study opportunities in educational supplements in the Estonian daily and weekly newspapers (e.g., *Eesti Ekspress*, *Eesti Päevaleht*, *Maaleht*, *Postimees*, *Õhtuleht*) (see Figure 6). The ENDC cooperates with local television and radio to ensure the coverage of relevant newsworthy events in leading Estonian media channels. From 2010 to 2012, the average number of news items in the media was 318 per year.

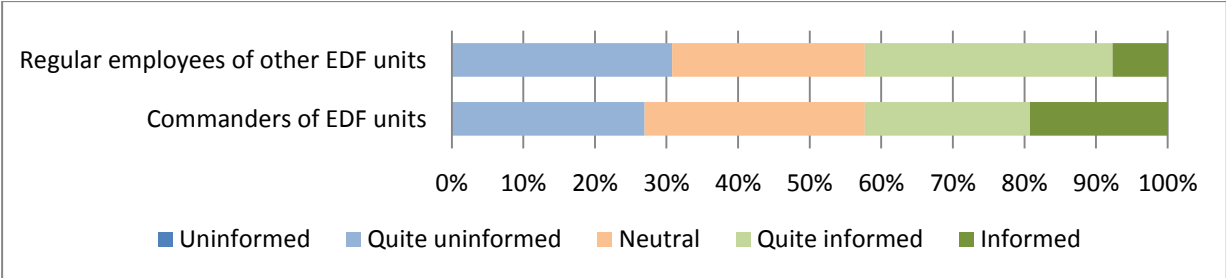


Figure 7. Employer evaluation as to EDF unit employees being informed of the ENDC in 2012

## 1.2 Personnel Management

### Organisation of employee recruitment and personnel work

The personnel of the ENDC consists of servicemen in active service pursuant to the Defence Forces Service Act and contracted employees (including academic staff) hired according to the Employment Contracts Act. Personnel recruitment and selection criteria are set forth in the [Personnel Recruitment Principles of the ENDC](#), arranged by category.

Recruitment of contracted employees is organised through public competitions to ensure that all posts are filled with employees with the best possible knowledge and skills. For selecting new employees, a committee with at least three members is formed.

Table 2. Competitions for ENDC teaching staff posts in 2010–2013

Year	Number of posts	Number of candidates	Candidates per place
2010	5	14	2.8
2011	2	20	10
2012	2	12	6
2013	24	118	4.9

In addition to the above criteria, the selection and organisation of selection procedures for filling academic posts of the ENDC are regulated by the [Teaching and Research Staff Qualification Requirements, Terms and Procedures of Assessing their Compatibility](#) and Job Description for ENDC Academic Staff (see Figure 2 and Figure 8). For selecting academic staff, the ENDC Commandant convenes a committee who presents justified selection outcomes to the ENDC Council for discussion and approval.

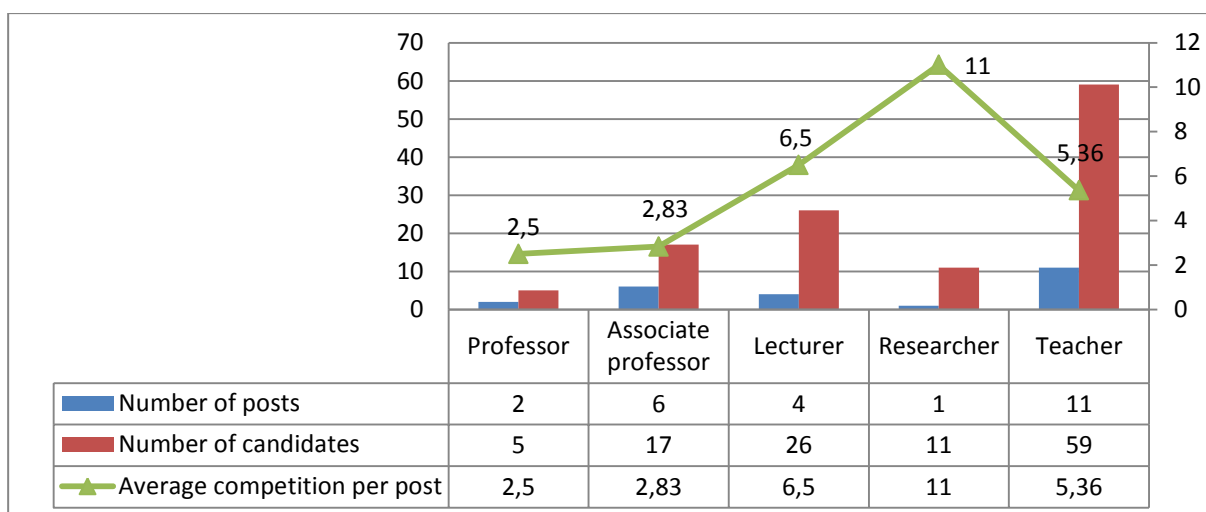


Figure 8. ENDC academic personnel (re)election statistics in 2013

The recruitment of servicemen in active service is usually carried out within the EDF and is based on the document [Rotation Principles of Military Academic Staff](#). Information as to the availability of vacancies is disseminated through the EDF Intranet to all EDF units. To fill vacant places, cooperation is established with the Headquarters of the EDF – which coordinates the distribution of servicemen across the EDF – and the rotation plan to ensure an optimal availability of qualified active servicemen for the EDF as a whole. The suitability of servicemen is evaluated according to the qualification requirements and their level of military education.

The organisation of personnel work is based on various documents on personnel matters (incl. the EDF Personnel Strategy), and on education matters for the set of requirements governing academic personnel. Pursuant to higher level documents, the ENDC has drafted the necessary rules and procedures for the training, evaluation and motivation of its personnel.

**Fulfilment of posts according to the official structure of the ENDC**

As of 1<sup>st</sup> April 2013 there are 213 employees in the ENDC (see Figure 9). In addition there are students who are also appointed to the post of active serviceman. Out of all personnel, 36% are academic and 64% are support personnel. The everyday service duties of approximately 15% of the ENDC personnel (Simulation Centre, War and Disaster Medicine Centre, Education Support Centre and the Estonian contingent of the Baltic Defence College) are not directly related to providing formal education but they are involved in carrying out or supporting continuing education or, more broadly, serving society.

A relatively high percentage of support personnel is due to the specifics of military education and service in the armed forces in general. A considerable amount of the study process is carried out in the field, in training areas of the EDF and in units all over Estonia, and this requires transportation with drivers, storage and maintenance of special equipment (weapons, ammunition, explosive ordnance) and accommodation and catering for students.

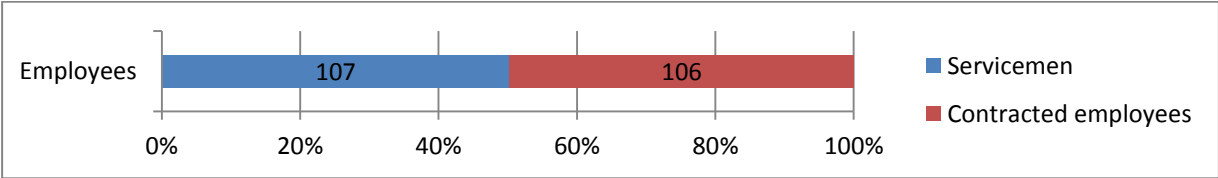


Figure 9. Serviceman-contracted employee ratio in the ENDC

The rate of fulfilment of posts in the ENDC structure has remained constant over the past three years; out of approximately 250 posts an average of 84% are filled, which is comparable to the average post fulfilment level in the EDF as a whole. As of 1<sup>st</sup> April 2013, 81% of academic staff posts and 87% of support personnel posts are filled (see Figure 10). The main shortage of labour is caused by the overall shortage of active servicemen in the EDF, while the shortage of academic personnel is caused by the shortage of servicemen in active service suitable for academic staff posts.

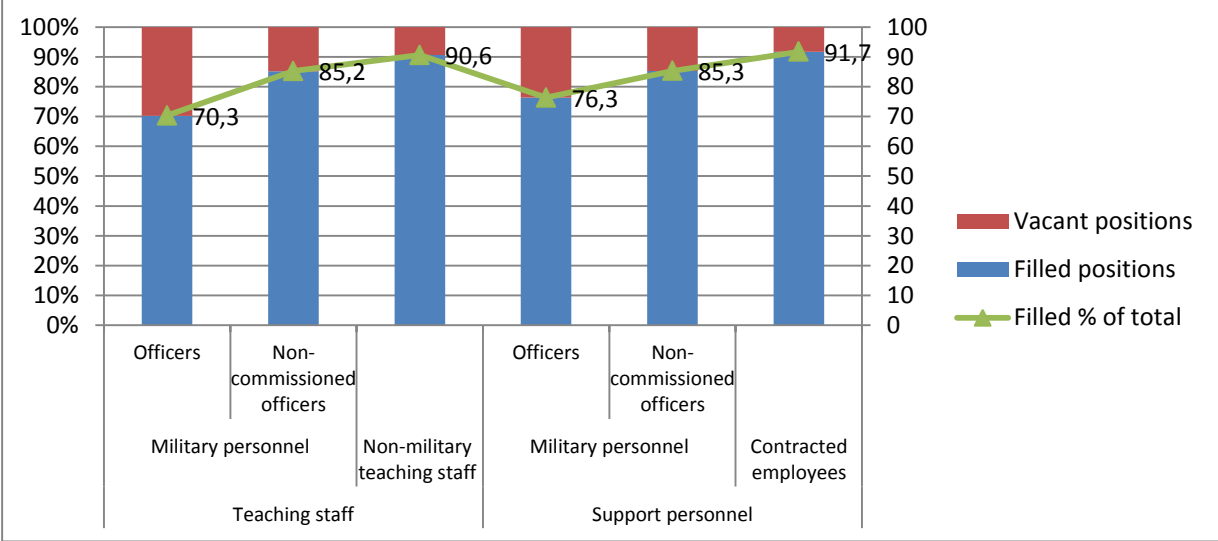


Figure 10. Post of the ENDC by categories as of 01 April 2013



Over the last two years workforce fluctuation has been 13%, on average. This figure should be looked at in the context of the service rotation cycle (every 3-5 years): about 18% of all servicemen leave the ENDC every year. Since academic personnel are elected for five years at a time, there were relatively few changes amongst them in 2011-2012 (7.1%). In 2011-2012 the total fluctuation of contracted employees was 9.4%.

To hire highly qualified employees and reduce workforce fluctuation, the ENDC has taken the following measures over the last few years:

- ✓ Drafted the [rotation principles](#) for military teaching staff.
- ✓ Close cooperation with different units of the EDF so as to use servicemen serving in other units as visiting teaching staff, thus ensuring that the best specialists are involved in the teaching process.
- ✓ Drafted [employee motivation and acknowledgement principles](#).

The average age of the ENDC employee is 40 years, the average age for civilian academic personnel being 44.3 years and that of the military teaching staff being 36 years (average length of military career is 15.5 years) (see Figure 11).

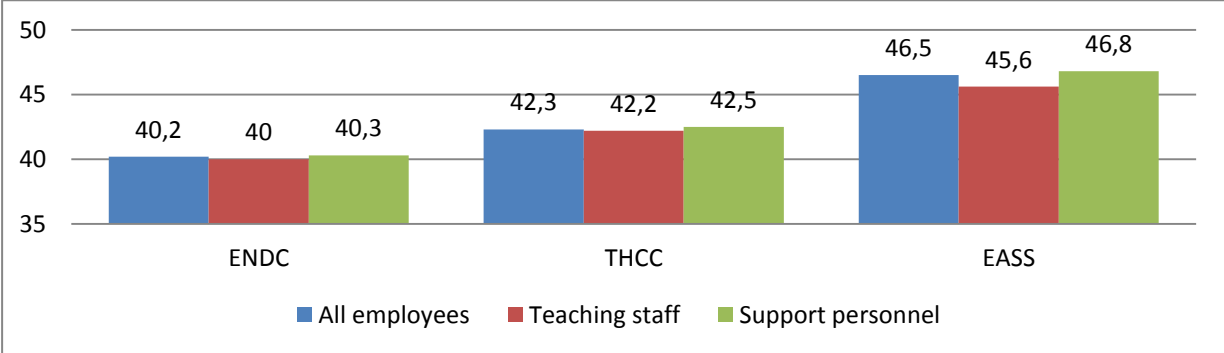


Figure 11. Average age of the ENDC, Tartu Health Care College (THCC) and Estonian Academy of Security Sciences (EASS) employees

50% of all academic staff have Master’s or doctoral degrees (see Figure 12). From 2010 to 2013, five employees of the ENDC have received doctoral degrees and eight employees obtained Master’s degrees. Servicemen-instructors without higher education teach mostly at the vocational level or teach specific practical military skills at the professional higher education level. Servicemen filling the posts of instructors are not responsible teachers for a subject: they work as assistant teachers to the military teaching staff with higher education.

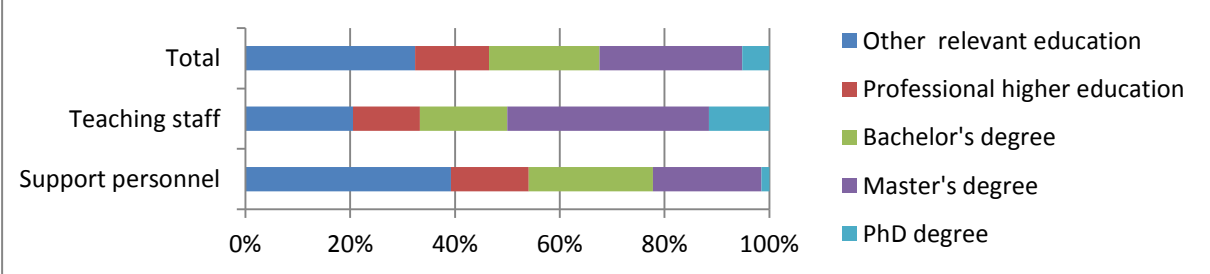


Figure 12. Qualification of ENDC employees

**Attestations and evaluation interviews**

ENDC employees have regular attestations and evaluation interviews in accordance with the Attestations and Evaluation Organisation Procedures in the EDF, in order to monitor their professional development, performance and compatibility with their posts. In addition,



professional interviews form the basis for planning training, acknowledgements and appointing job-related tasks for the next evaluation period.

For servicemen filling academic staff posts, attestations and evaluations are carried out pursuant to the regulations of the EDF. For contracted academic personnel, attestations are organised based on the [Terms and Procedures of Evaluating Teaching and Research Staff](#) and are carried out once per election period. For carrying out these attestations, a committee is formed by order of the ENDC Commandant. This committee evaluates previous activity including the research activities, improvements in the teaching process and the student feedback for a teacher. Attestations of contracted teaching staff were first implemented in 2012 when 15 persons were evaluated, 14 of whom received positive attestations and one received a negative attestation. Over and above these attestations, members of contracted teaching staff are subject to annual evaluation interviews.

### ENDC employee salaries

The remuneration of the ENDC employees is regulated by the salary guidelines of the Ministry of Defence area of administration which has fixed salary rates by post, task, required qualifications and extent of responsibility. It also imposes limitations on paying additional bonuses, as in other public sectors. Over the last two years, the average gross salary of all employees (including contracted academic staff) increased by 8.45% and that of military academic staff increased by 10.26%. During the same period, the increase in gross salary in Tartu County was 8.33% and 7.37% in Estonia. In general terms the salaries of the ENDC are subdivided as follows: 48% for support personnel, 26% for teaching staff and 26% for students.

In 2012 the average salary of ENDC teaching staff was 33.2% higher than the average gross salary in Estonia overall. The salary of contracted teaching staff will be increased by 5% starting from the 1<sup>st</sup> of July 2013.

### Continuing education and acknowledgement of ENDC employee performance

Planning continuing education courses and participation in them is organised by the document [Principles of Continuing Education](#). The selection of continuing education courses is based on an annual training plan compiled on the basis of the outcomes of attestations and annual evaluation interviews, while considering the ENDC budgetary funds allocated for this purpose (see Figure 13). In addition to budgetary funds, the ENDC also uses funding from various projects of the European Social Fund (e.g., Primus, DoRa) to raise the qualifications and competence of its teaching staff.

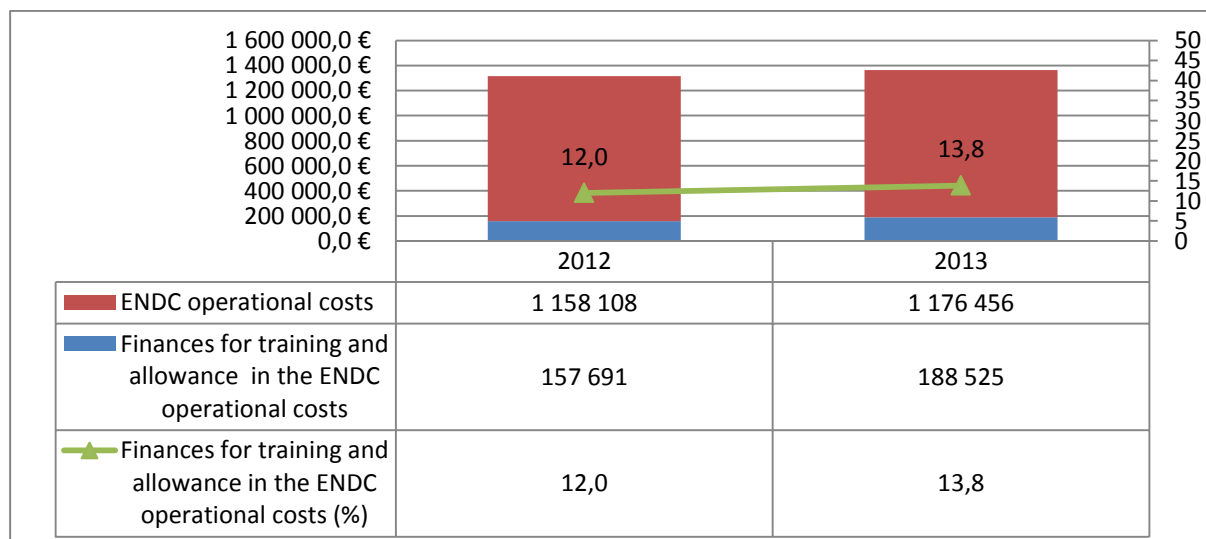


Figure 13. The volume of continuing education and business trip costs in operational costs of the ENDC

From 2010 to 2012 as many as 46% of ENDC employees participated in various continuing education courses. In 2012 the average volume of training course per person was 53 hours (in the Estonian Academy of Security Sciences this figure was 60.67 hours). In addition to continuing education courses, employees participated in conferences and seminars in Estonia and abroad. ENDC employees participate in the meetings of different cooperation networks (see Ch. 3) and teaching staff can take advantage of diverse mobility programs (see Ch. 2) funded by the European Union. An important training and development opportunity for active servicemen is participation in international military operations (from 2010–2012, 29 servicemen in Afghanistan, Iraq and Bosnia-Herzegovina), as well as participation in EDF training exercises to practice the performance of wartime tasks and enhance the teaching process by way of professional experience. The professional development of the teaching staff is also supported by the [Regulations of Sabbatical Leave for the ENDC Teaching Staff](#) that provide the opportunity to have a free period of up to one semester for compiling research papers or articles, carrying out research, participating in conferences and seminars, etc. From 2011 three members of teaching staff have been on sabbatical leave.

The 2013 employee satisfaction survey reveals that 86% of respondents consider his/her work as offering professional fulfilment, challenge and opportunities for development. The survey also indicated that slightly fewer than 80% of employees are satisfied with the professional training and continuing education opportunities they have (see Figure 14). The highest rate of satisfaction (nearly 90%) was for the applicability of knowledge and skills obtained in such training courses to one’s everyday work. The lowest satisfaction was indicated for the continuing education course planning system based on evaluation interviews and the availability of continuing education opportunities (47% of respondents being very satisfied or quite satisfied). To ensure a more efficient planning of continuing education courses based on both employee interests and evaluation interviews, the principles of [continuing education for ENDC employees](#) were approved in 2013.

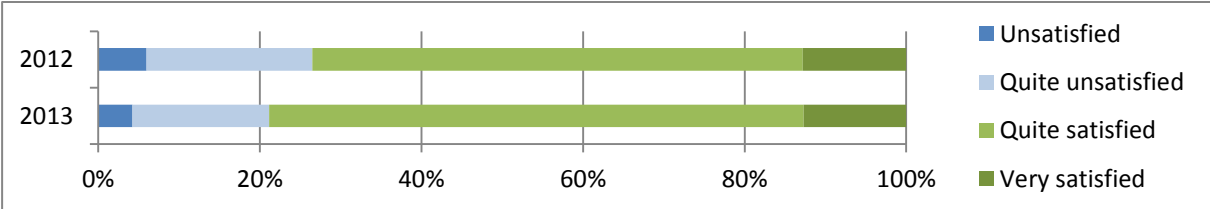


Figure 14. Overall satisfaction of ENDC employees with professional development opportunities in 2012 and 2013

In the acknowledgement and motivation of employees, the ENDC follows the principles of the EDF according to which people are recognized for remarkable achievements or outstanding performance of work assignments. In addition, the ENDC approved the [Principles of Employee Motivation and Acknowledgement in the ENDC](#) at the end of 2012 which specify and provide additional opportunities for the recognition and acknowledgement of ENDC employees. The 2012 satisfaction survey revealed that 90% of respondents are very satisfied/quite satisfied with the recognition of their work by their colleagues and 80% of respondents are very satisfied/quite satisfied with their work being evaluated by their colleagues.

**Occupational safety and health in the ENDC**

To ensure occupational safety and health (OSH), the ENDC follows the national regulations. The majority of workplace accidents occur during field training or exercises, or when practising sports (e.g., competitions, physical training exercises). Over the last three years the number of

workplace accidents for all personnel (i.e. 400 people: employees and students) has not exceeded six incidents per year. This figure equals the average occupational accident figure in public and national defence sectors which was 1.12% in 2012.

As of 2004 the ENDC has carried out risk assessments for the workstations of different sections of the ENDC, e.g., transport, food service and medical sections, as well as in special equipment warehouses. The main risk factors for office employees are ergonomically related, i.e., working with computers and sitting in the same position. For employees who do not work in offices the main risk factors differ according to their assignments. To monitor the state of employee health, servicemen in active service should have an EDF Medical Committee examination once every three years and contracted employees should consult the occupational health doctor once every three years according to schedule.

### **1.3 Management of Budgetary Funds and Infrastructure**

The ENDC receives funding from the EDF budget compiled in accordance with the Guidelines for the EDF Budget Drafting and Use. As an institution of higher education, the ENDC is different from other universities since the EDF has a centralised system of budget management (since 2011), meaning that the ENDC requests certain amounts of funding necessary for its everyday expenses and activities, yet the ENDC does not manage these budgetary funds directly and the overall functioning of the ENDC is instead assured by EDF centralised funding. The annual budget of the ENDC therefore mostly disregards the following costs: employee salaries, infrastructure maintenance and improvement and logistical support expenses (e.g., maintenance of transportation, special equipment and armament, food service, uniforms, medical services).

The ENDC plans its operational costs on an annual basis and these include mainly budgetary costs on training, business trips, research activities (incl. seminars, conferences, publication of ENDC Proceedings), current administration costs (incl. representation, public relations, office supplies, publications), salaries to visiting teaching staff, and the costs of different study process methods. Budget negotiations for operational costs take place in the Headquarters of the EDF, followed by an approval by the Commander of the EDF. The approved budget forms the basis for the ENDC activities of that respective year. In addition to its annual budgetary funds, the ENDC received targeted funding from the Archimedes Foundation (Primus and DoRa programmes) and from the Estonian Information Technology Foundation (project BeSt) from 2008–2012. In 2008-2013 the total budget of the ENDC has amounted to 208,164 euros in the Primus, BeSt and DoRa programmes.

In 2012 the ENDC budget, including operational and central costs, was approximately 8 million euros, of which the ENDC operational costs were 1,3 million euros. The budgetary funds allocated by the EDF assure the sustained performance of the ENDC's tasks with the necessary infrastructure (incl. its development and maintenance).

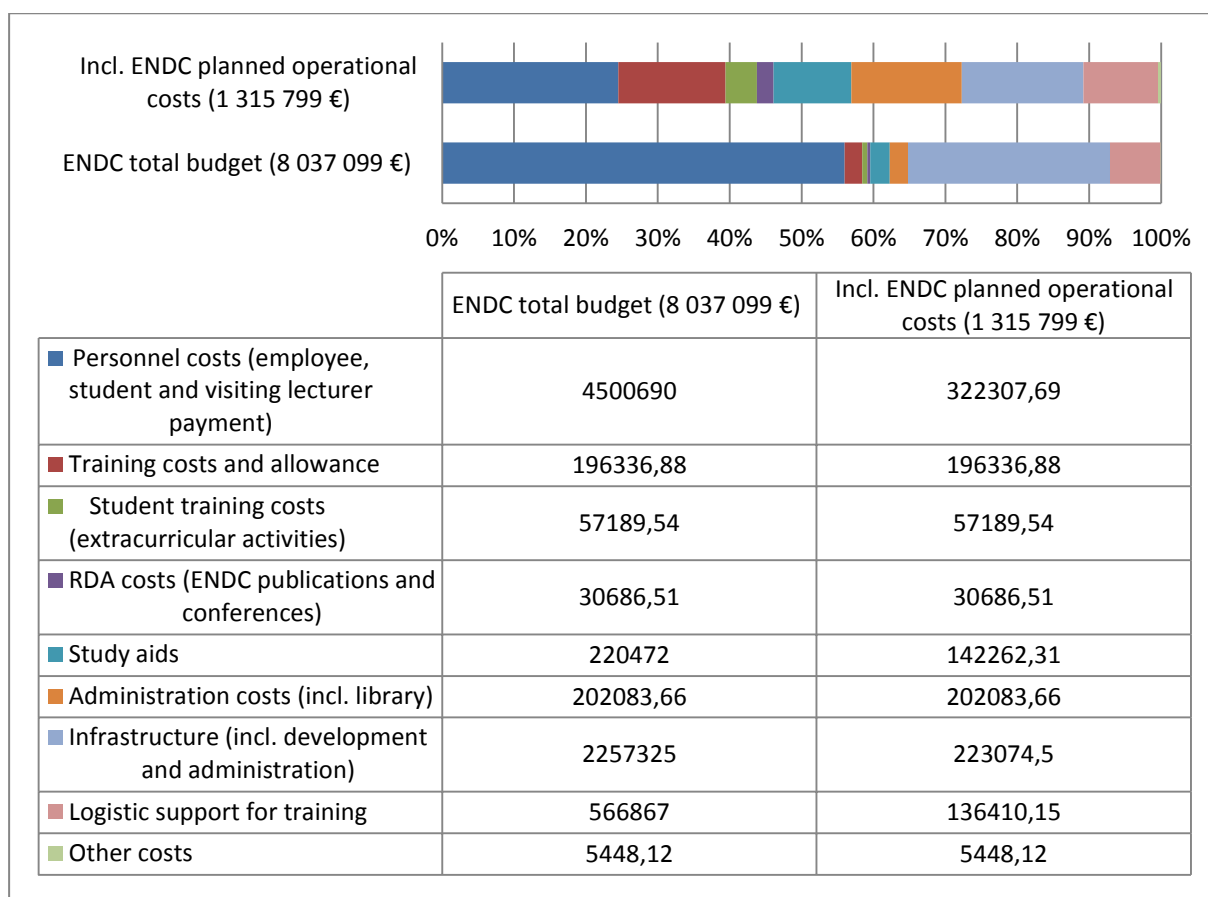


Figure 15. The ENDC budget in 2012

The efficient and purposeful use of budgetary funds is checked through reporting and audits of specific fields ordered by both the ENDC and EDF. From 2010 to 2012 the following audits were carried out in the ENDC:

- ✓ Organisation of declaring state assets as unserviceable; writing off and destruction of property;
- ✓ Purposefulness of research and development budgetary funding use;
- ✓ Organisation of finance and procurement in the EDF;
- ✓ Organisation of the field of medicine and its internal audit in the area of government of the Ministry of Defence.

The audit reports did not reveal any major areas requiring improvement in the ENDC. The main aspect that did require some improvement was the insufficient allocation and use of budgetary funds for research and development activities. This can be considered as the main challenge for the ENDC to overcome in order to establish a solid foundation of war sciences which does not exist as yet due to the short period of time since Estonia reclaimed its independence. To resolve these shortcomings, research projects have been initiated based on the ENDC's research and development strategy (see Ch. 3).

## Communication, information technology and information systems

The ENDC IT support consists in the maintenance of hardware and software and facilitates study and work related activities. All computer workstations (for both study and work purposes) of the ENDC are equipped with all necessary modern communication and IT solutions. ENDC personnel have access to the EDF intranet and the e-learning environment “ILIAS”. In order to ensure quality internet service the ENDC has a permanent internet connection with some access restrictions due to the security requirements of the EDF. The use of all information systems is regulated by the Information Technology Regulations of the EDF.

The ENDC has an electronic document management system “Postipoiss”, the use of which is regulated by the Records Management Regulations of the EDF. Personnel work is organised and administered in the electronic personnel registration program “Baltpers”.

The organisation and management of studies is supported by the Study Information System (SIS) “Roosi” launched in 2005. This system was developed to meet the specific needs of the ENDC. In addition to this, the ENDC, together with other universities, uses the Admission Information System (AIS) to support the submission of electronic applications, and the Estonian Education Information System (EEIS) for the management and reporting of study activity.

However, the 2012 satisfaction survey indicated that the SIS supported by Windows has become cumbersome for students and employees alike (satisfaction rates on a 4-point scale being 2.52 and 2.46 respectively) (see Figure 16).

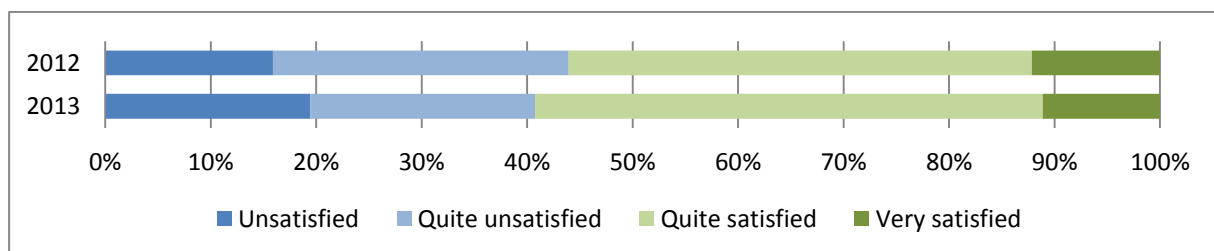


Figure 16. ENDC student satisfaction with the SIS in 2012 and 2013

Based on these surveys, the ENDC initiated to process to consider changing the current study information system for one used by other institutions of professional higher education in Estonia. In April 2013 the decision was made to join it and preparations for launching this system starting from academic year 2013/2014 are currently underway.

## Infrastructure

To a great extent, the activities of the ENDC are backed with the necessary infrastructure. The ENDC facilities are located in Tartu and in the village called Meegomäe in Võru County where the Non-commissioned Officer School is located.

Table 3. The ENDC facilities

<b>Building</b>	<b>Address</b>	<b>Description</b>
Main building and barracks	Tartu, Riia 12	5 classrooms (30-65 places each) 4 classrooms (20-25 places each) 2 computer laboratories (18 places each) 212 accommodation places assembly hall gym fitness hall firing range (6 lanes)
Education Support Centre and warehouses, dormitory	Tartu, Rebase 9	workstations 51 accommodation places
Simulation Centre	Tartu, Raatuse 110	1 lecture room 1 classroom JCATS operator workstations 96 accommodation places (short-term stays)
Apartment Block	Tartu, Vaksali 31	59 apartments for ENDC employees
Non-commissioned Officer School (NCO School)	Meegomäe, Võru County	4 classrooms (28 places each) 1 classroom (60 places) 1 heavy weaponry classroom (28 places) 1 computer laboratory (21 places) 1 classroom in security area (36 places) gym 174 accommodation places
Firing range	Paluküla, Haaslava, Tartu County	12 lanes
Car Park (rental)	Tartu, Ringtee 19	
Warehouses (rental)	Tartu, Ringtee 19A	

The facilities located in Tartu assure the provision of the study process. Dormitories and apartments guarantee sufficient accommodation opportunities for students of degree studies and continuing education, as well as housing for military members of the teaching staff. Considering the growth of continuing education for healthcare specialists, plus conscripts from 2014 onwards, the ENDC would need an increase in both classroom and accommodation space.

Similarly, the facilities located at Meegomäe provide satisfactory conditions for carrying out study activities, however the facilities in Võru have proved too costly for the EDF. Therefore, starting from 2014 the NCO School of the ENDC will be located on the territory of the Kuperjanovi Infantry Battalion in Võru where a study building will be constructed to meet the needs of the NCO School.

In furnishing both study and work rooms, the measurement results of work environment parameters were considered together with the recommendations of an OSH specialist. The satisfaction surveys undertaken in 2012 and 2013 showed that both students (see Figure 17) and employees (see Figure 18) are satisfied with their learning and work environment respectively (about 90% of the respondents in both years).

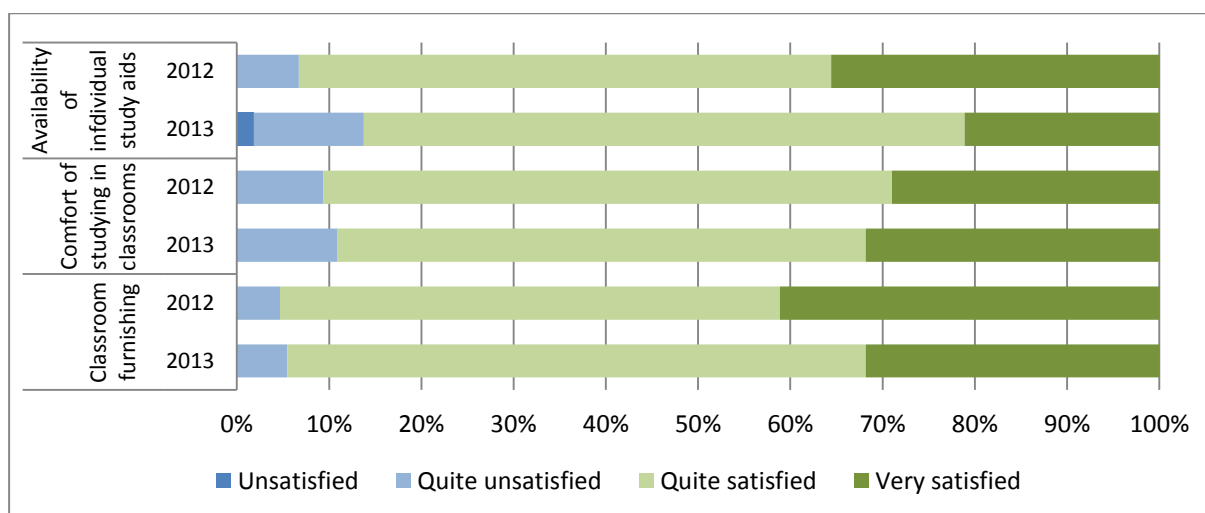


Figure 17. ENDC student satisfaction with learning environment in 2012 and 2013

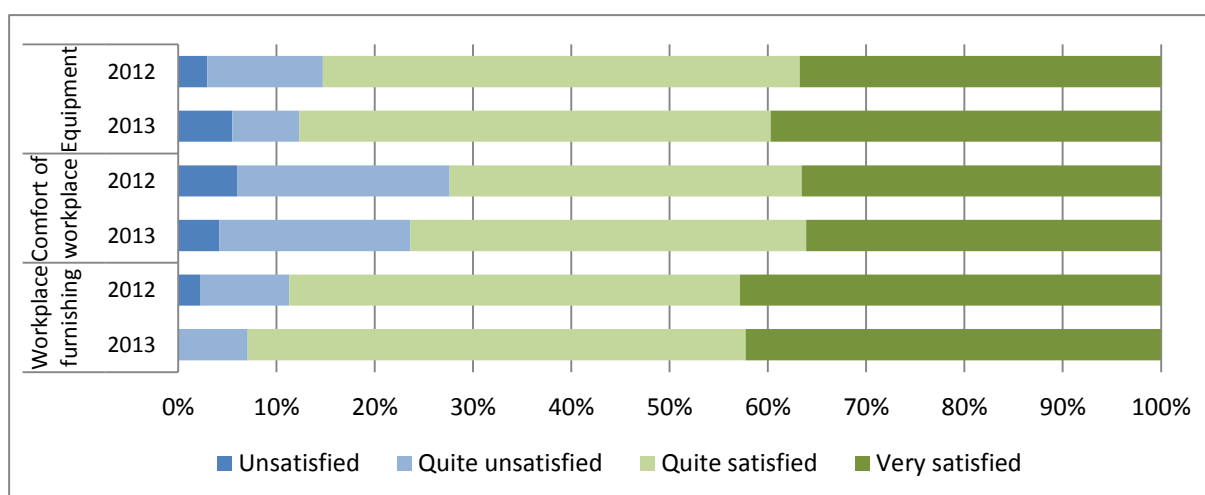


Figure 18. ENDC employee satisfaction with work environment, 2012-2013

## The Library

The ENDC library is a specialised research library.

Table 4. ENDC library

Indicator	Description
Locations	Riia 12, Tartu and Meegomäe, Võru County
Number of items in collections as of 25 January 2013	33916 items in collection, of which 28036 are held in the main ENDC building
Number of books	30 519 items in total, of which 10 861 different books
Journals ordered in 2013	In Tartu: 13 in Estonian and 45 in foreign languages; in Võru: 5 in Estonian.
E-platforms joined	E-book Library, access to different e-newspapers, e-journals, e-magazines, e-books, possibility of borrowing e-readers.
Available databases	Keelevara, Armed Conflict Database, EBSCO databases,

	Library PressDisplay, Military Periscope, Praeger Security International, Questia. In addition, Tartu University databases are made available.
User workstations	25 workstations in Tartu 24 workstations in Võru
IT support	11 library desktop computers in Tartu (plus printer and scanner) 5 desktop computers in Võru (plus printer)
Number of active readers	700 approx.

The ENDC library belongs to the EDF unified library system. The online catalogue URRAM is accessible to all users (employees and students) for performing searches in all libraries of the EDF. The ENDC library provides lending services for members of the ENDC and Baltic Defence College as well as for all active EDF servicemen, members of the Estonian Defence League, students and teaching staff of Tartu University, Estonian Aviation Academy and Estonian Maritime Academy. All items in the collection are available to everybody for use in the library. The library can order items and copies of articles it does not contain from other libraries in Estonia for students and teaching staff for free. When ordering from abroad, the paid inter-library lending services offered by Tartu University Library can be exploited. Student satisfaction questionnaires show that students are satisfied with the ENDC library (see Figure 19).

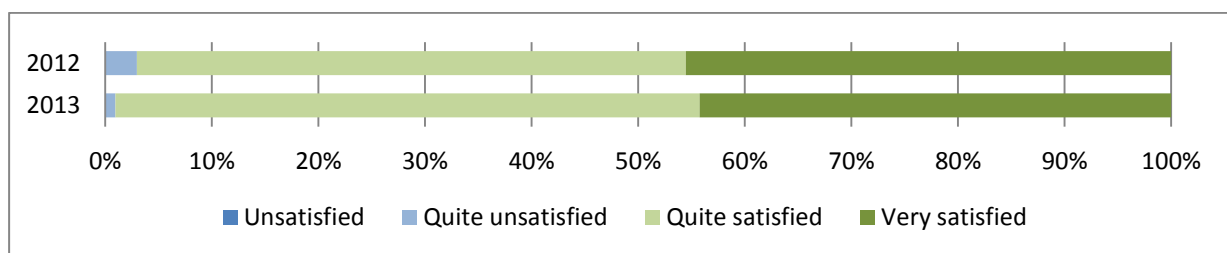


Figure 19. Student satisfaction with the availability of specialised literature and other media in the ENDC library in 2012 and 2013

The ENDC has sufficient funds for the acquisition of new items for its collection (see Figure 20). One of the aims in the ENDC development plan for 2011-2015 is to find a solution for expanding existing library facilities.

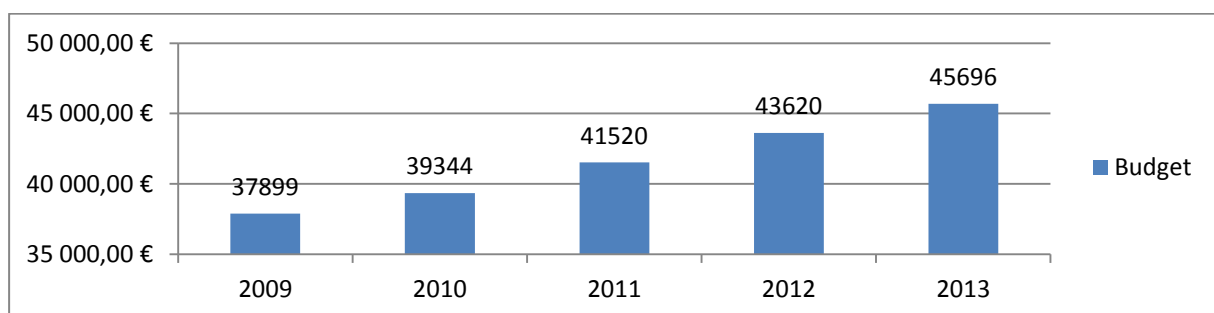


Figure 20. ENDC library budget, 2009–2013



## **Strengths and areas of improvement in the ENDC**

### **Strengths**

- ✓ The ENDC is characterised by its ability to concentrate and focus on its aims, activities as well as output (its orientation to a narrow, specific field in national defence: the training of officers and non-commissioned officers and the development of defence capacity).
- ✓ Management of the ENDC is regulated by the regulations and guidelines drawn up in accordance with educational legislation and that of the EDF; the hierarchy of decision-making and the ENDC's chain of command ensure the accomplishment of all assigned tasks.
- ✓ The ENDC has a stable and sustainable source of funding which ensures the effective performance of its activities.
- ✓ The ENDC has all the resources and infrastructure necessary to accomplish all tasks set forth in the statutes of the ENDC.

### **Areas of improvement**

- ✓ To apply to the fullest extent the quality assurance system developed in 2012 (incl. various surveys).
- ✓ For more efficient completion of basic and support processes, ENDC departmental responsibilities should be specified together with their coordination requirements.
- ✓ To ensure more efficient use of resources and an improved study process, closer and more systematic cooperation should be pursued with other units of the EDF.
- ✓ For the optimal planning and control of ENDC operational costs, a comprehensive system of cost accounting and analysis should be developed for the ENDC.

## 2. STUDIES

### 2.1 Formation of the Student Body and the Efficiency of the Study Process

The curricula (see Ch. 1) defined according to the levels of education required are directly related to the future service position of graduates (including specialisation) (see Table 5).

Table 5. Specialisation according to the ENDC curricula and service positions after graduation

Level of education	Post-graduation positions of service	Possibilities of specialization
Vocational education	Platoon leader and Company sergeant (incl. instructor of service)	infantry, combat engineering, air defence, signals, artillery, logistics, military police, air force and navy
Professional higher education, Land Force	Platoon leader and company commander	infantry, combat engineering, air defence, artillery, signals and logistics
Professional higher education, Air Force	Junior officer within radar post, flight or squadron	Until the academic year 2012/2013 airfield officer and signals and radar and signals officer Starting from academic year 2013/2014 air operations, air surveillance, airfield
Professional higher education, Navy	Commander of a ship section and crew	tactics, technology
Master's study, Land Force	Infantry Battalion and Brigade staff officer	infantry, combat engineers, air defence, artillery, signals

Learning objectives and outcomes have been described in the curricula. Within one academic year studies are conducted simultaneously according to one vocational education curriculum, three professional higher education curricula and a Master's curriculum (see p. 5). According to the standard period of study of the curriculum there are 1-3 courses of different stages of studies.

The number of student places (state-commissioned education) is determined at the levels of both vocational and professional higher education in cooperation with the Ministry of Defence in the annual directive of the Commander of the EDF (see Table 6). The number of positions in the structure of the Defence Forces and rotation cycles are the calculated based on state-commissioned education, forming the EDF's annual increase in the number of NCOs and officers. State-commissioned education figures in 2009–2012 are as follows:

Table 6. State-commissioned student positions in 2009–2012

Vocational education	Professional higher education			Master's studies
	Land Force	Air Force	Navy (starting from 2011)	
60	50-55	10	10	20-25

The regulations governing applying for and enrolling in the ENDC are stated in the curricula of vocational and professional higher education. Admission to the ENDC is regulated by the following documents: [Study Regulations of the Estonian National Defence College](#), [Conditions and Procedures of Admission to the Estonian National Defence College](#), and [Admission Criteria of the Estonian National Defence College](#), which is compiled to regulate the admission for a particular academic year and is approved by the Council of the ENDC

Since students of the ENDC are appointed/to be appointed to the positions of servicemen in the status of pupils (vocational education) or students (professional higher education), studying at the ENDC is influenced by different legislation regulating military service that set forth the terms and requirements for servicemen. The number of student candidates admitted to professional higher education curricula is influenced by the requirements of conscription (completed required training during conscription for female candidates) which are a precondition for entering active service in the Defence Forces. Being fit for active service (including condition of health) is closely connected with the above, influencing the number of conscripts (i.e., the number of potential students in the ENDC) and explains why it is not possible for students with special needs to study at the ENDC (see Figure 21). According to data from the Defence Resources Agency (which, among other things, keeps track of people suitable for service in the Defence Forces) there is about 5% of people annually definitely ready to continue their service as professional servicemen. Based on that, the target group of ENDC student candidates is approximately 200 people per year.

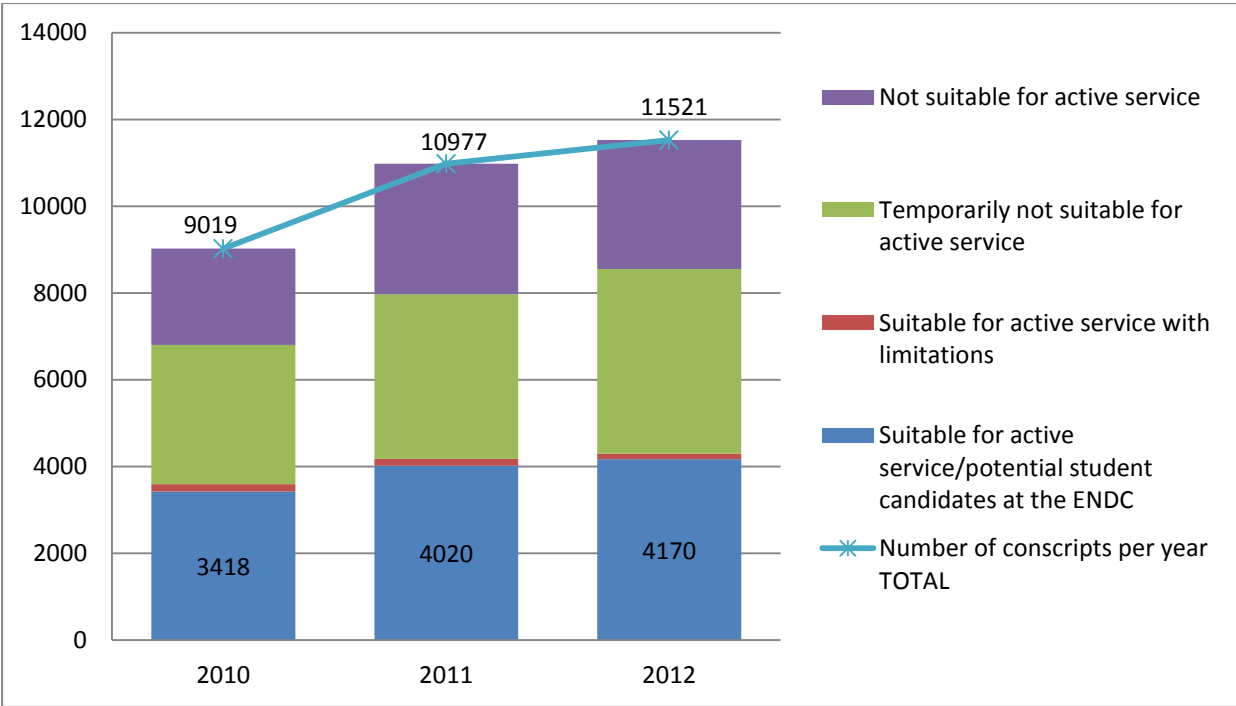


Figure 21. Reports of Duty to serve in the Defence Forces 2010–2012

The number of potential students in the near future is also predictably limited by the fall in numbers of men suitable for service in the Defence Forces. The number of Master’s students is limited by the purpose and nature of the curriculum according to which only those having completed the 1<sup>st</sup> level of higher education in military leadership (or equivalent thereof) and who have at least three years of work experience in the field of study corresponding to the Master’s study curriculum can apply for a student position in the curriculum.

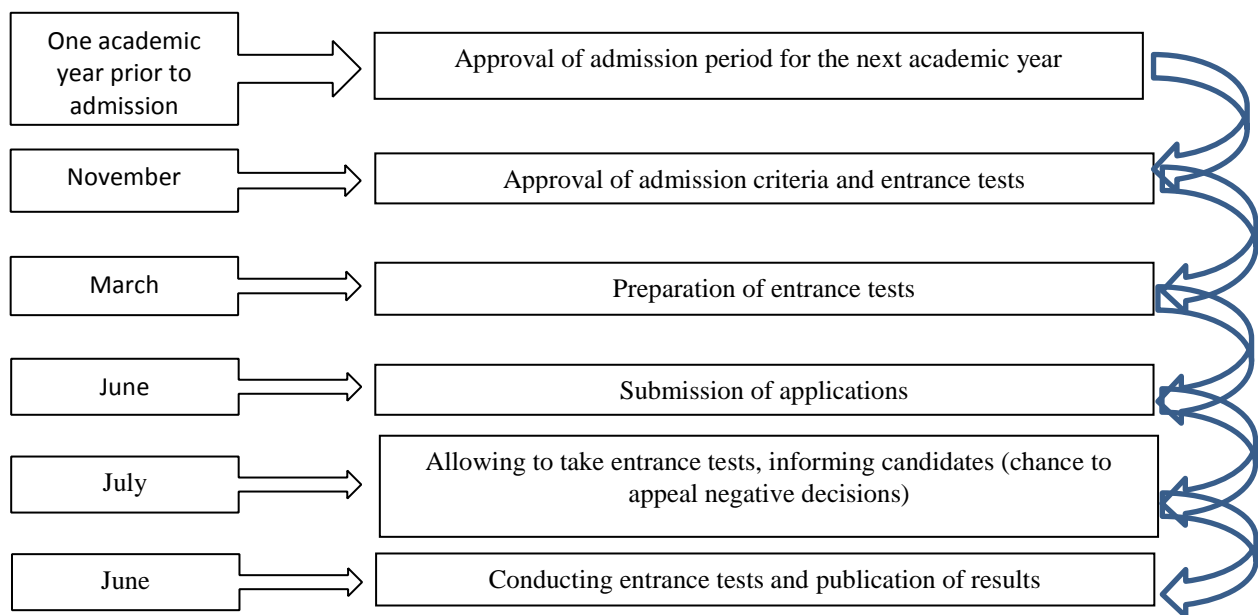


Figure 22. Admission process

Factors influencing application to student positions and competition.

- ✓ The number of people admitted to professional higher education is influenced every year by people preferring studies in some other institution of higher education. The number of students commencing studies on any particular course is influenced by the people changing the curriculum within the ENDC.
- ✓ The number of applicants for the Air Force and Navy curricula is influenced by the size of the abovementioned branches of service and the number of conscripts within those branches. There are about 3000 conscripts in the Land Forces every year, as opposed to 200 young people conscripted into the Navy. There is no opportunity for conscription into the Air Force.
- ✓ In 2011 the number of applicants for professional higher education was influenced by the state examination in English with its requirement of 50 points. Due to the lack of applicants, studies following the Air Force curriculum were not opened and those candidates who completed the requisite entrance tests began studies in the Land Force and Navy curricula.
- ✓ The number of applicants for Master's studies depends on the personnel policy of the EDF. In spite of the large volume of state-commissioned places, it is often the case that only those officers whose further service requires completion of Master's studies are sent to continue their education.

Every year after the admission period the Education Department compiles a summary of the results of entrance tests and, when necessary, submits proposals to the Council of the ENDC concerning changing or supplementing admission requirements and criteria (including in the curricula) for the next admission period. From 2011 the ENDC and the Defence Forces introduced the following changes:

- ✓ In 2011 the requirement for the state examination in English was introduced in applying for professional higher education.
- ✓ In 2012 the requirement for taking the state examinations in mathematics and English was removed as an admission requirement. The change of requirement was based on the evaluation of the correlation between the state examination results and students' later performance.
- ✓ Based on the Defence Forces Service Act enforced in April 2013. Females have been given the opportunity of completing conscription that will predictably also increase the number of female students commencing studies in professional higher education at the ENDC.

The statistics of the entrance competition (see Figure 23 and 24) prove that the number of student candidates recently peaked in 2010. This fact can be explained by economic hardship and the increase in unemployment. In spite of the state-commissioned education, the ENDC has not strictly observed the requirement of admission quota when completing the courses but has rather followed the completion of admission requirements by the student candidates to a curriculum (including positive results of entrance tests). The abovementioned principle is also supported by the task set by the Commander of the EDF according to which the quality of the future NCO and officer corps is rated more highly than quantity.

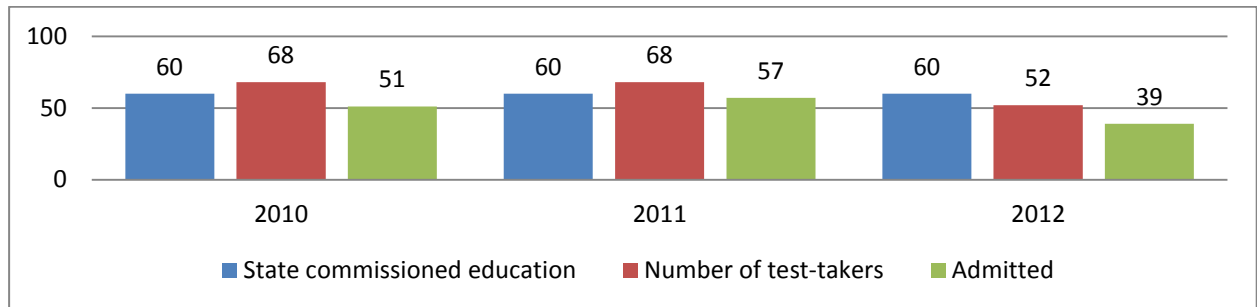


Figure 23. Admission to vocational education 2010–2012

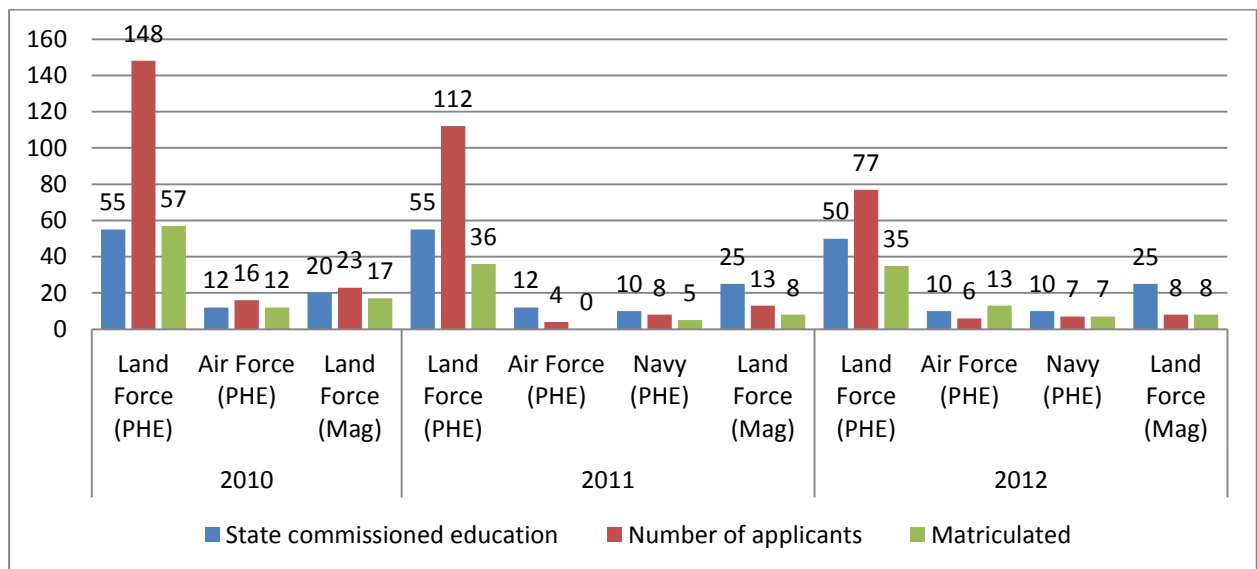


Figure 24. Admission to higher education 2010–2012

Student candidates have the right to contest the admission committee’s decision on whether the candidate is permitted to take the entrance tests or not, the results of the entrance tests or whether the candidate was admitted to the ENDC or not. From 2008–2012 student candidates of vocational education and Master’s studies have not chosen to contest entrance test results. Student candidates of professional higher education have contested test results on 4 occasions altogether. In 2009 the result of the essay in Estonian was contested once, the results of the professional suitability interview were contested on two occasions and in 2010 the result of the essay in Estonian was contested once. Outstanding claims by the admission committee of the ENDC have not been further submitted to the Disputes Committee of the ENDC.

The profile of students admitted to professional higher education is formed on the basis of people conscripted and having completed their conscription. The profile of students of vocational and Master’s studies depends on the background of NCOs and officers applying for the curriculum (obtained formal education, military preparation, course of service) (see Figure 25). Student age

in vocational education is related to the level of military training in the NCO career model, which means that members of the Defence Forces with actual service experience apply to senior NCO courses (vocational education).

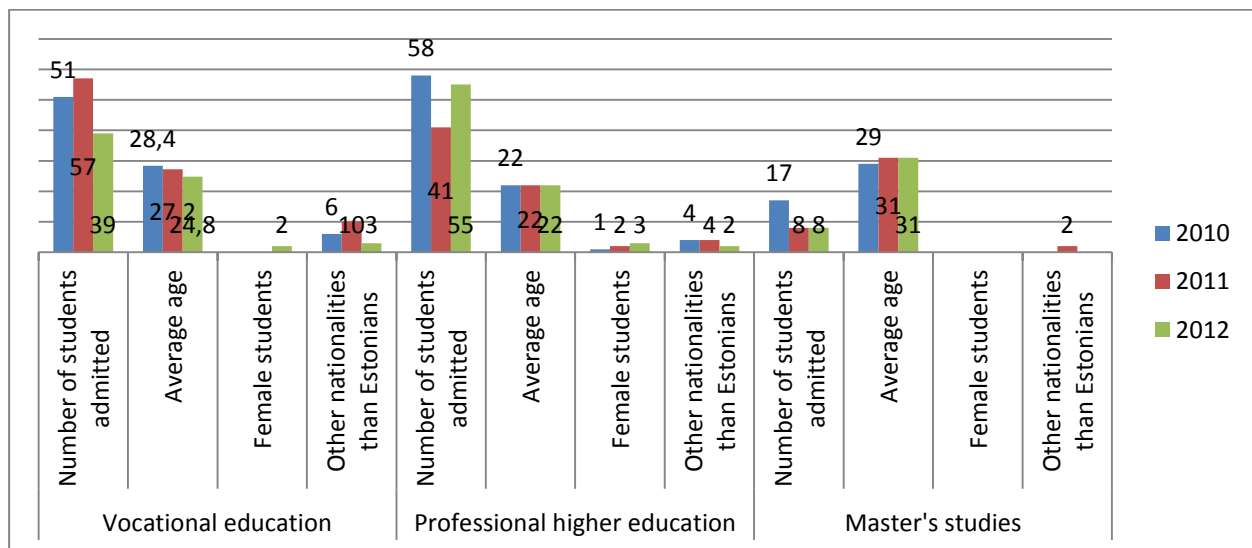


Figure 25. ENDC vocational and professional higher education students' profile in 2010–2012

### Guaranteeing graduate competitiveness

The preparation and conduct of studies takes place in cooperation with the employer or taking into account the employer's needs. Besides the knowledge and skills obtained, the working environment is also important in the process of preparing a future NCO or officer, depending on wartime or peacetime conditions respectively. When in peacetime, the working environment is generally a unit, while in wartime it is generally terrain. Based on that, curriculum-based studies to develop leadership skills are conducted as field exercises, making use of EDF training areas all over Estonia. In order to practice peacetime work tasks, the curricula prescribe practical placement subjects with aims and outcomes supporting the graduates' ability to complete the service duties of their primary positions. The organisation, conduct and evaluation of practical placement all take place in cooperation with units and following Practical Placement Regulations ([Air Force](#); [Land Force](#)) and subject syllabi. Practical placement is conducted in EDF units all over Estonia. The selection of locations for practical placement and the assignment of students to practical placement are both related to graduates' possible future service positions. Every student is assigned a supervisor for the duration of practical placement. The instruction of supervisors and control of practical placement is conducted by the member of the teaching staff of the ENDC in charge of the practical placement.

All graduates of the ENDC are assured of a service position within the EDF or Defence League in accordance with their level of studies. From 2010–2012 all graduates of the ENDC began their service within the EDF or Defence League. The higher education graduate and employee satisfaction survey conducted in 2012 (60% of respondents of the sample) shows that only 10% found they do not work within the field of their studies. It is therefore important that all graduates of ENDC Master's studies work in the field of their studies. Based on the same survey, the service positions of the graduates correspond to the levels determined in the curricula. Graduates of the land force professional higher education curriculum as a rule serve in the positions of platoons and companies (60%), graduates of the air force curriculum serve in various positions in the Air Force and graduates of Master's studies serve as chiefs of staff or staff officers of battalions or other units (83% of the respondents).

Since approximately 80% of the graduates of the ENDC are very satisfied or rather satisfied with their service according to the satisfaction survey conducted among graduates in 2012 (See Figure 26), studies completed at the ENDC can also be considered competitive for graduates who consider their service being only partially connected with their studies.

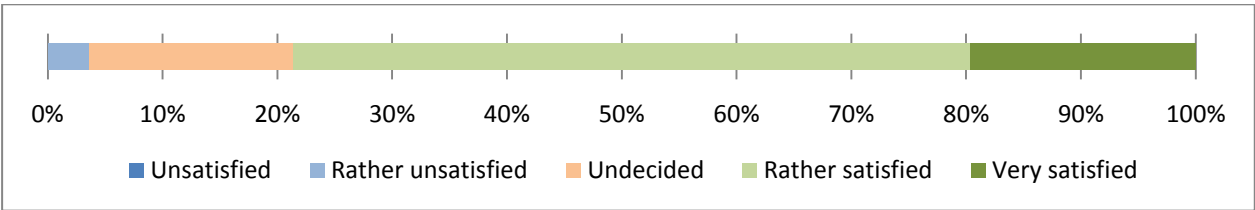


Figure 26. Graduate's (graduated in 2009–2011) satisfaction with their service do far

Since the re-establishment of the ENDC in 1998, there has been a total of 476 graduates (including 70 graduates of Master's studies starting from 2007). Within the last 3 years a total of 20 officers who graduated from ENDC higher education studies have left the EDF. The majority of them have listed a better paid job as a reason. For the ENDC, the above means that studies completed and graduation documents obtained in the ENDC guarantee the competitiveness of graduates in the job market after leaving the EDF. That said, it is important that in 2010–2012 only one graduate of ENDC Master's studies left service in the Defence Forces.

**Learning environment**

The ENDC provides all students with a study and living environment with the following conditions.

Table 7. ENDC learning environment

Service	Description	Notes
Housing	In twin rooms of the dormitory of the ENDC or in the NCO School with facilities for laundry and ironing	During practical placement in the accommodation facilities of EDF units or in tents during field exercises
Food	3 times a day in the dining hall of the ENDC or the NCO School, kitchen facilities available in the dormitory	During practical placement in the dining halls of EDF units, field kitchen or K-rations
Clothing	Field uniform, service uniform, track suit	
Transport	Provided for field exercises, training, locations of practical placement	
Medical service	Out-patient consultation and dental care in the ENDC medical centre	
Salary	From 600 euros (gross) according to rank and years of service	Master's level students receive a salary according to the salary grade of their last position
Information technology support	Access to computers in the computer laboratories, libraries	
Free time	Gym and fitness room in the dormitory, possibility to use sports facilities in Tartu that the ENDC is renting, recreation areas in the dormitory	Possibility to use sports equipment of the Defence Forces (skis, bikes, etc.)

According to the satisfaction survey conducted among the students in both 2012 and 2013 (66.5% of respondents of the sample), students are very satisfied with the study environment (average estimation on the 4-point scale is 3.2). The results of both satisfaction surveys prove that more than 80% of students are satisfied with the psychological study environment and over 90% of students are satisfied with the physical study environment (see Figure 27).

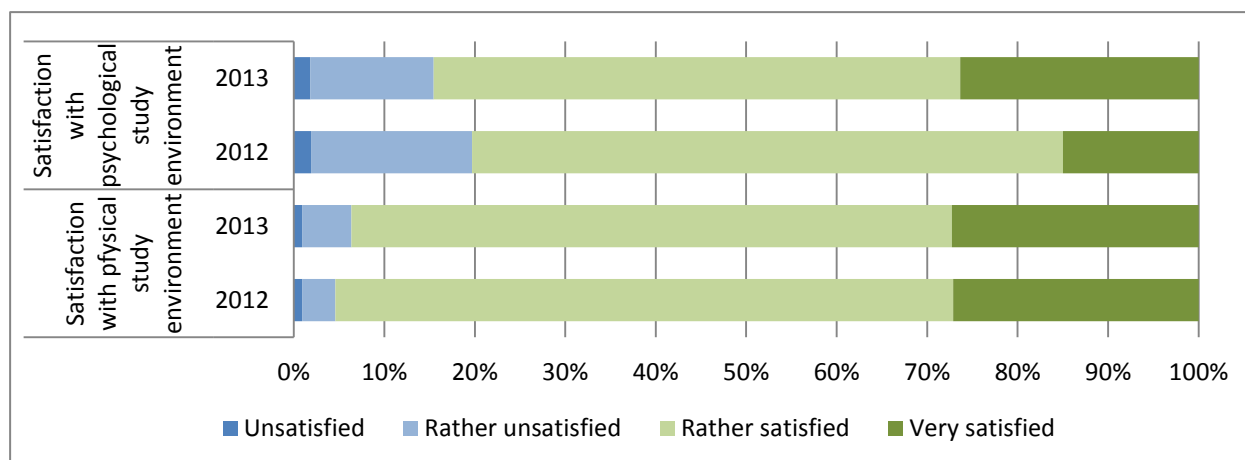


Figure 27. Student’s general satisfaction with learning environment

90% of students are very satisfied or satisfied with all aspects of the library (including collections, databases and service), catering, classrooms (including equipment and comfort), availability of individual study materials and dormitory facilities for independent studies. Information technology facilities provided the least satisfaction. In order to eliminate the shortcomings indicated by students in the 2012 survey, an additional procurement of encrypted memory sticks was carried out, computers in classrooms were replaced and there is a plan to implement an online error notification system that would provide better IT support for users.

In addition to the learning environment provided, students have the chance to participate in several extracurricular activities as an additional asset during their studies in the ENDC.

- ✓ From 2010 all graduates of the land force professional higher education curriculum have the right to teach national defence at high school level.
- ✓ From 2012 all students of professional higher education receive the B- and C-category driver’s licence free of charge.
- ✓ Every year freshmen participate in courses of ballroom dance, etiquette and swimming.
- ✓ All students receive regular firing training (once a month, as a rule) and they can participate in various sports competitions.

## 2.2 Curricula Development

The procedures of compiling, opening, quality evaluation, development and closing of curricula (including composition of curricula, requirements for their content and quality) are prescribed in the [Statute of the Curriculum of the Estonian National Defence College](#) (see Figure 28 and 29).



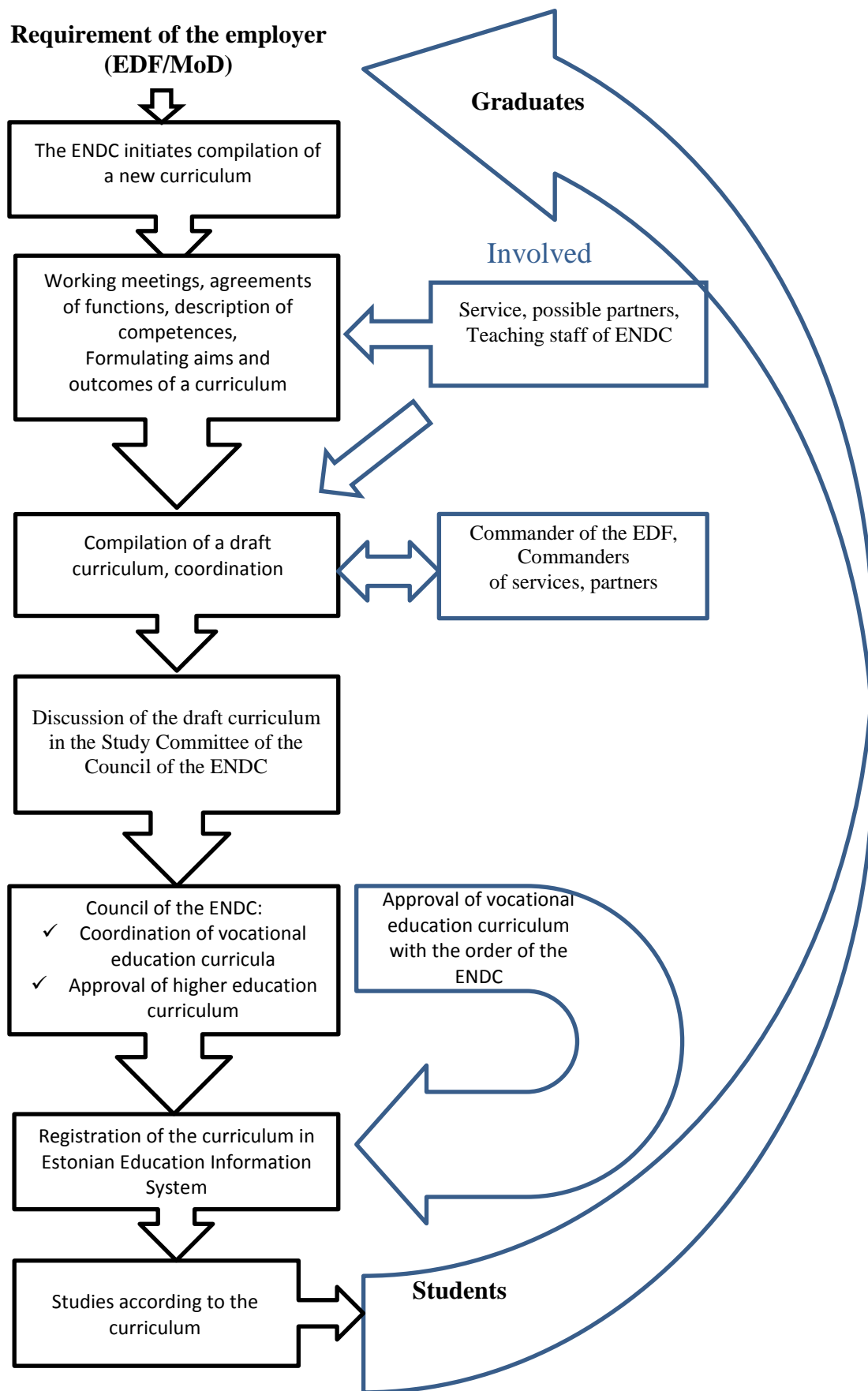


Figure 28. Process chart of curriculum compilation at the ENDC

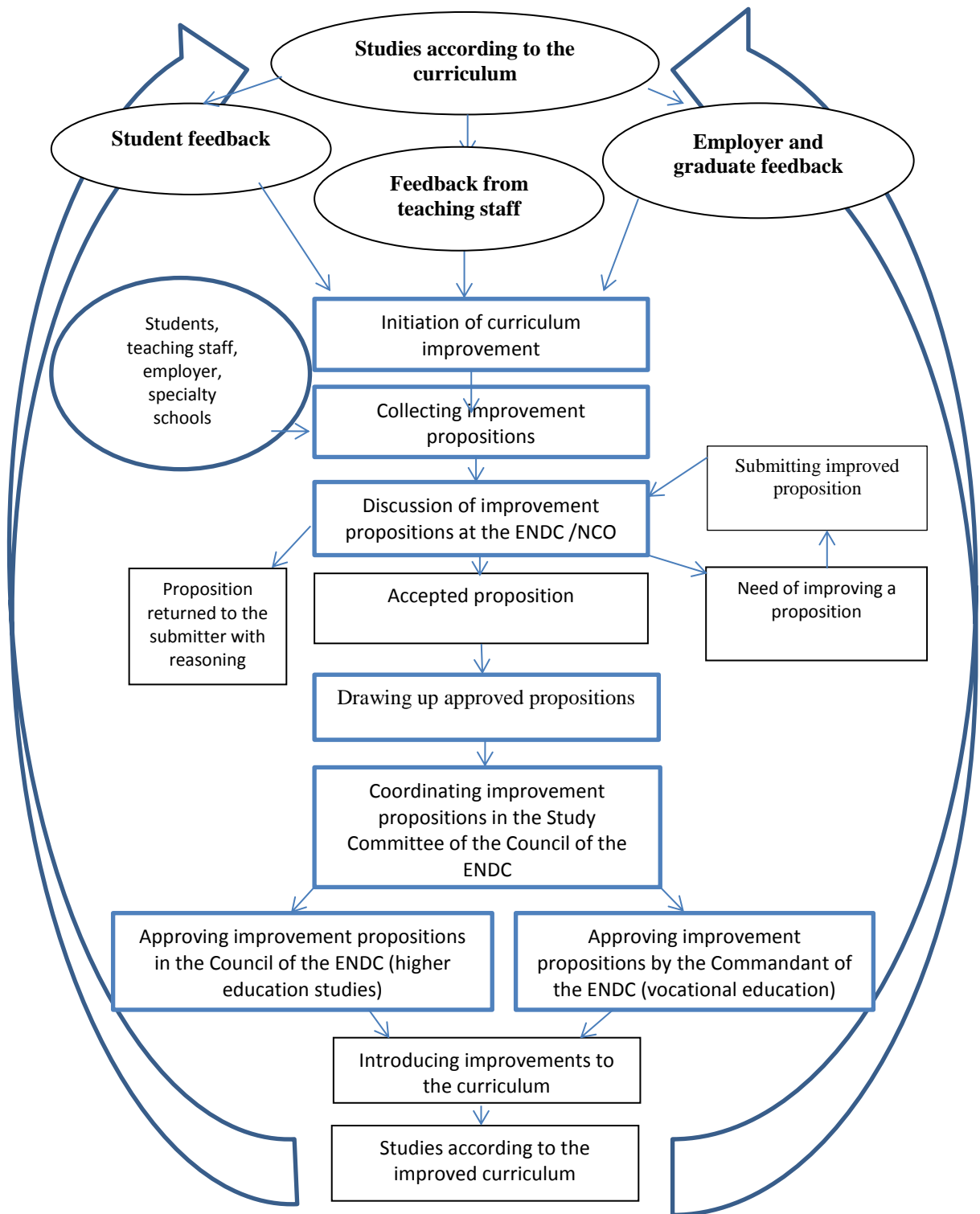


Figure 29. Process chart of improving curricula at the ENDC

Table 8. Development of vocational and higher education curricula and improving the quality of studies starting from 2009

Year	Activity	Reason/initiative
2009	Implementation of outcome-based curricula of higher education (total of 3 curricula)	Legislation concerning higher education
2009	Organising regular seminars for members of the teaching staff in order to improve curricula and quality of teaching 1-2 times a year	Initiative of the ENDC, supported by the Primus programme
2010	Compilation of the professional higher education curriculum “Naval Military Leadership”	Requirement of the EDF
2010	Instigation of series of seminars “From lecturer to lecturer” once a month (25 seminars by April 2013)	Initiative of the ENDC
2010	Compilation of a continuing education curriculum lasting one year to prepare junior officers with prior higher education for the EDF	Requirement of the EDF
2011	Compilation and implementation of the classroom observation system of the ENDC according to <a href="#">Classroom Observation System at the Estonian National Defence College</a>	Initiative of the ENDC, supported by the Primus programme
2011	Implementation of the <a href="#">Mentoring System</a> (2011-2013 18 mentor-mentee relationships)	Initiative of the ENDC, supported by Primus program
2012	Compilation of a new version of the professional higher education curriculum “Air Force Military Leadership”	Initiative of the ENDC
2012	Defining, describing and launching the process of shaping students’ leadership skills following the curricula of the ENDC	Initiative of the ENDC
Once per academic year	Regular enhancement of continuing education and higher education curricula according to the Statute of the Curriculum of the ENDC	Initiative of the ENDC

In 2012 the Programme for Higher Education Quality Enhancement Primus, supported by the European Union ESF, acknowledged the activities of the ENDC in curriculum development in 2011.

Based on the satisfaction survey of 2012, employers on the whole evaluate highly the quality of studies at the ENDC and their applicability (see Figure 30).

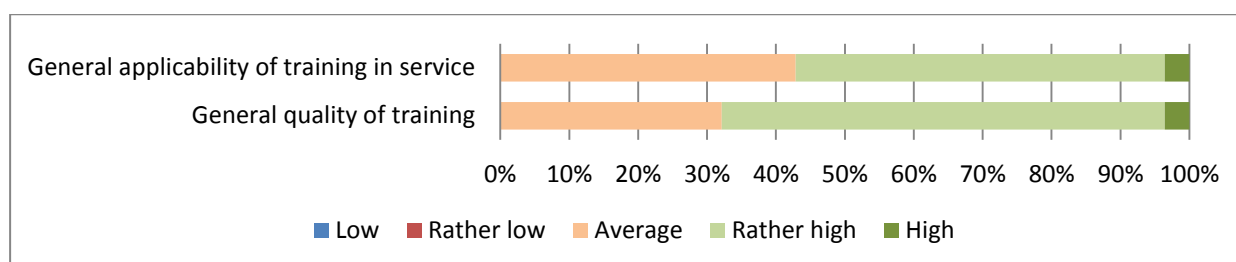


Figure 30. Employer’s estimation of the quality of studies at the ENDC and its applicability (%)

Similarly, the student satisfaction surveys conducted in 2012–2013 show that students are in general satisfied with their studies at the ENDC (see Figure 31).

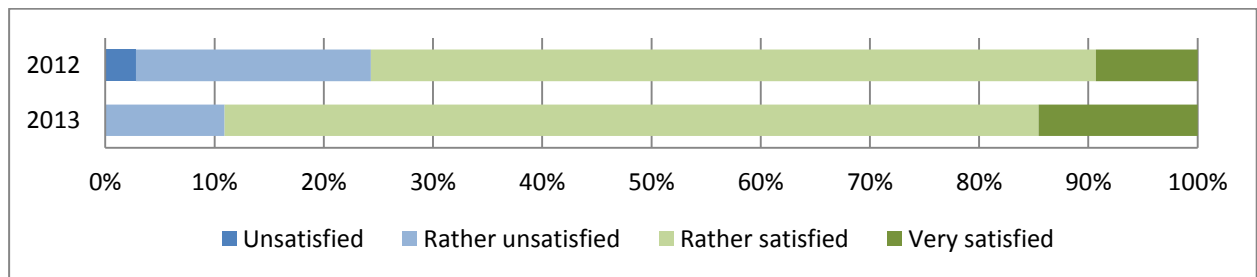


Figure 31. Student's general satisfaction with the studies, 2012–2013

### 2.3 Students' Academic Progress and Evaluation

Participation in studies is obligatory; however, students can when necessary apply for a short exemption from their studies or for academic leave for a longer period of time. The evaluation of students is based on individual subjects (evaluation methods and criteria are described in the respective syllabi) and both formative and summative evaluation are used. The evaluation system is based on the national evaluation system of higher education that awards grades on a scale of 1 to 5 for graded evaluation. Students have the right to contest results at three levels: first, to turn to the person, unit or committee having made the decision; second, to appeal to the Chief of Education Department; and finally to appeal to the Disputes Committee of the ENDC which operates according to the guidelines detailed in the document [Disputes Committee Rules of Procedure](#).

In order to contest the result of a final paper or a Master's thesis the student has the right to submit a written appeal to the Commandant of the ENDC who will convene the Disputes Committee to resolve it. In 2010–2012 there were no contested decisions concerning board examinations or the decisions of defence committees of final papers and Master's theses.

Over the last 3 years an average of 70% of students commencing studies according to higher education curricula have graduated from the ENDC within the standard period of study (see Figure 32).

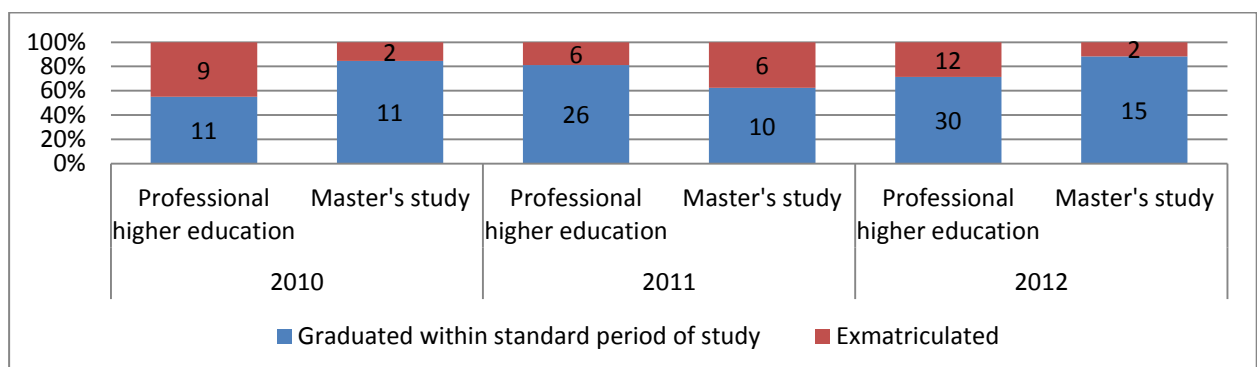


Figure 32. Students admitted in 2007–2010 to higher education curricula graduating within standard period of study

Not graduating within the standard period of study is, in general, caused by exclusion from the ENDC (based on [Conditions and Procedures of Exclusion from the Estonian National Defence College](#)). The main reasons are lack of academic progress, disciplinary offences, personal

decision, being absent during studies (after academic leave) or not defending a final paper or Master’s thesis. In the latter case, the ENDC has introduced the possibility from 2010 of defending a final paper or Master’s thesis at a later date. The exclusion of a student from the list of students does not always mean leaving the Defence Forces. Students deleted from matriculation register can continue their service as NCOs in some units of the Defence Forces. The drop-out rate of freshmen from 11 institutions of professional higher education in Estonia in 2010/2011 was 5.1-35.9%. The drop-out rate of freshmen of the ENDC on the above scale was 9.9%.

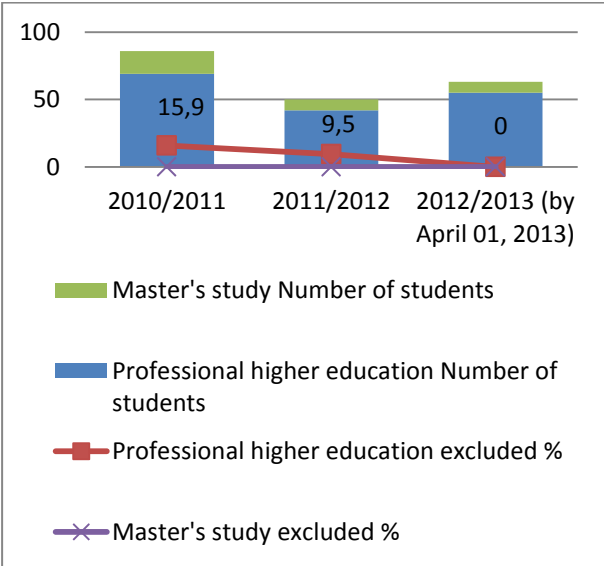


Figure 33. Freshmen dropout in higher education

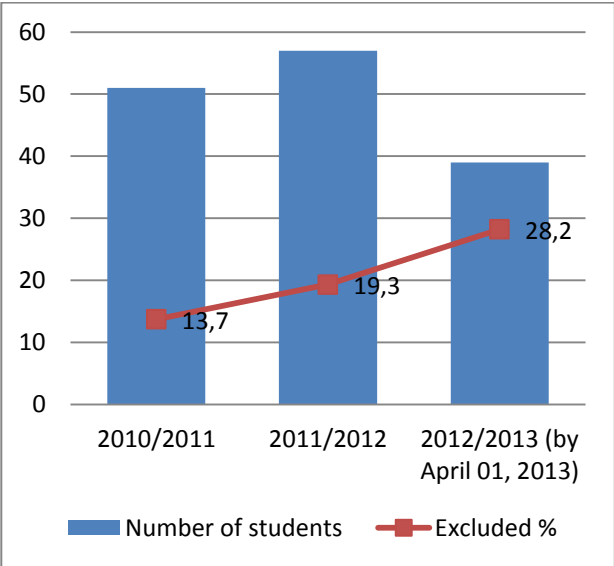


Figure 34. Freshmen dropout in vocational education

Based on the example of the academic year 2010/2011, the general student dropout rate from the ENDC (both professional higher education and Master’s studies) was 10.7% of the total number of students. In the same academic year the general dropout rate from 11 institutions of professional higher education was 7.8-19.9%.

**Accreditation of prior and experiential learning (APEL)**

From 2010, APEL has been implemented at the ENDC based on the [Accreditation of Prior and Experiential Learning Regulations](#). APEL applications are evaluated by an APEL committee consisting of 4 members acting according to the Work procedures of the APEL Committee. Before compiling an APEL application applicants can consult APEL advisors. External students form proportionally the largest group of all APEL applicants. Master’s level students and professional higher education students occupy the second position according to the number of applications and volume of studies.

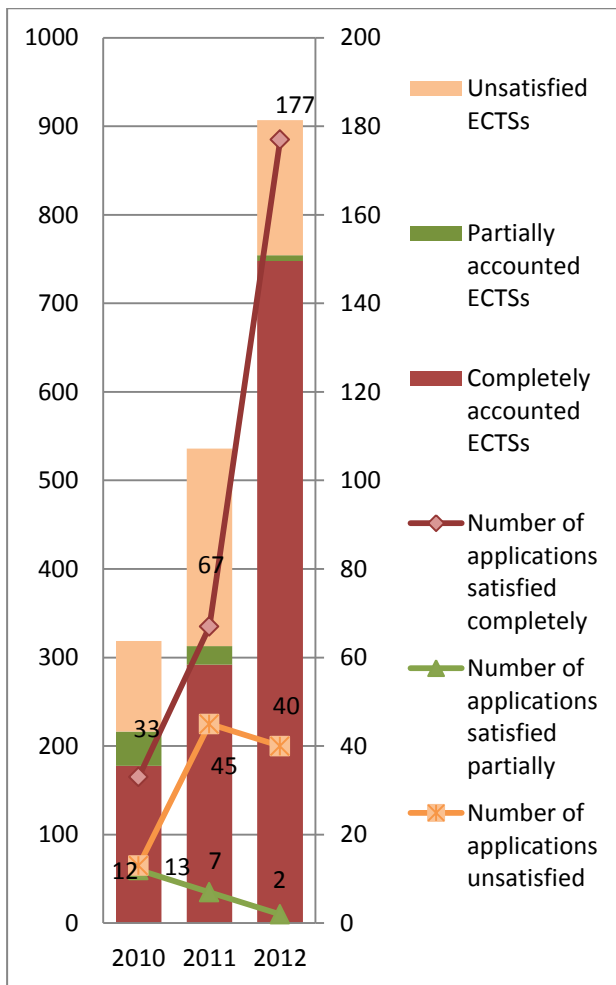


Figure 35. APEL applications in higher education 2010–2012

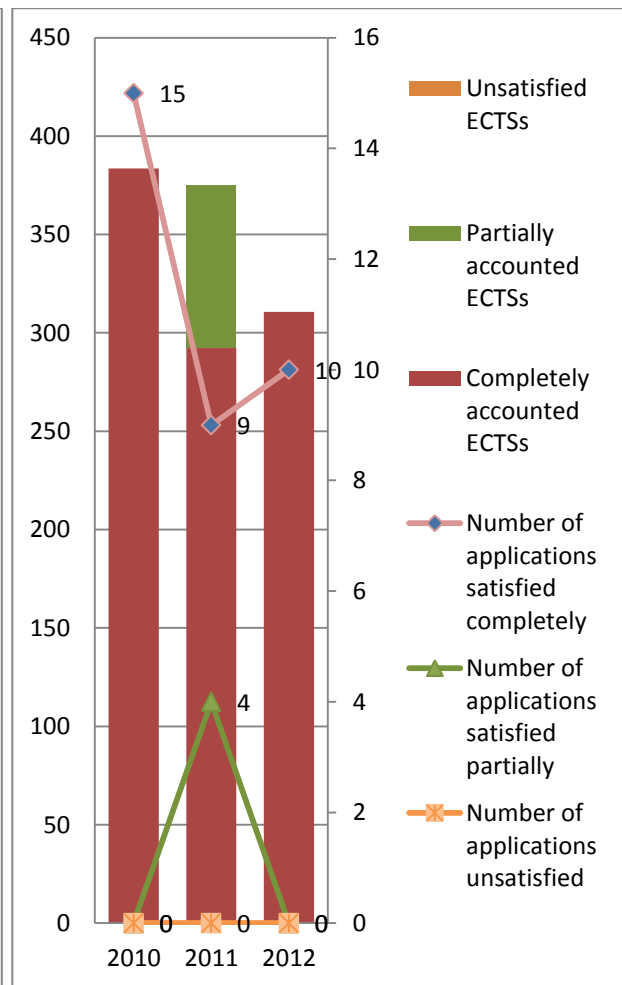


Figure 36. APEL applications in vocational education 2010–2012

The volume of APEL at the ENDC showed an increasing trend in 2010–2012 (see Figure 35 and 36). The large amount of successful applications is due to the transferral of applicant in-service training and experiential learning that corresponds to subject profiles in the curricula of the ENDC.

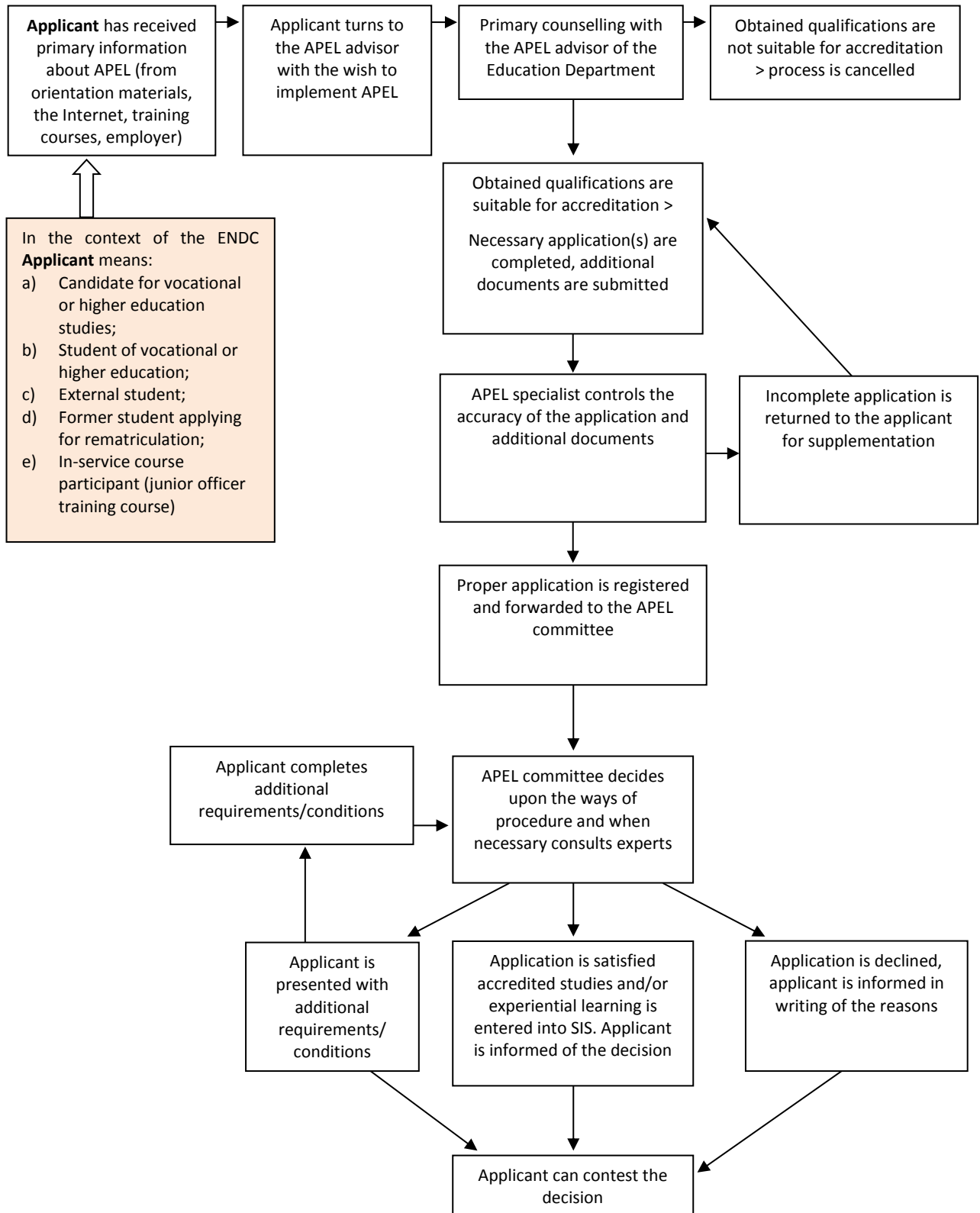


Figure 37. Description of APEL procedures

The APEL committee submits a report to the Council of the ENDC every year, pointing out the APEL statistics, problems and fields of improvement in the given academic year. Since 2010 the APEL procedures have been changed twice and the work procedures of the APEL committee once.

Based on the satisfaction survey conducted in 2013, the satisfaction of students having used APEL fell concerning the APEL process as a whole (2.8 on the 4-point scale in 2012, 2.5 in 2013). This is due to discrepancies in implementing APEL (transferred subjects within APEL have been accredited in completion of a curriculum) and the organisation of student service (students are paid for studying and are in active service, being absent from studies is regulated by Study Regulations that do not support the implementation of APEL during full-time studies).

## 2.4 Study Support Processes

The purpose of counselling is to provide students with the necessary information concerning studies and their organisation, future careers and also their personal life when necessary (see Table 9).

Tabel 9. Student counselling at the ENDC

Unit/person	Content of counselling	Time
Planning Branch of the Education Department	Organisation of studies (including instructions, regulations), timetables, documents attesting studying, SIS, study results, including organisation of practical placement, feedback and everything to do with graduation papers and Master's theses	Working days
Chiefs of Chairs, teaching staff	Studies (including practical placement, graduation papers and Master's theses)	Working days
APEL advisors	Completion of applications, additional documents, deadlines, responses to applications	Working days
Commandant of the ENDC/Chief of Education Department	Students' problems, propositions	Once a month
Course commander, Commander and sergeant of the Officer School	All aspects of studies, service, personal life (including selection of specialties, appointing to locations of service)	Working days, without limitations in exceptional cases
Cadet sergeants (appointed students of senior courses)	All aspects studies and service	Working days
Chaplain of the ENDC, Psychology service of the EDF	Personal matters	Working days, without limitations in exceptional cases
Administration of the ENDC (e.g. advisors to the Commandant of the ENDC), Chief Inspector of the EDF	Matters of a specific area	Working days, without limitations in exceptional cases



Activities connected with student counselling, supporting studies and continuing traditions:

- ✓ From 2009 freshmen complete the course “Study skills in an institution of higher education”.
- ✓ In 2010 the “Cadet Textbook” was compiled in cooperation with students for freshmen of the ENDC.
- ✓ Every year a specialties open day is conducted for all sophomores in order to introduce them to branches and/or armed service specialties and possible courses of service prior to specialty selection, according to specialisation.
- ✓ Student evaluation interviews are conducted with all students (once a year).
- ✓ Sophomores (about 50% of courses) participate in the important formal events (parades, balls) of foreign military academies in order to represent the ENDC and promote international cooperation.

Student satisfaction surveys conducted in 2012 and 2013 showed that approximately 70% of respondents are quite pleased or very pleased with counselling (see Figure 38). Counselling concerning studies and service was evaluated at 2.9 points on a 4-point scale, giving an above average result (base level being 2.5). According to the satisfaction survey conducted in 2013, satisfaction with counselling has generally increased. A fall in counselling satisfaction occurred only for issues concerning student mobility. The latter is due to the fact that student mobility has taken place based on direct offers (depending on academic achievement). Student awareness of various student mobility opportunities is also poor because the development of mechanisms promoting student mobility is still underway at the administrative level of the ENDC.

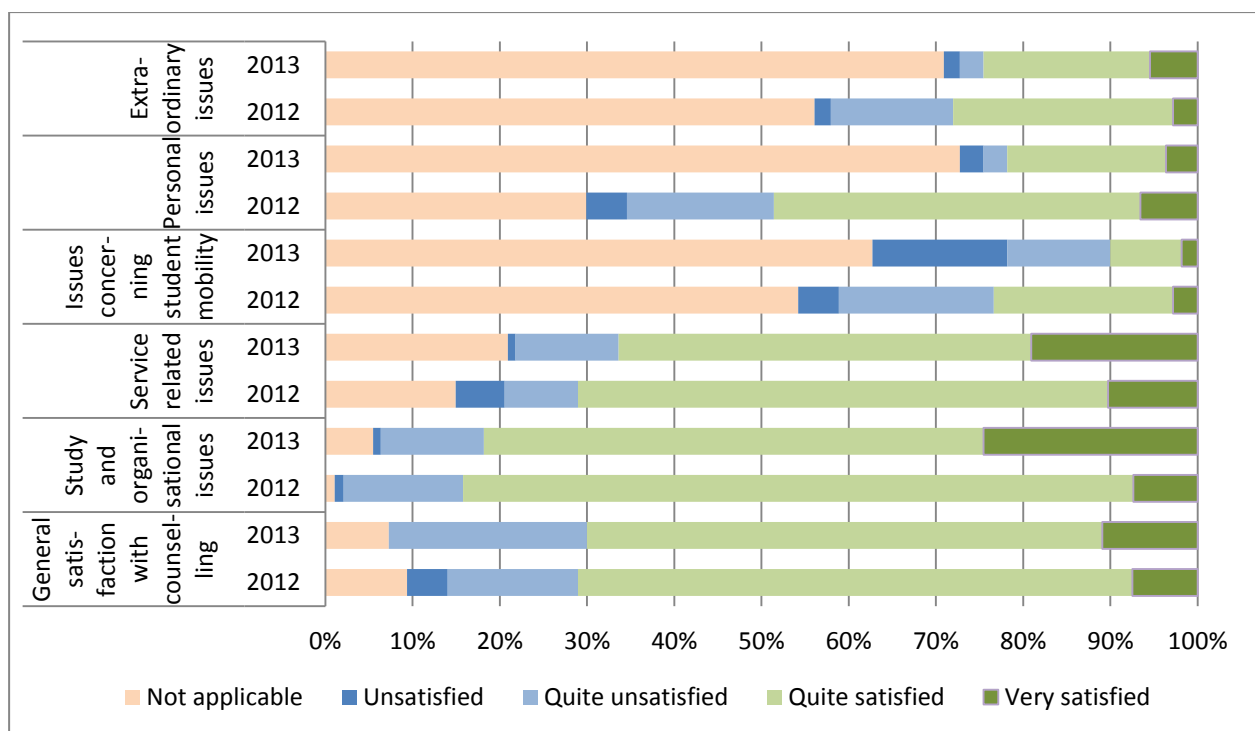


Figure 38. Student satisfaction with counselling

### Involving and motivating students

Representatives of the students of the ENDC belong to the Study Council of the Education Department and to the Council of the ENDC (including the Study Committee of the Council). Every year, students have the chance to submit propositions to improve curricula. Furthermore, students of the ENDC form the student body that acts according to the [Statute of the Student Body of the ENDC](#). The student body has the right to submit propositions to the administration of the ENDC in order to improve different fields of activity within it.

Students are regularly asked to provide feedback on their studies and they participate in the satisfaction survey of the ENDC. Compared with other institutions of professional higher education where approximately 20% of the students respond to feedback questionnaires, the average proportion of respondents among ENDC students is over 60%, making it possible to draw more accurate conclusions concerning areas that need improvement, based on the student feedback. In addition to feedback forms, from 2010 meetings have been conducted with all courses and immediate and more specific feedback is gathered about the previous semester.

For example, based on the results of feedback forms and meetings with students, a new version of the Air Force professional higher education curriculum was compiled, the volume of controlling studies by the administration of the ENDC and teaching staff participation in continuing education courses have been increased, seminars for teaching staff have been given on teaching staff academic behaviour and the application of different evaluation methods during studies.

In order to acknowledge the hard work of the best students, trophies are awarded each semester to the students with the highest academic achievements, based on the Trophy “Best Student of the Semester” Statute. Every semester, the best students are also awarded books. There is a separate assessment of the best final papers and Master’s theses and a valuable gift is awarded to the best graduate in every academic year (an officer’s sword or a hunting knife, according to the service involved). Students are also rewarded using the budgetary means of the ENDC for representing the academy in EDF sports competitions, in competitions outside of the EDF, and for impressive athletic achievements.

### **International Cooperation**

The aim of international mobility is to develop cooperation with institutions of higher education abroad (including military schools), to improve Estonian officers’ interoperability with their partners and to improve student, teaching staff and employer competence, and thus also the quality of studies at the ENDC. The aim of the Development Plan of the ENDC in 2011–2015 is to increase the number of students completing their studies abroad from 1% of the total to 3%, and starting from 2012 to admit foreign students so that they would constitute 1% of the total number of students at the ENDC.

In the pursuit of international cooperation, the ENDC makes use of the DoRa programme funded by the EU ESF and the “Military Erasmus” initiative launched by agreement of the Defence Ministers of the EU in 2008 (see Figure 39). When the DoRa programme supports the participation of Master’s level students, teaching staff and junior researchers in international research circulation, this Military Erasmus programme is predominantly for the exchange of professional higher education students. Within the latter the ENDC entered into a bilateral cooperation agreement in 2012 with the Theresan Military Academy in Austria, and by the year 2013 there is a plan to enter into cooperation agreement with the Polish Air Force Academy. In 2013 the ENDC will join the Erasmus program which will expand such cooperation possibilities even further. There is a plan to complete the aim set by the Action Plan of the Development Plan of the ENDC to enter into three international cooperation agreements by the end of 2013.

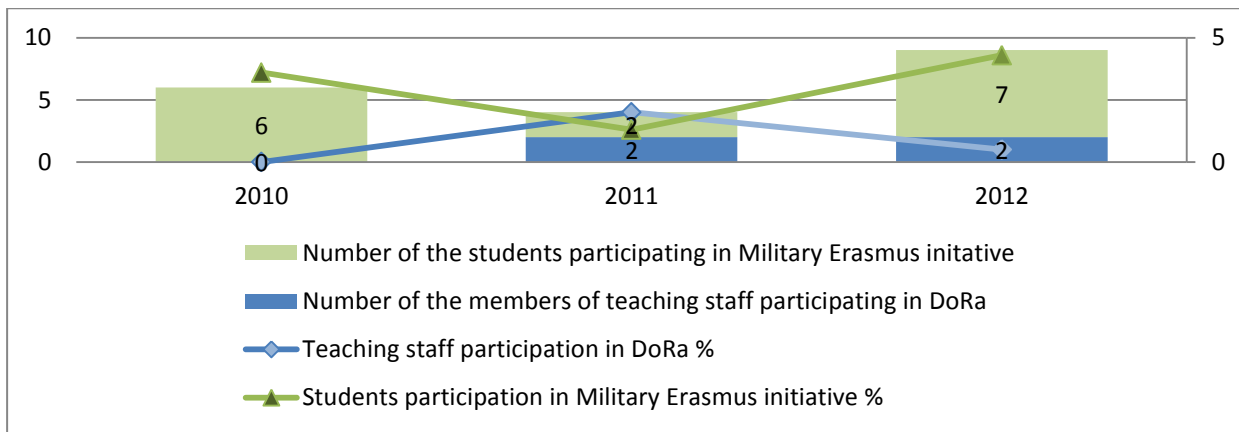


Figure 39. Students and teaching staff participation in mobility programs in 2010–2012

According to the order of the Commandant of the ENDC of 2013, there is a plan to open at least one subject taught in English in the academic year 2013/2014, thus creating the possibility to admit foreign students.

The ENDC employs two full-time foreign members of teaching staff and three visiting members of teaching staff. This satisfies the goal set by the action plan of the Development Plan for the year 2013, according to which in 2013 the teaching staff of the ENDC should contain 2% of foreign members. By April 1<sup>st</sup> 2013 the goal was surpassed and the proportion of foreign members of teaching staff (including visiting members) totals 8% at present.

### Using modern technical and technological equipment in studies

Standard equipment in all classrooms includes a computer and screen projector. Computers are connected to the general computer network of the EDF with Internet access. The ENDC Simulation Centre is equipped with simulation systems (VBS, JCATS) that make it possible to practice the command of both small tactical level units and operational level units in a virtual environment, and to test battle plans compiled during studies. The fire simulator ALFONS 2M is used. Military training areas and firing ranges all over Estonia are used to conduct practical training. From September 2012 two lecture recording devices ECHO 360 were introduced.

In order to increase the flexibility of studies and to promote individual learning, the ENDC has set the goal of increasing the use of e-learning platforms. According to the Implementation Plan of the Development Plan of the ENDC, in 2011–2015 the aim is to increase the number of subjects taught with e-learning support or e-learning subjects from the basic level in 2011 (i.e., one subject per Chair) to the target level whereby every Chair will provide 5 e-learning subjects by 2015.

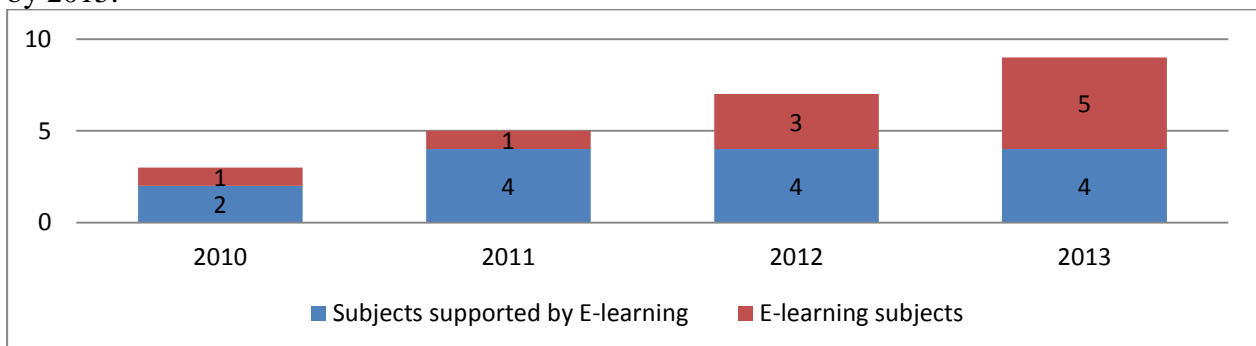


Figure 40. Using the E-learning platform in higher education studies in 2010–2013

## **Strengths and areas of improvement manifested in the educational activity of the ENDC**

### **Strengths**

- ✓ Studies at the ENDC are purposeful and directly comply with the interests of the employer, there is close cooperation with the employer in different activities.
- ✓ Curricula have been compiled in cooperation with the employer and partners, graduate competence corresponds to the requirements of the employer, curriculum development is regular and systematic.
- ✓ Study processes are regulated with respective documents, and discussing/solving/deciding upon issues connected with studies takes place in decision-making bodies at various levels.
- ✓ Counselling at different levels is provided for students.
- ✓ A versatile physical learning environment is provided for the students.
- ✓ Students' practical placement takes place without exception in their future work environment and all graduates are provided with a position either in the EDF or the Defence League.
- ✓ The ENDC has initiated several new activities in 2009–2012 to improve curricula and the quality of studies. The quality of higher education improvement program Primus, supported by the EU ESF, has been of great help in development work.

### **Areas of improvement**

- ✓ Due to the limited amount of student candidates, competition to curricula is not fierce which means and requires more systematic and powerful recruitment policies and actively promoting the military profession in order to fill student positions.
- ✓ To harmonize and improve the teaching staff's methodological competence, to increase the integration of subjects within one curriculum and to modernise teaching materials.
- ✓ To increase the mobility of students and teaching staff, to start teaching subjects in English in order to admit foreign students and to establish an international study environment.
- ✓ To find ways of solving the discrepancies between service regulations and applying APEL.
- ✓ To ensure a more balanced use of the e-learning platform in studies and within Chairs.

### 3. RESEARCH AND DEVELOPMENT ACTIVITIES (RDA)

#### 3.1 Strategic Aims and Evaluation of RDA Efficiency

The research and development activities of the ENDC are based on the [Strategy of Research and Development Activities of the Estonian National Defence College](#) and the development plan of the ENDC 2011–2015, whose primary tendencies of enhancing defence are determined by the development plan of national defence 2013–2022 and research and development principles within the Ministry of Defence (MoD) area of government (corresponding strategy for 2013–2022, currently underway). The aim of RDA at the ENDC is to support research-based teaching and scientific research and development activities (incl. developing applicable solutions) within the military and national defence in order to improve the Estonian defence capability. Within the relevant competence the focus is also on essential defence topics for NATO and the EU, e.g., war and disaster medicine, military psychology and simulation systems. The ENDC belongs to the RDA coordination group and to the research council of the MoD.

All members of the teaching and scientific staff appointed to the positions of lecturer, associate professor or professor with a work load of at least 0.5 have the obligation to perform research work. The efficiency of RDA at the ENDC is evaluated according to the key results of the ENDC of which publications, ENDC Proceedings, scientific and research projects, international conferences and seminars, study materials and equipment are the indicators.

#### Publications

In 2008–2012 members of the teaching and research staff with the requirement of research work published 250 research publications. The number of publications has increased over the past three years. According to the Estonian Research Information System (ERIS), 132 of these publications are classified as “local” (ERIS 3.2-6.6) and 118 as “international” (ERIS 1.1-1.3, 2.3 and 3.1), see Figure 41). There were 15 publications at level 1.1 and 8 publications at level 3.1 published within the given time period.

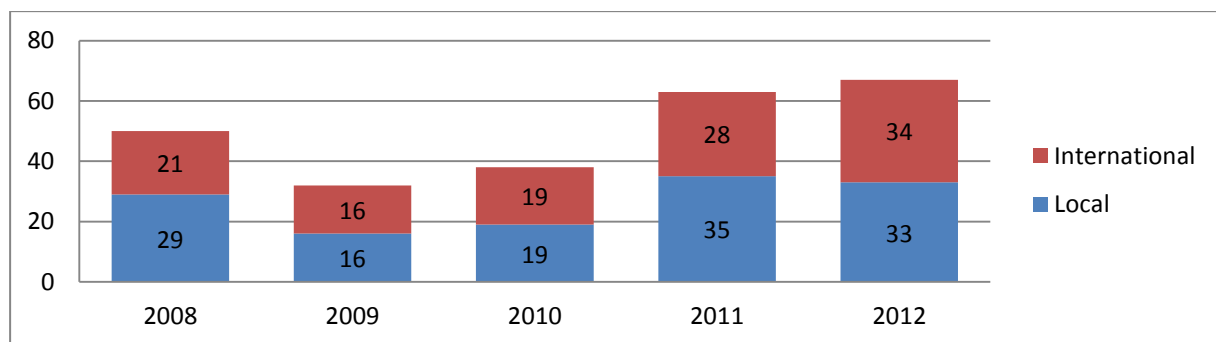


Figure 41. Number of research publications in 2008–2012 (source: ERIS)

#### ENDC Proceedings

From 2003 the peer-reviewed international research journal the ENDC Proceedings has been published at the ENDC (ERIS classification 1.2) in cooperation with the University of Tartu Press and with the international editorial board and council. The ENDC Proceedings are published semi-annually with a circulation of 300 copies, 16 volumes of the ENDC Proceedings being published in 2003–2012. All published articles can be [freely found](#) after publishing. From 2009 subseries of the ENDC Proceedings – Cultural, Peace and Conflict Studies Series – has been published. In 2012 the ENDC joined the CEEOL abstract database.

Among the authors of the ENDC Proceedings there can be found not only employees of the ENDC and the EDF, but also researchers and teaching staff from other institutions of higher education in Estonia and abroad. In the Proceedings published in 2008–2012 41% of the articles were written by employees and students of the ENDC, however the journal is becoming increasingly popular among the teaching and research staff of other institutions of higher education (see Figure 42). Since 2003 the ENDC Proceedings have been ready to collaborate with students having defended final papers or Master’s theses (also at the ENDC), having published 4 articles of student papers written at the ENDC and 8 papers at other institutions of higher education that suit the profile of the Proceedings.

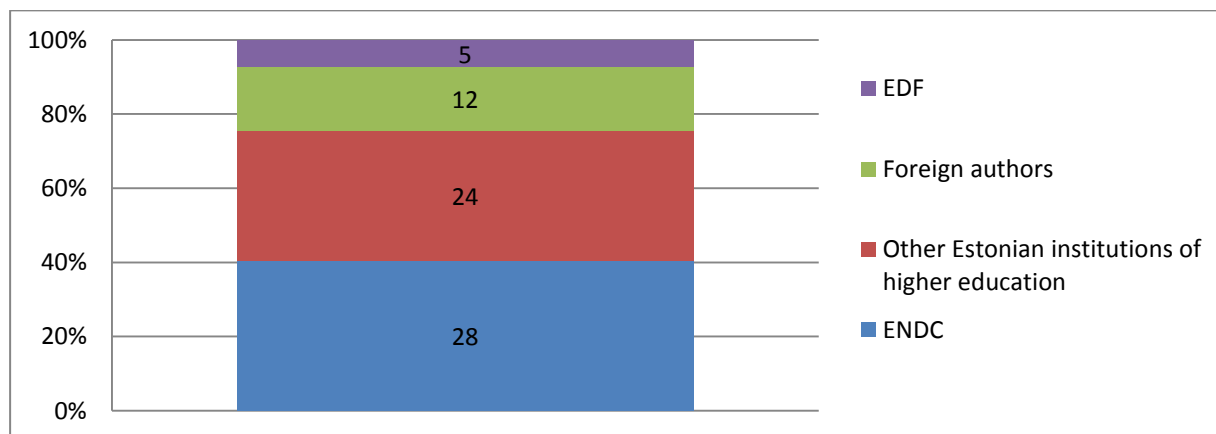


Figure 42. Authors of the ENDC Proceedings in 2008–2012 (volumes 11-16)

According to the action plan of the development plan of the ENDC for 2011–2015, ongoing reforms of the Proceedings will make them correspond to ERIS requirement 1.1 of research publications by 2015.

### Science and research projects

The academic staff of the ENDC participates in scientific and research projects both within the MoD area of government and outside, in the latter case contributing to research activities within their professional field conducted at other institutions of higher education. The ENDC teaching and research staff in doctoral studies in different institutions of higher education also promote factors of research work (7 people as of April 1<sup>st</sup> 2013). In 2008–2012 the academic staff of the ENDC participated in completing 58 different scientific and research projects (see Figure 43).

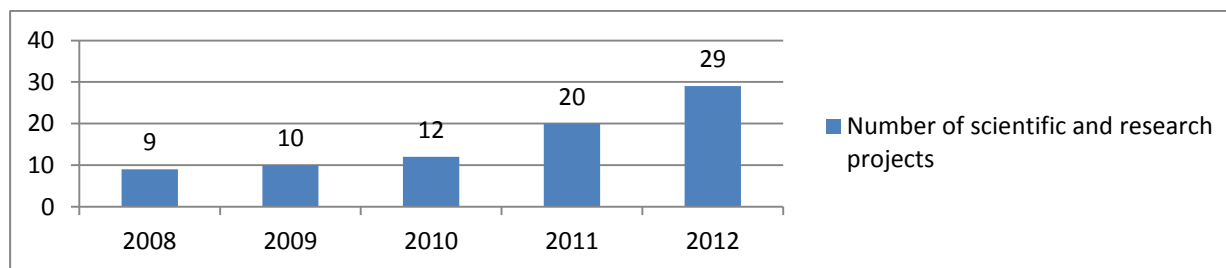


Figure 43. Members of teaching and research staff of the ENDC’s participation in scientific and research projects in 2008–2012 (incl. projects over several years)

Since 2003 the ENDC has applied for and completed research projects aimed at enhancing the development of national defence, funded by the MoD (see Table 10).

Table 10. Research projects funded by the MoD and their executors 2005–2013

<b>Grant/project</b>	<b>Main executor</b>	<b>Co-executor</b>	<b>Period</b>
Common map application of the Estonian Defence Forces for geospatial data handling	ENDC	Map Centre	2003–2004
Derivation of Meteorological Data from GPS Navigation System	ENDC	Tallinn University of Technology, Tartu University	2005–2008
Viability of military vehicles on Estonian soils in non-freezing conditions	ENDC		2007–2009
Analysis of feet strain division and rectifying biomechanics in overload syndrome and injury prevention and treatment in military training of servicemen	ENDC	Tartu University Hospital, Sports Medicine and Rehabilitation Clinic	2008–2013
Viability of infantry fighting vehicles on Estonian territory	Estonian University of Life Sciences	ENDC	2012–2015
Selection and integration of a psychometric instrument corresponding to EDF needs in the personnel evaluation system.	Tartu University	ENDC	2012–2015
Assessing the health hazards of active servicemen	Tartu University	ENDC	2012–2015
Developing protective clothing from special textiles	Tallinn University of Technology	ENDC	2012–2016
Military history of Estonia in the context of global military developments	Tartu University	ENDC	2013–2019

The ENDC has also participated in targeted funded research projects (see Table 11).

Table 11. Targeted funded research projects fulfilled with ENDC participation

<b>Project</b>	<b>Main executor</b>	<b>Co-executor</b>	<b>Funded by</b>	<b>Period</b>
Promotion of cadet intercultural sensitivity as a facilitator of effective adjustment in multicultural environments of deployment	ENDC	Tartu University	Programme Primus supported by EU ESF (foundation Archimedes)	2008–2011
Online multimedia dictionary of logistics and management of supply chains	Estonian Entrepreneurship University Mainor	ENDC	EU ESF Sub-measure of cooperation and innovation of institutions of higher education (Archimedes foundation)	2011–2013

In addition to the abovementioned projects, institution-specific research topics have been identified in order to promote research and development activities at the ENDC, thereby supporting the completion of the RDA strategy (see Table 12). The selection of research topics and compilation of research tasks is based on the profile of the Chairs of the ENDC and their professional competences, and these are in turn based on the priority development direction of the EDF. By 2013 three Chairs were assigned research topics. Research topics for the Chair of Tactics and Chair of Natural and Exact Sciences are being drafted.

Table 12. Research topics approved by the Council of the ENDC in 2012

<b>Research topic</b>	<b>Chair</b>	<b>Status</b>
Soldier, Organisation and State: Comparative Analysis of Principal Values and Leadership Principles in Modern Democratic Society and Military Organisations	Chair of Humanitarian and Social Sciences	Research tasks compiled
Military history of Estonia in the context of global military developments	Chair of Strategy	Research project funded by MoD
Communicative Links Between Military Fields and Propaganda	Language Centre	Basic function compiled

### **International research events and research cooperation**

In accordance with the development plan of the ENDC, the Chairs and the Centre for War and Disaster Medicine organise international research events in order to promote international relations and support research-based learning. Conferences within these areas of activity also form part of the development of research topics and integrated degree studies at the ENDC (incl. student participation, using video recordings in learning). (see Table 13).



Table 13. International conferences at the ENDC in 2009–2012

Year	Name	Partici- pants	Associated and additional activities
2009	Historical and Contemporary Perspectives on the Law of Armed Conflict (LoAC)	90	LoAC seminar for Master's students, special volume of the Proceedings (No. 15)
2010	Military and Catastrophe Medicine	220	Seminar Camp Bastion Field hospital Tabletop Exercise
2011	The Challenges for Officer Training and Their Prospective Careers	90	Leadership seminar for Master's students
2011	Military and Emergency Medicine	225	Meeting of the Chiefs of Medical services of the DF of Baltic States and Medical training working groups
2012	World War II in the Baltic states	100	Planned activity of a research topic
2012	Translating and Interpreting Military and Related Texts	120	Planned activity of a research topic, special volume of the Proceedings (No. 16)
2012	China, Russia and the West: Interests, Images and Relatedness	85	Seminar (special operations) for officers of the ENDC and the EDF
2012	Ethical and Moral Aspects of Military Leadership	110	Leadership seminar for the students
2012	Military and Disaster Medicine	210	Workshop introducing the conduct of <i>Major Incident Medical Management and Support</i> course

In addition to conferences organised by the ENDC and supporting the goals of the RDA strategy, employees of the ENDC participate in national and international conferences and seminars. In 2008–2012 the teaching and research staff of the ENDC participated in 154 international research conferences and seminars and delivered 92 presentations.

Members of the ENDC teaching and research staff cooperate with universities and research institutions in Estonia and abroad (incl. military institutions) in both studies and research activities (see Table 14). As of April 1<sup>st</sup> 2013 there exist cooperation contracts with six education and research institutions; there are, however, more cooperation partners in total.

Table 14. Main partners in study and research work of the ENDC

<b>Estonian institutions of higher education and research establishments</b>	Tartu University, Estonian Aviation Academy, Estonian Maritime Academy, Estonian University of Life Sciences, Tallinn University, Tallinn University of Technology, Estonian Academy of Security Sciences, Tartu and Tallinn Healthcare Colleges, The National Archives of Estonia, Estonian War Museum, The Institute of the Estonian Language
<b>Foreign institutions of higher education and research (incl. military institutions)</b>	Theresan Military Academy (Austria), Turku, Cambridge and Melbourne universities, Führungsakademie der Bundeswehr, Zentrum für Militärgeschichte und Sozialwissenschaften der Bundeswehr (ZMSBw), Polish Air Force Academy and University of the Federal Armed Forces Hamburg, Institute for Peace Research and Security Policy Research Centre ZEUS, Hamburg (Centre for European Peace and Security Studies, Research Group DemoS)

In order to maintain and improve the qualifications of the teaching staff, 9 employees participate in the editorial boards (incl. international boards) of journals and volumes. In 2008–2012 ENDC staff supervised 31 student papers in other institutions of higher education.

Participation in the activities of security organisations and professional networks is an additional outcome of international cooperation (see Table 15).

Table 15. Employees of the ENDC in international RDA networks

<b>Organisation</b>	<b>Working group/panel</b>	<b>Activities</b>
NATO Research and Technology Organisation/ Science and Technology Organisation	Exploiting Commercial Technologies and Games for use in NATO	CAR (incl. Simulation Centre) membership in working groups
	Security in Collective Mission Simulation	
	NATO Training Simulation Working Group	
	CAX Forum	
	Psychological Aspects of Deployment and Health Behaviours	
	Medically Unexplained Physical Symptoms in Military Personnel	
	Psychological and Physiological Selection of SOF Personnel	
	Mental Health Training	
	Military Suicides	
NATO Training Group	Individual Training and Education Development	Membership, tasks in working groups
European Defence Agency	Project ATHENA	Membership, tasks in working groups
	Asymmetric Threats in Urban Operations	

Network for Research and Cooperation in Cultural Development		Participating member of the teaching staff uniquely in Estonia possesses the licence of IDI (Intercultural Development Inventory) test administrator
International Society for Intelligence Research		Regular reports in annual conference, publishing research results
Baltic Military Psychologists Expert Forum		National representative
Bureau for International Language Coordination		Regular reports in conferences and seminars, methodological development activities

**Study materials and aids**

In accordance with the action plan of the development plan of the ENDC, the aim is to provide a sufficient number of study materials and study aids. In 2010–2012, 3 [study materials and aids](#) were compiled each year for vocational and higher education studies. In the compilation of the study materials the focus has been on tactics (including the leadership of military units) and science. Such an approach results from the lack of standard instructional materials in the field (e.g. tactics) or from the need to address topics from a military-specific perspective (e.g. physics). By 2015 the action plan of the development plan will prescribe the compilation of 4 study materials per year.

**3.2 RDA Resources and Support Processes**

For the organisation of RDA events (e.g. conferences) the ENDC has an integral system of logistic support (including transport, accommodation, catering). The RDA of the ENDC is financed from ENDC operational costs (conferences and the ENDC Proceedings), the MoD budget (research grants) and structural funds (projects of the Archimedes Foundation). Until 2010 the MoD allocated the budget for research projects for the ENDC in its capacity as main executor, including co-executors from other institutions of education and research. In connection with the centralisation process of the EDF, the financing of RDA projects was changed from 2011, according to which, pursuant to the Conditions and Regulations of Initiating Military Research, Science or Technology Projects for public universities or evaluated research and development institutions, the ENDC will act as co-executor in the RDA projects of the MoD with whom educational and research institutions enter into corresponding contracts as partners.

The budget for organising conferences is planned annually within the ENDC operational costs and has increased each year (see Figure 44). The budget for the ENDC Proceedings has remained stable. However, due to the development plans of the journal, the budget of the Proceedings also needs to increase (see Figure 45).

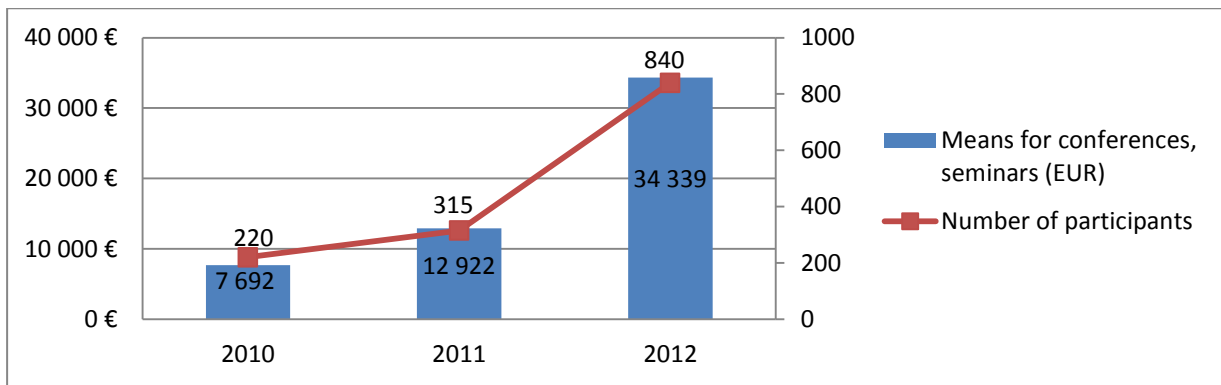


Figure 44. Budget of research conferences and seminars and number of participants 2010–2012

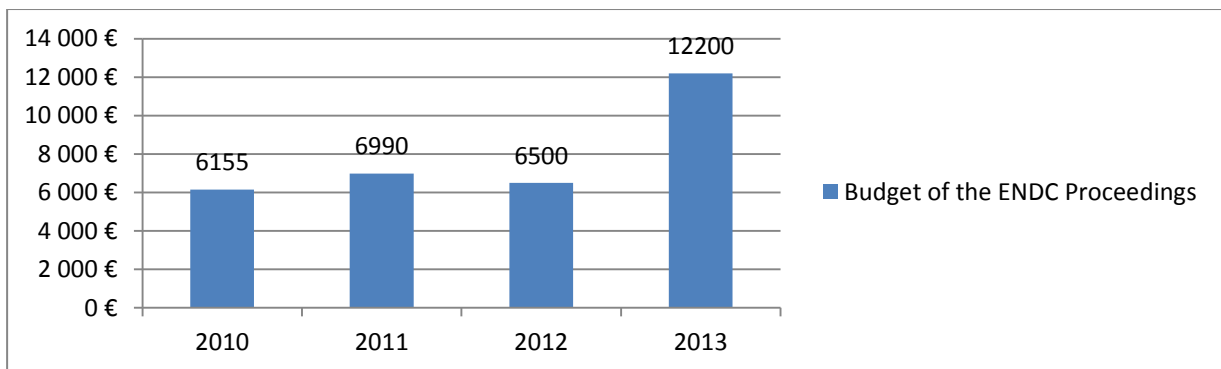


Figure 45. Budget of the ENDC Proceedings in euros 2010–2013

As main executor of the projects applied for at the MoD (2003–2010), the ENDC budget for research projects was 201 000 euros, and from 2011 the budget for co-executed research projects is 1.7 million euros. From 2008 the budget of projects funded by structural funds and with ENDC participation was 87 000 euros. From 2011 the RDA of the ENDC were also financed from the EDF Headquarters budget (activities related to research topics and applied research).

The development of RDA at the ENDC is supported by the Regulations and Procedures of Supporting Doctoral Studies of Military Personnel, with the aim of improving the research potential of the EDF through the promotion of doctoral studies (incl. financial support and conducting small-scale research work). The Centre for Applied Research functions as a support structure for RDA at the ENDC with the abovementioned goal of hiring doctoral students as research fellows in active service, conducting research based on the requirements of the EDF and coordinating the compilation of EDF guidelines (e.g., doctrines).

### 3.3 Supervising Student Papers

#### Process of supervising and supervisors

The compilation of student papers is regulated by Guidelines for Compiling, Presenting and Defending Student Papers at the ENDC. In order to support this compilation, curricula of different levels contain the respective subjects, and every course member participates in 2 research seminars and a prior defence of papers.

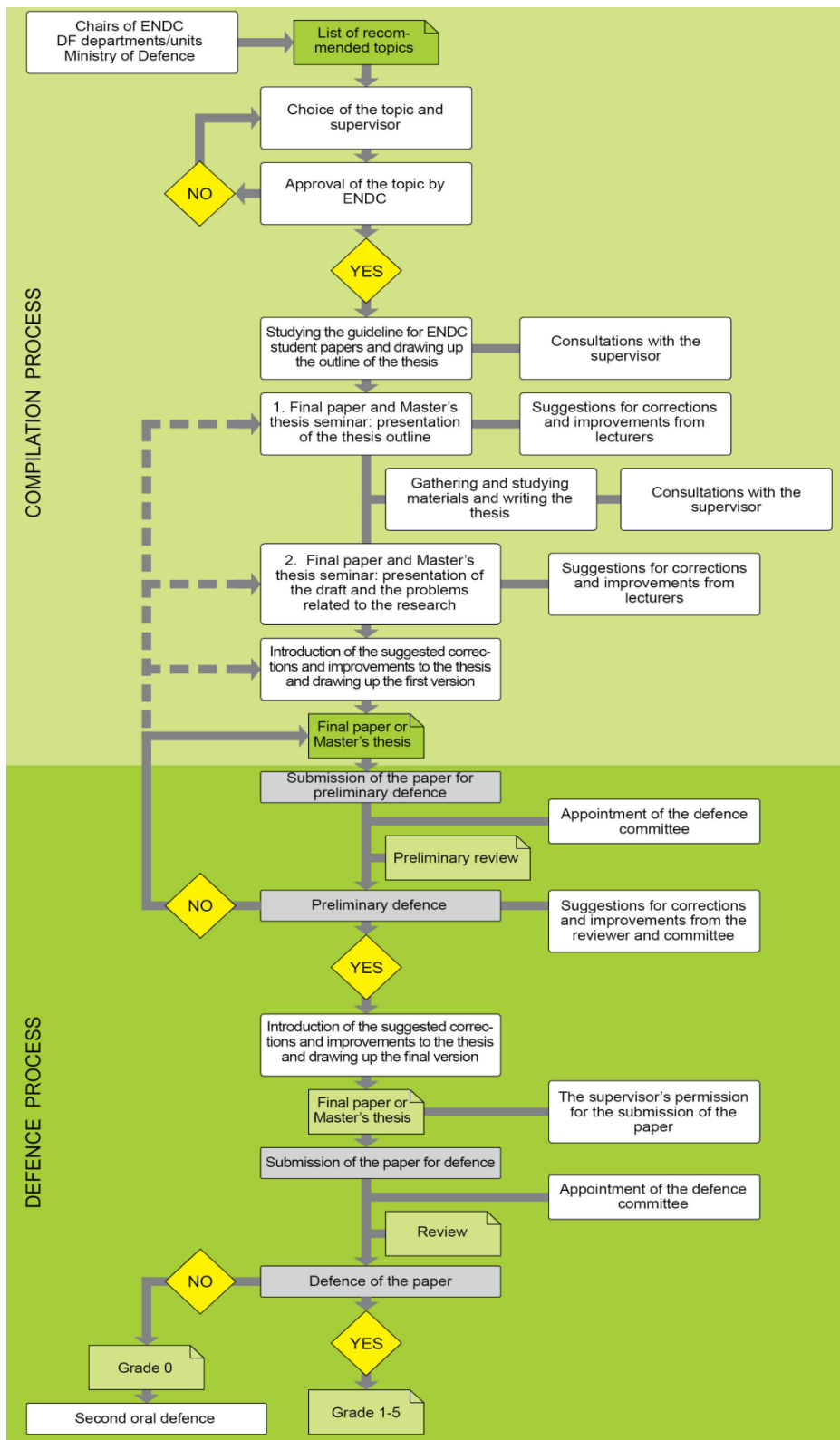


Figure 46. Process of compiling student papers at the ENDC

In order to increase supervising competence, approximately half of the teaching staff at the ENDC have taken part in the in-service course “Supervising Student Research Papers and Providing Feedback”. Supervising experience is also shared and issues related to supervision are discussed during the seminars “From Lecturer to Lecturer”.

Within the Chairs of the ENDC, most student papers are supervised in the Chairs of Tactics (TK), Humanitarian and Social Science (HS), and Strategy (ST) (see Figure 47).

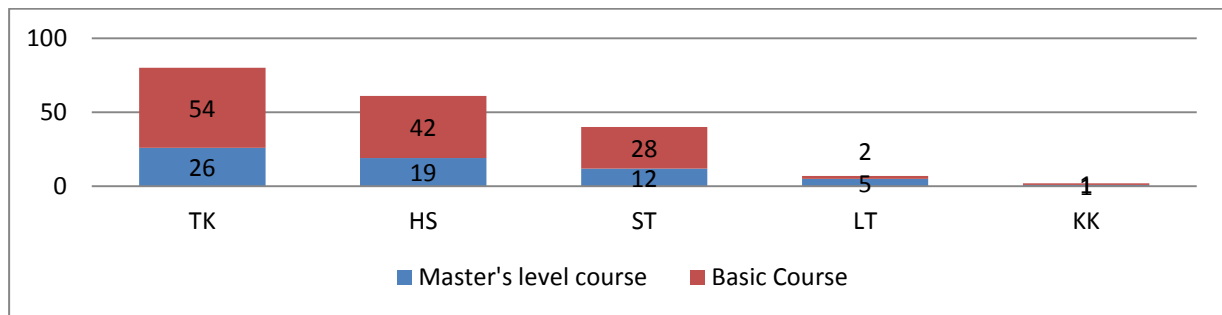


Figure 47. Supervised and defended student papers in 2008–2012 by Chairs

Final papers and Master's theses may have up to 2 supervisors. In addition to employees of the ENDC, professionals from other institutions of higher education and EDF units can also be selected to supervise specific research papers (see Figure 48). 25% of final papers and 49% of Master's Theses defended in 2008–2012 had 2 supervisors.

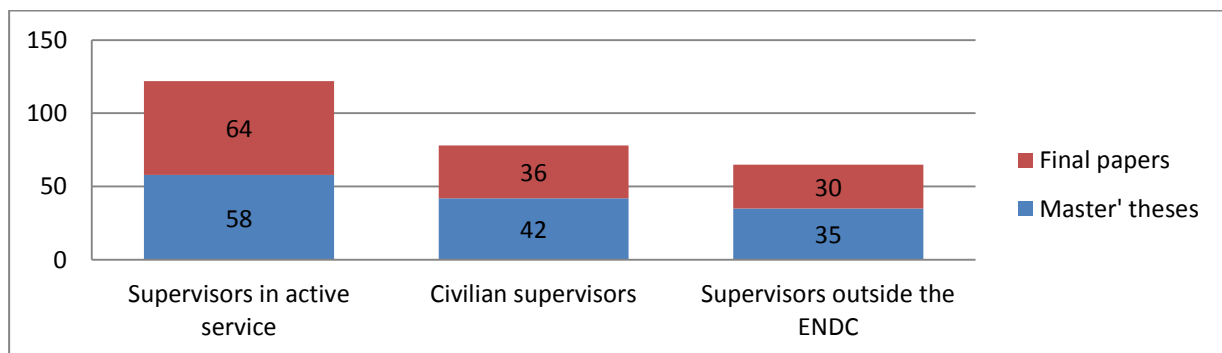


Figure 48. Supervisors of student papers by category 2008–2012

In 2008–2012 61 Master's theses out of 65 and 132 final papers out of 137 were submitted for defence in a timely manner. During the given period the average grade of Master's theses was 3.57 and that of final papers was 3.12.

### Needs-based student papers

The aim of the ENDC is to guarantee that student papers are connected with national defence and military topics and that research results are as applicable as possible to the areas of importance at the ENDC or in the EDF. The task of supervisors is to link student interests with the needs of the ENDC and EDF. About 2/3 of student papers defended in 2010–2012 have such a focus (see Figure 49 and Table 16).

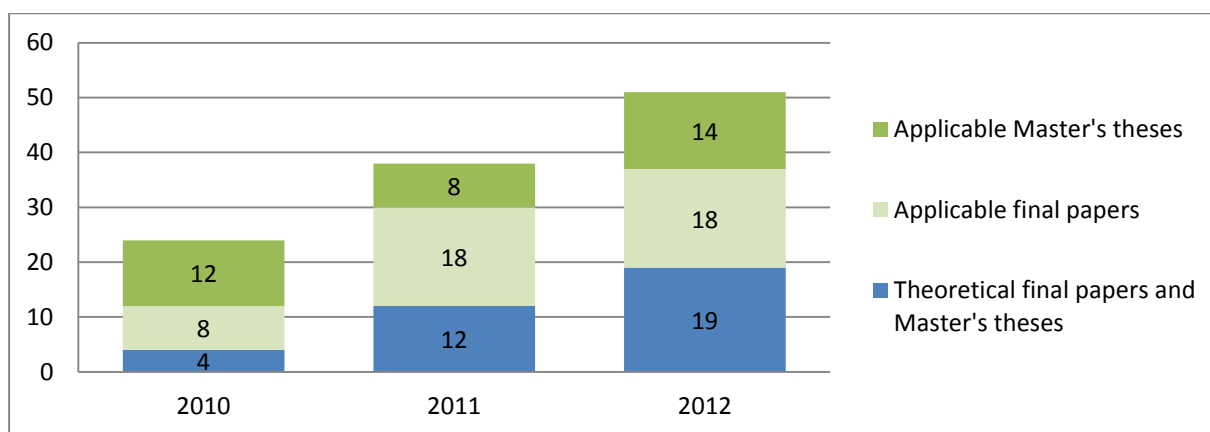


Figure 49. Applicability of student papers defended 2010–2012

Table 16. Examples of applicability of defended Master's theses at the ENDC and EDF

Author, year	Topic	Application
Tameri, T. 2009	Military Logistics Terminology Harmonization in the Estonian Language	Input for Language Centre cooperation project (logistics terminology)
Sirel, M. 2010	Strategic Surprise in the Art of Warfare: Content, Causes and Effects	Input for teaching topics of art of warfare in Master's level studies at the ENDC
Aija, E. 2011	Application of Manoeuvre Warfare Principles in the Estonian Defence Forces' Light Infantry Battalion Offensive Operations	Input for preparing different exercises in North Eastern Defence Command and the EDF main training event Spring Storm 2012.
Otsalainen, T. 2011.	Analysis of the Organizational Culture of the First Infantry Brigade	Input to improve organisational culture of the 1 <sup>st</sup> Infantry Brigade
Roodvee, F. 2012	The Direction of Field Artillery Battalion Fire and its Automation	Results are used in the training and activities of the Artillery battalion

Students can provide feedback on the supervising process (incl. supervisors) during final paper seminars and during the preliminary defence of papers. Furthermore, students have the opportunity to evaluate the final paper and Master's thesis compilation process in the annual satisfaction survey. The satisfaction surveys from 2012 and 2013 prove that about 60% of respondents are satisfied with the process of supervising final papers and Master's theses (see Figure 50).

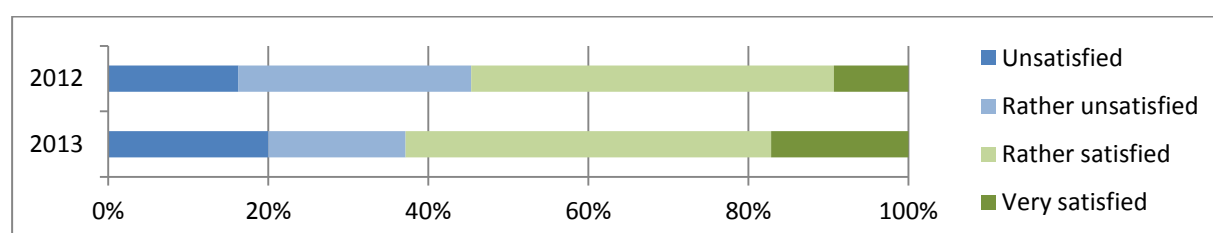


Figure 50. Student satisfaction with the process of compiling student papers (selection of topic and supervisor, seminars, supervision, defending)

Every year the ENDC recognizes the best authors of student papers in the categories of best theoretical and applied final paper and Master's thesis. Successfully defended student papers participate in open competition (e.g., Estonian Ministry of Education and Research competition of student papers, Estonian Academy of Science competition of student papers), in which they have attained high positions. For example, in 2009 an ENDC Master's thesis was awarded 2<sup>nd</sup> place in the student paper competition of the Estonian Academy of Science. In 2012 an ENDC final paper was awarded a prize and a Master's Thesis claimed 1<sup>st</sup> place in the MoD research paper competition. The best student papers are also recognized by the Rectors' Board of the Institutions of Professional Higher Education.

### **Protection of intellectual property**

Issues of intellectual property theft are dealt with in the subjects of languages and compiling research papers. The ENDC treats plagiarism as a disciplinary offence and in the event of repeated infractions the offending student is expelled. Over the past few years there have been 3-5 cases of intellectual property theft in student papers on average, the offenders predominantly being first-year students. No students were expelled for plagiarism in 2008–2012. In order to increase student awareness of the protection of intellectual property, in 2012–2013 the ENDC:

- ✓ updated the [regulations and rules of exclusion](#) from the ENDC;
- ✓ specified the instructions to be given for written student papers concerning the abovementioned issues;
- ✓ issued instructions to teaching staff for handling cases of intellectual property theft.

### **RDA strengths and areas of improvement**

#### **Strengths**

- ✓ The number of publications by members of teaching and research staff has continuously increased.
- ✓ The ENDC has a regular peer-reviewed research journal that is open for cooperation and has an international editorial board.
- ✓ Research conferences featuring international participants are organised on a regular basis.
- ✓ The ENDC cooperates in RDA both in Estonia and internationally. Employees participate in several professional cooperation networks.

#### **Areas of improvement**

- ✓ To increase the involvement of the military members of the teaching staff in research projects, fulfilling ENDC research topics and publishing, including increasing the number of military articles of the total number of ENDC publications.
- ✓ To improve overall administrative capacity of RDA at the ENDC, e.g. creating the position of RDA specialist or appointing the relevant tasks to existing staff members.
- ✓ To compile an action plan for RDA strategy.
- ✓ To involve students more actively in fulfilling ENDC research topics and EDF research projects related to their student papers.
- ✓ To increase students' satisfaction with supervision by making final paper and Master's thesis seminars more efficient and developing supervisors' supervising competence.



## 4. PROVISION OF SERVICES TO SOCIETY

Based on [the Development Plan of the ENDC 2011–2015](#) the purpose of services to society at the ENDC is to popularize and promote public awareness of national defence and to develop national defence capabilities of different constituencies. According to the [key outcomes](#) of the ENDC the latter has identified the activities and indicators of service to society in three areas: popularizing the main activity of the ENDC, providing continuing education and other activities aimed at a wider audience through organizing or participating in different events.

The goal of the ENDC is to be an open-minded partner in cooperation for different target groups via activities aimed at a wider audience, within the given field cooperating actively with its employer and partners. The Action Plan of the Development Plan of the ENDC has determined the activities and related developments aimed at the wider audience in order to fulfil the Development Plan of the ENDC. The goals set for each year are also reflected in the annual directive of the Commander of the EDF and in the annual order of the Commandant of the ENDC.

### 4.1 Popularizing main activities and public relations, contribution to the development of society

Introducing the ENDC and public relations are conducted on the basis of visual identity guidelines developed at the ENDC where different communication channels (incl. visual means) are used to introduce the goals of the ENDC to various target groups and the values of the ENDC are stressed through highlighting and using external markers.

In order to promote public awareness of national defence and to influence national defence behaviour in society the ENDC above all popularizes vocational and higher education in the field of national defence.

The ENDC cooperates closely with the Recruitment Centre of the Defence Resources Agency (DRA) (see Figure 51). ENDC representatives visits different high schools, participates in education fairs (e.g. Teeviit) and briefings. Until 2010 the ENDC participated in the program “Conscious Choice” together with other institutions of professional higher education in Estonia where study possibilities are introduced to students of Estonian high schools and vocational schools. In 2010 the representatives of the ENDC visited 50 schools. In 2011 the ENDC participated in the National Broadcasting [TV show “Kooliproov”](#) together with other institutions of professional higher education introducing their institutions.

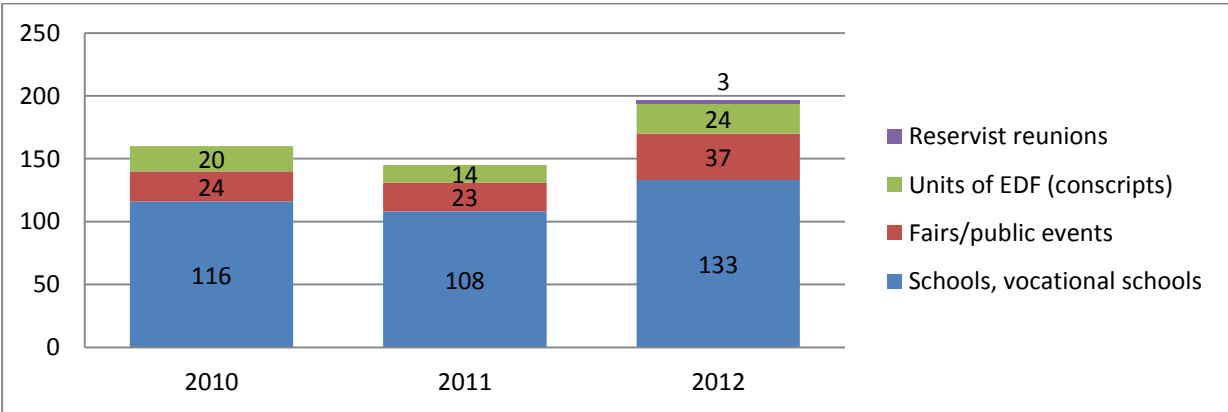


Figure 51. Introducing higher education of national defence in cooperation with the DRA 2010–2012

From 2008 the ENDC organizes open days for school pupils, members of the Defence League youth organisations and conscripts as target group, however, also kindergarteners come to visit. It is in essence a briefing day with the cadets introducing the weaponry and equipment of the EDF, their training and living conditions (see Figure 52).

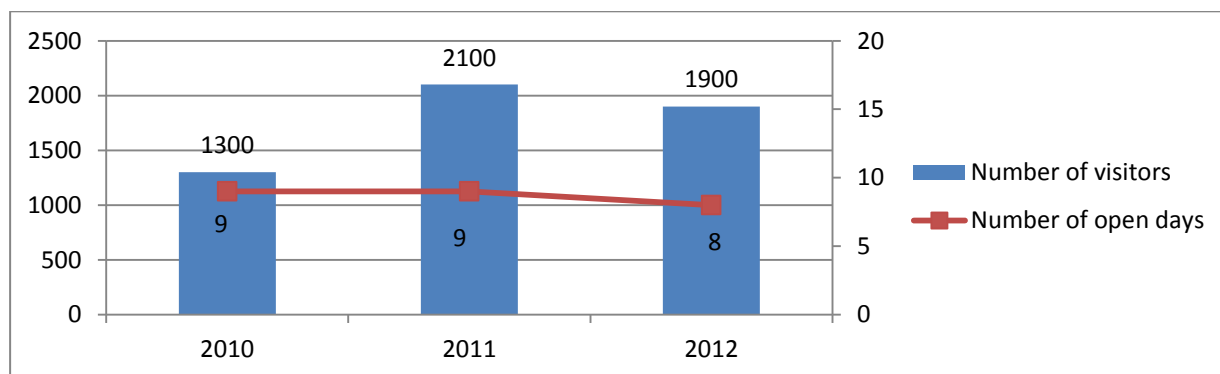


Figure 52. Participation in the ENDC open days 2010–2012

In addition, the ENDC is introduced and public relations are promoted on different levels and in different forms (see Table 17).

Table 17. Public relations and events introducing the ENDC

Activity	Target group	Content	Remarks
Shadowing a Cadet	Pupils	To introduce cadets' everyday activities (incl. studies) in 1.5 days	Every spring semester 2010 – 13 “shadows” 2011 – 4 “shadows” 2012 – 18 “shadows”
Shadowing a Professional	Pupils	To introduce the military/officer's profession	2-5 “shadows” annually
Tour of the Commandant of the ENDC in the units of the EDF	Conscripts	Commandant of the ENDC and the cadets introduce military education and national defence to the conscripts	Once a year
Conscript training	Conscripts	Through training carried out by the graduates of the ENDC they set an example and immediate source of information introducing the study possibilities at the ENDC to conscripts	
Articles in daily papers and journals of popular science	All interested groups	To provide expert opinion and evaluation and to introduce study, research and development activities at the ENDC	Papers „Sõdurileht“, Eesti Ekspress „Riigikaitseleht“, education supplements of Postimees, Maaleht, Õhtuleht, Journals „Kaitse Kodu“, „Sõdur“

Recruitment campaign of the ENDC	All interested groups	To create interest to enrol students and to provide information about entrance tests	Every year through different communication channels (TV, posters, radio)
Radio and TV interviews	All interested groups	To broadcast more important events of the ENDC	Estonian National Broadcasting (radio and TV) Radio „Kuku“, regional newspapers

In popularizing the main activities of the ENDC and the EDF in general the Education Support Centre (ESC) of the ENDC plays a major role, organizing the publishing or photocopying of textbooks and handbooks (textbooks, manuals, study posters) and military books compiled and prepared both at the ENDC and in the EDF as a whole (see Figure 53). In 2012 the ESC made book layout and design and published the national defence textbook for high schools. The textbook was printed in 3000 copies and the employees of the ENDC were its co-authors.

The ESC also provides audio visual solutions for both study (incl. recording lectures) and research work, thus creating an opportunity to broadcast different events taking place at the ENDC. For example in March 2013 the ESC provided the support of on-line system ECHO for the research conference “10 Years from the Operation Iraqi Freedom” that enabled about 900 people to participate in the conference on-line.

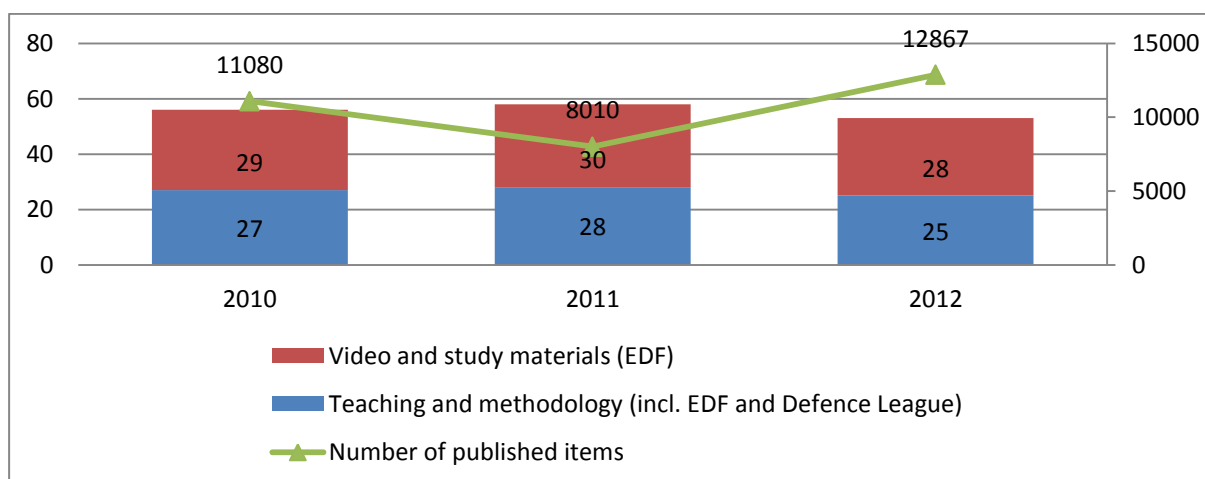


Figure 53. ENDC publications and production of audio-visual study materials (2010–2012)

In order to increase the awareness of national defence among a wider audience, the ENDC actively contributes towards conducting and supporting national defence lessons in high schools. Over years 2-4 employees of the ENDC have taught national defence in high schools in Tartu County. Furthermore, lessons of national defence are integrated in professional higher education curricula where the students of the ENDC teach in high schools and upon graduation receive the right to work as national defence teachers.

### Participation in professional associations and non-profit councils and decision-making bodies

Participation in professional associations enables the ENDC to disseminate its know-how and to keep abreast of developments in different areas of national defence. The employees of the ENDC are active in different professional and vocational associations within the domain of the Ministry

of Defence (e.g. the Association of the Medics of the EDF, the Naval Officers Club of Estonia, the Estonian Defence League), in professional associations outside the domain of the Ministry of Defence (e.g. associations for doctors, historians, theologians, mathematicians) as well as in citizens' and charity associations (e.g. Lions Club, various sports associations). In addition to national associations, the employees are also members of international societies (e.g. the European Society of International Law, the European Association for Language Testing and Assessment). On average, the employees of the ENDC are members of about two professional or public associations

**4.2 Continuing education and other educational activities aimed at a wider audience**

**Conducting in-service training**

Strategic aims of in-service training are prescribed by the [Development plan 2011–2015](#) of the ENDC according to which the aim of the ENDC is to provide in-service training following the principles of lifelong learning, to act as a centre coordinating the in-service training of the EDF and widely develop national defence competence within the constituencies connected with the ENDC and the EDF. In-service training courses are planned taking into account the needs of the ENDC and the EDF and the ENDC in-service training request is fixed in the annual directive of the Commander of the EDF. In-service curricula are developed on the basis of the [Curriculum Statute](#) and ENDC and EDF professionals are involved in compilation of curricula. The organisation of in-service training courses is regulated by the [Regulations for Continuing Education of the ENDC](#).

The main target group of the in-service training at the ENDC are the employees of the EDF, however, in-service training of national defence is also offered for the members of the Defence League, reservists, officials and employees working in the establishments of national defence and high school teachers of national defence. According to the needs of the target groups the in-service training curricula at the ENDC are divided into officers', NCOs', war and disaster medicine, language and other professional national defence in-service training curricula. In 2010–2012 the number of in-service curricula has remained steady and in some fields trending upward. The number of in-service courses (see Figure 54) and participants in such courses (see Figure 55) has increased as a whole.

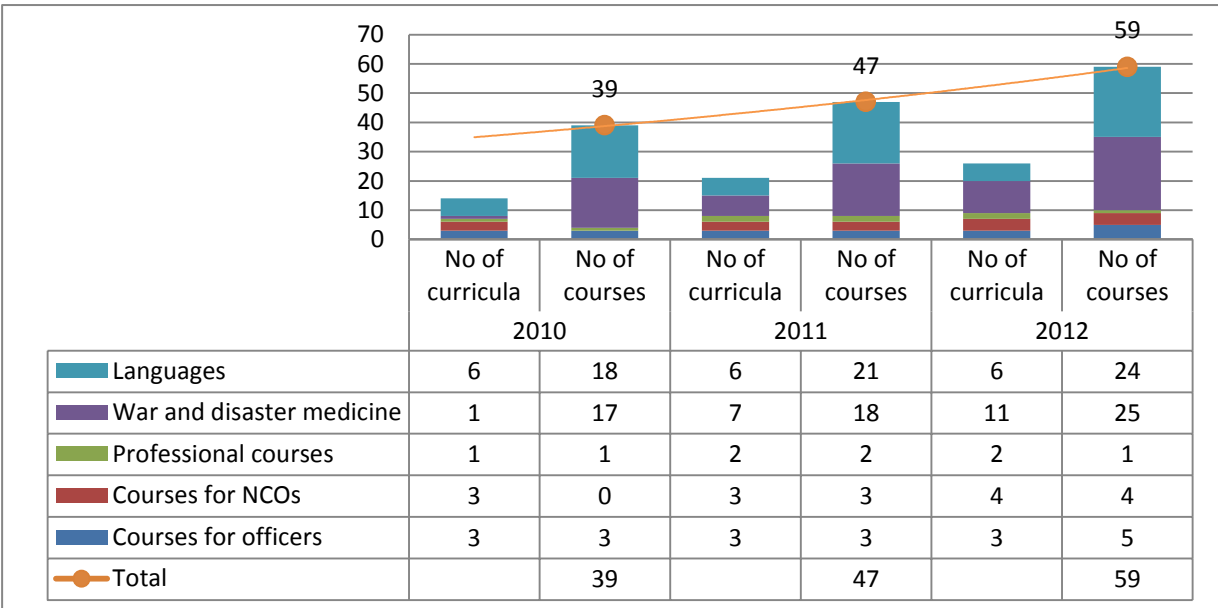


Figure 54. In-service training curricula and number of courses 2010–2012

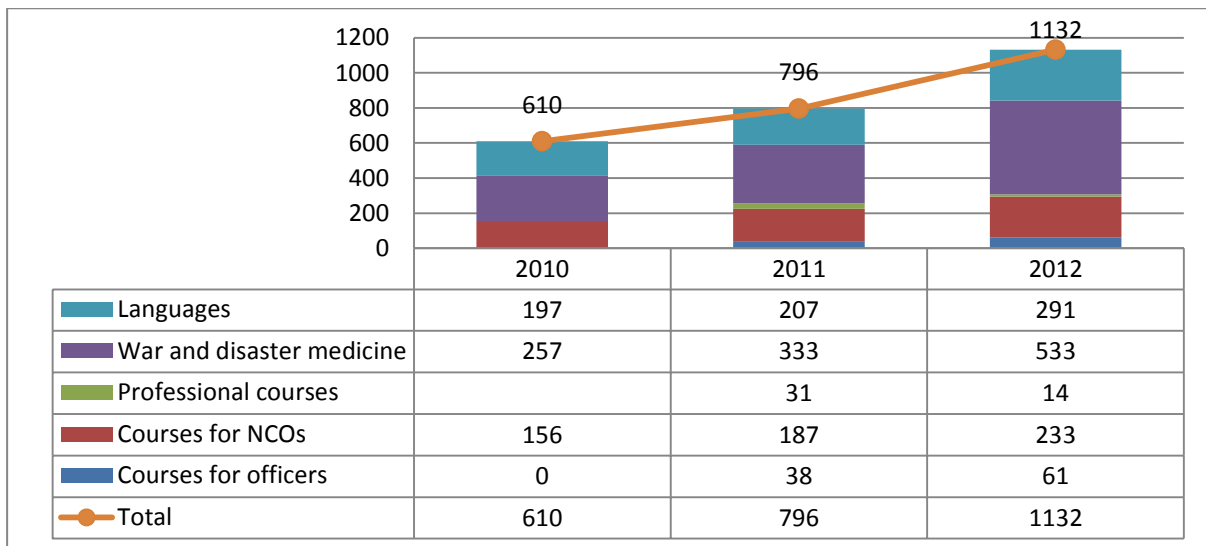


Figure 55. Number of course participants in in-service training courses 2010–2012

In recent years the greatest developments of the in-service training at the ENDC are:

- ✓ Since 2010 the ENDC made it possible for people with higher education to complete a 1-year [junior officer course \(JOC\)](#) as an in-service training course, the graduates begin their military career on an equal footing with the graduates of the professional higher education curriculum.
- ✓ Since 2012 the ENDC teaches the subject of “War and disaster medicine” for the students of Tartu University, Tartu and Tallinn Health Care Colleges.
- ✓ According to the Action Plan of the Development Plan of the ENDC the institution contributes towards increasing the volume of in-service training courses with e-learning support or in the e-learning environment ILIAS (see Figure 56).

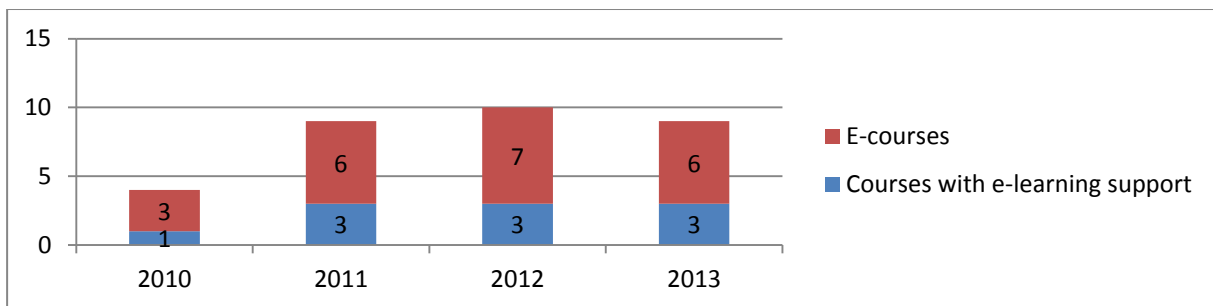


Figure 56. In-service training courses with e-learning support or as e-courses 2010-2013

### Feedback on continuing education courses

In order to ensure the quality of such courses until 2012 feedback was collected mainly on the feedback questionnaires compiled by the academic staff on paper. In 2012 the process of compiling of a uniform feedback form began, with the possibility to complete the form in the e-learning environment ILIAS enabling a systematic collection and analysis of feedback. Feedback summaries are compiled as reports and the results are used in improvement activities. Based on the uniform feedback form:

- ✓ A new version of the curriculum was compiled for infantry battalion tactics course and junior staff officer course for the year 2013, including the review of learning outcomes volume of the subjects.

- ✓ A curriculum of the military lawyer course will be improved by 2014 based on the feedback on the 1<sup>st</sup> module of the course delivered this spring with regard to its subjects and volume.

In the course of evaluating the Development Plan 2011–2015 of the ENDC at the end of 2012 the cross-analysis of in-service training courses was conducted keeping in mind the capacity of the ENDC and the in-service training requirements of the EDF. Based on this analysis the in-service training activities and indicators were corrected in the Development Plan.

### 4.3 Other activities aimed at a wider audience

#### Maintaining traditions

The aim of the ENDC is to value traditions and maintain historical memory of national defence. This serves the purpose of informing and including in the context of society and promoting and shaping the sense of national pride in the context of the ENDC. Thus the ENDC either organises or participates in public events that facilitate the events of Estonian recent history, but also the traditions and customs of the ENDC and the EDF as a whole. In general traditional events take the form of ceremonial meetings, formations, walks, sports events, but also of ceremonial tributes with the participation of personnel and/or students and that generally receive media coverage (see Table 18).

Table 18. Major events promoting traditions at the ENDC

Event	Coverage
Initiation ceremony of new cadets (freshmen)	Internal media, social media
Walk at the beginning of the academic year	Internal media, national media, social media
Firing competition of the Officer School	Internal media, social media
December 1, 1924 commemoration formation to honour of the fallen cadets	Internal media, national media, social media
Ceremony of taking the Cadet oath	Internal media, social media
Festive Christmas dinner of the Cadet Body	Internal media, social media
Independence Day of the Republic of Estonia	Internal media, national media, social media
Anniversary of the Officer School	Internal media, national media, social media
Orienteering competition dedicated to Captain Urmas Aal	Internal media, social media
Anniversary of Tartu Peace Treaty	Internal media, national media, social media

#### Museum of the ENDC

The task of the [Museum of the ENDC](#) is to introduce the topics of military education and thinking in the context of Estonian military history, the traditions and values of the ENDC and the EDF to the general public. The Museum of the ENDC has cooperation relationship with

national and municipal museums and private collections. The main cooperation partners are Estonian War Museum (General Laidoner Museum) and the non-profit organisation Inheritance of Estonian Military History that aggregates private collections and nongovernmental museums and promotes cooperation with institutions of military heritage.

Students of national defence and groups of high school students visit the museum of the ENDC during the open house, but also the conscripts, participants of in-service training courses and guests from Estonia and abroad come to visit it (see Figure 57). Foreign visitors make up about 20% of the total number of visitors per year.

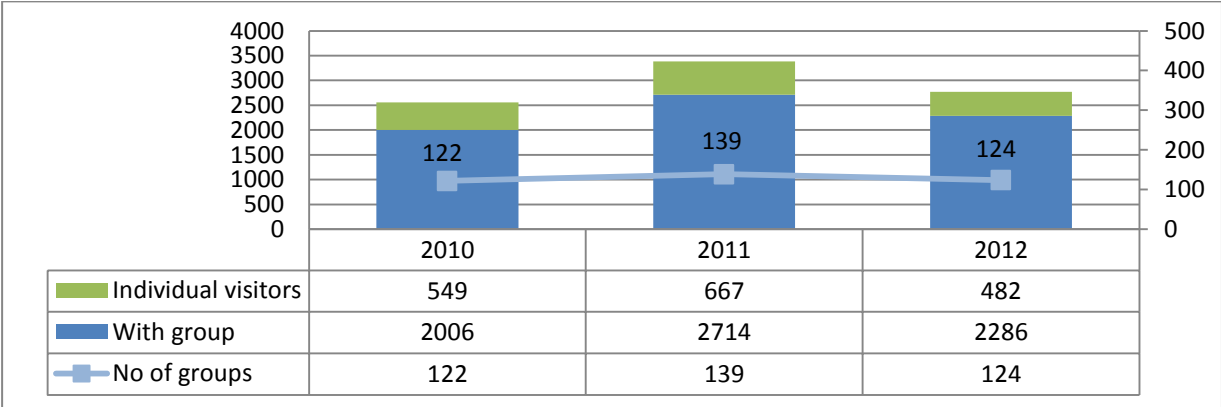


Figure 57. Visits to the ENDC Museum 2010–2012

**Using the infrastructure and services of the ENDC**

Using the infrastructure of the ENDC and services provided by third parties/institutions are regulated by [the Regulations of Providing Remunerated Services and General Principles of Determining the Tariff Rate](#). Since the ENDC is a unit of the EDF, the ENDC cannot make any profit by renting out its facilities or providing services. The main applications to use the infrastructure of the ENDC are related to organising different events (assembly hall), however, the requests also include the use of sports halls and firing ranges in order to develop necessary skills and are submitted by the institutions within the administrative field of the MoD (incl. the Defence League), of public defence and different cultural and educational institutions.

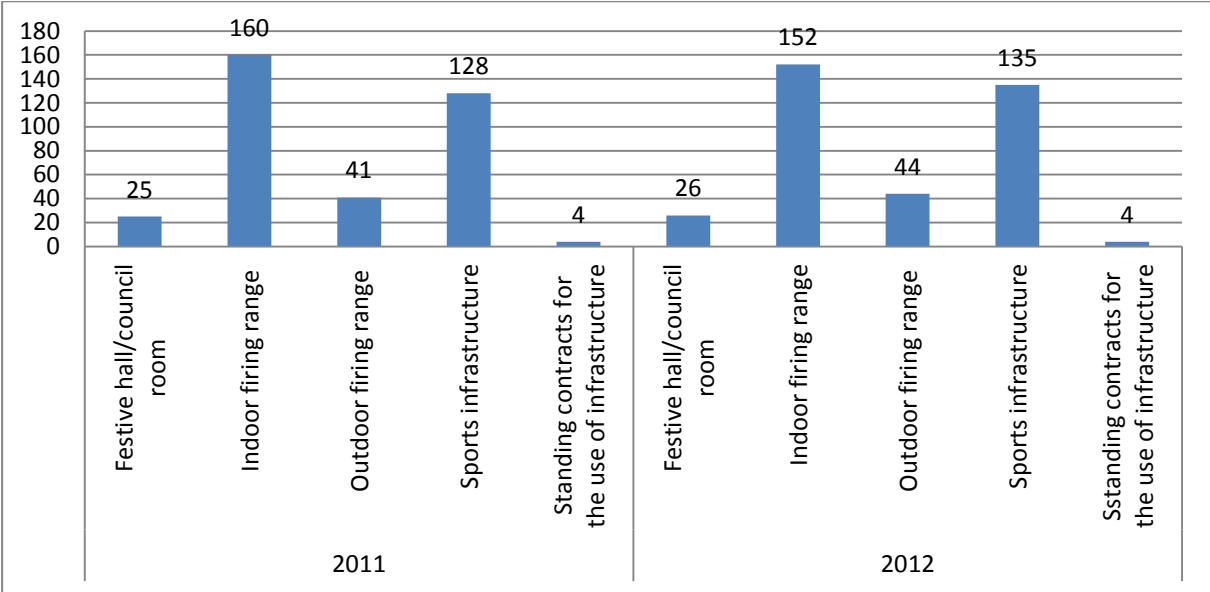


Figure 58. Using the infrastructure of the ENDC 2011–2012

In addition, the Simulation Centre of the ENDC is aimed at the wider audience offering simulation platform to solve different military and crises situations both for the EDF and institutions of public defence. During 2009–2012 as many as 11 international training exercises took place in the Simulation Centre of the ENDC (see Figure 59).

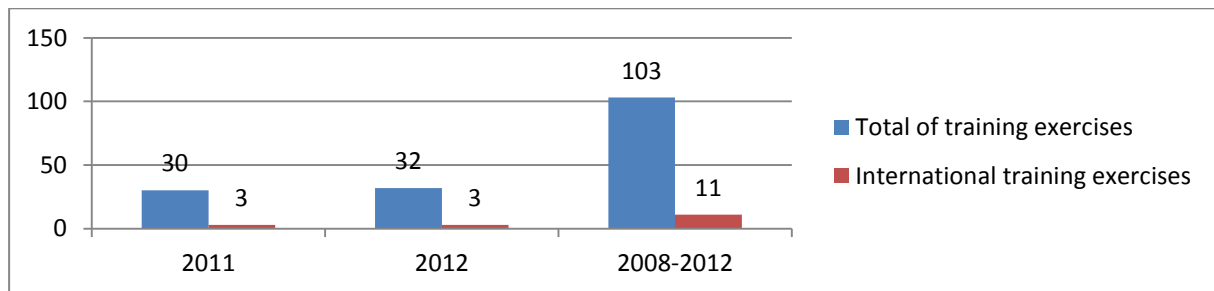


Figure 59. Computer-assisted exercises in the Simulation Centre 2008–2012

## Strengths and areas of improvement manifesting in the ENDC’s services to society

### Strengths

- ✓ The ENDC contributes actively towards popularizing military education (incl. publishing special literature, offering its infrastructure) and public relations.
- ✓ Through traditional events the ENDC has (re-)established continuity to maintain traditions.
- ✓ In-service training areas have been developed to correspond to the requirements of the EDF and the Defence League, the volume of in-service training is trending upward.
- ✓ The ENDC has a museum to popularise the EDF, military education and its history.

### Areas of improvement

- ✓ To develop the integrated concept of military in-service training aimed outside the area of government of the MoD.
- ✓ To continue development and implementation of a uniform feedback form on in-service training courses.
- ✓ To develop and implement the principles of RDA publishing and collecting relevant statistics.
- ✓ To expand the possibilities of offering the infrastructure and services of the ENDC based on the key outcomes of the ENDC.