# A roadmap to bring appropriate and improved technologies into operational use:

# Definition of a test-case

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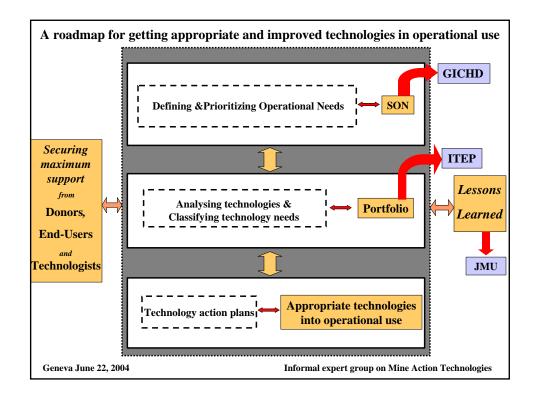
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## Aim of the roadmap

To bring as soon as possible appropriate mine action technologies into operational use, taking into account real needs of end-users, priorities and the state of maturity of technologies.

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## How should technologies be applied?

- Increased application of existing technologies (mechanical test-case)
- Modification of operational procedures using combination of existing technologies
- Development of new technologies

#### Why?

- · To increase safety
- To increase productivity (more sq meters) and efficiency (less money)

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#### **Test-case definition**

- To demonstrate the feasibility of the roadmap
- To convince mine action actors about the need of involving existing organisations (GICHD & ITEP) in the complete process of bringing appropriate mine action technologies into operational use
- To involve end-users in the complete process
- To demonstrate the efficiency of the roadmap

Selected test-case: mechanical clearance equipment

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### Croatian approach

Croatia is a good example of the *positive effect* that the use of appropriate technologies can have on Mine Action Operations:

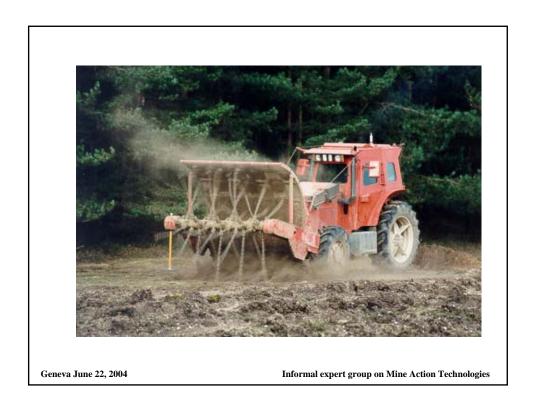
Currently CROMAC is using 42 demining machines as the first method of clearance in 80% of projects in Croatia.

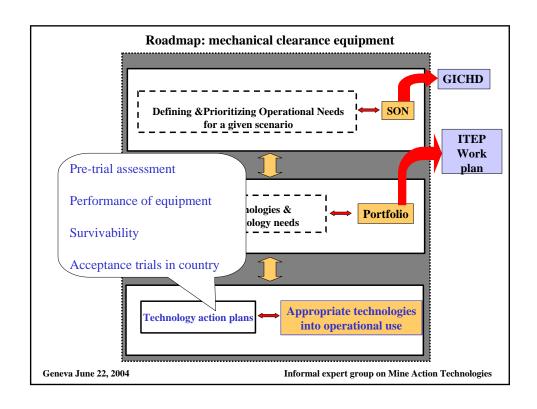
Typically the mechanical clearance is followed up by the use of Mine Detection Dogs as the second method of clearance.

➤ The Annual Clearance Capability in Croatia has increased from 10 sq km (2000) to 40 sq km (2004)

The average cost of clearance per sq metre has been significantly reduced from 2.13 EUR (1998) to 0.9 EUR (2003)

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# Technology action plan

- Standard based tests (CWA developed by technologists <u>and</u> end-users)
- Collaborative project and shared resources





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CWA	ARMTRAC75	BOZENA4	RM-KA02
Pre-trial assessment	Failed in March	Passed in May	Passed in May
	(returned to manufacturer for improvement)		
Performance test	?	September	October
Survivability	?	October	November
Acceptance trials in country	Cambodia (requested by UK MAG)	User request expected	User request expected







Collaborating countries: CA, UK, SE, US

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#### **Summary**

- Test-case results will be available at the 5MSP in NAIROBI
- Recommendations to donors:
  - To increase cost-efficiency by choosing appropriate technology (more sq metre at lower cost)
  - To improve sustainability by securing long-term capability of equipments (Training and maintenance)
- Recommendations to technologists

To continue to investigate existing technologies, combination of technologies and new technologies.

- Recommendations to end-users
  - To participate to the complete processes
  - To support and /or conduct in-country tests

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#### **Conclusions**

- Technology has made significant progress in the field of mine action.
- Improvements in technology have been evolutionary in nature and new operational procedures have been developed.
- The challenges that remain to be solved are in the areas of close-in detection and area reduction.
- This could be achieved by using a combination of existing or improved technologies and by developing new technologies.

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Thank you to all members of the informal group of experts on mine action technology, and especially to end-users!

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