NPA/GICHD Socio-Economic Impact & Land Use Evaluation in the Former Yugoslavia
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Acronyms

BiH  Bosnia and Herzegovina
BoD  Board of Donors
BHCD Bosnia and Herzegovina Commission for Demining
BH-MAC Bosnia and Herzegovina Mine Action Centre
CRPC Commission for Real Property Claims (of Displaced Persons & Refugees)
CIDA Canadian International Development Agency
EDD  Explosives Detection Dogs
EPBiH Elektroprivreda Bosnia and Herzegovina
EPM  Elektroprivreda Mostar
FMAC Federal Mine Action Centre
GFAP General Framework Agreement for Peace (the 'Dayton Agreement')
GICHD Geneva International Centre for Humanitarian Demining
IC  International Community
ICRC International Committee of the Red Cross
IMSMA Information Management System for Mine Action
ITF  International Trust Fund for Demining and Mines Victims Assistance (the 'Slovenia Trust Fund')
LFA  Logical Framework Analysis
MACG Mine Awareness Coordination Group
MFA  Ministry of Foreign Affairs
MIS  Management Information System
NOK  Norwegian Kronor
NPA  Norwegian Peoples Aid
OHR  Office of the High Representative
OSCE Organisation for Security and Cooperation in Europe
PIU  Project Implementation Unit
PRRP Priority Reconstruction and Recovery Programme
RRTF Refugee Return Task Force
RS  Republika Srpska
RS-MAC Republika Srpska Mine Action Centre
SAA  Stabilisation and Association Agreements
SEE South-Eastern Europe
SFOR Stabilisation Force
<table>
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<td>Sarajevo Mine Action Plan</td>
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<td>UNMAC</td>
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Summary
Findings

NPA and the Mine Action Programme in Bosnia & Herzegovina

The Mine and UXO Problem in Bosnia & Herzegovina

The course of the 1992-95 war in Bosnia and Herzegovina was extremely complex, with large variations in the intensity of fighting, shifts in conflict locations, and widespread activity by local militias who attacked rival ethnic neighbourhoods to promote ethnic cleansing. The war resulted in 250,000 fatalities, 1.2 million refugees, and massive internal displacement. It also left over 18,000 minefields, particularly in bands of contamination along former confrontation lines, and around housing, public buildings, and key infrastructure.¹

Under the Dayton Peace Agreement (November 1995), ex-combatants were required to ‘lift’ their mines from the Zone of Separation and other areas from which their forces were withdrawn, to mark other minefields, and to provide minefield maps and records. Mine ‘lifting’ did not meet international clearance standards, and resulted in a reduced, but still unacceptable residual hazard to civilians. As well, minefield maps and records often were unreliable while other fields had never been mapped. As a result, Bosnia and Herzegovina suffers from extensive but low density minefields in urban, suburban, and rural areas, as well as considerable quantities of unexploded ordnance.

The peace agreement also established a new government structure, with a very weak central government and two ‘entity’ governments – the Federation of Bosnia and Herzegovina with a Bosnian Muslim (Bosniac) majority and a significant Bosnian Croat minority, and the Republika Srbska (RS) with an ethnic Serbian majority. Co-operation between the two entities and among the entities and the central government has generally been poor, hindering the development of coherent policies and programmes for reconstruction, including mine action. The Dayton Agreement also established the Office of the High Representative (OHR), and empowered the High Representative to take executive action should the entity and central governments not implement the provisions of the peace agreement.

Evolution of the Mine Action Programme in Bosnia & Herzegovina

Mine action began immediately following the Dayton Agreement with a number of separate or loosely co-ordinated initiatives. The various armies commenced some mine lifting under the supervision of SFOR. The UN created the United Nations Mine Action Centre (UNMAC) in June 1996 to co-ordinate mine action and supervise the establishment of national bodies. The following year, a three-member Demining Commission was appointed and the government entered into an agreement with the UN to establish Bosnia and Herzegovina Mine Action Centre (BH-MAC) and MACs in both entities.² The US State Department provided funding for the initial MAC installation and data processing facilities, together with training in mine survey and clearance. The European Union (EU) also financed equipment,

¹ These were sometimes for defensive purposes, but often were laid to deny access to other ethnic groups.
² Handover of responsibility from UNMAC to BHCD and BHMAC occurred in July 1998.
training, and initial salaries for deminers. The World Bank approved a $67 million Emergency Landmines Clearance Project to support clearance in support of priority reconstruction and resettlement projects, as well as institutional development administered through Project Implementation Units (PIUs) working with the MACs in both entities. The US agreed to match funds channelled via the International Trust Fund (ITF) in Slovenia for mine action in BiH. From 1997-99, UNICEF operated a six-team demining programme to support its own projects. NPA and other international NGOs also initiated humanitarian mine action.

While data obtained by the mission are incomplete and often inconsistent, the following graph suggests a significant shift in the proportion of clearance undertaken principally for economic reconstruction (e.g., clearance of major infrastructure) versus resettlement and other humanitarian purposes (e.g., clearance for housing).

Notes: Data for 1996-98 from LMM 1999, pp. 563-64
Data for 2000 from FMAC Bulletin for 2001, Table 'Demining Operations Review for the Area of the Federation and D.C. Brcko BiH in 2000, per Landuse.' (no pagination)

Shifting Priorities for Clearance: 1996-2000

With so many groups involved and the need to establish a civilian demining authority and structure from scratch, problems were legion. The Government initially was unwilling to expend funds on foreign contractors, insisting that local firms had adequate capacity. This delayed priority clearance during the 1996-demining season. The UN and World Bank disagreed on the strategy for building local capacity in the MACs. Deminers were enrolled in training programmes without addressing whether they would be employed after training. Co-operation among the BH, Federation, and RS MACs remained poor. These problems culminated in the early closure of the World Bank’s Emergency Landmine Clearance Project, followed by the High Representative’s dismissal of the Demining Commissioners in October 2000 for conflict of interest.

Serious problems remain with the mine action programme. First, the BH-MAC has the responsibility to 'co-ordinate' the entity MACs, but has no direct authority over their funding, staffing, and operations. The entity MACs prepare separate lists of priority tasks. These are first approved by the governments of the Federation and RS respectively before being compiled – with requests for priority clearances from the international community – into an overall BiH list. One of the key responsibilities of the BH-MAC is information management, but its MIS system has serious functional deficiencies compared to newer mine action

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3 The teams subsequently were transferred to NPA and HELP.
4 The UNDP sought to build a fully functioning UN-MAC and then hand this over to local authorities, while the Bank advocated working with the authorities from the beginning, building their capacity. (World Bank, 1998, p. 43).
systems such as IMSMA. As well, the international community has not provided adequate funding in recent years for further capacity building of the BiH and entity MACs. In light of these difficulties and the Demining Commission scandal, donors also delayed funding for clearance activities in 2000.

At the same time, significant mine action capacity has been established in Bosnia and Herzegovina. Likely 2,000 people have been trained in mine clearance, with perhaps 1,400 still employed on a full-time, seasonal, or short-term basis. The bulk of the clearance is done by 20+ local and international firms active in the country, which compete for commercial tenders issued by (initially) the World Bank PIUs and (currently) by the ITF. Entity armies also undertake mine clearance. International and local NGOs conduct clearance with funds obtained directly from donor countries. Finally, civil protection (CP) units respond to requests from local authorities to clear UXO.

The system for setting priorities (see Box) has been refined over the years through the accumulation of experience within the mine action programme itself and by local government bodies (municipalities, ministries, and state enterprises) and donor/International Community (IC) agencies.

**TEXT BOX: PRIORITY-SETTING FOR THE FEDERAL MINE ACTION PROGRAMME**

Criteria for setting priorities for the FMAC are laid-out in Article 8 of 'The Decision on the Federal Mine Action Centre foundation', officially gazetted in 1997 and amended in 2000. Broad priorities are:

- **Humanitarian purposes**, for the return of refugees and displaced persons;

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5 Clearly, there are significant data problems as well. For example, *Landmine Monitor 2000* states the BH-MAC reported 3.6 km² cleared in 1999 for all of BiH. The FMAC Annual Report states that more than 4.8 km² was cleared just in the Federation. The BH-MAC plan for 2001 states that 20.8 km² of Federation land has been cleared since the end of the war, while the FMAC reports only 15.4 km² has been cleared to the end of 2000.

6 Numbers of international technical advisers dropped from 47 in 1998 to three currently.

7 Most commercial firms re-engage deminers for each mine clearance contract the firm obtains.

8 The International Trust Fund for Demining and Mines Victims Assistance (also known as the 'Slovenia Trust Fund') was established by the government of the Republic of Slovenia in March 1998 to promote mine clearance and victim assistance in South-Eastern Europe, with a focus on Bosnia and Herzegovina. The US subsequently donated up to $28 million to match any donations received from other donors. To the end of 2000, donations totaled over $52.3 million. (ITF 2000)

9 These are generally channeled through the ITF to trigger matching funds from the US, which are then available for financing commercial mine clearance.
Economic reasons, to allow reconstruction and development projects to go forward, and for agricultural land.

For regional equity, priority tasks are to be allocated in proportion to the number of registered minefields according to the requirements of the cantons.

The process through which a particular minefield is placed on the priority 'long list' is:

1. Municipalities submit specific requests to canton authorities, and propose a 'category of priority';
2. Canton authorities consult with IC and donor agencies (OHR regional offices; UNHCR; and others) to obtain their specific requirements and to ensure validity and transparency;
3. Following a general survey, the FMAC Commission (Operations Manager, Regional office Managers and Planners, and canton government mine action coordinators) allocates each task to one of the following categories:
   - Category I: locations in regular civilian use or needed for refugee/IDP return or needed for reconstruction and development projects;
   - Category II: locations in occasional use or adjacent to Category I tasks; and
   - Category III: peripheral locations.
4. FMAC prepares a project folder ('red folder') containing all relevant data on the location and mines present, the operational plan (demining methods required), and an estimate of the likely cost and duration.

In addition, organisations that have their own funds available for mine clearance (e.g., EPBiH and EPM – the electric utilities; NGOs) can request FMAC to survey minefields prior to clearance.

The Priority List is treated as an official document and published in newspapers and on the Internet.

There is no guarantee that all Category I tasks on the Priority List will be cleared within a set period. FMAC's Annual Plan for 2001 lists 388 tasks totalling 16.94 km², but the target for clearance is only 10 km². Accordingly, a second 'resource allocation' process takes place. In this, mine clearance organisations (army; civilian protection; NGOs) and donor agencies (USAID; ITF) consult with FMAC to select tasks from the priority long list that accord with their priorities (e.g., for reconstruction and development projects). As well, demining requests from federal ministries 'are treated as the highest priority.' Clearance organisations such as NPA can also ask FMAC to prepare a project folder for minefields that were not included in the original Priority List for the year, but which clearly pose a danger to returnees and other civilians. Similarly, organisations managing reconstruction and development projects can request that minefields be added to the Priority List because these will delay new projects.

END OF TEXT BOX

Good progress also has been made in mine awareness. NPA and other European NGOs began programs in 1995 for refugees that were expected to return following the Dayton Agreement. They, along with ICRC, began an in-country mine awareness programme in 1996 and a Mines Awareness Working Group¹⁰ was convened by UNMAC in May 1996. Teacher training to introduce mine awareness in the primary school system began in 1997 and (for the RS) 1998, and this now forms the backbone of the mine awareness programme, supplemented by occasional mass media campaigns. Landmine and UXO casualties have fallen from over 50 per month in 1996 to fewer than eight per month by 1999.

Under donor pressure, some progress has been made in recent months to resolve existing problems with the governance structure for the national mine action programme. BiH authorities have appointed three new demining commissioners, transferred responsibility for demining to the Ministry of Civil Affairs and Communications on an interim basis, and have

¹⁰ Following December 1999, the Mine Awareness Coordination Group (MACG).
agreed with the Board of Donors (BoD)\textsuperscript{11} on new demining legislation. This should be presented to Parliament in May 2001 and should be passed after mid-year.\textsuperscript{12} In addition, the GICHD conducted an information management needs assessment earlier this year.

\textbf{Evolution of the NPA Mine Action Programme}

\textit{Clearance Activities}

NPA had been involved in humanitarian relief and psycho-social programming for Bosnian refugees from 1993. Immediately following the GFAP, NPA initiated a shelter (i.e., housing reconstruction) programme for returnees, while the psycho-social work evolved into a community development programme. NPA also delivered mine awareness training for refugees in Norway who were expected to return, and began mobilising for a mine action programme within BiH. In 1995 – with funding from the Royal Norwegian Ministry of Foreign Affairs – NPA began mobilising for a full-fledged mine action programme, which commenced work in BiH in 1996.

The initial country programme strategy was to have mine action work in support of the shelter and community development programmes, principally by clearing mines and UXO contamination from communities in which NPA was reconstructing housing and initiating community development efforts. Therefore, all NPA programmes centred on Tuzla and its surrounding region. This approach continued through 1997, but the benefits of such co-ordination did not prove as great as hoped. The Shelter Programme was very large\textsuperscript{13} but there were many uncontaminated sites where reconstruction could be undertaken without requiring support from dedicated mine action resources. By co-ordinating with municipalities and other agencies, the Shelter Programme could arrange for its sites to be demined through the standard priority-setting process.

Accordingly, by mid-1997 NPA decided to focus its mine action programme on Sarajevo Canton. Sarajevo was severely contaminated, with very high accident rates\textsuperscript{14} and 70,000+ displaced persons (UNMAC, 1998). NPA also felt it could slim its mine action management structure and make more efficient use of its clearance assets by focusing on Sarajevo. As there were numerous complicated clearance tasks in the urban areas (e.g., house and building clearance), NPA's capacity to field multiple assets (manual, mechanical, dog) and its sound operations management systems would be of great assistance. Finally, Norway has made significant commitments to Bosnia and Herzegovina, and NPA's mine clearance would receive an appropriately high profile, both nationally and internationally, if centred in the capital.

In May 1998 NPA also absorbed one of the UNHCR manual teams (25 persons) operating in the RS.\textsuperscript{15} Over the years, it has also secured funding from new donors including Austria, Canada, Germany, and Switzerland, plus various charitable organisations.\textsuperscript{16}

\begin{itemize}
  \item \textsuperscript{11}This body, co-chaired by the UNDP and the OHR, exists to promote coordination among mine action donors and with the BiH and entity authorities.
  \item \textsuperscript{12}Apparently the legislation will change the status of the entity MACs from legally independent organisations to regional offices within the BH-MAC structure.
  \item \textsuperscript{13}The annual budget initially was in the range of 65 million NOK.
  \item \textsuperscript{14}LMM Report 1999 (p. 565) shows 180 victims for Sarajevo from 1996-May 1998 – the highest rate in the country.
  \item \textsuperscript{15}NPA has continued to base this team within the RS.
  \item \textsuperscript{16}Grants from the Norwegian MFA still make-up about two-thirds of NPA's annual expenditures on mine action.
\end{itemize}
Inclement weather makes mine clearance difficult during winter months. From 1998-2000 this did not pose a significant problem to NPA operations as teams were assigned to clearing apartment blocks and other buildings. After most priority buildings were cleared in Sarajevo, in January 2001 NPA assigned two manual teams supported by an EDD team to Mostar, which has a milder, drier winter. It sent the other demining teams on standby leave.

**Applied Research**

NPA has undertaken a significant amount of applied research designed to test the suitability of different types of assets and to determine the best combinations of assets for various clearance tasks. In 1996-97 NPA determined a large armoured mine clearance machine (a Leopard tank re-fitted by Bofors) was unsuitable for normal use in BiH. In contrast, the Tempest T4 mini-flail tested in conjunction with Development Technology Workshop in 1999 proved to be very effective for cutting vegetation/ground preparation. An excavator has been purchased and armoured to assist in clearing collapsed buildings.

NPA has also been a leader in the introduction of explosives detecting dogs (EDDs) and testing to determine that these are most effective after mechanical ground preparation has cleared vegetation and trip-wires, and broken the surface crust. On the basis of these tests, a new and heavier version of the Tempest was tested successfully in 2000, and other equipment (the 'Armtrack') is leased when needed from European Landmine Solutions to prepare larger sites for dog teams.

**Co-operation with Other Mine Action Organisations**

NPA has worked directly with UNHCR, HELP, and InterSOS by providing material, medical, and operational support for their operations. It has assisted various organisations with training for EDDs. Staff have been seconded to UNMAC (later, BH-MAC) and various regional offices of the entity MACs to assist in areas such as quality assurance and control, EDD accreditation procedures, and field supervision.

**Future Plans**

NPA's future plans are to evolve toward a regional programme for former Yugoslav republics. Agreements are now being negotiated with the Government of Croatia to allow NPA to operate in that country. NPA will be the first mine clearance NGO in Croatia, and plans to expand its programme slowly (e.g., only survey operations in the first year). Eventually, NPA clearance assets now in Kosovo will be available for both BiH and Croatia, managed by a regional office in Sarajevo. This should allow higher productivity as teams and equipment can be deployed to different regions depending on seasonal weather patterns.

Most of NPA's other plans also focus on increasing productivity and cost effectiveness. For more open suburban and rural areas, NPA now uses mechanical, dog, and manual assets in combination, as follows:

- First, mechanical ground preparation – including breaking the soil crust – using the Tempest T5 or the Armtrack;
- Second, use of EDDs to locate mines and other explosives quickly;
- Third, manual clearance of the located devices.
For urban areas, and ruined buildings in particular, NPA is experimenting with the excavator to accelerate clearance rates and increase site safety. Overall, NPA plans a re-balancing of assets, with greater use of mechanical and EDD approaches and a gradual decline in the numbers of manual deminers through attrition.\textsuperscript{17}

As depicted in the graph below, NPA has raised its productivity continuously over the course of its programme – at least on the simple measure of area cleared per employee. In moving to Sarajevo in 1997, NPA also began to take on more difficult and time-consuming tasks such as clearing buildings and demolished sites. Over the past year, operations have been shifting from the central city to the suburbs, which should result in an increase in the area cleared per unit of labour.

\textsuperscript{17} Attrition is principally due to emigration of deminers rather than resignations to take positions with other organisations within BiH.
Analysis

Institutional and Capacity Development (I&CD)\textsuperscript{18} Issues

The I&CD Framework and Performance Improvement

Many things are required for effective organisational performance. First, the organisation must have the requisite capacity, stemming from individual skills, sound management systems, a proper organisational structure, and adequate resources. Second, an organisation’s performance may be enhanced or constrained by the actions of other organisations with which it must work. Finally, institutions\textsuperscript{19} create an incentive structure for an organisation, which will determine whether it and its staff are motivated to pursue the organisation's mandate. These different factors underlying an organisation's performance – capacities; co-ordination; incentives – are illustrated below.

Organisational performance issues can also be grouped into four levels to create the basic I&CD framework, depicted below.

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<th>Level</th>
<th>Typical Performance Issues</th>
<th>Possible Actions</th>
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<tr>
<td>Individual</td>
<td>• Skills&lt;br&gt;• Experience&lt;br&gt;• Employee demographics (gender, ethnic, etc.)</td>
<td>• Staff training.&lt;br&gt; • Recruitment policies and procedures.</td>
</tr>
<tr>
<td>Organisational</td>
<td>• General management approaches&lt;br&gt;• Functional management policies (finance, personnel, logistics, etc.)&lt;br&gt;• Information systems&lt;br&gt;• Resources</td>
<td>• Management training.&lt;br&gt; • Revise policies &amp; procedures.&lt;br&gt; • System development.&lt;br&gt; • Fundraising drives.</td>
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<tr>
<td>Task Networks</td>
<td>• Co-ordination with other mine action organisations.</td>
<td>• Establish mine action working groups.</td>
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\textsuperscript{18} This is the current term used by the Development Assistance Committee (DAC) of the OECD – the principal inter-governmental organisation for the major donor nations. See www.oecd.org/dac/tcnet/

\textsuperscript{19} Often the word 'institution' is used in reference to organisations – particularly well known organisations like the Red Cross. Increasingly however, 'institution' is used to refer to laws and social norms that establish incentives to act along certain lines or to avoid certain behaviours. In this latter sense, as it is used in this document, institutions are 'the rules of the game' while organisations and individuals are the 'players.'
Performance development entails identifying and resolving constraints arising in any or all of these levels. We use this I&CD framework to ensure that problems and opportunities are examined in a systematic fashion.

**Institutional Context**

The essential feature of Bosnia and Herzegovina today is the ethnic enmity that led to – and was reinforced by – the 1992-95 war. The consequences of that conflict include:

- **Political deadlock** – The Dayton Peace Agreement imposed a confederal structure with an extremely weak central government for BiH, and two 'entity' governments responsible for the delivery of most public services (often then delegated to the municipal or canton levels) and which retain the bulk of the fiscal and regulatory authority. There remains considerable support among Bosnian Serbs in the RS and Bosnian Croats in the Federation for a permanent split, with significant territory and population being absorbed by Serbia and Croatia. In other words, large segments of the population want the BiH state to fail. At the same time, the Dayton Peace Agreement gave these groups very significant powers, which they often use to undermine the principles underlying the Agreement rather than taking positive steps to social and economic recovery.

- **Social division** – Conflict and ethnic cleansing campaigns created a million refugees and a similar number of internally displaced people, reducing the population by over one-third, from 4.3 million before the war to perhaps 2.7 million, more than half of whom no longer resided where they previously had lived. (Dahrendorf and Balian, 1999, p. 13) This reduced the number and extent of multiethnic communities within BiH, leading to greater social division and more complete control of local governments (cantons and municipalities within the Federation; municipalities in RS) by local majorities. There remain significant differences in the attitudes of the three national groups concerning the desirability of recreating the pre-war social fabric.20

- **Minority Returns** – The IC was anxious to promote 'minority returns' to restore the multinational ethnic nature of BiH. Annex 7 of the Dayton Agreement proclaims that 'All refugees and displaced persons have the right freely to return to their homes of origin', entity and local governments have been ineffective at best – and often overtly

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20 Only 12 percent of Bosniacs believe there is a 'wide social difference' between ethnic groups, compared to 29 percent of Croats and 57 percent of Serbs. (World Bank, 1999, p. 22).

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obstructionist – in facilitating minority returns.\textsuperscript{21} Similarly, the efforts of the IC to promote minority returns have as yet achieved little. Of over 2 million refugees and internally displaced, only 650,000 had returned to their homes by the end of 1999 – the vast majority to same-ethnic areas (World Bank, 2000, p. 4). Recent data suggests minority returns are increasing,\textsuperscript{22} but it remains uncertain how many are remaining after their ‘return’.\textsuperscript{23}

\begin{itemize}
  \item Accelerated Rural-Urban Migration – The conflict depopulated much of the countryside, particularly in what is now the Federation. The focus of rehabilitation efforts on urban areas and public infrastructure that supports the cities, coupled with the magnet of good jobs with IC organisations or within the broader ‘aid industry’, have ensured that few young adults with job skills will return to farming within the Federation. Unless arrested, this will further accelerate rural decline and destitution.
  
  \item Widespread Unemployment and Underemployment – The war devastated the economy.\textsuperscript{24} The Priority Reconstruction and Recovery Programme (PRRP) has helped jump-start the economy,\textsuperscript{25} more than doubling per capita incomes (from $456 at end-1995 to about $1,080 by 2000). However, unemployment remains in the range of 40% or above, leading many of the best qualified to emigrate and dissuading refugees from returning.\textsuperscript{26}
  
  \item Intertwined Political, Economic, and Criminal Elites – The sluggish and incomplete implementation of the Dayton Agreement has left many key organisations (municipalities, government departments, state corporations, etc.) in the hands of leaders who were responsible for the war and the attempt to destroy BiH. Other war-leaders have joined or accommodated criminal syndicates so as to obtain funding for their efforts to undermine the Dayton Agreement and to keep ethnic chauvinism alive.
\end{itemize}

\textsuperscript{21} Minority returns are considered to be ‘returns to areas where the individuals concerned currently constitute the minority, regardless of pre-conflict demography.’

\textsuperscript{22} Minority returns rose from 35-40,000 in 1998, 41,007 in 1999 to 67,445 in 2000.

\textsuperscript{23} Some seem to be returning simply to reclaim their homes so they subsequently can sell them. As well, statistics on minority returns have been inflated, at least in prior years. “… returns to Brcko (and other places in RS and in the Croat part of the Federation) are in fact measured by assessing whether, of a family unit, one relative has spent one night in a reconstructed house. Statistical measurements thus do not take account of the sustainability of return.” (Dahrendorf and Balian, 1999, p. 29)

\textsuperscript{24} GDP per capita fell from $2,429 in 1990 to under $460 in 1995. (World Bank, 2000, p. 4).

\textsuperscript{25} Annual GDP growth rates were 69% in 1996, followed by 29%, 13%, and 10% from 1997-99.

\textsuperscript{26} Unemployment among returnees appears half-again higher than the general unemployment rate. (World Bank, 1999, p. iv)
Crucially, the IC imposed the Dayton Agreement on the warring parties, and has established a 'quasi-protectorate'. (Dahrendorf and Balian, 1999, p. 21) In the face of resistance on the part of state, entity, and municipal authorities to the implementation of the GFAP provisions, the IC increased the powers of the High Representative at the Bonn Peace Implementation Council (PIC) in December 1997, and again at the Madrid PIC the following year. While understandable given the danger that the country could slide back into open conflict, these arrangements create two problems. First, they in some ways accommodate the intransigence of BiH politicians, perhaps delaying the day when the electorate will hold them responsible for resolving the political deadlock. Second, the Dayton Agreement did not establish adequate co-ordinating mechanisms to govern adequately: "… there is a lack of a sustained effort to define benchmarks, criteria or a bottom-line for the imposition of conditions. No focused attempt is being made to bring together approaches by different donors." (ibid., p. 7)

One of the fundamental fissures within the IC is between (1) those agencies and individuals with significant 'political' responsibilities (peacebuilding, enforcement of the human rights principles within the GFAP, and – especially – avoiding any 'validation' of ethnic cleansing) and (2) those with a more traditional aid mandate (e.g., the World Bank and the bilateral donor agencies from the IC). While all might agree in the long-term ideal for BiH, differences in experience and mandates imply disagreements concerning whether that ideal is realistically achievable, as well as the overall strategy and day-to-day tactics for the IC's efforts.

These factors place NPA and its staff in an ambiguous and often difficult position. For example, a focus on the return of refugees and displaced persons – and particularly on minority returns – implies fewer resources for clearing hazards facing current residents, and particularly those of 'majority' status within communities. On the other hand, experience to date suggests that a multiplicity of factors inhibit minority (and other) returns. Mine clearance may often be a necessary condition for returns, but rarely is it sufficient. NPA and other mine clearance organisations are therefore dependent to an unusual degree on complementary actions by other development organisations and local governments before their mine clearance investments for returnees – and particularly minority returnees – bear fruit as intended. Clearance to assist established communities is likely to be far less fraught with uncertainties over the beneficial impact.

As well, the MACs may assign tasks (perhaps under pressure from the IC) to NPA that do not accord with, and may even run counter to, the wishes of local communities. This means NPA managers must waste significant time in overcoming the inertia or obstructionism of local officials. It could also expose deminers to hostility, obstructionism, or even harassment from community members, which must certainly be a frustration for workers who are risking their lives to address hazards facing the community.

Key Networks

Mine Action Task Network

The weak and overlapping governance structures for BiH were replicated at the level of the national mine action programme. The BH-MAC has responsibilities for maintaining the national mine action database, establishing national standards, accrediting clearance and mine awareness organisations, and 'co-ordination' of the entity MACs. However, in this last

27 For example, the High Representative can revoke laws made by BiH and entity governments, impose laws by decree, and remove public servants and elected politicians from office.
role it has not had the authority to direct the entity MACs to perform or desist in specific activities, or to cooperate fully between themselves. Meanwhile, the Board of Donors holds the power of the purse strings, but not the responsibility for setting or adopting a national mine action programme, or for its implementation. Fortunately, the crisis culminating in the removal of the demining commissioners seems to have led to a consensus to establish a unitary structure for the mine action centre, which should be in place after mid-year.

Relations between NPA and the BH-MAC and entity MACs have been strained on occasion in past years. From NPA’s perspective, this seems largely due to the initial inexperience of the MACs in setting standards and applying these in a consistent and logical manner. As it operates mainly in the Sarajevo Canton, in close proximity to four MAC offices (BH-MAC, FMAC, and the Sarajevo regional offices for both FMAC and RS-MAC), NPA operations also seem to be subject to more frequent inspections than those of other clearance organisations.

While irritants remain – particularly with respect to seemingly arbitrary differences in priorities attached to similar mine and UXO hazards – relations between NPA and the various MACs appear to have improved over the years. Senior officials in the MACs clearly respect NPA’s technical capacity and experience, and for the assistance provided by NPA personnel to the MACs in prior years. Inconsistent directives from the MACs are likely to be less of a problem once a unitary structure for the MAC is established later this year.

A number of officials from the BH-MAC and FMAC alluded to the process by which specific clearance tasks are selected for clearance by NPA. Some spoke of NPA’s size and asset mix, allowing it to undertake large and/or technically demanding tasks beyond the capacity of many other mine action operators. Others mentioned the fact that NPA arranges its own funding, so it can undertake priority tasks that the ITF does not select for competitive tender. One official summed-up by saying NPA can take the ‘non-attractive’ tasks.

On the other hand, NPA personnel mentioned that they also bring tasks to the attention of FMAC. Sometimes these relate to efficiency issues (i.e., NPA is already working in a community and can take-on nearby Category 1 tasks). In other cases it reflects disagreements over how an individual hazard has been broken into specific tasks (i.e., the surveyed task from FMAC splits a single contaminated area). Finally, there are disagreements over the priority category to which a minefield has been assigned (i.e., FMAC does not list it as Category 1, but NPA feels it should be). In such cases, NPA personnel expressed frustration over frequent and lengthy delays in obtaining ‘red folders’ for the tasks they have identified.

NPA and the other mine action NGOs appear to have good working relationships among themselves. Conversely, there have been significant rivalries between commercial demining firms and the NGOs. This was understandable while the mine action programme was evolving, as both the for- and not-for-profit organisations would be contesting for ‘their fair share’ of total funding. This rivalry seems to have abated somewhat, and NPA for one now hires equipment from commercial firms when the task warrants.

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28 National standards specify at least one inspection per week for each active clearance task. Some NPA sites have been inspected almost daily.
29 Officials from RS-MAC did not emphasize this point. This may be because fewer of the minefields in the RS region around Sarajevo are in urban areas, requiring more resources and a variety of clearance assets.
30 The overall impression is that NPA can mobilize the resources required to tackle almost any of the mine and UXO clearance tasks in BiH. From its side, NPA also feels this way, as demonstrated by the following quote from a recent quarterly report: "A temporary closure of the BH MAC would not change the operations of NPA."
A country like Bosnia with its social enmities, the ethnic cleansing within many communities in the recent past, and weak or compromised governance of public institutions, is unlikely to be fertile ground for accountability and transparency. With respect to mine action, there are good reasons for suspecting that misinformation abounds during the priority-setting and resource allocation processes. Even when priority decisions are made on the basis of accurate information, there is a likelihood that some local officials will act to prevent the implementation of resettlements and returns as planned. In this regard, it is particularly worrisome that nowhere in the overall mine action system in BiH is there provision and commitment for 'level 4' surveys to validate that demined land, buildings, and infrastructure have been put into productive use by the intended beneficiaries.

Coordination with Other Actors

Donors
NPA appears to maintain good relationships with donors to its mine action programme, and particularly the Royal Ministry of Foreign Affairs (MFA) via the Norwegian Ambassador in Sarajevo. Over the past couple of years, NPA has improved its progress, financial, and annual reporting on the use of donor funds. Donors appear to view NPA as a competent and experienced mine action organisation, with a good safety record. The one concern expressed was that NPA appeared expensive relative to other clearance operators, although none of the donors had investigated this issue thoroughly.

NPA generally does not deal directly with the Board of Donors, but the Norwegian Ambassador discusses specific issues with NPA as needed. On occasion, the NPA resident representative has been asked to make a presentation to the BoD.

Other NPA Programmes in BiH
Since it centred its programme in Sarajevo, NPA no longer attempts to co-ordinate its mine action activities with its shelter and community development programmes. General co-ordination is still effected by dint of the collocation of the programme offices in NPA's Regional Resource Office.

Government (State, Entity, Canton, Municipality)
NPA appears to maintain what might be termed 'general working relationships' with local governments on an as required basis. For example, it does not have periodic meetings with canton or municipal officials to review their entire contamination problem and how this constrains planned development.

NPA Capacity

NPA Overall
Mine action programming has become extremely important to the overall NPA organisation, with large projects in Angola, Bosnia-Herzegovina, Cambodia, Kosovo, Laos, Mozambique, Northern Iraq, Kurdistan, and the Western Sahara. It constitutes a large share of the total organisational budget and is one of the lines of programming that makes a net positive contribution to NPA overheads.  

Most mine action funding comes from the MFA and is fully funded. Conversely, NPA must contribute 20 percent of the budget for programmes and projects funded by Norad. The evaluation team was unable to determine whether mine action cross-subsidizes other NPA activities but, with overhead...
NPA has just engaged a socio-economic adviser for mine action – Sara Sekkenes, who recently filled a similar role for the NPA program in Angola. This should foster organisational learning within the NPA mine action cadre. We understand Ms Sekkenes will be focussing on strengthening the planning-monitoring-evaluation cycle for mine action programmes. This is an important investment by NPA.

**NPA-BiH**

As is frequently the case in post-conflict emergencies, when donors want a rapid and very visible presence to bolster the peace process, NPA tried ‘to hit the ground running’ with its mine action programme in BiH. With no binding budget constraints, it expanded rapidly, before its mine action management systems were fully in place. It also was saddled with inappropriate (and extremely expensive) equipment via tied-aid schemes. Unsurprisingly, in the first years NPA had low productivity and extremely high unit costs.

Since then, NPA-BiH has made significant improvements in terms of cost-efficiency. It has developed more and better tools (e.g., explosives detection dogs and more appropriate mechanical units) and experimented with how best to use these assets in combination. It has made other efforts to raise productivity (e.g., seasonal deployments) and instituted more adequate systems for control of costs and the use of assets. Critically, it has vastly improved its mine action information system since 1998.\(^32\)

Within the Regional Office, NPA has installed NPA's standard financial accounting package, and fielded a professional accountant to the Sarajevo office. Critically, it has not developed a cost accounting system to support mine action of other programming.\(^33\)

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\(^{32}\) This was due principally to the initiative of one of the local personnel – Zlatko Gegic, Project Manager – who has a previous background in information management.

\(^{33}\) Financial and programme management staff were, however, very receptive to the idea and began working on a cost accounting framework to generate some of the cost estimates needed for the analysis in the next section of this report.
In summary, NPA-BiH, and the mine action programme in particular, has continued to make incremental improvements in its operations, and has plans to continue such efforts. However, NPA's unit costs remain high (11+ DM/m² for 2000) compared to the rates tendered by commercial firms for ITF competitive bids, which generally range from 3-6 DM/m².

Individual
On its initial deployment, NPA fielded international staff to provide most of the critical skills required for mine clearance and the supporting functions, and to train local personnel. The development of indigenous capacity is now well advanced, with local personnel in charge of most of the day-to-day functions of operational planning and management. In addition to the Resident Representative responsible for all NPA programs, there are now only three international personnel within NPA's mine action program – the Program Manager and two advisers.  

Success in developing local capacity does, however, imply future risks. With few international staff in line management positions, there is a danger arising from the rotation of international personnel – particularly those in line management positions. Both the Resident Representative and the Program Manager have been in Bosnia for a number of years. If both leave at around the same time, the new management team could well introduce a change in strategic direction or mode of operations based on an incomplete understanding of local issues and conditions, thus disrupting the efficiency and/or effectiveness of operations.

Costs and Benefits of NPA Mine Clearance

NPA Costs

It has long been clear that NPA has had high unit costs compared to many other clearance organisations operating in Bosnia and Herzegovina. The graph below depicts rough estimates of NPA's average clearance costs over recent years, which have fallen from over 120 DM/m² in 1997 to perhaps 7 DM/m² for 2001.  

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34 Given the availability of capable local personnel, NPA feels even this represents "a slight over capacity" needed principally "to provide support for other mine action programs in the Balkan region during their start up phase." (NPA Mine Action Program Strategy: 2000-2004, paragraph 2.2.3)

35 Another important cost of mine clearance stems from demining accidents – deaths and injuries to deminers. For example, NPA has suffered two deaths in recent years. No attempt has been made to estimate these costs in monetary terms.

36 As well, clearance costs in BiH – even for the commercial firms – are significantly higher than those achieved in some other countries. For example, Afghanistan's average clearance costs appear to be about $8,000/ha, only one-half to one-third those of commercial firms in Bosnia, which charge 30,000-60,000 DM/ha.

37 These estimates were calculated by dividing the total annual expenditures reported by NPA by the number of square meters cleared each year. Unit costs will therefore be slightly overestimated as some NPA expenditures have gone to support mine awareness or other non-clearance activities (e.g., TA to the MACs).
The graph below depicts the estimated costs, per square meter, for clearance tasks completed in 2000, using the unit cost estimates recently generated by NPA-BiH. The costs ranged from 6.72 DM/m$^2$ to 84.72/m$^2$, and averaged 11.75 DM/m$^2$ (about $56,000/ha).

Benefits from NPA Mine Clearance

The "products" of mine clearance are cleared and safe land, buildings, and infrastructure. The principal benefits are (1) the value of the land, buildings, and infrastructure and (2) increased public safety. The first set of benefits typically can be expressed in monetary terms. Three different techniques can be used to derive these monetary estimates:

1. Replacement cost – the value of the materials and labour to reconstruct a building or other built asset.
2. Capitalized value – the net present value of income streams (e.g., rent) earned from the land, building, or infrastructure asset, less any maintenance costs. (see Box: Calculating Capital Values)
3. Market value – what the land, building, or infrastructure could be sold for, assuming "best alternative use" (i.e., the highest value use given market conditions, zoning restrictions, etc., irrespective of its currently use).38

38 For example, a house and lot in central Sarajevo might be purchased by someone to use as a store or for redevelopment into an office complex. The market value of the house and land should therefore reflect this "best alternative use" even if the current owner wishes to keep it as a residence.
**TEXT BOX: CALCULATING CAPITAL VALUES**

This approach “uses an income stream of actual or intended rental income which can be achieved from renting the property and applies a capitalization (market) rate to determine the value.” (World Bank for the CRPC, 2000) For example, the future revenue streams relating to a flat that is, or could be, rented at 1,000 KM/month with property taxes and maintenance costs totaling 1,000 KM/year, and 10% capitalization (or discount) rate, are as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Income (rent)</td>
<td>12,000 KM</td>
<td>12,000 KM</td>
<td>12,000 KM</td>
<td>12,000 KM</td>
</tr>
<tr>
<td>Expenses</td>
<td>1,000 KM</td>
<td>1,000 KM</td>
<td>1,000 KM</td>
<td>1,000 KM</td>
</tr>
<tr>
<td>Net Income (before discounting)</td>
<td>11,000 KM</td>
<td>11,000 KM</td>
<td>11,000 KM</td>
<td>11,000 KM</td>
</tr>
<tr>
<td>Present Value (discounted) of Net Income</td>
<td>10,488 KM</td>
<td>9,535 KM</td>
<td>8,668 KM</td>
<td>Etc.</td>
</tr>
</tbody>
</table>

Adding the discounted net income streams for an extended period gives the capital value of the flat – the net present value (NPV) of expected future income. In this very simple example, the flat would yield, over 20 years:

Net revenue before discounting = 11,000 KM/year * 20 years = 220,000 KM  
NPV (i.e., after discounting at 10%/year) = 98,220 KM

Of course, the owner would still have the flat after 20 years, which he could sell or continue to rent out. Assuming the flat could be sold at the end of 20 years for 100,000 KM, we would discount this amount to find its present value (about 15,600 KM in this case) and add this to find the current capital value = 98,220 + 15,600 = 113,820 KM. In brief, the capitalized value of the flat is about 113,820 KM. In the absence of a well-functioning property market, this figure could be used as an estimate of the current value of the flat.

**END OF BOX**

Where it can be obtained, the market value provides the most convenient estimate. NPA has been able to obtain market values for the following:

<table>
<thead>
<tr>
<th>Case #</th>
<th>Central Sarajevo</th>
<th>DM/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Serviced housing lots with no buildings</td>
<td>250</td>
</tr>
<tr>
<td>2</td>
<td>Flats in apartment buildings</td>
<td>1,600 2,500</td>
</tr>
<tr>
<td></td>
<td><strong>Suburbs of Sarajevo</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Serviced housing lots with no buildings</td>
<td>100   150</td>
</tr>
<tr>
<td>4</td>
<td>Flats in apartment buildings</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td><strong>Smaller cities</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Serviced housing lots with no buildings</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>Flats in apartment buildings</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td><strong>Villages</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Serviced housing lots with no buildings</td>
<td>15    20</td>
</tr>
</tbody>
</table>

We will use these estimates for the initial cost-benefit analysis in the following section. However, these are very high figures for a country as poor as Bosnia, with high unemployment. For example, a good-sized flat of 100m² in central Sarajevo would cost between 160,000 DM and 250,000 DM, while one in the suburbs would be 120,000.³⁹

³⁹ The village in question is in Vogosca municipality of Sarajevo Canton, which is not far from the city. The village might therefore be considered ‘peri-urban’ rather than rural; hence the relatively high value for a residential lot.

⁴⁰ At a 10% discount rate, this implies a rental value for a 100m² flat in the suburbs of over 1,000 DM/month, even before taxes and maintenance costs are considered.
There are a variety of reasons why residential land and building prices are so high:

- Only a small number of residential lots and flats have clear title – The Commission for Real Property Claims (CRPC) has registered about 252,000 claims for property rights to be recognized throughout BiH. It has issued decisions on about 46 percent of these, but repossession has been achieved in only 22 percent of the cases. This means about 200,000 households are still seeking to regain their pre-war residences, while only 55,000 households have obtained clear title and possession and, hence, could be in a position to sell. Thus, only a few homes are truly ready for sale, assuming their owners were so inclined.

- A large number of residential units are occupied by people who are neither owners nor are renting from the legal owners – Local authorities will not evict these people unless they have alternative accommodation (and usually, an alternative they are willing to move into). This means many legal owners cannot regain possession of their pre-war residences and, often, are also forced to occupy someone else’s residence, with no security of tenure. In such a situation, those who can afford it are likely to seek a more secure situation for their family by purchasing a second residence rather than waiting – perhaps years – for legal title and possession of their pre-war residence. This raises demand to the housing market, without increasing supply.

- The banking system is weak and poorly regulated – If people are uncertain of the financial health and quality of management of the various banks, they will be unwilling to deposit their savings in those institutions. They then will seek to invest their savings in less risky assets, such as land and buildings. Those with money will seek to buy real property (and other safe assets), while those with real property will be loath to sell as they have no safe place to deposit the proceeds. This increases the demand while reducing supply, both of which push the market price higher.

- Large amounts of cash are being generated by illegal or other underground activities – In spite of Bosnia's poverty, there are people making significant amounts of unreported income. They may not want to deposit these funds in local banks, both because of the risk of bank failure and because large deposits might alert authorities to the criminal or underground activities. Such individuals might seek to purchase real property or other asset deemed safe.

In addition, a poorly regulated banking system means some individuals can establish a bank, accept deposits from the public, and loan these funds to their associates, with no intention of repayment. Purchases of land and buildings would serve as a convenient cover for such fraudulent loans.

- Additional values in real property – In many countries, real property assets are valued higher than “capitalization” calculations would suggest reasonable. This often is because households and businesses cannot obtain credit without real property as collateral, or because real property is seen as more secure than other assets.

41 Source: UNCHR-BiH “Statistics: Implementation of the Property Laws.” 28 February 2001 (available from UNHCR-Bosnia website). Implementation in the Federation has been higher than in RS.
Slow post-war economic adjustment — The Dayton Agreement required that the new state's central bank serve as a 'currency board'\(^{42}\) to guard against any new government debasing the currency. This has protected the par value of the Konvertible Marka (KM) to the German mark, thereby keeping inflation under control and (perhaps) bolstering the confidence of foreign investors. But it has prevented any controlled devaluation of the KM to reduce local prices relative to those in Bosnia's trading partners, thus restoring competitiveness to increase economic output and raise employment levels. Taking this powerful policy tool — currency devaluation — away from authorities may prolong the economic adjustment by keeping local prices — including property prices — too high.

In brief, the high market values for residential lots and flats in Sarajevo and other urban areas suggest distortions in property and capital markets, coupled with large incomes from criminal or other underground activities. As the work of the CRPC and RRTF advances, bank regulation and supervision improves, and more underground activities are eliminated or absorbed within the formal economy, land and building values should decline. Therefore, supplemental cost-benefit calculations are provided in the following section to provide alternative — and perhaps more reasonable — estimates of the economic benefits stemming from NPA's mine clearance activities.

**Cost-Benefit Analysis of Mine Clearance**

**General Points**

NPA has provided market value data corresponding to four of the sites they have cleared in 1999-2000, for which clearance costs have been calculated. These are:

- Serviced land in central Sarajevo (case #1).
- Serviced land and residences in central Sarajevo (case #2).
- Serviced land and residences in a Sarajevo suburb (case #3).
- Serviced housing lots in a village (case #7).

The current market values of each of these sites are simply the value per m\(^2\) times the area (in square meters) cleared. Where minimum and maximum market values have been provided, we report the results using the minimum and maximum values separately. In one case (#2 in central Sarajevo), both flats/houses and land were cleared, so we have calculated the sum of the values of residences (at the given market rate) and the value of the land area cleared (at its market rate).

We assume there will be some delay before the land or buildings are put to use. Therefore, we have calculated the internal rates of return (IRRs), net present values (NPVs), and Benefit-Cost Ratios (B-C Ratio)\(^{43}\) for each case assuming delays of 1, 2, and 3 years before the benefits accrue (i.e., before people make use of the land or buildings). (See Box: Different Measures for Summarizing Benefits and Costs)

For case #2, we assume the flats/buildings must be reconstructed at a cost of 50,000 DM per unit (assuming the 10,262 m\(^2\) of houses/flats cleared represents 100 units).

For case #3, we assume an additional cost of 100,000 DM to clear the rubble of houses that could not be reconstructed.

\(^{42}\) A currency board can issue local currency only to the limit of its foreign currency-denominated assets (i.e., it cannot simply "print money" to finance government deficits).

\(^{43}\) We have used a 10% discount rate to calculate NPVs and B-C Ratios.
**TEXT BOX: DIFFERENT MEASURES FOR SUMMARIZING BENEFITS AND COSTS**

There are three principal ways to summarize the results of cost-benefit analysis, as follows:

Net Present Value (NPV) is the sum of the cost and benefits streams over time, discounted at some agreed rate (we have used 10 percent/annum). If the NPV is positive, then the investment yields positive financial/economic benefits at that discount rate.

Internal Rate of Return (IRR) is the discount rate that equates the discounted cost and revenue streams (i.e., so NPV = 0). The higher the IRR, the better the investment in financial/economic terms. Generally, if the IRR is above a minimum value (say, 10 percent/annum), the investment is considered sound in financial or economic terms.

Benefit-Cost Ratio (B-C Ratio) is the net benefits, discounted at some agreed rate (e.g., 10 percent/annum), divided by the costs, discounted at the same rate, or

\[
\frac{\text{PV Benefits} - \text{PV Costs}}{\text{PV Costs}}, \text{ where}
\]

\[
\text{PV} = \text{Present Value (the same as saying the discounted value)}. \text{ If the B-C Ratio is greater than zero, then the investment yields positive financial/economic benefits at that discount rate.}
\]

Assuming there is agreement that 10 percent/annum is an appropriate discount rate for BiH, then an investment in landmine clearance will be warranted in financial or economic terms if:

\[
\text{NPV} > 0 \text{ or } \text{IRR} > 10\% \text{ or } \text{B-C Ratio} > 0
\]

**END TEXT BOX**

**Case 1 – Serviced Housing Lots with No Buildings: Central Sarajevo**

Task #10495, Sarajevo Canton, Novo Sarajevo Municipality
- 1010 m$^2$ cleared at a cost of 10,339 DM (10.24 DM/m$^2$).
- Value of land reported by NPA is at least 250 DM/m$^2$, or 252,500 DM in total.

<table>
<thead>
<tr>
<th>Case 1</th>
<th>Delay before land/buildings put in use</th>
<th>1 year</th>
<th>2 years</th>
<th>3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRR$^{44}$</td>
<td>2342%</td>
<td>394%</td>
<td>190%</td>
<td></td>
</tr>
<tr>
<td>NPV</td>
<td>219,207 DM</td>
<td>198,339 DM</td>
<td>179,368 DM</td>
<td></td>
</tr>
<tr>
<td>BC Ratio</td>
<td>21</td>
<td>19</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Summary – Extremely high net benefits to clearance. Net benefits are in the range of 17-21 times clearance costs.

**Case 2 – Combination of Residences and Serviced Land: Central Sarajevo**

Task #10037, Sarajevo Canton, Novo Sarajevo Municipality
- 24,500 m$^2$ cleared, of which 10,262 m$^2$ were houses/flats, at a cost of 458,502 DM (18.71 DM/m$^2$).
- Value of land reported by NPA is at least 250 DM/m$^2$, or 3,559,500 DM in total, plus 1,600-2,500/m$^2$ for the residences, or 16,419,200-25,655,000 DM in total. Therefore, the grand total for land and residences is between 19,978,700 DM and 29,214,500 DM.
- We assume the 10,262 m$^2$ represents 100 residences, which need to be reconstructed the year following clearance at a cost of 50,000 DM/residence.

$^{44}$ An IRR above 12% represents an acceptable investment.
### Case 2 (Min)

<table>
<thead>
<tr>
<th></th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>3167%</td>
</tr>
<tr>
<td>NPV</td>
<td>13,158,498 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>29</td>
</tr>
</tbody>
</table>

Summary – Extremely high net benefits to clearance. Net benefits are in the range of 22-29 times clearance costs.

### Case 2 (Max)

<table>
<thead>
<tr>
<th></th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>5181%</td>
</tr>
<tr>
<td>NPV</td>
<td>21,554,680 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>47</td>
</tr>
</tbody>
</table>

Summary – Extremely high net benefits to clearance. Net benefits are in the range of 37-47 times clearance costs.

### Case 3 – Combination of Residences and Serviced Land: Sarajevo suburb

Task #10394, Sarajevo Canton, Ilidza Municipality
- 19,923 m² cleared, of which 253 m² were houses, at a cost of 322,034 DM (16.16 DM/m²).\(^{45}\)
- Value of land reported by NPA is at 100-150 DM/m², or 1,967,000-2,950,500 DM in total, plus 1,200/m² for the residences, or 303,600 DM in total. Therefore, the grand total for land and residences is between 2,270,600 DM and 3,254,100 DM.

We assume rubble has to be cleared in the year following demining at a cost of 100,000 DM.

### Case 3 (Min)

<table>
<thead>
<tr>
<th></th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>574%</td>
</tr>
<tr>
<td>NPV</td>
<td>1,651,238 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>5</td>
</tr>
</tbody>
</table>

Summary – Very high net benefits to clearance. Net benefits are in the range of 4-5 times clearance costs.

### Case 3 (Max)

<table>
<thead>
<tr>
<th></th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>879%</td>
</tr>
<tr>
<td>NPV</td>
<td>2,545,329 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>8</td>
</tr>
</tbody>
</table>

Summary – Very high net benefits to clearance. Net benefits are in the range of 6-8 times clearance costs.

### Case 7 –Serviced Land: Village

Task #10485, Sarajevo Canton, Vogosca Municipality

\(^{45}\) NPA’s MIS shows 30,000 m² cleared, but the detail provided mentions only 19,923 m² of serviced land and houses. I have implicitly assumed the remaining 10,077 m² is valueless.
• 1470 m² cleared at a cost of 31,861 DM (21.67 DM/m²).
• Value of land reported by NPA is 15-20 DM/m², or 22,050-29,400 DM in total.

<table>
<thead>
<tr>
<th>Case 7 (Min)</th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>-31%</td>
</tr>
<tr>
<td>NPV</td>
<td>-11,815 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>-0.4</td>
</tr>
</tbody>
</table>

Summary – Net benefits are negative. Clearance costs would have to drop by over 30% for this task to be warranted on purely economic grounds.  

<table>
<thead>
<tr>
<th>Case 7 (Max)</th>
<th>Delay before land/buildings put in use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
</tr>
<tr>
<td>IRR</td>
<td>-8%</td>
</tr>
<tr>
<td>NPV</td>
<td>-5,133 DM</td>
</tr>
<tr>
<td>BC Ratio</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

Summary – Net benefits are negative. Clearance costs would have to drop to by over 8% for this task to be warranted on purely economic grounds.

**Summary of the Market Value Cases**

The results based on reported market values (assuming land and buildings are used the year following clearance) are summarized below.

<table>
<thead>
<tr>
<th>Case – Task Number</th>
<th>Area Cleared (m²)</th>
<th>NPV (at market midpoint)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 10495</td>
<td>1,010</td>
<td>219,207 DM</td>
</tr>
<tr>
<td>2 – 10037</td>
<td>24,500</td>
<td>17,356,589 DM</td>
</tr>
<tr>
<td>3 – 10394</td>
<td>19,923</td>
<td>2,098,284 DM</td>
</tr>
<tr>
<td>7 – 10485</td>
<td>1,470</td>
<td>-8,474 DM</td>
</tr>
<tr>
<td>(1) Total (above)</td>
<td>46,903</td>
<td>19,665,606 DM</td>
</tr>
<tr>
<td>(2) NPA totals for 2000</td>
<td>438,934</td>
<td>5,020,000 DM²⁷⁷</td>
</tr>
<tr>
<td>(1) ÷ (2)</td>
<td>0.11</td>
<td>3.92</td>
</tr>
</tbody>
</table>

These are truly remarkable results. Eleven percent of the clearance completed in 2000 yielded net benefits, in present value terms, almost four times the entire NPA mine action program budget! A few points stand out.

First, the reported market values of land and residences in central or suburban Sarajevo may be high in relation to Bosnia's current economic situation. At these values, net benefits garnered from a single good-sized task in central Sarajevo (Case #2, task 10037 - 2.45 hectares) equals – in simple economic terms – NPA's entire mine action budget for three years!

Second, clearance of land in villages – even those close to Sarajevo – is a marginal or losing proposition in purely economic terms. Unless there are significant public safety concerns or some other special reason to clear land in-and-around villages, such tasks should probably be left to operators with lower cost structures than NPA currently achieves.

⁴⁶ Clearance might still be warranted if the mines posed a significant danger to the community.

⁴⁷ This is the estimate for NPA's total expenditures on mine action in 2000.
Third, the NPV of benefits decline if there are lengthy delays in putting the land and buildings into productive use. Each year of delay reduces the NPV of benefits, for these four parcels of land, by 12 percent or over 2 million KM.

Fourth, the results validate – in economic terms – NPA’s decision to focus on activities in support of the Sarajevo Mine Action Plan.

Clearly, these results are driven by the high reported market values for urban land and buildings, which is probably due to a combination of factors that restrict the supply of residences for sale while increasing the demand to purchase residences. These findings may not, therefore, prevail over the long term.

As a test of this hypothesis that market values may fall significantly, therefore reducing the economic justification of NPA’s demining, we obtained rental values of flats in central Sarajevo and the suburbs. The ranges of reported rents for 100m² flats were:

<table>
<thead>
<tr>
<th>100 m² flats</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Sarajevo</td>
<td>1,500 DM</td>
<td>2,000 DM</td>
</tr>
<tr>
<td>Suburbs</td>
<td>500 DM</td>
<td>1,000 DM</td>
</tr>
</tbody>
</table>

Assuming a 10 percent discount rate with property tax and maintenance costs of 20 percent of the rental value, evaluating for 20 years, and assuming the flat then has a sale value at that time, the implied NPV (or capitalised values) of flats today are:

<table>
<thead>
<tr>
<th>100 m² flats</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Sarajevo</td>
<td>148,624 DM</td>
<td>198,166 DM</td>
</tr>
<tr>
<td>Suburbs</td>
<td>49,541 DM</td>
<td>99,083 DM</td>
</tr>
</tbody>
</table>

Comparing these results with the reported market (sale) prices gives the following:

<table>
<thead>
<tr>
<th>100 m² flats</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Central Sarajevo - Reported market value</td>
<td>160,000 DM</td>
<td>250,000 DM</td>
</tr>
<tr>
<td>(2) Capitalised values based on reported rents</td>
<td>148,624 DM</td>
<td>198,166 DM</td>
</tr>
<tr>
<td>(1) ÷ (2)</td>
<td>108%</td>
<td>126%</td>
</tr>
<tr>
<td>(3) Suburbs - Reported market value (mid-point)</td>
<td>120,000 DM</td>
<td></td>
</tr>
<tr>
<td>(4) Capitalised values based on reported rents</td>
<td>74,312 DM</td>
<td></td>
</tr>
<tr>
<td>(3) ÷ (4)</td>
<td>161%</td>
<td></td>
</tr>
</tbody>
</table>

These results suggest the reported market values for residences in Sarajevo are somewhat higher than their capitalised values and, therefore, people are paying a premium when purchasing residences. However, this premium is not so large as to suggest a plummeting of market values and, hence, the benefit-cost ratios calculated for NPA demining tasks.

We have therefore calculated for comparison purposes the NPV results that would prevail if the market values for residential properties fell by half. This gives a safe lower bound for the net economic benefits accruing from NPA clearance work. The following table provides a comparison of net present values at (1) the current reported market values and (2) one-half the reported market values, for the case studies of urban areas.

<table>
<thead>
<tr>
<th>Case – Task Number</th>
<th>NPV (assuming land/buildings are used after 1 year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reported Values</td>
</tr>
</tbody>
</table>

48 E-mail from Kjell Bjork, Monday, 6 June 2001.
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 10495</td>
<td>219,207 DM</td>
<td>104,434 DM</td>
<td></td>
</tr>
<tr>
<td>2 – 10037</td>
<td>17,356,589 DM</td>
<td>6,176,316 DM</td>
<td></td>
</tr>
<tr>
<td>3 – 10394</td>
<td>2,098,284 DM</td>
<td>842,670 DM</td>
<td></td>
</tr>
<tr>
<td>(1) Total (above)</td>
<td>19,674,080 DM</td>
<td>7,123,420 DM</td>
<td></td>
</tr>
<tr>
<td>(2) NPA totals for 2000</td>
<td>5,020,000 DM</td>
<td>5,020,000 DM</td>
<td></td>
</tr>
<tr>
<td>(1) ÷ (2)</td>
<td>3.92</td>
<td>1.42</td>
<td></td>
</tr>
</tbody>
</table>

Even if market values for urban housing fell to one-half the current level, clearance in urban areas will still achieve very high economic returns.
Conclusions

Institutional & Capacity Development Issues

Institutional Context

NPA operates within an extremely difficult institutional environment. In spite of recent gains by the more pluralist parties, substantial political support exists for chauvinistic nationalist parties, particularly among Bosnian Serbs and Croats. The central government remains weak, while the entity governments are often obstructionist. As a result, the reconstruction program, and many of the country's broader social and political affairs, are driven by the International Community (IC), which has not, however, created the mechanisms or capacity adequate for integrating donor initiatives let alone governing the country. It is unclear how long the IC will maintain its commitment to such a high profile, costly, and high-risk role. It is equally unclear how to achieve the IC's desired outcome, with local, democratically elected officials assuming responsibility for Bosnia and Herzegovina's future development while adhering to the principles espoused in the Dayton Agreement.

At the level of the national mine action program, the planned enactment of legislation, followed by a tighter integration of the BiH and entity MACs, will represent an important advance if adequately implemented. But there remain broad – and tightly inter-related – strategic issues facing the IC, that will affect NPA's mine action program both operationally and in terms of the results it might expect to achieve and be sustained. Among these issues are:

- A shift from reconstruction and peacebuilding to development – Emergency reconstruction and peacebuilding has attracted large funding commitments from the IC, with the bulk of these channelled via the Priority Reconstruction and Recovery Programme prepared by the EU and World Bank, which effected a modicum of coherence. A shift to a "normal" development program implies a decline in assistance flows and greater involvement by local officials in formulating a development strategy and the specific project priorities.  

- Minority returns versus straightforward reconstruction – There are difficult tradeoffs here. Understandably, the IC wants to ensure its actions do not validate ethnic cleansing. However, there are no ready answers to the problem of minority returns (see Box), and a tight focus on this issue means that other aspects of economic and social reconstruction will be delayed – particularly if aid funding continues to decline. There also is a very real danger of social backlash if the needs of settled households are not addressed while, in the same community, international assistance is lavished on minority returnees.

- A change in the people controlling the purse strings - The IC's current efforts are focused on the promotion and, where necessary, enforcement of the broad political and social principles underlying the Dayton Agreement. Those members of the IC that are heavily engaged in BiH – and their various inter-governmental mechanisms (OSCE; OHR; 

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49 Reasonably standard approaches have evolved for (1) donor coordination (i.e., reducing inconsistencies, gaps, and overlaps in the activities of different donors) and (2) aid management (i.e., aligning the bulk of donor assistance with the development priorities of the country). Typically, this entails the establishment of a Consultative Group (CG) under World Bank auspices or a Round Table (under UNDP auspices) bringing together all donors and government officials periodically, coupled with efforts to promote local "ownership" by "putting the government in the driver's seat."

50 There are also the needs of refugees and IDPs who do not want to return to their former homes or to other communities in which they would be minorities.
NATO/SFOR) – are understandably preoccupied with complex political, social, and security considerations. Success in building peace – or gradual resignation and withdrawal on the part of the IC – will likely see the more traditional aid programs come to the fore. Aid agency officials, by habit-of-mind, are more focused on matters concerning the efficiency and developmental effectiveness of any programs they support.

It remains uncertain how the IC will deal with such issues. It seems the current set of institutional arrangements is unsustainable, and significant changes are likely. Such changes will certainly affect the NPA mine action program (e.g., funding levels, program objectives and target beneficiaries, reporting requirements, etc.).

**TEXT BOX: MINORITY RETURNS**

Annex 7 of the Dayton Agreement established that...

- 'All refugees and displaced persons have the right freely to return to their homes of origin. They shall have the right to have restored to them property of which they were deprived in the course of hostilities since 1991 and to be compensated for any property that cannot be restored to them.'
- 'The Parties shall take all necessary steps to prevent activities within their territories which would hinder or impede the safe and voluntary return of refugees and displaced persons.'
- 'The Parties shall not interfere with the returnees' choice of destination, nor shall they compel them to remain in or move to situations of serious danger or insecurity, or to areas lacking in the basic infrastructure necessary to resume a normal life.'

Inadequate housing was seen as a major deterrent to the return of refugees and IDPs, so donors devoted significant efforts to repair and reconstruction of housing. An estimated 412,000 housing units had been damaged or destroyed during the war – about one third the pre-war housing stock. This reconstruction did not, however, lead to significant minority returns, which are essential if ethnic cleansing is to be reversed, thus restoring the multicultural character of BiH.

The core problem is that local authorities, representing the majority interests in each community, do not facilitate minority returns because (1) they simply do not want the minorities to return or (2) returns would force the relocation of those who are occupying the returnees' residences. This core problem is aggravated by substantial differences expressed by different national ethnic groups in the desire to return. Most Bosniac (67.7%) and Croat (55.6%) IDPs wish to return to their pre-war residences, but less than 25% of Serb IDPs have this desire. (UNDP 2000, Chart 7, p. 35) This makes it unlikely that Bosniacs or Croats who want to return to Serb-majority communities can be "matched" with Serbs occupying their homes who are similarly willing to return to areas in which they are a minority. Forcing Serb IDPs to return – thus freeing residences for Bosniacs or Croat owners – would violate the principle in Annex 7 that Parties 'shall not interfere with the returnees' choice of destination.' But unless the Serb IDPs vacate the dwellings, the Bosniac or Croat owners cannot return.

Minority returns have been increasing, rising from 35-40,000 in 1998, to 41,007 in 1999 and 67,445 in 2000. This, however, represents a small proportion of the remaining number of citizens who are unable or unwilling to return to their pre-war communities.

Annex 7 of the Dayton Agreement also states:

- 'The Parties hereby establish an independent Commission for Displaced Persons and Refugees [that] shall receive and decide any claims for real property in Bosnia and Herzegovina, where the property has not voluntarily been sold or otherwise transferred since April 1, 1992, and where the claimant does not now enjoy possession of that property. Claims may be for return of the property or for just compensation in lieu of return.' (Underlining added)

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51 For example, the OSCE mandate in BiH is "promoting democratic values, monitoring and furthering the development of human rights, organizing and supervising elections, as well as implementing arms control and security-building measures." (www.oscebih.org)
However, "CRPC has not thus far been successful in creating the necessary framework for the establishment of the [Compensation] Fund, because … many organisations and institutions (both in the international community and in domestic governmental structures) were convinced that despite the best intentions of fund managers, it would end up operating in such a way that the return of persons to their pre-war homes would be undermined." (World Bank for the CRPC, 2000)

NPA within the BiH Mine Action Program

Since its relocation to Sarajevo, the NPA mine action program seems to have assumed a unique role or niche within the national mine action effort. In brief, it can undertake clearance of large minefields that the ITF does not wish to put out to commercial tender, perhaps because the clearance will be too complicated or expensive.

An additional point is that the NPA mine action plans and reports often suggest an exclusive focus on Sarajevo, in support of The Mine Action Plan for Sarajevo Canton (SMAP). It is clear this is no longer the case, as NPA has year-round activities in RS (often outside the RS portion of Sarajevo and its environs) and seasonal activities in the Mostar area.

There is also an impression among some officials within the BiH-MAC, and perhaps elsewhere in the government, that NPA’s clearance efforts benefit the Bosniac majority to a disproportionate degree. Whether this was an accurate perception in the past, it does not appear true today. In addition to the team operating in the RS, NPA has cleared large areas within Serb and Croat enclaves within Sarajevo canton.

The procedures for setting clearance priorities and assigning tasks to specific agencies seems to have improved over the past few years. Irritants remain when NPA identifies hazards it feels should be cleared, which – for one reason or another – have not been classified as a priority within the entity mine action plans. More generally, it is impossible to be certain how well the priority-setting processes are working because there is no systematic Level 4 survey activity to verify that cleared areas have been returned to productive use by the intended beneficiaries.

The Capacity of NPA and Its Mine Action Personnel

By all reports, NPA has sound operating procedures. Its senior management team has extensive experience in both mine action and BiH. They are taking a gradualist approach to the evolution toward a regional mine action program, which seems reasonable given the problems experienced at the beginning of the BiH program. Local personnel have successfully assumed most of the management responsibility for day-to-day operations and in some areas, including the MIS, have instituted valuable innovations. At the same time, and in spite of its success in raising the productivity of its clearance operations, NPA unit clearance costs remain high: perhaps triple those of commercial firms, albeit falling.

Costs and Benefits of NPA Clearance Operations

Based on a limited number of case studies, NPA's clearance efforts appear to deliver very substantial economic returns. Given the current value of land and residences in urban areas,

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52 For example, the LFA for 2000 states the goal of the mine action program is "Implementation of the SMAP", while the purpose is "Reduced threat from mines and UXOs in Sarajevo canton for the inhabitants."

27
this finding is likely to hold true for most other clearance tasks completed by NPA since it relocated to Sarajevo. There are, however, some important caveats.

First, clearance in villages may not be warranted in cost-benefit terms due to:

- the apparent impoverishment of rural areas – a situation that the international community and local governments do not yet appear to be addressing in an effective manner, and
- NPA's high clearance costs.

Second, in the absence of a systematic effort to verify that land and buildings have been put to productive use by the intended beneficiaries, one cannot be sure that the potential social and economic benefits are being realized. This is particularly worrisome given the country's political economy. With imperfect coordination across reconstruction programs, and the ability of local governments to delay and obstruct the return of minorities, there is no guarantee that cleared land and buildings will be put to use within a reasonable timeframe. More fundamentally, the substantial potential benefits from clearing in urban zones create huge monetary incentives for individuals to acquire the cleared land and buildings. In an environment with weak accountability and widespread criminal activities, there is a significant danger that monetary incentives on this scale might elicit misappropriation, intimidation of intended beneficiaries, or other fraudulent activities.
Recommendations

1. NPA should clarify the objectives (i.e., the goals and purposes listed in its Logical Framework Analysis) of its mine action program in Bosnia and Herzegovina. It should then go on to revise its program logic chain (inputs ⇒ outputs ⇒ purpose ⇒ goal) and its monitoring and evaluation framework (indicators; key assumptions) to be consistent with these new objectives. (See Box: Recommended Approaches for Planning, Monitoring, and Evaluation)

**TEXT BOX: RECOMMENDED APPROACHES FOR PLANNING, MONITORING, AND EVALUATION**

*Clarifying Objectives*

NPA needs to clarify the objectives of its mine action program, as these are not clearly stated in some key documents or, where they are clear such as in the Logical Framework Analysis (LFA), they do not accurately reflect NPA's program. At minimum, the revised objectives should:

- encompass the entire range of the mine action activity, which extends beyond the support given to the SMAP;
- highlight the NPA niche within the overall BiH mine action program;
- give clear reflection to NPA's broader corporate values as an NGO;
- be consistent with the objectives to be developed for NPA's regional mine action program.

Ideally, they should incorporate, but not be limited to, the insights obtained from this evaluation (i.e., that mine clearance creates the potential for significant economic benefits).

As a preliminary step to revising its program objectives, NPA might take the opportunity to consult with various organisations and groups to clarify misperceptions and ambiguities, identify unmet needs, and increase the likelihood that the potential benefits of mine clearance are realised in a prompt manner. The core findings from this GICHD evaluation (i.e., concerning the economic benefits accruing to mine action) could provide an entry point for such consultations, and should elicit statements concerning what other potential benefits (i.e., other than those readily quantifiable in financial terms) are valued, and by whom. Such consultations could include:

- Current and potential donors;
- Demining Commissioners and MAC officials;
- Representatives of key inter-governmental bodies (e.g., OHA) and UN agencies (in particular to understand the evolution of the International Community's objectives vis-à-vis minority returns, assistance to local majority populations, and the transition to 'normal' development programming);
- Local government officials in the cantons and municipalities in which NPA is, or is likely to be, active;
- Officers from community-based organisations, including those representing minority groups that may feel their interests are not adequately represented by local governments.

Following these preliminary consultations, NPA should prepare draft statements of its overall goal and specific purposes of its mine action program, and submit them for comment prior to finalisation to those with whom it consulted. In validating the objectives with its donors in particular, NPA should try to obtain 'buy-in' to a medium-term program (i.e., three-to-five years).

*Rethinking the Program Logic*

Once it has refined its statements for the goal and purposes of its mine action program, NPA should revamp its program logic (i.e., the first column of the LFA depicting inputs ⇒ outputs ⇒ purpose ⇒ goal) so this is in line with the new objectives. In particular, the list of outputs should reflect the full range of NPA's mine action activities (e.g., outputs regarding applied research on EDDs and equipment, development of a cost accounting system, etc.). The program logic will then provide a cleared guide for the development of the full program plan, annual work plans, donor proposals, etc.

*Monitoring and Evaluation (M & E) Framework*
Once it has settled on the program logic, NPA should pay close attention to the second and third columns of its LFA, depicting the performance indicators for each level of desired results (i.e., output, purpose, goal), and the key assumptions. Together, these establish the M & E Framework, because two types of things must be monitored:

- Progress toward results (output, outcome, impact);
- Whether the critical assumptions are bearing true.

Concerning indicators, NPA needs to ask, for each result it hopes to achieve, four basic questions:

- What information would we need to know to assess whether we're making adequate progress toward this result? The answer to this question is the set of indicators required.
- Where would we find this information? (data sources)
- What of this information do we have or can we obtain? (collection methods)
- How will we obtain the information we do not already have? (applied research)


2. Clarification of the NPA mine action program's objectives and its M & E framework will set the stage for 'level 4 surveys,' which are needed to confirm:
   - The intended beneficiaries have in fact obtained legal title and physical possession of the cleared land and buildings, and
   - They are putting the land or buildings into productive use within a reasonable time, or
   - If not, why not?

NPA should encourage the new BiH-MAC to undertake the level 4 surveys in a systematic and transparent manner for the entire mine action program. If however, the BiH-MAC does not assume this responsibility, or if the information it passes to NPA is not sufficiently timely, accurate, and complete for NPA's management purposes, NPA should undertake level 4 surveys of its own tasks and report findings to donors in the standard progress reports.

3. NPA should continue to do simple case studies of the type done in this evaluation to estimate the likely economic impact of any tasks it agrees to undertake, and report the findings to its donors in the standard progress reports. It should also update each case study based on the information obtained via level 4 surveys. Both sets of information should be summarised and reported to donors in the standard progress reports.

4. NPA should develop a simple public information program to ensure other members of the mine action community and both officials and citizens in the communities in which NPA is working are aware of the following features of NPA's mine action program:
   - The program works in both the Federation and the RS;
   - The program assists all national groups;
   - The overall goal and specific purposes of the program;
   - NPA – directly or via BiH-MAC – confirms that any cleared land or buildings go to the intended beneficiaries and are put into productive use without undue delay.

5. The NPA regional office should advance its recent experiment in developing unit cost estimates by implementing a proper cost accounting system to support analysis and management decision-making. Such a system will provide an important complement to
NPA’s on-going efforts to reduce its unit costs for mine clearance, which now focus on the productivity of labour, EDD, and equipment usage rather than the broader concept of cost efficiency.

6. NPA (in Sarajevo and Oslo) should develop a transition strategy regarding senior management personnel within the Sarajevo regional office and the mine action program, to ensure the mine action program is not disrupted as international personnel are rotated.

7. NPA should add a staff position with responsibility for:
   - Working with local officials and community-based groups to understand their priorities regarding mine clearance and to determine how to reduce any inconveniences or other problems created by NPA’s demining work (e.g., re-routing traffic, public information announcements, etc.);
   - Documenting landmine and UXO hazards that are considered priorities by the local communities or by the NPA demining teams, but which have not been placed on the national mine action priority list;
   - Bringing these overlooked priorities to the attention of the relevant MAC officials; and
   - Troubleshooting to expedite the completion of the ‘red folder’ by the relevant MAC so demining can begin.

Some of these tasks are now undertaken on an as-needed basis by mine action managers. But they have other important duties for which their training and experience are more suited, and they find it frustrating to deal with the bureaucracy in the MACs and various government offices. Someone with a background in community development, urban or community planning, or property development would be appropriate for this position, and NPA may already have suitable candidates within its community development or shelter programs. This individual might also assume primary responsibility for monitoring market value data for cost-benefit case studies, and for conducting level 4 surveys to confirm the use made of cleared land and buildings.

The above recommendations can all be implemented within the next year. During this time, NPA might also investigate a more innovative and far-reaching addition to its programming in Bosnia and Herzegovina. The core results of this evaluation indicate that landmine clearance of land and buildings in urban areas can deliver very significant financial benefits, which far exceed the cost of demining. Conceivably, NPA and local community groups could "capture" at least some of these financial benefits to defray some of the demining costs or to provide low-income housing or other community development investments. For example, NPA might clear a large parcel of land on the condition that the local government gives the land to a community-based group. That group might then sell half the land and use the proceeds to:
   - contribute to demining costs,
   - finance loans so low income members could construct houses on the remaining land,
   - construct other community amenities, such as playgrounds.

Such a scheme could be an effective means to channel the benefits of demining to needy groups and to provide a degree of financial sustainability to the NPA mine action program or a locally incorporated successor organisation.
Bibliography


NPA (various). “Annual Reports.”

Office of the High Representative (various). "Report by the High Representative for Implementation of the Peace Agreement to The Secretary-General of the United Nations." Available at www.ohr.int/reports/ Accessed 1 May 2001


Annex 1: Terms of Reference

1.0 Background

Decisions on the structure, planning priorities and modus operandi of mine action programmes should reflect the needs of the affected community, and global mine action priorities should reflect a set of internationally held ideals and principles regarding the scope and focus of our efforts. In practice this is not always the case. Sometimes, mine action decisions focus on individual perceptions or donor priorities rather than specific community or national needs, and there is sometimes seemingly little correlation between the work pursued and the mitigation of human suffering.

Independent and impartial monitoring and evaluation of project implementation is the cornerstone of effective programming. The ability to examine and learn from one's experience is necessary if humanitarian mine action is to remain credible in the face of tightening donor contributions.

Norwegian People’s Aid, an international NGO operating in Bosnia Herzegovina and has invested a great deal of effort and resources in developing a sustainable programme. The opportunity to evaluate this work is overdue. Furthermore, it affords NPA the opportunity to reinforce its support to communities affected by mines and UXO and thereby give additional confidence to its donors.

2.0 Purpose of the Evaluation

The evaluation will examine the social and economic benefits of mine action derived by NPA’s intended beneficiaries. Furthermore, the evaluation will primarily focus on access to demined land for the community, provincial/local/national government, and business/development ventures. This process will also generate recommendations that will enable NPA mine action to categorise or conceptualise the severity of mine contamination and thus plan responses accordingly.

3.0 Intended Beneficiaries of the Evaluation

The evaluation will provide guidance and focus primarily to programme planners and managers and also to donors giving them analytical tools to assess more effectively the relative benefits and costs of mine action programmes. The ultimate beneficiaries of the evaluation should of course be the affected communities who will themselves be integral to the evaluation process.

4.0 Benefits of the Evaluation

It is envisaged that the recommendations of this evaluation will have an impact on the decision-making process for planning and implementation of NPA mine action programmes by helping to ensure that the culture of decision-making reflects the needs of the communities directly concerned by the problem. Taking into account the social and economic costs and benefits, the evaluation will further develop approaches to define and conceptualise the severity of mine contamination, to prioritise mine action initiatives, and to measure the results of mine action activities. Additional advantages will be enhanced analytical rigour and greater transparency in decision-making leading to better use of resources. It is also hoped...
that the evaluation will facilitate greater integration of mine action with the wider development community.

5.0 **Methodology Overview**

The specific tasks to be covered by the evaluation will include, but are not restricted to, the following:

- Review the socio-economic analytical process within NPA, both at the HQ and the field level. And the ways in which this type of analysis contributes to the overall priority setting procedure and ultimately to the implementation of projects at field level.
- Review NPA rules and regulations in regards to prioritisation of resources and tasks for mine clearance activities. Included will be an analysis of the programme cycle in which the process of community liaison and ultimately the hand-over of demined land is executed.
- Carry out a survey of a representative sample of areas cleared by NPA in Bosnia and Herzegovina (Sarajevo) since 1998, with a view to ascertaining:
  - Whether the current occupants of the land are the intended beneficiaries
  - Whether intended beneficiaries were clearly identified
  - How they/the land cleared was selected.
  - Whether proper reporting and hand-over procedures were carried out.
  - What other social or economic benefits have resulted in the increased access to the demined land.
- Do a review of ongoing projects to determine and chart changes in decision making procedures and trends.
- Carry out a cost-benefit analysis of clearance activities (manual, mechanically assisted and dogs).
- Draw lessons learned on the above in order to make concrete recommendation regarding mine action priority setting and implementation
- Propose ways that may strengthen NPA’s monitoring and internal reporting structures that allows for greater monitoring and evaluation of ongoing activities by the organisation and donors.

6.0 **Evaluation Output**

The initial output of the evaluation will be a detailed report with recommendations.

7.0 **Structure and Implementation of the Evaluation**

The evaluation should be conducted in three stages:

7.1 **Preparatory Activities**

7.1.1 A detailed plan with costs for the main evaluation and changes to the outline/framework will be made. The plan and revised TORs will be approved by the NPA.

7.1.2 The first stage will involve the establishment of the TET (see point 8.1).
7.1.3 Once there is a formal agreement between NPA and the Project Manager (GICHD), the GICHD TET will prepare a draft methodology document. In addition, schedules and a workplan for the evaluation will be arranged.

7.2 Main Evaluation

7.2.1 The Project Manager, working closely with the NPA field staff, is to collect information from current and recent field programmes. This information is to be used to 'populate', test and validate the ongoing evaluation. This user information needs to be the best and most up-to-date available.

7.2.2 Following the TET will deploy to Sarajevo for approximately two weeks to carryout the evaluation.

7.2.3 The evaluation should be used to identify common operational needs. Emphasis should be given to operational shortfalls which would benefit from new or improved approaches.

7.2.4 The evaluation should have wide application for NPA Programme Managers and for the mobilisation and management of resources. It should provide the user and donor communities with a clear indication of the benefits arising from the mine action process.

7.2.5 The Project Manager is to seek comments on the analysis from as many stakeholders as possible, particularly those with recent field experience in managing mine action programmes and projects.

7.2.6 The GICHD TET will submit a draft evaluation to NPA for comment and approval.

7.3 Review, Revision and Presentation

7.3.1 The next stage of the evaluation will be to review the first evaluation draft with GICHD TET and NPA representatives as well as other invested stakeholders.

7.3.2 Revision and adaptation of the draft should commence immediately following the initial review and the final draft evaluation should be presented to NPA no later than one month after the first draft is submitted.

7.3.4 Following the revision and subsequent changes the NPA will then endorse and present the evaluation.

8.0 Management Structure and Responsibilities

8.1 Project Management.
The GICHD will manage the evaluation project on behalf of NPA. A Project Manager is to be appointed by the Technical Director of the GICHD. In addition a Research Assistant as well as an Evaluation Specialist will be recruited. These three will comprise the Test and Evaluation Team, or TET.
Annex 2: Schedule of Meetings

**Monday, 23 April**
Arrival in Sarajevo

**Tuesday, 24 April**
Stephen Bryant, Regional Programme Director  NPA
Kjell Bjork, Programme Manager  NPA
Tour of NPA office & warehouse facilities

**Wednesday, 25 April**
Filip Filipovic, Director & David Rowe, Chief  BiH-MAC
Technical Advisor
Edin Bijedic, Operations Manager  Federal MAC
Jusuf Jasarevic, Regional Manager  Federal MAC, Sarajevo Region
Zoran Grujic, Assistant Director of Information  BiH-MAC

**Thursday, 26 April**
Dean Tadic, Project Manager  NPA Shelter Programme
Mahmutovic Husein, Mayor & Hodzic Rifat, Civil  Ilidza Municipality
Protection Officer
Meherd Cero, General Secretary  Federal Ministry of Physical
Planning & Environment

**Friday, 27 April**
Jusuf Halilagic, Deputy Minister & BH Demining  BiH Ministry of Civil Affairs and
Commissioner, and Franjo Markota, BH Demining  Communications
Ahdin Orahovac, Director  Federal MAC

**Saturday, 28 April**
Zlatko Gegic, Project Manager  NPA
Tour of former & current NPA clearance sites

**Monday, 30 April**
Hendrik Kolstrup, Resident Representative & Co-  UNDP-BiH
Chairman, Board of Donors, Mirga Saltmiras, Task
Manager for Mine Action, Jusuf Tanovic, National
Officer for Mine Action
Stephan Annighoefer  RRTF Central Secretariat, OHR
Tour of former & current NPA clearance sites

**Wednesday, 2 May**
Ljubomir Savcic, Regional Manager  Pale Regional Office, RS-MAC

**Thursday, 3 May**
Kjell Bjork, Damir Atikovic  NPA (overview of cost-benefit
analysis for mine action)
Kjell Bjork, Programme Manager and Gire Oye,  NPA (for review of optional
Finance Manager  approaches for cost accounting)
Stephen Bryant & Kjell Bjork  NPA (debriefing)

**Friday, 4 May**
Thor Gislesen, Ambassador  Royal Norwegian Embassy
Damir Atikovic  NPA (using Excel for cost-benefit
analysis)

**Saturday, 5 May**
Departure
# Annex 3: Detailed Results from the Market Value Case Studies

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| 10037 | 2 - minimum value | 46,871 m² cleared outside [change to 24,500-10,262 =14,238] - value as per #1 |
|       |                   | 10,262 m² house clearance (apartments and private houses) |
|       | Clearance/reconstruction costs | 458,502 DM | 5,000,000 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | Market value (-1 yr) | 0 DM | 19,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | B-C | -458,502 DM | 14,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | Market value (-2 yrs) | 0 DM | 0 DM | 19,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | B-C | -458,502 DM | -5,000,000 DM | 19,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | Market value (-3 yrs) | 0 DM | 0 DM | 0 DM | 19,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | B-C | -458,502 DM | -5,000,000 DM | 0 DM | 19,978,700 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |

| 10037 | 2 - maximum value | 46,871 m² cleared outside [change to 24,500-10,262 =14,238] - value as per #1 |
|       |                   | 10,262 m² house clearance (apartments and private houses) |
|       | Clearance/reconstruction costs | 458,502 DM | 5,000,000 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | Market value (-1 yr) | 0 DM | 29,214,500 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
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|       | Market value (-3 yrs) | 0 DM | 0 DM | 0 DM | 29,214,500 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
|       | B-C | -458,502 DM | -5,000,000 DM | 0 DM | 29,214,500 DM | 0 DM | 0 DM | 0 DM | 0 DM | 0 DM |
## Case Study

### 3-minimum

19,670 m² cleared outside (ruins cleared away where houses could not be reconstructed).

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253 m² house clearance

### 3-maximum

19,670 m² cleared outside (ruins cleared away where houses could not be reconstructed).

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253 m² house clearance
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IRR | Breakeven | NPV | BC Ratio |
--- | --- | --- | --- |
| -31% | 35,047 DM | -11,815 DM | -0.37 |
| -17% | 38,551 DM | -13,637 DM | -0.43 |
| -12% | 42,406 DM | -15,294 DM | -0.48 |

IRR | Breakeven | NPV | BC Ratio |
--- | --- | --- | --- |
| -8% | 35,047 DM | -5,133 DM | -0.16 |
| -4% | 38,551 DM | -7,563 DM | -0.24 |
| -3% | 42,406 DM | -9,772 DM | -0.31 |

10485 | 7-maximum | 1,470 m2 | 29,400 DM | 0 DM | 0 DM | 29,400 DM | 0 DM |

Case Ref # Clearance cost Market value (-1 yr) Market value (-2 yrs) Market value (-3 yrs)