

Time to Go MAD: Mine Action and Development¹

In the decade or so since its conception, Mine Action (MA) programmes have begun in over [30?] countries and its practitioners have overcome many teething problems, often in extremely trying conditions. Understandably, the need to devise safe work practices for achieving an exacting quality standard in clearing contaminated areas was given prominent attention during the early years, as were strategies and tactics for meeting the most basic security needs of refugees and others made destitute by conflict and the presence of landmines, plus the aid workers trying to provide some succour. The often difficult terrain, shabby roads and communication systems, and heavy programme start-up costs to train and equip local personnel made Mine Action was an expensive proposition, and efforts have also been made to enhance the efficiency of operations and reduce the cost of clearance and the delivery of other mine action services. Such measures have addressed the need to “do the job right”, and are absolutely crucial to the performance of MA programmes. This paper however addresses the other essential for performance – doing the right job – and particularly for situations in which the humanitarian imperative to save lives is no longer the measure of all things. Rather than Humanitarian Mine Action (HMA), we will explore the nexus of Mine Action and Development (MAD), considering the progress achieved and some challenges ahead.

Most fundamentally a shift to MAD entails an attempt to understand and document the benefits arising from mine action so a reckoning of both sides of the ledger – benefits as well as costs – can be made. While this sounds like a commonsensical proposition, in fact it is daunting as many of the key benefits that mine action might deliver, such as enhancing the sense of security of those in mine-afflicted communities, are difficult to assess, particularly in some quantifiable measure. Regardless, such a reckoning is needed for three of the main challenges facing Mine Action at this juncture. First, it is necessary to demonstrate to donors what their mine action funding has achieved and to make the case for continued support. Second, mine action programmes need to get on the increasingly crowded development agendas in mine-afflicted countries in order to command adequate financial support and due attention from senior government officials. Third, a reckoning of benefits as well as costs is required to provide a means for mine action programmes to assess their performance against what ultimately counts – improving the wellbeing of those affected by landmine contamination – and to improve this performance over time. Collectively these challenges imply that mine action should position itself in the development mainstream to avoid relegation to the post-conflict backwater.

A Short History of How We Got to Where We Are

The main testing ground for mine action in its formative decade was a series of ‘complex emergencies’ which emerged during the final years of the Cold War. Such emergencies are characterised by intra-state conflict, a blurring of lines between combatants and civilians, violence directed largely against civilian targets, fluidity in terms of conflict

¹ Ted Paterson, 2003. An edited version of this paper appeared in Maslen, Stuart (2004), *Mine Action after Diana: Progress in the Struggle Against Landmines*, University of Michigan Press.

zones and populations on the run, and a breakdown of the modern state with the loss of legitimate authority over increasing swaths of the country. Over time, war economies emerge as rival factions exploit natural resources, cultivate narcotics, launder money, and steal humanitarian assistance to finance the conflicts. The international community has responded (in some cases with a distinct lack of enthusiasm or success) with humanitarian² assistance and peacekeeping missions (with the latter often encumbered with additional peace-building chores). The humanitarian aid workers and military personnel made strange bedfellows, united perhaps only in their disparagement of the many representatives of officialdom thrown into the fray.

Unsurprisingly given this crucible, the amalgam we term the mine action community is a microcosm of this broader international response to complex emergencies. The members of this community include: military engineers, whose outlooks reflect both their professional training and the command-and-control approaches of their employers; aid workers imbued with the humanitarian principles of neutrality and impartiality; international human rights campaigners with often single-minded zeal; representatives from official donor agencies trying to square the circle among humanitarian imperatives, national interests, and political realities; and information professionals wrestling with that modern analogue of making bricks without straw – how to turn sparse and suspicious data into usable information. Added to this mix are local entrepreneurs for whom mine action is both a duty and an opportunity for leadership in the local milieu; local deminers for whom, quite remarkably, prodding blindly at live explosives constitutes a survival strategy; and, of course, UN officials assigned to herd cats.

This history has imbued the mine action community with certain distinguishing characteristics, such as:

- It is a multi-disciplinary endeavour involving a multiplicity of organisations;
- It entails (in theory if not always in practice) a variety of components;
- Its origins in complex emergencies mean that short-term mandates and humanitarian perspectives have predominated;
- It has a high international profile which in turn implies active engagement by many international organisations plus generous funding, much of which is earmarked for mine action.

Each of these characteristics gives rise to distinct pluses and minuses vis-à-vis a possible transition from HMA to MAD. As many of these characteristics have been addressed elsewhere in this volume, we will focus principally on the last two points.

From HMA to MAD – Some Challenges

² The distinction between humanitarian and developmental aid is critical. The former is provided in emergencies to address the ‘humanitarian imperative’ (saving lives). It is viewed as short-term and not intended to have sustained impacts in terms of changes to society and the economy. Conversely, developmental aid seeks to bring about sustained socio-economic impacts.

As most programmes have emerged in the midst of emergencies, mine action is funded mainly via the humanitarian aid channels of official development agencies, which normally provide money only for short-term projects of a year or less. This type of funding is appropriate when the situation on the ground is evolving rapidly, but it also constrains long-term planning and inhibits investments for which the payoffs occur in the long term. Such investments include building indigenous capacities, conducting comprehensive surveys of the contamination problem, and ‘luxuries’ such as socio-economic work to understand more precisely how landmine hazards are constraining development in the affected communities. Unfortunately, these are precisely the type of investments that prepare a programme for the transition from HMA to MAD.

Humanitarian aid is also meant to finance urgent supplies to the most vulnerable populations. This inhibits HMA programmes from considering actions that would foster the long-term development of communities that are not at immediate risk of famine, war, or disease: in strategic planning language, to mix more proactive (searching for and exploiting opportunities) with the reactive (responding to immediate threats to lives and limbs).

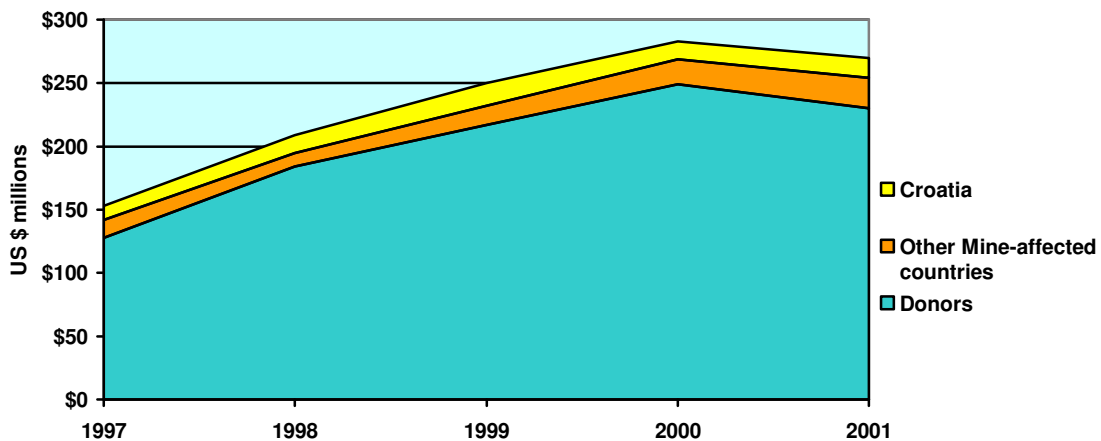
Large-scale humanitarian crises also lead to the heavy engagement of the international community, which means many resources can be brought to bear and allows for large programmes to start-up quickly, particularly for matters such as mine action which have captured worldwide attention. But such active engagement also magnifies donor coordination problems and inhibits local ownership, while the rapid build-up to a large programme can overwhelm local capacities and prolong the dependence on foreign expertise. Finally, generous funding – particularly when it is earmarked for mine action alone, creates a “Samaritan’s Dilemma” in which the generosity of donors can make it less likely that the recipient exerts the necessary effort to help themselves, and remains dependent on handouts.

In short, a transition to MAD implies a longer time-horizon for planning, which enhances the attractiveness of investments that entail heavy short-term costs but promise substantial dividends in the long-term. It entails broadening the focus to bring developmental opportunities into perspective alongside a concern for the vulnerabilities created by landmine contamination: It requires that priorities be based principally on the needs expressed by the affected populations (demand-led) rather the desire to maximise the efficient use of assets (supply-led).

Tentative steps in these directions have already been made, but rapid progress has been constrained in part because the mine action community includes relatively few individuals with strong backgrounds in the social sciences (needed to analyse the socio-economic aspects of mine action) or in development management, who have long grappled with ways to enhance local capacities and ownership as counterweights to donor coordination difficulties, and the ever-present Samaritan’s Dilemma. This suggests that mine action continues to be ‘ring fenced’ and viewed as a specialised, post-conflict activity by both recipient governments and donor agencies.

The mine action community will need to make faster progress because, for a variety of reasons, international donors have started to press governments in many mine-afflicted countries to assume a larger role in their national mine action programmes. First, many of the growing number of countries that are now receiving international assistance for mine action do not represent complex emergencies. Second, although a number of complex emergencies remain acute, stability of a sort has emerged for some: Bosnia, Cambodia, and Mozambique, with glimmers of hope even for Angola and (more faintly) Afghanistan. At least the first three of these countries are now focused on development rather than post-conflict reconstruction, and mine action must ‘mainstream’ itself if it is to get on the agendas of development planners in both recipient countries and donor agencies. Third – and with the possible exception of Mozambique – each of these countries face contamination on a scale that will take decades-not-years to overcome and requires an effort sustained over the long term. Fourth, donors quite rightly balk at the prospect of financing mine action in countries that are making only token contributions of their own (see graph 1). Finally, recipient ownership is part of the new litany of the international development field. Greater local ownership is important if mine action programmes are to be sustained, in the long term by more realistic contributions from local governments and in the short-term because donors faced so competing demands for their funds will look at which development priorities espoused by the recipient government are actually backed-up with local money and high-level attention.

Graph 1: Sources of Mine Action Funding



| % Contributions | 1997 | 1998 | 1999 | 2000 | 2001 |
|---------------------|-------|-------|-------|-------|-------|
| Donors | 83.7% | 88.2% | 86.9% | 88.6% | 85.4% |
| Croatia | 7.2% | 6.6% | 7.0% | 4.9% | 5.9% |
| Other M-A countries | 9.1% | 5.3% | 6.2% | 6.5% | 8.8% |

Source: 'Resources to Achieve the Convention's Humanitarian Aims: A Preliminary Review', presentation by Norway (Chair of the Resource Mobilisation Contact Group) to the Standing Committee on the General Status & Operation of the Convention, 3 February 2003, Geneva. The contributions from other Mine-Afflicted countries includes World Bank loans which must be repaid.

The rest of this chapter will examine the nature of development and what we think we know about how mine action contributes to development, both in the narrow sense of

economic growth and more broadly. This will lead into a preliminary attempt to measure our ignorance in such matters, and to suggestions about how to broaden and accelerate our learning. Finally, the chapter will discuss the mechanics of development planning and the ways in which mine action might interpose itself.

A Quick Tour of Development

A discussion about mine action's contribution to development must make some effort at least to grapple with the concept of development. Put simply, it is an effort to increase the wellbeing of people who are in some way impoverished in the things that both sustain life and make it worth living. These good things in life are many and varied, including robust health, sufficient education, friends and family, cultural offerings, and so on. Because of its many-faceted nature, it is impossible to measure in a direct way the precise level of wellbeing an individual, community, or country has attained. To assess a country's development status and whether it is increasing over time we need to use substitute or proxy indicators that can be measured. Generally, money is the best single indicator as it can be used to purchase goods and services that meet many needs, so a country's per capita income level is often used as a proxy for the level of an average citizen's wellbeing, while the economic growth rate is used to gauge the rate at which a country is developing. However money cannot buy everything needed to live well or even to sustain life in certain adverse situations, so a calculation simply of economic values provides too narrow an accounting of development. The Human Development Index (HDI) published in the annual Human Development Report by UNDP provides a broader measure. The HDI is a composite of three numbers, each representing one important component of wellbeing: (1) a long and healthy life; (2) knowledge; and (3) a decent standard of living.

But even the HDI does not incorporate all those things which reasonable people have reason to value, such as the right to vote and voice their opinions on matters affecting them, or the opportunity to earn the respect of fellow citizens and the right to be treated with dignity, irrespective of one's accomplishments and abilities. These are things that reasonable people have good reason to value, even though these values are tricky to capture in a simple quantitative manner. For one example, would not reasonable people living in a mine-contaminated community place a high value on an enhanced sense of security for themselves, their families, and friends? Our difficulty in assigning a 'hard number' for the value people place on enhanced security does not imply we should neglect it entirely. We need some means for at least depicting the diverse components (including those difficult to quantify) that constitute the broad phenomenon termed development. For this purpose, we shall use the diagram provided in Figure 1.³

Three basic points should be noted. First, each of the components (represented by the ellipses, which we will term spheres) is a good thing in itself: it has intrinsic value and makes a direct contribution to the thing we call development, as depicted by the solid arrows. Second, many of these highly valued things in life are inherently hard to measure and, hence, to arrive at a quantitative valuation. We must be on guard against the "what isn't counted doesn't count" fallacy. Third, each of these components reinforces the

³ This is adapted from DAC, 2001 and Sen, 1999.

others. For example, better health (part of the Human Needs sphere) increases people's economic prospects by allowing them to work longer and harder; similarly, higher incomes ('Economic' sphere) make it easier to maintain robust health by eating better or (collectively) installing water and sanitation systems and other primary health measures. Thus, in addition to their intrinsic values, each of the components has instrumental value as a mechanism for augmenting the others, thereby contributing indirectly to development. These instrumental values are depicted by the dotted arrows in the figure.

FIGURE 1 ABOUT HERE

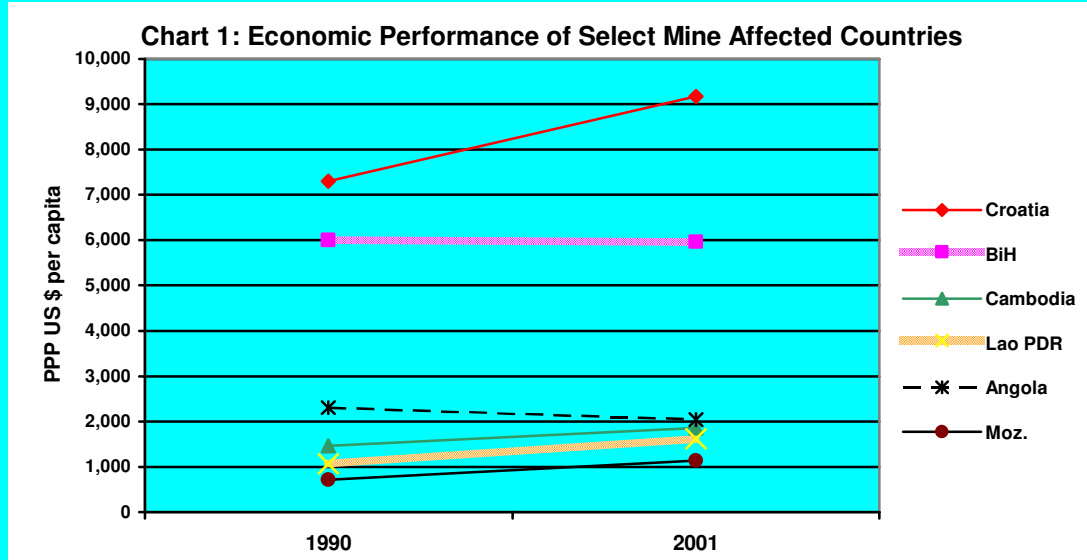
Another feature that warrants emphasis is that the components of wellbeing are embedded in the here-and-now; a combination of the unique history and geography of each place on earth, which together constitute the specific (for want of a better term) 'atmosphere' within which development suffocates or breathes. Like different gases, the elements of this atmosphere intermingle in a complex fashion, are difficult to isolate in concrete terms, and – in spite of their important role in structuring behaviour – go largely unnoticed by the inhabitants as they conduct their day-to-day affairs. Included in these atmospheric features are things such as the natural and technological heritage of a place, the nature of gender relations in households and society, and the degree of trust that individuals place in other members of their family, circle of friends, community, ethnic group, and nation at large. The atmospherics of development can range from pristine to polluted, and can amplify or mute the transmissions among the components of wellbeing. For an obvious example, whether improved health care for women leads to substantial economic benefits to their households largely depends on the economic opportunities available to women in that society. It follows that, while at one level we can generalise about the mechanics of how mine action might contribute to development, there is no typical mine-afflicted country (see Box) as each has its own atmospherics.

Development is also a dynamic process because the mutually-reinforcing nature of the components of wellbeing means advancement in one reinforces progress in the others, which in turn sustain the initial advance. Virtuous circles are features of healthy development as achievements in different spheres of life magnify one another. But this process of mutual reinforcement can also lead to vicious circles, where problems in one sphere are transmitted to the others, spreading infection rather than wellbeing. An understanding of how achievements and failures are transmitted within the atmospherics of a particular place and time to create virtuous circles or break vicious circles is the key to good development initiatives.

A final point in connection with the diagram is that individuals, households, and communities are agents of their own wellbeing. It is their energies that will make or break most development efforts initiated by outsiders. Positive results are far more likely when the intended beneficiaries, whether local community members or national leaders, endorse and are active participants in the planning and monitoring of mine actions.

The Development Status of Mine-Afflicted Countries

Although quantitative measures cannot paint a detailed picture of the development status of a country, they can sketch some broad outlines. For example, the chart below provides some basic economic data for some of the most mine-afflicted countries, which are a disparate group. Croatia and Bosnia and Herzegovina (BiH) were at a similar level before the break-up of Yugoslavia, but have followed decidedly different trajectories since then. Cambodia and Laos were similarly poor entering the 1990s and have managed modest growth since then. In Southern Africa, Angola was more than twice as wealthy in per capita terms as Mozambique in 1990, but the latter has grown rapidly while Angola's economy hasn't kept-up with its population growth.



The table below indicates how these countries rank among 175 countries in the world in terms of the HDI (some countries, including Afghanistan, are excluded for lack of data). They form three clear groups which correspond to their geographic location: South-eastern Europe (with high to medium-high rankings), South-east Asia (ranked well into the bottom half of countries), and Southern Africa (ranked close to the bottom). Again, there is nothing here that allows us to determine a typical mine-affected country.

Table 1 – Human Development Index (HDI) Scores for Selected Mine-Affected Countries

| | HDI Score | Rank (out of 175) | Human Development Class |
|------------|-----------|-------------------|-------------------------|
| Croatia | 0.818 | 47 | High |
| BiH | 0.777 | 66 | Medium |
| Cambodia | 0.556 | 130 | Medium |
| Laos | 0.525 | 135 | Medium |
| Angola | 0.377 | 164 | Low |
| Mozambique | 0.356 | 170 | Low |

Our view of development to this point is an isolated one. Self-development will everywhere and always form the core of a sustained process of improvement and, hence, sustainable development. But as with mine action, the resources available to a poor country for its own development efforts can be supplemented by inflows from wealthier nations in forms such as money (official development assistance, private donations via NGOs, and private investments by businesses), knowledge, and new technology. This broader system of international development is depicted in Figure 2.

FIGURE 2 ABOUT HERE

We can now use such diagrams to analyse some of the contributions that mine action could make to development, illustrating with evidence (where we have it) on how significant each of these connections might be. A useful starting point would be a comparison of mine action in a humanitarian emergency with mine action doing development within a reasonably healthy economy and society.

Mine Action during Humanitarian Emergencies⁴

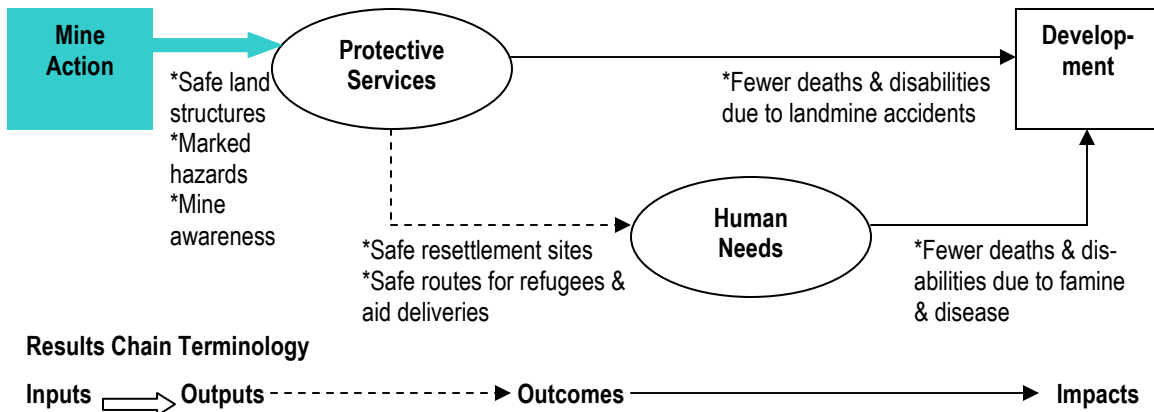
Mine action often begins in the midst of humanitarian emergencies arising from conflict. In such a situation, the international humanitarian organisations such as UN agencies and NGOs should be guided by the humanitarian principles of neutrality and impartiality, coupled with the need for security for both their staffs and the populations they are serving. In the context of our basic development diagram, the major mine actions (arrow 1a in Figure 3) are designed to enhance protective security – mine risk education (MRE), marking of hazards, plus clearance for resettlement camps and routes taken by refugees lead to an intrinsic contribution to development to the degree they save lives and limbs (solid arrow A). By employing local personnel and making local purchases (arrow 1b), and by clearing farm land for refugees (2b), MA also makes contributions to the local economy, reducing impoverishment (arrow B).

FIGURE 3 ABOUT HERE

Demining is also an instrument facilitating the delivery of humanitarian assistance, which then reduces deaths and disabilities from famine and disease. Thus there are two channels by which mine actions lead to fewer deaths and disabilities, and can be isolated from the main development diagram to ease comparison. (The diagram in this format can be viewed as a ‘logic chain’ of cause-and-effect relationships, or as a ‘value chain’ depicting how valued things are created. Both are common tools in programme planning, and both relate strongly to the ‘results chain’ used by many donor agencies as the basis of their results-based management approaches.)

⁴ To maintain a reasonably clear illustration, this discussion focuses on demining activities and MRE at the cost of ignoring the advocacy, stockpile destruction, and victim assistance components. Including all components would make the picture far more complicated, but the essential logic would remain the same. Needless to say, I am not suggesting that these components – and particularly victim assistance – do not make contributions to development.

Figure 4: Logic, Value, & Results Chains



The Evidence on Mine Action Saving Lives and Limbs

The human toll exacted by landmines and UXO has been well documented and was the principal motivation behind the campaign to ban anti-personnel mines. But what do we know about the direct contributions of clearance, marking, and mine awareness to a reduction in the number of deaths and disabilities? Unfortunately we know little, at least in quantitative terms. Take the numbers of deaths and injuries from landmines, which often rise after the end of a conflict as refugees return along routes and to communities that may be contaminated. The numbers of accidents then decline for some years because people become aware of the hazardous areas and generally avoid these. This knowledge may come from MRE or because minefields have been marked by survey teams, but more generally from seeing landmines, hearing from other community members, or because some unfortunate person or animal has detonated a mine. Mine clearance also makes a contribution to risk reduction, but in heavily contaminated countries this is modest because only a tiny portion of hazardous areas can be cleared in any one year.* Complicating the matter further, in at least some countries landmine accidents result from knowingly risky behaviour because people are driven by economic necessity. In other countries, the laying of new mines may be a factor in the number of injuries as people pursue ethnic vendettas or lay mines to protect their vacant homes, opium fields, etc. With all these factors influencing the level and trend of accidents, it becomes extremely difficult to isolate which factor has led to what portion of the decline in numbers. This could conceivably be accomplished with abundant data of excellent quality. Unfortunately, in most countries data on landmine accidents is incomplete and often of very poor quality.

As a result of these complications, there is not a single study that has demonstrated any statistically meaningful link between the numbers of landmine accidents and any component of mine action** or mine action in general.

*For example in Bosnia, LMM 2002 reports that about 4,000 km² are suspected of contamination, while less than 5.5 km² was cleared in 2001, slightly more than one-tenth of one percent of the suspected area (and perhaps only two per cent of the 'priority 1' contaminated areas)!

**One study for Afghanistan reported a correlation between MRE and landmine accidents. (Andersson et al., 1998) Unfortunately, it was a positive correlation, so there were more accidents in communities that had received mine awareness training! As well, a number of people have voiced their concerns about the methodology used in the study.

The box summarises the difficulties we have in measuring the direct impact of MA on the reduction in deaths and disabilities. But in humanitarian emergencies MA also contributes indirectly to the reduction in deaths and injuries by ensuring refugee camps

are free of contamination, and keeping the transportation routes safe so that people can flee from conflict and aid agencies can deliver life-saving supplies to prevent famine and disease. Indeed, far more deaths and disabilities may be prevented through this channel. Of course, MA is only one of many contributions and cannot claim sole credit for the security, health, and nutrition of refugees, but it also is likely that the relief agencies involved will have reasonable firm data on the numbers of people assisted. In fact, we shall see that there are relatively few and modest developmental benefits that can be directly attributed to mine action. Instead, MA makes many contributions that must be combined with other initiatives – by individuals or organisations – to reap developmental benefits. It is these links with other initiatives that the mine action community needs to better understand if it is to enhance its development impact.

A Picture of Mine Action Doing Development

For the sake of brevity we will skip the post-conflict reconstruction and reconciliation period as a country makes the transition from war to peace (noting only that mine clearance of major arteries and facilities is often an important component of reconstruction) and will look ahead to the beginning of reasonably normal development (diagram 5). Investments in each of the spheres of wellbeing are being made with to promote development. Secondary and tertiary connections among the spheres are increasing and strengthening. If this process proceeds long enough, and the atmosphere heals sufficiently, development will become a dynamic, self-reinforcing process.

The diagram lists a number of the benefits that might be delivered directly by, or spring from, mine action. But note that, except for the economic impact stemming from the local wages and purchases, these are all secondary benefits. Mine action's direct contributions remain unchanged when we switch from the humanitarian to development context: investments in protective security (arrow 1a). MRE, survey, marking, and clearance all are designed to enhance the security of those in the contaminated communities, but such actions do not determine the final use of the areas and facilities that have been made more secure. In short, the mine action community depends mainly on others to create the developmental benefits from MA. Bearing this point in mind for now, we can now turn to the evidence available concerning the potential magnitude of the typical benefits.

FIGURE 5 ABOUT HERE

Mine Action and Development: The Evidence to Date

PRELUDE

Before examining the evidence on benefits, we should disabuse ourselves of the notion that mine action programmes will have a measurable impact on a country's macro (or overall) economic and development indicators. Even large mine action programmes represent but a small proportion of a country's overall development effort. For example, in none of our set of mine-affected countries does mine action funding amount to even five per cent of official development assistance (ODA – foreign aid given by the wealthy

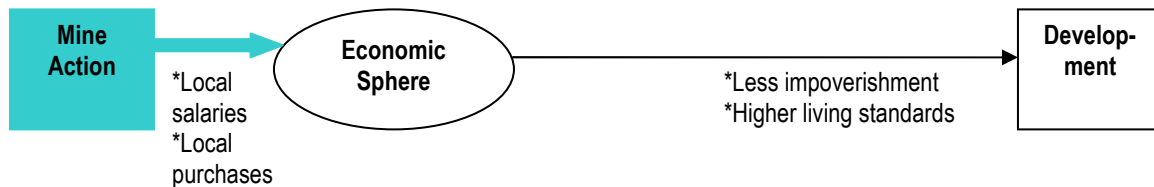
industrialised countries) while, except for Mozambique, ODA itself represents less than 15 per cent of GDP. Thus, spending on mine action in these countries averages less than one-third of one percent of GDP, which is too small to have a measurable impact on a country's overall rates of growth and development.

Table 1 – Mine Action Spending, Foreign Aid, and GDP (in US \$ millions)

| | MA \$ (est.) | ODA | GDP | MA\$/ODA | MA\$/GDP |
|------------|--------------|-------|----------|--------------------|--------------------|
| Croatia | \$20 | \$113 | \$20,300 | 2.67% ⁵ | 0.10% ⁴ |
| BiH | \$18 | \$639 | \$4,800 | 2.50% | 0.33% |
| Cambodia | \$12 | \$409 | \$3,400 | 2.94% | 0.35% |
| Laos | \$8 | \$243 | \$1,800 | 3.29% | 0.44% |
| Angola | \$10 | \$268 | \$9,500 | 3.73% | 0.11% |
| Mozambique | \$10 | \$935 | \$3,600 | 1.07% | 0.28% |

Of course this does not mean that mine action programmes have negligible impacts; only that we have to dig deeper to examine the specific contributions such programmes make to development. The obvious first step is to begin with MA's direct contributions. The one isolated below is the local wages and purchases made by MA programmes, which further stimulates economic activity to the extent these monies continue to circulate throughout local communities (termed the multiplier effect). This can be an important contribution, but we must remember it is not unique to mine action. One million dollars paid to, say, local deminers, will have much the same impact on the local economy as one million dollars paid to local workers on a road construction project. When a comparison is made between these alternative uses for the million dollars, this particular benefit is the same for each so it simply cancels out.

Figure 6: Direct Economic Contributions



There are two situations in which the logic outlined above would need modification. The first is when there is a marked difference in the pattern of expenditures and, particularly, the proportion of imports, between alternative projects. For example, if an extra million dollars in MA funding is spent mainly on imported equipment and expatriate salaries, mine action expenditures would not give much boost to the local economy. It appears a high percentage of MA funding does leak from the local economy via imports and expatriate salaries. Other things being equal, local authorities would prefer to allocate the available money to projects with lower import content. Thus the mine action community needs to be able to show why other things are not equal, and examine matters for which mine action possesses a unique or at least a comparative advantage.

⁵ This counts only the international donations to Croatia's MA programme (perhaps \$3 million/annum). In addition the Croatian government provides perhaps \$17 million.

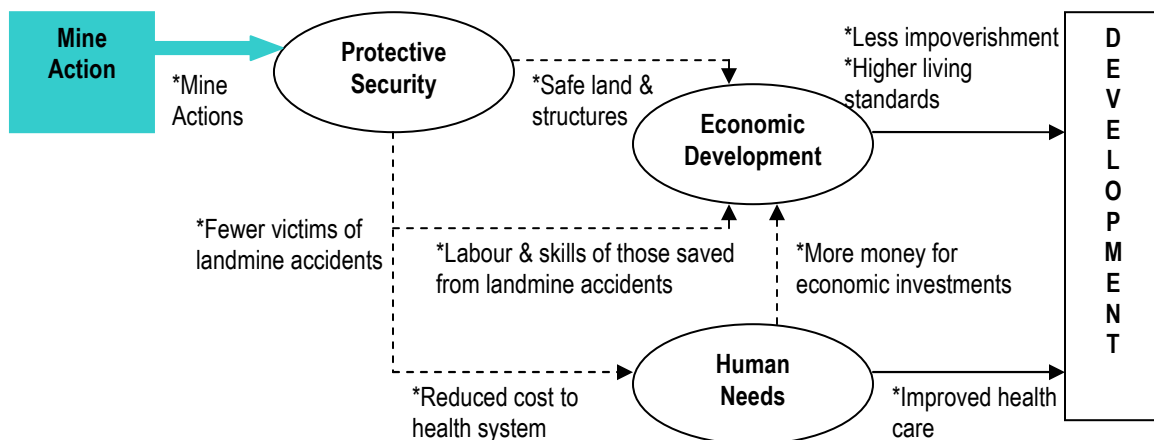
The second situation in which the impact of direct expenditures would have relevance to development planners in choosing which type of projects to fund is when donor money is earmarked for a certain type of project and would be lost to the recipient if that project did not go forward. Earmarking funds for MA still appears common among donors. As noted previously, however, donors are aware that this creates a serious Samaritan's Dilemma, and are taking steps to reduce the incentive to treat mine action funding as a free good. In some cases, donors have simply stopped earmarking funds purely for mine action, while in other cases, donors will offer only 'blended money', in which funds earmarked for mine action are available to match general development aid money. In short, so long as donors earmark funds for mine action, even on a blended basis, then mine-afflicted countries have an additional incentive to support mine action programming. We believe the practice of earmarking will decline and for the purposes of this paper we will assume that any extra boost from additional funding is cancelled by the high import content into mine action relative to many other aid projects.

We may now turn to the other direct contributions made by mine action: safe land and structures, marked hazards, and MRE. These investments in protective security give rise to two intrinsically valuable things – a reduction in deaths and an enhanced sense of security – but as discussed previously, we are as yet unable to determine how much a contribution MA makes to the reduction in deaths and injuries. The enhanced sense of security is an extremely important contribution (to which we will return), but it is difficult to quantify such a benefit and it appears no one has yet done so.

BENEFITS QUANTIFIABLE IN MONETARY TERMS

We can now turn to those potential benefits in which MA plays an instrumental role and that can be quantified in economic terms (giving a narrow, albeit important, view of developmental impacts). Three channels which have been examined to date.

Figure 7: Potential Benefits Measured in Monetary Terms



All these potential benefits arise because MA enhances protective security. The first stems from the direct use that could be made of land and structures declared safe after

clearance or a reduction in the area suspected of contamination following survey (termed area reduction). The second and third economic benefits arise because mine action reduces deaths and injuries (although by how much we cannot say). These benefits are: (1) the labour and skills of the people saved from accidents, which can be put to productive use; and (2) the savings to the health care system, which does not need to treat so many victims (these savings could come in the form of better service for others in need of health care, or in reduced health care budgets, freeing the money for other purposes).

Cost-Benefit Studies of Landmine Clearance: Land & Structures

In 2000-2001 there were a spate of studies commissioned to examine the contribution mine action was making to economic wellbeing in mine afflicted countries.* The general methodology is straightforward:** cost-benefit case studies of representative types of land and structures are done and an estimate for the entire programme is generated by extrapolating the findings. In general the results have been encouraging. In Afghanistan (the most thorough study) for example, the economic benefit of the land cleared by the mine action programme in 1999 was estimated to be about \$46 million dollars against a cost of about \$23 million. Thus an average of \$2 in benefits generated for each \$1 in costs. Different types of land were evaluated (residential, irrigation works, roads, crop land, grazing land), and quantitative estimates were developed for the benefits in terms of the value of the land and animal losses that have been averted by clearance (this latter item was quite modest). However, there was a wide range of values within each of these land categories: for example, eight different case studies were done for both agricultural and grazing land. The graph on the following page depicts the estimated benefits for each of the 28 case studies conducted.

The very positive results estimated for clearance in Afghanistan stem from the fact that huge amounts of valuable land has been mined (e.g., urban areas, irrigation works, roads). As well, most agricultural crops are produced on the small proportion of the total land that is close to water sources. Other countries have different patterns of contamination and economic activity. In Bosnia for example, many residential areas were mined or contaminated with UXO, but there are relatively few areas of intensive agriculture and the agricultural economy has not recovered much since the war. Therefore, the net benefits (i.e., after clearance costs) in urban areas are very high, but those from clearance of agricultural land are often negative. In Laos, urban areas are for the most part free of UXO contamination and there are three broad types of rice cultivation (the preponderant form of agriculture). These are, in decreasing order of productivity, irrigated 'dry season' cultivation, rain-fed 'wet season' cultivation, and upland cultivation. In most cases, the clearance of the first two types of land is warranted on economic grounds alone, while clearance of upland rice growing areas is not.

There also are some countries where the costs of clearance exceed the economic benefits for the bulk of the contaminated land. For example, Mozambique and Angola are sparsely populated and most agriculture has low productivity. In many areas there is ample land available, so farmers are not forced to cultivate land they suspect. In such countries, widespread clearance of rain-fed agricultural land is not warranted on purely economic grounds, but smaller, tightly targeted clearance of, say, water sites and irrigated crop land might well be justified on economic grounds.

*The first of these (Harris, 2000) was seriously flawed and not to be trusted (see Paterson, 2001). The others were UNDP & GICHD (2001), World Bank & UNDP (2001), and GICHD (2001).

**Further detail is given in UNDP & GICHD, 2001. Chapter 3.

INSERT GRAPH FOR AFGHANISTAN

In broad terms, the cost-benefit studies indicate the proportion of contaminated land for which clearance is warranted in economic terms alone is affected by many factors including the pattern of contamination, but in general is:

- Higher when the country is comparatively wealthy (and thus, more productive);
- Higher when the country is more densely populated;
- Higher when clearance costs are lower.

None of the above conclusions should cause any surprise. Far more importantly however, the findings suggest that much of the clearance being done by MA programmes is justified in terms of the economic value of the land and structures alone, and clearance of certain types of land and structures is delivering exceptionally high returns in spite of the high cost of clearance. The studies also confirm that there are huge differences even within countries in the potential economic payoffs arising from clearance of different hazards, even for different hazards just within the 'first priority' category. This implies large payoffs would accrue if assets were targeting more toward the valuable land.

Three caveats require mention. First, these calculations of economic values made possible by clearance or area reduction assume the land and structures will be put to good use shortly after the completion of the demining operations which, of course, may not be the case. For example, people may flee the community if conflict resumes. As well, areas may be cleared on the expectation of some private investment or development project, which may not go forward as planned. Thus, the calculations represent only the potential benefits from clearance. Unfortunately, the proportions of these potential benefits that are in fact realised often is unknown because few mine action programmes incorporate a systematic effort to revisit the areas cleared to determine what use has been made of it.

Second, the calculations assume that the area suspected of contamination will not be used unless demining is done. In some areas where land is scarce relative to the local population or where certain groups are excluded from using 'safe' land, people may be driven by economic necessity to use the land – and perhaps clear some of the ordnance themselves – even though it has not been declared safe by official agencies.

A third caveat is that data in most of the countries studied are extremely sparse, and the researchers have had to make many assumptions (sometimes of heroic proportions) to obtain their estimates. Still, the preponderance of evidence suggests that well-targeted clearance and area reduction yields substantial economic returns in most mine-afflicted countries that remain at peace. In some cases, the returns are so large that any conceivable adjustments to the assumptions employed would not change the conclusion.

Clearance, marking, and MRE also yield economic benefits by reducing the numbers of accidents and thus the loss of human capital to the local economy. While the human toll of landmines has received an immense amount of deserved attention through the international campaign to ban landmines, and the burden such accidents place on fragile health systems has been widely written-up, there has been little analysis of the economic dimensions of this, in part because (as noted previously) we as yet have no good way of

determining the contribution that these components of mine action have made to the declines in landmine accidents observed in most mine-afflicted countries. If we cannot determine how many lives and limbs are saved, we cannot generate a good estimate of the economic value of the human capital this represents. That being said, the following boxes summarise the limited findings to date.

Cost-Benefit Studies of Landmine Clearance: Lives & Limbs

The people saved from landmine accidents are able to use their labour and skills in economically productive activities. Studies on the value of this are few because we cannot determine how many lives and limbs are saved by mine action, but some exist. In the same Afghanistan study for example, the economic loss in lifetime production per death or injury from a landmine accident was estimated at only about \$2,600. (There was also a 'welfare loss' added to put a monetary figure on the value of simply being alive and well, but this is a dodgy exercise.) It was then estimated (using heroic assumptions) that the 34.2 km² cleared in 1999 would reduce the annual number of deaths and injuries by about 340. This implies a stream of annual benefits through this saved lives and limbs channel of about \$885,000 which, over 15 years came to about \$6 million in 'present value' terms). This is small compared to the cost of clearance in 1999 (about \$23 million) and very small relative to the economic value calculated for the land and structures that were cleared in 1999 (\$46 million).*

Other attempts have been made by economists to calculate the value of lost economic production due to landmine accidents that could be averted by mine action. Again, the potential economic benefits are quite small. In Bosnia for example, the cost of lost production from all deaths and injuries caused by landmines in 1999 was estimated at less than \$1.6 million. In Cambodia, an economist came up with a lost production cost arising from 2,400 landmine deaths and injuries a year of only \$241,200!**

*All figures have been derived by the author from data in World Bank & UNDP, 2001, *op. cit.*

**Figures for Bosnia are from S. Mitchell, (forthcoming), *Death, Disability, Displaced Persons and Development: The Case of Landmines in Bosnia and Herzegovina*. Those for Cambodia are from Harris, 2000, *op. cit.*

Costs of Treating Victims of Landmine Accidents

One item that analysts have tried to generate estimates for is the burden that treating landmine victims represents to local health care systems. This burden usually is expressed in terms of the costs of medical care for those injured in landmine accidents. Estimates based on the amount of mine action funding provided for victim assistance typically are far too high because, except for a few instances, the facilities and services financed in this way provides services to all people with similar disabilities (e.g., prostheses centres serve all amputees rather than simply victims of landmine accidents, who usually are in the minority). On the other hand, estimates built from the bottom-up are generally too low as much of the data are missing. Bottom-up estimates generated for three countries* are given below:

| | Afghanistan | Bosnia | Cambodia |
|---|--------------------|---------------|-----------------|
| Acute care/injury | | \$4,495 | |
| Present value of continuing care/injury | | \$950 | |
| Total cost/injury (present value of lifetime care for injury, including prosthesis) | \$2,000 | \$5,445 | \$550 |
| Present value of total medical costs arising from all injuries in 1 year. | \$4,640,000 | \$218,315 | \$26,400 |

Medical costs of this magnitude are very small relative to total medical costs (for example, less than one-tenth of total medical care costs in Bosnia). These quantitative estimates are, of course, terribly conservative. They do not include many items for which data were unavailable (such as the salaries of expatriate doctors in Afghanistan and Cambodia), but more fundamentally they do not include estimates for the value of care given by household members or others in the local community. Still, the numbers of landmine survivors are not nearly as great as other war victims, those injured in vehicle, farm, and industrial accidents or, in some poor countries, victims of disabling diseases such as polio and onchocerciasis (river blindness). Such people are just as deserving of medical treatment as are landmine victims, and measures to reduce the incidence of, say, disabling diseases would often alleviate more disability, home care costs, and suffering per dollar spent than mine action does. In short, it should be clear that the comparative advantage of mine action relative to alternative expenditures of development dollars does not lie in the potential to reduce medical care costs for landmine victims.

*Figures for Afghanistan are derived from data in World Bank & UNDP, *op. cit.* Those for Bosnia are from Mitchell, *op. cit.* Those for Cambodia are from Harris, *op. cit.*

A similar picture would emerge concerning MA and the socio-cultural dimension of development (issues such as the opportunity to be recognised for one's achievements and the right to be treated with dignity irrespective of one's abilities and accomplishments). Victim assistance programmes do valuable work in terms of psycho-social and economic rehabilitation for landmine survivors and their families. But most of these activities are financed by international donors and typically the facilities and services so financed cover all those in the relevant classes of disabilities (e.g., amputees or visually impaired) and not simply the survivors of landmine accidents. Once again, the numbers of landmine victims in most cases will be dwarfed by those disabled by war, other accidents, and disease, and the economic returns that could be quantified would almost certainly be negative (although no one believes the value of such programmes should be assessed purely in economic terms).

Measuring Our Ignorance

The somewhat limited evidence available to date suggests that mine action's contribution in terms of land and structures that are safe to use is by far the largest potential benefit among those that can readily be quantified in monetary terms. In many countries, mine action appears to provide high economic returns and thus could be justified on economic grounds alone, assuming these potential benefits are in fact being realised. Unfortunately, few mine action organisations have systematic systems in place to monitor the use being made of the land and structures that have been rendered safe, and this needs to be done as it represents the most concrete evidence available for both donors and the local government that mine action funding represents a sound investment in development.

The evidence to date also indicates that there are extremely wide variations in the potential economic values of the land and structures which have been cleared. Even in countries such as Afghanistan where it seems clear that mine action is generating high economic returns, a great deal of clearance of low value land is being done, while land and structures which are as much as 40 times as valuable remain contaminated. Priority-setting (or targeting) remains far from optimal.

While deaths and injuries to innocent people are always human tragedies, the evidence suggests the economic burden of landmine accidents is modest compared to other common causes of untimely deaths and disabilities and small relative to the potential economic benefits from safe land and structures.

We obviously have large gaps in our knowledge. Most glaring is our inability to date to gauge the effectiveness of any mine actions in terms of reducing the numbers of accidents. Some relevant research has been published,⁶ but the (very rough) figures in the following table suggest we are far from a full understanding of the problem.

Table x – Rough Estimates⁷ of Landmine Deaths & Injuries per KM2 of Hazardous Land

| | Afghanistan | Bosnia | Cambodia |
|-----------------------------------|--------------------|-----------------|-----------------|
| High Priority | 10.00 | 0.18 | ? |
| Other | 2.22 | 0.02 | ? |
| Total | 5.88 | 0.04 | 0.20 |
| Ratio: Total to Afghanistan Total | 1 to 1 | 1 to 148 | 1 to 29 |

It seems improbable that, for example, there are 29 times as many deaths and injuries per area of contaminated land in Afghanistan as in Cambodia. Such figures may stem more from the poor quality and incomplete nature of data on both contamination and victims. If

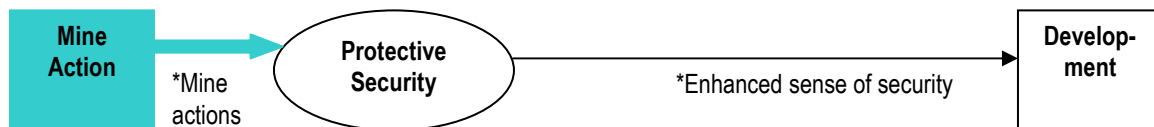
⁶ Benini, Moulton, and Conley, 2002, 'Landmines and Local Community Adaptation', *Journal of Contingencies and Crisis Management*, 10:2: pp. 82-94, Blackwell Publishers.

⁷ The estimates for Afghanistan are from World Bank & UNDP, 2001, plus updated estimate for the total area contaminated. Estimates for Bosnia are from Annex 3 of *Demining Strategy for Bosnia and Herzegovina*. Estimates for Cambodia calculated from figures in LMM for 2002.

such basic data are not improved, it will be well nigh impossible to draw firm connections between mine actions and the tragic carnage on innocent people.

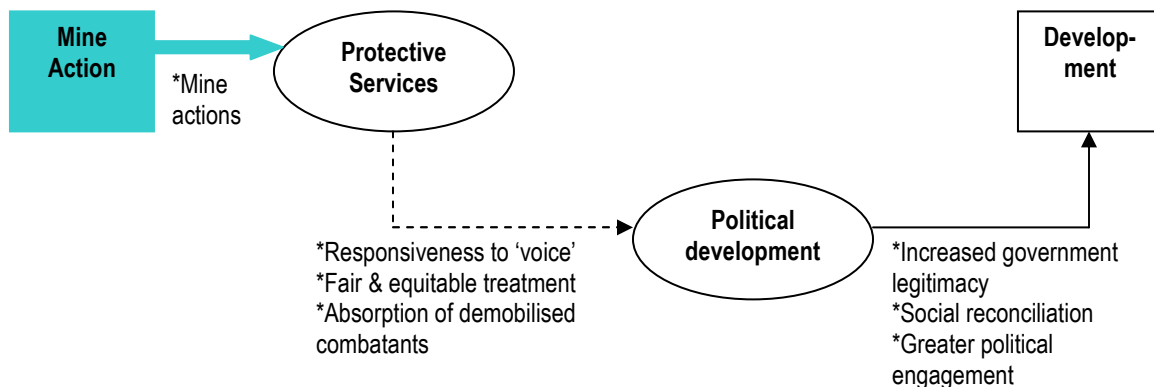
We also remain ignorant about two other contributions that mine action makes to wellbeing and, therefore, development which, to this author, seem fundamental and which are amenable to research that is likely to improve the performance of MAD. The first of these is the contribution that a variety of mine actions make to the sense of security that people in mine affected communities enjoy. To put the case simply, reasonable people accord value to their own sense of security and to their confidence that their family members, friends, and fellow citizens will not be maimed as they conduct their daily affairs. While this value is not typically expressed in quantitative terms, there are techniques available to obtain a rough-but-reasonable measure of how much value citizens place on various types of public services. One approach (termed ‘willingness-to-pay’) has already been used to estimate the demand for public services in many developing countries.⁸ Such research could then be combined with surveys of communities before-and-after the delivery of some type of mine action to gauge the effectiveness of different actions.

Figure 8: Enhancing the Sense of Security



The second potential contribution that merits further research – particularly in countries recovering from internal conflict – is the effect MA has on various aspects of a country’s political development, as depicted below.

Figure 9: Contributing to Political Development



MA could create many potential benefits that would enhance political rights and reconciliation, thus helping to clear the poisoned atmosphere and, more generally, to

⁸ For example, this author went to the World Bank website and typed Willingness to Pay in the site’s search engine and obtained 1,000 hits.

stimulate democratic and transparent governance practices. Three points are perhaps of particular relevance. First, MA could play a valuable role in providing employment to demobilised soldiers after an internal conflict. Demobilisation often is a key component in the peace-building and reconciliation processes. However, if rapid demobilisation is done without forethought or in a slipshod fashion it can further damage the social fabric because there may be few prospects for tens of thousands of young men who have experience with, and often access to, weapons that would serve them well should they resort to banditry. Demining is a labour intensive activity and could absorb large numbers of these young men, providing them with employment, training, discipline, and the opportunity to garner respect. Further, if hiring for mine action staff is done fairly so that reasonably equitable numbers of each faction are employed, a strong message for reconciliation is broadcast. While it many mine action programmes employ former combatants, there are few if any cases in which an explicit link has been made between mine action authorities and organisations and a demobilisation programme. We are also unaware of any systematic research done on whether adherents to the different factions of an internal conflict have had equitable access to employment in mine action. Of course, it is difficult to coordinate effectively in the early post-conflict period, but it appears that this potential contribution by mine action has been largely unexploited.

A second important contribution that mine action could make to social reconciliation and the evolution of sound political processes at the local level is by creating channels for those most directly affected by landmine contamination to have a voice in determining local priorities. Of course, mine action is not unique in this capacity, but the landmine problems faced by a severely contaminated community have features that suggest a community development process would pay significant dividends, both in terms of selecting appropriate responses to the various hazards and in fostering reasonably democratic and transparent processes for identifying community priorities. Landmine contamination in a seriously impacted community would be viewed as an important issue by a large proportion of the people and thus merit the effort to participate; the nature of the problems is likely to be reasonably clear and concrete; and local residents are almost certain to possess relevant information about which the MA personnel are unaware.

There is no one best strategy for eliciting ‘voice’ because communities and their power structures vary so much within and across countries. For example, in a post-conflict situation with a reasonably developmental regime in place, the best strategy may be to work via local government officials, helping legitimise the state. In other cases, linking with NGOs already engaged in community development activities might be a better approach. In some cases it might be necessary for mine action organisations to develop in-house capacity for this type of work, an approach the Peace Research Institute in Oslo (PRIO) is piloting in Mozambique. Another strategy adopted by Handicap International in both Afghanistan and Cambodia is to establish networks of community volunteers to serve as a link between remote communities and the mine action organisations. A word of caution: any such effort to give local community residents a voice in mine action priorities must be matched by a readiness on the part of mine action organisations to be responsive to this input. This has been a problem in a number of programmes in which the clearance organisations are structured to undertake large tasks efficiently, which

requires significant logistical support. The lead time for planning such operations means these organisations find it difficult to respond within a reasonable time to community requests, while their preference for large tasks may mean they are unwilling to respond to any requests concerning small but potentially vital clearance tasks.

A third important issue in this sphere is the need for mine action to provide – and be seen to be providing – fair treatment to all affected communities and citizens. This means at least taking strong steps to avoid corruption and to deal decisively with any allegations which surface. This is not the place to dwell on the details, but allegations of corruption have been an Achilles' heel in many of the oldest and largest mine action programmes, and failures to address this problem would represent the greatest single threat of a dramatic decline in donor support.

Thus, elements of a research agenda should include the following issues intended to better understand how to enhance the contribution MA makes to development:

- Priority-setting systems to better target expensive MA assets on those hazards that offer the greatest potential for advancing development;
- Monitoring systems to determine what proportion of potential benefits are actually realised, and to uncover patterns that would further strengthen the targeting process;
- Continued efforts to enhance the accuracy and completeness of data on landmine accidents;
- Studies in mine-afflicted communities to determine – through willingness-to-pay and other approaches – the relative value residents place on mine actions to enhance their sense of physical security relative to other public services that might be provided.
- Studies of how community-based priority-setting can enhance both the direct effectiveness of mine action and the supplementary contribution that mine action can make to community governance processes.
- Multi-country studies on how mine action occasionally falls prey to corruption to develop ways and means for insulating the programmes from this menace.

As well, in countries that have recently suffered from an internal conflict or where ethnic or regional tensions could explode into such a conflict, the following items should also form part of the research agenda:

- Case studies documenting concrete examples of how mine action programmes have accelerated or inhibited peace-building and national reconciliation.
- Case studies on how mine action programmes capitalised upon or missed opportunities to play a central role in the demobilisation process.

Steps are being taken already along many of these lines, but need to be accelerated. More progress also needs to be made in adding social scientists and development management specialists to the existing mix of MA disciplines and in making this diverse community work in a multi-disciplinary fashion rather than as independent services. The desired result is a broadened perspective that does not ignore such critical matters as safety, quality, and efficiency but that also seeks to embrace the more challenging issue of

developmental effectiveness. This requires people involved with the programmes, and vested with adequate authority, whose habits of mind cause them to ask the sometimes embarrassing questions, such as: why can't our information system allow us to tell how much of a contribution we're making to the reduction of accidents, and why aren't we fixing this problem?; how can we assess the degree to which communities value mine actions (and which actions) compared to better schools, clinics, water systems and so on?; and how can we be more certain that the land and structures we demine are used in the intended manner, by the intended beneficiaries, and at the intended time? When we see more people being rewarded for asking such tough questions and struggling to find answers, then we will know a mine action programme is well on its way to doing development in an effective manner.

There is one other question that a MAD programme will be asking, to which we will next turn: how can we coordinate more effectively with others doing development?

Mainstreaming Mine Action

The new aid architecture is built increasingly around such principles as donor-recipient partnerships with the recipient 'in the driver's seat', a balanced focus on both poverty reduction and economic growth, results-based approaches to aid management, sustainability, and greater selectivity on the part of donors to focus their scarce resources in those countries whose governments are committed to development and to those sectors that are likely to deliver the best results in terms of poverty reduction. Leaving aside for the moment that donor practices often fall well short of such a principled approach, the cornerstone for this aid edifice is recipient ownership. Developing countries are to take the lead in setting their objectives, deciding the appropriate strategy (now issued in what is termed a Poverty Reduction Strategy Paper), and coordinating the donors. In theory therefore, the country's development authorities are the people generating the development plan which will clearly signal the extent to which mine action is a national priority. The mine action community will need to get on the agenda of these people if it is to stay on the radar of the donors to that country. How does this agenda evolve?

All development strategies reflect some mix of top-down and bottom-up elements. The nature of this mix varies across countries but, because development is such a complex phenomenon, most practitioners have lost faith in the practicality of the national government collecting all the relevant information and formulating detailed development plans to implement the selected strategy. Therefore, what is now imposed from the top are the national objectives, the broad strategy for achieving these, and (the essential link between strategy and implementation) an allocation of funds in line with the strategy. Ideally, the latter is based on a medium-term expenditure framework which projects the fiscal revenues that will be available in the coming and future years then sets sustainable expenditure limits for overall government spending and for each of the sector programmes, typically for a three-year period. These expenditure allocations should be based on more detailed strategies for each of the key sectors (agriculture, industry, transportation, health, etc.; the breakdown will typically follow that of the government ministries) – often supplemented by other strategies for 'cross-cutting initiatives' (e.g.,

rural development, which may require action by six or more ministries). The results of all this is then reflected in the national budget, covering a one-year period and providing legislative authority for spending, allocated among:

- National ministries (typically with some detail provided on the programmes run by each ministry);
- Allocations for transfers to parastatal bodies, which could include state-owned enterprises (for electrical power, ports, railways, etc. and, in some countries, the mine action authority and centre) plus special bodies created for development projects which cut across ministerial lines (e.g., integrated rural development projects);
- Allocations to sub-national governments (provinces/states and, in some cases, districts) to provide resources for the delivery of some local public services.

The amounts allocated to sub-national levels depend not only on the fiscal resources the national government can command, but also on the constitutional breakdown of authority between the central and sub-national governments, plus the fiscal authorities reserved for the sub-national governments (often minor items such as license fees, building permits, and various other user fees). In theory then, each sub-national government has the fiscal resources to discharge its responsibilities, most often including the delivery of local public services and land use control. These governments can then develop their own development plans, reflecting a balance between local needs and national objectives, and such details need not be reflected in the national strategy.

An understanding of who has the authority over what development issues is absolutely critical if mine action is to engage effectively with the broader community of development actors. First, it determines what points of contact must be made for what types of decisions. The simple fact is that many of the development issues relating to mine action – and particularly those relating to land use – fall under sub-national authorities. Second, the pattern of political and fiscal decentralisation is likely to be mirrored in the approach that officials in the recipient government deem appropriate for the allocation of donor funds for mine action. In more decentralised countries, the inclination will be to distribute funds among sub-national governments and let them determine the priorities with only broad guidelines or criteria imposed by the national mine action authority. Donor frustrations concerning the transparency of the priority-setting process stems in some cases from their lack of understanding that the political framework of many countries dictates that such decisions fall largely to local officials. This then has been coupled with the failure of national mine action authorities and their international advisors to develop accountability systems that are adequate for holding local officials to account for these decisions.

In fact, the most interesting of the current attempts to improve the alignment of mine action with development priorities have occurred at the sub-national level. In Cambodia, a follow-up project to the Landmine Impact Survey provided both the landmine data bases and additional data bases containing socio-economic and geographic information concerning each village to Land Use Planning Units (LUPU) in four provinces. LUPU staff now respond to requests from both mine action organisations and outside agencies

for data analysis. Each of the LUPU (which form part of the national mine action authority rather than a land ministry) supports a Provincial Rural Development Committee and together they organise village-level exercises to select priorities and consultations with stakeholders such as NGOs working in the province. In Cambodia, this has tremendous potential for linking mine action to, say, poverty reduction because a 'poverty mapping' initiative has developed commune level poverty tallies by combining GIS data with a Socio-Economic Survey and the General Population Census.

Another exciting experiment is in Croatia. Like many former socialist countries, Croatia has large amounts of demographic, geographic, and economic data available in GIS format, a strong tradition of physical planning, and many well-trained professionals in the technical disciplines. Drawing upon all three, in 2001 the MAC commissioned a pilot effort to develop a County Mine Action Plan using a mathematically sophisticated multi-criteria analysis to highlight those hazards which seem to offer the greatest development potential.

For a third example, the Survey Action Center working with Handicap International is conducting a pilot effort in Bosnia as an extension to a standard its Landmine Impact Survey (LIS). As soon as a severely-impacted community is identified via the LIS, a small Task Assessment and Planning (TAP) team conducts a follow-up visit to document more thoroughly the nature of the socio-economic problems created by each hazard affecting that community and consults with residents and municipal officials to devise a plan outlining what type of MA response is required for the most problematic hazards.

The TAP experiment in Bosnia is still underway and the full benefits of both the Cambodia and Croatia initiatives have yet to be garnered. This is no criticism as they were pilot efforts, but it remains to be seen how committed national authorities are to aligning mine action with development, as this may require major changes on how their programmes are planned and implemented. For example, mine action resources may have to be deployed in ways that increase the average clearance costs per unit of land, which will rankle some who have built their reputations on maximising efficiency and would need to re-work their standard operating procedures, logistics systems, etc.

These three pilot efforts also focus on sub-national levels, so a remaining hurdle is to strengthen the links between mine action and development planning at the national level. This is essential if the resources available to the overall programme are to be properly allocated among the different parts of the country and across the various sectors (agriculture, transportation, etc.), although in raising such issues mine action officials need to be well prepared for political resistance on the part of those provinces and sectors that would lose from such a decision. Getting senior government authorities firmly on side is also essential if mechanisms are to be established to hold local officials to account for their mine action decisions. As well, in many countries including Cambodia and Bosnia, mine action officials must be far more proactive in securing financial commitments from their government to allay donor concerns that mine action is not seen as a national priority.

Differences between the pilot efforts in Cambodia and Croatia also illustrate a strategic dilemma facing all mine action programmes. Should a mine action programme build in-house capacity for socio-economic analysis so it can determine its own priorities or should it remain a technical service that will receive guidance from development planning authorities who already have such capacity? Cambodia illustrates the problems associated with an in-house solution. The LUPUs are part of Cambodia's mine action authority and remain isolated from the Land Ministry in Phnom Penh and from the national ministries responsible for key sectoral programmes such as roads. There is duplication and the task of forging useful links between the LUPUs and these national ministries may be complicated by bureaucratic turf battles.

In Croatia the mine action centre did not start by building in-house capacity for the socio-economic analysis. Instead it advised the county and municipal officials that their governments retained the responsibility for the final selection of clearance priorities, but that the MAC would provide clear recommendations based on thorough technical and socio-economic analysis. The MAC then engaged a university professor as a short-term consultant to conduct the multi-criteria analysis. This approach seems appropriate for Croatia because the country has reasonably capable governments at the national, county, and municipal levels. The danger is that the MAC may not fully exploit the pilot effort because there remains no in-house unit championing the issue, and the exercise may appear to most MAC managers as a complex and bothersome diversion from what they perceive as their core task – to clear landmines efficiently.

Each country will need to devise an appropriate response to this dilemma. In countries with reasonably capable and committed governments, the appropriate response is likely to be more along the lines adopted in Croatia. Substantial in-house capacity for socio-economic analysis is probably not required. Instead, a good liaison unit reporting to senior management and charged with the task of forging the links with government ministries, parastatals, and sub-national authorities probably would suffice. These links could be based on working groups that bring together the sectoral and provincial planners, who will identify priorities based on socio-economic considerations, with mine action representatives advising on technical solutions for the priorities identified. This approach would be aided if the liaison unit had a discretionary budget to engage outside experts to assist in the initial exercise in developing a mine action plan in support of each sector's or province's development programme.

Conversely, in countries which lack a capable and committed national government, more in-house socio-economic capacity will be required. Where countries where many ministries are incapable the mainstream is but a trickle and the mine action unit will need to take the lead on the analysis. Such analysis should be based whenever possible on information and participation from the appropriate ministries: the goal must never be to develop a mine action plan in isolation from the responsible organs of a legitimate government. Alternatively, where the government is not committed to development and poverty reduction, the mainstream can lead to a swamp. Some socio-economic capacity is needed to validate the priorities put forward by national ministries and sub-national governments to guard against corruption.

One last point: in all cases the mine action programme must make its case! They must do a better job of demonstrating – in quantitative terms where possible – the many and varied contributions mine action is making to development. Programmes also need to demonstrate results on the ground and not simply possibilities, which means they need to provide for follow-up surveys on a systematic basis to confirm the intended beneficiaries are making good use of the opportunities created by mine action. Mine action programmes that fail to make their case will be doing themselves out of a job before their job is done.

FIGURE 1: THE INTERACTIVE COMPONENTS OF WELLBEING OR IMPOVERISHMENT

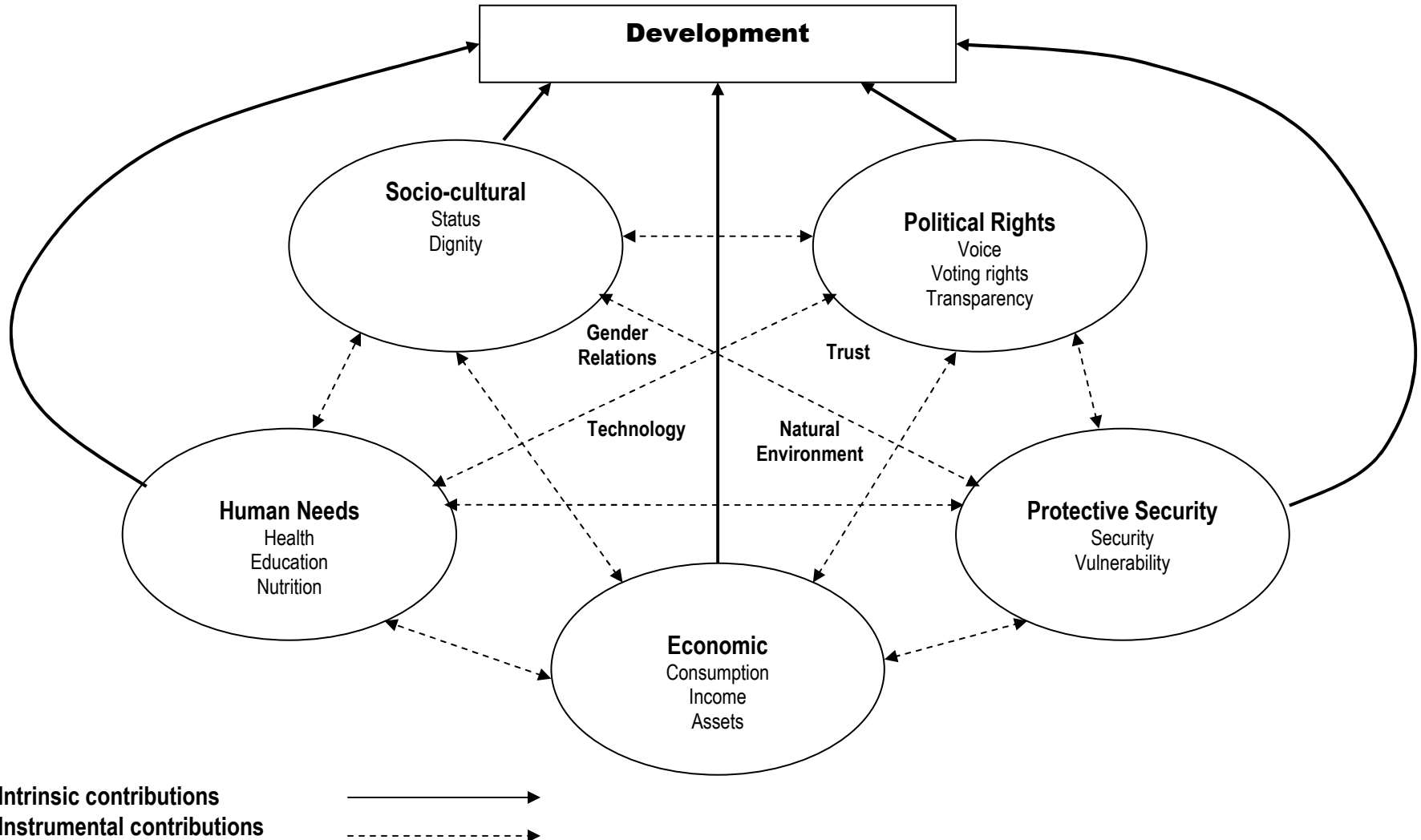


FIGURE 2: THE INTERNATIONAL DEVELOPMENT SYSTEM

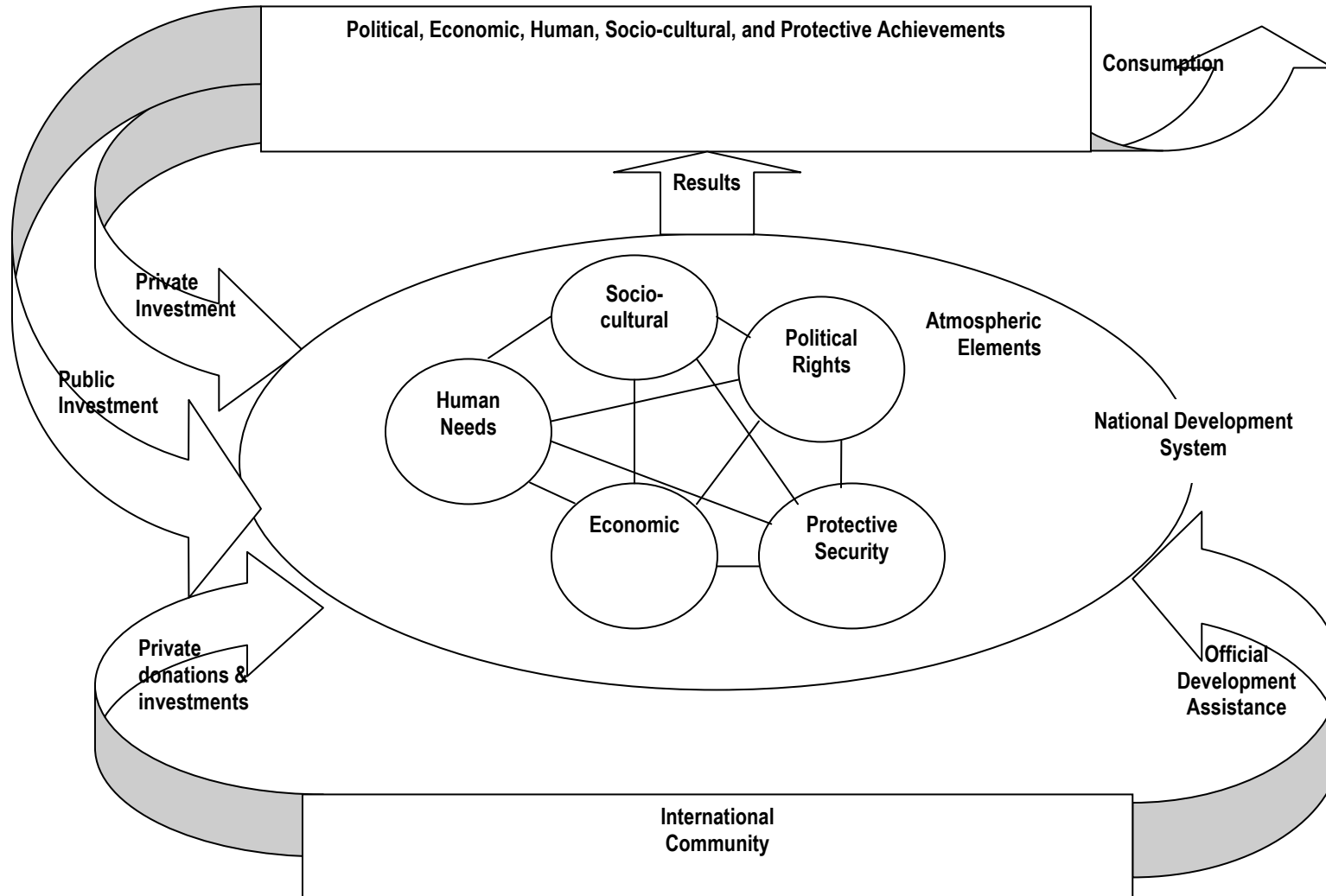


FIGURE 3: MINE ACTION DURING HUMANITARIAN EMERGENCIES

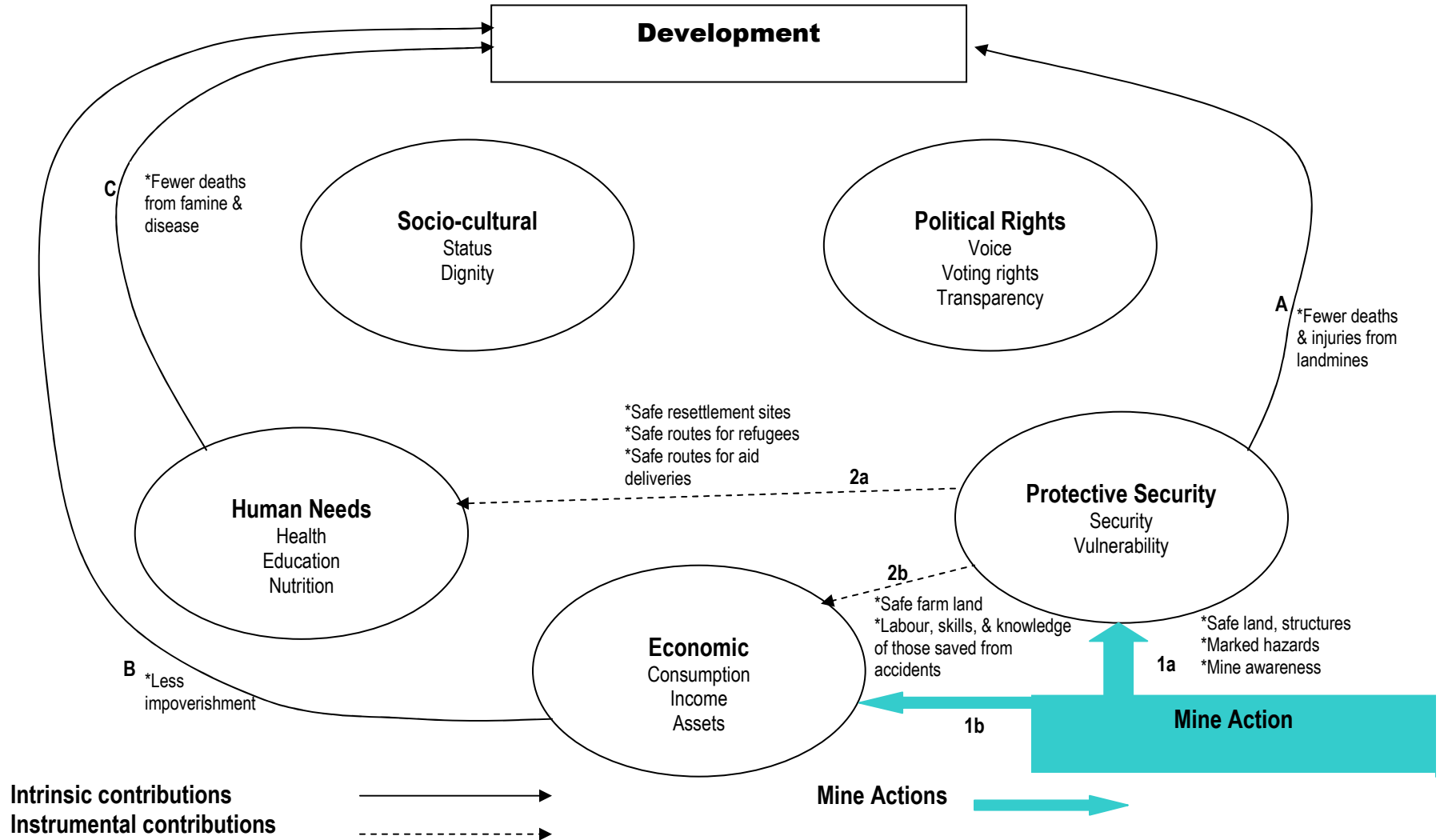
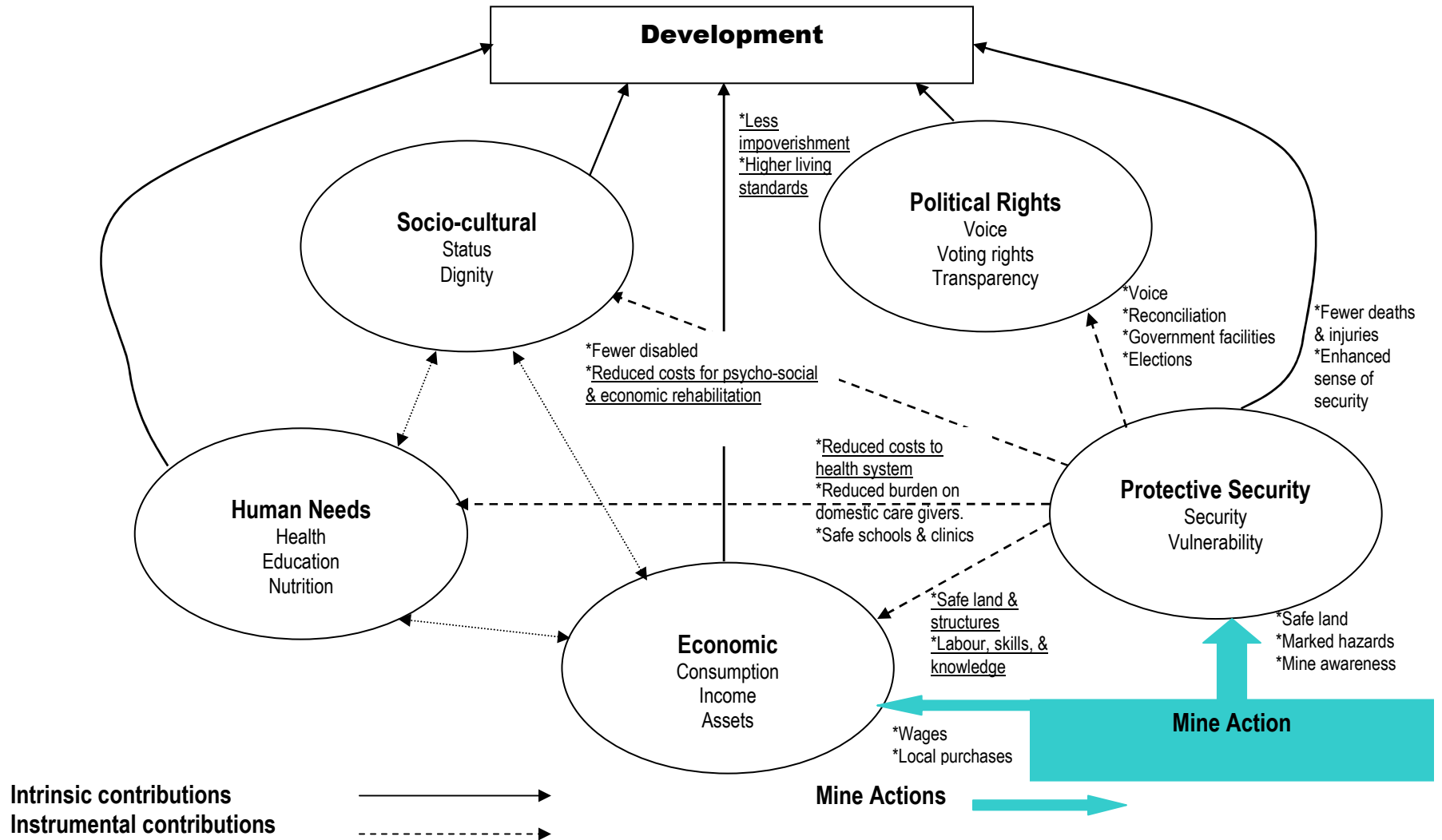


FIGURE 5: SOME SPECIFIC DEVELOPMENTAL IMPACTS OF MINE ACTION



Estimated Benefits from All Case Studies for Afghanistan

