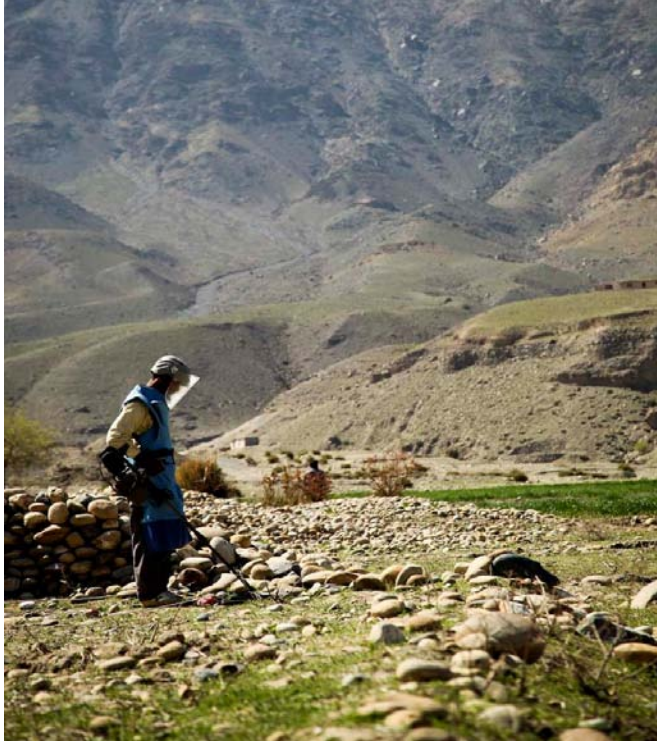




د افغانستان د ماین پاکى چارو د هم غړى مرکز | مرکز هماهنگى امور ماین پاکى افغانستان

## Mine Action Coordination Centre of Afghanistan (MACCA)



### EASTERN CLEARANCE MODEL:

### REMOVAL OF KNOWN<sup>1</sup> HAZARD IN NURISTAN, KUNAR, LAGHMAN & NANGAHAR IN 24 MONTHS

- 139 demining teams (79 new)
- 10 EOD teams (8 new)
- 10 mechanical assets
- 10 mine detection dog teams
- 3,000 people employed
- \$37 million

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.

<sup>1</sup> Data taken from IMSMA 24<sup>th</sup> February 2010

## Introduction & background

The following documents propose a 24-month solution to

- clear all known hazard<sup>1</sup> from the eastern provinces of Afghanistan
- contribute to stabilization in the east by providing employment opportunities for 3,000<sup>2</sup> people

Collectively the provinces of Nangahar, Laghman, Kunar and Nuristan contain 395 hazards which contaminate an area of 32.7 sq km; most of the hazard is located in the Pakistani border areas of Kunar and Nangahar.

MACCA is well aware that manual mine clearance rates on different minefields can vary significantly. However, for this modeling exercise an average manual mine clearance rate <sup>3</sup> has been used for all minefields regardless of terrain (hillside, flat land), contamination type (anti personnel/anti vehicle mine), soil type or vegetation cover, the factors which tend to affect clearance rates. It has also been assumed that each team comprises 10 deminers, the most common team structure in the programme.

According to UN Department of Safety and Security much of the eastern region is designated as “extreme risk” and “high risk”; clearly this poses a challenge to any project implemented in the province. In order to better manage this risk, and to increase stability in the project area, MACCA recommends a community based approach be followed. In 2008, in an effort to enable demining in areas of insecurity the concept of Community Based Demining (CBD) was developed. The basic concept is that if communities are involved in the clearance of hazard from their own communities they take ownership of the project and provide the security required. Ten community based projects established and operating successfully in Helmand, Ghor, Khost, Nangahar, Kandahar, Kunar and Uruzgan prove the concept behind the CBD approach to be robust and effective.

Further to providing security for the deminers CBD also contributes significantly to stabilization, as described by a Community Based Deminer from Khost;



*“When I first heard that the mine clearance programme would start in our village, I could hardly believe it. Because of the security concerns, no other projects had come to our village. Many of our young people who had no jobs are now employed by the project and this has really helped the security and stabilization of our community.”*

<sup>1</sup> Data taken from IMSMA 3<sup>rd</sup> March 2010. All minefields (not battlefields) recorded in IMSMA were considered including those where demining has already commenced. The area remaining on these hazards (denoted as “worked on” in IMSMA) as of the end of February 2010 is included in the calculation.

<sup>2</sup> 1,700 new jobs will be created, 1,300 people already employed will be provided with continued employment

<sup>3</sup> Equal to 10,000 sq m per month as observed by MACCA during the last three years of monitoring Implementing Partner operations

A further benefit of using the CBD model is that employment opportunities are “secondary”. This means that community members conduct demining in their own villages and communities in the mornings and for the rest of the day they are able to conduct their normal income generation activities; farming, grazing, shop keeping, manual labour etc. This approach enables communities to benefit from increased income which can be re-invested in local economies and eliminates the “economic shock” of redundancy when clearance ends.

From the Area Mine Action Centre (AMAC) in Jalalabad, MACCA is currently coordinating the activities of 79 clearance assets in the eastern provinces, including CBD teams, mobile demining teams, mine detection dogs, demining machines and Explosive Ordnance Disposal (EOD) teams. These teams are deployed and managed by Afghan mine action Implementing Partners OMAR, MDC, ATC and DAFA.

### **Project design**

This project has been designed to build on the clearance capacity already established and operating in the east. CBD has proven successful in this area; one of the first CBD projects in the country was established by OMAR in Kunar in 2008 and now over a quarter of all demining teams in the east are community based. Furthermore, the vast majority of the staff in the mobile teams are also from the eastern region and able to work in these communities with ease. This capacity provides an excellent platform for expansion; experienced personnel will provide training, the command structure and quality control for new CBD teams.

Achievement of the project goal requires immediate expansion; the number of demining teams will approximately double from 60 operating now to the required capacity of 139, and EOD teams will increase from two to ten. Dog assets already in the region will be restructured from Mine Dog Groups (where the dog teams are permanently allocated to specific demining teams) to ten Mine Dog Sets which are designed to move between demining teams as the type of hazard and clearance strategy requires. MACCA believes this approach to be more flexible and cost effective. There are sufficient machines in the region to negate the need to purchase new assets, though some relocation will be required.

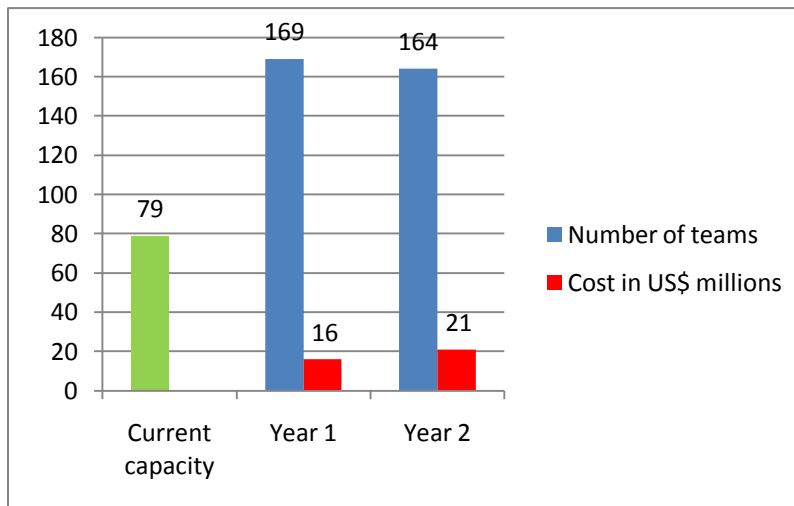
Hazards have been clustered creating smaller sub-projects within the overall clearance plan. Each cluster takes into consideration geographical barriers between communities (rivers, mountains, etc) and the extent of hazard in each cluster. (Please see Annex A for details.)

All clusters except three and five will require 24 operational months to complete clearance; the hazard size in Cluster 3 and 5 is such that only 12 months will be required for completion. Clearance will commence in each cluster simultaneously at the beginning of the project.

## Project budget

The total cost of this project is \$37 million. Of this, \$16 million will be required in Year One and \$21 million in Year Two. In Year One funds will be used to equip and deploy new teams; the existing capacity is funded for 12 months through bilateral and VTF agreements. In Year Two the running costs of newly established and existing teams will be funded under this budget.

The graph below shows the number of teams which will be deployed per year and the associated cost. The number of teams currently deployed in the province is shown for reference.

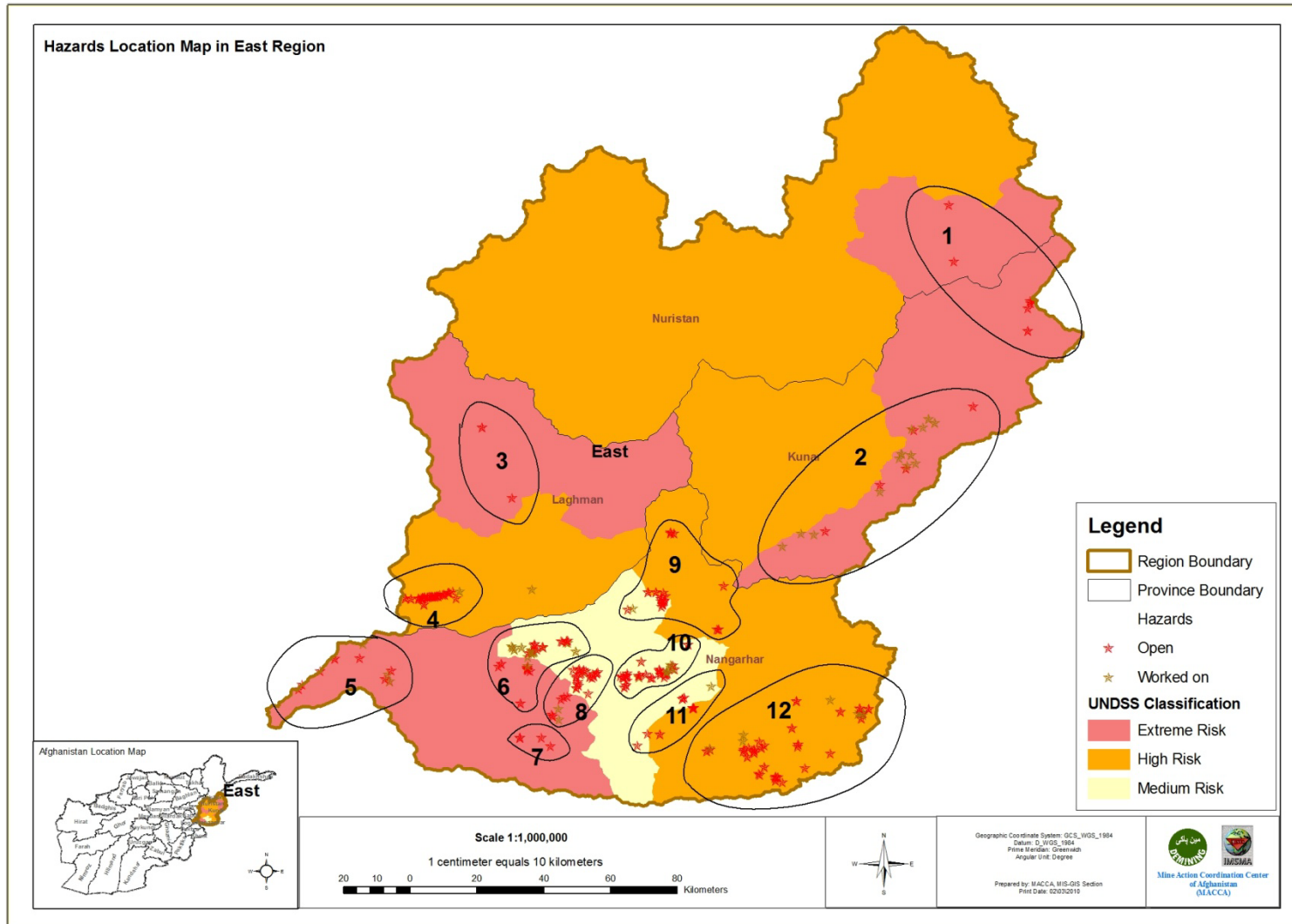


## Conclusion

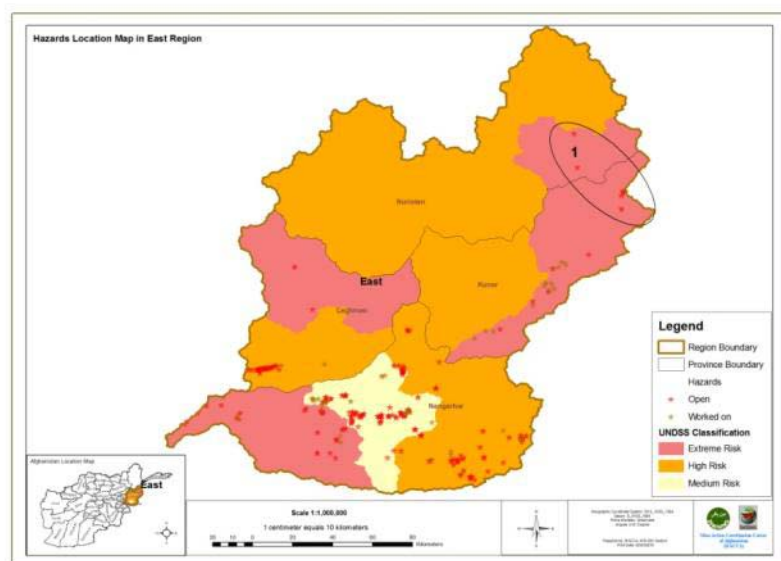
Eastern Afghanistan provides a great opportunity for stabilisation and a significant “win” for mine action. This 24 month project will provide employment opportunities throughout the Pakistani border areas for over 3,000 people and at the same time will result in clearance of all known hazard from the east. The financial contribution, split over a two-year period, is minimal in comparison to the benefits which will be realized.

The following pages summarize the hazard, the current capacity and the resources required to clear each cluster. For further details please contact [abigail.hartley@macca.org.af](mailto:abigail.hartley@macca.org.af)

## ANNEX A: HAZARD & CLUSTER LOCATION



## Cluster location, contamination and security situation



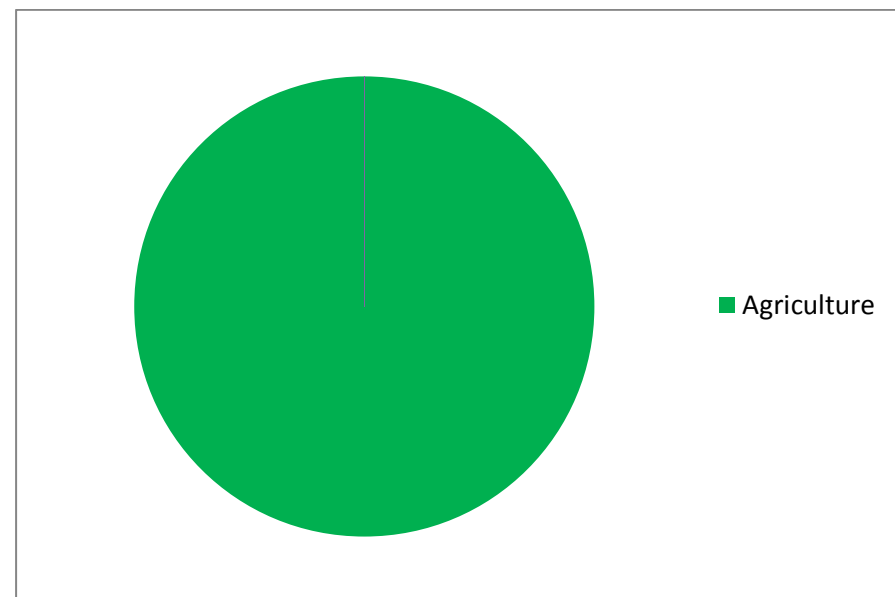
### Impact summary

Number of minefields	8
Area of minefields (sq m)	3,056,500
Number of communities impacted	6
Number of families affected	3,850
Number of civilian deaths and injuries recorded in IMSMA	49

### Cost summary

Total Cost (US\$)	4,657,950
Cost for Year One (US\$)	2,640,875
Cost for Year Two (US\$)	2,017,075

## Socio-economic blockages resulting from contamination

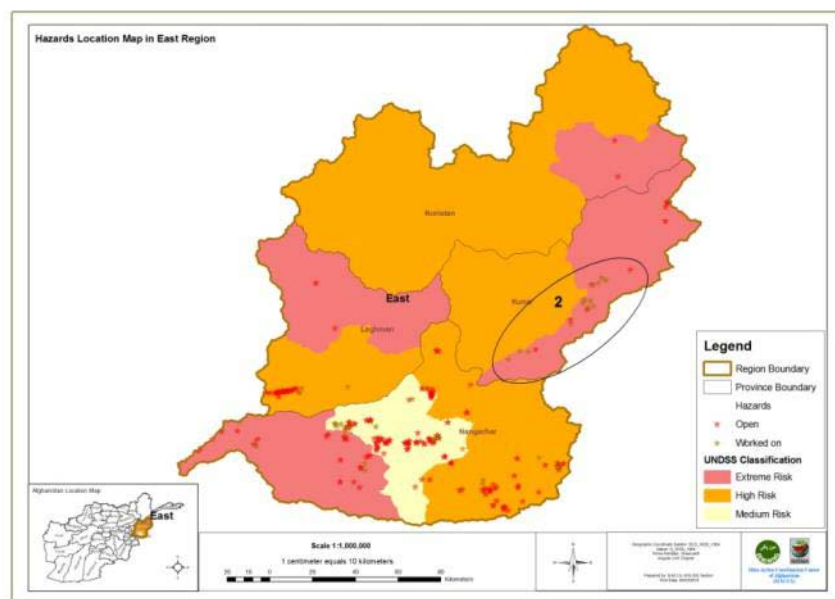


### Assets required for complete clearance of cluster

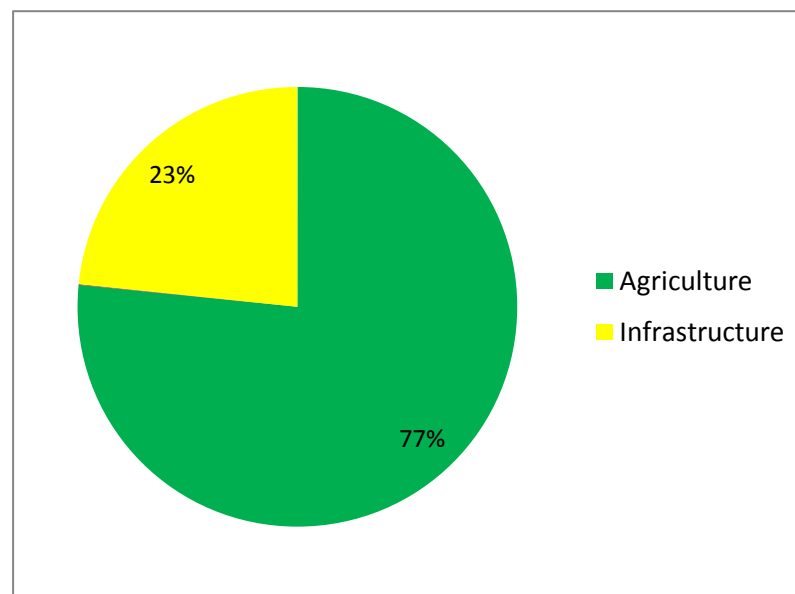
Total number of Demining Teams required	13
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	0
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	0
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	13
Additional EOD Teams required	1
Additional Dog Assets required	1
Additional Mechanical Assets required	0



## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	25
Area of minefields(sq m)	2,187,151
Number of communities impacted	12
Number of families affected	4,546
Number of civilian deaths and injuries recorded in IMSMA	202

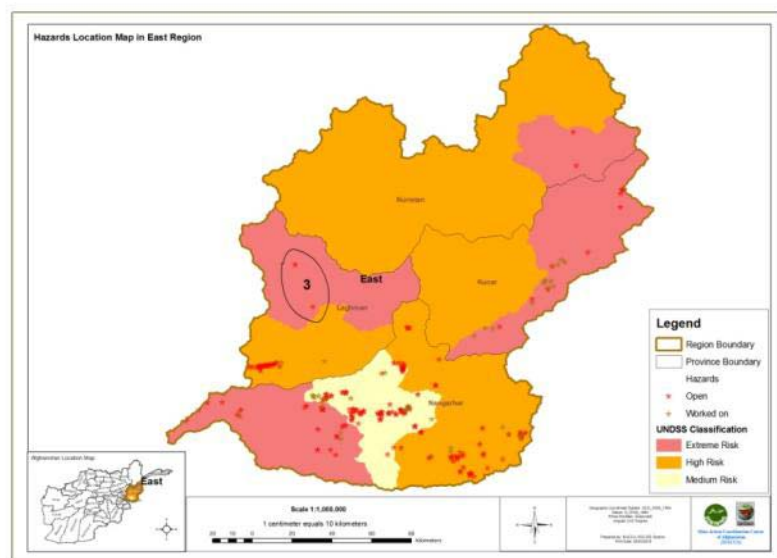
## Cost summary

Total Cost (US\$)	1,762,796
Cost for Year One (US\$)	223,863
Cost for Year Two (US\$)	1,538,933

## Assets required for complete clearance of cluster

Total number of Demining Teams required	9
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	9
Number of EOD Teams deployed/available	1
Number of Dog Assets deployed/available	0
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	0
Additional EOD Teams required	0
Additional Dog Assets required	1
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



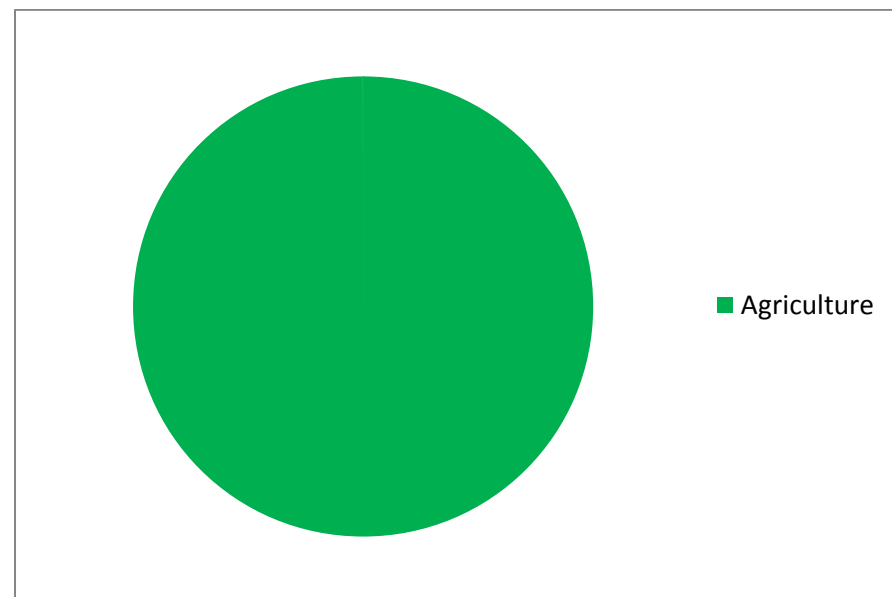
### Impact summary

Number of minefields	3
Area of minefields(sq m)	104,810
Number of communities impacted	2
Number of families affected	260
Number of civilian deaths and injuries recorded in IMSMA	2

### Cost summary

Total Cost (US\$)	157,215
Cost for Year One (US\$)	157,215
Cost for Year Two (US\$)	-

## Socio-economic blockages resulting from contamination

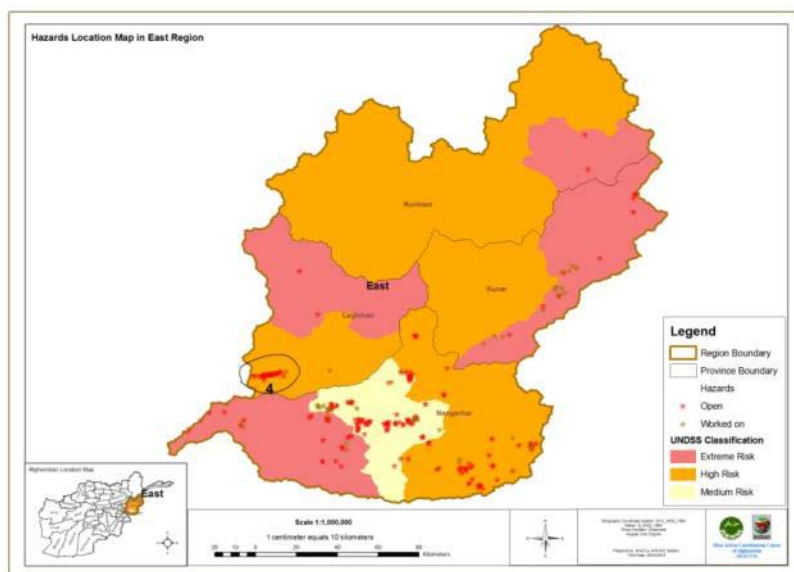


### Assets required for complete clearance of cluster

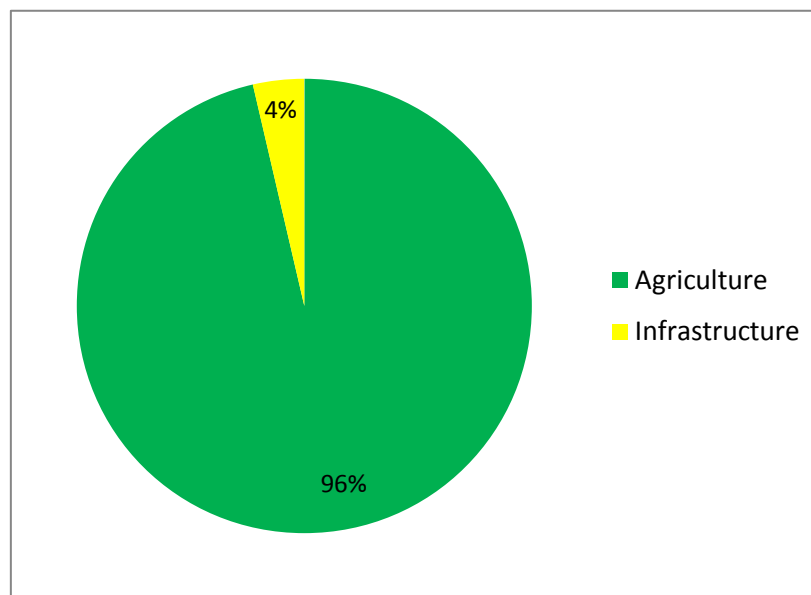
Total number of Demining Teams required	1
Total number of EOD Teams required	0
Total number of Dog Assets required	0
Total number of Mechanical Assets required	0
Number of Demining Teams deployed/available	0
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	0
Number of Mechanical Assets deployed/available	0
Additional Demining Teams required	1
Additional EOD Teams required	0
Additional Dog Assets required	0
Additional Mechanical Assets required	0



## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	54
Area of minefields (sq m)	3,817,616
Number of communities impacted	4
Number of families affected	1,216
Number of civilian deaths and injuries recorded in IMSMA	773

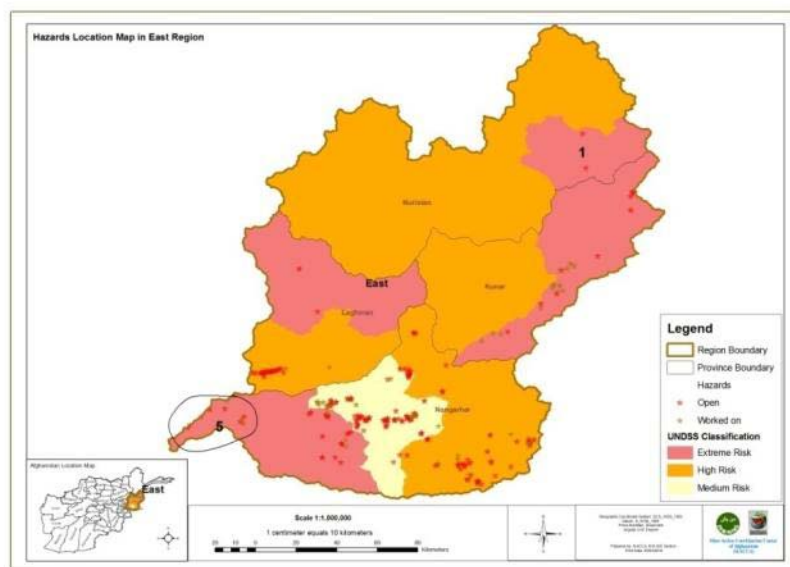
## Cost summary

Total Cost (US\$)	5,287,401
Cost for Year One (US\$)	2,851,712
Cost for Year Two (US\$)	2,435,689

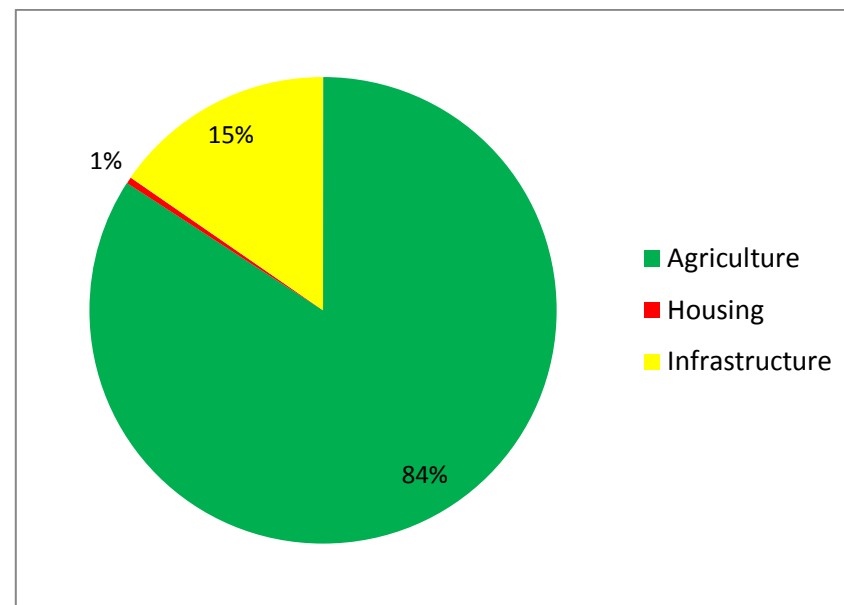
## Assets required for complete clearance of cluster

Total number of Demining Teams required	16
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	2
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	0
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	14
Additional EOD Teams required	1
Additional Dog Assets required	1
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	13
Area of minefields (sq m)	525,495
Number of communities impacted	7
Number of families affected	200
Number of civilian deaths and injuries recorded in IMSMA	9

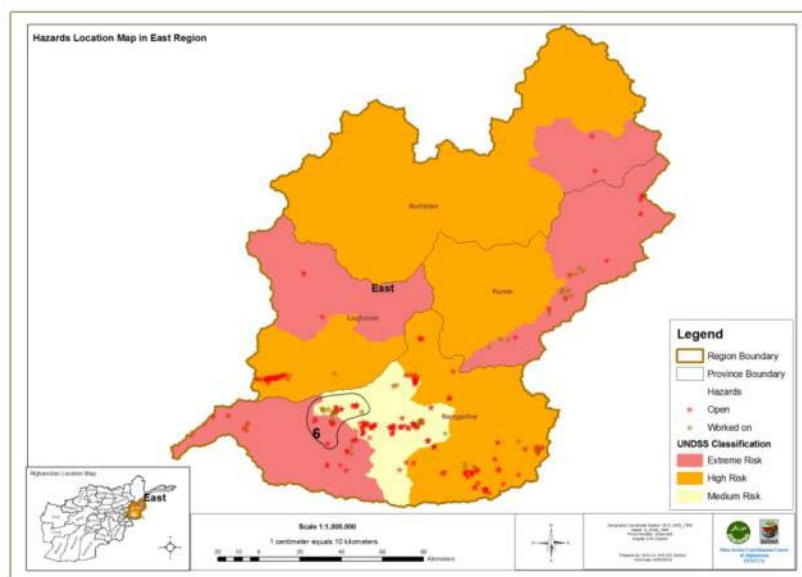
## Cost summary

Total Cost (US\$)	608,243
Cost for Year One (US\$)	608,243
Cost for Year Two (US\$)	-

## Assets required for complete clearance of cluster

Total number of Demining Teams required	4
Total number of EOD Teams required	0
Total number of Dog Assets required	0
Total number of Mechanical Assets required	0
Number of Demining Teams deployed/available	1
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	0
Number of Mechanical Assets deployed/available	0
Additional Demining Teams required	3
Additional EOD Teams required	0
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



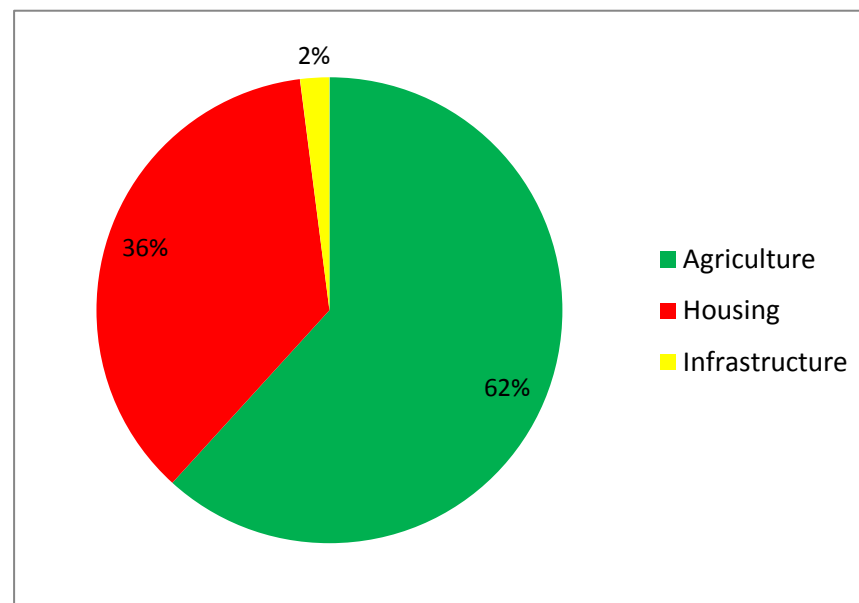
## Impact summary

Number of minefields	57
Area of minefields (sq m)	3,001,557
Number of communities impacted	10
Number of families affected	4,695
Number of civilian deaths and injuries recorded in IMSMA	509

## Cost summary

Total Cost (US\$)	2,043,024
Cost for Year One (US\$)	56,168
Cost for Year Two (US\$)	1,986,856

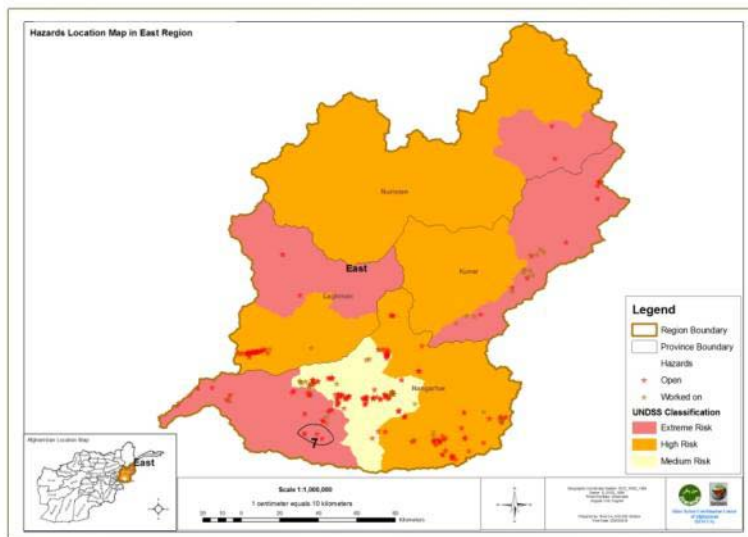
## Socio-economic blockages resulting from contamination



## Assets required for complete clearance of cluster

Total number of Demining Teams required	13
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	13
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	0
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



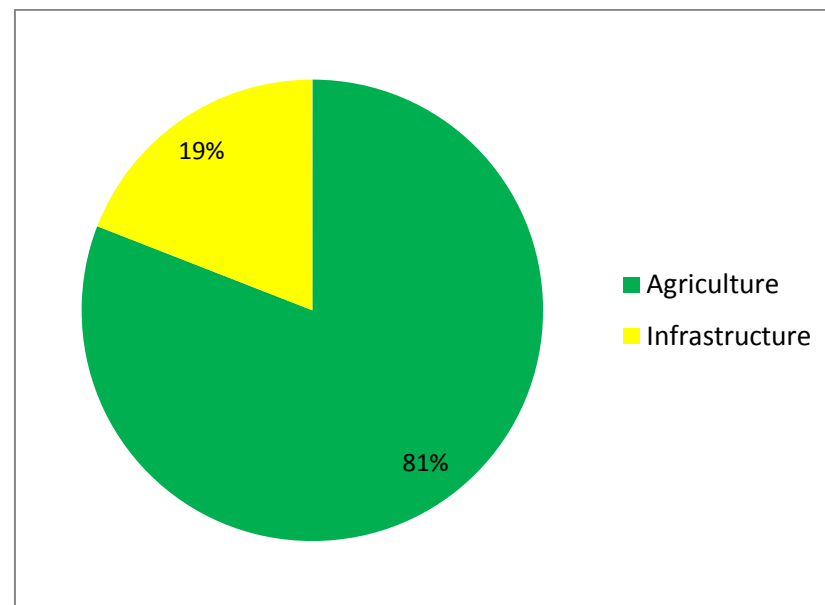
### Impact summary

Number of minefields	10
Area of minefields (sq m)	2,673,514
Number of communities impacted	3
Number of families affected	1,285
Number of civilian deaths and injuries recorded in IMSMA	0

### Cost summary

Total Cost (US\$)	3,956,568
Cost for Year One (US\$)	2,150,136
Cost for Year Two (US\$)	1,806,433

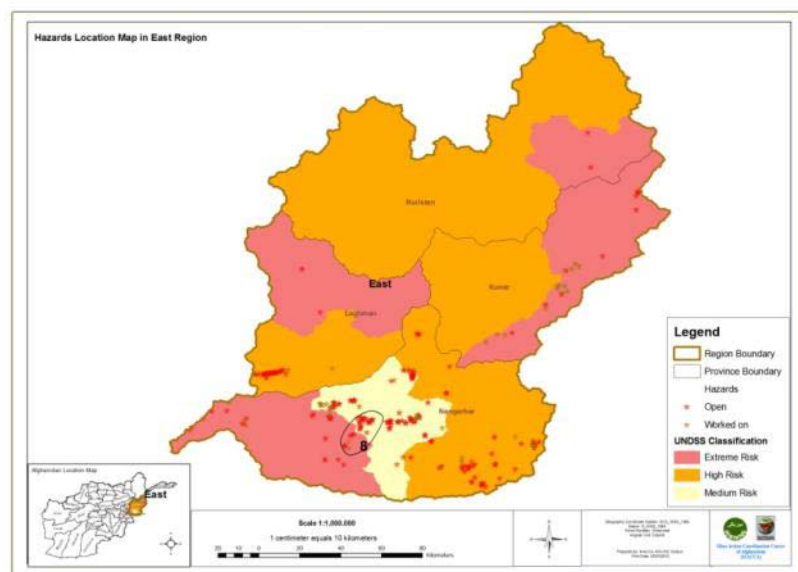
## Socio-economic blockages resulting from contamination



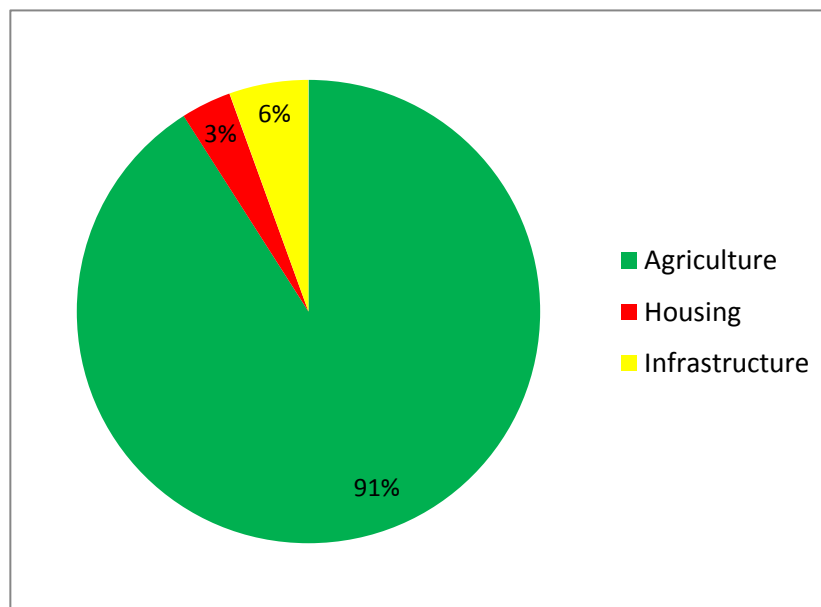
### Assets required for complete clearance of cluster

Total number of Demining Teams required	11
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	0
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	11
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	43
Area of minefields (sq m)	3,829,301
Number of communities impacted	12
Number of families affected	3,977
Number of civilian deaths and injuries recorded in IMSMA	12

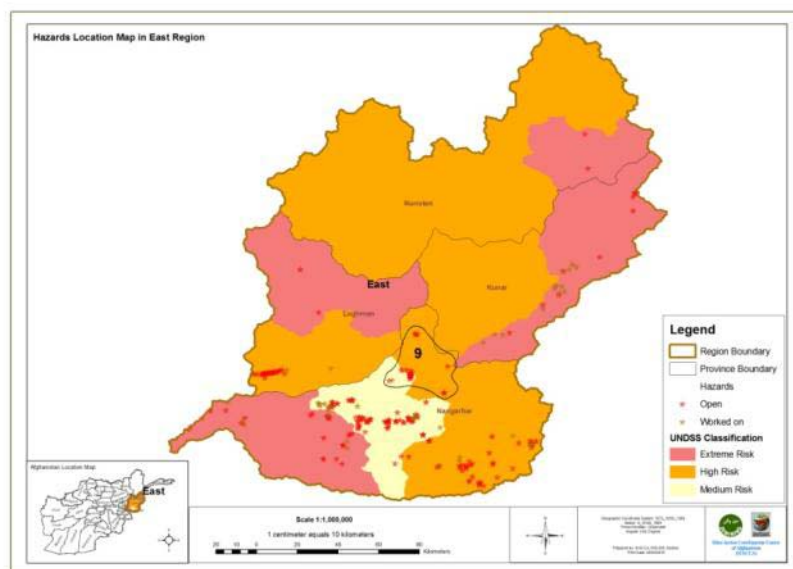
## Cost summary

Total Cost (US\$)	4,379,091
Cost for Year One (US\$)	1,936,976
Cost for Year Two (US\$)	2,442,116

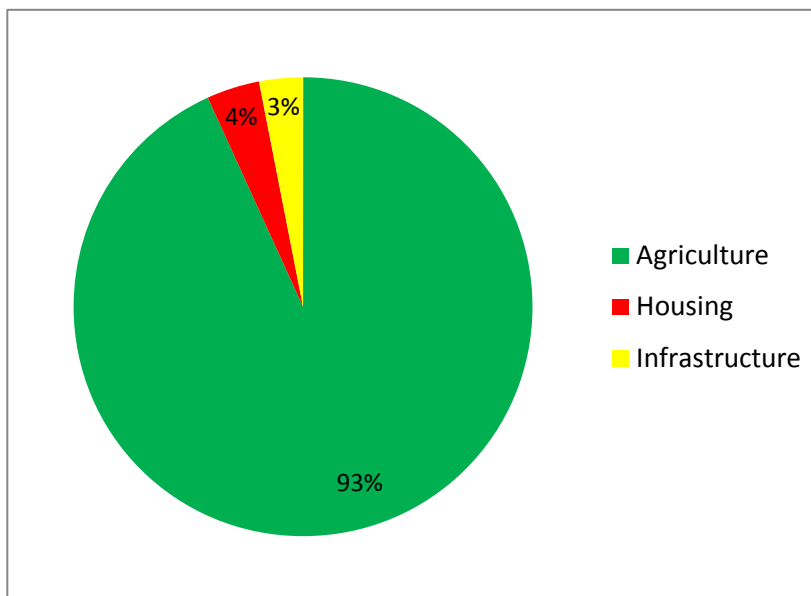
## Assets required for complete clearance of cluster

Total number of Demining Teams required	16
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	6
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	10
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	30
Area of minefields (sq m)	1,987,878
Number of communities impacted	7
Number of families affected	1,223
Number of civilian deaths and injuries recorded in IMSMA	104

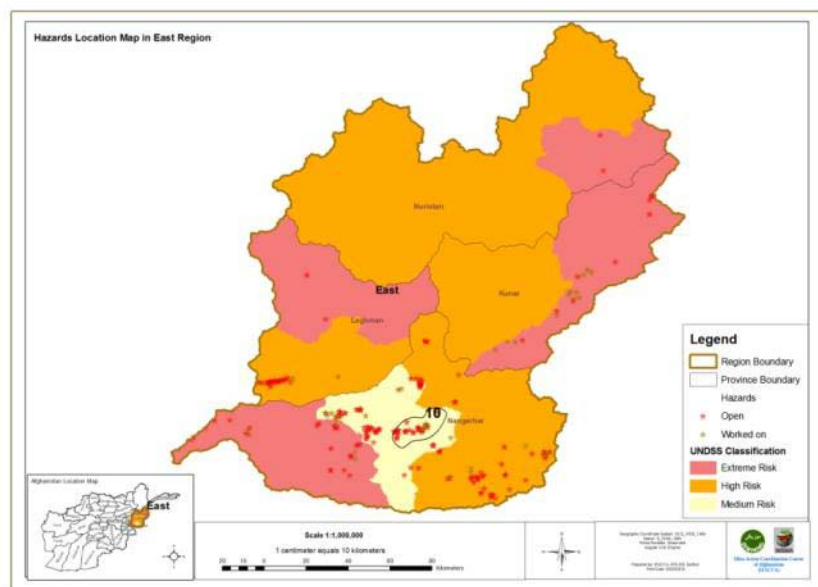
## Cost summary

Total Cost (US\$)	1,625,241
Cost for Year One (US\$)	195,909
Cost for Year Two (US\$)	1,429,333

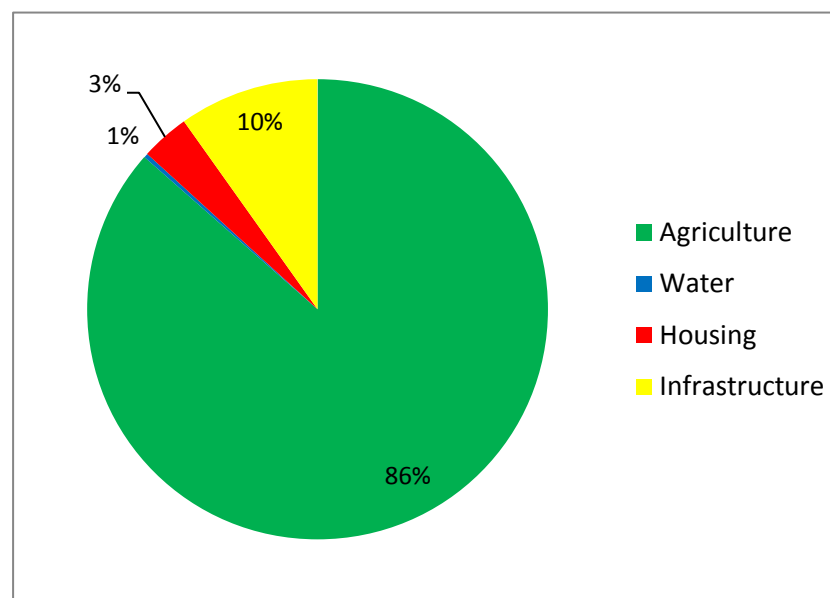
## Assets required for complete clearance of cluster

Total number of Demining Teams required	8
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	8
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	0
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



## Socio-economic blockages resulting from contamination



## Impact summary

Number of minefields	67
Area of minefields (sq m)	4,682,578
Number of communities impacted	8
Number of families affected	3,500
Number of civilian deaths and injuries recorded in IMSMA	697

## Cost summary

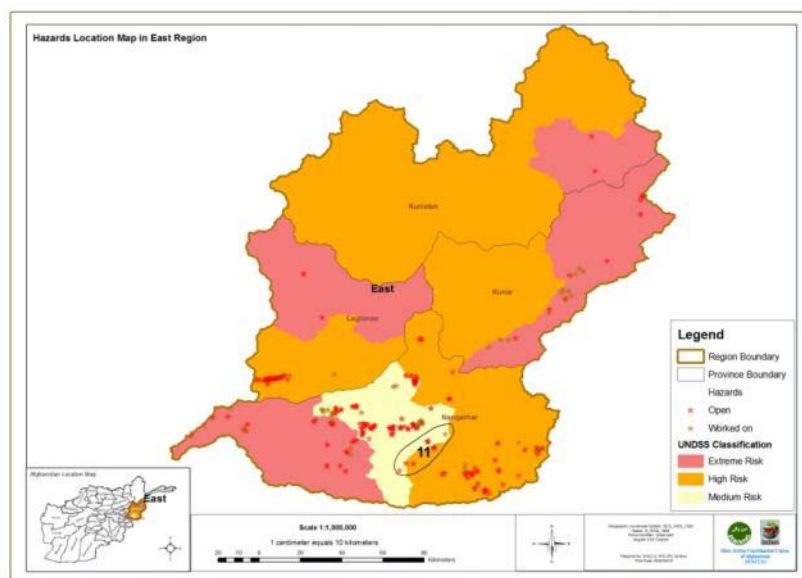
Total Cost (US\$)	4,263,351
Cost for Year One (US\$)	1,351,934
Cost for Year Two (US\$)	2,911,418

## Assets required for complete clearance of cluster

Total number of Demining Teams required	20
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	12
Number of EOD Teams deployed/available	1
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	8
Additional EOD Teams required	0
Additional Dog Assets required	0
Additional Mechanical Assets required	0



## Cluster location, contamination and security situation



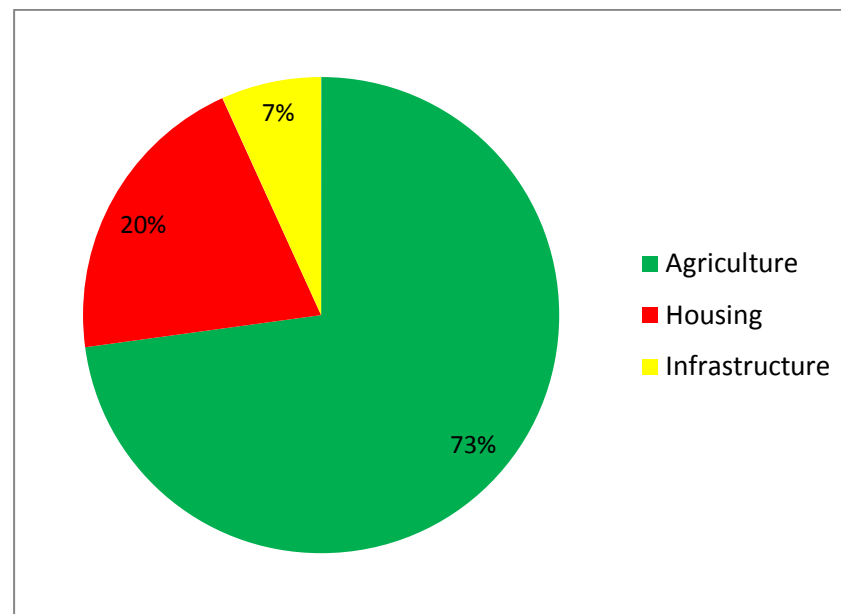
## Impact summary

Number of minefields	18
Area of minefields (sq m)	2,018,360
Number of communities impacted	6
Number of families affected	3,551
Number of civilian deaths and injuries recorded in IMSMA	141

## Cost summary

Total Cost (US\$)	2,924,868
Cost for Year One (US\$)	1,478,770
Cost for Year Two (US\$)	1,446,098

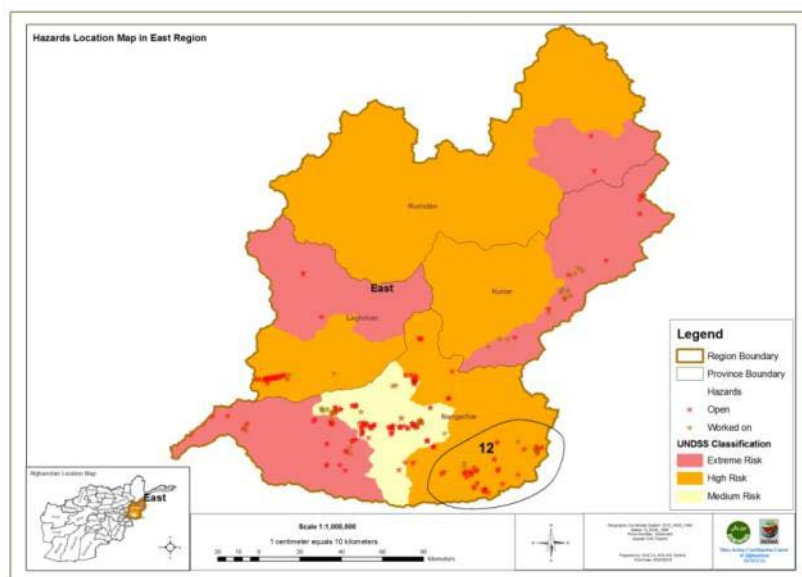
## Socio-economic blockages resulting from contamination



## Assets required for complete clearance of cluster

Total number of Demining Teams required	8
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	1
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	7
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0

## Cluster location, contamination and security situation



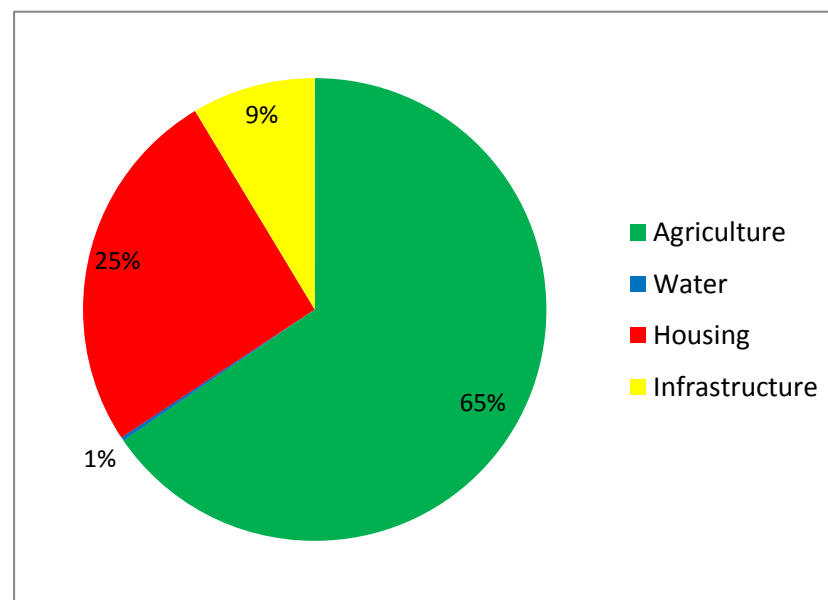
## Impact summary

Number of minefields	67
Area of minefields (sq m)	4,873,233
Number of communities impacted	18
Number of families affected	8,384
Number of civilian deaths and injuries recorded in IMSMA	104

## Cost summary

Total Cost (US\$)	5,376,203
Cost for Year One (US\$)	2,359,925
Cost for Year Two (US\$)	3,016,278

## Socio-economic blockages resulting from contamination



## Assets required for complete clearance of cluster

Total number of Demining Teams required	20
Total number of EOD Teams required	1
Total number of Dog Assets required	1
Total number of Mechanical Assets required	1
Number of Demining Teams deployed/available	8
Number of EOD Teams deployed/available	0
Number of Dog Assets deployed/available	1
Number of Mechanical Assets deployed/available	1
Additional Demining Teams required	12
Additional EOD Teams required	1
Additional Dog Assets required	0
Additional Mechanical Assets required	0