



د افغانستان د ماین پاکى چارو د هم غړى مرکز | مرکز هماهنگى امور ماین پاکى افغانستان

Mine Action Coordination Centre of Afghanistan (MACCA)



MODELING EXERCISE:

THE REMOVAL OF KNOWN¹ HAZARD IN AFGHANISTAN

On behalf of the Government of Afghanistan MACCA/DMC are the custodians of the national mine action database.

The database holds information concerning

- all reported hazard
- the extent and type of contamination
- the number of people impacted including their gender and age
- the effect each hazard has in terms of blockage to resources
- planning criteria and the resulting priorities for clearance
- the progress of clearance
- clearance rates of assets according to contamination type
- annual and quarterly clearance plans for all operators
- financial details of donor support, including the level and geographical area of investment

This data enables detailed and accurate historical analysis. In addition it provides an opportunity to model management solutions and scenarios for clearance.

The following pages detail one such modelling exercise, undertaken by MACCA in February 2010.

¹ Data taken from IMSMA 24th February 2010

Introduction

The following analysis presents an overview of potential solutions to the known¹ landmine and Explosive Remnants of War (ERW) hazard in Afghanistan as 1389 approaches².

At the end of February 2010 645.6 sq km of land was recorded in the national database as being contaminated by landmines and abandoned IEDs³. Currently 575 mine action teams are working in the Mine Action Programme of Afghanistan (MAPA), coordinated by MACCA. Of these, 425 are manual Demining Teams (DTs) and the rest are dog and mechanical assets and Explosive Ordnance Disposal (EOD) teams.

It is MACCA's responsibility to understand the extent of the problem and the relationship between the size of the hazard and the resources required to address it.

Parameters and assumptions

In this analysis only minefields have been considered; areas where fighting took place but landmines were not used (battlefields) have not been included. Clearance of battlefields is not linked to either the Afghan Compact or Ottawa Treaty both of which frame the goals of the MAPA. Furthermore any country which has been subject to extended or repeated periods of conflict can expect to be affected by ERW which are discovered and reported many years after the conflict has ended. It is unrealistic to suggest a timeframe for clearing this type of contamination.

Minefields where demining is ongoing are denoted as "worked on" in IMSMA. These minefields have not been included in the calculation; MACCA expects donors who have provided funds to enable work to start will be committed to supporting their Implementing Partners until these hazards are complete and thus have not been included in this costing exercise.

Analysis has been made at provincial level; this document does not reach down into districts, communities or individual minefields. MACCA is well aware that manual mine clearance rates on different minefields can vary significantly. However, for this macro-level analysis an average manual mine clearance rate⁴ has been used for all minefields regardless of terrain (hillside, flat land), contamination type (anti personnel/anti vehicle mine/abandoned IED), soil type or vegetation cover, which are the factors which tend to affect clearance rates. If a donor expresses interest in a specific project area MACCA can either develop a project proposal or seek an Implementing Partner to design

¹ Data taken from IMSMA 24th February 2010

² 1389 commences 1st April 2010

³ Recently reported from Helmand Province

⁴ Equal to 10,000 sq m per month as observed by MACCA during the last three years of monitoring Implementing Partner operations

and cost a project proposal at district and/or community level which will take into account the issues above and will result in production of a refined project plan.⁵

It has been assumed that the total hazardous area will be cleared manually and that each team comprises 10 deminers, the most common team structure in the programme. Some provinces are contaminated by very large minefields predominantly characterized by sporadically laid anti-tank mines. MACCA does not consider traditional manual demining to be a cost effective or efficient way of addressing this type of hazard and thus recommends an innovative management solution to these areas. However, at present the programme does not possess the technology required and thus this analysis has assumed manual clearance of these areas. Should more appropriate technology be introduced to the programme specifically to deal with these hazards the overall cost of clearance could reduce by as much as \$125 million⁶.

The reader will notice costs associated with mechanical and mine detection dog assets and Explosive Ordnance Disposal (EOD) teams. These have been included to provide an expectation of the cost of an integrated approach to demining which is encouraged and supported by MACCA. MACCA has assumed for every ten manual demining teams, one EOD team, one mechanical asset and one mine detection dog team will be required.

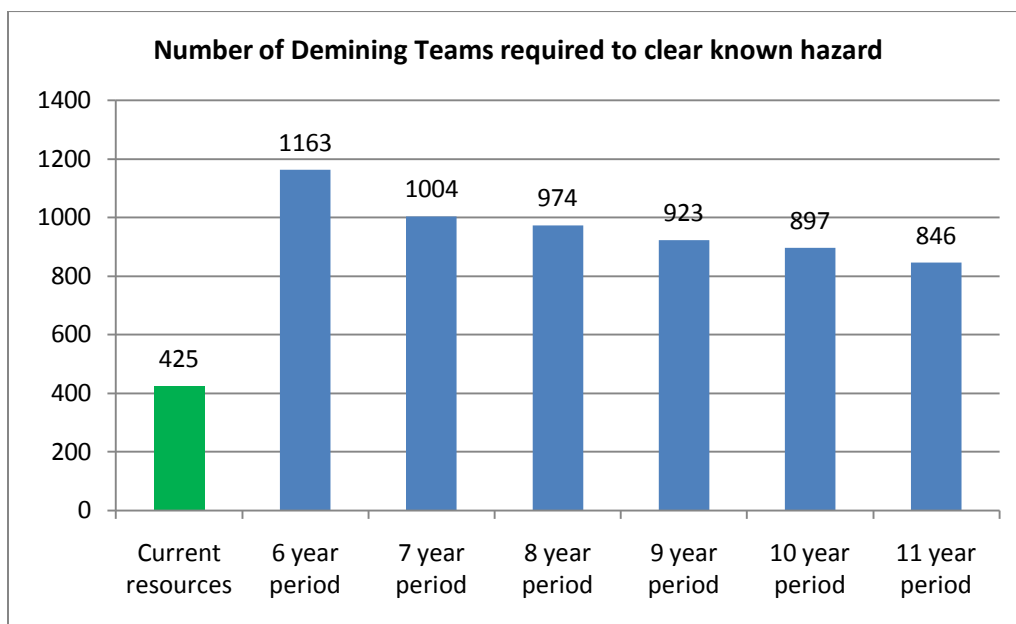
Costs have been calculated by taking the average costs of team set-up and implementation as detailed in the budget section of contracts between Implementing Partners and UNOPS.

⁵ On behalf of two MAPA stakeholders MACCA has undertaken further analysis of the Eastern Region (Nuristan, Kunar, Laghman & Nangahar provinces) and Helmand Province. Copies of the resultant “Eastern Clearance Model” and “Helmand Clearance Model” are available from MACCA.

⁶ In Kandahar, Ghazni, Farah, and Helmand the ratio of normal vs. large sporadic hazards is high, warranting the application of new technology in these provinces. MACCA estimates the cost will be approximately \$30 million spread across all four provinces, whereas manual clearance of these areas would cost approximately \$155 million (assuming new teams are established). Thus the introduction of new technology could result in a saving of \$125 million.

Relationship between demining teams, time and money

The more teams that are deployed the less time is required for clearance. The graph below shows how many teams would be necessary should MACCA seek to coordinate clearance of all known hazard in a period of six, seven, eight, nine, ten or eleven years. The current number of demining teams in the programme is shown for reference.⁷

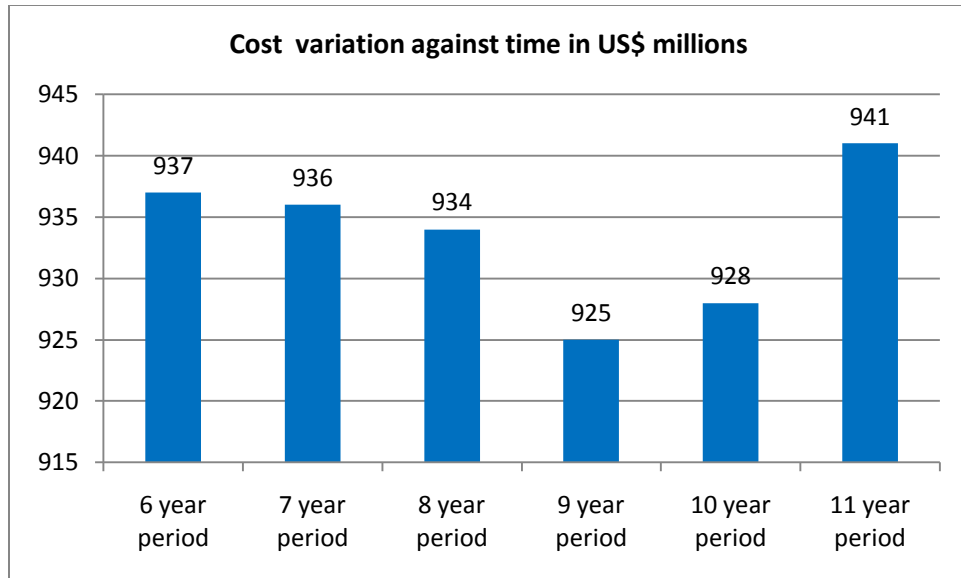


MACCA has considered the relationship between the costs required to equip new teams (\$48,000 per new team) and those associated with running teams (\$132,000 per annum).

More teams deployed for a shorter period require more funds for equipment but less for running costs. Fewer teams deployed for a longer period require smaller set up costs, but greater running costs. At a particular stage a critical point is reached; where the relationship between initial investment and running costs combine to create the lowest possible expense.

The graph below demonstrates that for this project that point is achieved when a nine year clearance period is chosen.

⁷ The majority of demining teams in the programme are 10-lane demining teams. However, some are 20 lanes and some are four, depending on the Implementing Partner. The figure of 425 has been derived by dividing the 20 lane teams in two and combining two four lane teams into one and adding this to the total number of 1-lane teams.



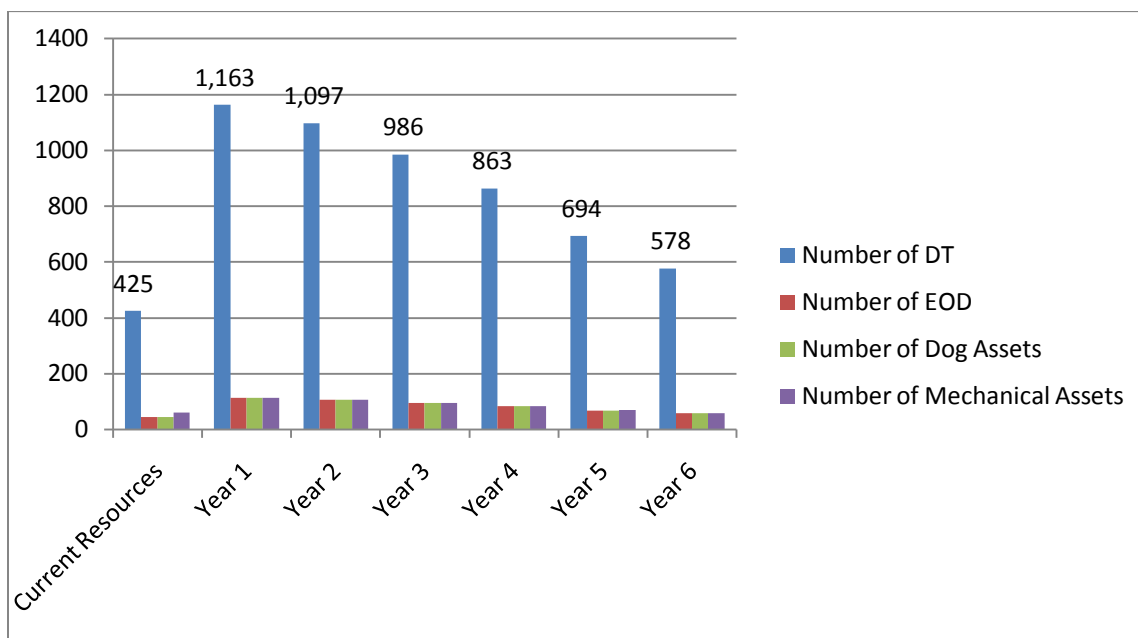
However, MACCA strongly recommends that a more ambitious target of six years be set. The relatively small difference in cost (\$13 million) is outweighed by the benefits of a concerted and concentrated effort at removing hazard in Afghanistan. Mine clearance has been ongoing for more than twenty years; it is time to use mine action as the employment generator it is to contribute to the stabilization of Afghanistan in the next decade.

Clearance modeling

There are many ways to deploy assets in order to achieve the same result. The following models provide samples of what MACCA could coordinate to ensure removal of all known hazard within six years.

a) Model One

One option would be to dramatically increase the size of the programme immediately and begin clearance in all affected provinces at the same time. The graph below shows how many teams in each year would be required should this model be used. The number of current teams is shown for reference and context.⁸



As can be seen the programme would need to increase the number of clearance assets from 425 Demining Teams DT (plus a smaller number of dog, mechanical and EOD supporting assets) to almost 1,200 demining teams and approximately 340 support teams immediately. This would require a tripling in the size of the programme and would see the number of people employed rise from 10,000 currently to just over 24,000. The majority of these 10,000 staff are “core” capacity; deminers who have been employed for a substantial time in the programme and are deployed around the country according to Implementing Partner clearance plans. In the last two years a Community Based approach has been developed which results in employment of community members to clear mines in their own villages. In this approach demining can be viewed as secondary employment; demining is conducted in the morning

⁸ DT signifies demining team and EOD signifies Explosive Ordnance Disposal team

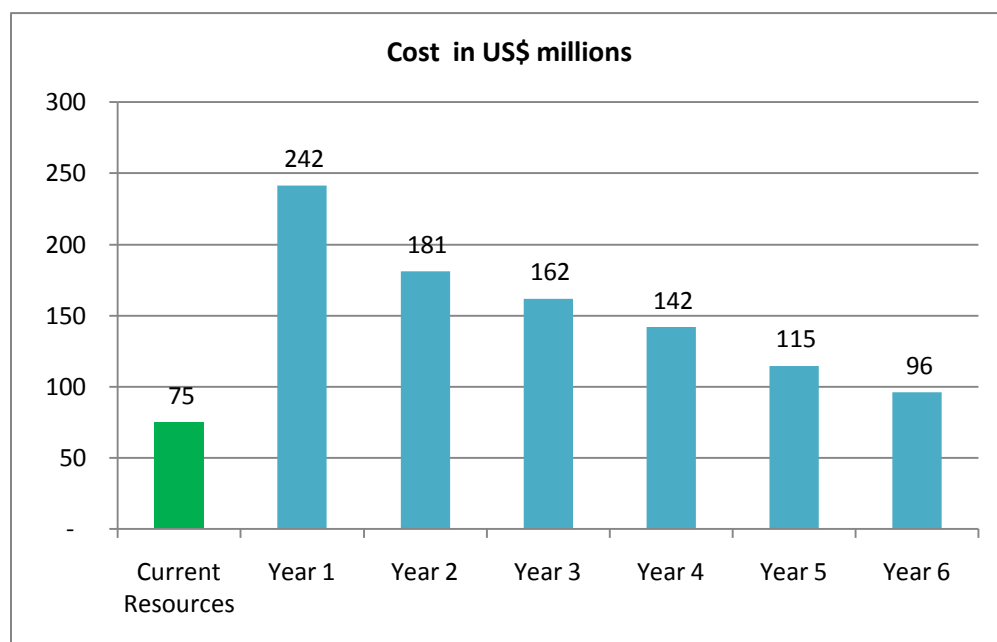
only enabling farmers, tailors, manual laborers, etc from impacted communities to continue their “normal” income generating activities alongside demining.

MACCA supports this approach to deminer employment for two main reasons:

1. This strategy reduces the impact of demobilization when clearance is complete; deminers will not be made “redundant”, they will simply return to their normal activity.
2. Though demining increases the potential for communities to increase their income generation (for example by returning land to productive use) sometimes the full benefit is not realized because communities do not have sufficient income to buy tools, seeds, etc to use on returned land. By providing additional income to communities themselves this risk is reduced.

Over time and as hazard is removed the number of assets required would gradually decline to a level slightly more than at present. The challenges to this model would be management of significant expansion in a short time frame and the requirement for a rapid and large injection of funds to enable delivery. The benefits to this model would be an immediate mine action response in all contaminated provinces of Afghanistan resulting in country-wide job creation contributing to stabilization and the opportunity for over 2,000 communities in Afghanistan to feel the benefit of positive interaction with the international donor community. Furthermore the significant amount of capital equipment purchased in year one would be available to support the management of residual risk over the following decades and other Afghan National Disaster Management Authority (ANDMA) interventions.

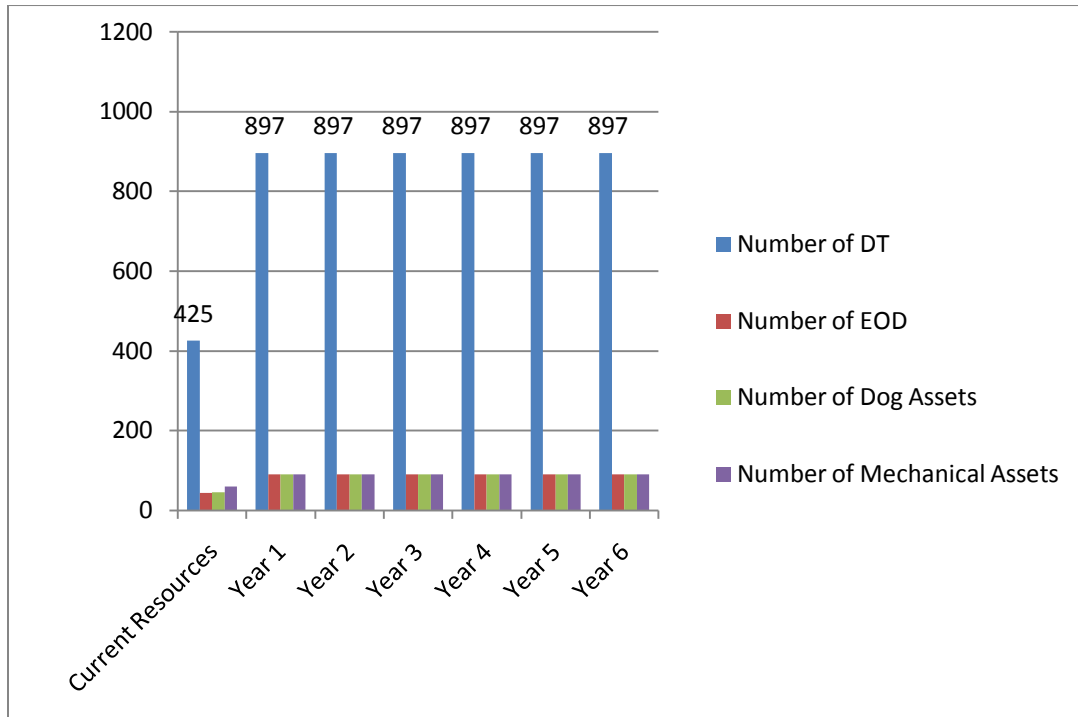
The graph below shows the funds required to support this approach. The total investment over the six year period would be \$937 million, requiring a high point of \$242 million in year one, reducing to \$96 million by year six. The cost of deployment of current assets is shown for reference.



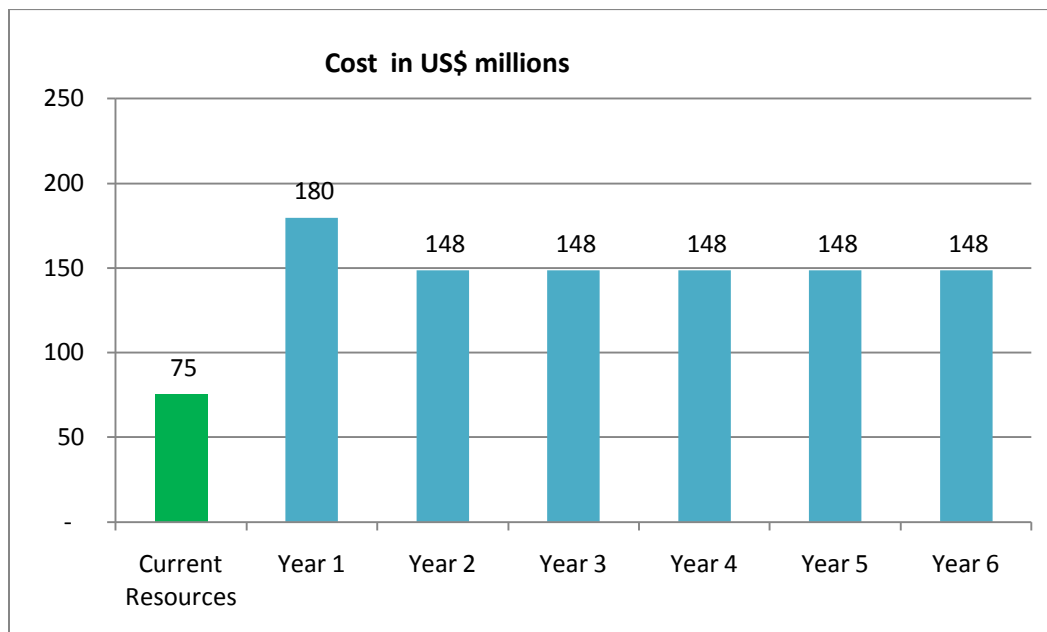
Please note that figures have been rounded.

b) Model Two

An alternative model would be to take a more conservative approach to programme expansion. This model anticipates fewer new teams in the immediate time frame but a requirement for all teams to be deployed for the whole six year period to enable completion.



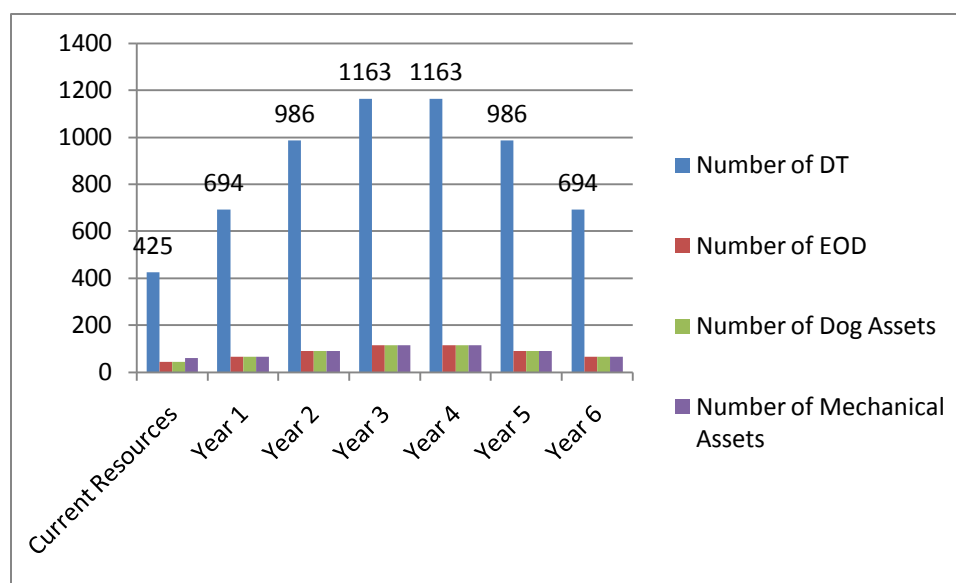
An initial investment of \$180 million would be required, dropping to \$148 million per year until project end, as shown in the graph below.



Since a smaller capital outlay is required for the project the total cost of \$922 million is less than Model One. Model Two presents a more manageable expansion at the outset of the project, requiring a doubling, rather than tripling of programme size. The downside of this model is a requirement for sustained donor commitment and the impact of approximately 10,000 “core” deminers being made redundant at the end of the project. Furthermore all equipment would be in full use throughout the project and as a result of depreciation and wear and tear would not be in sufficiently good condition to support management of residual risk in decades to come.

c) Model Three

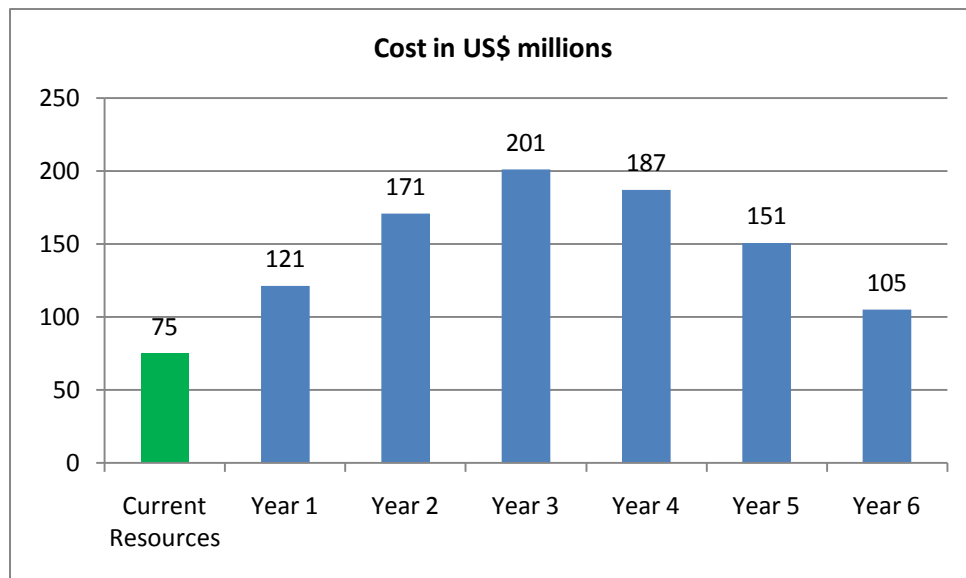
This model requires a gradual increase and decrease in programme size at project outset and end. During the first 12 months of the project demining teams would increase gradually from 425 to 694 (plus associated dog, mechanical and EOD support), reaching a highpoint of 1163 demining teams within two and a half years of the project starting. Teams would gradually decrease towards the end of the project to a level slightly higher than the number of teams currently working in Afghanistan.



The following graph shows the cost associated with this model.⁹ The financial resources required are the same as Model One (\$937 million) since the same number of new teams will be established and the deployment period will be the same. However, in Model One all activity would commence immediately, whereas in Model Three activities would increase gradually over time. The advantage of Model Three over Model One is a more manageable increase in programme size and a time-lag in which to secure

⁹ Note the grand total of these yearly costs is equal to \$936 rather than \$937 million due to rounding.

funding. The disadvantage is that more Afghans will have to wait longer for mine action to commence in their communities.



Provincial clearance model

In this analysis MACCA has taken a provincial approach to clearance; by responding to the contamination in each province the collective result will be that hazard across the country is removed.

As part of this modeling design MACCA has considered

- a) the reconciliation and stabilization intent of the Government of Afghanistan
- b) the opportunity that Community Based Demining presents for secondary employment¹⁰ opportunities for a sufficient period of time to enable stability benefits to be realized in impacted communities
- c) the number of assets which can be effectively managed
- d) the requirement that clearance happens in a timely fashion, and
- e) a desire to ensure best value for money for the donor community

As mentioned previously MACCA considers a six year clearance project manageable and achievable provided the financial resources required to deliver are made available.

Through analysis of the data and taking the above into consideration MACCA anticipates

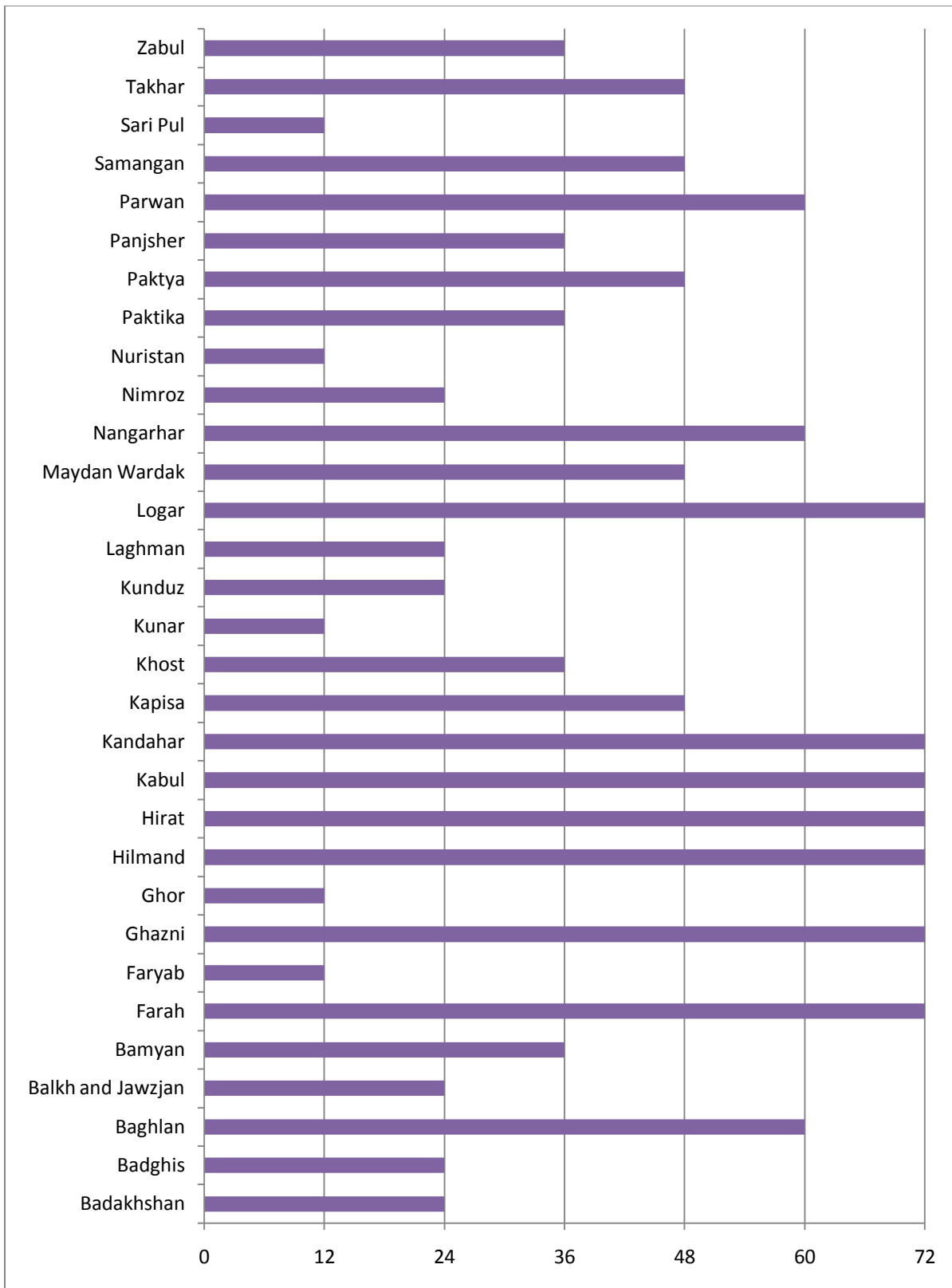
- An average of 13 demining teams and appropriate supporting assets deployed in each of the provinces of Sari Pul, Nuristan, Ghor, Kunar and Faryab would enable completion in 12 months
- An average of 21 demining teams and supporting assets deployed in Nimroz, Laghman, Kunduz, Balkh & Jawzjan, Badghis and Badakshan would enable completion in 24 months
- The same number of teams in Bamyan, Khost, Paktika, Panshir and Zabul would enable completion in 36 months

The contamination in the remaining provinces is such that an increased number of assets would be required to bring these areas to completion in a reasonable time frame;

- An average of 36 demining teams and supporting assets per province could clear Samangan, Paktya, Maydan Wardak, Takhar and Kapisa in four years and Baghlan, Nangahar and Parwan in five years
- The remaining heavily contaminated provinces of Farah, Ghazni, Helmand, Hirat, Kabul, Kandahar and Logar would require an average of 83 teams per province to result in complete clearance within six years.

The chart following shows the number of months required to complete clearance in each contaminated province in Afghanistan up to a time period of six years.

¹⁰ Demining should be seen and understood as a “part time” employment opportunity. Farmers, shop-keepers, manual laborers, and so on from impacted communities can carry out demining in part of the day and continue their “core” income generation activities during the rest of the day.



Breakdown by province

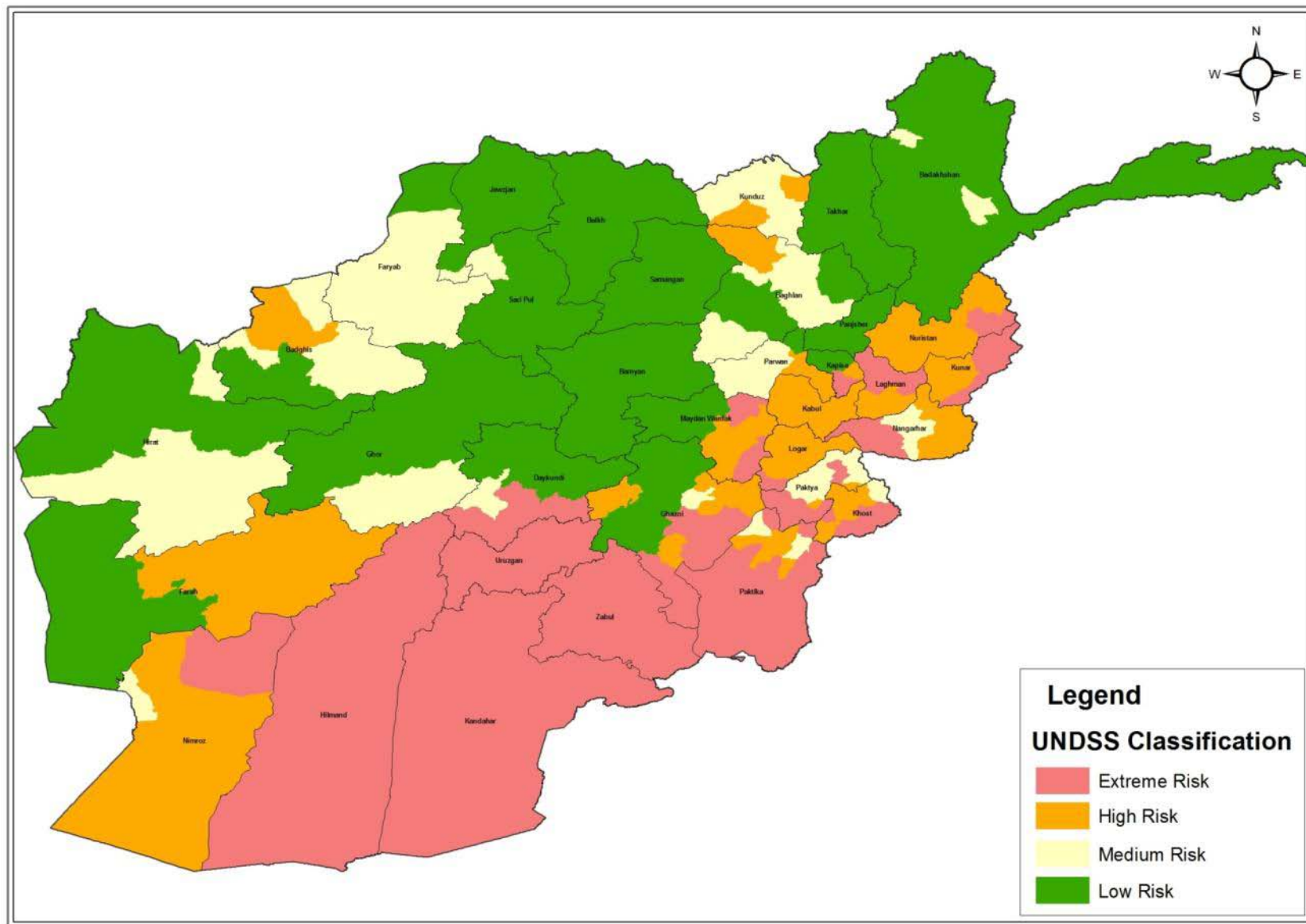
The following pages summarise contamination province by province and give an indication of the cost and timeframe for bringing each province to completion.

For each province two costs for clearance have been calculated and displayed; one assumes only new teams will be deployed and so takes into account new equipment as well as running costs, the other assumes all teams will come from the current capacity and equipment is therefore not budgeted. The reality is likely to be a combination of the two. When funds are made available MACCA will consider the number and type of teams working in the province at that time and calculate and budget for any additional capacity required to complete clearance. Donors reading this document are presented with a worst and best case scenario and can expect a figure somewhere between the two as the final cost.

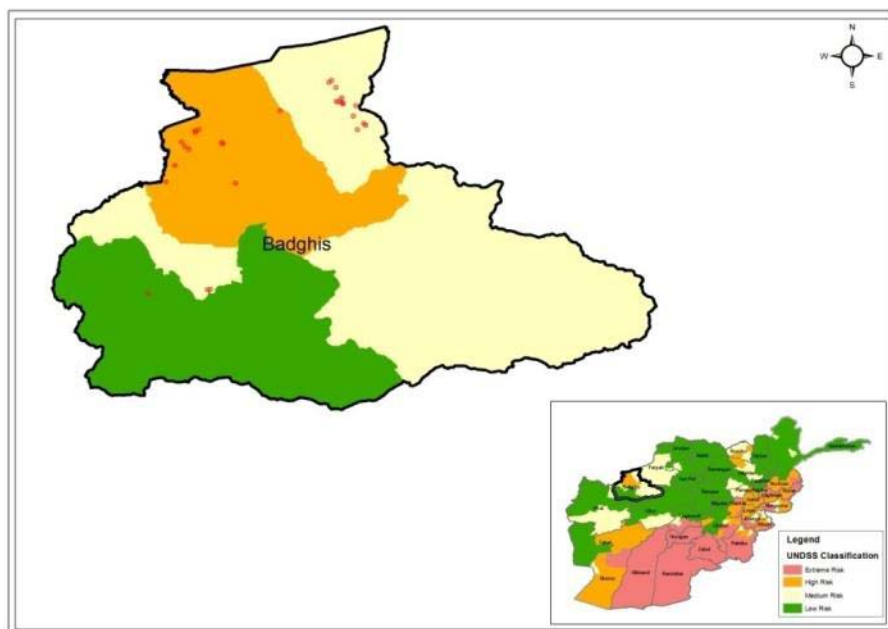
In the case of Farah, Ghazni, Helmand and Kandahar provinces the cost should new technology rather than manual clearance be used for removal of the large hazards is also shown.

Conclusion

The purpose of this analysis is not to suggest one particular model, but to demonstrate the capability of MACCA to coordinate clearance of all known hazard in Afghanistan under different financial and management circumstances. MACCA fully understands the extent of contamination and the financial resources required for clearance. Achievement of any of the models above relies on two significant assumptions. The first is that the assets currently operating in Afghanistan are financially resourced to continue delivering mine action throughout the next six year period. The second is that access to all known hazard is available; the Community Based Demining concept has delivered successfully in insecure areas during the last year and a half, demonstrating that this challenge can be overcome, given the right approach.



Province location, contamination and security situation:

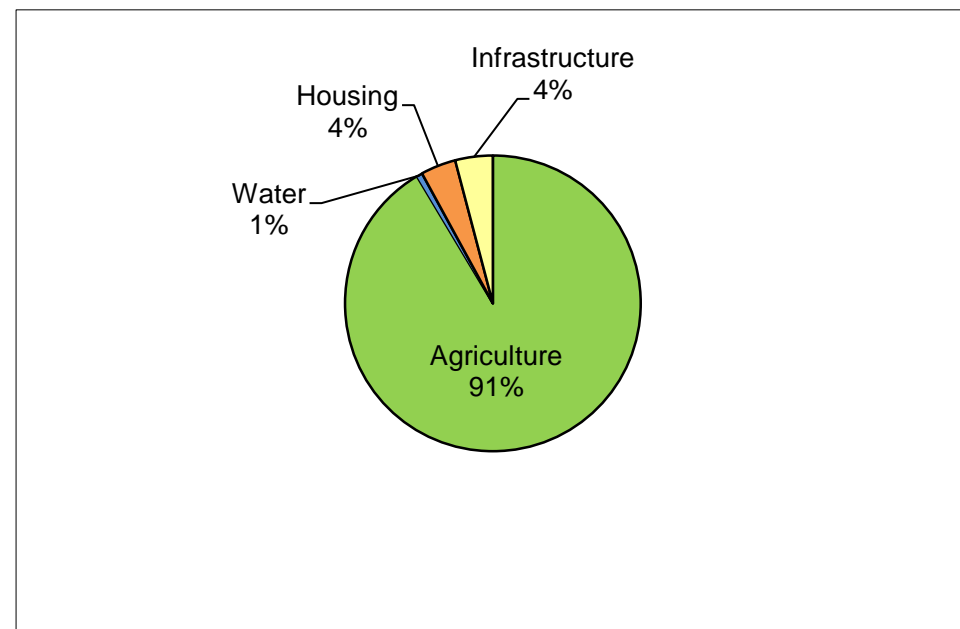


Impact summary:

Number of minefields	32
Area of minefields	3,661,483
Number of communities impacted	16
Number of families affected	5,820
Number of civilian deaths and injuries recorded in IMSMA	257

LANDMINE AND ERW CONTAMINATION: BADGHIS

Socio-economic blockages resulting from contamination:

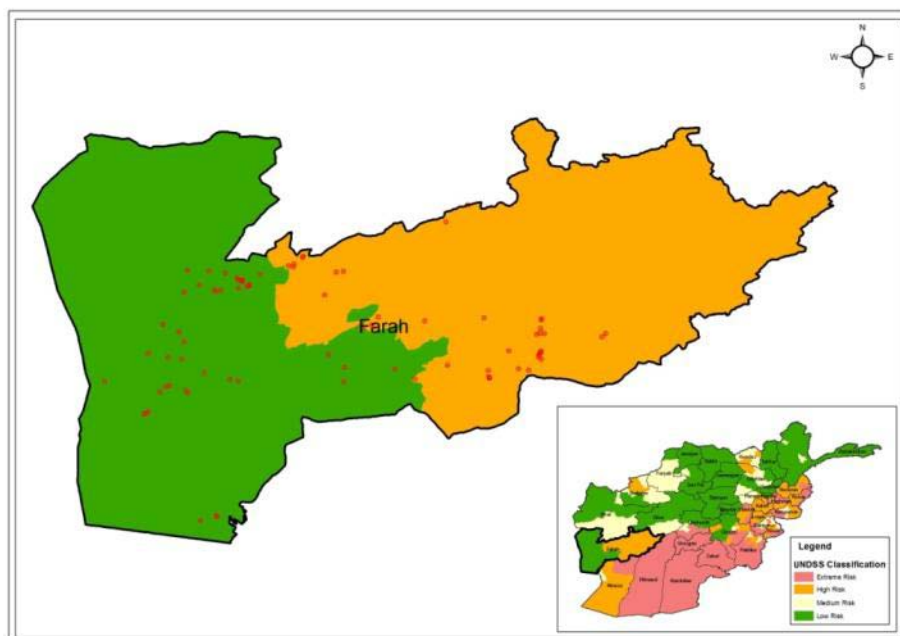


Resources required for complete clearance of province:

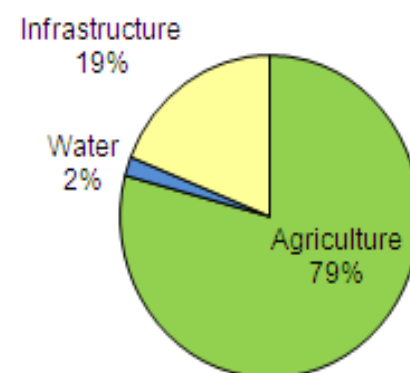
Number of Demining Teams	15
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	340
Cost if new teams are created	\$6,578,928
Cost if existing teams are used	\$5,371,631
Project Period (operational months)	24

WESTERN REGION

Province location, contamination and security situation:



Socio-economic blockages resulting from contamination:



Impact summary:

Number of minefields	84
Area of minefields	51,327,426
Number of communities impacted	43
Number of families affected	15,304
Number of civilian deaths and injuries recorded in IMSMA	214

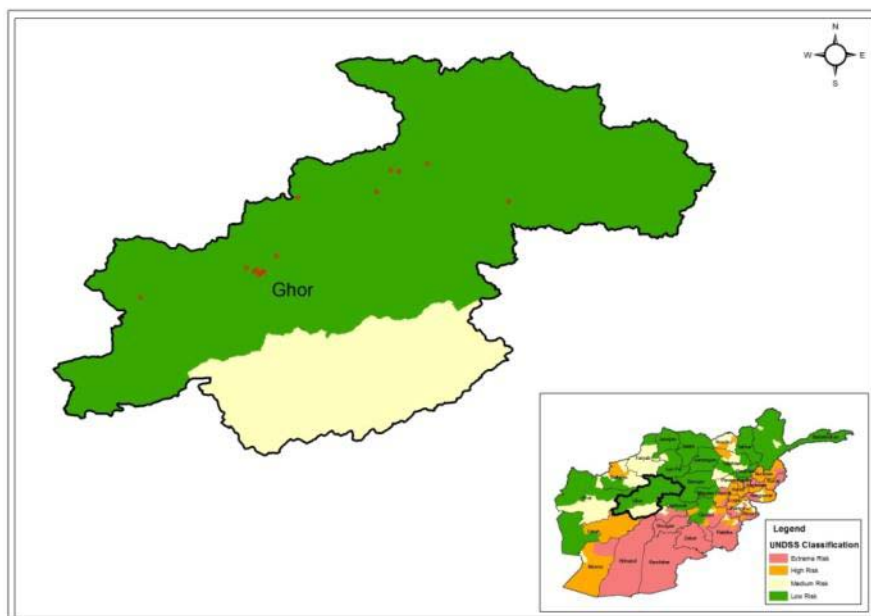
Resources required for complete clearance of province:

Number of Demining Teams	71
Number of EOD Teams	7
Number of Dog Assets	7
Number of Mechanical Assets	7
Number of people employed	1,448
Cost if new teams are created	\$75,656,497
Cost if existing teams are used	\$70,572,169
Cost if large hazards cleared with new technology	\$35,304,063
Project Period (operational months)	72

LANDMINE AND ERW CONTAMINATION: FARAH

WESTERN REGION

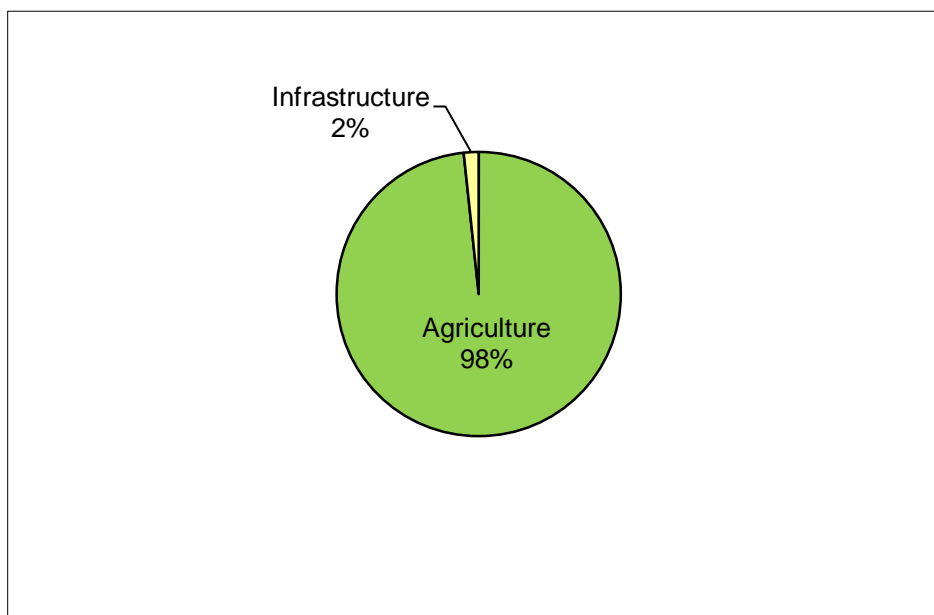
Province location, contamination and security situation:



Impact summary:

Number of minefields	10
Area of minefields	623,430
Number of communities impacted	10
Number of families affected	1,298
Number of civilian deaths and injuries recorded in IMSMA	29

Socio-economic blockages resulting from contamination:



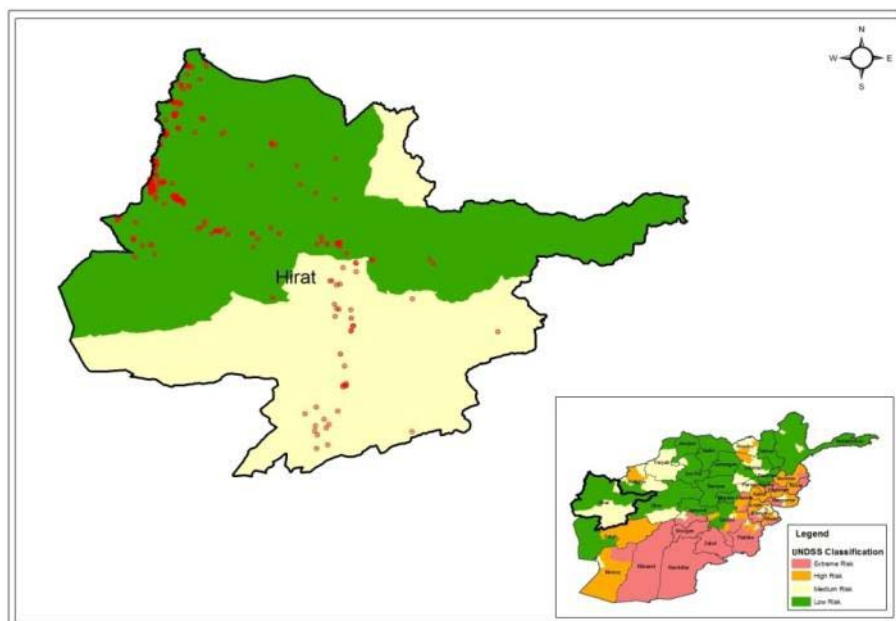
Resources required for complete clearance of province:

Number of Demining Teams	5
Number of EOD Teams	1
Number of Dog Assets	1
Number of Mechanical Assets	1
Number of people employed	139
Cost if new teams are created	\$1,508,645
Cost if existing teams are used	\$1,021,773
Project Period (operational months)	12

LANDMINE AND ERW CONTAMINATION: GHOR

WESTERN REGION

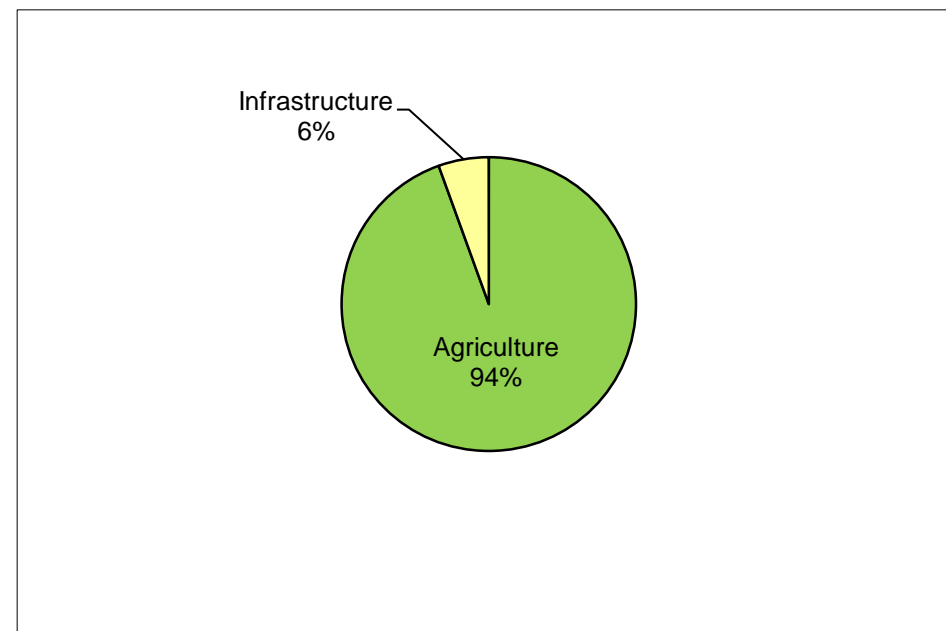
Province location, contamination and security situation:



Impact summary:

Number of minefields	407
Area of minefields	41,529,231
Number of communities impacted	87
Number of families affected	57,967
Number of civilian deaths and injuries recorded in IMSMA	1,294

Socio-economic blockages resulting from contamination:



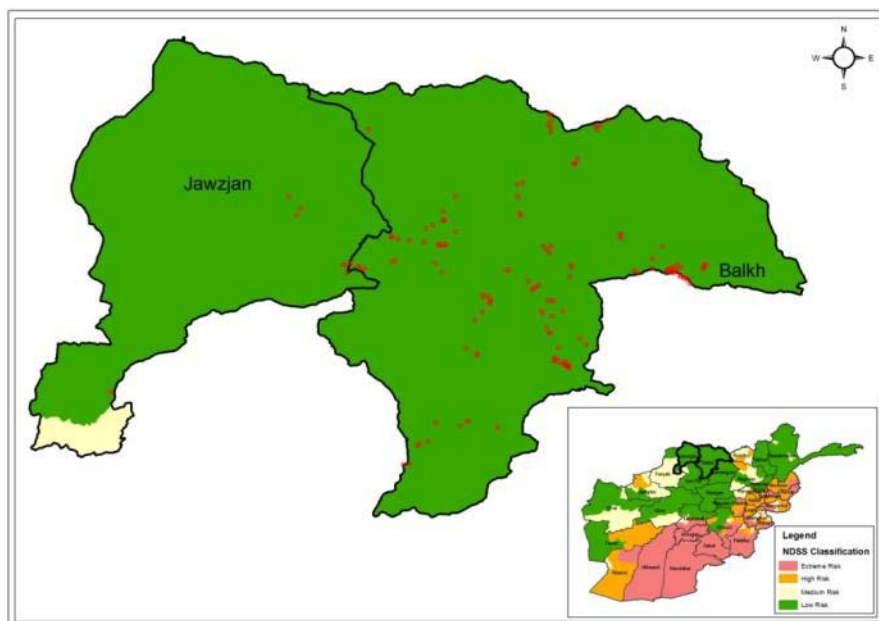
Resources required for complete clearance of province:

Number of Demining Teams	58
Number of EOD Teams	6
Number of Dog Assets	6
Number of Mechanical Assets	6
Number of people employed	1,183
Cost if new teams are created	\$61,971,770
Cost if existing teams are used	\$57,778,154
Project Period (operational months)	72

LANDMINE AND ERW CONTAMINATION: HIRAT

WESTERN REGION

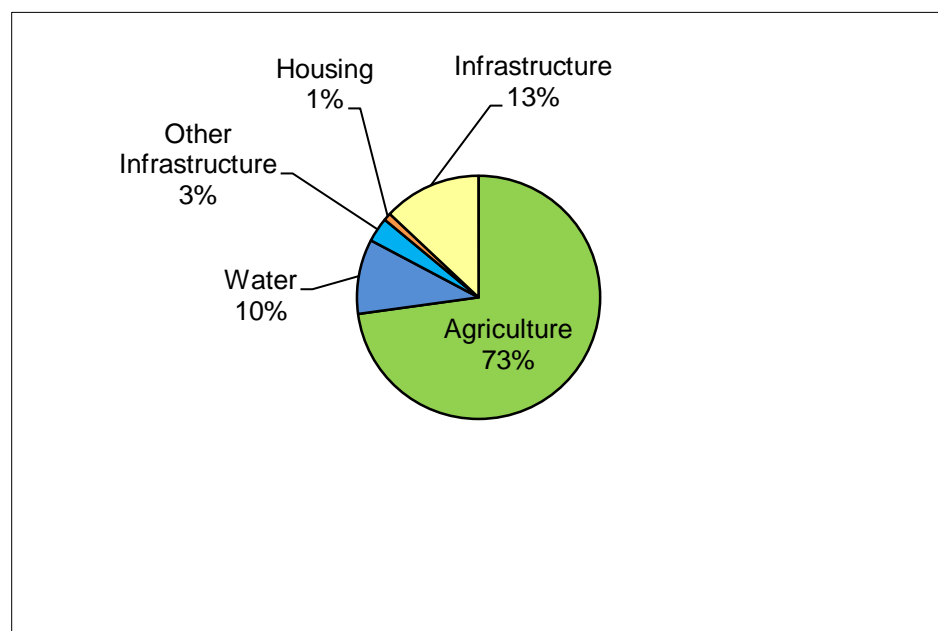
Province location, contamination and security situation:



Impact summary:

Number of minefields	148
Area of minefields	4,282,620
Number of communities impacted	72
Number of families affected	16,862
Number of civilian deaths and injuries recorded in IMSMA	553

Socio-economic blockages resulting from contamination:



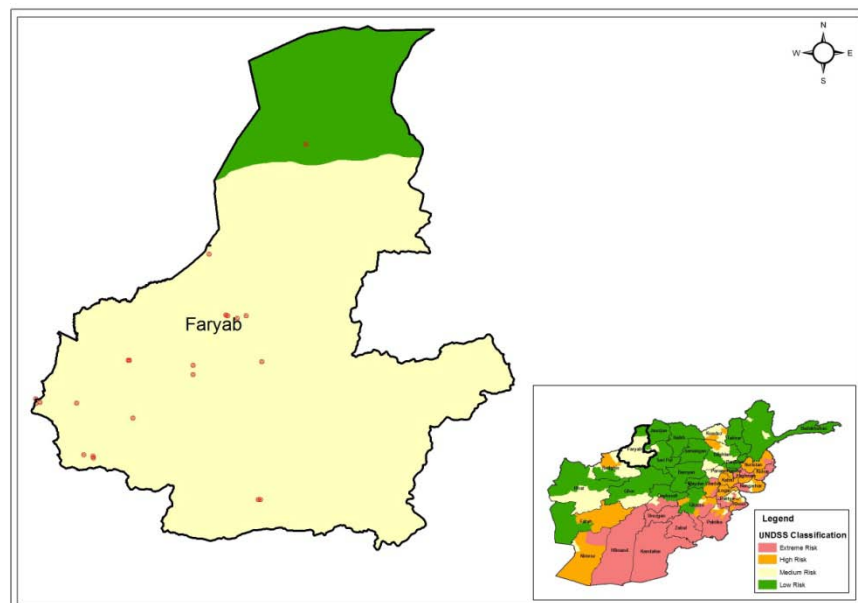
Resources required for complete clearance of province:

Number of Demining Teams	18
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	386
Cost if new teams are created	\$7,386,406
Cost if existing teams are used	\$6,054,882
Project Period (operational months)	24

LANDMINE AND ERW CONTAMINATION: BALKH & JAWZJAN

NORTHERN REGION

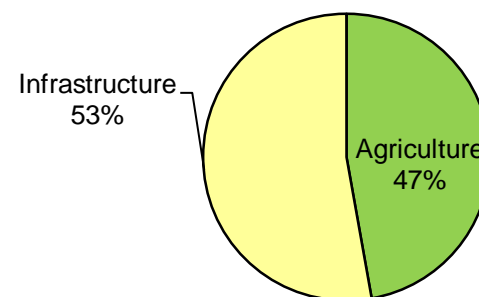
Province location, contamination and security situation:



Impact summary:

Number of minefields	25
Area of minefields	1,789,538
Number of communities impacted	16
Number of families affected	8,380
Number of civilian deaths and injuries recorded in IMSMA	571

Socio-economic blockages resulting from contamination:



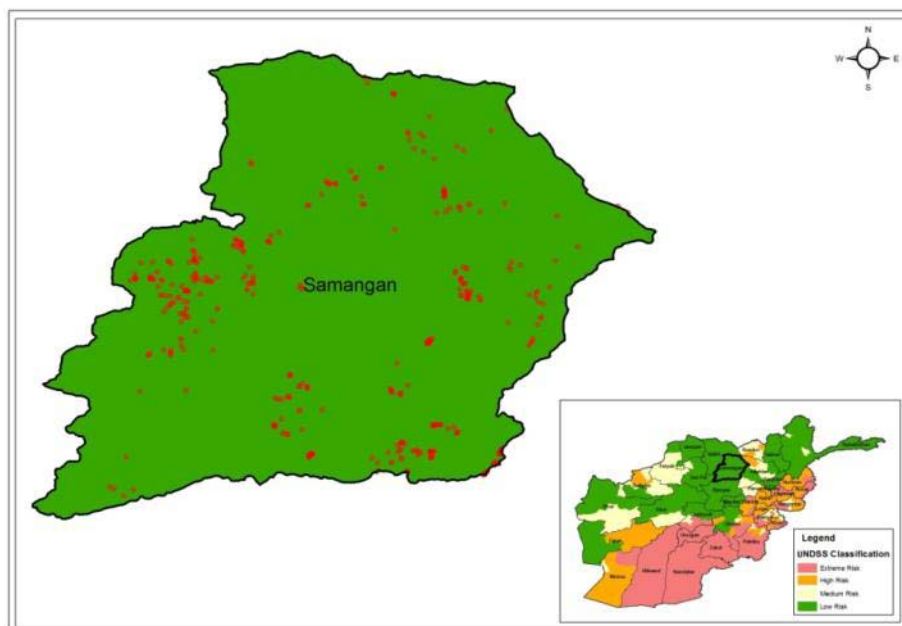
Resources required for complete clearance of province:

Number of Demining Teams	15
Number of EOD Teams	1
Number of Dog Assets	1
Number of Mechanical Assets	1
Number of people employed	313
Cost if new teams are created	\$3,257,807
Cost if existing teams are used	\$2,304,492
Project Period (operational months)	12

LANDMINE AND ERW CONTAMINATION: FARYAB

NORTHERN REGION

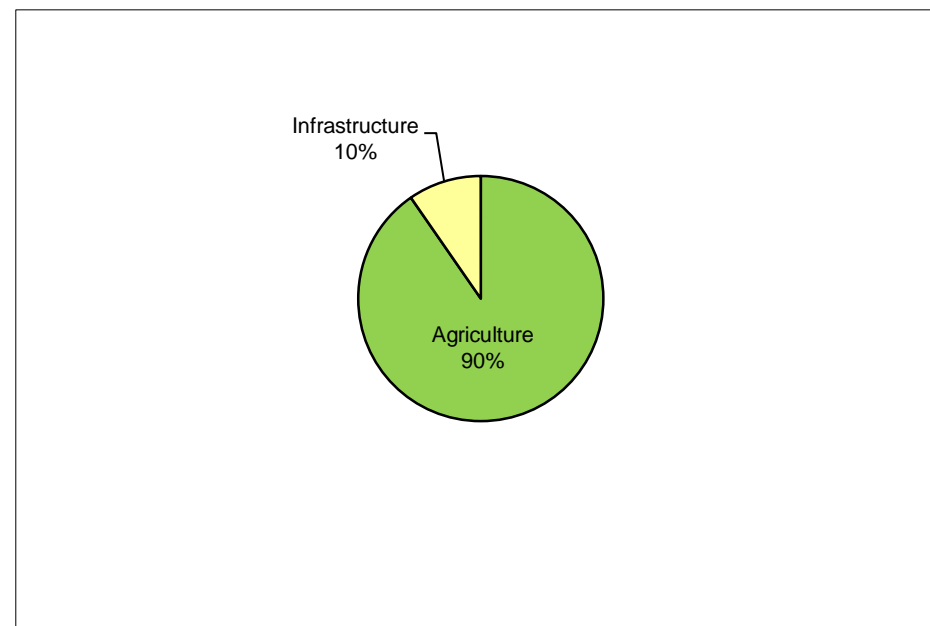
Province location, contamination and security situation:



Impact summary:

Number of minefields	416
Area of minefields	14,864,768
Number of communities impacted	103
Number of families affected	19,744
Number of civilian deaths and injuries recorded in IMSMA	392

Socio-economic blockages resulting from contamination:



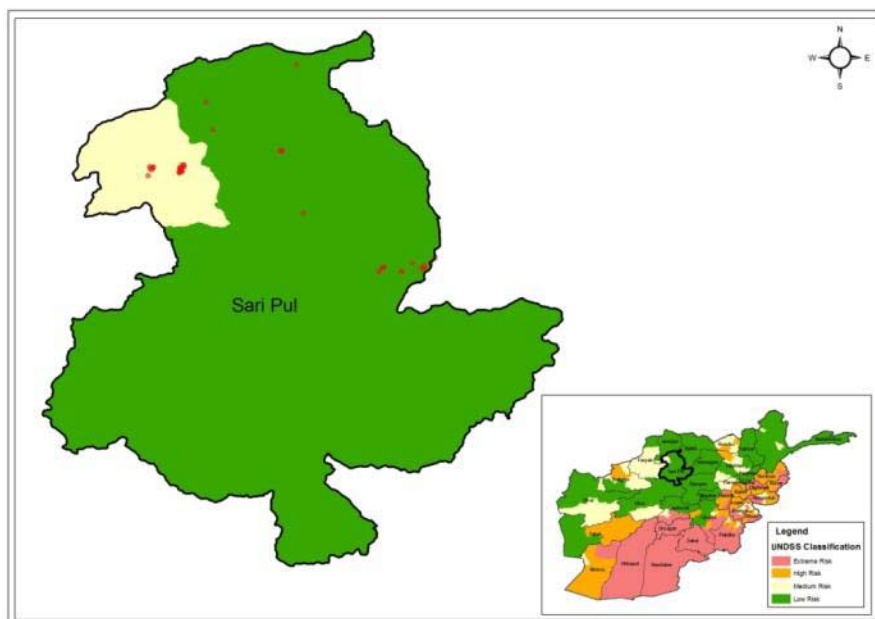
Resources required for complete clearance of province:

Number of Demining Teams	31
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	642
Cost if new teams are created	\$22,582,222
Cost if existing teams are used	\$20,383,245
Project Period (operational months)	48

LANDMINE AND ERW CONTAMINATION: SAMANGAN

NORTHERN REGION

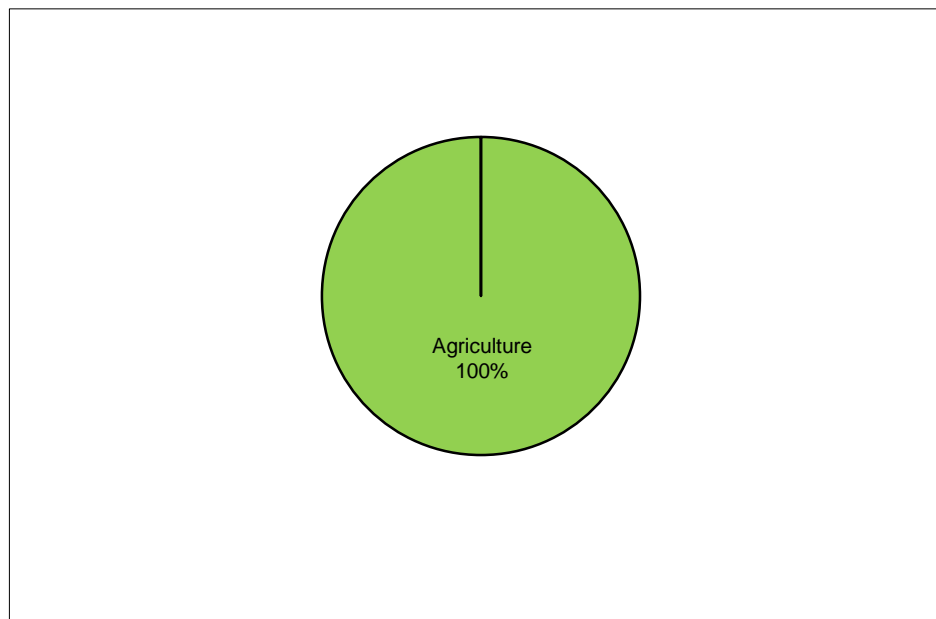
Province location, contamination and security situation:



Impact summary:

Number of minefields	50
Area of minefields	1,552,360
Number of communities impacted	12
Number of families affected	5,650
Number of civilian deaths and injuries recorded in IMSMA	153

Socio-economic blockages resulting from contamination:



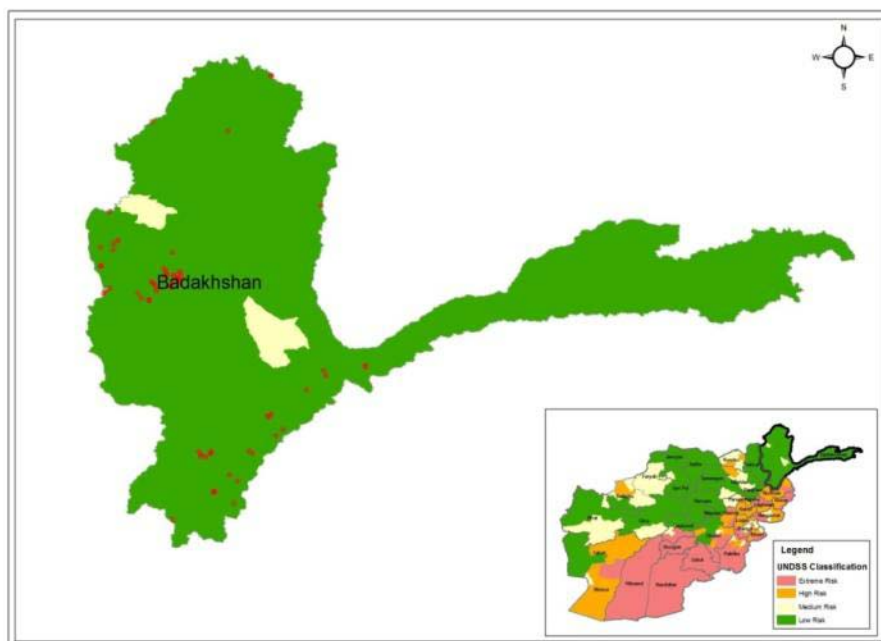
Resources required for complete clearance of province:

Number of Demining Teams	13
Number of EOD Teams	1
Number of Dog Assets	1
Number of Mechanical Assets	1
Number of people employed	278
Cost if new teams are created	\$2,902,040
Cost if existing teams are used	\$2,043,596
Project Period (operational months)	12

LANDMINE AND ERW CONTAMINATION: SARI PUL

NORTHERN REGION

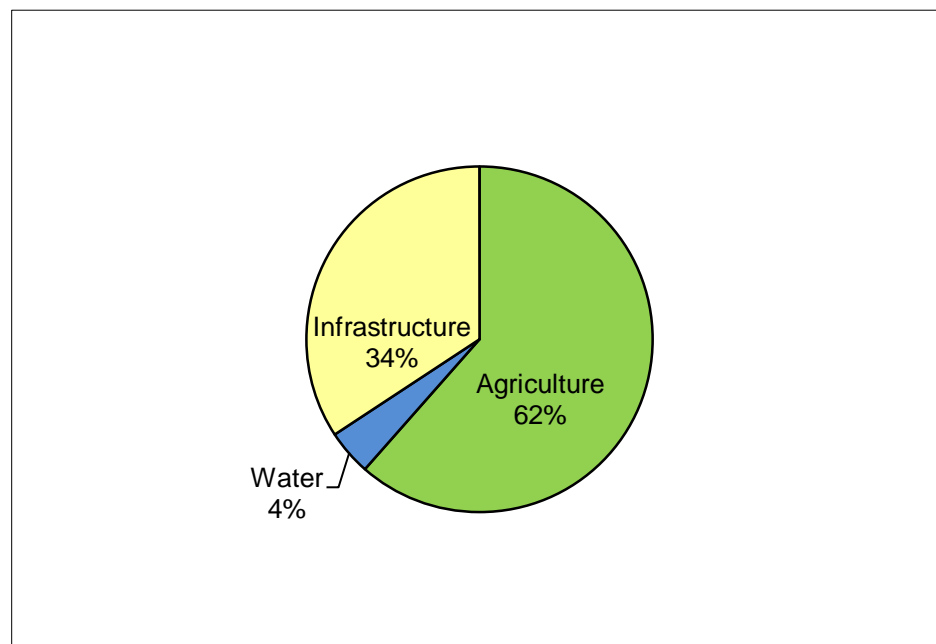
Province location, contamination and security situation:



Impact summary:

Number of minefields	97
Area of minefields	3,147,725
Number of communities impacted	43
Number of families affected	3,432
Number of civilian deaths and injuries recorded in IMSMA	221

Socio-economic blockages resulting from contamination:



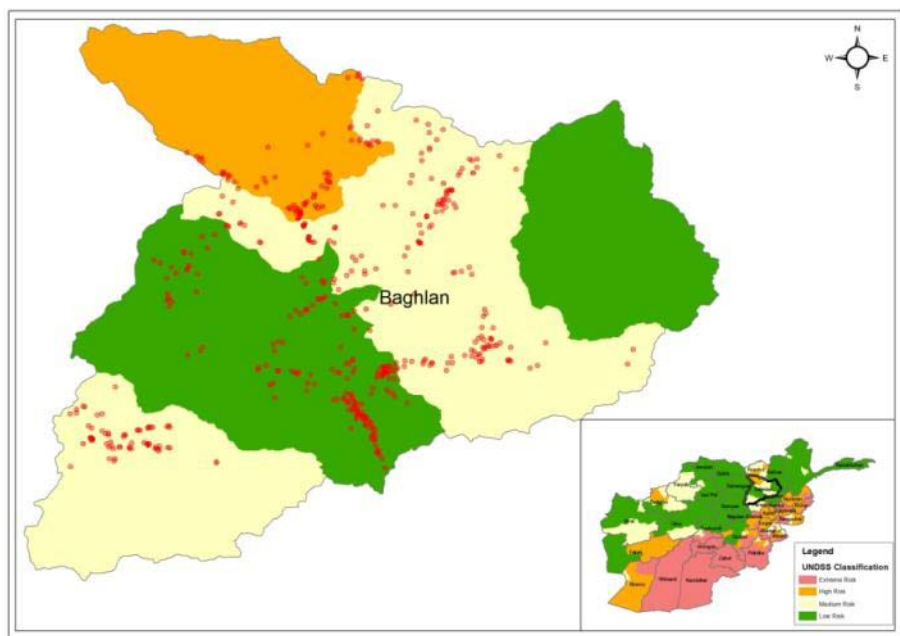
Resources required for complete clearance of province:

Number of Demining Teams	13
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	301
Cost if new teams are created	\$5,911,043
Cost if existing teams are used	\$4,806,498
Project Period (operational months)	24

LANDMINE AND ERW CONTAMINATION: BADAKSHAN

NORTH EAST REGION

Province location, contamination and security situation:

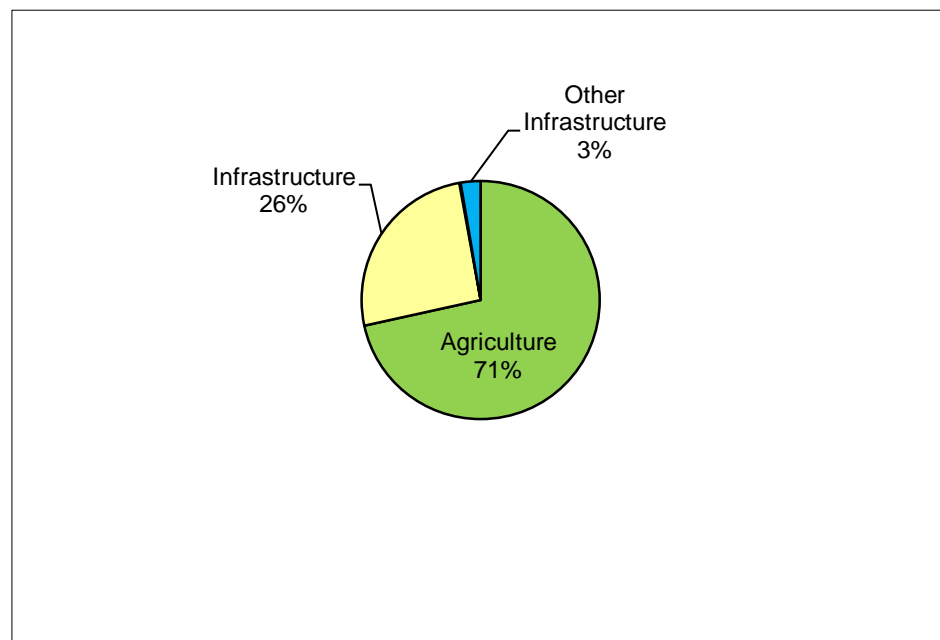


Impact summary:

Number of minefields	552
Area of minefields	25,068,692
Number of communities impacted	190
Number of families affected	28,180
Number of civilian deaths and injuries recorded in IMSMA	400

LANDMINE AND ERW CONTAMINATION: BAGHLAN

Socio-economic blockages resulting from contamination:

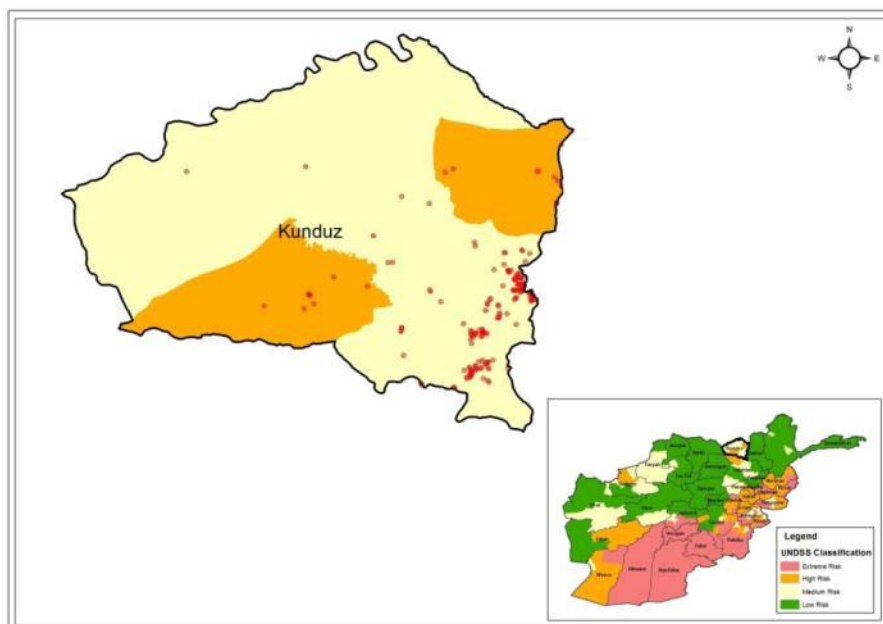


Resources required for complete clearance of province:

Number of Demining Teams	42
Number of EOD Teams	4
Number of Dog Assets	4
Number of Mechanical Assets	4
Number of people employed	857
Cost if new teams are created	\$37,251,057
Cost if existing teams are used	\$34,295,562
Project Period (operational months)	60

NORTH EAST REGION

Province location, contamination and security situation:

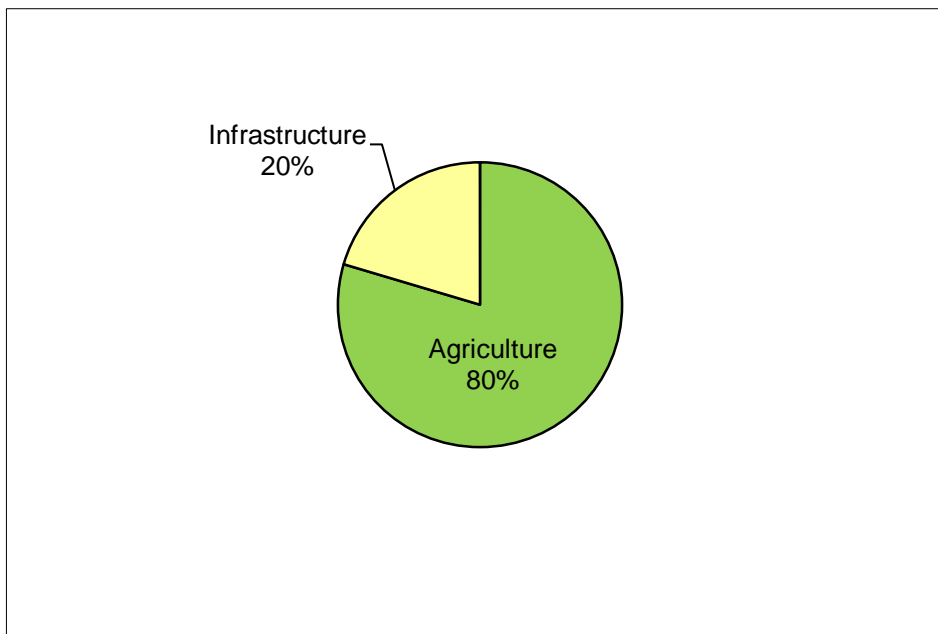


Impact summary:

Number of minefields	203
Area of minefields	5,074,929
Number of communities impacted	50
Number of families affected	9,825
Number of civilian deaths and injuries recorded in IMSMA	254

LANDMINE AND ERW CONTAMINATION: KUNDUZ

Socio-economic blockages resulting from contamination:

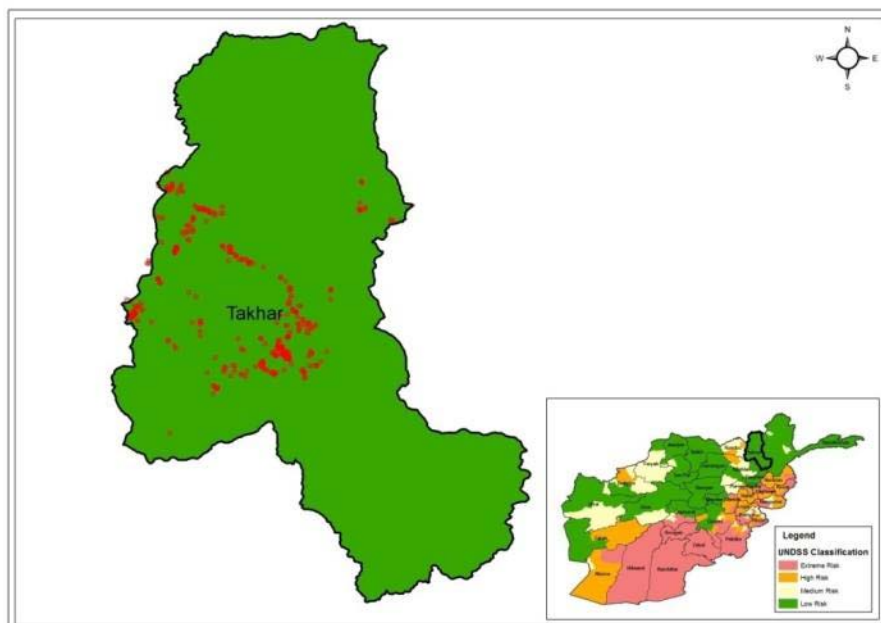


Resources required for complete clearance of province:

Number of Demining Teams	21
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	446
Cost if new teams are created	\$8,416,408
Cost if existing teams are used	\$6,926,422
Project Period (operational months)	24

NORTH EAST REGION

Province location, contamination and security situation:

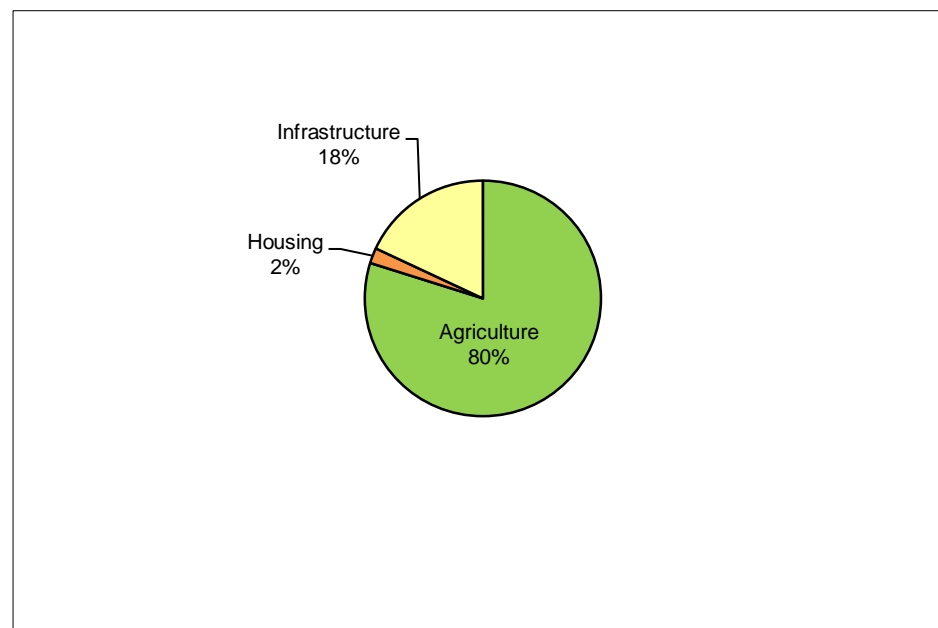


Impact summary:

Number of minefields	388
Area of minefields	12,605,269
Number of communities impacted	89
Number of families affected	14,746
Number of civilian deaths and injuries recorded in IMSMA	470

LANDMINE AND ERW CONTAMINATION: TAKHAR

Socio-economic blockages resulting from contamination:

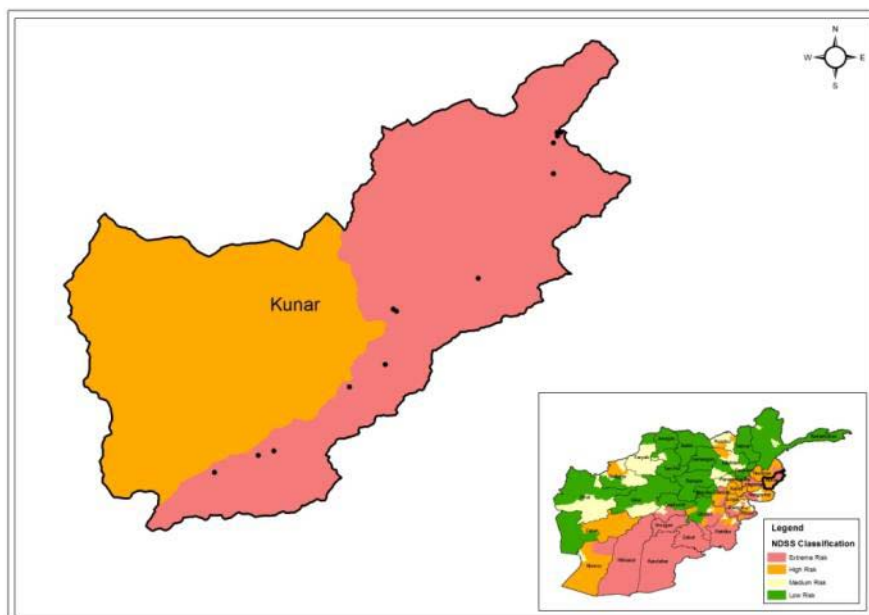


Resources required for complete clearance of province:

Number of Demining Teams	26
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	538
Cost if new teams are created	\$18,289,323
Cost if existing teams are used	\$16,553,796
Project Period (operational months)	48

NORTH EAST REGION

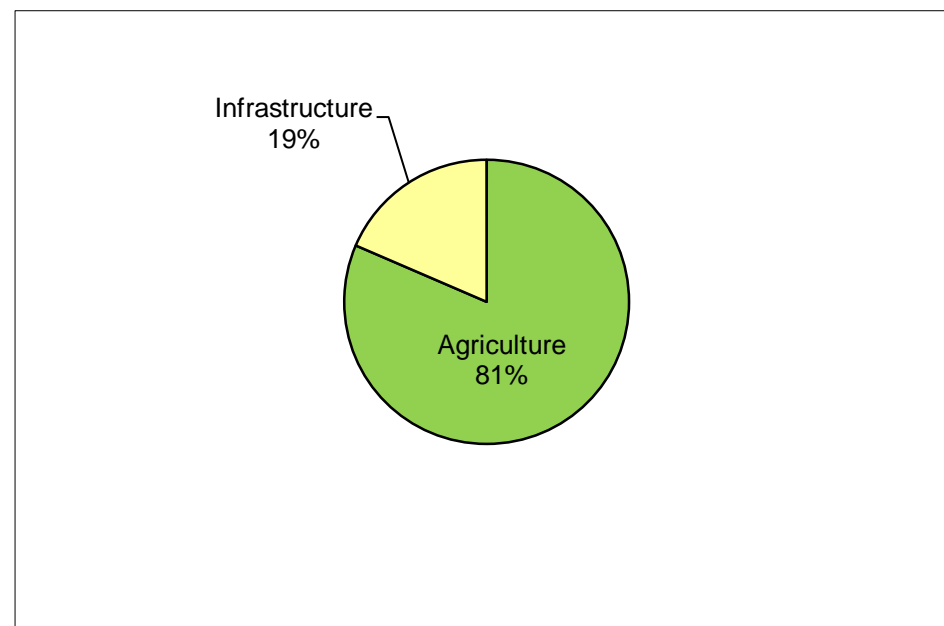
Province location, contamination and security situation:



Impact summary:

Number of minefields	11
Area of minefields	1,870,059
Number of communities impacted	9
Number of families affected	3,918
Number of civilian deaths and injuries recorded in IMSMA	437

Socio-economic blockages resulting from contamination:



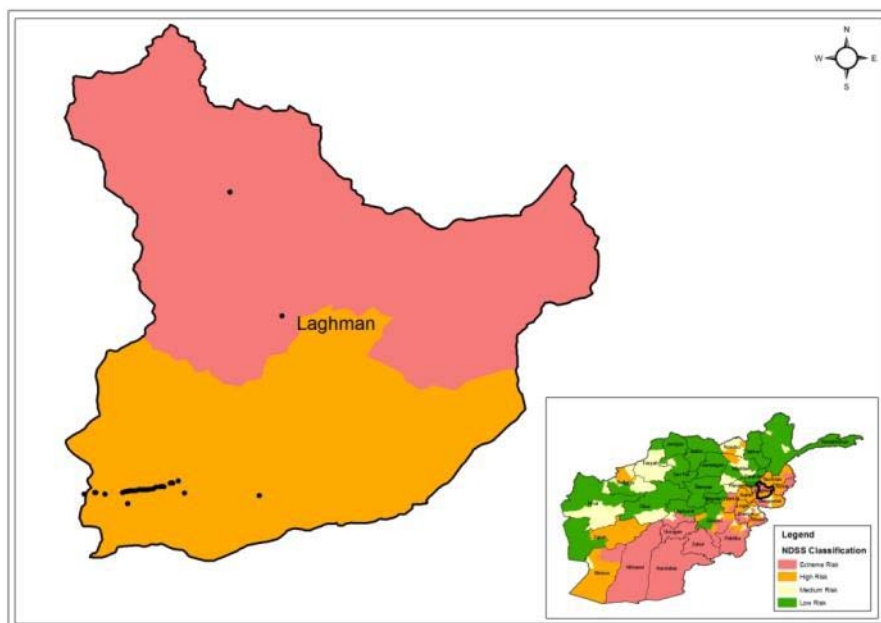
Resources required for complete clearance of province:

Number of Demining Teams	16
Number of EOD Teams	1
Number of Dog Assets	1
Number of Mechanical Assets	1
Number of people employed	326
Cost if new teams are created	\$3,378,589
Cost if existing teams are used	\$2,393,065
Project Period (operational months)	12

LANDMINE AND ERW CONTAMINATION: KUNAR

EASTERN REGION

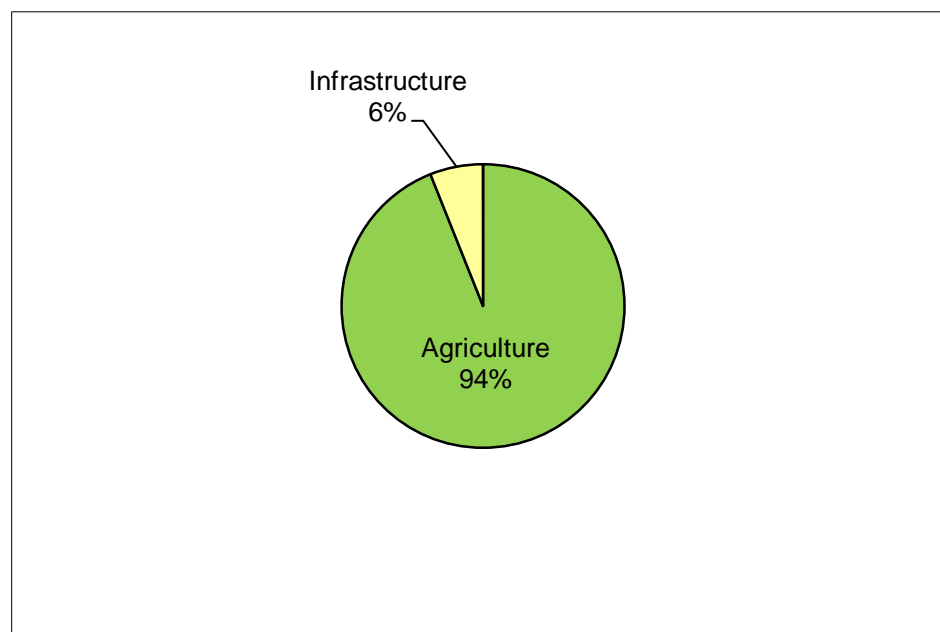
Province location, contamination and security situation:



Impact summary:

Number of minefields	56
Area of minefields	3,965,754
Number of communities impacted	4
Number of families affected	426
Number of civilian deaths and injuries recorded in IMSMA	339

Socio-economic blockages resulting from contamination:



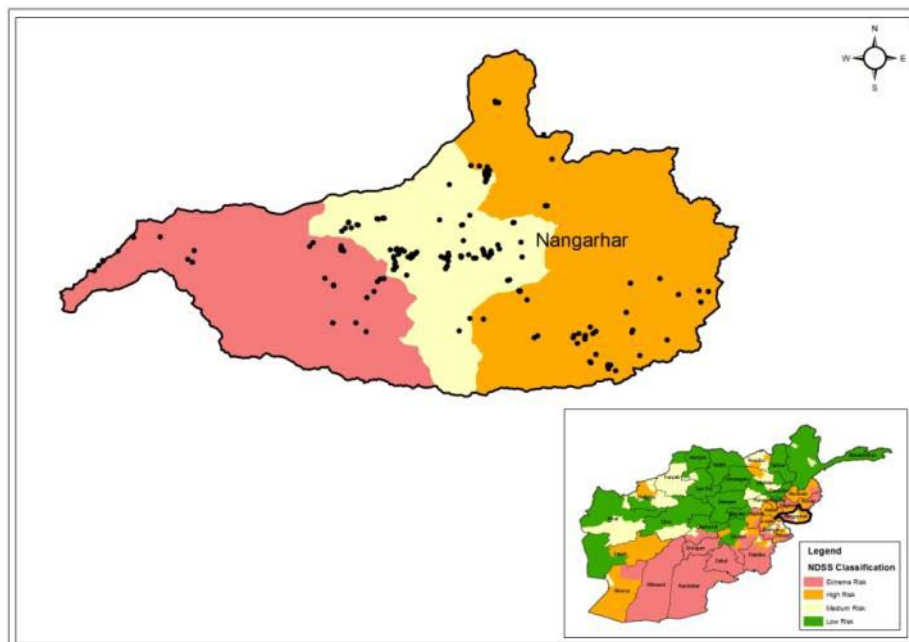
Resources required for complete clearance of province:

Number of Demining Teams	17
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	362
Cost if new teams are created	\$6,974,480
Cost if existing teams are used	\$5,706,329
Project Period (operational months)	24

LANDMINE AND ERW CONTAMINATION: LAGHMAN

EASTERN REGION

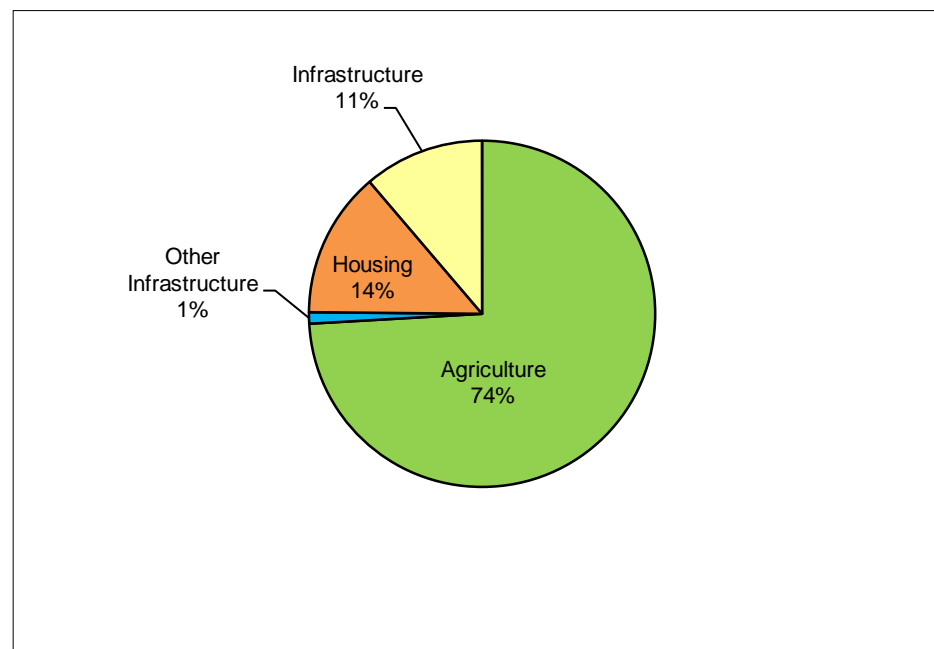
Province location, contamination and security situation:



Impact summary:

Number of minefields	249
Area of minefields	21,948,364
Number of communities impacted	65
Number of families affected	25,070
Number of civilian deaths and injuries recorded in IMSMA	1,820

Socio-economic blockages resulting from contamination:



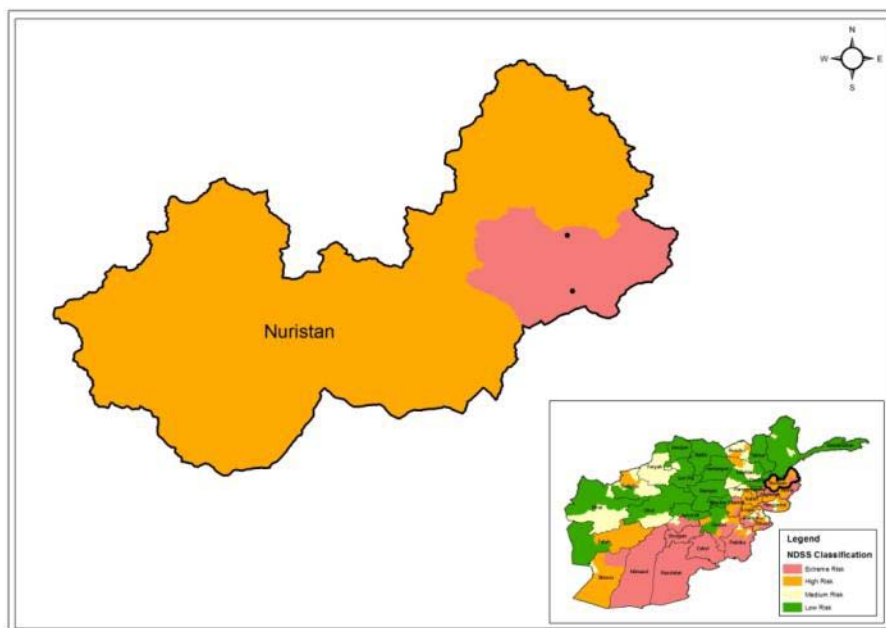
Resources required for complete clearance of province:

Number of Demining Teams	37
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	743
Cost if new teams are created	\$31,651,570
Cost if existing teams are used	\$29,183,200
Project Period (operational months)	60

LANDMINE AND ERW CONTAMINATION: NANGARHAR

EASTERN REGION

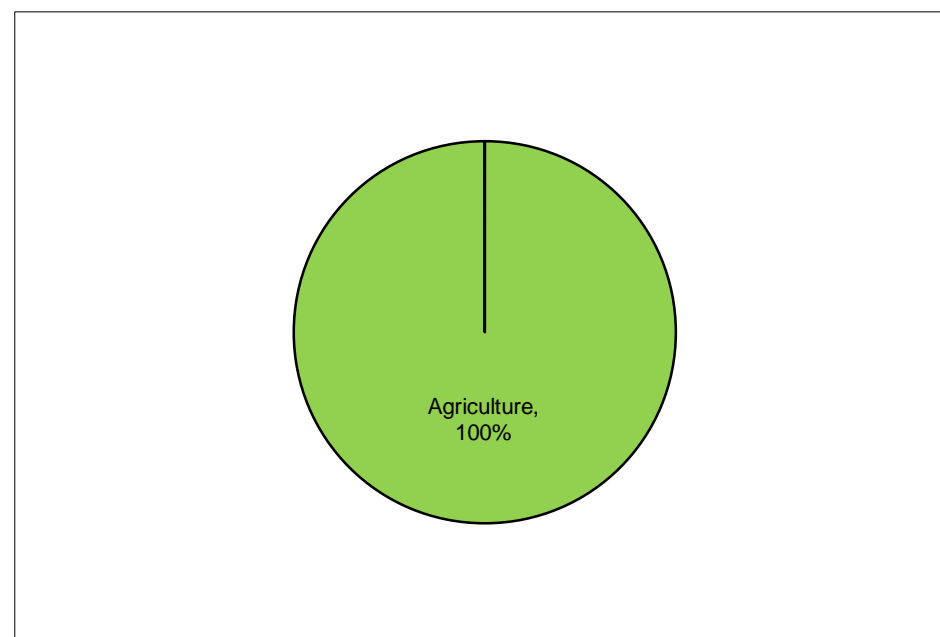
Province location, contamination and security situation:



Impact summary:

Number of minefields	2
Area of minefields	2,000,450
Number of communities impacted	2
Number of families affected	1,800
Number of civilian deaths and injuries recorded in IMSMA	36

Socio-economic blockages resulting from contamination:



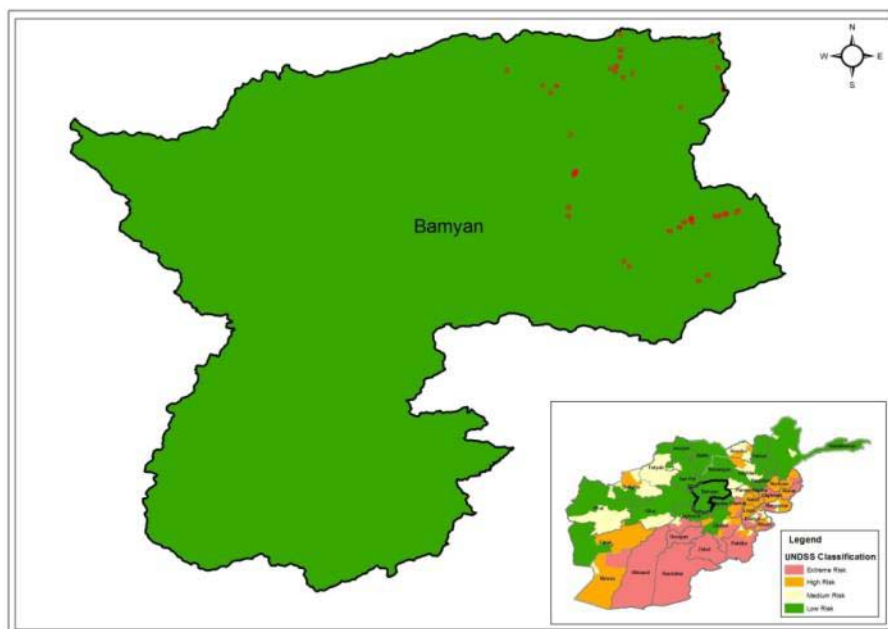
Resources required for complete clearance of province:

Number of Demining Teams	17
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	365
Cost if new teams are created	\$4,147,675
Cost if existing teams are used	\$2,872,495
Project Period (operational months)	12

LANDMINE AND ERW CONTAMINATION: NURISTAN

EASTERN REGION

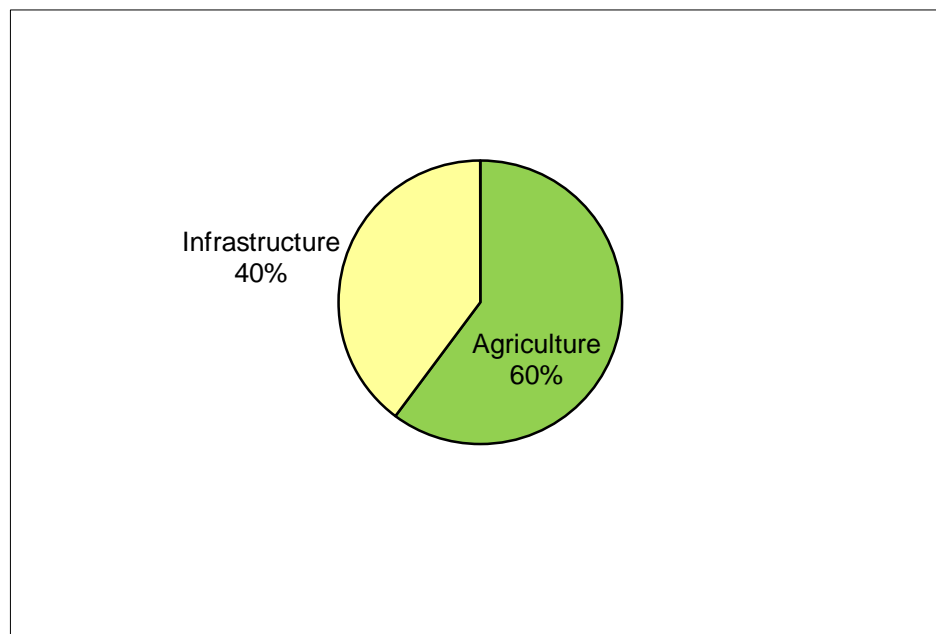
Province location, contamination and security situation:



Impact summary:

Number of minefields	121
Area of minefields	6,343,384
Number of communities impacted	19
Number of families affected	4,583
Number of civilian deaths and injuries recorded in IMSMA	149

Socio-economic blockages resulting from contamination:



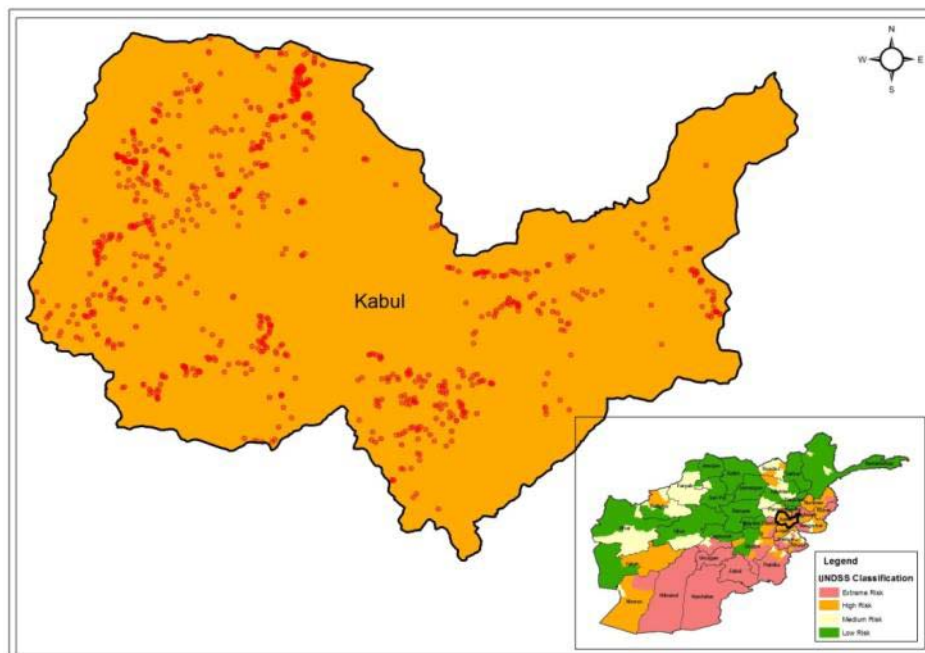
Resources required for complete clearance of province:

Number of Demining Teams	18
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	382
Cost if new teams are created	\$10,314,507
Cost if existing teams are used	\$8,993,722
Project Period (operational months)	36

LANDMINE AND ERW CONTAMINATION: BAMYAN

CENTRAL REGION

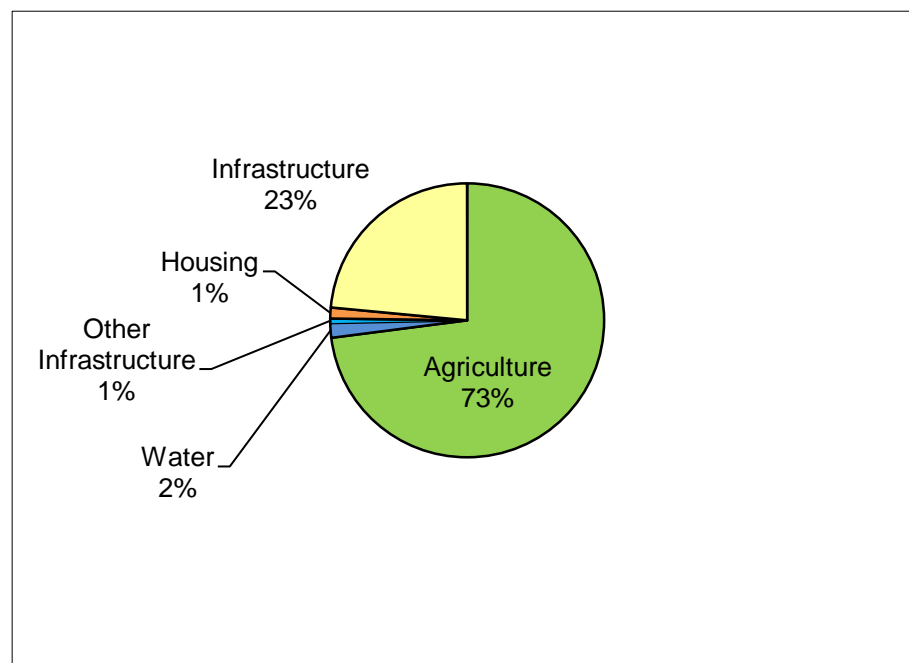
Province location, contamination and security situation:



Impact summary:

Number of minefields	915
Area of minefields	57,692,163
Number of communities impacted	236
Number of families affected	64,681
Number of civilian deaths and injuries recorded in IMSMA	4,590

Socio-economic blockages resulting from contamination:



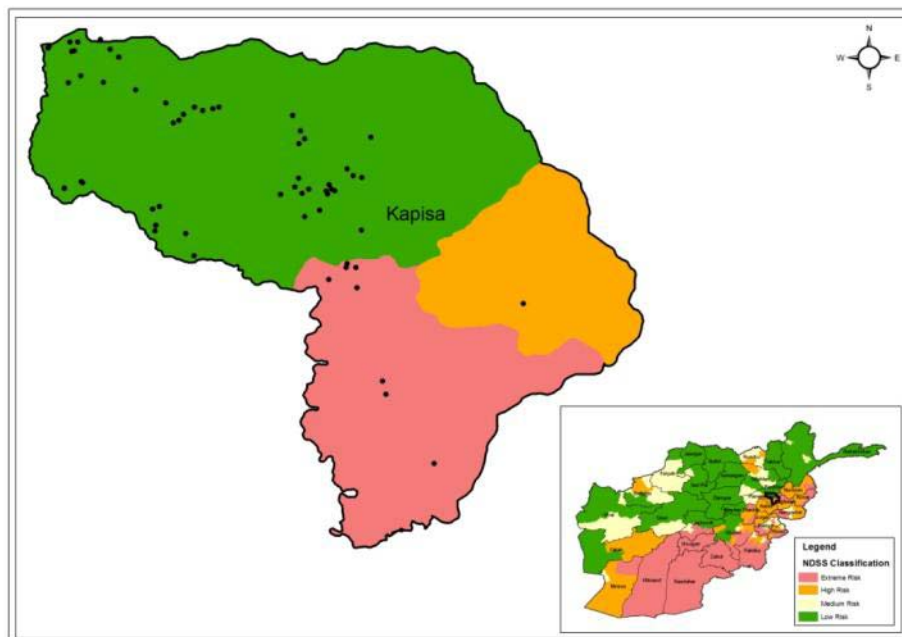
Resources required for complete clearance of province:

Number of Demining Teams	80
Number of EOD Teams	9
Number of Dog Assets	9
Number of Mechanical Assets	9
Number of people employed	1,647
Cost if new teams are created	\$87,589,024
Cost if existing teams are used	\$81,605,379
Project Period (operational months)	72

LANDMINE AND ERW CONTAMINATION: KABUL

CENTRAL REGION

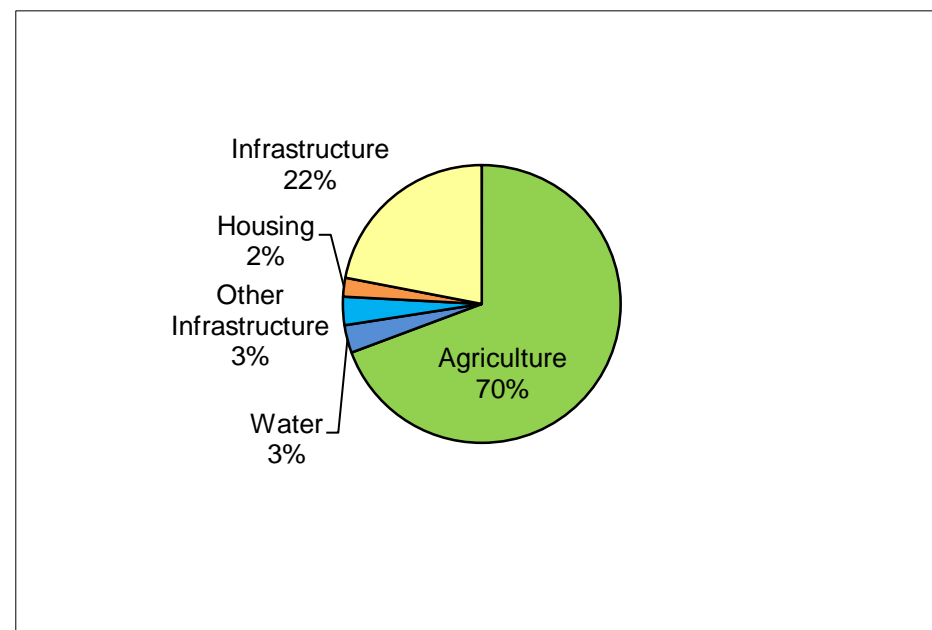
Province location, contamination and security situation:



Impact summary:

Number of minefields	86
Area of minefields	11,269,004
Number of communities impacted	35
Number of families affected	7,918
Number of civilian deaths and injuries recorded in IMSMA	325

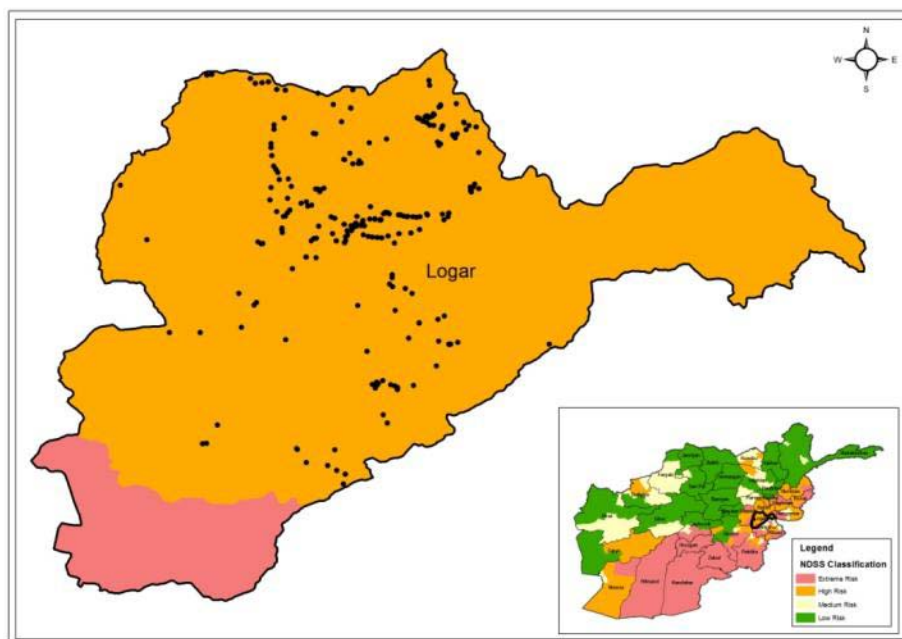
Socio-economic blockages resulting from contamination:



Resources required for complete clearance of province:

Number of Demining Teams	23
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	488
Cost if new teams are created	\$16,685,805
Cost if existing teams are used	\$15,083,904
Project Period (operational months)	48

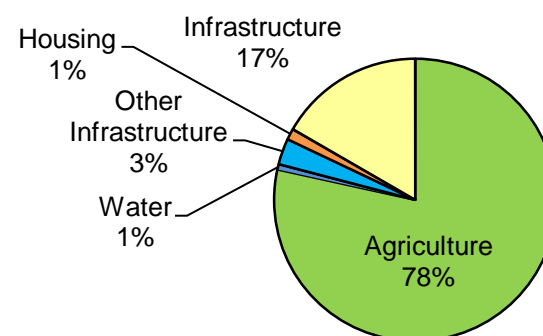
Province location, contamination and security situation:



Impact summary:

Number of minefields	427
Area of minefields	66,232,560
Number of communities impacted	73
Number of families affected	20,327
Number of civilian deaths and injuries recorded in IMSMA	711

Socio-economic blockages resulting from contamination:



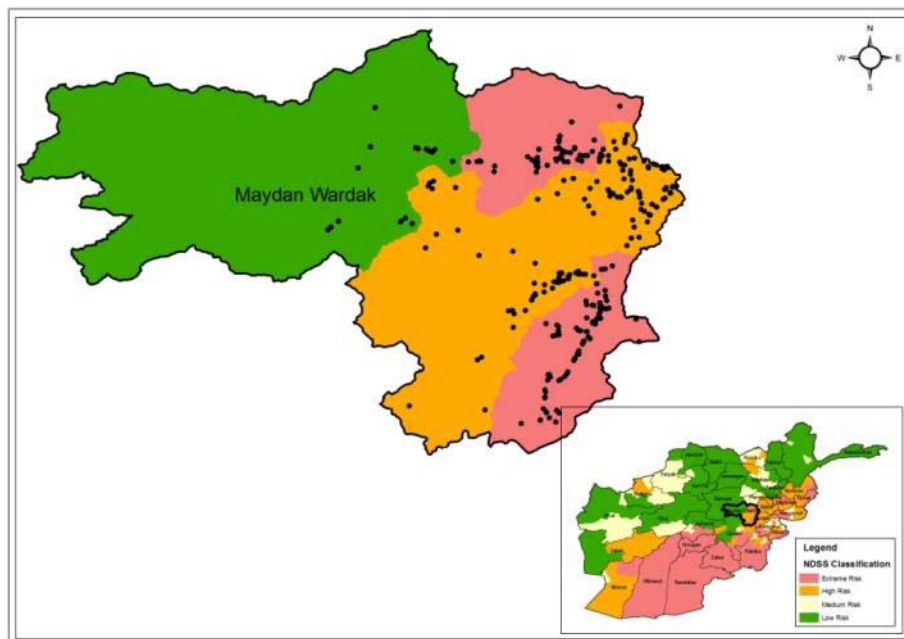
Resources required for complete clearance of province:

Number of Demining Teams	92
Number of EOD Teams	9
Number of Dog Assets	9
Number of Mechanical Assets	9
Number of people employed	1,861
Cost if new teams are created	\$97,552,820
Cost if existing teams are used	\$90,999,816
Project Period (operational months)	72

LANDMINE AND ERW CONTAMINATION: LOGAR

CENTRAL REGION

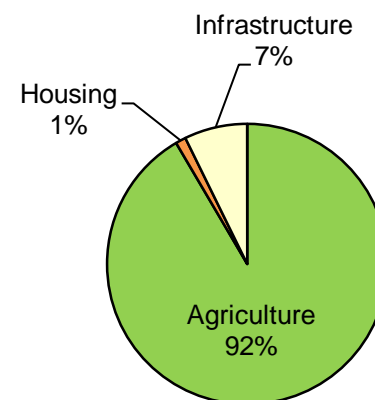
Province location, contamination and security situation:



Impact summary:

Number of minefields	315
Area of minefields	26,780,016
Number of communities impacted	156
Number of families affected	20,396
Number of civilian deaths and injuries recorded in IMSMA	755

Socio-economic blockages resulting from contamination:



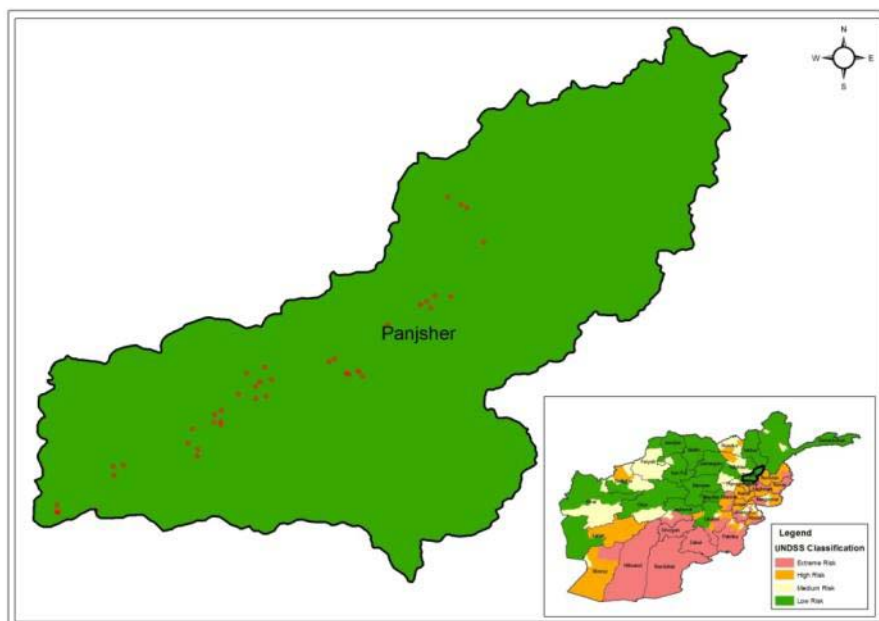
Resources required for complete clearance of province:

Number of Demining Teams	56
Number of EOD Teams	5
Number of Dog Assets	5
Number of Mechanical Assets	5
Number of people employed	1,129
Cost if new teams are created	\$40,043,519
Cost if existing teams are used	\$36,178,018
Project Period (operational months)	48

LANDMINE AND ERW CONTAMINATION: MAYDAN WARDAK

CENTRAL REGION

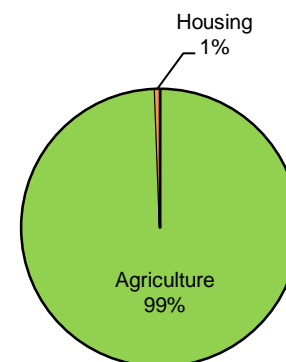
Province location, contamination and security situation:



Impact summary:

Number of minefields	55
Area of minefields	8,044,305
Number of communities impacted	19
Number of families affected	20,910
Number of civilian deaths and injuries recorded in IMSMA	132

Socio-economic blockages resulting from contamination:



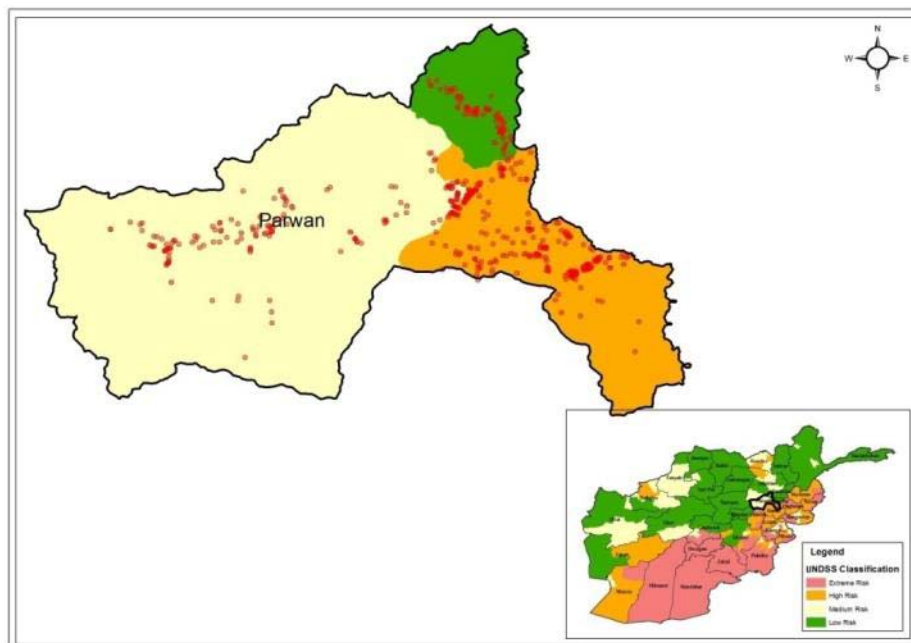
Resources required for complete clearance of province:

Number of Demining Teams	22
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	465
Cost if new teams are created	\$12,362,976
Cost if existing teams are used	\$10,820,736
Project Period (operational months)	36

LANDMINE AND ERW CONTAMINATION: PANJSHER

CENTRAL REGION

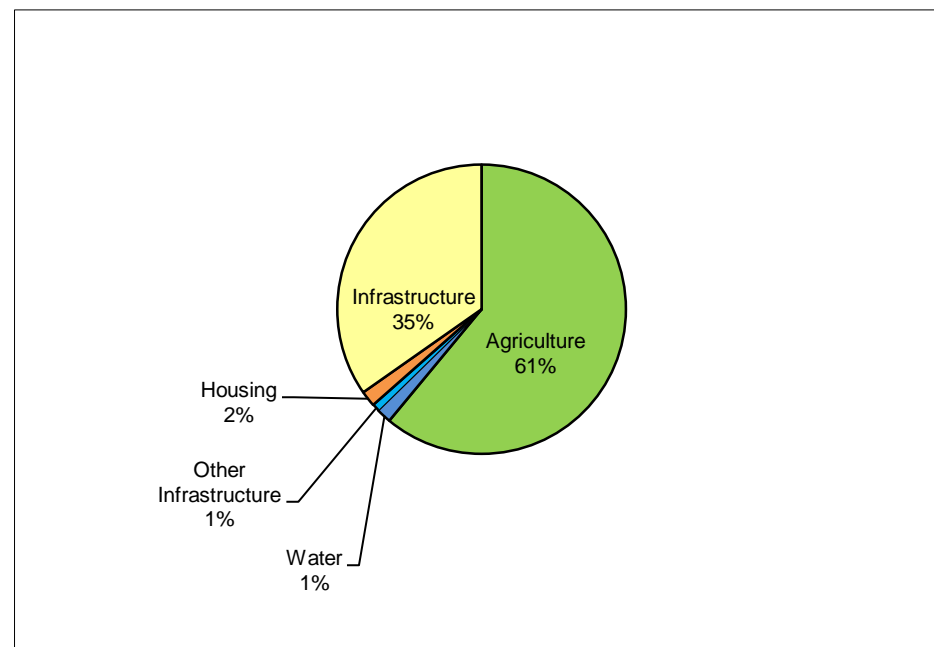
Province location, contamination and security situation:



Impact summary:

Number of minefields	536
Area of minefields	22,486,880
Number of communities impacted	169
Number of families affected	30,909
Number of civilian deaths and injuries recorded in IMSMA	1,101

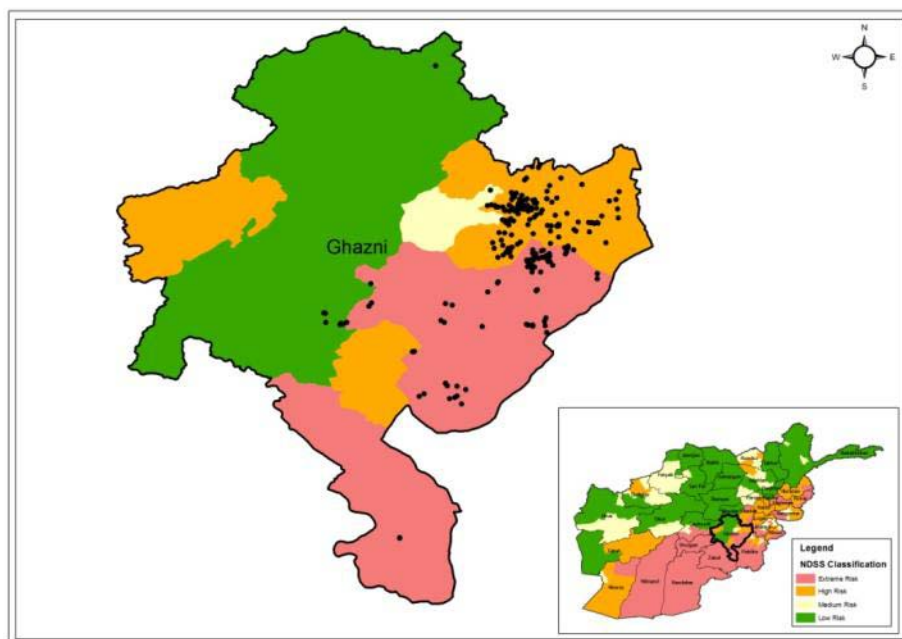
Socio-economic blockages resulting from contamination:



Resources required for complete clearance of province:

Number of Demining Teams	37
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	760
Cost if new teams are created	\$32,287,018
Cost if existing teams are used	\$29,775,568
Project Period (operational months)	60

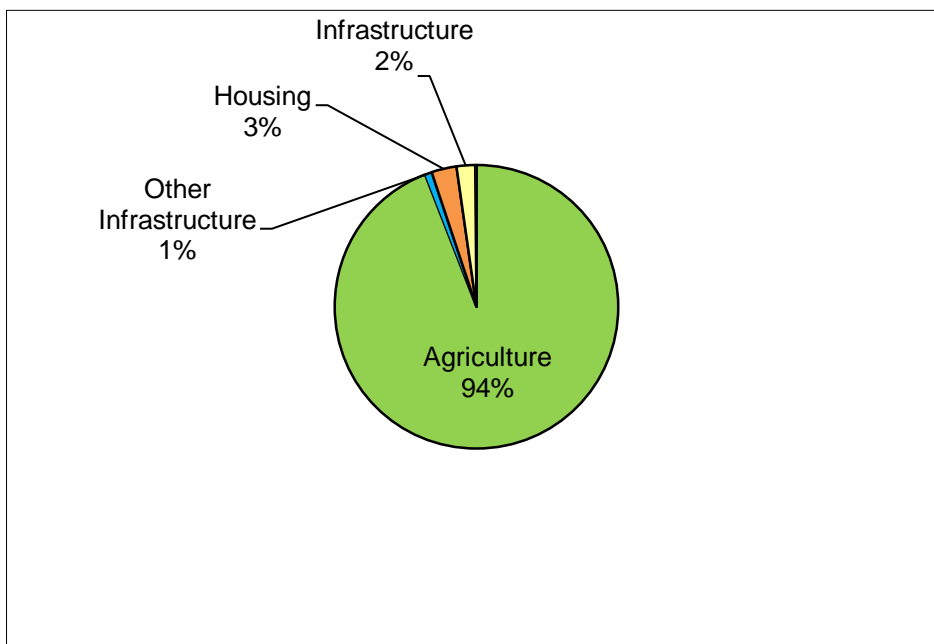
Province location, contamination and security situation:



Impact summary:

Number of minefields	256
Area of minefields	44,499,188
Number of communities impacted	137
Number of families affected	31,715
Number of civilian deaths and injuries recorded in IMSMA	913

Socio-economic blockages resulting from contamination:



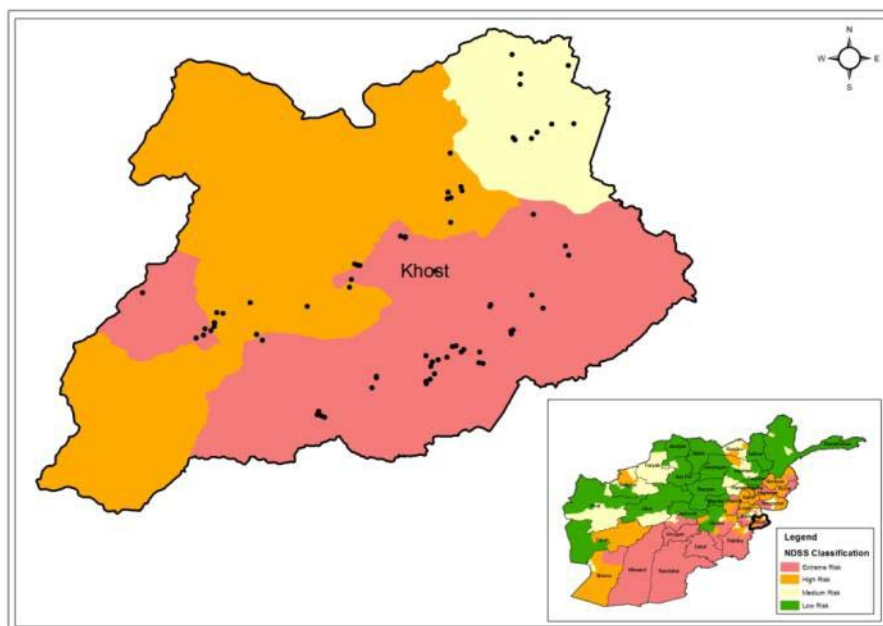
Resources required for complete clearance of province:

Number of Demining Teams	62
Number of EOD Teams	6
Number of Dog Assets	6
Number of Mechanical Assets	6
Number of people employed	1,257
Cost if new teams are created	\$65,436,719
Cost if existing teams are used	\$61,045,106
Cost if large hazards cleared with new technology	\$55,568,332
Project Period (operational months)	72

LANDMINE AND ERW CONTAMINATION: GHAZNI

SOUTH EAST REGION

Province location, contamination and security situation:

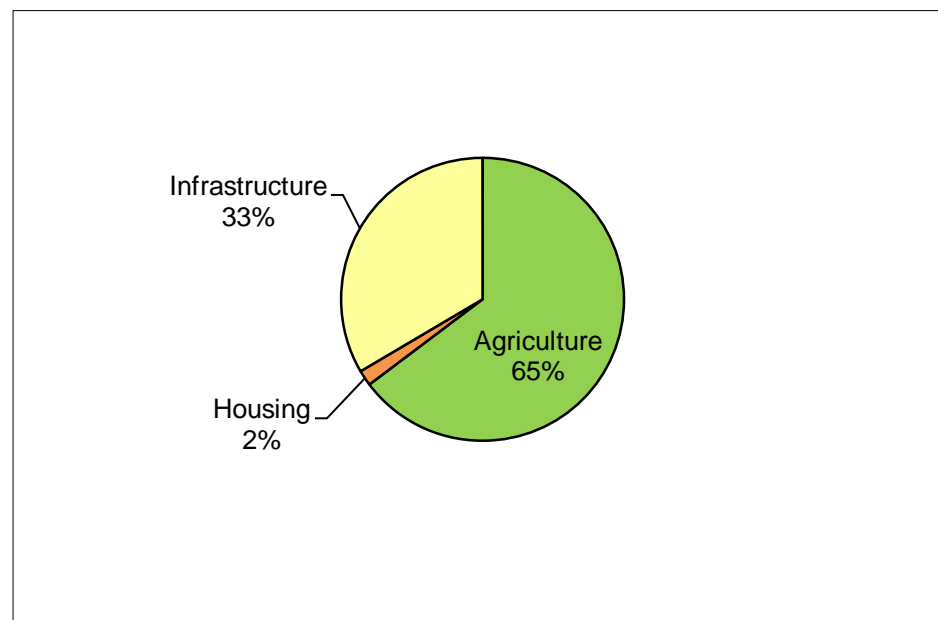


Impact summary:

Number of minefields	98
Area of minefields	6,692,247
Number of communities impacted	37
Number of families affected	9,253
Number of civilian deaths and injuries recorded in IMSMA	549

LANDMINE AND ERW CONTAMINATION: KHOST

Socio-economic blockages resulting from contamination:

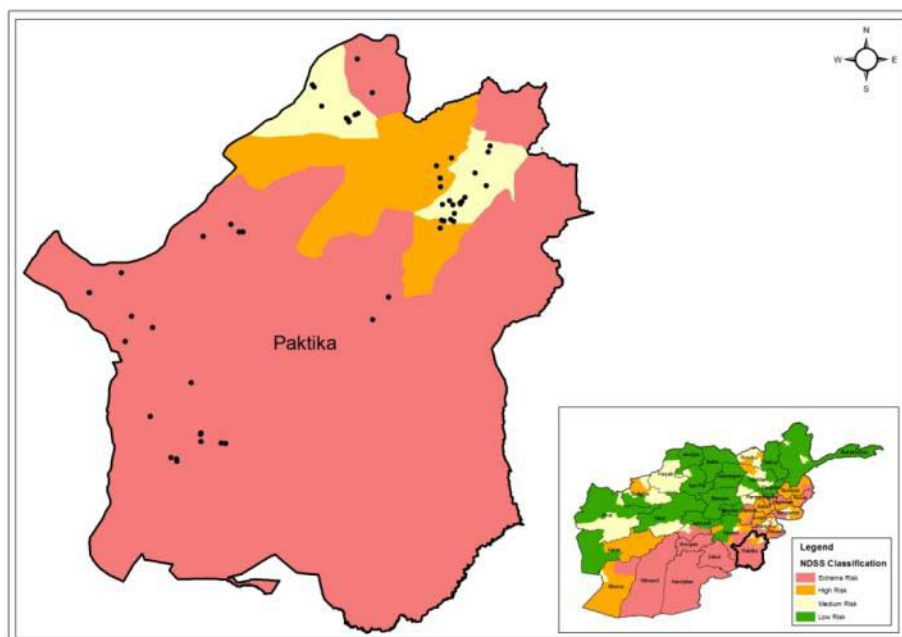


Resources required for complete clearance of province:

Number of Demining Teams	19
Number of EOD Teams	2
Number of Dog Assets	2
Number of Mechanical Assets	2
Number of people employed	400
Cost if new teams are created	\$10,744,771
Cost if existing teams are used	\$9,377,472
Project Period (operational months)	36

SOUTH EAST REGION

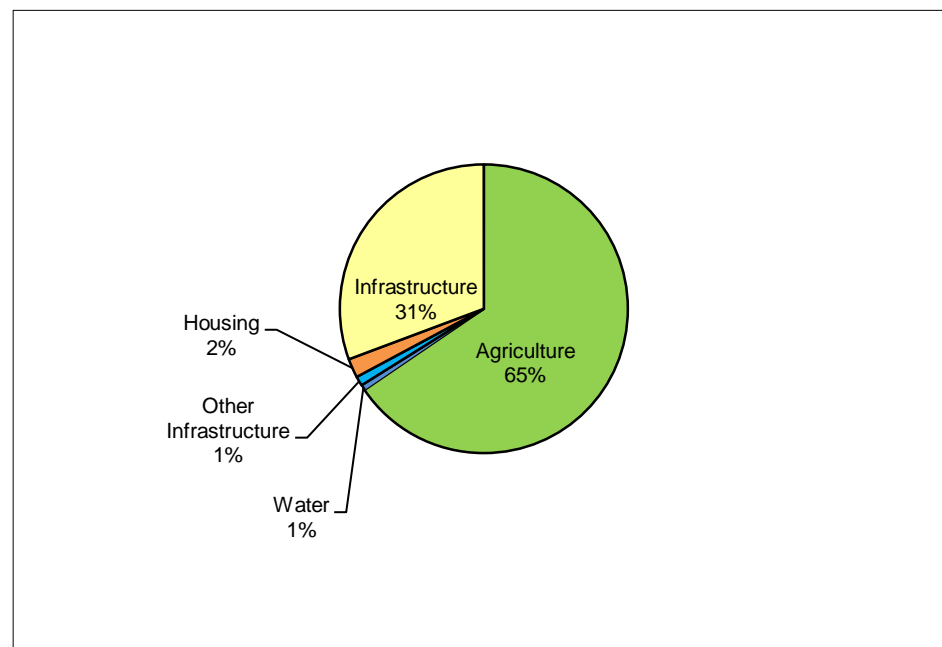
Province location, contamination and security situation:



Impact summary:

Number of minefields	60
Area of minefields	12,294,879
Number of communities impacted	40
Number of families affected	7,077
Number of civilian deaths and injuries recorded in IMSMA	107

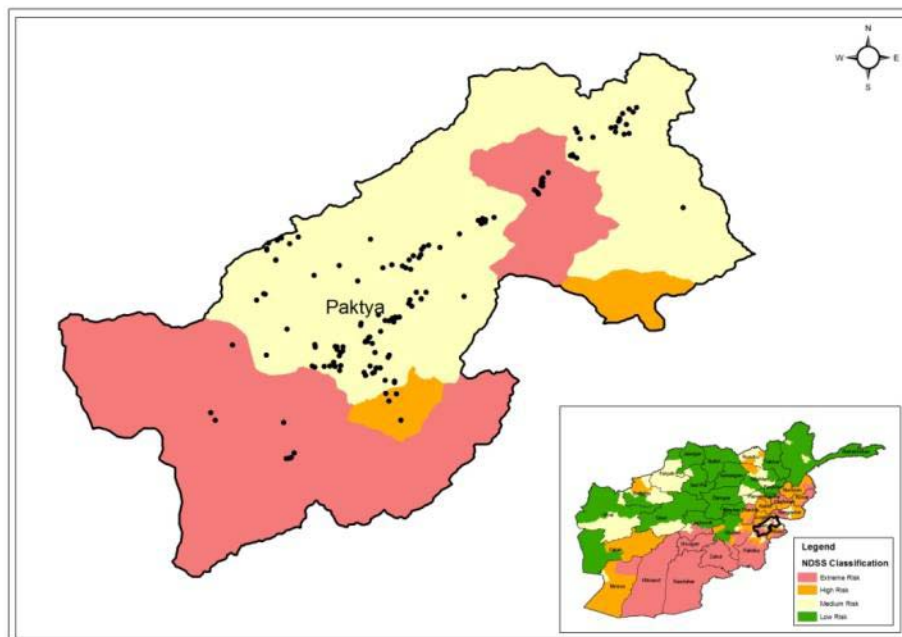
Socio-economic blockages resulting from contamination:



Resources required for complete clearance of province:

Number of Demining Teams	34
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	700
Cost if new teams are created	\$18,900,184
Cost if existing teams are used	\$16,548,367
Project Period (operational months)	36

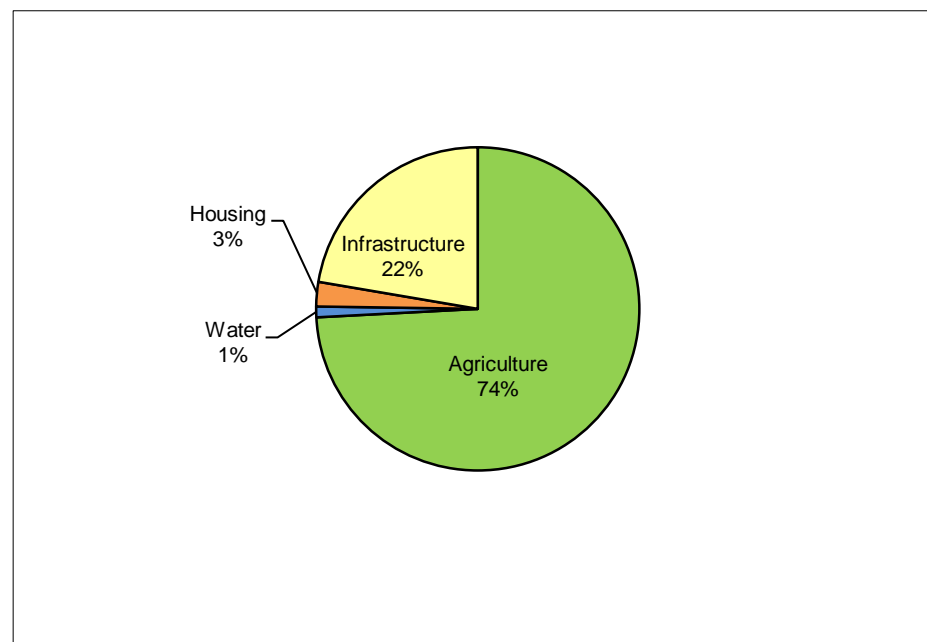
Province location, contamination and security situation:



Impact summary:

Number of minefields	204
Area of minefields	15,981,078
Number of communities impacted	66
Number of families affected	13,107
Number of civilian deaths and injuries recorded in IMSMA	574

Socio-economic blockages resulting from contamination:



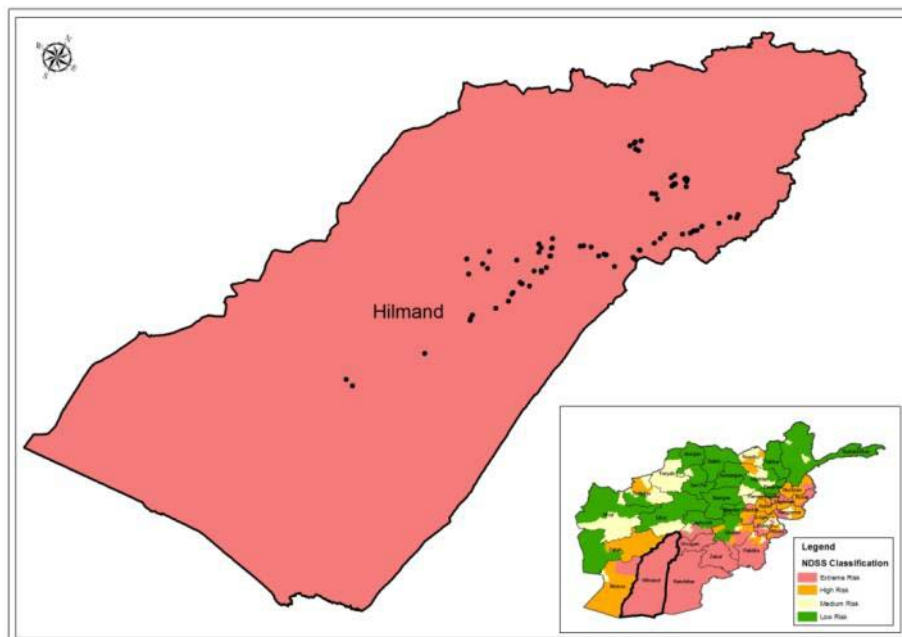
Resources required for complete clearance of province:

Number of Demining Teams	33
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	684
Cost if new teams are created	\$23,921,794
Cost if existing teams are used	\$21,611,186
Project Period (operational months)	48

LANDMINE AND ERW CONTAMINATION: PAKTYA

SOUTH EAST REGION

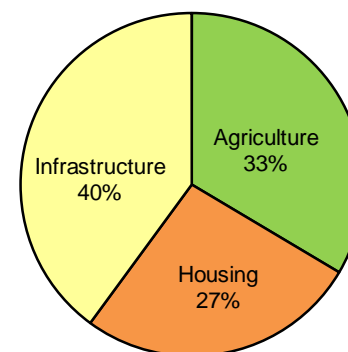
Province location, contamination and security situation:



Impact summary:

Number of minefields	109
Area of minefields	72,762,623
Number of communities impacted	62
Number of families affected	14,328
Number of civilian deaths and injuries recorded in IMSMA	624

Socio-economic blockages resulting from contamination:



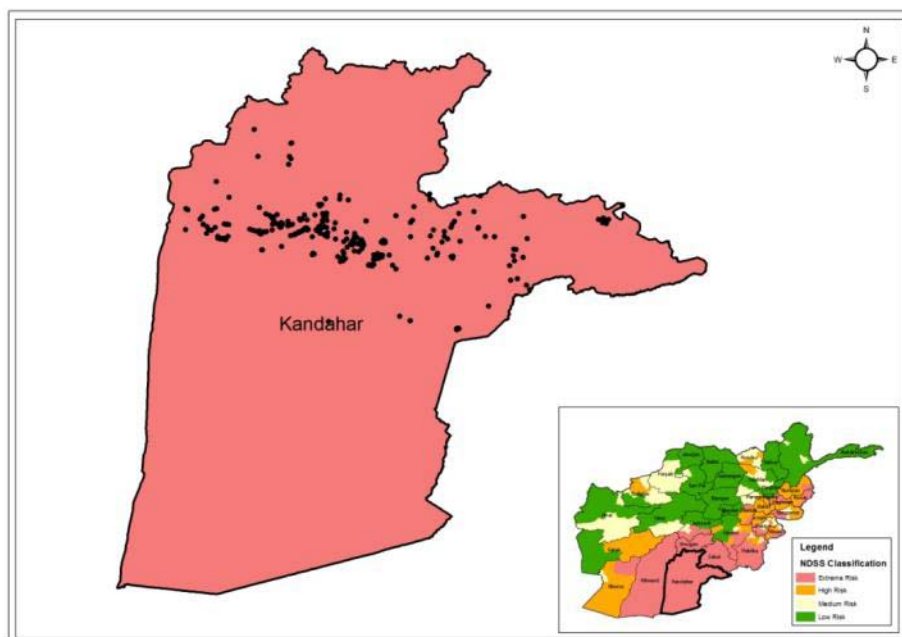
Resources required for complete clearance of province:

Number of Demining Teams	101
Number of EOD Teams	10
Number of Dog Assets	10
Number of Mechanical Assets	10
Number of people employed	2,044
Cost if new teams are created	\$107,424,727
Cost if existing teams are used	\$100,198,885
Cost if large hazards cleared with new technology	\$43,966,500
Project Period (operational months)	48

LANDMINE AND ERW CONTAMINATION: HELMAND

SOUTHERN REGION

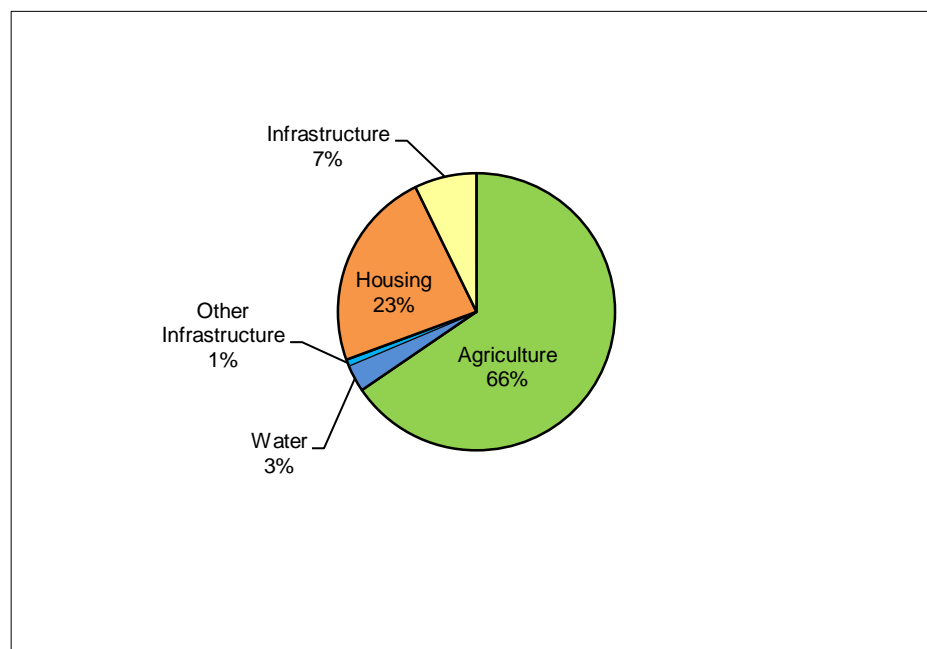
Province location, contamination and security situation:



Impact summary:

Number of minefields	327
Area of minefields	81,946,416
Number of communities impacted	138
Number of families affected	16,516
Number of civilian deaths and injuries recorded in IMSMA	1,597

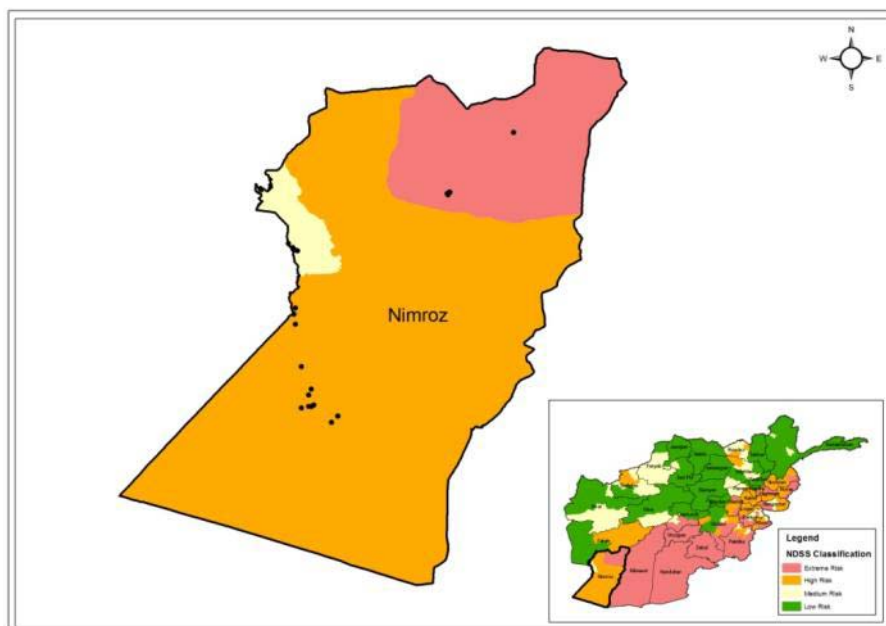
Socio-economic blockages resulting from contamination:



Resources required for complete clearance of province:

Number of Demining Teams	114
Number of EOD Teams	11
Number of Dog Assets	11
Number of Mechanical Assets	11
Number of people employed	2,294
Cost if new teams are created	\$120,392,652
Cost if existing teams are used	\$112,317,058
Cost if large hazards cleared with new technology	\$81,900,928
Project Period (operational months)	72

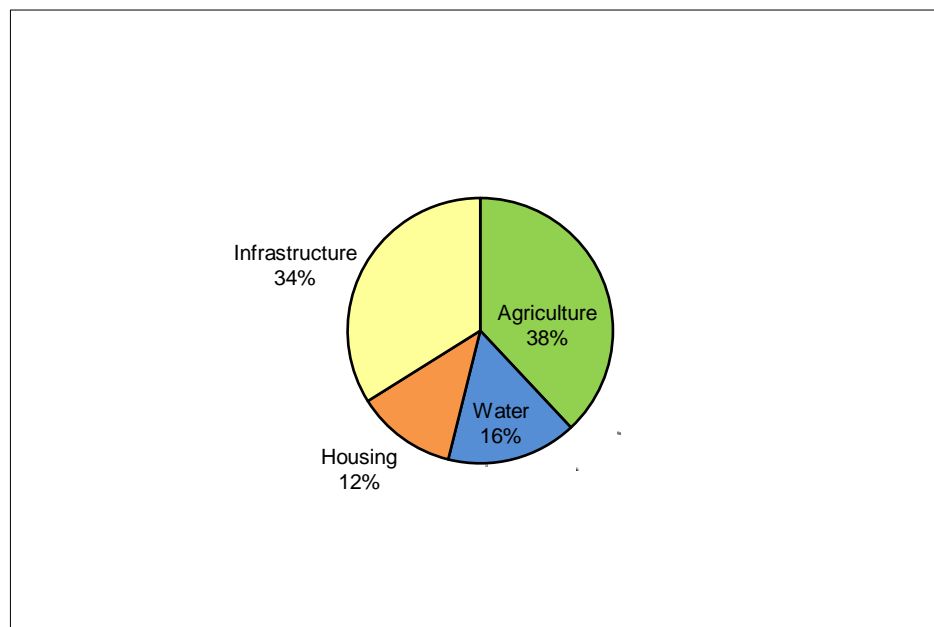
Province location, contamination and security situation:



Impact summary:

Number of minefields	24
Area of minefields	6,689,500
Number of communities impacted	15
Number of families affected	720
Number of civilian deaths and injuries recorded in IMSMA	87

Socio-economic blockages resulting from contamination:



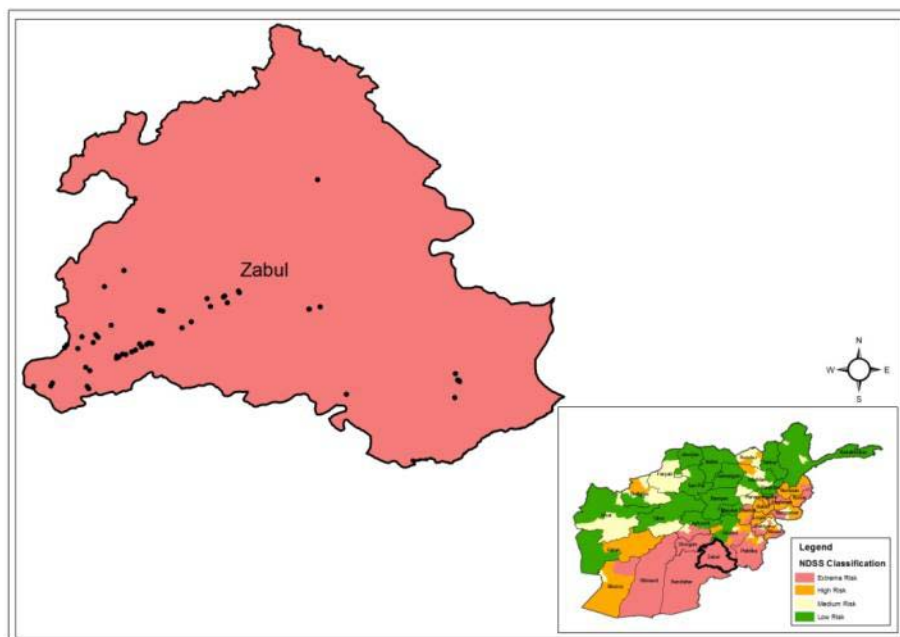
Resources required for complete clearance of province:

Number of Demining Teams	28
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	587
Cost if new teams are created	\$11,424,850
Cost if existing teams are used	\$9,374,450
Project Period (operational months)	24

LANDMINE AND ERW CONTAMINATION: NIMROZ

SOUTHERN REGION

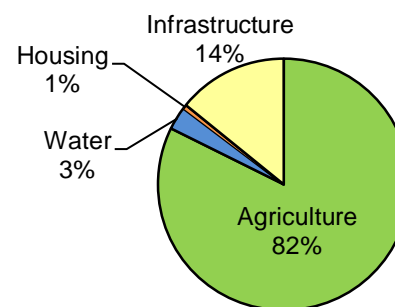
Province location, contamination and security situation:



Impact summary:

Number of minefields	54
Area of minefields	10,628,640
Number of communities impacted	30
Number of families affected	610
Number of civilian deaths and injuries recorded in IMSMA	273

Socio-economic blockages resulting from contamination:



Resources required for complete clearance of province:

Number of Demining Teams	30
Number of EOD Teams	3
Number of Dog Assets	3
Number of Mechanical Assets	3
Number of people employed	616
Cost if new teams are created	\$16,845,156
Cost if existing teams are used	\$14,715,504
Project Period (operational months)	36

LANDMINE AND ERW CONTAMINATION: ZABUL

SOUTHERN REGION