

*Presented at the TIC Working Week 2016,  
May 2-6, 2016 in Christchurch, New Zealand*

# URBAN TRANSFORMATION FOR THE PREVENTION OF DISASTER



[http://www.kiruna.se/ImageVaultFiles/id\\_11246/cf\\_5/1.jpg](http://www.kiruna.se/ImageVaultFiles/id_11246/cf_5/1.jpg)

Marija Juric

# Historically about Kiruna and mine



<https://userscontent2.emaze.com/images/feb9f04b-8133-47ef-b18b-58d54d294c75/3ad496fe-bf6a-43ed-bfad-cb5553f42387.jpg>

# Year 1908



[http://www.skogsmuseet.se/sites/default/files/styles/gallery\\_image\\_large/public/10002066\\_low.jpg?itok=Aj7OUf5m](http://www.skogsmuseet.se/sites/default/files/styles/gallery_image_large/public/10002066_low.jpg?itok=Aj7OUf5m)

# Year 1950



<https://www.pinterest.com/pin/547539267172323520/>



[http://assets.ur.se/id/181493/images/1\\_xl.jpg](http://assets.ur.se/id/181493/images/1_xl.jpg)

# LKAB



[http://www.metallerochgruvor.se/sites/default/files/story/2015/maj/106605\\_lkabkiruna.jpg](http://www.metallerochgruvor.se/sites/default/files/story/2015/maj/106605_lkabkiruna.jpg)

# Kiruna today



[https://www.informationsverige.se/Svenska/Leva-och-bo/lan-ochkommuner/PublishingImages/Sidor/Kiruna/kiruna\\_vinter.jpg](https://www.informationsverige.se/Svenska/Leva-och-bo/lan-ochkommuner/PublishingImages/Sidor/Kiruna/kiruna_vinter.jpg)



<http://www.nordnorge.com/sites/n/nordnorge.com/files/4cd0675bde59c407185e804a607b392c.jpg>



<http://www.kirunalapland.se/wp-content/uploads/2015/11/Aurora-Village-foto-Lights-Over-Lapland-Chad-Blakley1.jpg>





- **Changes in the physical environment caused by the mining operations**  
**-cracks, collapse of land, pollution of water and soil, dust, poor air quality, etc.**



<http://www.anasys.se/vandring/kebne99>

/kebne9.jpgWU2pHKYUprU/UTMtdi5CJJI/AAAAAAAABOo/j24w4MqrtJc/s320/sprickor.jpg



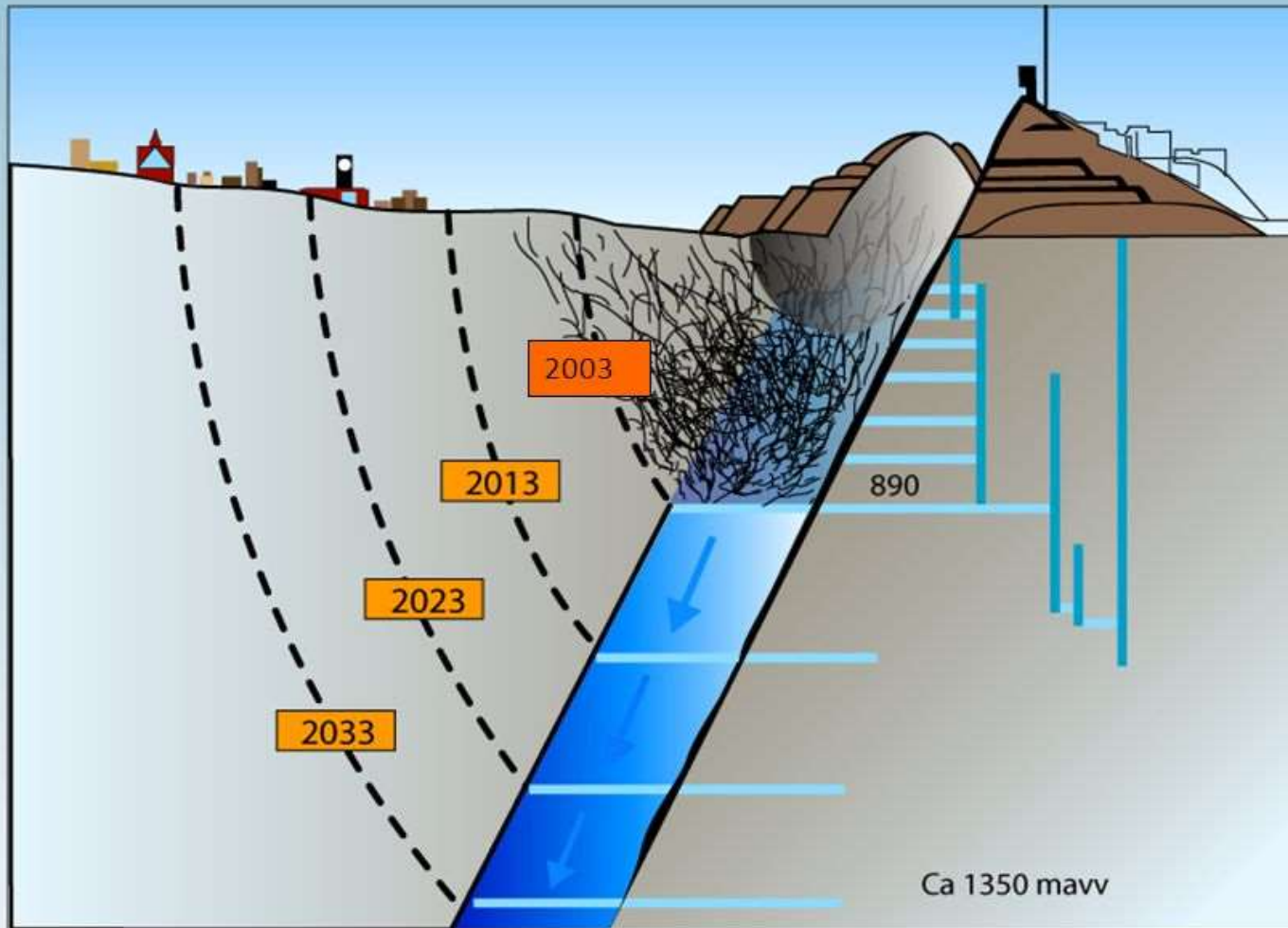
<http://storage.cybersite.se/files/2d4024d2-c748-4e2b-bde3-a6aacffcdec2/acd3f300-73a2-49cc-ab33-12586f9604ca2.jpg>



<http://1.bp.blogspot.com/>

WU2pHKYUprU/UTMtdi5CJJI/AAAAAAAABOo/j24w4MqrtJc/s320/sprickor.jpg





[http://images.slideplayer.se/8/2023090/slides/slide\\_4.jpg](http://images.slideplayer.se/8/2023090/slides/slide_4.jpg)



[http://i.dailymail.co.uk/i/pix/2013/09/05/article-2412126-1BA25187000005DC-227\\_634x632.jpg](http://i.dailymail.co.uk/i/pix/2013/09/05/article-2412126-1BA25187000005DC-227_634x632.jpg)

LANTMÄTERIET





[http://www.kiruna.se/ImageVaultFiles/id\\_13227/cf\\_29/gp1logp2\\_zoom.jpg](http://www.kiruna.se/ImageVaultFiles/id_13227/cf_29/gp1logp2_zoom.jpg)

# New Kiruna center





[http://www.white.se/app/uploads/2014/05/Kiruna\\_square\\_winter\\_w\\_-736x460.jpg](http://www.white.se/app/uploads/2014/05/Kiruna_square_winter_w_-736x460.jpg)

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