



LANTMÄTIETS WORK WITH WILD FIRES 2014 AND 2018

16-17 JUNE 2020

GUNNAR ERSBO AND MAGDALENA ANDERSSON

SWEDISH MAPPING, CADASTRAL AND LAND REGISTRATION AUTHORITY

LANTMÄTERIET

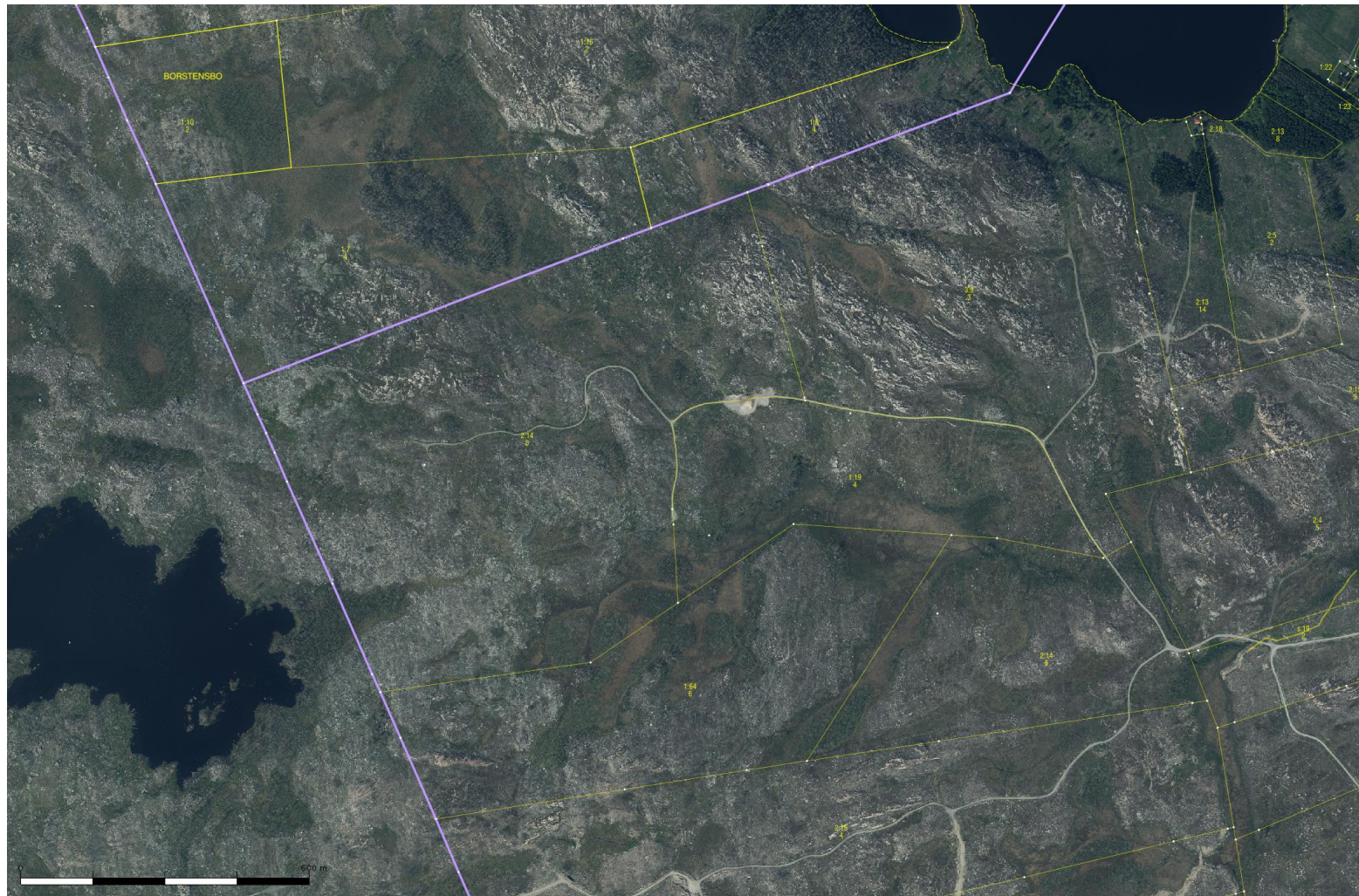


FACTS ABOUT THE WILD FIRE 2014

- Sweden's largest forest fire in recent time (31 July-11 August 2014)
- More than 13,000 hectares (32,100 acres) was burnt
- More than 130 property owners lost most of their forest
- More than 1,000 people and more than 2,000 cattle were evacuated
- More than 600,000 cubic meters of burned timber was removed during the first winter
- Estimated cost for the damages is more than 100 million Euros
- Swedish government granted 1.8 million Euros to cover cadastral procedures cost

ORTOPHOTO

As you can see in the photo there is almost no woods left in the land consolidation area which made it easier for the landowners to start trading their land.



VERY HEAVILY BURNT



BOUNDARY MARK

Most boundary marks in this area are made of stones and are from the 18th and 19th century.

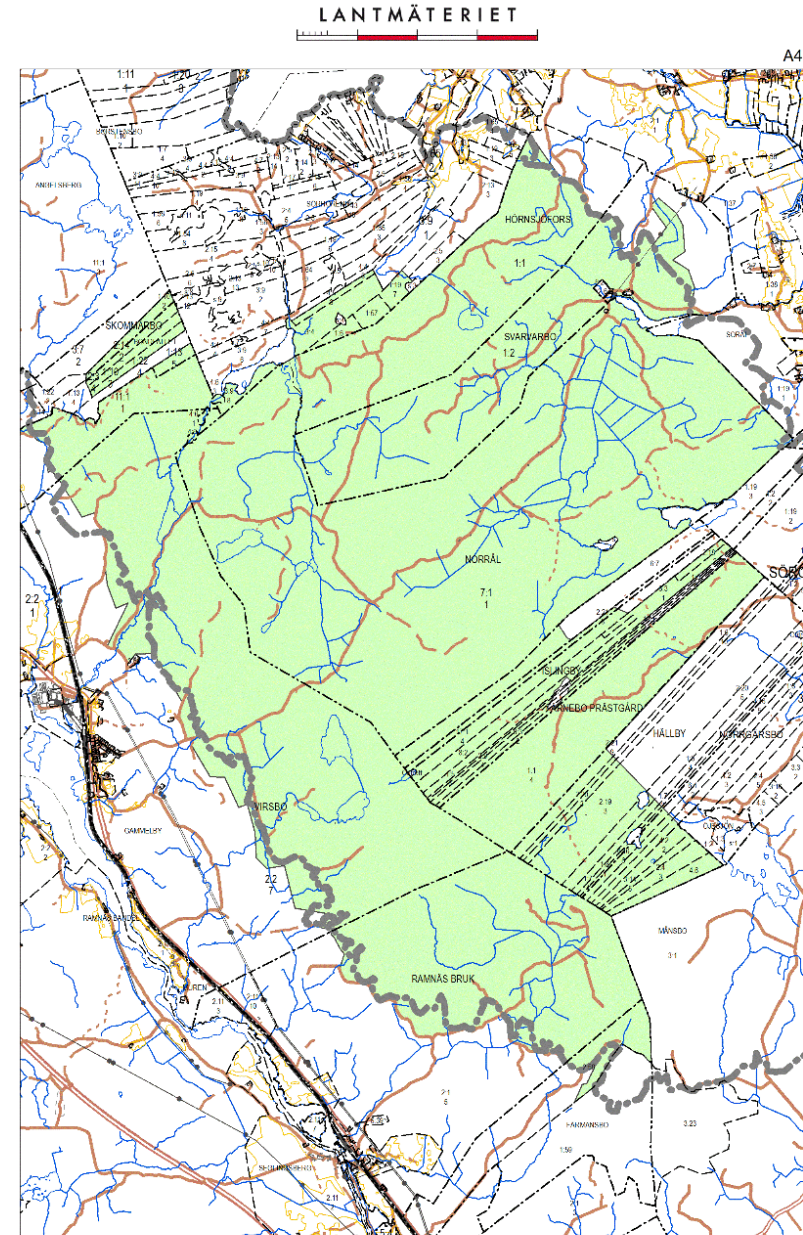
We have been able to retrieve and measure 80-85% of the boundary marks with very high accuracy.

The last property definitions will be handled during June-August 2020 depending of Corona restrictions.



NATURE RESERVE

In the southern part of the burnt area 6 500 hectares has been reserved as a nature reserve to protect species that are dependent of wild fires. This area has become a tourist attraction



LANTMÄTERIETS SUPPORT WITH GEODATA AND MAPS IN 2014

One of Lantmäteriets local land surveyors contacted our Director General and in a couple of hours a local printing house got access to printing files of the area.

From that moment all involved organisations had access to same printed maps instead of using at least 4 different map systems.

Information provided in different layers. (adequate geodata)



DELIVERING DATA TO FIGHT WILDFIRES AND PROTECT FORESTS IN SWEDEN 2018

16 APRIL 2020

PETER ADLER

SWEDISH MAPPING, CADASTRAL AND LAND REGISTRATION AUTHORITY

LANTMÄTERIET



WILDFIRES IN SWEDEN SUMMER 2018



REQUESTING THE SWEAF GEOCELL

July 19th, early morning Lantmäteriet requested the Swedish Civil Contingencies Agency (MSB) to send a formal request to the Swedish Armed Forces (SweAF) duty officer asking for support to the wildfire fighting by deploying the Geocell.



REQUESTING THE SWEAF GEOCELL

July 20th, afternoon
Lantmäteriet establish the SweAF Geocell at the regional crisis management HQ at Färila School, 350 km north of Stockholm.

24 hours Geosupport managed by 4 geo-analytics.

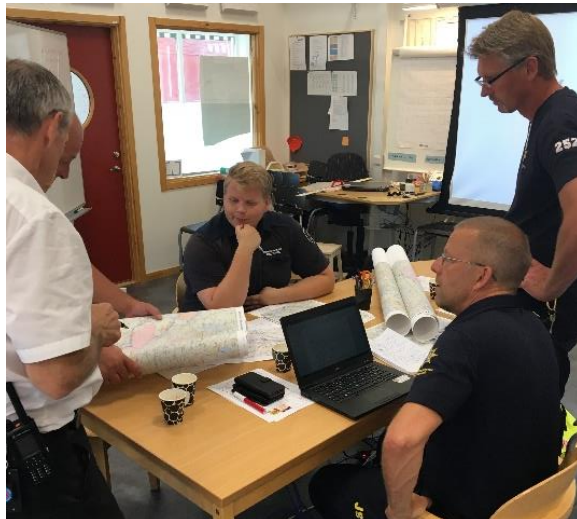


SUPPORTING THE RESCUE LEADERS AND ACTIVE PERSONNEL

Primary assignment of the Geocell was to support the operation with situational awareness, by producing every day approx.

- 700 maps, scale 50K, size A3
- 50 maps, scale 50K, size A0

Secondly to support analysis and decision-makers with geographic information.



DEPLOYED GEOCELL

Equipment

- 4 laptops
- A3-printer, ~1000 A3-maps/hour
- 42 inch plotter, ~20 A0-maps/hour
- NAS for data storage, UPS battery backup
- Ipad for collecting data and information
- Software: ArcGIS, FME, Global Mapper

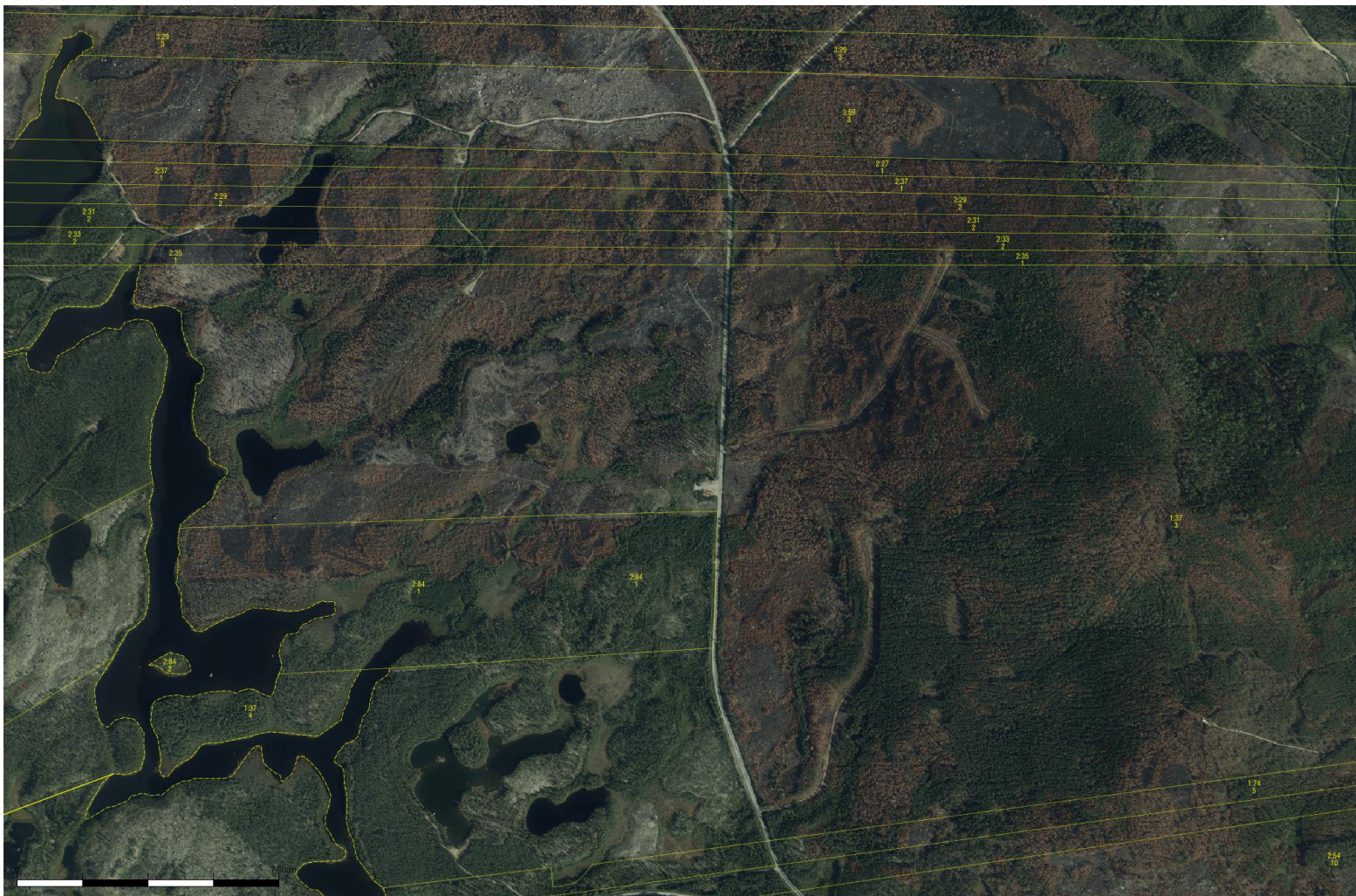
HW and SW has to work offline without internet access.

Logistic:

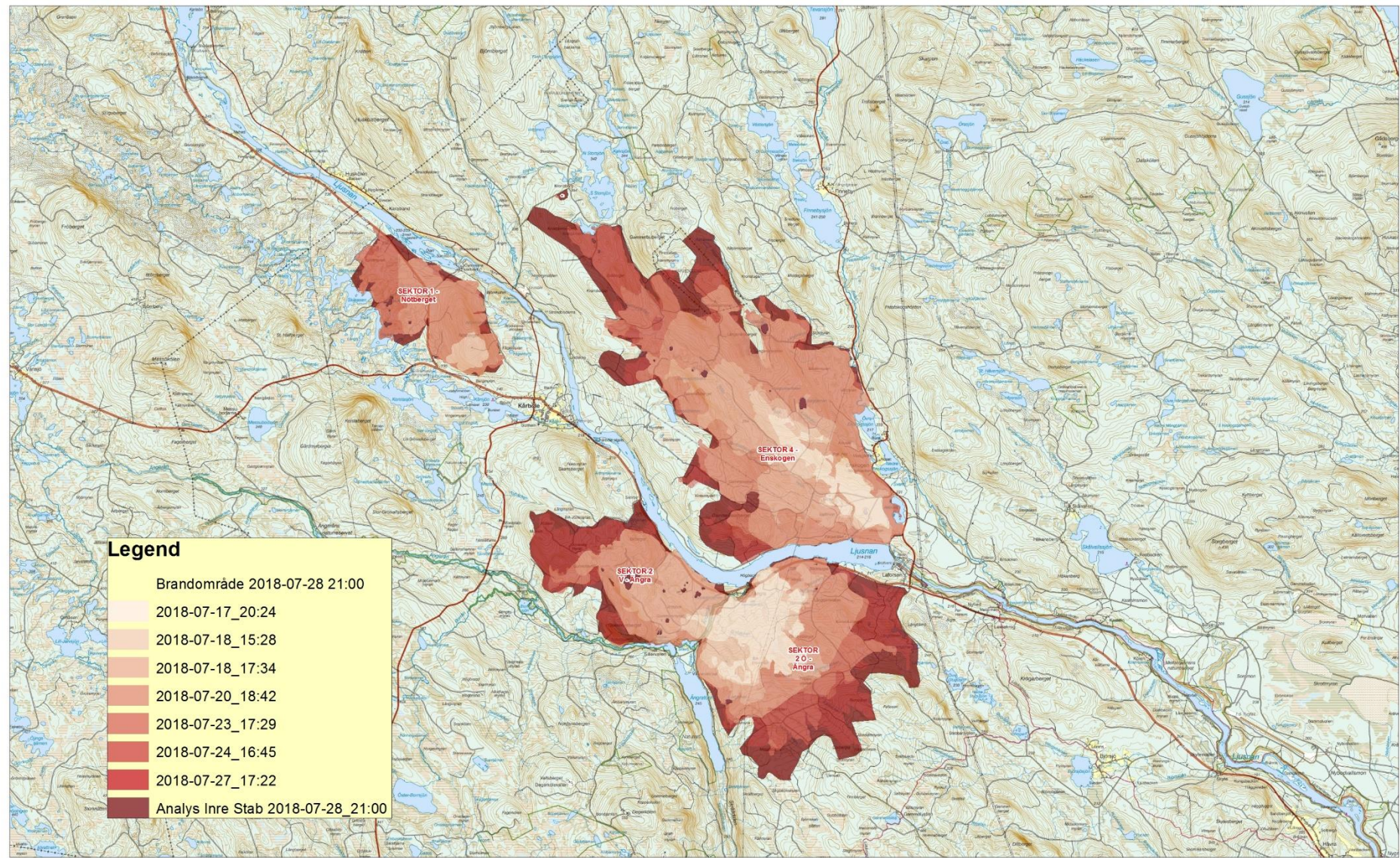
Self-supported for 3 days; food and sleeping.



ORTFOTO KÅRBÖLE



Brandutveckling satellit Källa: Copernicus/EU, samt analys Inre Stab



Legend

Brandområde 2018-07-28 21:00

- 2018-07-17_20:24
- 2018-07-18_15:28
- 2018-07-18_17:34
- 2018-07-20_18:42
- 2018-07-23_17:29
- 2018-07-24_16:45
- 2018-07-27_17:22
- Analys Inre Stab 2018-07-28_21:00



Producerad av:
 Försvarens tekniska stödenhet
 geografiska information (Geo SE)
 Engangsmaterial © Lantmäteriet
 Överlagrad information: COPERNICUS European Union, ESA samt Analys från Inre Stab Fält
 Papperstitel: A 4
 Produkt ID: SE-EX-182229
 Version: 1
 Datum: 29 JULI 2018

Skilj och koordinatssystem
 Färg skilj i en eller flera skilj i skilj
 Skilj skilj i en eller flera skilj i skilj
 Skilj skilj i en eller flera skilj i skilj
 Skilj skilj i en eller flera skilj i skilj

LESSONS LEARNED

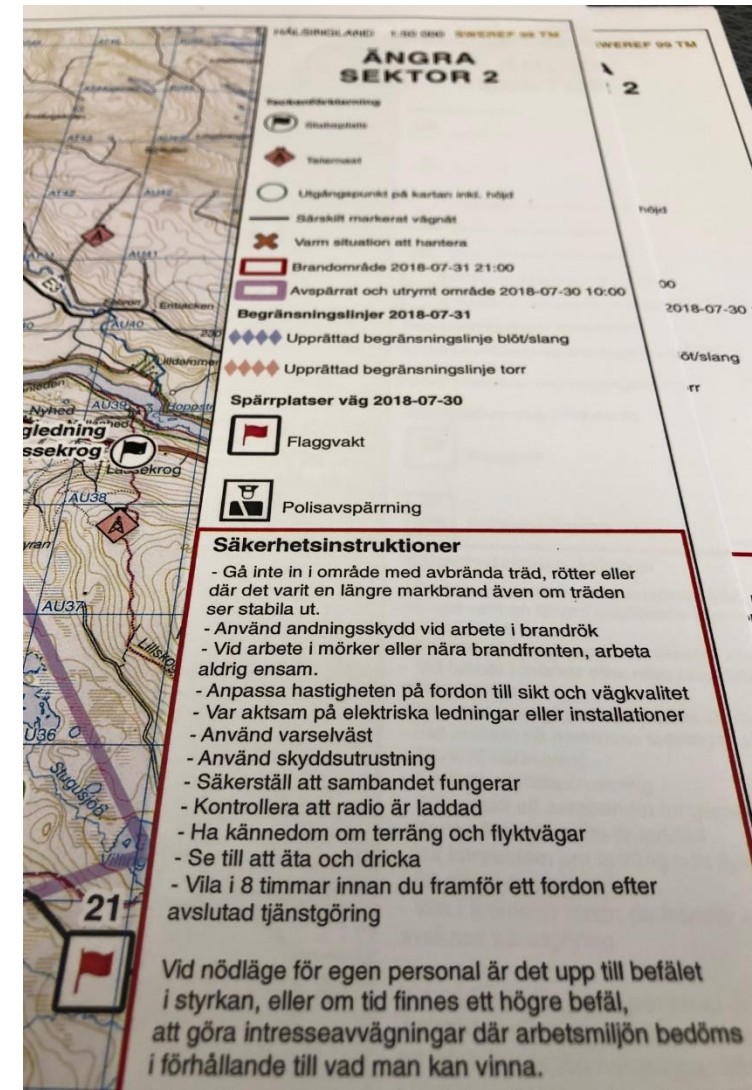
Feedback from staff and field personnel **very positive**.

The Geocell filled a previously missing resource and **added a new dimension** to the operation.

Lack of knowledge in respect to the usefulness of geographic information and GIS, especially thematic data, e.g. biomass, vegetation, proximity to water, soil humidity.

First time a Geocell was incorporated in a civil crisis management staff – need to define requirements, responsibilities and organisation.

Huge amount of collaborating organisations, apart from Swedish authorities and NOGs; Poland, Germany, Italy, France, Portugal, Lithuania, Finland, Norway, Denmark and six firefighters from Greenland.



FACTS ABOUT THE FIRES AROUND KÅRBÖLE

Animated video in Swedish at

<https://www.ljusdal.se/samhallegator/krisochsakerhet/informationombranderna2018/faktaombranderna.4.12be7f0e165140d0d1895a64.html>

THANK YOU FOR LISTENING!

For questions and information, feel free to contact:

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