Applying Data for Peacekeeping: Challenges and opportunities

15 November 2018 Conference Report





Table of Contents

Introduction and recap of day 1	3
Key note: Applying data for peacekeeping: lessons and recommendations	4
Morning Breakout Sessions	6
Breakout on Threat analysis and early action	6
Breakout on Data management systems for peacekeeping	7
Breakout on Data for peacekeeping performance	8
Afternoon breakout sessions	9
Breakout on Open source data for peacekeeping	9
Breakout on Collating data for decision-making	10
Breakout session on Human Intelligence for peacekeeping	12
Concluding Panel Discussion	13
Annex I. Agenda	14
Annex II. Abbreviations	15

Introduction and recap of day 1

Peacekeeping relies on structural, actionable and timely information to be effective. The challenges lie in collecting and collating relevant information, applying information for effective actions and measuring performance.

This two-day conference, which took place on 14 and 15 November in The Hague, brought together peacekeepers from UNMISS and MINUSMA, policy makers and experts from UN HQ and the Dutch Ministries of Foreign Affairs and Defense, and researchers from CIVIC, Bellingcat, Airwars, Every Casualty, SIPRI, and ETH Zurich, among others to discuss current challenges the application of data for peacekeeping and to facilitate operational exchanges between data initiatives, peacekeeping staff and policy makers. The event was initiated by the Protection of Civilians (PoC) department of PAX as part of its Strategic Partnership with the Netherlands Ministry of Foreign Affairs.

Recap of day 1

There is a huge volume of data available, varying in quality and accessibility. The availability of data does not mean that it is utilized to the best extent possible. Data gathered on mission level gets lost in the upwards maelstrom of hierarchy, resulting in a 'black hole' of data.

Challenges in data gathering exist of both technical nature and collection risks, e.g. the principle of doing no harm, responsibility to not put people in danger, and risks of asking what people need without the ability to provide this.

Key questions identified during day 1:

- What do we do with all the data that we collect?
- How can we use human intelligence to acquire a better understanding of the conflict and the perceptions of the affected communities?
- How do we match the data supply with the data demand to provide options for decision makers?

Opportunities identified during day 1:

There is a shift of culture in organizations towards being more comfortable with the use of data. This culture shift is vital and mechanisms need to be created within peacekeeping to make more effective use of data on decision-making level. "This is really interesting, but what to do with it?" Efficiency in making use of data for decision making is required.

- Already existing data can be more comprehensively used to analyze conflict and predict future conflict
- The demand and supply side of data should be enhanced
- Different components of a mission should be brought together to analyze data more efficient
- Enhanced collaboration is required between UN/NGO's/think tanks/etc., both on data collection and data analysis
- SAGE can function as a comprehensive data system within peacekeeping missions that collects, analyses and disseminates information from and for all mission components

Key note: Applying data for peacekeeping: lessons and recommendations¹

The key note for the event on 15 November was delivered by Ms Christina Goodness, Chief of the Peacekeeping Information Management Unit at DPKO/DFS.

Following a variety of previous **peacekeeping reform** initiatives (such as the High-Level Independent Panel on UN Peace Operations, or HIPPO) Secretary-General António Guterres proposed reforms in 2017 in the United Nations peace and security architecture, in the UN's management system and structures, as well as in the UN development system. Strategic reviews of major peacekeeping operations have been initiated which will assess the conditions for successful mandate implementation with enhanced focus on performance- and mandate reporting.

There is a high need to produce evidence of the influence of multilateral organizations such as the UN on the world **to legitimize their existence**. **Data and innovation** is high on the agenda and with the reform agenda of the Secretary General,² the HIPPO report, and several initiatives relating to technology and innovation, we are at a **tipping point**.



¹ This section summarizes the key note presentation as well as the plenary discussion that followed. ² With the overarching goal to create a UN that is better equipped to address the complex contemporary

challenges

Data is important for peacekeeping for a variety of reasons:

- Situational awareness; it enhances knowledge on the facts on the ground
- Decision making; to take rapid targeted decisions and respond
- **Progress management**; data enables measurement of how we are progressing against the mandate
- Forward analysis; data projects where we need to go next

Several larger opportunities for applying data for peacekeeping are identified:

- 1) data facilitates rapid targeted decision-making and response in theatre
- 2) data provides a nuanced picture of successes and failures for planning
- 3) data provides better evidence to defend multilateralism

A data driven approach that supports efficiency within peacekeeping is required. Data is valuable for peacekeeping reviews and for monitoring the effectiveness of blue helmet as it provides insight into the effectiveness of patrols for protection of civilians. The availability of data does not suffice. It is imperative to **understand** the data's most effective application. To achieve a better understanding of data, conceptual, technical and visual analytical skills are required. **Consultation** between different peacekeeping components (or 'silo's') is a vital element of making the most of data. Pulling together data from different organizations can help get insights into relations between, for example troop deployment and patrols with the occurrence of incidents and the presence of armed groups.

There is a need for data to not just inform operational level response but also deliver **input into strategic discussions**. The UN should have senior level conversations about its 'needs' for evidence and data. Matching data sets to strategic questions **can lead to more targeted data** and applied to accommodate specific questions. The use of analytics by senior leadership can still be improved.

It is important to keep in mind that the UN is not set up as a data shop and has limited resources for gathering and analyzing substantive data. **Extra support** should be provided to support systems like SAGE, and to better equip people to use data. This can be achieved either through training personnel or hiring data experts.

We need to get innovative about the way we **present progress** and effectiveness of peacekeeping missions, for example by the use of maps, photography or imagery, looking over course of time and convey evidence. **Data visualizations** make operational realities visible to decision makers. Fatalities (both UN casualties and civilian casualties) can be mapped out in order to check whether the deployment is accurate.

Peacekeeping is a political orientated activity. **Member states** want the UN to be more efficient but it is a double edged sword. Whereas some member states are looking for the evidence, others may have another agenda.

The coming years will likely see a move from a country-focused (Mali) peacekeeping approach to a regional peacekeeping strategy (Sahel).

Morning Breakout Sessions

BREAKOUT ON THREAT ANALYSIS AND EARLY ACTION

Threat analysis³ provides insight into threats to civilians. It is therefore a vital element for early warning and early action in peacekeeping.

Machine Learning⁴ could be applied as an early warning tool. It can assist UN Peacekeeping in a variety of ways:

- It could predict where violence might occur
- where violence spills over
- when violence occurs
- how much violence will occur

Machine Learning uses algorithms to process and learn from data in order to make meaningful predictions, automatically seeking for **causation**.

Machine learning can be applied to predict clashes from different data sources, including **text data and from image data such as satellite images**. It can support the UN with text mining to further assist data collection and it can predict violence by identifying threats within text. Hate speech search, combined with resource data on groups can provide loads of options. Participants mention that quantitative data cannot be the sole source of input into early warning and making predictions.

Participants wonder to what extent it is needed to **verify the data** before it can be used in machine learning. This depends on how much data is fed. Feed it 90% of the data and see if it predicts the 10% correctly. There is no perfect data, there is good and better data but never perfect data.

Data analysis as of yet is not addressing **root causes**. Picking up **trends** in the data could be a great opportunity in this regard.. Predictions made by machine learning can be taken into account when creating a better environment to pursue these root causes and address them. **Job shortage** is seen as a root cause for unrest in several Arab countries. Frustrations of the population may ultimately lead to violence. Applied machine learning could create insights into predictors on, for example riots and protests, and thereby contribute to early warning. Acting upon the early warning is another thing. One of the difficulties with early action is that it is impossible to claim something was prevented because it never happened. With machine learning, the actual preventing act could be logged as an action and the machine can be tweaked to learn and study these phenomena.

Participants mention there is no tool to buy off the shelf that will solve all problems regarding the application of data for peacekeeping. Participants mention that the first hurdle is taken by the UN with SAGE, the second hurdle is **collaboration**.

³ For more on threat analysis in peacekeeping see f.i.: CIVIC (2018) Data-driven Protection. Linking Threat Analysis to Planning in UN Peacekeeping Operations. <u>https://civiliansinconflict.org/wp-content/uploads/2018/11/CIVIC_PeaceKeeping_PRINT_DigitalNov27.pdf</u>

⁴ For more on the application of machine learning in peacekeeping see f.i.: Duursma, A. and J. Karlsrud (2018) Predictive Peacekeeping. Opportunities and challenges. NUPI Policy Brief 10/2018. https://brage.bibsys.no/xmlui/bitstream/handle/11250/2566871/NUPI_Policy_Brief_10_Karlsrud_Duurs ma.pdf?sequence=2&isAllowed=y

BREAKOUT ON DATA MANAGEMENT SYSTEMS FOR PEACEKEEPING

Data management systems are vital in peacekeeping. Such systems allow for a systematic common **situational awareness** to guide operations; they contribute to **response** and **accountability**; and can assist peacekeeping **performance** evaluations.

SAGE is a simple intuitive **web-based system** for all peacekeeping missions that allows multiple mission components to add and share data on incidents, events and activities of UN peacekeeping missions. SAGE started in 2015 at mission headquarter level and is currently being implemented in 10 peacekeeping missions and 2 special political missions. It stores information as structured data, rather than text-based documents, and it also includes the ability to **map out incident locations** on UN Base Map, with GIS overlays. Data is presented in statistical "dashboard-style" trend charting of incidents/events.

Currently, a lot of data gets lost during the **reporting process**. When information on activities or incidents is entered into manual reports such as Situation Reports, some details may be regarded as insignificant for users higher up in the hierarchy and left out. This means that data is missing in the chain of decision-making. Moreover, multiple tools and platforms, both structured an unstructured, are used within and across missions. With SAGE, regional officers enter information into a single database, which means further analysis can be done and can be linked to other databases. The challenge is still to make people understand the benefits of using SAGE instead of other systems. An initiative by an external group to **promote SAGE** would be beneficial. It would also be useful to bring SAGE users from the mission together to **reflect on best practices** and discuss users tips. Moreover, the sustainability of **trainings for SAGE** implementation can be improved. Users receive only one training and keeping that knowledge up to date is personality based. Dedicated staff members are needed to keep this going.

The Elva platform⁵ gathers information to build a picture of localised events in real time with data collected directly from local communities. Data is collected mainly in hard to reach areas and acquired through key informant interviews, through networks of community safety groups, through household surveys and through focus groups. Data gathered from local communities can be used to help understand **drivers of conflict** and provide **knowledge on grievances** that for example may feed extremists. Data furthermore may be used to swiftly identify and address local community security challenges as they emerge. Small pieces of data can -combined- lead to more information.

Participants also discuss **data sharing between the UN and third parties** and mention that in general, there is a fear within the UN that bringing out too much information will lead to criticism which makes it reluctant to data sharing with third parties. SAGE allows for the distilling of data to a point where information can be shared.

⁵ For more on Elva see: <u>www.elva.org</u>

BREAKOUT ON DATA FOR PEACEKEEPING PERFORMANCE

Many initiatives regarding peacekeeping performance take place at strategic level, serving to optimize accountability to New York and comparing different missions. This is valuable, but peacekeeping performance is also critical on **operational level**. The Stimson Centre currently works on a project that aims to provide decision-makers in peacekeeping missions better data to improve **operational performance** on Protection of Civilians in the field. Not with the purpose of enhancing accountability towards New York, but with a particular focus on the accountability of missions towards civilians. The project is not trying to evaluate the overall performance of the mission on PoC, but aims to assist to utilize PoC data more effectively, stimulating it to control its own **monitoring and evaluating system**.

It is important not to only collect new data but **better data**. A better operational picture can be acquired if different data sources would be combined. Participants agree that we must try to **measure effects of peacekeeping** in one way or another. Data is needed to investigate how effective peacekeeping is, but what kind of data do we need? On mission level, there is lots of information from different perspectives and angles. Opportunities for measuring peacekeeping performance would be **trend analysis** and **activity based analysis**. If the average respond time to incidents or hotspot forecasts can be captured, it is possible to investigate if and how this changes over time. **Activity based analysis** can help the mission answer questions about the effectiveness of activities implemented by missions' department of Civil Affairs.

The **performance and effectiveness of patrols** is also discussed. Participants mention that collecting GPS data from troop- and police patrols would be beneficial as this enables comparison between mission presence and violence against civilians. Current patrol reports give only limited information, frequently only on the number of patrols conducted. In-depth information on what they found and what they did is not available. This is in part due to **the technical manner of reporting** with valuable information being left out if it does not perfectly fit the reporting format and in part due to countries unwilling to share the locations of their troops

Being effective in peacekeeping has everything to do with **gender awareness.** Mission personnel is frequently not gender aware, and this has damaging effects. There is the idea that it is hard (or impossible) to get in contact with women. However, a female perspective, for instance whilst conducting needs assessment, is crucial. A solution for more complete data including both male and female perspectives would be **mixed patrols.**

What constitutes success for peacekeeping? Participants mention that mission leadership needs a clear sense of the data they need to be able to make decisions and proactively ask for this data to be collected. Participants mention that no matter what data you collect, what constitutes 'success' must be mirrored to the environment of the peacekeeping mission. There a need for standard indicators to enable comparison.

The problem with data is that anyone can find something to support their **political aims.** There is a lot of **suspicion** on how data will be used by member states.

Afternoon breakout sessions

BREAKOUT ON OPEN SOURCE DATA FOR PEACEKEEPING

Open source data is increasingly used for the monitoring of (violent) incidents in conflict areas. People all over the world have the means to post videos and pictures on social media and send them to news agents. This results in a vast amount of data, including imagery on for example war crimes. Bellingcat and Airwars are two organizations occupied with the analysis of open source data from conflict areas.

Whether information from the ground can be acquired through open source data depends on the internet and **social media coverage** in the country where the incident occurs. If there is no coverage **satellite images** can also function as an effective tool to obtain more data on an incident. It may take a long time but with a combination of eye witnesses, satellite images, and video evidence an incident can be to reconstructed.

Airwars is among the organizations that conducts open source investigations. Airwars a.o. monitors civil casualties from coalition airstrikes in Iraq and Syria. Combined, open sources can provide information on the **location, incident, neighborhood, number of victims, and even names** of victims of an incident. Airwars then compares this information with the information provided by the coalition. Open source data provides a valuable source in advocacy efforts for **credible assessments on behalf of civilians**, as well as for transparency and accountability. Policy makers can play a role in transparency about incidents and accountability to civilians. More **openness** on airstrikes and resulting civilian harm and a reporting system for civil society could help.

There are several challenges to using social media, specifically relating to credibility and verification of sources. There are different truths communicated on social media with actors deliberately spreading **fake information** which makes it difficult for people to distinguish between what is real and what is fake. The most common thing is the **re-use of videos** of old incidents which are portrayed as a new incident. It is therefore crucial **to check and verify** every piece of image, for instance by reverse image search.

The process of **geolocating**⁶ an incident starts with context, to geolocate something it is vital to check for visible locations and for other clues in the area. Satellite imagery is available 24/7, which helps in identifying changes in landscapes and buildings.

Participants wonder whether there are possibilities to analyze keywords on social media, to find out there is an increased concern under the population. According to the open source specialists, it is possible to geolocate tweets from a certain location. If there is a big spike in people posting about a checkpoint somewhere, this means that there is probably something going on. Open source data, such as Twitter could therefore also be used as **early warning source** in peacekeeping.

⁶ the identification of a geographic location or object

BREAKOUT ON COLLATING DATA FOR DECISION-MAKING

The 'Improving Security of United Nations Peacekeeping'⁷ or 'Santos Cruz report' (referring to Lt Gen. dos Santos Cruz who led the review team) addresses **casualties among UN peacekeepers**, and what should be done to reduce these casualties. The report argues that if troop- and police-contributing countries do not immediately take responsibility for reversing this trend and **take measures needed to operate securely** in dangerous environments, personnel will continue to be an easy target and mandates of peacekeeping operations will be compromised. A **mindset change** is needed, the report concludes. The report identified four broad areas in which the UN should take action: 1) Changing mindsets, 2) Improving capacity, 3) Achieving a threat sensitive mission footprint, and 4) Enhancing accountability.

A variety **of data sources** exist in peacekeeping missions, including: daily and weekly troop and section reports; reports compiled by the mission's Joint Operations Center (JOC); Community Alert Networks (CANs); stakeholder mappings conducted by Political Affairs and Civil Affairs; early warning and flash reports prepared by the mission's Joint Mission Analysis Center (JMAC); violations recorded by the Human Rights Division; special analytical products produced by consultants; geospatial and signals intelligence (satellites); open source data; and information-sharing through engagement with humanitarian and development actors.

It is difficult to combine and collate all this information and several elements are missing:

- 1) Uniform and high-quality reporting: missions need information on trends of armed group activity, threats to civilians, violations, and activities of other actors. This requires the ability to routinely collect the same information over time,
- 2) Guidelines on Mission Priority Information Requirements (MPIRs) and Mission Intelligence Acquisition Plans (MIAPs),
- 3) Field-based staff to verify and collate data,
- 4) Strong systems for managing and storing information: SAGE is implemented in ten missions, but not used effectively yet in most of the large missions in Africa,
- 5) Data-driven decision-making by Mission leadership.

A centralized system for information storage and management is required with data that is **trusted** by its users. SAGE can function as such a centralized database. To enhance trust, **responsibility** for data entry should be clearly assigned and there needs to be an **approval system** for inserted data. Databases should allow staff to confirm the number and quality of sources and allow staff to **rank or grade** the severity of a threat. Participants mention that the grading of incidents is currently based on individual judgment and therefore **s**ubjective. A set of indicators is required that can be used to **standardize** judgement of data. Such standardization could also prevent that incidents are listed multiple times under a different marker. If sections receive conflicting information about incidents they need capacity to clarify and verify information at the local level. Staff is needed that is responsible for bringing section reports together into a **single operating picture**. Missions should ensure staff are properly **trained to use databases and understand PIRs**, which is currently a challenge both on the military and civilian staff side.

Reporting should be uniform, structured, and meet the information needs of the Mission. All staff should know what the mission's PIRs are and **clear pathways** need to be established for bringing early-warning information to the attention of key personnel and decision-makers. Mission leaders should

⁷For the 'Santos Cruz report' see:

https://peacekeeping.un.org/sites/default/files/improving_security_of_united_nations_peacekeepers_r eport.pdf

also be willing to take **proactive decisions**, sometimes with partial information. Decision-making meetings would benefit from the inclusion of **protection advisors and JMAC analysts**.

Participants mention that the exchange of information between **civil and military components** remains challenging. Some progress has been made but the **lack of integration** among different mission components is not systematically covered. Improvements need to be institutionalized. Predeployment training is crucial for a mindset change. There is an opportunity to involve gender advisors and protection specialists in pre-deployment- and in-mission training.

BREAKOUT SESSION ON HUMAN INTELLIGENCE FOR PEACEKEEPING

Human intelligence can contribute to **mission accountability** and a **bottom up approach** in peacekeeping. However, peacekeeping missions lack data on the communities they are to protect and misunderstanding and misperception between the community and the mission frequently occurs. Missions also lack insights into dialogues on local level. Before two conflicting communities can be brought together, a lot of effort into the set-up of such an event is needed. After the dialogue, it is important to organize follow-up activities. Several participants mention that missions (Civil Affairs) are not equipped to create such events but could collaborate with NGOs in this regard. Currently, NGOs and peacekeeping missions are not aware of each other's demands for certain information. More **conversation between NGOs and missions** is therefore needed to reinvent methodologies, based upon needs for data.

UNMISS developed a **community engagement strategy** to guide its interactions with civilians. Data collected on local level is used for strategic decision making, and provides insights into factors that might affect the mission. Different early warning indicators are used to develop scenarios to be able to respond towards events that effect the mission mandate and for preventive practices.

When involved in local level data collection, it is vital to explain the rational of the research and how people may benefit from participating. It is also important to make the gathered data available to the community. Ideally, this process is as fast as possible. This increases local utility of the findings and enhances **ownership**. Moreover, data collected on perceptions is just a snapshot. When a security incident occurs, perceptions may change. This does not mean that perception data is inept. The discussion about why perceptions change is very relevant. How do people's ideas of being affected by a situation change? Especially to minority groups, it can be important that they see that they are represented.

Participants discuss the **terminology** of human intelligence and mention that it may be better to adopt a terminology that is not threatening for the national/local context and does not stimulate mission components to keep data for themselves. Human intelligence could for example be relabeled as human information or situational awareness.

Participants agree that peacekeeping missions need some intelligence element in it to be able to protect civilians and agree that it is crucial to find ways to engage the local community and build trust between the mission and the population. This should be synchronized with **high level conversation**.

Concluding panel discussion

Three areas of opportunities for strengthening peacekeeping and the ability to use data were identified:

- 1. Reinvigorated support for centralized data systems: here we find opportunities for long-term data analysis. It started all well with SAGE, but the issue is the need for ongoing training and support for peacekeeping operations using it.
- 2. The **human skills gap** should be filled, including data literacy at senior management in the UN. Data analysis talent is needed in the UN.
- 3. A high level conversation should take place addressing the **strategic use of data**. What is data good for and what not? When we should use data and when is it not relevant? We should not pretend that data is everything, but it is a powerful enabler of analysis. The UN/peacekeeping needs better representations of the progress and impact that is made.

The panel members see an increasing pressure on governments to **justify peacekeeping efforts**. Reports about the progress of the peacekeeping mandates will heavily rely on data. It is noted that the interesting part is not the data itself, but the analysis. Data analysis is often **politically driven**, especially when data is used to measure success of a mission. Data is used as **leverage** and some actors have an interest in a lack of data or keep it deliberately to themselves. To the opposite, integrated and inclusive data can also be used to convince skeptical countries of the effectiveness of peacekeeping. The data continues to expand. The positive effect of data is massive transparency, but it can also be used as leverage and actors may deliberately spread fake news.

Independent of how brilliant our tools and technical solutions are, everything still depends on the people using them. Information does not automatically lead to better performances, partly because of systemic reasons. MINUSMA is a mission with an incredibly **big brain, but tiny hands**. It knows a lot about dynamics in the country, but it can do very few things of protecting people. MINUSMA for example has a perfect picture of Improved Explosive Devises (IED) threats. As a result of this, many measures (Standard Operating Procedures (SOPs), road signs, pictures of the area, increased training) are implemented. But this does not prevent peacekeepers from dying from IED attacks. The **mindset of the troops** operating in a asymmetric threat environment has not changed. People neglect the SOPs, forget the training they got, and do not read the signs, with sometimes fatal results.

We focus a lot on peacekeeping operations and the UN Secretary General, but there are many opportunities for civil society and UN member states as well. The **UN is a membership organization**, so countries should take responsibility in resolving issues.

There is a lot going on about the role of the UN in the world. Is this an outdated concept? The UN was born as an innovative concept. As a program that pushes forward. The big concern right now is to defend **the concept of multilateralism**.

Annex I. Agenda

15 November	
09:30 - 09:45	Word of welcome
	Mr. Hans Rouw, Program Lead Protection of Civilians, PAX
09.45 - 10:00	Opportunities as discussed during day 1
	Mr. Marco Donati, Coordination Officer, United Nations Policy, Evaluation
	and Training Division
10:00- 10:45	Key note on strains and opportunities of applying data in peacekeeping
	Ms. Christina Goodness, Chief Peacekeeping Information Management
	Unit, United Nations Department of Peacekeeping Operations
10.45 – 11:00	Coffee
11:00 - 12:30	Facilitated breakout sessions on types of data:
	1. Open source data for peacekeeping
	2. Data management systems
	3. Human intelligence for peacekeeping
12.30 - 13:30	Lunch
13.30 - 15:00	Facilitated breakout sessions on application of data:
	1. Data for peacekeeping performance
	2. Collating data for decision-making
	3. Data for threat analysis & early action
15:00 - 15:30	Coffee break
15:30 - 16:30	Expert panel reflecting on opportunities identified
	United Nations, Dutch Ministry of Foreign Affairs, German Ministry of
	Defense, PAX
	Facilitated by Mr. Rob Sijstermans, Cluster Coordinator Human Security,
	Dutch Ministry of Foreign Affairs
16:30 - 16:45	Closing remarks by Mr. Hans Rouw

Annex II. Abbreviations

CAN	Community Alert Network
DPKO/DFS	Department of Peacekeeping Operations, Department of Field Support
IED	Improvised Explosive Device
MINUSMA	United Nations Multidimensional Integrated Stabilization Mission in Mali
HIPPO	High-Level Independent Panel on UN Peace Operations
JMAC	Joint Mission Analysis Centre
JOC	Joint Operations Centre
MPIR	Mission Priority Information Requirements
MIAP	Mission Intelligence Acquisition Plans
PoC	Protection of Civilians
SOP	Standard Operating Procedure