

Measurement of Post-Conflict Resolution in Bosnia-Herzegovina

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INTRODUCTION

Since late 1995, North Atlantic Treaty Organisation (NATO) forces have been deployed in the Balkans to assist the international community in keeping the peace in Bosnia-Herzegovina. Each of the NATO Commanders desired a means to identify the recovery progress on the road from civil war to peace and a method to assist in force reductions when the situation warranted. This paper provides a summary of the early assessment methods and a description of the current system in place for measuring progress. The background, methodological basis and some example results are described and illustrated. Finally, the paper seeks to identify implications of the lessons learned in these measurement efforts for future peace support operations. We contend that the traditional approaches to assessing mission success employed by commanders, in concert with associated Headquarters structure and information flows, should evolve to accept new kinds of data and findings as key aids to decision-making.

Assessment of mission success in Bosnia-Herzegovina has essentially required measurement of the breadth and depth of conflict resolution. This is extraordinarily difficult work (see Holtzman, 1996; Oberg, 1996; Wallis, 1995) and there was no broadly accepted initial template that could be employed to track the incremental return to peaceful co-existence among ethnic factions when the early missions deployed into the theatre. The task was to generate a methodology that would generate useful indicators of progress for commanders, which could be measured reliably over time, and which could be implemented in the conditions of an operational environment. The road to attaining these lofty goals was not clear-cut or easy. NATO and the international community were essentially trying to rebuild a country from the start. How to measure the progress was also not clearly discernible nor were there any recent analytical precedents to emulate. This was as new an endeavor as could be imagined.

The General Framework Agreement for Peace (GFAP) contained 11 Annexes that laid out the specific aspects of the peace in Bosnia-Herzegovina. Only one of these Annexes specifically addressed the military aspects of the agreement. It contained the military responsibilities of the Former Warring Factions and the duties and responsibilities of the NATO Implementation Force (IFOR). The other 10 Annexes contained the civil provisions of the agreement and they touched on almost every facet of life in Bosnia-Herzegovina. The principal tasks for IFOR were to assist the country in recovering from their recent civil war, overcome the ethnic, religious and racial problems and assist them in returning to a peaceful, economically viable state.

Operational analysis (OA) has been part of the NATO mission in the Balkans since its beginning and OA attempted to provide some assistance. Successive OA support teams have developed metrics to help the command in assessing the progress in the national recovery. Traditional methods and techniques for the measurement of mission success are grounded in the execution of conflict. Few of the standard military OA tools could be profitably applied to the circumstances of BiH. The work needed to incorporate indicators from both the military and civil domains, demanding a synthesis of operations research and social scientific approaches. Both traditional OA and social scientists were deployed to Bosnia by the NATO C3 Agency to provide this analytical support to IFOR and to subsequent NATO Stabilisation Force (SFOR) commanders.

The analysts deployed to successive operational Headquarters in Bosnia-Herzegovina had to strike a balance between the requirements of rigorous methodology and the critical imperative to provide pragmatic, useful, time-sensitive information to commanders. The successful measurement of progress was hampered by a fundamental problem underlying the work; there was a critical absence of an articulated end-state. The military conditions consonant with a sustainable peace are relatively clear, but the precise social (particularly in the domain of inter-ethnic relations), economic and political elements of a stable nation-state were essentially unknown. In the perhaps uniquely complex Balkans situation (see Ignatieff, 1993), it is information on progress along these “soft” dimensions that was and is, in highest demand. There is a pressing requirement for improved analytical support to peace operations from social and behavioural scientists.

Three methodological programs for measuring the level of progress within Bosnia-Herzegovina were developed and implemented since December 1995. Normality Indicators were firstly employed to measure the basic needs of the population in the immediate wake of the conflict. Later years saw the evolution of Measures of Effectiveness and finally the Transition Strategy Six-Month Review to measure the elements of stable and sustainable progress. This paper will briefly describe the early assessment efforts and then will concentrate on the latest methodology employed. The SMR is currently used to assist NATO in assessing the post-conflict situation. The background, methodological basis and some example results for this method will be illustrated. We conclude with a brief discussion of the imperative that these new sources of “tactical” information be embedded in decision-making by commanders in future peace operations.

THE EARLY MEASUREMENT SYSTEMS

Over the years, three OA support elements have been deployed to the Balkans. The first was the Operational Analysis Branch (OAB) that deployed with the land component of IFOR, the Allied Command Europe Rapid Reaction Corps (ARRC). The mission of the OAB was to “give independent analytical and scientific advice to the Commander to aid his decision-making over the spectrum of AARC activities.” This five-person cell provided analytical support throughout the deployment of IFOR and they developed and instituted the first of three assessment methodologies called Normality Indicators.

SFOR replaced IFOR in November 1996. SFOR established an Assessment Cell (SFOR AC) consisting of seven military and civilian personnel. Their mission was to provide analytical support and operational analysis for the commander and his staff. This cell developed the second of the methodologies to measure recovery progress called Measures of Effectiveness (MOE). Following direction from the North Atlantic Council (NAC) in June 1998, the MOE program was replaced by the Six-Month Review (SMR). Analysts at SFOR, NATO C3 Agency and the Supreme Headquarters Allied Powers Europe (SHAPE) developed this methodology and it is the third of the methodologies used to assess progress.

Throughout these research and analysis activities, the core element has been the imperative to measure progress toward the sustainable secure environment envisioned by the GFAP. The following paragraphs describe these methodologies. While the programs were dissimilar in many respects, the aim of each was the same – to provide NATO commanders and staffs with rigorous and timely assessments of progress in Bosnia-Herzegovina. There is

ample evidence at this juncture that future NATO missions will demand analytical support of this nature and it is hoped that the lessons learned through four years of effort will be of considerable use in establishing such programs.

NORMALITY INDICATORS

The requirement for IFOR's OAB was for an analytical method to assess the direction and magnitude of changes in the country. The objectives of the Normality Indicators were to provide a strategic "measure of success" of the security framework. The requirement was to develop and implement a system to measure the return to normality. The resulting assessment was to improve the Commander's perception of the progress they were making in their mission accomplishment.

The OAB developed a methodology¹ that was based on observation of the situation and with the pertinent data collection by troops principally during routine patrols. These data were then qualitatively "scored" on the degree of their significance by personnel with considerable experience in-theatre. These qualitative indices initially provided information in the following areas:

- Urban food and goods outlets;
- Availability and presence of goods and groceries;
- Food prices and their stability;
- Urban traffic levels; and
- Occupancy and use of private housing, community and farm buildings.

Each indicator was scored on a scale of increasing intensity from 1 through 4. A score of 1 indicated a positive or essentially neutral event, with 2 through 4 signifying incidents involving increasing threats to stability. A "traffic light" metaphor was selected for the presentation of the findings, with a score of 1 represented by the colour green and a score of 4 represented by red. This technique was a simple way of capturing, distilling and presenting a large amount of information to commanders in a timely fashion. This information could then be distributed to the commanders and staff in graphic forms. Example results are shown in Figure 1. The colour coding was used for each of the divisional areas and for the complete area of responsibility (AOR). Additionally, trend arrows could be used for those showing an upward or downward trend.

The range of analysis topics expanded and contracted with the availability of data and with the imperatives of the mission. The OAB assembled the results of their analyses in frequent briefings to the Commander, his staff, subordinate units, representatives of international organisations (IO) and the press. The analytical findings were also used extensively by the staff to judge progress being made in operations.

¹ Detailed descriptions of the methodology, collection and reporting methods can be found in Rose, 1997 and Lambert, 1997.

The situation in Bosnia-Herzegovina improved considerably during the IFOR operations; consequently the SFOR mission was markedly different from the predecessor IFOR mission. The theatre situation in November 1996 was more stable than when IFOR had first arrived and there were no overt hostilities. Some government agencies and offices were forming and starting to function, albeit on a very rudimentary level.

NORMALITY INDICATORS					
CATEGORY	N	SE	SW	AOR	REMARKS
	STATUS				
CIVILIAN INCIDENTS	█	█	█	█	
CIVILIAN CASUALTIES	█	█	█	█	
CIVILIAN FOM	↑	█	↑	█	
AID FOM	█	█	█	█	
DISPLACED PERSONS	█	█	█	█	
POW	█	█	█	█	
STAPLE AVAILABILITY	↓	█	█	█	
SHELTER	↓	█	█	█	
WATER	↓	█	█	█	
POWER	↓	█	█	█	
MEDICAL (CIVILIAN)	█	█	█	█	
LAW AND ORDER	↓	↓	█	↓	
INFRASTRUCTURE	█	█	↑	█	

█	RED	█	AMBER	█	YELLOW	█	GREEN
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Figure 1: Example of Normality Indicators.

MEASURES OF EFFECTIVENESS

The SFOR Assessment Cell developed a system that would extend the work started by the ARRC OAB. The SFOR AC analysts concluded that the concept of normality indicators needed to be expanded beyond that used by the ARRC OAB. The essential work was to identify problems or potential instabilities in Bosnia-Herzegovina by identifying civil-military areas in which recovery progress was slow or was lacking. There were no constraints placed on the areas to be considered. They included, but were not limited to, government, political, social, economic, ethnic, military and infrastructure issues.

The resulting assessment system was loosely based on the Abraham Maslow's theory of needs and motivations.² In the context of Maslow's hierarchy, the ARRC OAB had successfully analysed the progress of the people in satisfying their basic level needs – those at the physiological level. The SFOR Assessment Cell needed to measure the progress in achieving the higher level goals – those concerning safety and the higher level societal needs.

² Maslow developed a theory that has influenced a number of different fields due to its high level of practicality. He described a hierarchy of five levels of basic needs (physiological, safety, belonging, esteem and self-actualisation). In this hierarchy, the person does not feel a higher level need until the demands for the lower level needs have been satisfied.

Thus, the SFOR AC focused their efforts more at the macro-level of measurement rather than the micro-level assessment as the OAB had done. These approaches were different, but seem appropriate for the time, the theatre situation and the different missions of the commands.

The resulting Measures of Effectiveness assessment methodology³ was based on data collected from the international organisations⁴ operating in Bosnia-Herzegovina and the SFOR staff. This information was qualitatively scored by personnel with considerable experience in theatre and used to assess the state of the twenty-five identified MOE shown in Table 1.

Freedom of Movement	Employment Status
Inter-Entity Boundary Line Crossings	Health Care
Police Behaviour	Property Rights
Displaced Persons/Returnees (DPRE)	Mine Area Clearance
Government Support to DPRE's	Media Freedom
Reconstruction Projects	House Destruction
DPRE Returns	Transition of Power
Destruction of Military Weapons	Institution Building: Nation
Confiscation of Police Weapons	Institution Building: Entities
Water Systems	Institution Building: Cantons
Sewer and Solid Waste Systems	Institution Building: Municipal
Electricity and Gas Systems	Arms Control
Education	

Table 1: Measures of Effectiveness.

Assessments were conducted monthly. These updates and the analytical follow up work presented snapshots of the conditions for each specific MOE. These snapshots represented the assessed condition of a MOE area at a particular point in time given the information available at that time. These were temporal conditions; thus they were referred to as "snapshots." With time and successive months of data collection and analysis, these snapshots were developed into time series or more comprehensive cluster or trend analyses. These more detailed and time dependent analyses were, in fact, the analytical objective. With them, the status of an MOE could be discerned and these provided a measure of effectiveness for each. These assessment results were presented against a map backdrop along with the appropriate statistical information and any inferences that could be derived from the data at that time. An example is shown in Figure 2.

³ Detailed descriptions of the methodology, collection and reporting methods can be found in: Owen, 1997 and Owen, 1997a.

⁴ These organisations included the Office of the High Representative (OHR), UN High Commissioner for Refugees (UNHCR), UN Head of Civil Affairs (UNHCA), UN Mission in Bosnia-Herzegovina (UNMIBH), UN Mine Action Centre (MAC), International Management Group (IMG), International Police Task Force (IPTF), International Committee of the Red Cross (ICRC), European Community Monitoring Mission (ECMM), Organisation for Security and Co-operation in Europe (OSCE) and World Bank (WB).

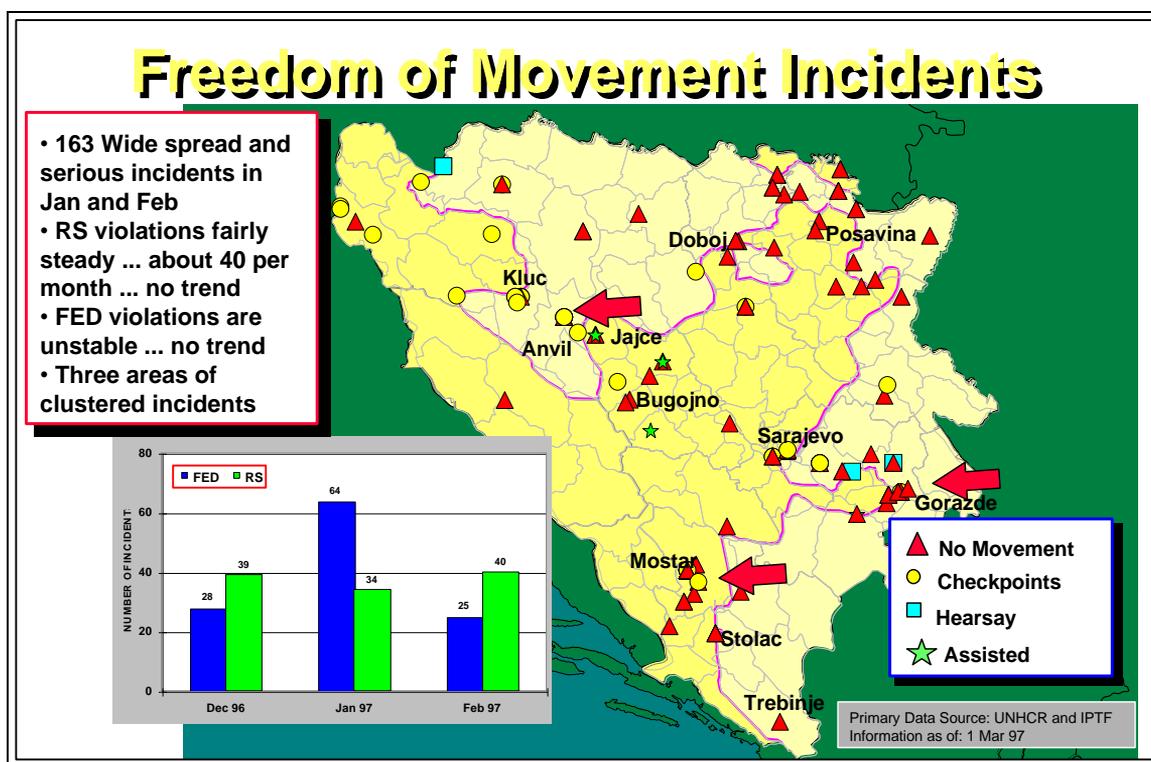


Figure 2: Freedom of Movement Incidents in Bosnia-Herzegovina, March 1997.

Assessments of these types were presented to the SFOR Commander and his staff on a regular basis starting in early 1997 and continued through the spring of 1998. The results were also regularly presented to the international organisations on both a formal and informal level. The briefings to the data providers also served as a “sanity check” on the analysis results and conclusions. These MOE assessments provided the staff and the international organisations with the rough indicators of progress on the road to recovery in Bosnia-Herzegovina.

THE CURRENT ASSESSMENT SYSTEM

In June 1998, the North Atlantic Council agreed on the development of a Transition Strategy Six-Month Review for the NATO Stabilisation Force. These planning reviews would be carried out for the NAC and the UN Office of the High Representative (OHR) by SFOR, SHAPE and the NATO staff. These reviews were to be based on a series of approved criteria, objectives and benchmarks for all military and civil security aspects of the mission in BiH. Each criterion would have one or more objectives and each objective would have one or more benchmarks included.

The aim of the SMR was to provide a comprehensive assessment of the status of progress toward stability in Bosnia-Herzegovina. The NAC identified ten critical dimensions of progress for measurement. These dimensions of progress (or criteria) attempt to encompass the security situation and civil implementation aspects of the GFAP. Each criterion has an associated desired end-state, which reflects the underlying objectives. The ten criteria and desired end-states are shown in Table 2.

Criteria	Desired end-state
Brcko	The consolidation of multi-ethnic institutions and a secure environment for returns to Brcko
Return of displaced persons and refugees (DPRE)	To have phased and peaceful DPRE minority returns on a self-sustaining basis in significant numbers
Media reform	The regulation of media in accordance with democratic standards and the availability of free and independent media throughout BiH
Arrest of persons indicted for war crimes (PIFWC)	To have all parties cooperating with the International Community in the arrest and prosecution of PIFWC
Public security and law enforcement	To have police forces in both entities that function in accordance with democratic principles and standards. To foster an environment in which the rule of law is paramount. To establish an independent, multi-ethnic judiciary.
Illegal institutions, organised crime and corruption	The dissolution of illegal pre-Dayton institutions, with revenue and disbursement mechanisms brought under the control of legitimate authorities
Democratic governance	To have functioning democratic institutions and practices at all levels throughout BiH
Military stability	A self-sustaining continuing cease-fire supported by transparent mechanisms for military-to-military cooperation
Economic development	To consolidate free-market reforms, including a transparent privatisation that precludes political influence in key economic sectors. To guarantee free movement of goods, services and capital across BiH with formal barriers to inter-entity commerce eliminated
Support to international organisations (IO)	IOs effectively carry out their implementation efforts without military support

Table 2: Criteria and Desired End-States.

Following the identification of these general criteria by the NAC, analysts at SHAPE and SFOR identified sets of linked objectives and specific progress benchmarks. Each benchmark was assigned a set of defined constituent measurement indicators. These items were incorporated into a questionnaire architecture to guide the assessment process. The questionnaires are administered to SFOR officers tasked with conducting the progress

measurement in areas of their expertise — NC3A analysts designed the questionnaires and provided a substantial array of the available data on progress to assist the officers in their assessments.

The methodology was designed to generate a comprehensive progress assessment (both of current status and of all trends identified across previous benchmark measurements) grounded in these essential criteria areas and their associated objectives, benchmarks and indicators. Some 270 indicators of social, economic, political, and military progress across the ten criteria areas are collected on a six-monthly basis. Ultimately, while founded upon the ten criteria designated by the NAC, the research seeks to gauge the extent to which BiH satisfies the elements of a stable nation-state as envisaged by the GFAP.

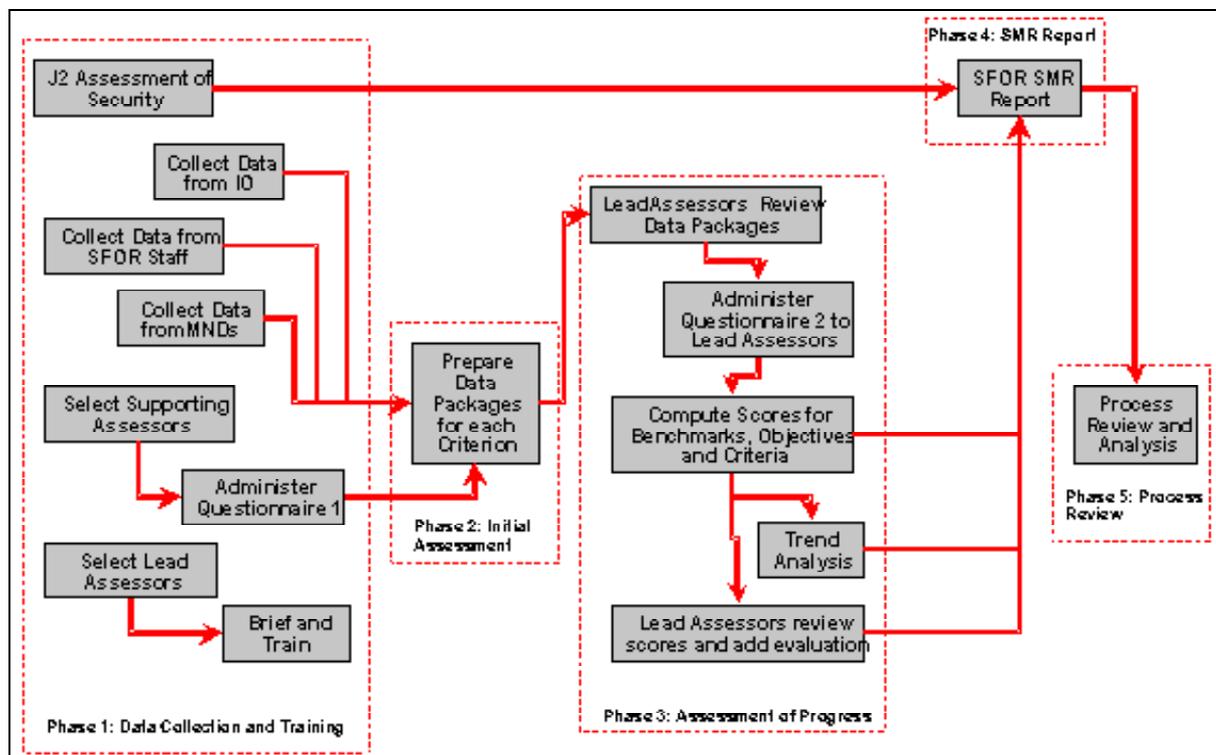


Figure 3: TS SMR Data Collection and Analysis Flow.

A complex iterative procedure is employed (see Figure 3) to guide the 10 SFOR area expert officers (usually at the Maj/LCol rank) and commanders through a detailed evaluation of multiple data inputs. The NC3A scientists provide the detailed criteria questionnaires; assemble comprehensive packages of available objective data on progress culled from UN, IO and NGO agencies in theatre; and conduct intensive interview schedules with civilian area experts. This information, typically involving several hundred pages, is provided to each SFOR area expert.

These officers marshal this material in concert with their own research and experience in completing a final questionnaire in which progress scores across the multiple dimensions of each criterion are assigned. Numerical scores are employed on a 1 to 5 scale. A score of 1 represents no progress since the cessation of hostilities and 5 meaning that the desired end-state has been achieved. Each score must be qualitatively justified in detail, and the scientists query assigned scores they believe to be discordant with the available quantitative evidence.

EXAMPLE RESULTS

Some examples of the results, based on the economic development criteria, are provided as illustrations of the output from this assessment method. Figure 4 shows the overall criteria score for Oct 1998 (1st SMR assessment date) and Apr 1999 (2nd SMR assessment date). These criterion scores focus on the progress or lack of progress made in achieving the end-state at six-month intervals. The desired end-state is a score of five. For this example there is some moderate improvement over the previous six-month period.

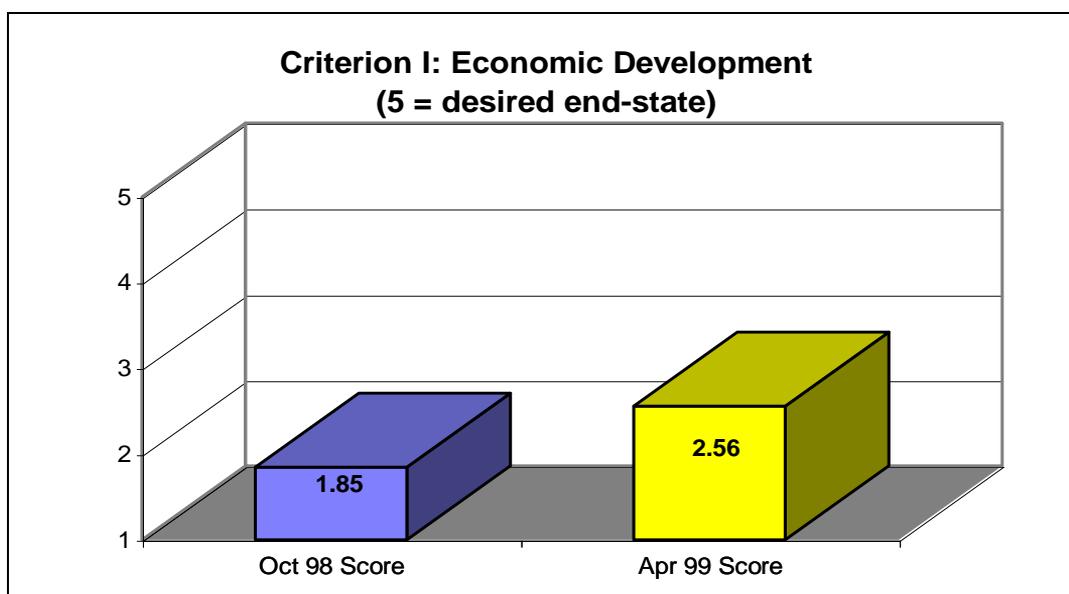


Figure 4: Example Criterion Scores.

The score for the situation in economic development was summarised and justified qualitatively by the SFOR area expert as follows:

“During the assessment period there have been positive developments mainly in the areas of currency acceptance, customs administration, banking, telecommunications and the fight against crime and corruption. This is reflected in the change in score from 1.85 to 2.56. However, economic growth has not been sustainable and is still reliant on International Organisations and donor-supported programs and projects. It will be at least 5 years before sustainable economic growth is achieved.”

Another example of the output is shown in Figure 5. It shows the Multi-National Divisions’ assessments of economic security at the municipality level. The MNDs scored each municipality based on the following direction.

In a municipality with strong or stable economic security (a score of 5), the basic needs of citizens are met in a sustainable manner. Food and shelter are widely available, as are essential utilities (water and energy). Legal and other barriers to commerce, industry and trade are removed. Employment is available to most that wish to work and this employment is offered in honest enterprises. The economic climate honours integrity in business activity and

abhors corruption. Average income is sufficient to reduce the grip of organised crime and the attractiveness of conflict. People and goods may move freely along all routes and de-mining is a success. There are indications that the former agricultural economy and the harvest seasons that made many men available for conflict during particular periods is being replaced by a more technologically advanced industrial / commercial economy.

Using this definition, none of the municipalities were assessed as ‘Very Strong’ or ‘Strong.’ Only a few clusters of ‘Very Weak’ municipalities were identified and these were scattered throughout the country. Most of the country was assessed as Weak (54%) or Medium (38%). The average municipality score during this analysis was 2.4. NC3A scientists also provided qualitative findings from interviews conducted with civilian officials operating in Bosnia. In the case of the economy criterion, SFOR area experts were provided with the following qualitative input on recent positive developments and remaining barriers to progress.

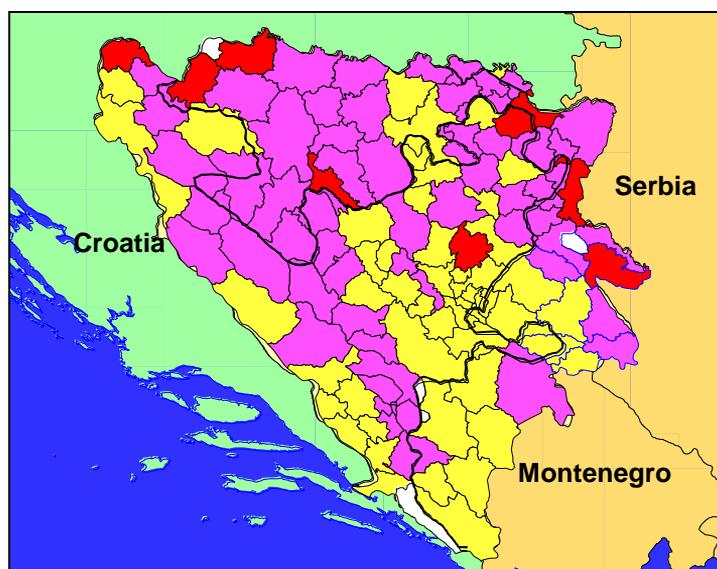


Figure 5: Economic Security by Municipality (April, 1999).

Progress in the consolidation of a free-market economy was implied from the following.

- *Common Currency*: strong acceptance of the national currency in Bosnia-Herzegovina and recognition abroad.
- *Telecommunications*: a single telecommunication country code for BiH and establishment of a telecommunication agency were accomplished.
- *Improved Customs Administration*: unification of customs administration in the Federation and strong cooperation between the customs administration between the Federation and the RS.
- *Banking*: liquidation and closure of the National Bank of Bosnia and Herzegovina.
- *Funding*: International Monetary Fund stand-by agreement in place.

- *Anti-Fraud and Corruption*: Privatization Monitoring Commission established to ensure transparency and anti-corruption strategy approved by the Steering Board.
- These interviews also identified critical remaining barriers to a free-market economy.
- *Establishment of a Free Market*: privatization of enterprises and banks.
- *Public Sector Reform*: Payment Bureau reform.
- *Public Sector Reform*: establishment of treasury and audit mechanisms and increased transparency for governmental revenues.
- *Corruption*: on-going effort to fight corruption and fiscal evasion.
- *Ethnic and Political Factors*: “De-link” and extricate chain of command from political and party affiliation so that parallel structures between Bosniacs and Croats are not supported (e.g. customs) in the Federation.

These limited examples illustrate the scope of the data collection and analysis effort that is currently expended in providing SFOR and NATO commanders with assessments of progress toward the resolution of the conflict in Bosnia-Herzegovina and, ultimately, toward strength reductions and withdrawal. While it is fair to say that the recognition that such data are needed in this operation coupled with the significant allocation of resources to the programme are significant steps forward, the impact of and respect accorded to the findings are unclear. We conclude with some discussion of the implications of these developments in analytical support to commanders of peace support operations.

IMPLICATIONS

As might be expected, we experienced limited literacy in social, economic, and political variables among SFOR officers and commanders. Few were familiar in other than a cursory fashion with the concepts, measures, methodological concerns, and other issues associated with evaluating mission success in this operation. The argument that contemporary peace support operations are an aberration and the utility of the knowledge in these domains will recede for military officers is not, in our view, valid. All post-Cold War operations (and indeed all operational scenarios short of total war) have dealt with significant “soft” factors at all levels and we expect the requirement for wider knowledge sets among officers to continue to intensify. The Officer Professional Development (OPD 2020) program undertaken by the Canadian Forces, for example, is driven in large measure by this need for officers to employ critical reasoning from a broad intellectual foundation in not only the sciences and engineering disciplines but also the arts and social sciences. As efforts such as the Transition Strategy Six-Month Review are gradually embedded in staff functions and headquarters organizations, in which hundreds of “soft” indicators and trend analyses are reported, the need for wider literacy among officers and commanders will expand.

At the strategic level in SFOR (Two-Star rank and above) we consistently found solid understanding of the need for non-traditional research and analysis in support of the mission. The data and findings produced by NC3A analysts routinely received high-level attention and were disseminated to higher headquarters, national command elements, and to political and diplomatic bodies in troop contributing nations.

The fit at the operational level was, however, weak. Many officers and commanders considered the entire effort to monitor progress toward a functioning multi-ethnic democracy to be evidence of “mission creep”, believing that SFOR should perform a strictly defined security function and leave the remainder of the conflict resolution effort to the UN, IO, and NGO agencies in theatre. The most telling disconnect was with Intelligence. The Int work and the progress measurement were conducted independently and in parallel. While a very large Int organization performed traditional Int functions, essentially in secret and focussing largely (if not wholly) on classic indicators grounded in threat assessment, a small team of scientists attempted to locate, collect, and analyze data that could be used for mission planning at all levels.

The NC3A research cell proper moved across several staff locations and no ideal “home” for this work was found in the Headquarters structure. This dramatically limited the impact of the data and findings and a good fit will have to be found in future HQ staff structures. In addition, the analysts deployed to SFOR to conduct this work were all civilians and this introduced many difficulties that we believe will increase in intensity in future missions. Some commanders had difficulty adjusting to the presence of scientists and it is fair to say that policies and protocols guiding the presence of civilians in theatres of operations are in serious disrepair or are simply absent in NATO and in most member nations. Within the research cell, however, the contribution of officers to the research was crucial and a mix of civilian analysts and experienced military officers will continue to be necessary for efforts to support future missions.

Critical issues emerge at the tactical level. The debate within SFOR over a strict security model versus a nation-building role was a permanent feature, and there was wide variance in the approaches of national elements. Some sought to integrate their personnel into the local communities and support low-level resolution initiatives, while others maintained highly isolated forces in a relatively aggressive posture. As a result, the SFOR mission effectiveness measurement effort was evaluating performance factors that were not actively pursued by some of the national elements on the ground, and the findings had limited relevance to some commanders. In some cases national elements deployed their own mission effectiveness measurement teams and projects. This difficulty is driven by wider tensions over the nature of the mission of military forces in peace support operations.

Until some resolution is achieved, measurement of success at theatre level will have limited utility to subordinate headquarters and tactical commanders. Every effort was made to disseminate Normality Indicator, Measures of Effectiveness, and Transition Strategy findings to commanders across the theatre, but it is fair to say that this was not a success at the tactical level. Traditional mission success measurement indicators are widely recognized by commanders; a central task of future peace operation effectiveness analysis will be the communication of new kinds of data and findings at the tactical level. Ensuring that these are meaningful and have utility in the field, as well as in headquarters, will be a challenge, particularly for civilian scientists.

In sum, it is our view that the incorporation of “soft” mission effectiveness variables into peace support and other operations will continue to increase, with considerable impact at operational and tactical levels.

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