

# Russian militarization of Crimea's nature



Made for Ukraine War Environmental Consequences Work Group

Eight years have passed since Russia annexed Crimea. During that time, Russia has converted several Emerald Network\* sites on the Kerch Peninsula into military proving grounds. Thousands of hectares of steppe biotopes found only rarely in Europe now resemble wastelands following regular military exercises conducted by the Russian armed forces.

\* The Emerald Network is analogous to Natura 2000 (European Union), a network of protected areas that protect rare species and habitats in Europe.

## The Kerch Peninsula, Crimea



Legend

- Kerch** Cities
- Emerald Network sites
- Areas used for military exercises by Russia (2014-2022)\*

\* Areas determined using satellite imagery showing the extent of lands damaged during military exercises



### 12

military exercises per year on average

Russia conducted in at the Opuk Proving Ground.

### 95

Trainings, maneuvers, and exercises conducted by Russia at Opuk Training Ground, 2014-2021

## Military exercises not "leave no trace" for nature

These active proving grounds are some of the last places where rare steppe bird species were found in Ukraine. It is likely impossible to estimate their population today, but a reduction is highly probable.

Prior to Crimea's annexation and the start of training exercises, the Kerch Peninsula was home to:




30%

of Europe's wintering great bustards (*Otis tarda*). This bustard is the largest flying bird (by weight) in the world.



100%

of little bustard (*Tetrax tetrax*) nesting sites in Ukraine are located on the Kerch Peninsula. Little bustards are a rare steppe species in Europe.



№ 1

the area likely contains the largest habitat for wild tulip (*Tulipa suaveolens*) in Ukraine.

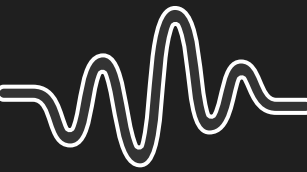
- Species listed in:
- IUCN Red List
  - Red Book of Ukraine
  - Europe's Red List
  - Bern Convention

## Opuk and Chauda Proving Grounds (shown together)

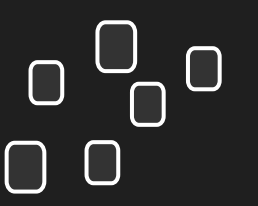
Kerch peninsula Emerald site  
about 55 000 hectares

## Dangers of munitions explosions in the Black Sea


Blast waves and acoustic pollution



Munitions fragments



Unused reagents

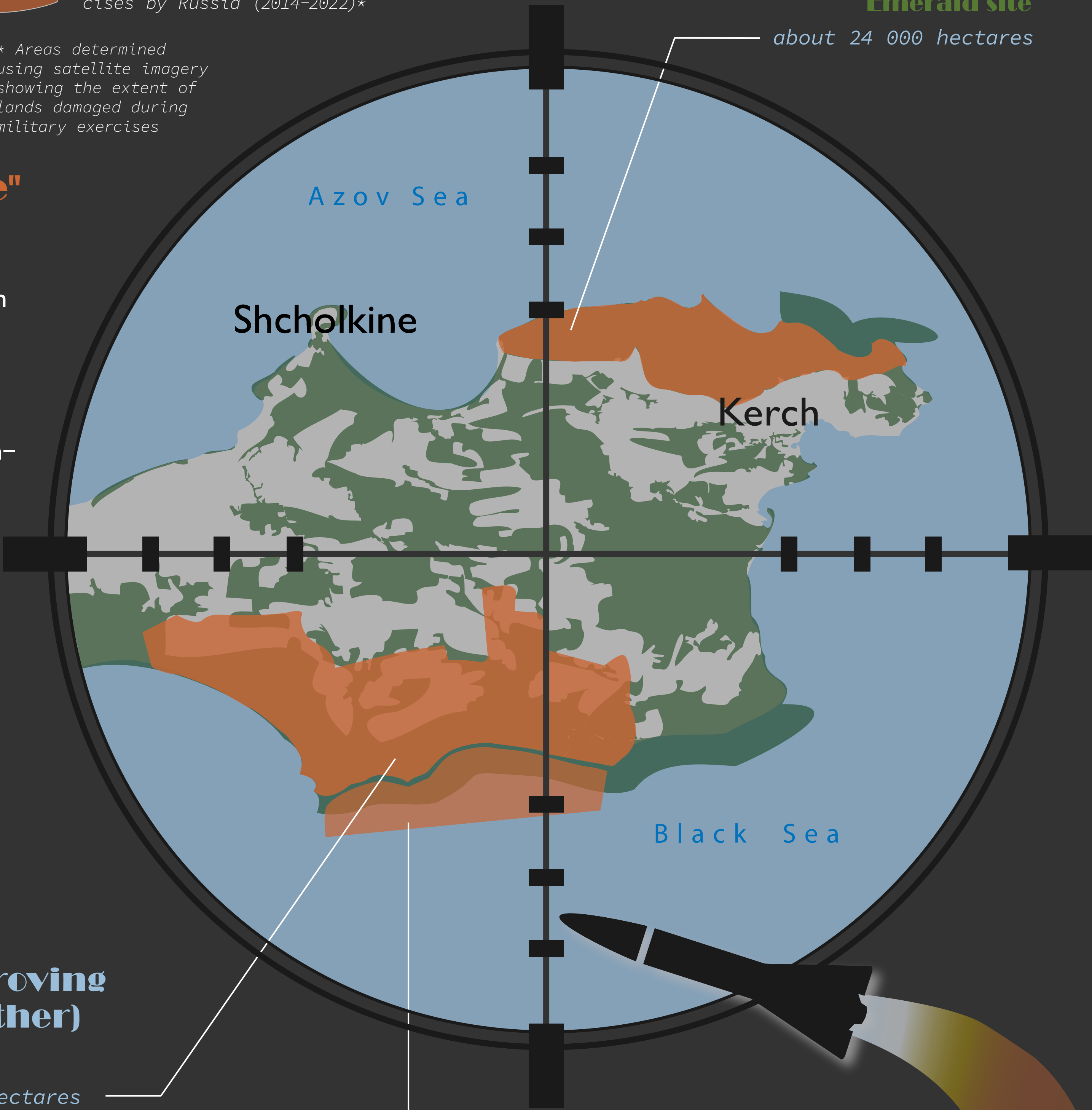


During explosive reactions, unused reagents fall directly into water, where they disperse rapidly.

Chemical elements contained in explosives kill plankton, result in acoustic injuries to cetaceans (such as dolphins), and concentrate heavy metals in fish.

## Bagerovskii Proving Ground

Karalarskiy Regional Landscape Park  
Emerald site  
about 24 000 hectares



## Opuk proving ground' restricted water zones

Kerch peninsula Emerald site

Most ground-launched munitions fired by Russia ended up in the Black Sea due to insufficient land area for testing long-range missiles.

This image illustrates detonation of a "vacuum bomb," a thermobaric weapon tested during the "Caucasus-2016" military exercises at Opuk Proving Ground.

A thermobaric weapon is the most powerful non-nuclear explosive device in the world.

By Valeriia Kolodezhna  
Translated by Jennifer Castner

Image credit: Ministry of Defense of the Russian Federation; photo by Yuriy Yuganson

Source: [CrimeaSOS](#)

Field of wild tulip (*Tulipa suaveolens*) completely destroyed by military equipment following Russian training exercises at Opuk Proving Ground.

Photographed (A and B) from the same angle with a view of Mount Opuk.

