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The role of the operational analyst

support to the Norwegian Armed Forces in Afghanistan

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Summary

This report documents the experiences and lessons from the deployment of operational analysts to Afghanistan with the Norwegian Armed Forces, with regard to the concept, the main tasks of the operational analyst and other experiences. The concept has evolved throughout the eight rotations in Faryab and one deployment to Mazar-e Sharif. The role of the analyst has evolved throughout the deployment, and the OA support has been more and more defined with each rotation. In addition to the main OA tasks, there have also been tasks individual to each analyst. The main OA tasks have been assessment and measurement of effects, analysis of polling results, statistical analysis, visualisation and ad hoc analysis.

The OA tasks in future deployments will be dependent on the operations being supported. A prerequisite for most tasks is collection and systematisation of data in a way that enables analysis of the operations. This is therefore an important part of the operational analysts' tasks. With regard to the analysis itself, operational analysts should assess and measure effects if the situation requires it. In addition, operational analysts should be involved in lessons learned and risk assessment.

The staff has often little or no idea about what the operational analyst actually does or can do. It is therefore important for the analyst to be able to identify her or his own tasks and potential need for staff and take the initiative to perform these tasks.

FFI has throughout the whole period offered reachback[1] to support the operational analysts deployed. The need for reachback has differed from contingent to contingent, and the analysts have used it to a varying degree. However, when needed, the reachback capacity has always proven to be useful. Given the limited capacity of only one deployed analyst, reachback is a key success factor in the deployment of operational analysts from FFI.

[1] This is the "process whereby a question or request for data is sent by a deployed analyst to a separate organisation".

Sammendrag

Denne rapporten beskriver erfaringer fra deployeringen av operasjonsanalytikere til Afghanistan, både med hensyn til konsept, arbeidsoppgaver og andre erfaringer. Konseptet har utviklet seg gjennom de åtte rotasjonene i Faryab og den ene i Mazar-e Sharif. Analytikerens rolle i hovedkvarteret har utviklet seg gjennom deployeringen, og støtten har blitt mer og mer definert med utviklingen. I tillegg til enkelte faste arbeidsoppgaver har det vært arbeidsoppgaver som har vært individuelle for alle analytikerne. Hovedoppgavene for operasjonsanalytikerne har vært fremdriftsvurderinger og måling av effekter, analyser av spørreundersøkelser, statistiske analyser, visualisering og oppdukkende analyser.

Hvilke oppgaver operasjonsanalytikeren skal ha i en fremtidig deployering er avhengig av operasjonen som støttes. En forutsetning for de fleste oppgaver er innsamling og systematisering av data på en måte som gjør analysene mulig. Dette er dermed en viktig del av oppgaven for en operasjonsanalytiker. Av analyser bør operasjonsanalytikeren utføre fremdriftsvurderinger og måling av effekter dersom situasjonen tilsier at det skal gjøres. I tillegg bør operasjonsanalytikeren være involvert i erfaringslæring og risikovurderinger.

Staben har ofte liten eller ingen kjennskap til hva en operasjonsanalytiker gjør eller kan gjøre. Det er derfor viktig at analytikeren evner å identifisere egne oppgaver og oppgaver hun/han kan løse for staben, og tar initiativ til å løse disse oppgavene.

FFI har gjennom hele perioden hatt en *reachback*-gruppe[2] som har støttet den deployerte analytikeren. Behovet for *reachback*-støtte har variert fra kontingent til kontingent, og analytikeren har benyttet seg av denne type støtte i ulik grad. Men når behovet har vært der, så har alltid støtten vist seg å være nyttig. Gitt den begrensede kapasiteten fra kun én analytiker har det vært en suksessfaktor med støtte fra en *reachback*-gruppe for den deployerte analytikeren fra FFI.

[2] Dette er en prosess hvor et spørsmål eller en forespørsel om data sendes av en deployert analytiker til en separate organisasjon.

Content

Preface

Norway was the lead nation of the Provincial Reconstruction Team (PRT) Maimanah in the Faryab province from 2005 until the end of September 2012. The PRT was part of NATO's International Security Assistance Force (ISAF) in Afghanistan and one of 28 PRTs across the country.

As part of the project "Analysis support to military operations" (ANTILOPE), the Norwegian Defence Research Establishment (FFI) deployed operational analysts to Afghanistan with PRT Maimanah from December 2008 until the withdrawal in 2012. In addition, one analyst was deployed with the National Contingent Command (NCC) in the first half of 2013. This report documents the experiences and lessons identified from the deployment of the analysts, with regard to the concept, the main tasks of the operational analyst and other experiences of deploying with a military unit.

This report builds on a previous report documenting the experiences from the three first deployments [1] and a lessons learned seminar at which the following persons were present: Espen Skjelland (Director of Analysis Division at FFI), Frode Rutledal (Project Manager of ANTILOPE), Bård Eggereide (PRT XII), Elin Marthinussen (PRT XIII), Steinar Gulichsen (PRT XIV), Mikael K. Fidjeland (PRT XV), Andreas Barstad (PRT XVII), Jonas Myhre Christiansen (PRT XVIII), Svein E. Martinussen (TSG-F) and Joachim Reitan (NCC XXIII). The lessons from the seminar have been summarised by Elin Marthinussen Gustavsen and Bård Eggereide.

Bård Eggereide and Elin Marthinussen Gustavsen

28 April 2017

Kjeller

1 Introduction

From December 2008 until the end of September 2012, the Norwegian Defence Research Establishment (FFI) deployed operational analysts with the Norwegian-led PRT Maimanah in Afghanistan. In addition, one analyst was deployed to the NCC in first half of 2013. Prior to these deployments, operational analysis (OA) support to the Norwegian Armed Forces had not been provided on a regular basis. This report describes the concept and main tasks of the OA support to PRT Maimanah, as well as the lessons identified from this contribution. Its main purpose is to record the lessons identified and provide a heads-up for future analysts on deployment.

The target audience of this report is mainly operational analysts that are thinking of deploying or will deploy with a military unit. It will also be useful if an organisation are about to deploy analysts and do not have a concept or want to change their OA concept. The report is also aimed at decision makers that will work with an operational analyst.

The background for establishing the OA concept and previous experiences of Norwegian OA support is described in the following sections. The Norwegian-led PRT Maimanah is then described in Chapter 2. Chapter 3 describes the OA concept in the preparation and in the deployment phases, and Chapter 4 describes the OA tasks. What it is like to deploy with a military unit is described in Chapter 5. The last chapter evaluates the Norwegian OA concept.

1.1 What is Operational Analysis?

OA can be defined as the “application of scientific methods to assist executive decision makers” [2]. The main purpose is to analyse the available data, quantitative and/or qualitative, in order to support a decision-making process. The scientific methods applied will vary and depend on e.g. the type of problem, and the time and resources available.

Operational analysis has proved useful in supporting military headquarters (HQs). The role is to support the HQ and Commander in the decision-making process by providing analysis. One of the most valuable OA contributions is in extending the range of problem solving techniques [3]. In addition, the analysis can address subjects and concerns that the analyst regards as useful to the decision-making process.

OA support seeks to be [2]:

- independent and unbiased
- credible
- understandable

1.2 Previous Norwegian Operational Analysis support to Operations

Until December 2008, Norwegian OA had not been practised on a regular basis in direct support of international military operations. However, Norway had contributed sporadic analytical support to international military operations, and this is described in this chapter.[3]

1997: Stabilisation Force in Bosnia and Herzegovina

The assessment cell in the stabilisation force in Bosnia and Herzegovina (SFOR) consisted of two civilian analysts and five officers. The positions were originally filled by the NATO Consultation, Command and Control Agency (NC3A)[4], but from June till November 1997 FFI filled one of the positions. The period was shared among three analysts, deploying for about six weeks each. The six-week rotation was found to be too short to get a situational understanding and provide good analyses.

Some of the assignments of the assessment cell were to:

- initiate the measuring of effectiveness
- maintain the non-military database
- make internal assessments
- record the lessons learned

2001: Kosovo Force

The OA cell in the Kosovo Force (KFOR), a contingent of five, consisted of four civilian analysts (three from Norway and one from Denmark) and one military analyst from US Army Europe.

The main tasks of the OA cell were:

- campaign assessment
- development of courses of action
- support for the development of a strategy to improve security and reduce tensions in the area

[3] FFI also supported the Norwegian Joint HQ (NJHQ) with analytical support (2003–2008). This support was limited to one analyst. The main emphasis for the analyst at the NJHQ was concept development and experimentation (CD&E) [4].
[4] In 2010 NC3A and four other agencies and programs were merged to form NATO Communications and Information (NCI) Agency.

2008: Nordic Battle Group

The Nordic Battle Group (NBG) was on readiness from January till July 2008. The OA cell consisted of two civilian analysts, one from Sweden and one from Norway.

The main tasks of the OA cell were:

- risk assessments
- recording and analysing lessons learned
- war gaming and structuring multiple criteria solutions.

1.3 The ANTILOPE project

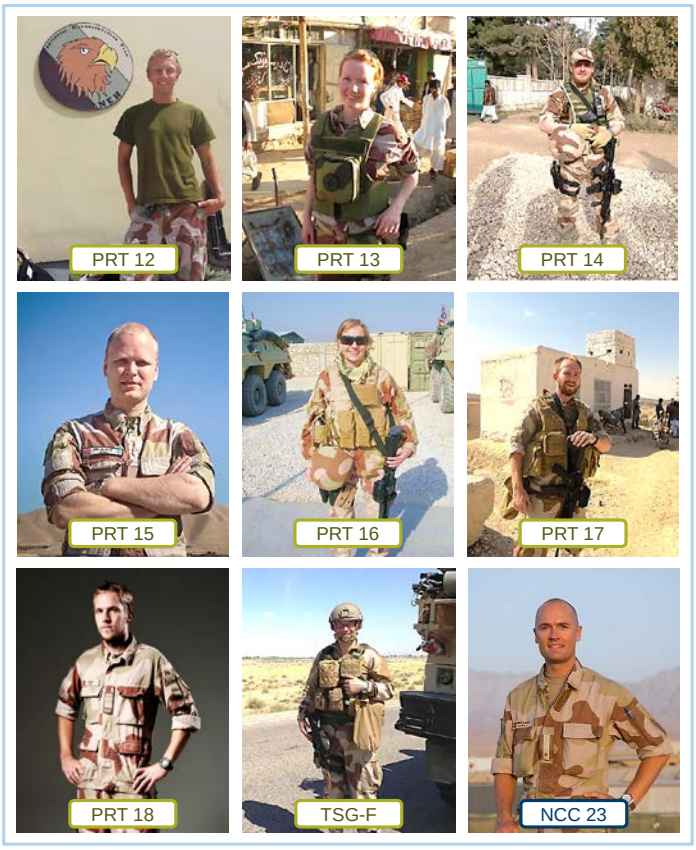

Figure 1.1 The nine deployed analysts from FFI. The first eight supported PRT Maimanah, while the ninth supported NCC in Mazar-e Sharif.

In order to provide continuous analytical support to military operations, the "Analysis support to military operations" (ANTILOPE) project was established at FFI in 2008. The aim was to build up a pool of deployable operational analysts in order to provide decision-making support for the planning and execution of military operations. The main effort of the project has been to support the Norwegian-led PRT Maimanah in Afghanistan.

The first operational analyst deployed with PRT Maimanah, contingent XII, in December 2008. After eight contingents, and as many analysts, the last analyst redeployed with the PRT from Faryab at the end of September 2012.[5] After the redeployment of the PRT, a ninth analyst supported the National Contingent Command (NCC) in Mazar-e Sharif from January till July 2013 (see Chapter 2 for the chain of command). Figure 1.1 shows the nine deployed analysts. From top left: Bård Eggereide, Elin Marthinussen, Steinar Gulichsen, Mikael Fidjeland, Monica Værholm, Andreas Barstad, Jonas Christensen, Svein Martinussen and Joachim Reitan.

[5] The final PRT was renamed as the Transition Support Group Faryab (TSG-F).

2 Organisational framework

2.1 The PRT concept

As part of the International Security Assistance Force's (ISAF) effort in Afghanistan, joint military–civilian PRTs were set up at provincial level. Their goal was to pave the way for a gradual transition from an environment in which international military forces were necessary to an environment in which Afghan national and sub-national government institutions were soundly established and functioning, so that PRTs became unnecessary [5].

Norway led one of the 28 PRTs in Afghanistan: PRT Maimanah. The PRT was located in the Faryab province in north-western Afghanistan, with the HQ in the provincial capital of Maimanah. Its mission statement was as follows:

> "As directed by Regional Command North and co-ordinated with national authorities, PRT Maimanah will assist Government of Afghanistan in Faryab province in building security, governance and promote development in order to establish a safe and well governed Afghanistan."[6]

Although the statement included both military and civilian objectives, there was a strong emphasis on making clear and distinct boundaries between the civilian and military contributions. This was emphasised in the Norwegian strategy for the comprehensive Norwegian civilian and military effort in Faryab province that was published in 2009 [6]. In general, security was handled by the military component and development and reconstruction were the responsibility of the civilian component, with both components sharing responsibility of contributing to building the Afghan official structures.

Figure 2.1 illustrates relevant command relations in PRT Maimanah, as well as important coordination processes. The grey rectangle illustrates the key Norwegian players in Afghanistan and, within this, the ISAF chain of command is emphasised in yellow. The figure also illustrates the formal distinction between the military and civilian components of PRT Maimanah, with the civilian component being outside the ISAF chain of command. The civilian component had a direct command relation to Norway (Ministry of Foreign Affairs) via the embassy in Kabul. In the national military chain of command, there was a national contingent commander (NCC) with a coordinating responsibility for Norwegian military resources in theatre (marked in blue).

[6] Royal Norwegian Embassy in Kabul, www.norway.org.af/News_and_events/prt/faryab1/.

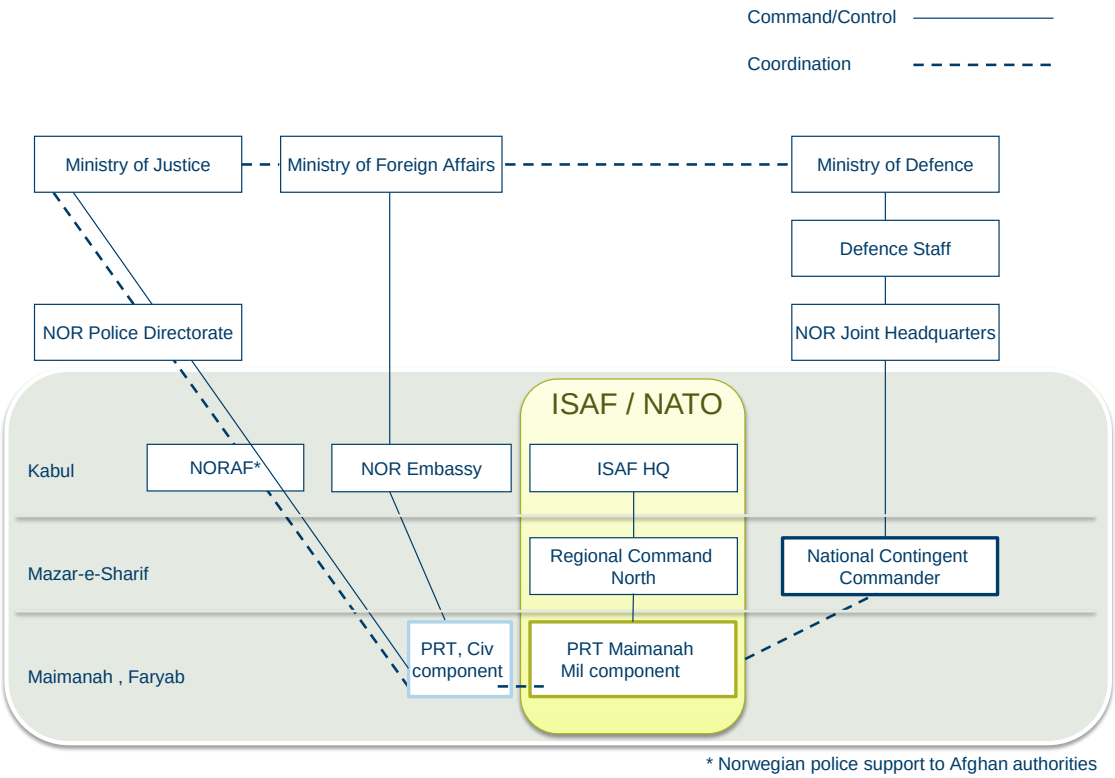

Figure 2.1 Command and coordination relationships for the Norwegian-led PRT Maimanah.

2.2 Organisational structure of PRT Maimanah

Each of the 28 PRTs in Afghanistan was led by one nation. The large number of nations commanding the different PRTs resulted in a variety of organisational structures in terms of the functions and resources available. Hence, each PRT had its own recognisable national features [7]. This was also in line with the PRT Handbook, which stated that:

> "Factors within the Provinces such as: the security situation, the status of reconstruction, development, effectiveness of governance institutions, the presence of other International organisations (IO) and agencies will all play a role in defining the specific manpower and functional expertise required of each PRT." [8]

The military elements of the PRTs were national contributions to ISAF and fell under Commander ISAF's command. The civilian elements of the PRTs were generally drawn from national government ministries and IOs and remained under national direction. A PRT's military–civilian composition defined its capabilities.[7]

[7] De Coning et al. describes the PRT concept as "an applied tactical-level whole-of-government approach. Each PRT is encouraged to include, in addition to its security (military) element, political advisors, development advisors, police and/or rule-of-law advisors, as well as any others (like governance, gender, counter-narcotics advisors, etc.), as appropriate, depending on the local context of each PRT. The PRT concept thus provides for the combined

Figure 2.2 gives the organisational structure of PRT Maimanah.[8] As the figure shows, the commander of the PRT had command only of the military component of the PRT, with the civilian coordinator having command of the civilian capabilities (with the exception of the police advisors, who had their own chain of command). This required extensive coordination within the organisation in order to achieve the intended whole-of-government approach.

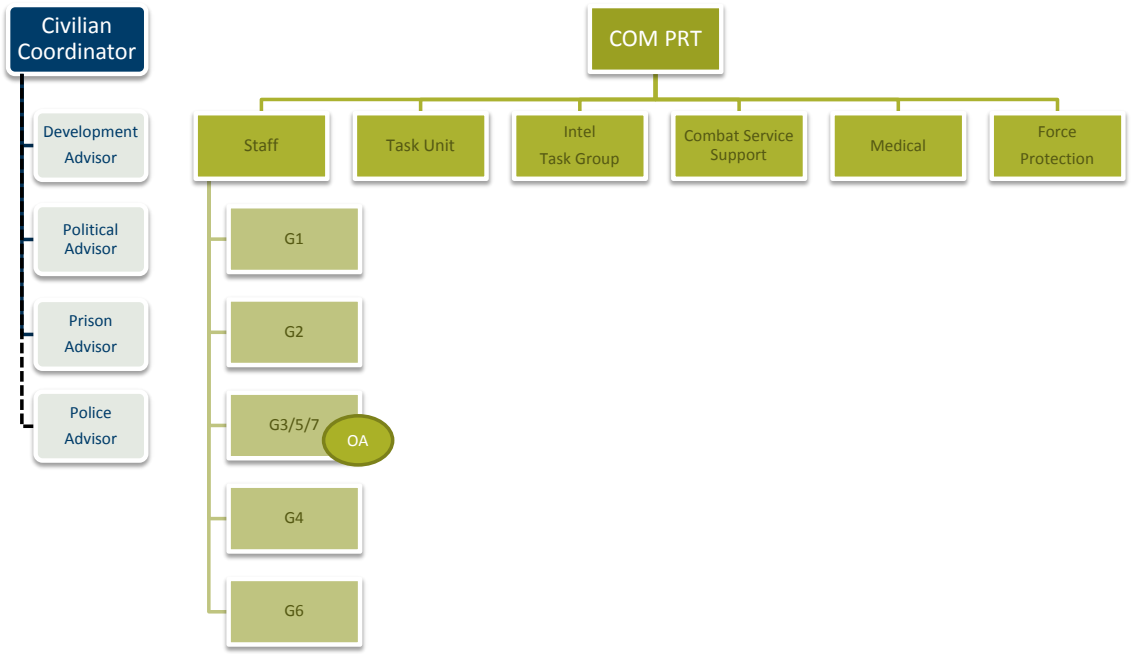

Figure 2.2 PRT Maimanah organisational structure.

The operational analyst deployed from FFI was integrated with the military staff in the G3/5/7 section (operation, plans and training) (see Section 3.4.3).

TSG-F was the continuation of the PRT under a different name.[9] The change of name signified that effort was to be directed towards preparation for the redeployment of the international military presence in Faryab and the transfer of responsibility to the Afghan National Security Forces (ANSF).

deployment of experts in several fields and from a range of government agencies, with the expectation that their co-location will result in improved whole-of-government coordination. The end-result is expected to have a more system-wide or multi-dimensional impact on the stabilization and reconstruction goals and objectives of the international intervention, within each PRT's area of operation." [9]

[8] The PRT Maimanah organisational structure changed in some ways during the time of the Norwegian lead.
[9] The TSG-F replaced PRT 19 as the last deployment in Faryab.

2.3 The NCC

In international operations, Norwegian Armed Forces – such as the PRT – are in general not under national command, but detached to a relevant unit in the international force. There are still some functions, however, that require a national presence in the theatre of operation. These include providing logistic and administrative support, maintaining situational awareness, monitoring plans, operations and other activities that involve Norwegian units or individuals, and reporting to the NJHQ. The National Contingent Commander, with his staff, is responsible for these functions. The purpose of the monitoring and reporting is twofold: first, it provides the NJHQ and the Norwegian strategic leadership with independent information and assessments that support their decision-making; second, should it become evident to NCC that planned or ongoing activities run counter to formal national caveats, or that they are otherwise unacceptable, he is authorised to refuse or stop Norwegian involvement. This is known as holding the *red card*.

The last of the nine operational analysts from FFI was deployed with the NCC staff. Formally, the position was in the so-called special section of staff, along with the legal advisor, veterinary officer, etc. In practice, however, the analyst worked in the G3 operations section.

3 The Norwegian OA concept

The ANTILOPE project is the first systematic approach to OA support to Norwegian Armed Forces.[10] Until the start of the project, the approach had been on a more ad hoc basis (see Chapter 1.2). The main effort of the project has been to support the Norwegian-led PRT Maimanah in Afghanistan.

This chapter gives a short description of the Norwegian OA concept with emphasis on the administrative issues concerning the deployment of an FFI scientist.

3.1 Preparations

A deploying analyst should have good knowledge of OA and military operations in general and the current operation in particular, and of the use of OA in support of military operations. The preparations for a deployment would vary, depending on the background and experience of the analyst.

In order to get an understanding of the OA issues in the field, the analyst was integrated in the work of the ANTILOPE project and the reachback team (see Chapter 3.5) prior to the deployment. The analyst also had pre-deployment training with the deploying unit (see Chapter 3.3). In addition, if needed, the analyst would attend formal courses in military operations and/or OA. Some of the relevant courses are presented below.

3.1.1 Norwegian Defence Command and Staff College

When deploying to a mission as part of a military unit, it is important to have a good understanding of how the unit operates, e.g. what the military headquarters functions and the staff procedures are. This is essential in order to understand where the analyst might contribute to the staff process, but also in order to make sure that the analyst does not hamper the work of the staff.

Since most of the deployed analysts had little knowledge in this area prior to deployment, FFI had an agreement with the Norwegian Defence Command and Staff College allowing one or two analysts to attend the Joint Operations course prior to deployment. The Joint Operations course is part of the Master of Military Science degree and aims to provide the students with knowledge on the military planning process and how a military headquarters functions at operational level.

[10] The NJHQ has now adopted a more systematic approach to OA with a section for analysis and concept development. The section is organised as part of the J5 branch. In addition there is a section for assessment as part of the J3 (J35 assessment). There is, however, no plan or capacity to deploy OA personnel from these sections to international operations.

Even though the PRT was not operating at this level, the basic knowledge acquired during the course proved to be useful to the analysts. A description of the course and the experiences of participation can be found in references [10], [11], [12], [13], [14] and [15].

3.1.2 OA courses in Birmingham and Australia

To get an introduction to OA, some of the analysts participated in basic OA courses. One of the courses was provided by the Operational Research Society in UK and is a civilian OA course. This gives the analyst a broad introduction to OA. Another course is provided by the Australian armed forces and Defence Science and Technology Organization. This course is customised for analysts who will deploy with military units. A description of the courses can be found in references [14], [15] and [16].

3.2 Military contract

The scientists deploying from FFI were given leave of absence from FFI during the pre-deployment training and deployment period. During this period, the analyst signed a standard military contract for deployment to international operations with the Norwegian Armed Forces. This is the same contract that all personnel recruited for international operations sign prior to deployment.

3.3 Pre-deployment training

As part of the military contract, the analyst followed the PRT basic pre-deployment training for about three months. This training was designed to make the soldiers and officers ready for deployment and covered a wide range of areas. Some of the areas covered in the training were:

- international law and the law of armed conflict
- cultural understanding
- basic medical training
- basic weapon skills
- basic situational awareness of the area of operation

In addition to the basic training, all sub-units of the PRT were given time to train on their individual skills: e.g., the staff, which the analyst was an integral part of, had time to train on the different functions of the staff in a planning situation.

3.4 Deployment

One aspect of signing a contract was that the analyst was regarded as an officer, dressed in uniform and armed like any other.

3.4.1 Rank

The first analysts from FFI who deployed with the PRT were given the rank of major (OF-3). The rank reflected the level of education of the analyst. After a couple of years, in 2011, civilian ranks for civilian personnel deploying to international operations were implemented. This system is based on the NATO system, with a direct link between the civilian and military ranks. The analysts, still in uniform, were therefore given the rank of C-3 which is comparable to the military rank OF-3.

3.4.2 Armed

Being regarded as an officer, the analyst was armed as any other. This was also the case with the civilian ranking of C-3. The situation rarely required the analyst to leave the camp in Maimanah city, but if needed it was imperative that the analyst was able to take responsibility for his or her own security in the same way as any other officer. The necessary training in the use of the firearms assigned to the officer was given during the preparation period.

3.4.3 Organisation

The analyst was integrated with the military staff of the PRT. The first analyst was part of the Special staff (organised under the Chief of Staff) to begin with, but was reassigned to the G3/5/7[11] (operation, plans and training) section in order to get easier access to data and because that was the main unit that the analyst needed to cooperate with. This was continued for the analysts who followed.

3.4.4 Rotation

The analyst followed the same rotational pattern as the PRT: three months of preparation, and six months of deployment. The three-month preparation period allowed for good integration with the rest of the staff early on. This proved useful for the analysts.

The six months of deployment included two periods of leave of two weeks each back to Norway.

3.4.5 Hand over/take over

When the PRT contingents rotated, there was a hand over/take over (HOTO) overlap between the redeploying and deploying analyst. The HOTO period was between one and two weeks long

[11] During the first rotations, the section was named S3/5/7.

(usually one week). During the HOTO, the redeploying analyst introduced the new analyst to life in the camp, the work of the redeploying analyst and the opportunities that existed for the new analyst. An important part of this was for the deploying analyst to become familiar with the information and filing system, in order to know what data existed and where, and thereby what analyses could be conducted.

3.5 Reachback

FFI provided reachback to support the deployed operational analyst. This is the "process whereby a question or request for data is sent by a deployed analyst to a separate organisation" [2]. Reachback can be a useful tool for the deployed analyst, especially when only one analyst is deployed at a time.

Figure 3.1 illustrates the concept at FFI. The reachback team was based at FFI, and the deployed analyst updated the reachback team each week with a situation report (see A and [18]). The report was discussed in a weekly telephone conference between the analyst and the reachback team.

The reachback team had the ability to use the entire breadth of resources at the institute to solve the specific reachback tasks by assigning the tasks to the appropriate research project at FFI. In this manner, the deployed analyst had access to all the fields of research at the institute, e.g. technology, anthropology and security policy. Although there was access to the entire institute, most of the reachback support was analysis carried out by the reachback team itself.

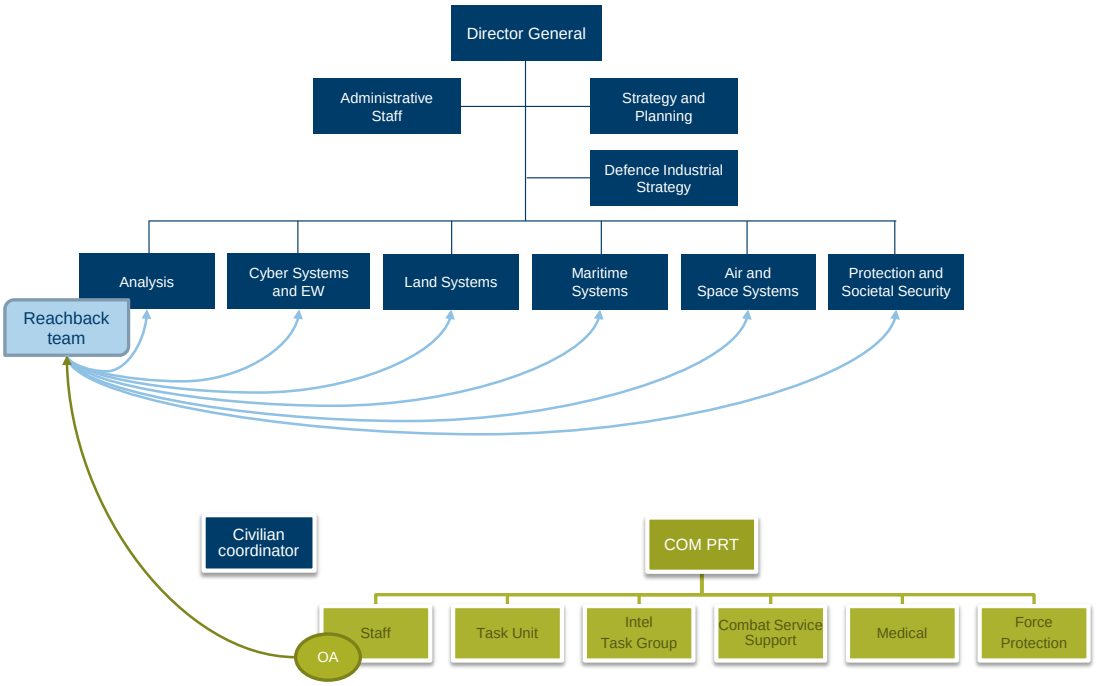

Figure 3.1 Reachback concept at FFI.

4 OA support to PRT Maimanah and NCC

When the first operational analyst deployed in December 2008, the PRT Maimanah had no experience of how to use OA. There was no information on which areas of responsibility the analyst would be given. This forced the analyst to be proactive and independently identify tasks that would support the commander's decision-making process. Even though the PRT became gradually more familiar with OA through the years of experiencing OA support, the analysts always had to be proactive. This chapter summarises the OA tasks of the analysts throughout the four-and-a-half years spent supporting Norwegian forces in Afghanistan. The tasks exemplify some of the general and specific competence a deploying analyst needs.

4.1 Main OA tasks

The definition of OA (see Chapter 1.1) gave the analysts the opportunity to address a wide range of problems. The specific OA tasks have therefore varied and depended on e.g., the type of problem, timeliness, resources available and the analyst's background [18]. Through the nine contingents of Norwegian-led HQs in Afghanistan in which an operational analyst has been part of the team, however, some types of analysis have tended to recur, and these are described in the following sections.

4.1.1 Assessments and measurement of effects

Assessment of the current situation and the developments in a conflict area is necessary in order to analyse the value of an international effort. The assessment looks at how the society is developing over time and how the international intervention is contributing to and affecting this development. The purpose of the assessment is to gain a better understanding of the situation in order to act and to do the right things. Thus, taking into account the desired goals and effects of both the civilian and the military elements of the plan, the assessments can provide awareness and recommendations to support the decision-making process.

Assessments had not been made on a regular basis in the Norwegian Armed Forces prior to the deployment of the operational analysts, but they quickly became one of their main tasks. The analysts started out by using an Effect Guidance Matrix (EGM) developed by the PRT; in addition, ISAF developed the district and provincial assessments process, which was based on many of the same indicators as the EGM. During the second half of FFI's deployment period, the operational analyst developed a campaign assessment based on both the EGM and the ISAF assessments.

4.1.1.1 Effect Guidance Matrix

The EGM was a tool for guiding ongoing and future operations. It was developed by the PRT itself and was an important tool in operational planning. The analysis of the status and trend of each effect was presented at a regular effect meeting (Appendix B).

In the EGM (figure 4.1), the area of operations was divided into sub-areas in order to differentiate between various levels of ambition. For each of the sub-areas, a top-level effect was decided on. The sub-areas were then broken down into named areas of interest which had a set of sub-effects assigned to them. The sub-effects were used as guidance for the work of the different sub-units in the PRT.

Faryab Sub-area	Top-level effect	Named area of interest	Sub-effect	Guidance
West	Effect West	NAI 1.1	...	...
			...	...
			...	...
		NAI 1.2	…	…
		NAI 1.3	…	…
Central - North	Effect Central - North	…	…	…
East	Effect East	…	…	…

Figure 4.1 EGM template.

In order to assess the status and trend for the different sub-effects and top-level effects, the operational analyst developed a set of measures of effectiveness (MoE) and a description on the kind of data that would be needed for them.

The assessment of the MoEs was supplemented by a subjective and qualitative assessment. This was carried out as a survey in which the chief of intelligence (G2) and chief of operations (G3) separately assessed the results achieved for the sub-effects on a scale of 1 to 4 and gave their explanation for their individual assessment on each. The operational analyst compared the results and summarised them in a report. On several occasions, the discussion of the individual assessments helped the PRT leadership to develop a better and more unified situational awareness.

As the focus has a tendency to shift from one contingent to the next, the EGM changed accordingly. The basic area of application, however, remained the same, and there was still a need to assess the status and direction for each sub-effect.

4.1.1.2 Activity analysis

Complementary to the EGM, activity analysis was conducted in 2009 and 2010. This analysis looked at the activities of the PRT, against the background of the activities of the insurgents, the status of the development projects and key events within the Afghan society. The aim of this analysis was to give the PRT leadership an overview of the situation regarding security and development (governance was included to a lesser degree due to the lack of a political advisor

during some of the deployments). This was continuously incorporated into the assessment and measurement of effects, in order to complement the subjective assessments in the EGM.

A major part of the activity analysis was a comparison of PRT activity and insurgent activity, to try to identify trends and draw conclusions. The analysis covered insurgent activity, PRT activity and key events in society (e.g., harvesting, elections, Ramadan, and so on). The analysis established a better understanding of how the insurgents operated in relation to the PRT and society in general.

4.1.1.3 District and provincial assessment

In 2010, the PRT was tasked to carry out district and provincial assessments by ISAF HQ. The form of the assessment was developed by ISAF and was the same throughout the provinces of Afghanistan. The assessment was an evaluation of the situation in each district of the province on each of ISAF's three lines of operation: enable ANSF, safe and secure environment, and good governance.

The assessments mainly used three data sources: the Faryab Survey (see Section 4.1.2.2), the incident database and interviews (personal assessment). The interviews took place with the company commanders and civilian advisors in the PRT.

4.1.1.4 Campaign assessment

The campaign assessment measured the achievement of the objectives of the PRT. "Campaign assessment" may not be the correct term, since the operations of a PRT were not considered to be a campaign. But the method and mind-set was the same as for a campaign assessment.

The campaign assessment was based on some of the same indicators and sources as the district and provincial assessment.

4.1.2 Polling

In an assessment of the situation and developments in a conflict area, it is important to include the population and their view of their own situation. Opinion polling offers a unique insight into the local population and their perceptions of the security situation, local governance, development and common concerns.

The PRT used two surveys: one in Maimanah city and one in the Faryab province. Both surveys were initiated by the operational analyst and became one of the main areas for analysis.

4.1.2.1 Maimanah city survey

Maimanah city was one of the focus areas of the PRT. In order to find out how the soldiers were perceived by the local population in Maimanah city, the operational analyst, in close cooperation with the information operations officer, developed and conducted a survey in the city. The survey had approximately 500 respondents. The information gathered from this survey

was then analysed by the operational analyst and formed the baseline for future assessments of population perceptions.

4.1.2.2 Faryab survey

The need for information expanded, and led to the establishment of the Faryab survey [19]. This was an extensive survey which covered the whole of Faryab with the aim of better understanding the population and their perceptions of the situation in the province. It was carried out twice a year, starting with the first wave in April 2010 [20]–[32]. The ninth and last wave was conducted in October 2014, two years after the termination of PRT Maimanah. It captured people's perceptions of the situation in the province two years after the withdrawal of ISAF. Table 4.1 shows the fieldwork dates and the sample sizes for the nine waves.

Table 4.1 Field dates and sample sizes of the nine waves of the Faryab Survey.

Wave	1	2	3	4	5	6	7	8	9
Field Dates	Apr 2010	Oct/Nov 2010	Apr 2011	Oct 2011	Apr/May 2012	Oct/Nov 2012	Apr 2013	Oct 2013	Oct 2014
Sample Size	1069	1182	1208	1388	1449	1433	1389	1441	1424

Being able to identify and incorporate lessons learned from previous operations is an important aspect of planning current military operations. This work involves data gathering and analysis, and thus makes it an ideal area of interest for the operational analyst.

The operational analyst in the first PRT participated in the after action reviews (AAR) meetings to record the different lessons identified. In addition, in major operations, lessons were gathered from all company commanders and other key players. These lessons-identified were then stored in a database and were analysed to identify how to improve operational effectiveness. A report was also written after all major operations.

The focus on lessons learned was not as strong in the other PRT contingents. The after action review meetings continued, as they are an integral part of military organisation. However, there was less systematic recording of lessons learned and, consequently, the focus of the operational analyst shifted. The lessons learned process remains important, however, and is one to which the operational analyst should contribute in future operations. Written reports identifying and analysing lessons learned are of great use when planning new operations.

4.1.3 General tasks

The analyst conducted several other tasks, often as part of the main tasks. This section presents some of the general tasks undertaken.

4.1.3.1 Data collection, structuring and presentation

The operational analyst relies on good data collection and structure in order to provide effective analytic support. The better the structure of the data, the easier it is to conduct the analysis.

All analysts supporting the PRT had to work on data structuring: the availability of data on operations was inadequate and in lack of a good structure. Good data is a prerequisite for monitoring effects, analysing activities, carrying out campaign assessments and keeping track of lessons learned.

During the seven years of Norwegian command from 2005 to 2012, PRT Maimanah collected a lot of information. It was stored and structured in different ways throughout the years. As the amount of information grew, it became increasingly difficult to maintain an overview of what was stored and who had the responsibility for updating it. In 2010, the analyst built a database to store the information in one place and make it available to other officers in the staff to remedy some of these challenges.

As part of the development of the database, a standard operating procedure was developed that laid down the responsibility for updating the different information elements in the database. The information contained in the database is shown in Figure 4.2.

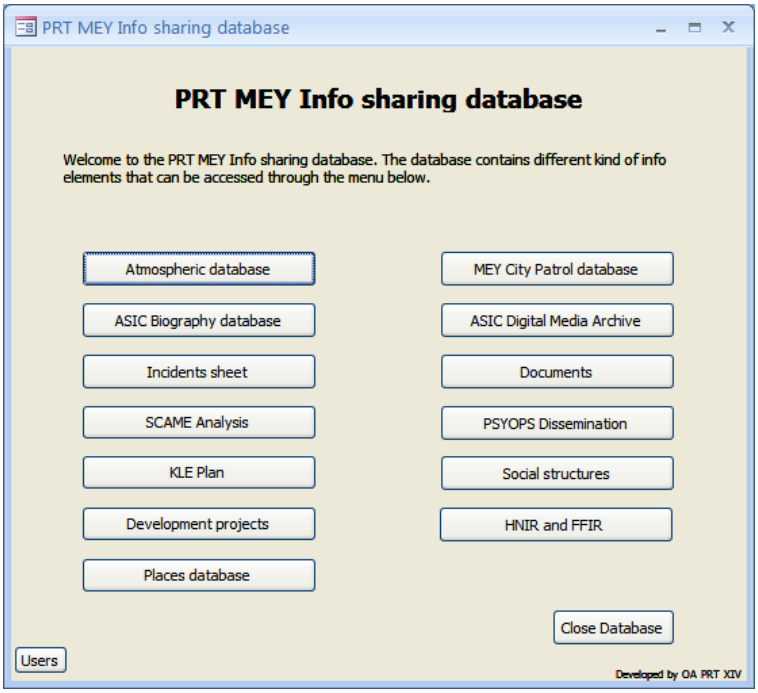

Figure 4.2 PRT MEY information sharing database – main menu.

A more in-depth description of each of the elements in the database can be found in [1].

4.1.3.2 Statistical analysis

Statistical analysis is an important tool in OA and was widely used by the operational analysts in the PRT. It was used to summarise and visualise data and to undertake trend analysis in order to understand the environment and assess progress over time.

Some examples of statistical analysis support for the PRT were:

- assessment and activity analysis (Section 4.1.1.2)
- polling analysis (Section 4.1.2)
- visualisation of development projects

Being able to visualise information is of great importance in a military headquarters. A lot of information is available in different formats and, since time is a critical factor in a military headquarters, it is crucial to present data in an easily understandable way. Because of their knowledge of visualisation software, operational analysts can not only present their own data in an easy and understandable way but can also help other members of staff to present their own data. There have been good experiences of presenting data on maps in general and on the map tool MARIA. The database presented in Section 4.1.3.1 has also been linked to MARIA[12].

An area in which the operational analyst had a lot of responsibility, at least in the early rotations, was analysis of civilian activity and the interaction with the civilian part of the PRT. Among other activities, there were several analyses of development projects, e.g., to give an overview of the development work in the province. The analysis included where the projects were located (in which districts), what kind of projects they were and how many had been completed or were ongoing. This analysis was an area in which geographical visualisation was of great use. An example is shown in Figure 4.3.

[12] MARIA is a map software and are used to develop GIS applications.

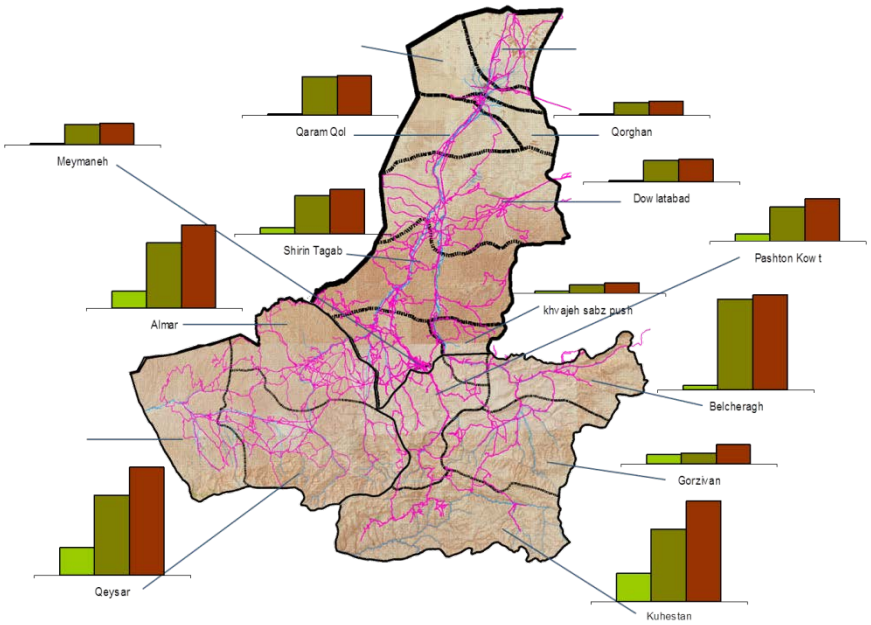

Figure 4.3 Example of visualisation of development projects. Light green column shows the number of ongoing projects, dark green shows completed projects and brown shows the total number (ongoing and completed) projects.

4.1.3.3 Risk assessment

Risk analysis can be an important OA task. In the first deployments, some risk assessment of future operations was done, but this was not a big task. Even though there were some minor tasks involving risk assessment during the deployment, this area was not prioritised.

4.2 Ad hoc analysis and calculations

Some of the OA tasks emerged on an ad hoc basis during the deployment. A few required specific knowledge and they generally required taking the initiative. It is important for operational analysts to stay alert to needs for analysis that occur randomly, rather than originating from the staff.

Some of the ad hoc examples were:

- analysis of prison data for the Department of Justice
- analysis supporting requests for information from Regional Command North, mainly on civil–military cooperation
- incident analysis for the intelligence unit

- participation in tests in relation to jamming devices
- computation of effects of car bombs
- analysis in support of the redeployment
- gathering and analysis of perceptions about the ISAF presence

Ad hoc tasks often derived from personal interests and professional background. In one case, knowledge of signal analysis proved to be useful. In another, knowledge of weapons physics proved to be useful for assessing the effects of car bombs on specific parts of the camp perimeter. A general understanding of experimental design and thermal physics was sufficient to make an assessment of the jamming device problem.

In some cases, the ad hoc tasks were related to ongoing work. In the first contingents, the analysts took responsibility for civil–military cooperation activities (CIMIC). This work was useful for effect analysis and campaign assessment. The request from the intelligence community for incident analysis in support of the decision over when to redeploy came after an initial analysis had been carried out through the initiative of the analyst. Preliminary results were picked up by the commander, and a request for support was made.

The problem of jamming devices came to the attention of the analyst when it was brought up at company level and was being handled by the staff. The same was true for the effect of car bombs. Both cases serve as examples of how important it is to stay involved in everyday staff work.

4.3 Reachback

Reachback can be a useful tool for the deployed analyst, especially when only one analyst is deployed at a time. The tasks presented can at times exceed the capacity of a single analyst. In addition, the analysts deployed come from a wide variety of backgrounds and therefore some tasks can go beyond their areas of expertise [1].

It has been useful to be able to use the reachback capacity at FFI to relieve some of the workload for the operational analyst. The main task for the reachback team was analysis of the polling results from Faryab [20]–[32]. In addition, the reachback facility provided support for a variety of other tasks, using a range of the resources in FFI.

One of the biggest challenges for reachback is the ability of the home organisation to maintain an acceptable level of situational awareness. Since FFI was not part of the chain of command of PRT, information was not automatically sent to the institute. To remedy this situation, the previously deployed analysts were actively used in the reachback role, with the most recently deployed analyst acting as the point of contact when he/she returned to FFI.

5 Deploying with a military unit

Working in a war zone is different from working in a research institute back home. The academic approach is not necessarily applicable in a war zone. It is important to be pragmatic and flexible, while still maintaining research ethics.

5.1 Personality

A deployed operational analyst is selected both for academic skills and personality. Academic skills are of course important to do the job, but personality is also of great importance. The key characteristics are described in more detail in [17]. The most important are:

- being able to present your work
- being able to get an overview of the situation
- humility (it is not about you)
- moral courage (say what needs to be said)
- being a team player
- being results orientated
- having integrity
- good sense of humour
- thick skin (do not take things personally)

In addition to analysis, it is important to be able to be a rational academic participant in discussions involving all levels of staff. Operational analysts should support officers and soldiers, especially outside the staff, whenever they have questions that science might help answer. Being constructively critical of incipient group thinking is also important.

5.2 Network

Social relations in the PRT were established during the three months of preparation and proved to be important during the deployment. The members of the staff are guaranteed to encounter hardship together when deployed to a place like Afghanistan. And with a staff gathered on an ad hoc basis, the establishment of social relations is important. Taking part in the events that are organised during the preparation period is therefore useful.

In addition, access to data and maintaining situational awareness is easier with a good network within and outside the staff. Informal channels of information should therefore be established with:

- key members of the staff (e.g., Commander, G2, G3 and G5)
- the civilian section
- the intelligence section

5.3 Work days in the field

The operational analyst's days are long during the deployment period, as they are for most other people on the staff. Most of the time is spent in the operations planning room. Therefore, it is important to take breaks and do physical activities outside the office, especially around periods of intensive work. The workload is to a large extent decided by the planning cycle.

All the analysts were given standard staff officer duties. In light of the situation on the ground in the PRT, with limited staff capacity, it was necessary for the analysts to take on standard staff officer duties in order to contribute to the overall achievements of the PRT. In order to show the value of having deployed an analyst, it was necessary for the operational analysts to take a pragmatic view of the kind of tasks they were prepared to do. (The other specialist officers in the PRT staff were also in this situation.)

Finally, maintaining weapon skills and physical fitness is also expected, so organising or participating in exercises is necessary.

6 Evaluation of the experience of deploying operational analysts

Through nine deployments and almost five years in field, the overall experiences of deployed operational analysts have been good. The feedback from both the analysts and the field commanders has described OA support as a useful asset to the staff. But although the concept has been successful in Afghanistan, it will most likely have to be adapted to a future long term commitment to support a military operation.

In order to maintain the capability after the deployment to Afghanistan, operational analysts from FFI support military exercises and have deployed together with the Intelligence Service to international operations.

The following sections give some of the experiences from the deployment to Afghanistan and recommendations for a future deployment.

6.1 Concept

The concept of deploying operational analysts to Afghanistan has evolved throughout the eight rotations in Faryab and one deployment to Mazar-e Sharif. Overall the concept has worked well.

The operational analysts followed the same rotation pattern as the Armed Forces, i.e. the 3 + 6 month rotation plan, with three months of preparation and 6 months of deployment. This allowed for good integration with the rest of the staff. The experience with this system was very good, and no change is anticipated or recommended for similar deployments in future.[13]

Based on the background of the analyst, it is important to give him/her the necessary basic OA and military operations training prior to deployment. FFI has an agreement with the Norwegian Defence Command and Staff College to allow analysts to attend the Joint Operations course prior to deployment. In addition, analysts have attended different OA courses. The experiences with the course at the Norwegian Defence Command and Staff College and the OA courses were good and are recommended for future deployments.

It is also important to give specific training in the computer systems and programs that the analyst will need to master. This has been somewhat difficult, since the tasks have varied and there has not always been a clear job description. With more experience and a clearer job description, this should become more streamlined for future deployments.

The operational analysts deployed in uniform and were given a rank that reflected their level of education: major (OF-3) or the civilian equivalent (C-3). Being regarded as an officer, the analysts were armed and given the necessary training in the use of the firearms assigned.

[13] If the next deployment differs significantly, – e.g., deploying two or more analysts at a time – other arrangements could be considered.

Deploying in uniform has its pros and cons. It is easier to blend in among the staff, but on the other hand fewer people will be aware that the operational analyst is a civilian analyst and it could be more difficult to establish relationships with the civilian section (civilian advisors, IOs, NGOs …). Deploying in uniform with a civilian rank has reduced the difference between being in uniform and not. The experiences from Afghanistan, provide no clear recommendation on whether to deploy in uniform.

The analysts were integrated with the military staff, in the section for operations, planning and training (G3/5/7). Being located with G3/5/7 worked satisfactory. As with the uniform, there are pros and cons with the location. First of all, it was helpful to be part of the operations and planning environment. This made it easier to be "one of the guys", and gave access to the "heart" of the operations. On the other hand, being located elsewhere could have given access to more (or less) data, since location influences the data the operational analysts had access to. This has not been a major issue, but should be something to have in mind when preparing for future operations. If access to data is dependent on the location in the staff (e.g. intelligence), this should be considered when deciding on the location of the analyst.

6.2 OA support

The role of the analyst has evolved throughout the deployment and OA support became more defined over the rotations. In addition to the main OA tasks, there were also tasks that were individual to each of the analysts.

The main OA tasks were the assessment and measurement of effects, analysis of polling results, statistical analysis, visualisation and ad hoc analysis. The OA tasks in future deployments will be dependent on the operations which the analysts are supporting. But operational analysts should always assess and measure the effects of the operation if the situation requires it. In addition, operational analysts should be involved in lessons learned and risk assessment, which is a natural part of keeping track of and analysing the unit's own operations.

The staff has often little or no idea about what the operational analyst actually does or can do. It is therefore important for the operational analyst to be able to identify tasks and the potential needs of the staff and take the initiative to perform those tasks. The border between intelligence and operational analysis is vague and that could easily be interpreted as stepping onto someone else's turf. It is therefore important to establish a good dialogue with the intelligence community. In addition, it can be useful to run relevant analysis and findings past the intelligence community before presenting them, in order to avoid duplication. That will also make the working environment better.

6.3 Reachback

Throughout the whole period, FFI offered reachback to support the deployed operational analysts. The need for reachback differed from contingent to contingent, and the analysts used it

to a varying degree. However, when it was used the reachback capacity always proved to be useful. Given the limited capacity of one deployed analyst, reachback was a key success factor in the deployment of operational analysts from FFI. The reachback team should push information, and support the operational analyst with analyses. Several analyses were conducted by the reachback team and these helped the deployed analyst when needed. One of the main tasks was analyses of the polling results from Faryab [20]–[32].

Abbreviations

AAR	After action review
ANSF	Afghan national security force
ANTILOPE	Analysis support to military operations
Apr	April
ASIC	All source intelligence cell
C	Civilian
CD&E	Concept development and experimentation
CIMIC	Civil-military cooperation
Civ	Civilian
COM	Commander
COS	Chief of staff
DEVAD	Development advisor
DSTO	Defence Science and Technology Organization
EGM	Effect Guidance Matrix
FFI	Norwegian Defence Research Establishment
HOTO	Hand over/take over
HQ	Headquarters
IO	Information officer
IO	International organisation
ISAF	International Security Assistance Force
KFOR	Kosovo Force
MoE	Measure of Effectiveness
NATO	North Atlantic Treaty Organization
NBG	Nordic Battle Group
NC3A	NATO Consultation, Command and Control Agency
NCC	National Contingent Command
NDCSC	Norwegian Defence Command and Staff College
NGO	Non-government organisation
NJHQ	Norwegian Joint HQ
NOR	Norwegian
NORAF	Norwegian police support to Afghan authorities
Nov	November
OA	Operational analysis
Oct	October

OF	Officer
POC	Point of contact
POLAD	Political advisor
POLO	Police liaison officer
PRT	Provincial Reconstruction Team
SFOR	Stabilisation Force in Bosnia and Herzegovina
SITREP	Situational report
TSG-F	Transition Support Group Faryab

Appendix A Weekly situation report

This appendix shows the format of the weekly situation report (sitrep) from the deployed operational analyst to the reachback team at FFI. An overview of the situation reports written in Afghanistan and a summary of the OA tasks can be found in [19].

WEEKLY SITREP – [Date: from – to]

[Address]
[E-mail]

ISAF; PRT MEY [Contingent number]; SITREP [Number]

Reporting period: from [date] to [date]

1. **General Situation**
2. **Technical**
3. **Reach-back**
4. **Data Collection**
5. **Table of OA Tasks**
    - [OA task number]
    - Received: [date]
    - [Name of OA task]
    - Requestor:
    - What: [Description]
    - [Delivery]
    - Status:
    - Lessons Identified:

A. Appendix A: Administration
A.1 Weather:
A.2 Security:
A.3 IT & Comms:
A.4 Hours Worked:
A.5 Travel Undertaken:
A.6 Additional Information:

Appendix B Effect Meeting

Each planning/execution cycle ended with an effect meeting. The purpose was to present the status of and possible trends on the effects in the Effect Guidance Matrix (EGM) (Chapter 4.1.1.1). The output was a common situational picture and the Commander's Guidance. Based on this, a new EGM was established for the next execution cycle.

Chair:

COS (or others as delegated by COS, e.g. Targeting Officer or Operational Analyst)

Participants:

COM, COS, S2, S3, Targeting Officer, Information Officer, POLAD, DEVAD, POLO and other relevant staff members

Agenda (purposed):

- Insurgency S2 and All source intelligence cell (ASIC)
- Development Operational Analyst and DEVAD
- Effect Achievement Operational Analyst
- Operations S3
- COM Guidance COM

Appendix C Reading list

When deploying to a new area, it is useful to make a list of relevant publications for new analysts to read. This list should include publications about OA and assessment, polling (if it is relevant), the area and country the analyst is deploying to and military publications (e.g. plans and orders, handbooks, etc.).

There are several reports on the ANTILOPE project and some sister projects that might be relevant for analysts deployed in the future. Most of them are listed below in chronological order, together with a few other relevant publications.

FFI publications

Elin Marthinussen, Therese H. Jacobsen og Ramin Anvar, *Kurs i operasjonsanalyse ved ORS i Birmingham 2006*, FFI-reiserapport 2006/01681 (Unntatt offentlighet), 2006.

Bjørn Robert Dahl, Bård Eggereide, Alf Christian Hennum, Elin Marthinussen, Frank B. Steder, *ANTILOPE på fact-finding*, FFI-reiserapport 2007/00103, 2007.

Elin Marthinussen, *Joint Effort og Joint Future 2007 – fellesoperative øvelser ved FSTS*, FFI-notat 2007/02329 (Begrenset), 2007.

Cecilie Sendstad, *(U) Operasjonsanalyse ved Forsvarets stabsskole*, FFI-notat 2008/00892 (Begrenset), 2008.

Håkon Ljøgodt, *Innsamling og modellering av data for analyse av militære operasjoner*, FFI-rapport 2008/01591, 2008.

Elin Marthinussen, Bård Eggereide, Cecilie Sendstad, *Analysestøtte til militære operasjoner – utvalgte internasjonale miljøer og en mulig norsk tilnærming*, FFI-rapport 2008/02332, 2008.

Stein Malerud, Steinar Gulichsen, Guro Lien, Elin Marthinussen, *Nordic Military Analysis Symposium, Stockholm 2008*, FFI-reiserapport 2008/02363, 2008.

Elin Marthinussen, Bjørn Robert Dahl, *Effects-based approach to operations – teori og kobling mot nettverksbasert forsvar og manøverteori*, FFI-rapport 2009/00288, 2008.

Håkon Ljøgodt, Elin Marthinussen, *Erfaringer med datainnsamling og analyse for å beskrive sikkerhetssituasjonen i Afghanistan*, FFI-rapport 2009/00324, 2009.

Gunn Alice Birkemo, Mikael Kirkeby Fidjeland, Hilja Lisa Huru, Guro Lien, *Introduction to ORI – kurs i operasjonsanalyse ved OR Society i Birmingham, 20.-24. april 2009*, FFI-reiserapport 2009/00882, 2009.

Mikael K. Fidjeland og Steinar Gulichsen, *(U) Joint Effort og Joint Future 2009 – operasjonsanalyse ved fellesoperative øvelser*, FFI-reiserapport 2009/01124 (Begrenset), 2009.

Frode Rutledal, *Direkte støtte til militære hovedkvarter og operasjoner Sluttrapport etter FFI-prosjekt 1003 Analysestøtte til FOHK*, FFI-rapport 2009/01247 (Unntatt offentlighet), 2009.

Lars Erik Pedersen, Elin Marthinussen, Guro Lien, Frank B. Steder, Joachim Reitan, Terje Nilsen, *Effektivitet i logistikkprosessen – erfaringer fra den logistiske understøttelsen av de norske styrkene i Afghanistan*, FFI-rapport 2010/00644, 2010.

Elin Marthinussen, *Joint Predeployment Operational Analysis Course 14. april–9. mai 2008, Canberra, Australia*, FFI-notat 2010/00825, 2010.

Maria Fleischer Fauske, Elin Marthinussen, Alf Christian Hennum, *Inntrykk fra 4th IMA Conference on Analysing Conflict Transformation, Oxford, England, 28.-30. juni 2010*, FFI-reiserapport 2010/01605, 2010.

Monica Værholm, *(U) Fellesoperativ modul ved Forsvarets stabsskole – med fokus på assessment under Joint Effort 2010*, FFI-reiserapport 2010/01181 (Begrenset), 2010.

Elin Marthinussen, Frode Rutledal, Bård Eggereide, Alf Christian Hennum, *Faryab Survey – wave 1*, FFI-rapport 2010/02511, 2010.

Elin Marthinussen, Frode Rutledal, Bård Eggereide, Alf Christian Hennum, *Faryab Survey – wave 2*, FFI-rapport 2010/02530, 2010.

Steinar Gulichsen, Elin Marthinussen, Bård Eggereide, *OA Support to PRT Meymaneh*, FFI-rapport 2010/02151, 2011.

Alf Christian Hennum, Bård Eggereide, Frode Rutledal and Elin Marthinussen, *Rammeverk for fremdriftsvurderinger knyttet til norsk støtte i Faryab-provinsen i Afghanistan*, FFI-rapport 2010/02519, 2011.

Håkon Ljøgodt, *FFIs meningsmålinger i Afghanistan – metodiske forutsetninger og erfaringer*, FFI-rapport 2011/00631, 2011.

Bård Eggereide, Alf Christian Hennum, Elin Marthinussen and Frode Rutledal, *An assessment of the situation in Faryab based on results from the first FFI Faryab survey*, FFI-rapport 2011/00907, 2011.

Jonas Myhre Christiansen, *Forberedelse til deployering som operasjonsanalytiker til PRT Maimana*, FFI-reiserapport 2011/00948, 2011.

Bård Eggereide, Elin Marthinussen, *Faryab Survey – wave 3*, FFI-rapport 2011/01020, 2011.

Margareta G. Kiær, Ingrid C. Mørk, *Erfaringslæring i Forsvaret - en casestudie av formelle og uformelle læringsarenaer basert på en intervjuundersøkelse i et OMLT*, FFI-rapport 2011/01894, 2012.

Bård Eggereide, Elin Marthinussen, *Faryab Survey – wave 4*, FFI-rapport 2012/00475, 2012.

Håvard Fridheim, Bård Eggereide, *"When we understand that slide, we'll have won the war" – peace support modelling with the use of the MARVEL tool*, FFI-rapport 2012/00828, 2012.

Bård Eggereide, Andreas Barstad, *Faryab Survey – wave 5*, FFI-rapport 2012/01447, 2012.

Bård Eggereide, Svein Erlend Martinussen, Elin Marthinussen, Andreas Barstad, *Faryab Survey – wave 6*, FFI-rapport 2012/02506, 2012.

Guro Lien, *Militær rådgivning og assistanse – erfaringer fra norske OMLT i Afghanistan 2006–2012*, FFI-rapport 2013/00678, 2013.

Elin Marthinussen, David Nordli, *A new beginning – the Faryab survey in post-ISAF climate (Wave 7)*, FFI-rapport 2013/01487, 2013.

David Nordli, *(U) Predicting the location of future Improvised Explosive Devices (IEDs) – a feasibility study from Faryab, Afghanistan*, FFI-rapport 2013/02338, (Begrenset), 2013.

Svein E. Martinussen, Andreas Barstad, Jonas Myhre Christiansen, *Attainment of goals for the Norwegian led provincial reconstruction team in Faryab – an assessment*, FFI-rapport 2013/02793, 2013.

Elin Marthinussen, David Nordli and Bård Eggereide, *Faryab Survey wave 8 – a year after the redeployment of Norwegian forces from Faryab*, FFI-rapport 2014/00064, 2014.

Bård Eggereide, *I hvilken grad ivaretas vurdering av måloppnåelse i forbindelse med nasjonale fellesoperasjoner?*, FFI-notat 2014/01287, 2014.

Idunn Helle, *Faryab Survey as an impact assessment tool for development projects*, FFI-notat, work in progress.

Bård Eggereide, *Oppsummering av OA-oppgaver og ukesrapporter fra Afghanistan*, FFI-notat 2014/01388, 2014.

Torgeir Brandsar, *Datamining ved bruk av PYTHON – Systematisering av stridslogg fra Faryab*, FFI-notat 2014/01397, 2015.

Elin Marthinussen and Frode Rutledal, *Faryab Survey – spørreundersøkelser i et konflikt-område*, FFI-notat 2014/01679 (Unntatt offentlighet), 2015.

David Nordli, *Operational Analytical Support (OAS) – the lost and useless staff function?*, FFI-notat 2014/01592, 2015.

Peter Aalen, *Faryab Survey – Trends and demographic differences wave 1–6 (2010-2012)*, FFI-rapport 2014/ 02316, 2015.

Torgeir Brandsar, *Befolkningens syn på den afghanske hæren (ANA) i Faryab 2010 – 2013: En simuleringsmodell*, FFI-notat, work in progress.

Elin Marthinussen and Bård Eggereide, *Faryab Survey wave 9 – two years after the redeployment of Norwegian forces from Faryab*, FFI-rapport 2015/00413, 2015.

Elin Marthinussen, *Joint Effort – erfaringer fra 8 års deltakelse på FSTS' fellesoperative øvelse*, FFI-notat 2016/00107, 2016.

NATO and other military publications

NATO RTO SAS, *Decision support to Combined Joint Task Force and Component Commanders*, AC/323(SAS-044)/46 (Unclassified), 2004.

PRT Executive Steering Committee, *Charter of the Provincial Reconstruction Team (PRT)*, (Unclassified), 2004.

Dr. Joe Strange and Colonel Richard Iron, *Understanding Centers of Gravity and Critical Vulnerabilities*, Swedish Defence College, Departement of War Studies, Stockholm 2005.

NATO, *PRT Handbook 2nd edition*, (Unclassified), 2006.

NATO, *NATO's Effect-Based Approach to Operations Handbook, 04 December 2007.*

NATO-RTO-SAS, *NATO Operations Assessment: A Case Study Based on Planning for Transition in Afghanistan*, AC/323(SAS-091)TP/420 (Unclassified), 2012.

NATO RTO SAS, *Operational Analysis Support to NATO Operations*, AC/323(SAS-089)TP/479 (Unclassified), 2012.

NATO, *NATO Operations Assessment Handbook (NOAH) – Version 2.0*, 15 December 2012.

NATO, *Allied Command Operations Comprehensive Operations Planning Directive COPD Interim V2.0*, Supreme Headquarters Allied Powers Europe, 04 October 2013.

Other publications

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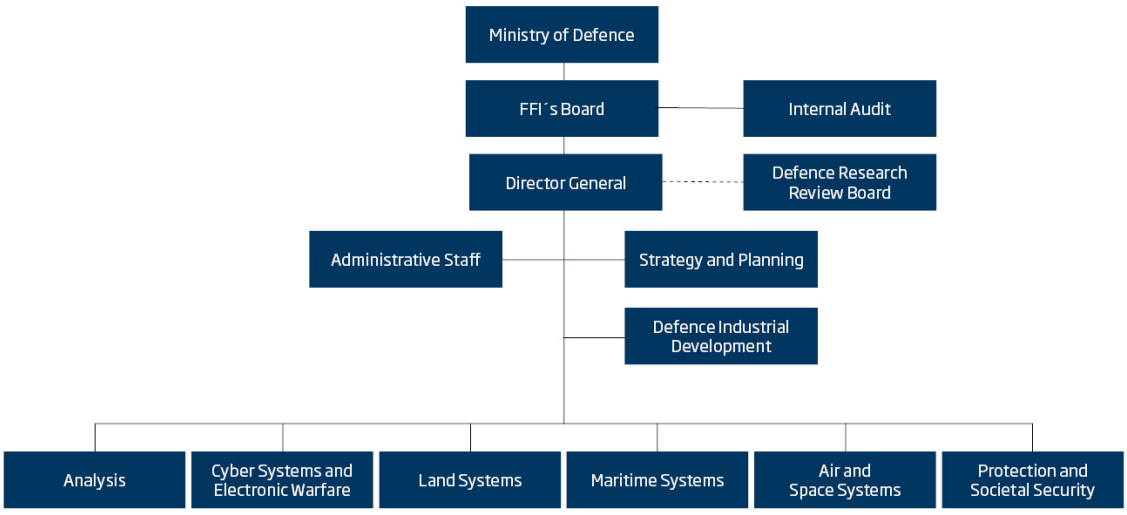

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