

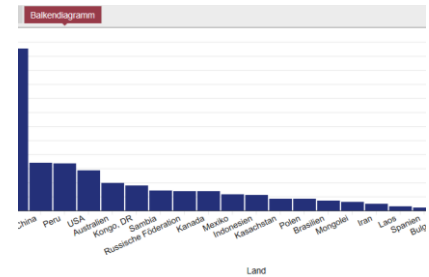
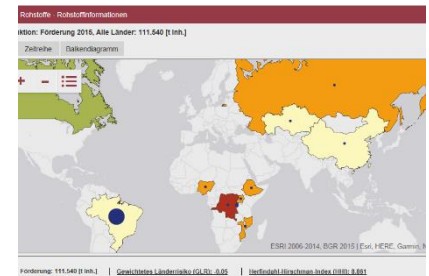
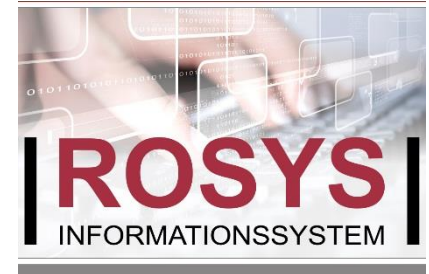
CRM Data Management Workshop, BAM, Berlin,
26.11.18

ROSYS: The raw materials information
system by the German Mineral Resources Agency

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German Mineral Resources Agency (DERA) at the
Federal Institute for Geosciences and Natural Resources (BGR)



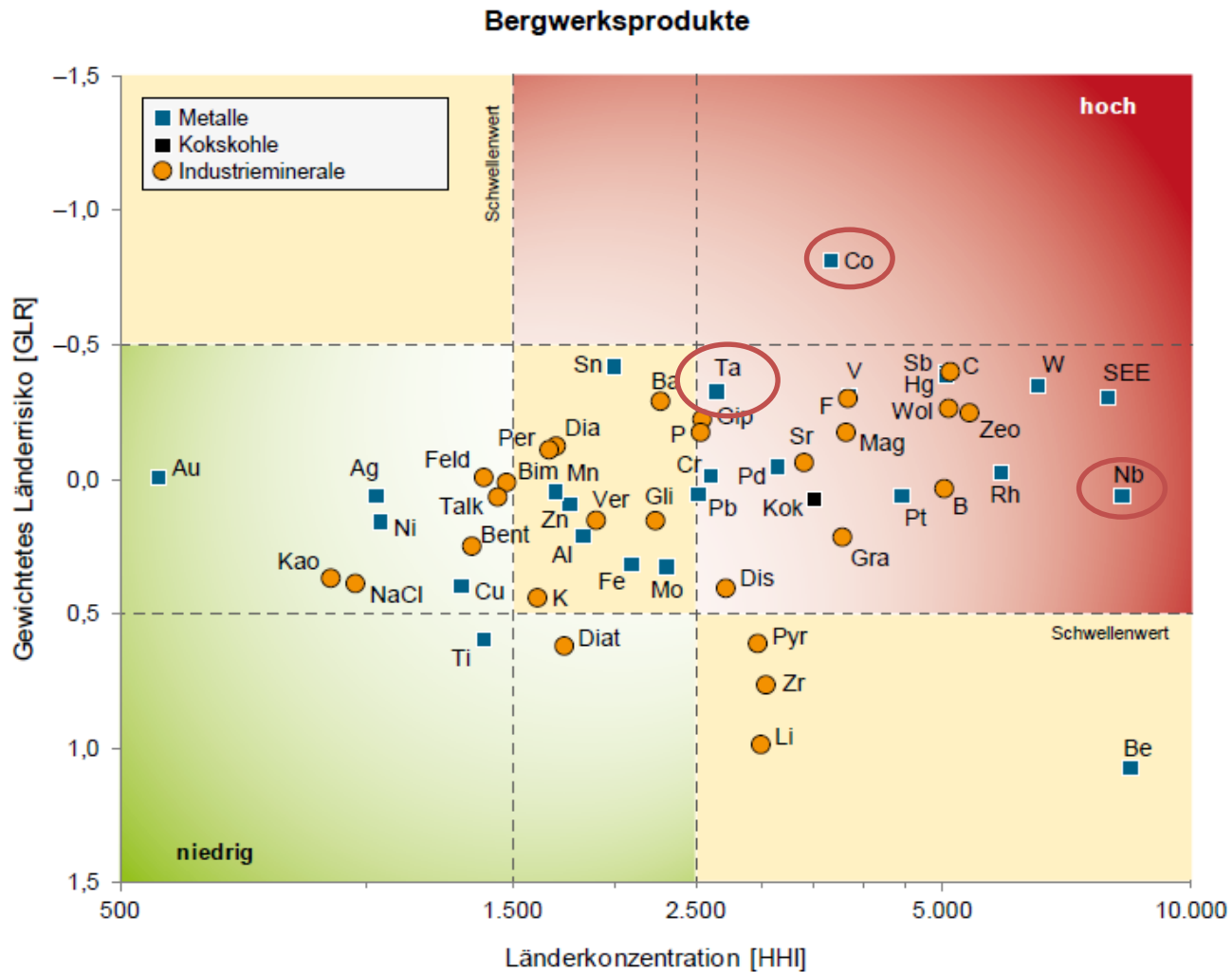
The Federal Institute for Geosciences and Natural Resources is the central geoscientific authority providing advice to the German Federal Government in all geo-relevant questions. It is subordinate to the Federal Ministry for Economic Affairs and Energy (BMWi).



- **The information system is a combination of various (2 major) databases, which are maintained and updated by BGR-experts**
- **ROSYS contains around 80 mineral and energy raw materials on a global scale**
- **It also has a focus on German imports and highlights Germany's strong dependence on raw material imports**
- **The goal of ROSYS is a first broad access to questions of the raw materials markets**
- **For more detailed information, the DERA also supplies consulting services and detailed reports on raw materials**
- **The mandate is to increase information and transparency on the raw materials market and highlight deteriorating developments in supply/demand or price**

- **In order to do so, the information system uses two (for now) indicators to quantify the risk:**
 - **Globally weighted governance risk**
 - Measure of a country's political stability and governance; composite index of 6 dimensions: Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption
 - The indicator ranges from -2.5 for very volatile countries to +2.5 for very safe countries
- **Herfindahl-Hirschman-Index (HHI)**
 - Measure of market concentration (country competition)
 - < 1500 = low market concentration
 - > 1500 & < 2500 = moderate market concentration
 - > 2500 = high market concentration

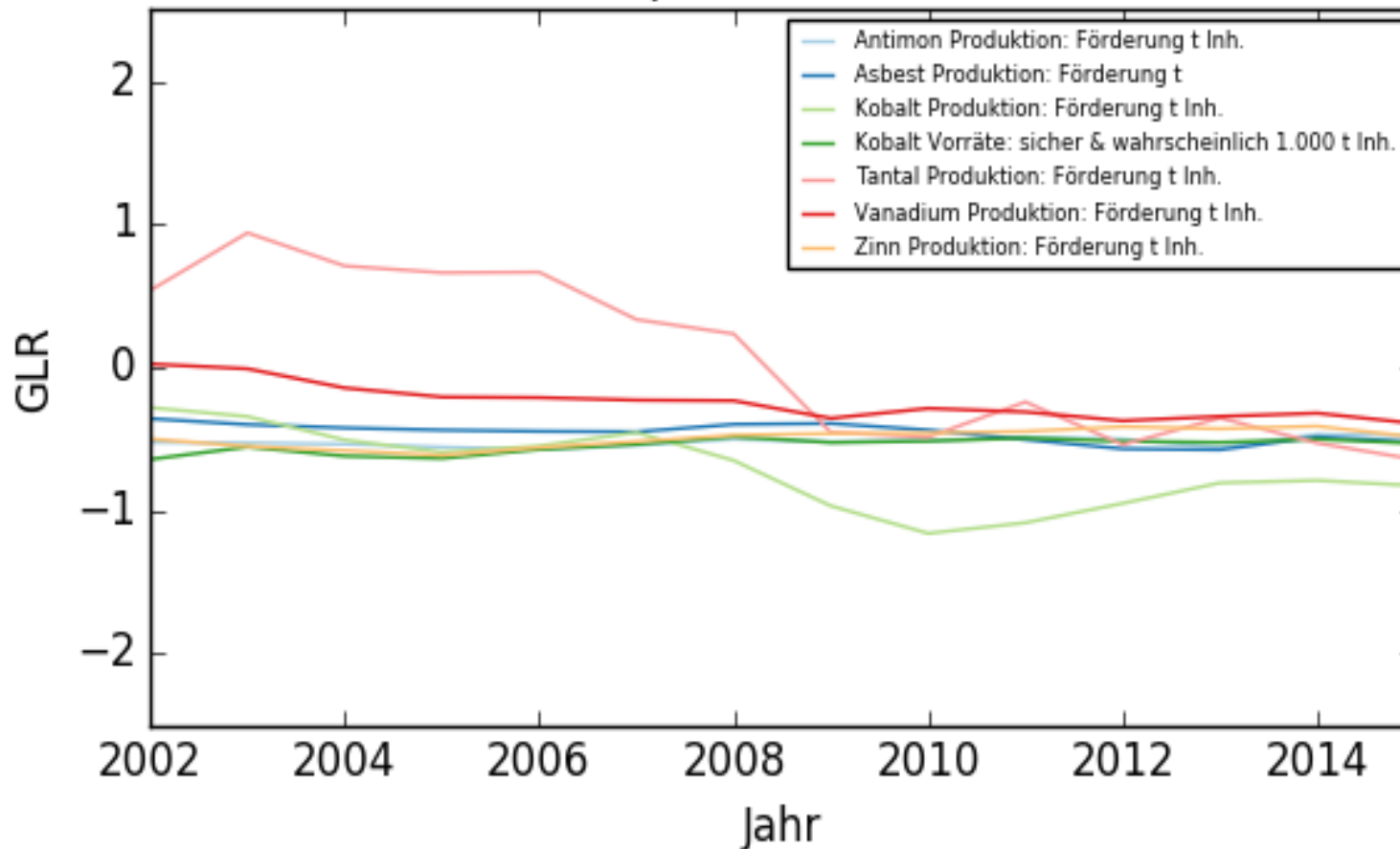
DERA Report 2016 – Critical Resources



■ = Risikogruppe 1 ■ = Risikogruppe 2 ■ = Risikogruppe 3

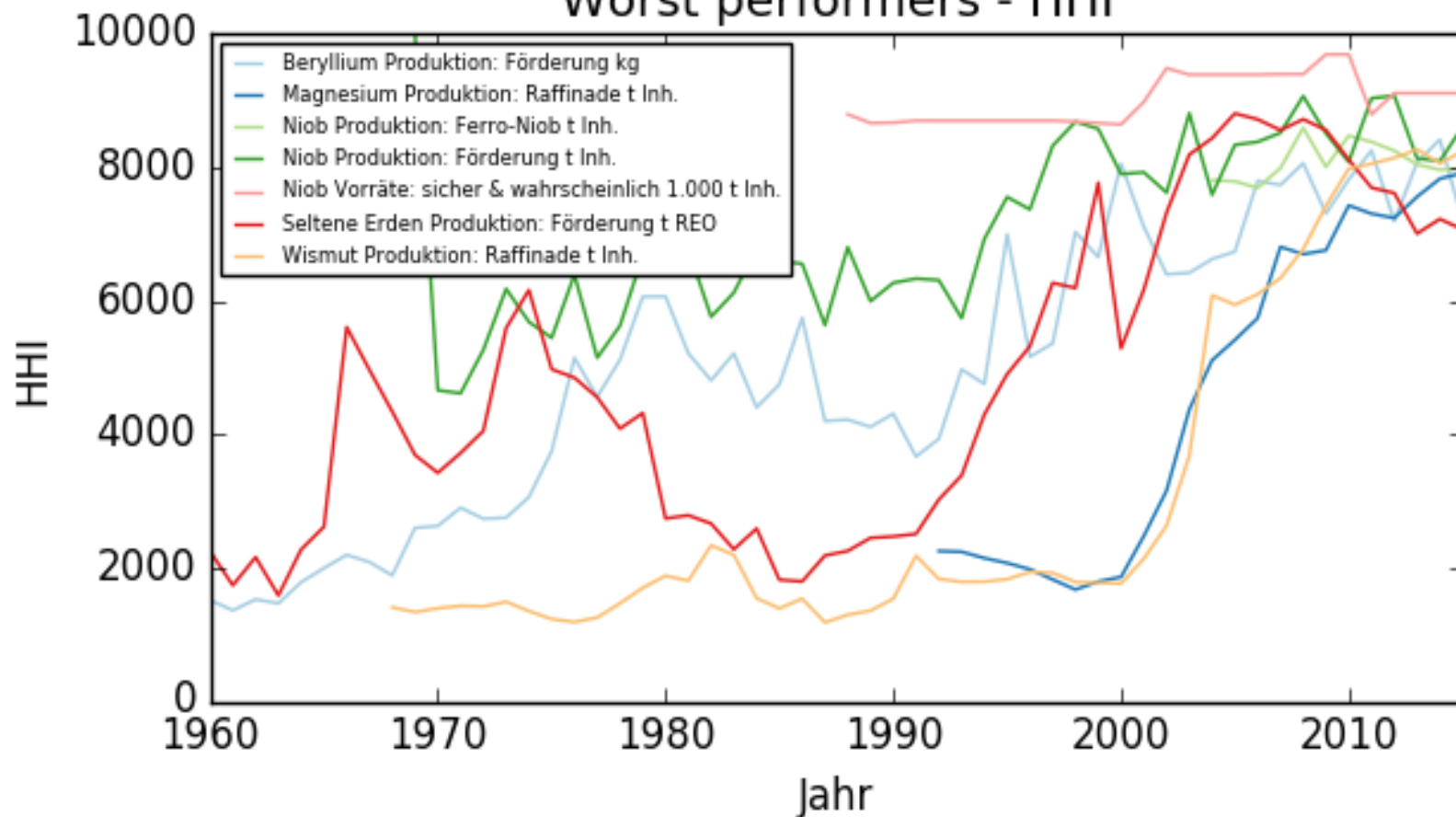
Globally Weighted Governance Risk

Worst performers - GLR



Market Concentration

Worst performers - HHI



ROSYS – DERA's Raw Materials Information System

ROSYS INFORMATIONSSYSTEM

Rohstoffinformationssystem

BGR Bundesanstalt für
Geowissenschaften
und Rohstoffe

DERA Deutsche
Rohstoffagentur
Bundesanstalt für Geowissenschaften und Rohstoffe

Mineralische Rohstoffe ▾ Energierohstoffe ▾ Rohstoffsituation Deutschland ▾



Willkommen bei der Deutschen Rohstoffagentur (DERA) in der Bundesanstalt für Geowissenschaften und Rohstoffe (BGR). Hier können Sie sich über aktuelle und historische Entwicklungen auf den Rohstoffmärkten informieren.



Mineralische Rohstoffe

Rohstoffinformationen

Länderinformationen



Energierohstoffe

Rohstoffinformationen

Länderinformationen



Rohstoffsituation Deutschland

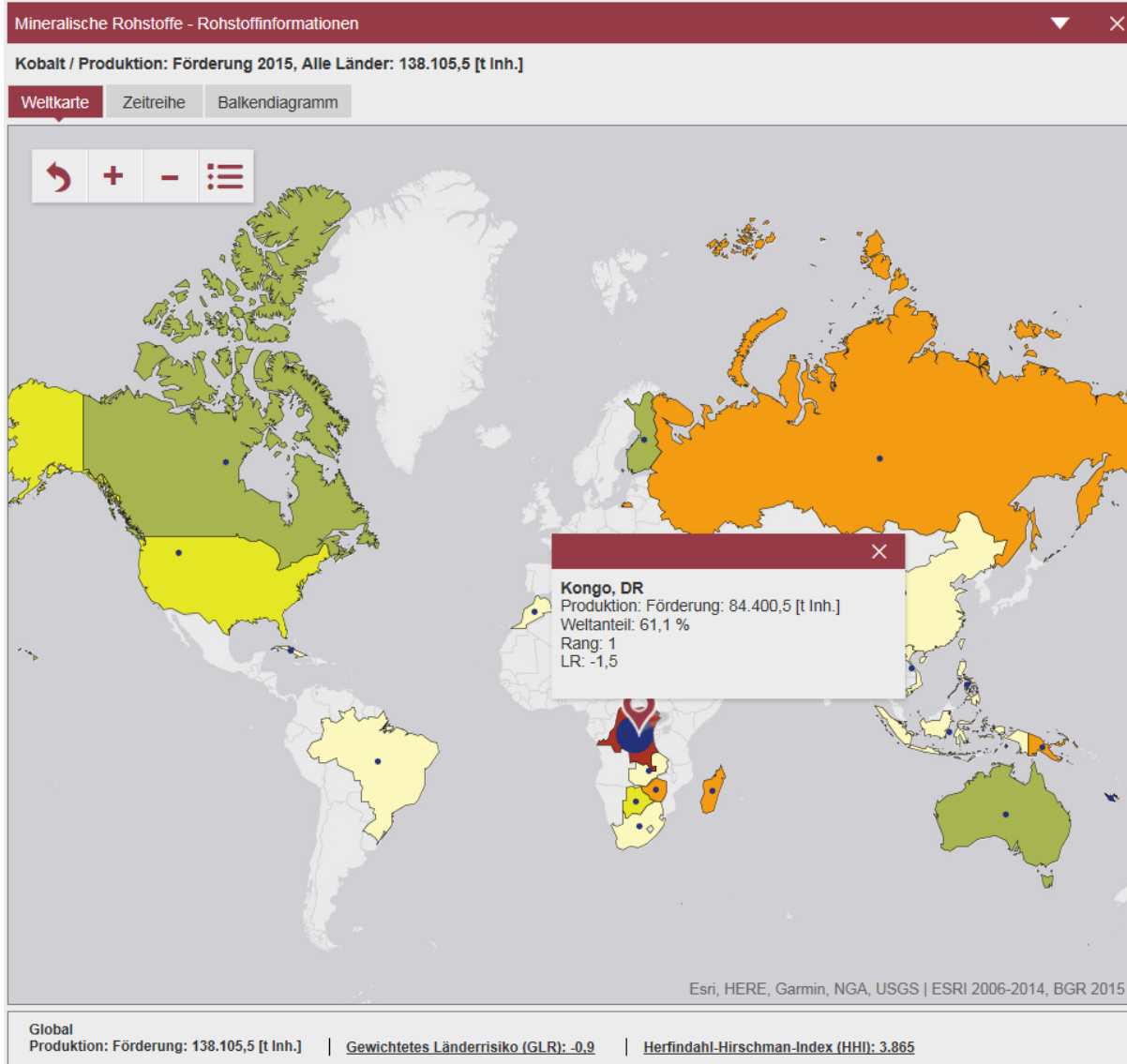
Importe Deutschland - nach
Rohstoff

Importe Deutschland - nach
Land

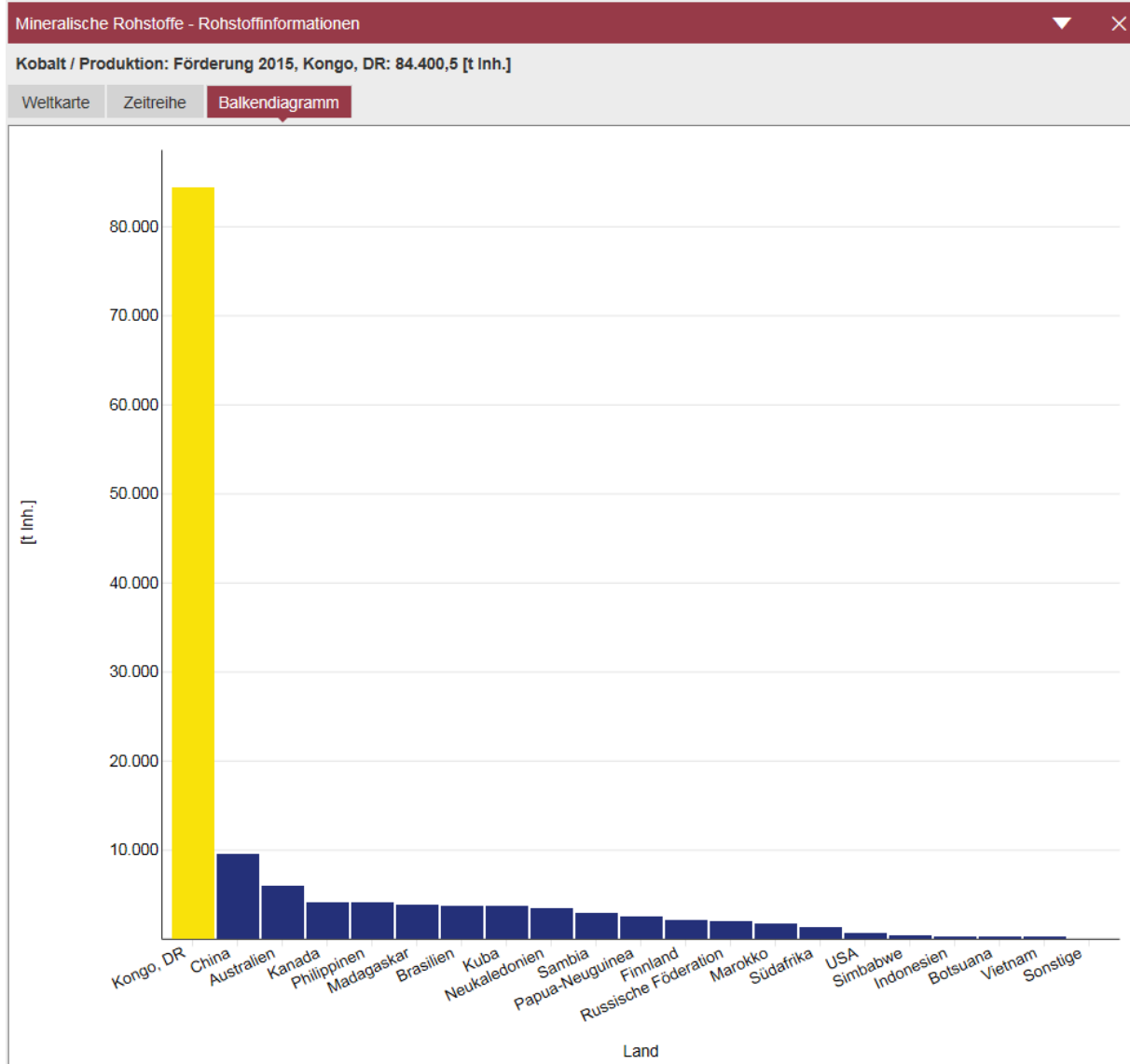
Mit freundlicher Unterstützung von:



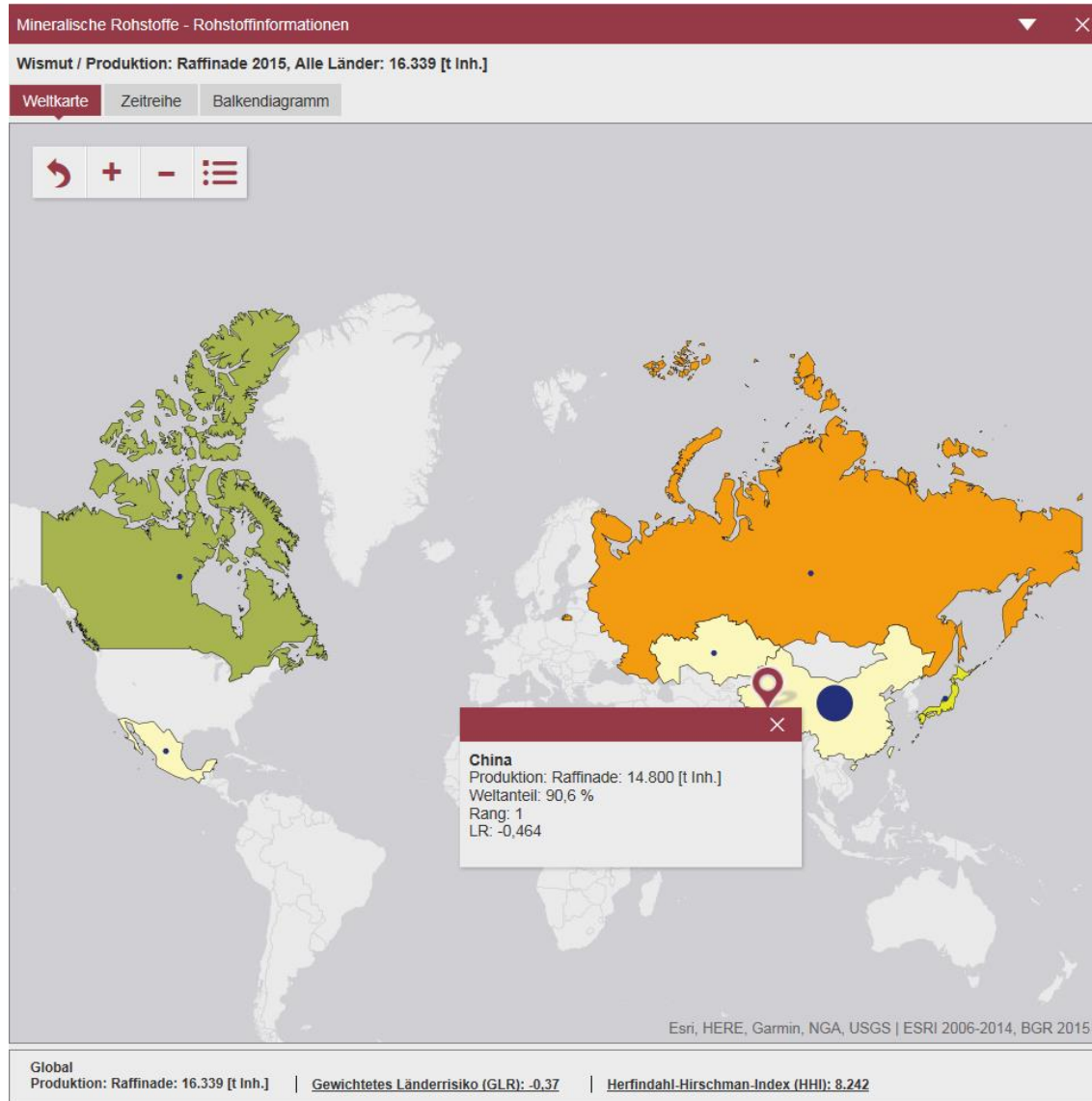
ROSYS data: Example 1 – Highly concentrated global cobalt market



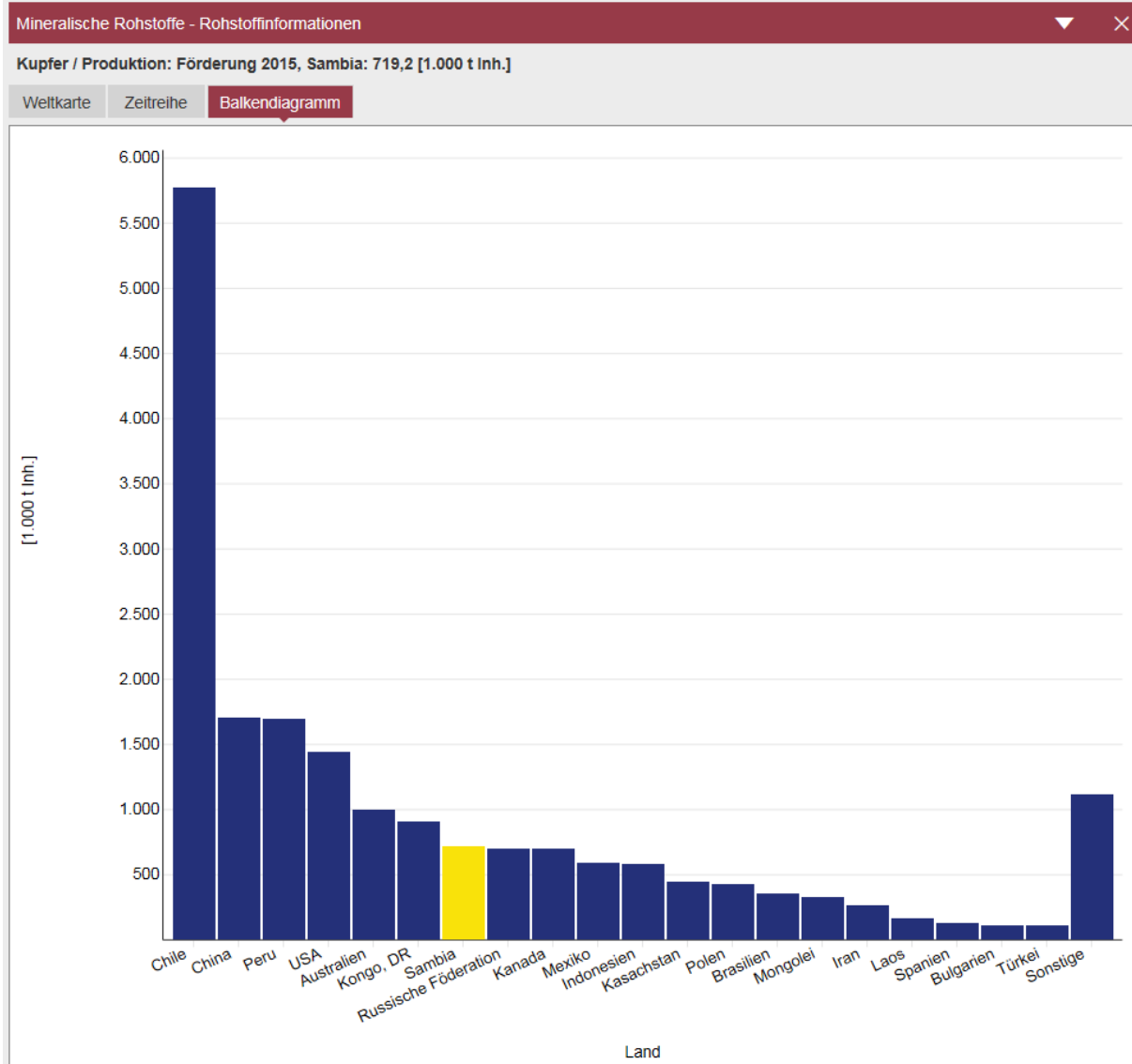
Kongo (DR) is a volatile country extracting 60 % of all cobalt in the world



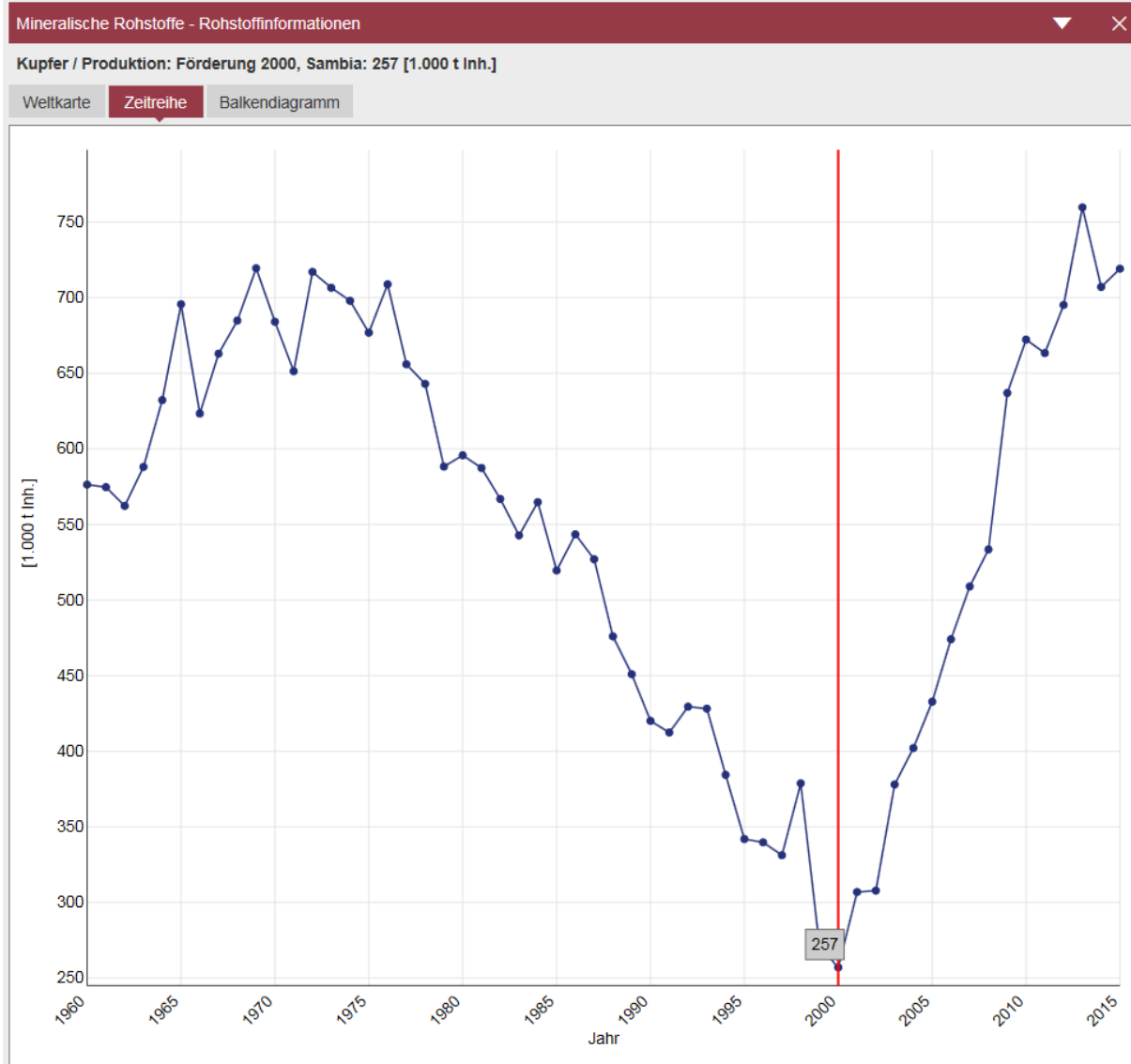
Case study 2: Bismuth - Market concentration of 8,242 (Herfindahl-Hirschman-Index) is very high. China dominates with a share of 90.6% of global production



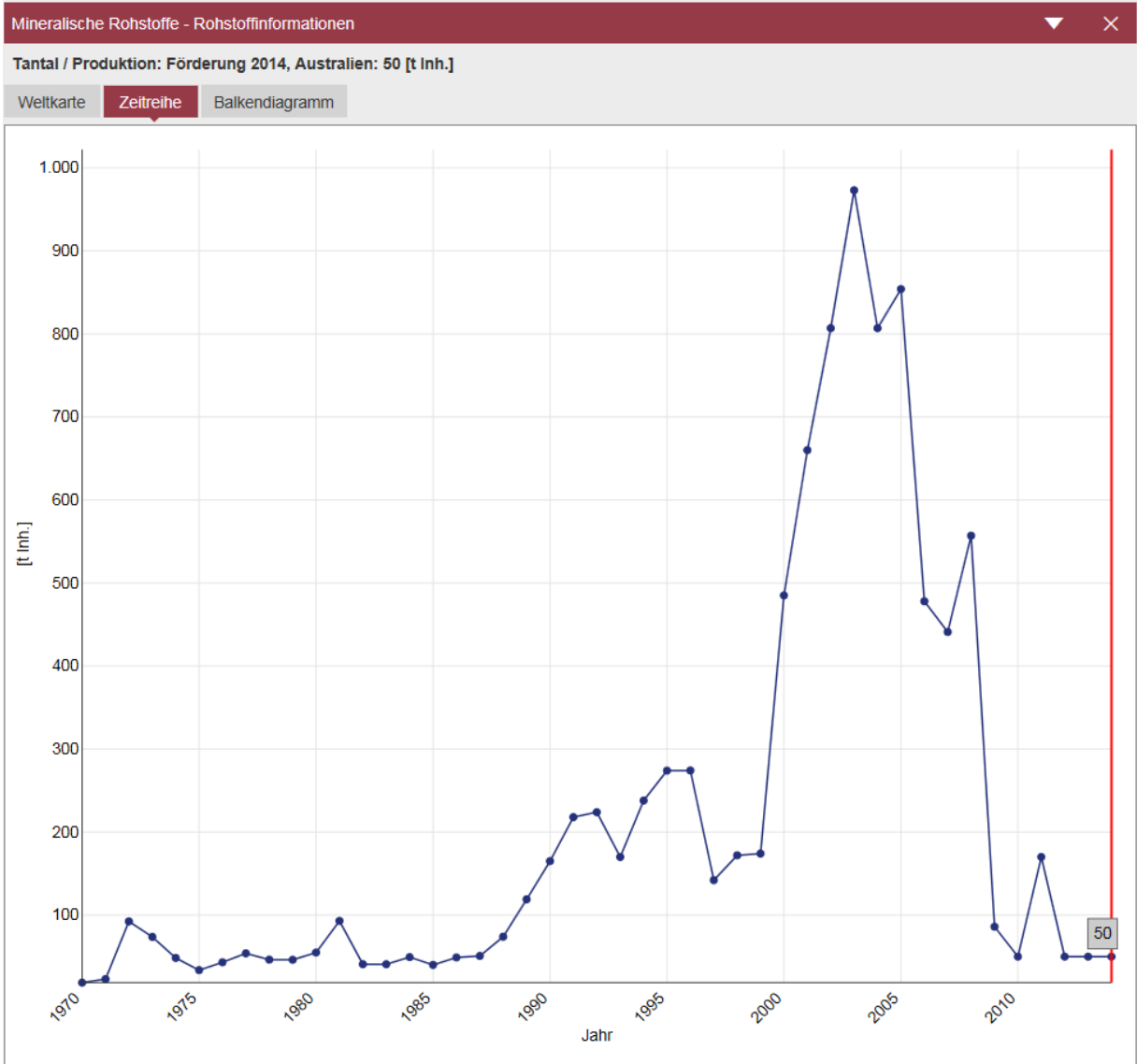
Concentrated markets increase supply and price risks – ROSYS data: Example 3 - Zambia recovers to one of the biggest copper producers again,



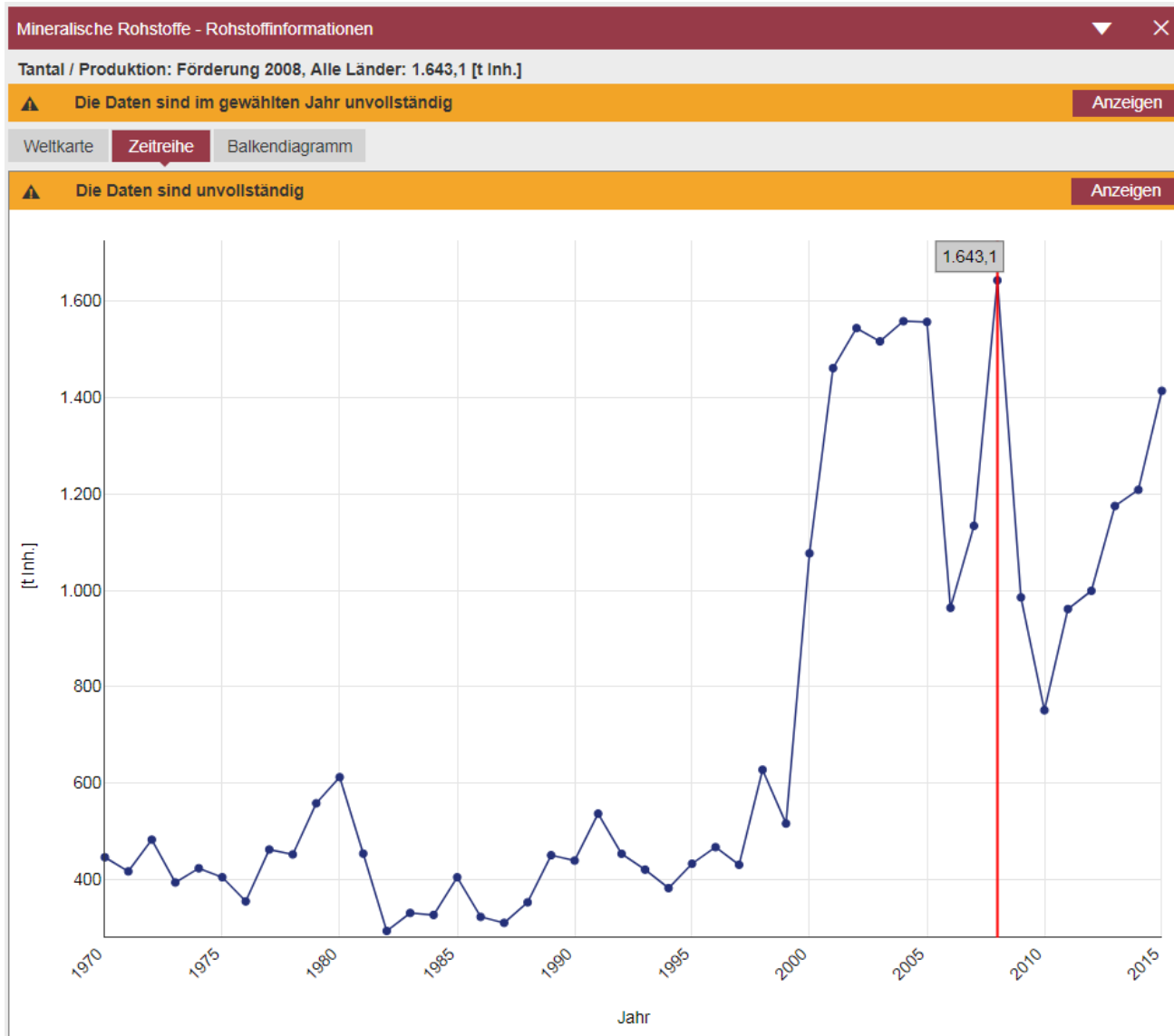
...after the country's decision to nationalise the copper mines in the 1990's had tremendous negative impacts on extraction



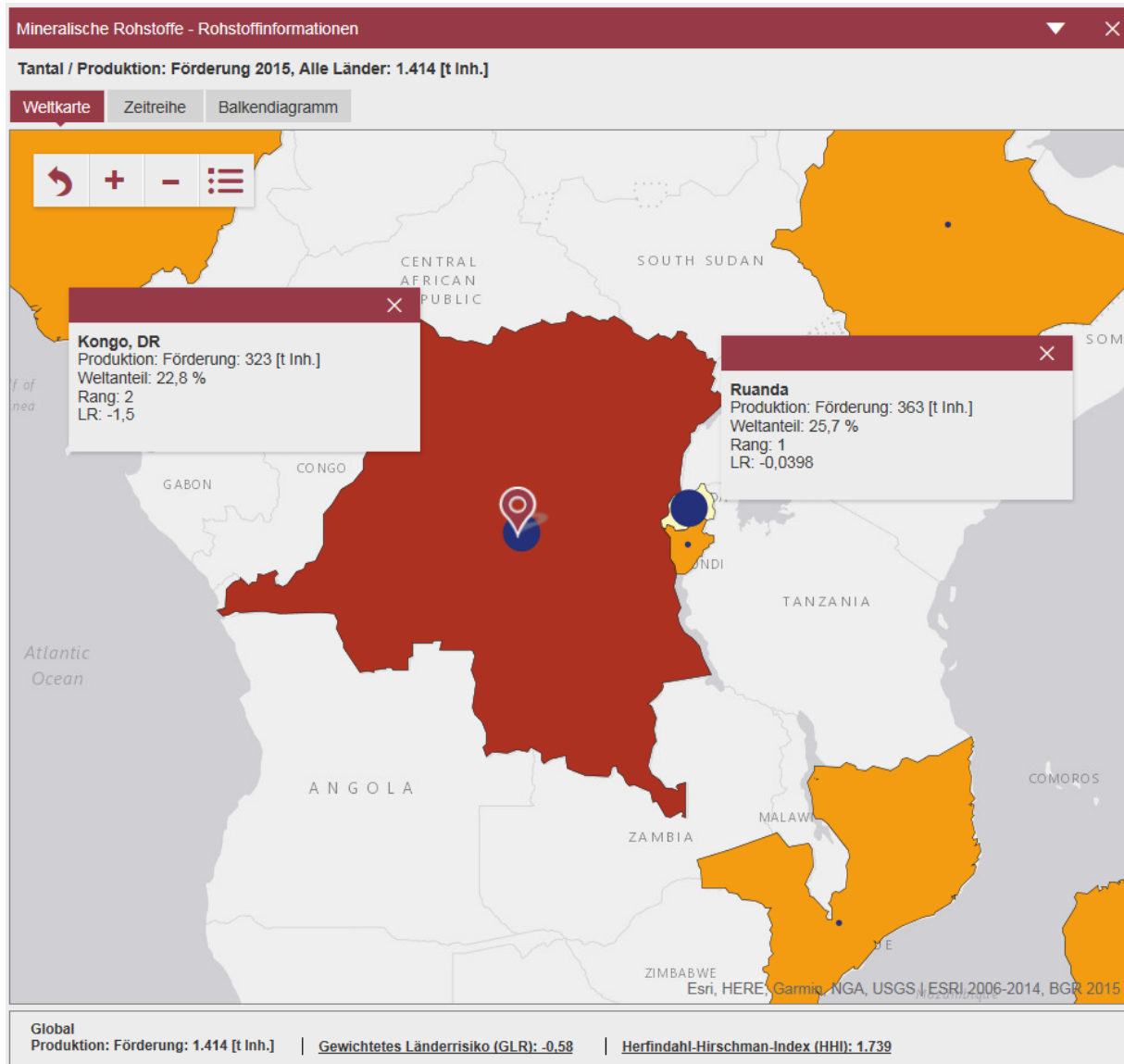
Example 4 – The risk of supply shortages and price risks on the tantalum market also exacerbates after Australia retreats entirely from extraction recently



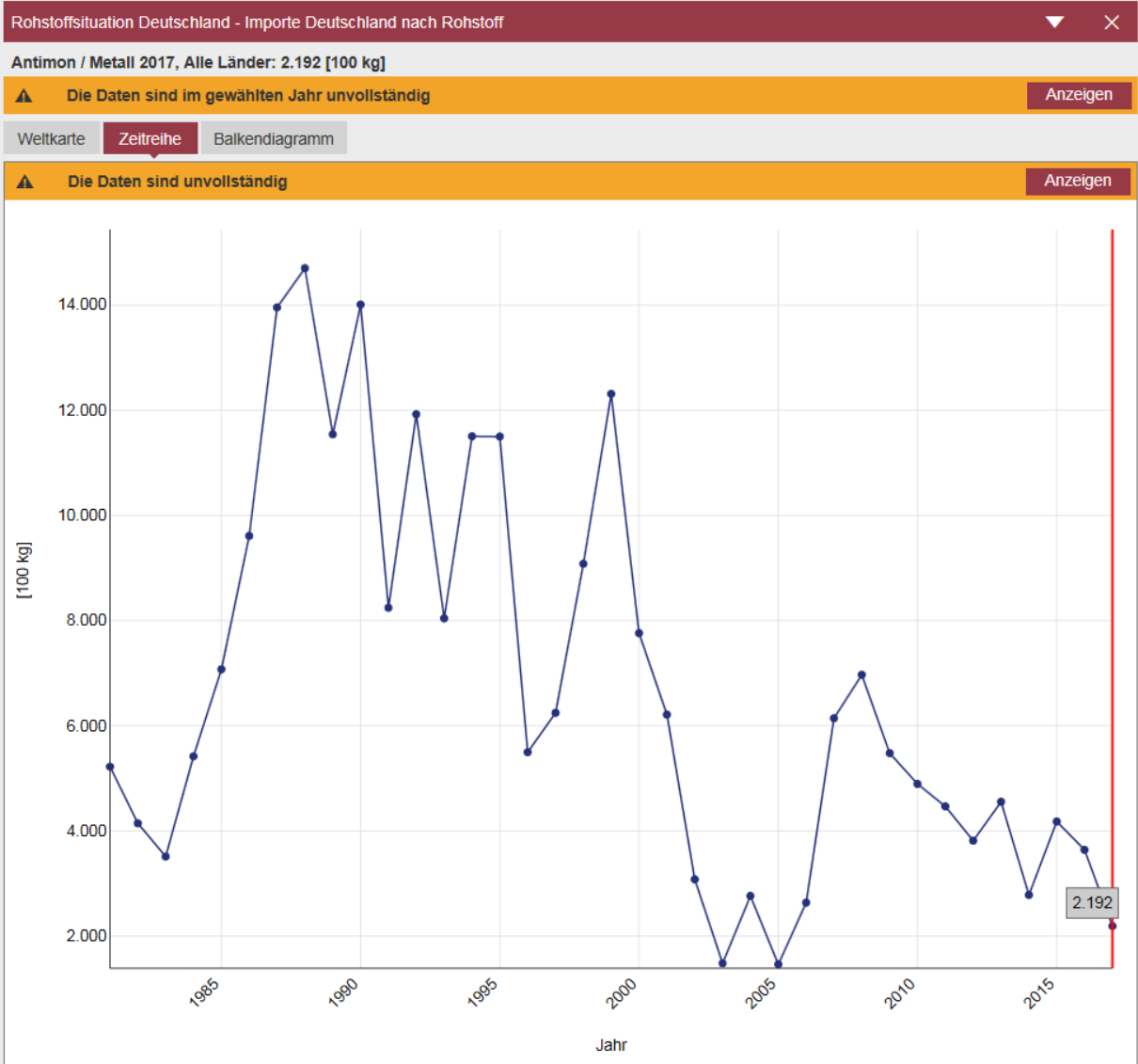
... leading to a global decrease of tantalum supply and only a slow recovery since then...



...two volatile countries, Kongo (DR) and Rwanda, now dominate the global tantalum market with a share of more than 50%



German Imports – Antimony gradually disappears in the value-added chain. Increasing price and thus substitution



..relocating industries, technological innovation, more efficient recycling, increased regulations diminish the use of antimony in Germany

