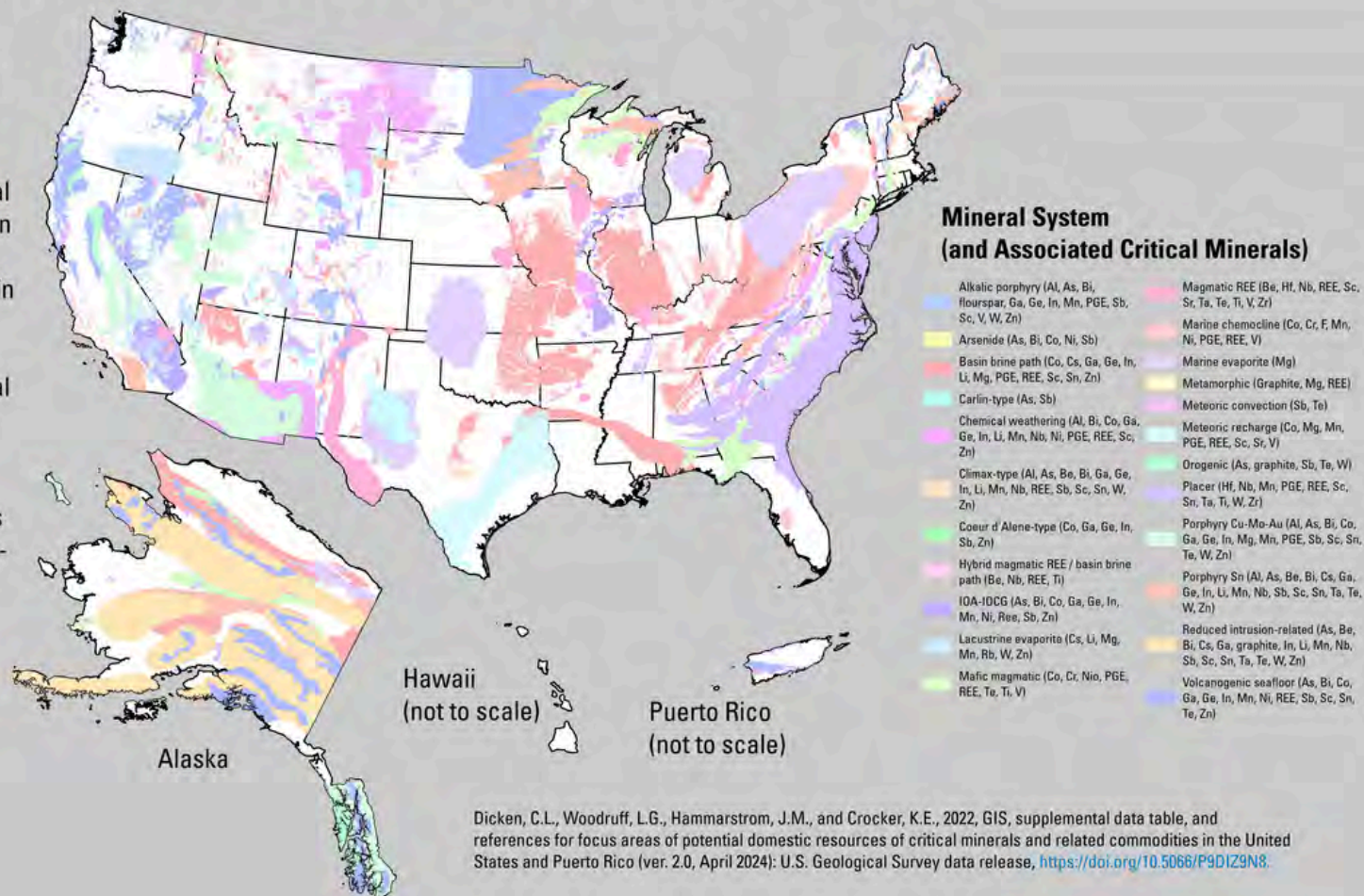


Areas with Potential to Host Subsurface Critical Minerals

Through the Earth Mapping Resources Initiative, USGS brings together federal and state experts to:

- Identify areas with mineral systems that might contain critical minerals and collect focused data within these areas
- Accelerate critical mineral resource assessments
- Show States, resource managers and developers where emerging minerals-dependent technologies may create economic opportunities



U.S. Department of the Interior
U.S. Geological Survey

Original

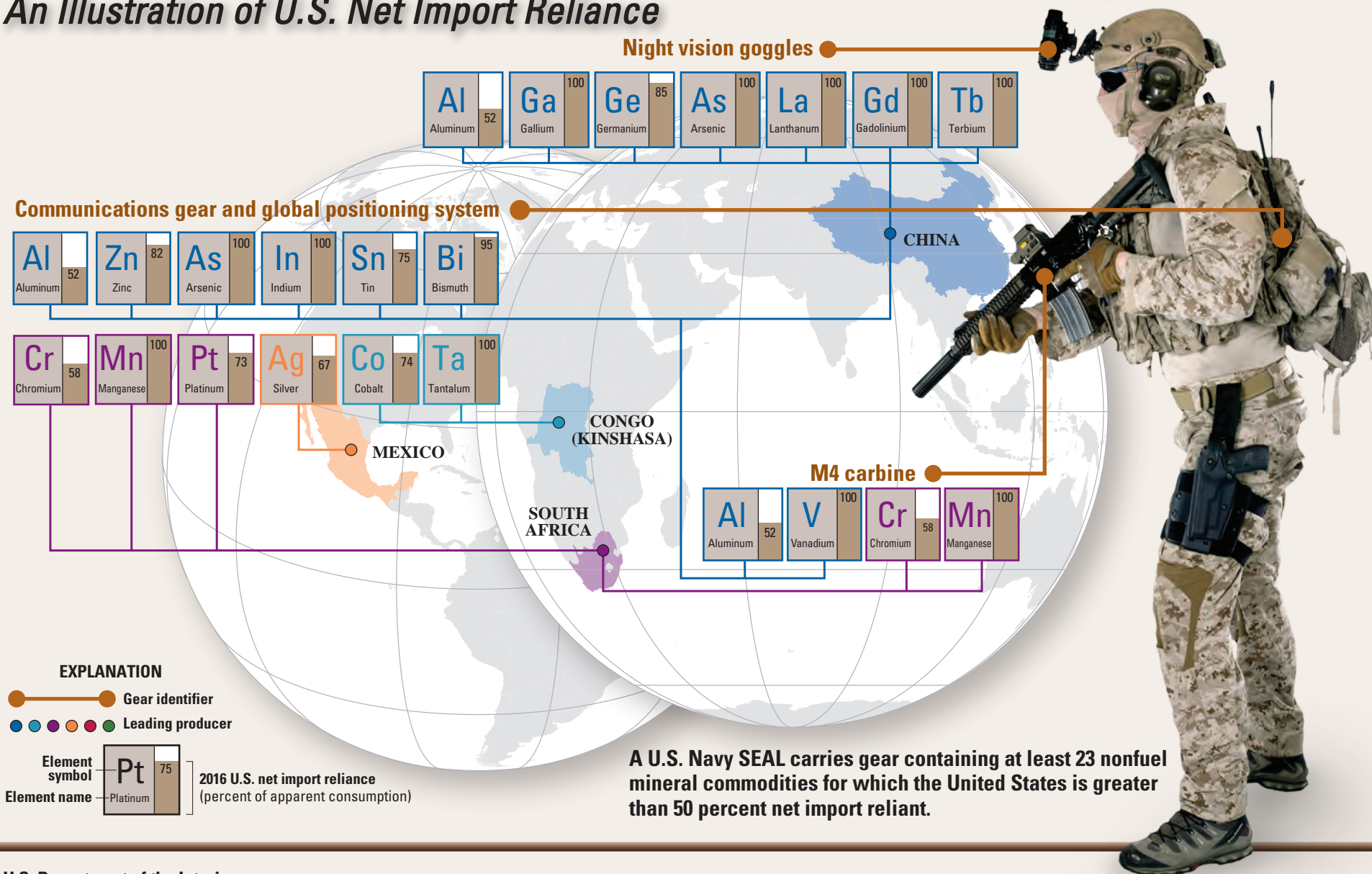
Thumbnail

Medium

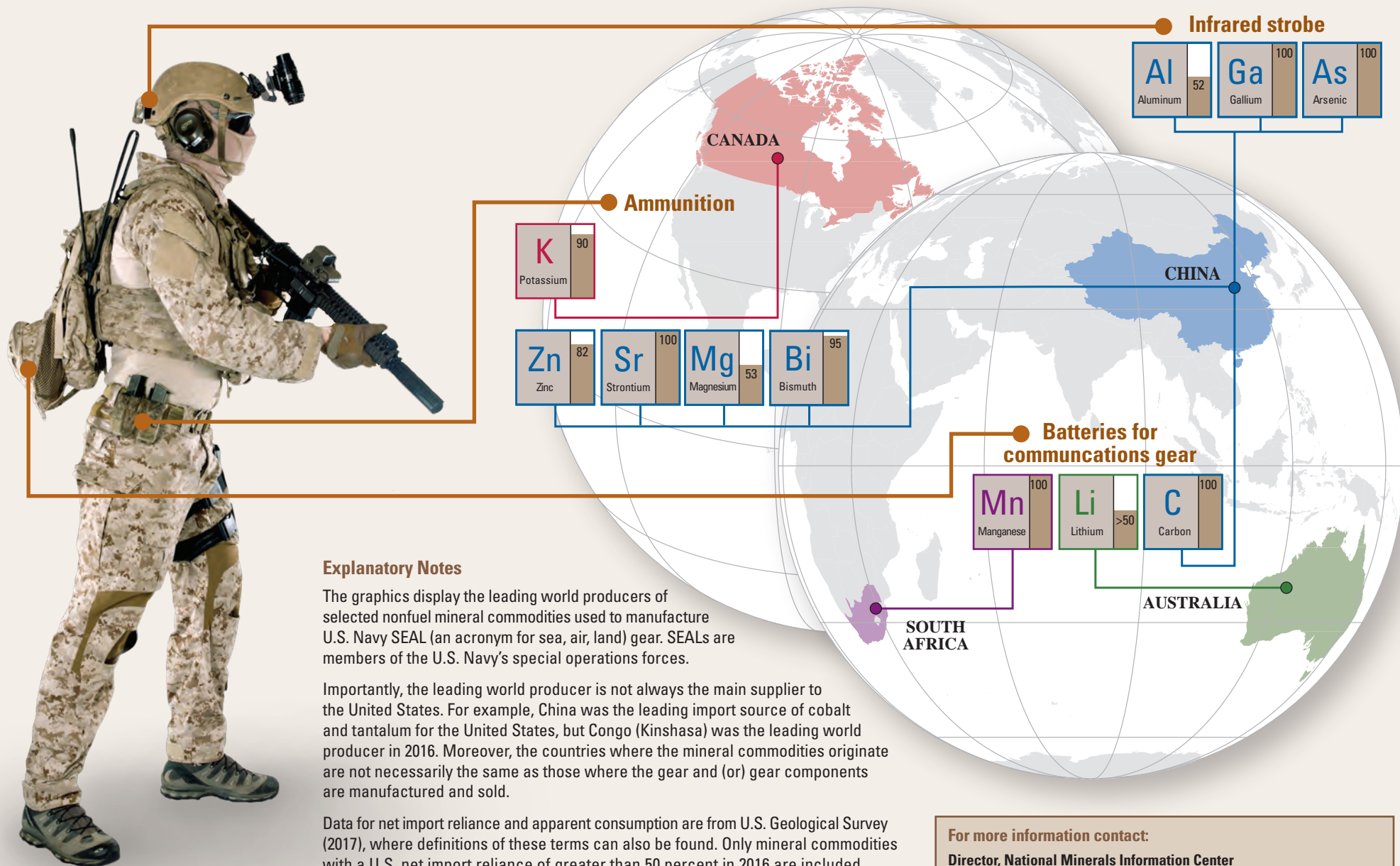
Was this page helpful?

Globally Sourced Mineral Commodities Used In U.S. Navy SEAL Gear

An Illustration of U.S. Net Import Reliance



A U.S. Navy SEAL carries gear containing at least 23 nonfuel mineral commodities for which the United States is greater than 50 percent net import reliant.



Explanatory Notes

The graphics display the leading world producers of selected nonfuel mineral commodities used to manufacture U.S. Navy SEAL (an acronym for sea, air, land) gear. SEALs are members of the U.S. Navy's special operations forces.

Importantly, the leading world producer is not always the main supplier to the United States. For example, China was the leading import source of cobalt and tantalum for the United States, but Congo (Kinshasa) was the leading world producer in 2016. Moreover, the countries where the mineral commodities originate are not necessarily the same as those where the gear and (or) gear components are manufactured and sold.

Data for net import reliance and apparent consumption are from U.S. Geological Survey (2017), where definitions of these terms can also be found. Only mineral commodities with a U.S. net import reliance of greater than 50 percent in 2016 are included. The U.S. net import reliance for lithium was greater than 50 percent in 2016, but the actual percentage is withheld to avoid disclosing company proprietary production information. Carbon refers to natural graphite, magnesium refers to magnesium compounds (rather than magnesium metal), and potassium refers to potash.

Reference Cited

U.S. Geological Survey, 2017, Mineral commodity summaries 2017: U.S. Geological Survey, 202 p. (Also available at <https://doi.org/10.3133/70180197>.)

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Photographs of the U.S. Navy SEALs are courtesy of the U.S. Navy.

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Or visit the USGS National Minerals Information Center website at <https://minerals.usgs.gov/minerals/>

2025 DRAFT LIST OF CRITICAL MINERALS

THE LIST OF CRITICAL MINERALS INFORMS:



**SUPPLY CHAIN
RISK
MITIGATION**



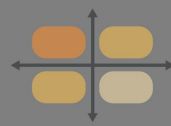
**FEDERAL POLICY
& STRATEGY**



STOCKPILES



**PERMITTING
PROCESSES**



**SCENARIO
PLANNING**



**PRIVATE
INVESTMENT**

USGS METHODOLOGY

84
MINERAL
COMMODITIES

Commodities
are grouped
into supply
chains



ARE THE IMPACTS OF
TRADE DISRUPTIONS
ON THE US ECONOMY
SIGNIFICANT?

Economic Effects
Assessment

400+
INDUSTRIES

Scenario Probabilities
Assessment

1,200+
TRADE DISRUPTION
SCENARIOS

RISK CATEGORIZATION

LIKELIHOOD of a scenario occurring \times **IMPACT** of the scenario = **RISK** probability weighting

If **RISK** is High, Elevated,
or Moderate ☒ **LISTED**

If **RISK** is Limited, Negligible,
or Negative ☐

IS THERE A SINGLE
DOMESTIC PRODUCER
FOR THAT MINERAL?

☒ **LISTED**

MINERALS IN FOCUS

62

Sm
SAMARIUM

LIST RANKING:
1

LEADING
PRODUCER:
China

INDUSTRIES
AT RISK:
**Defense
Navigation**



45

Rh
RHODIUM

LIST RANKING:
2

LEADING
PRODUCER:
South Africa

INDUSTRIES
AT RISK:
**Automotive
Electronics**



41

Nb
NIOBIUM

LIST RANKING:
10

LEADING
PRODUCER:
Brazil

INDUSTRIES
AT RISK:
**Construction
Medical
Equipment**



CRITICAL MINERALS

Ranked by Risk Classification

Samarium

Rhodium

Lutetium

Terbium

Dysprosium

Gallium

Germanium

Gadolinium

Tungsten

Niobium

Magnesium

Yttrium

Potash

Hafnium

Aluminum

Thulium

Neodymium

Silicon

Antimony

Barite

Graphite

Indium

Vanadium

Palladium

Manganese

Lanthanum

Praseodymium

Titanium

Copper

Platinum

Ruthenium

Zinc

Iridium

Cobalt

Erbium

Chromium

Silver

Tin

Bismuth

Nickel

Tantalum

Holmium

Fluorspar

Lithium

Rhenium

Cerium

Lead

Beryllium

Europium

Ytterbium

High
Elevated
Moderate

Single Point
of Failure

Zirconium

Qualitatively
Assessed

Cesium
Rubidium
Scandium



2025 List of Critical Minerals Methodology
<https://doi.org/10.3133/ofr20251047>



What are critical minerals?
<https://www.usgs.gov/programs/mineral-resources-program/science/what-are-critical-minerals-0>