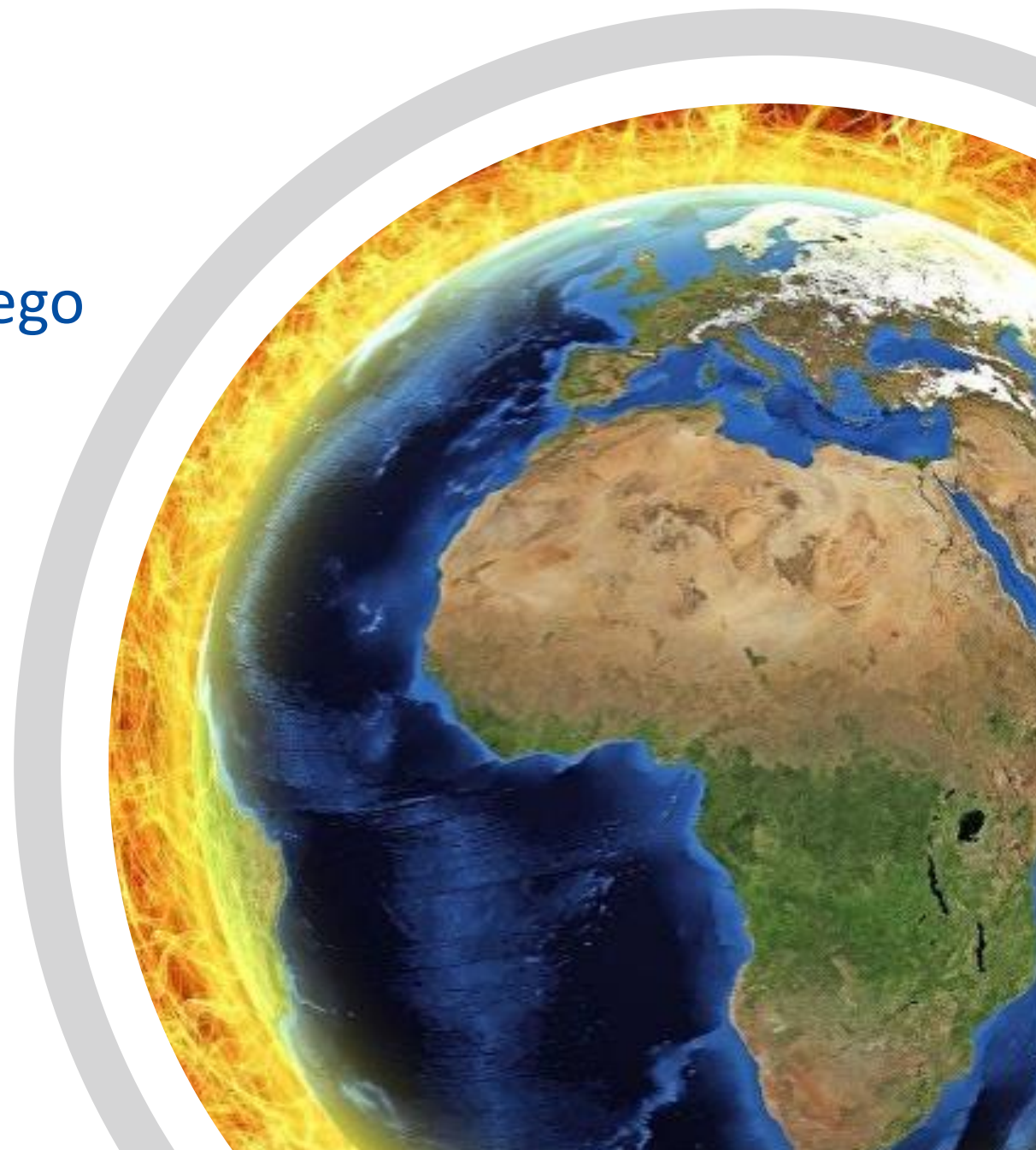


# Wyzwania i szanse dla zrównoważonego wzrostu produkcji rybackiej w erze Antropocenu

Radostaw Kowalski IRZBZ PAN w Olsztynie

Perspektywy rozwoju produkcji rybackiej  
w obliczu wyzwań 21. wieku  
Gdynia, 10 października 2018 r.



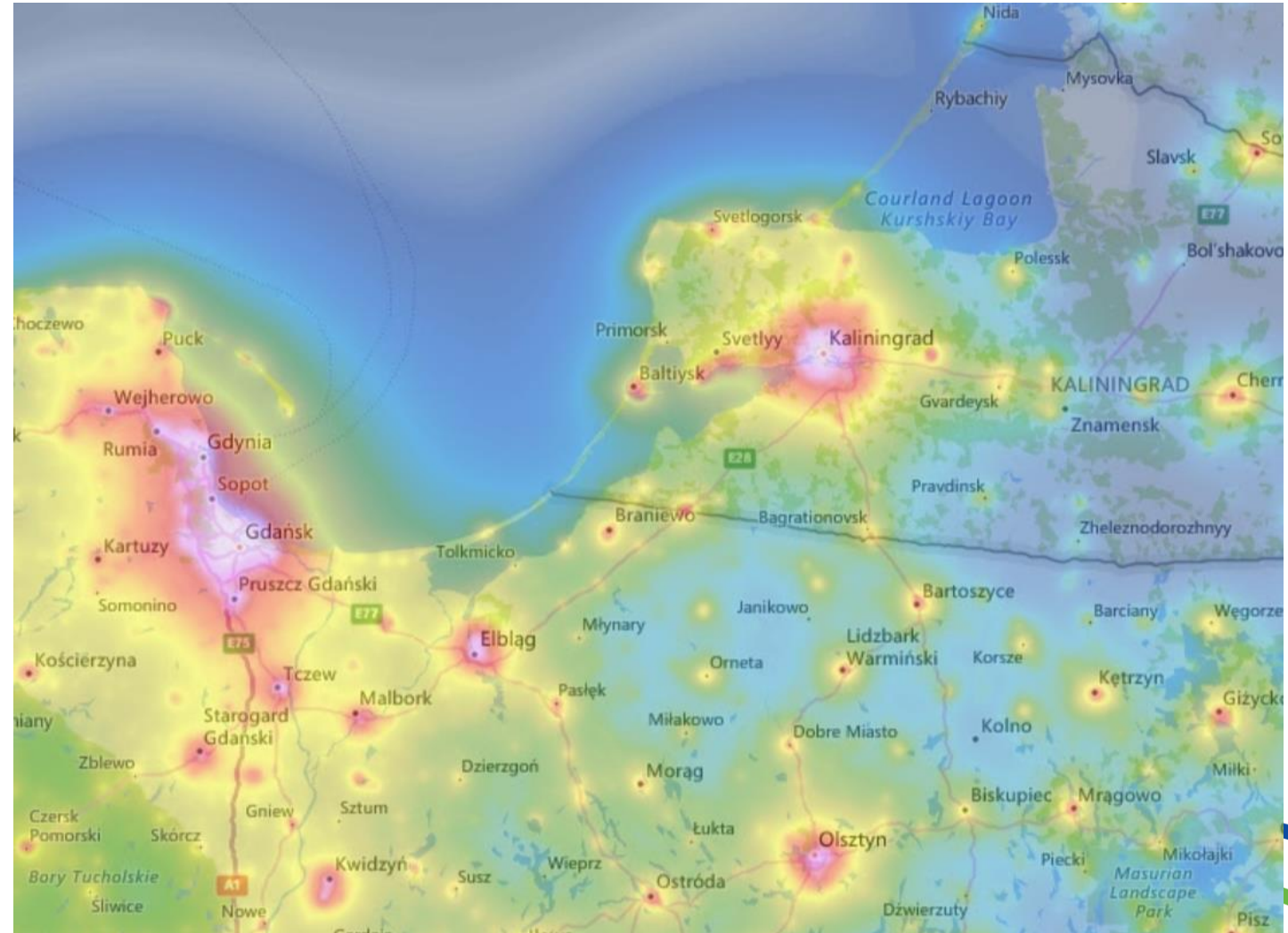
# Antropocen

- Light pollution – zanieczyszczenie światłem jako widoczny z kosmosu wskaźnik nowej ery



# Antropocen

- Zanieczyszczenie światłem a imperatyw moralny Kanta



# Antropocen

- W ciemności lepiej widać światło...

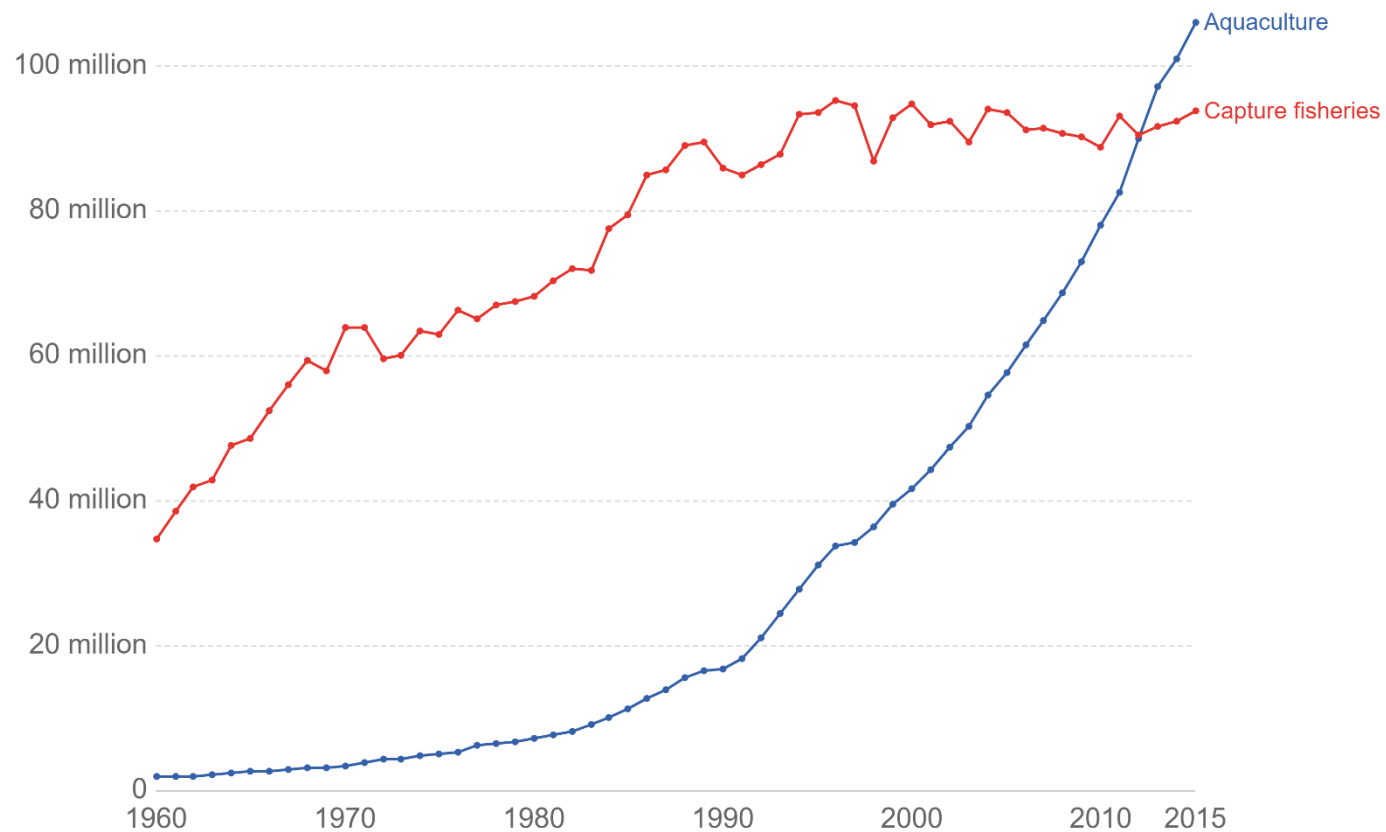


# Akwakultura i rybactwo – historia i perspektywy

## Capture fisheries vs. aquaculture (farmed fish) production, World

Annual production of seafood from wild-catch fisheries and aquaculture (farmed seafood) practices, measured in metric tonnes per year. Data is inclusive of all aquatic species, including aquatic animals and plants.

Our World  
in Data



Source: World Bank- World Development Indicators

[OurWorldInData.org/meat-and-seafood-production-consumption/](http://OurWorldInData.org/meat-and-seafood-production-consumption/) • CC BY-SA

# Perspektywy dla rybactwa śródłądowego

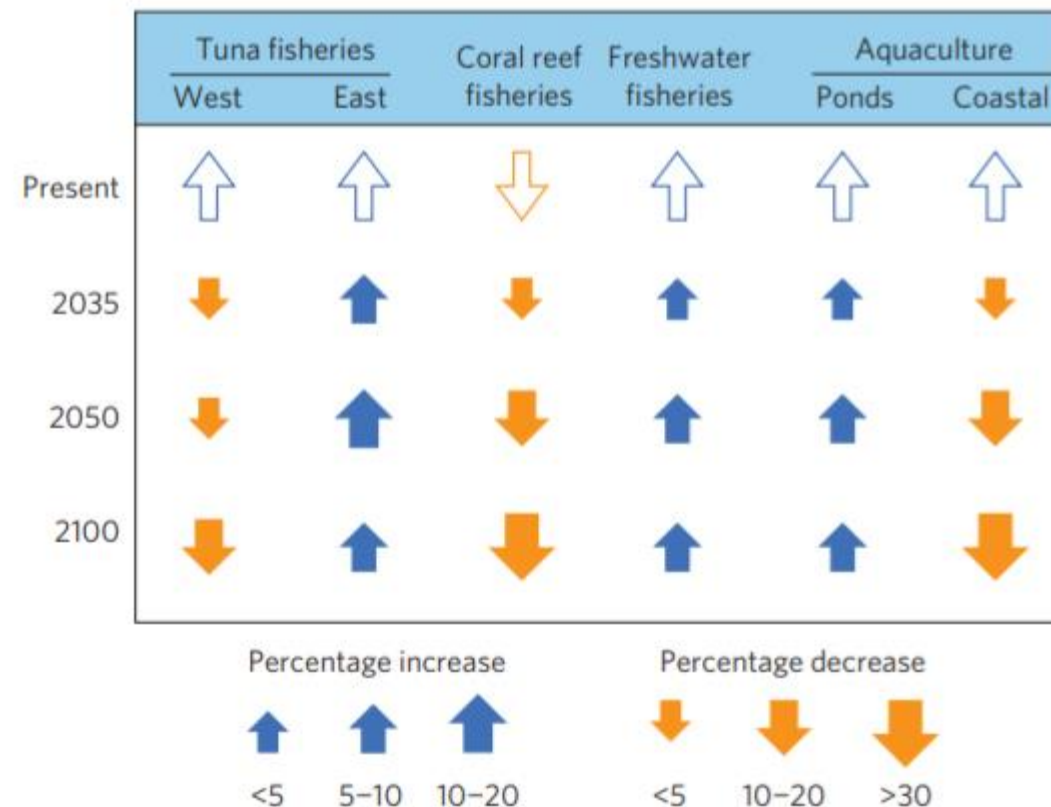
nature  
climate change

Article | Published: 10 March 2013

## Mixed responses of tropical Pacific fisheries and aquaculture to climate change

Johann D. Bell , Alexandre Ganachaud, Peter C. Gehrke, Shane P. Griffiths, Alistair J. Hobday, Ove Hoegh-Guldberg, Johanna E. Johnson, Robert Le Borgne, Patrick Lehodey, Janice M. Lough, Richard J. Matear, Timothy D. Pickering, Morgan S. Pratchett, Alex Sen Gupta, Inna Senina & Michelle Waycott

*Nature Climate Change* **3**, 591–599 (2013) | [Download Citation](#) ↓

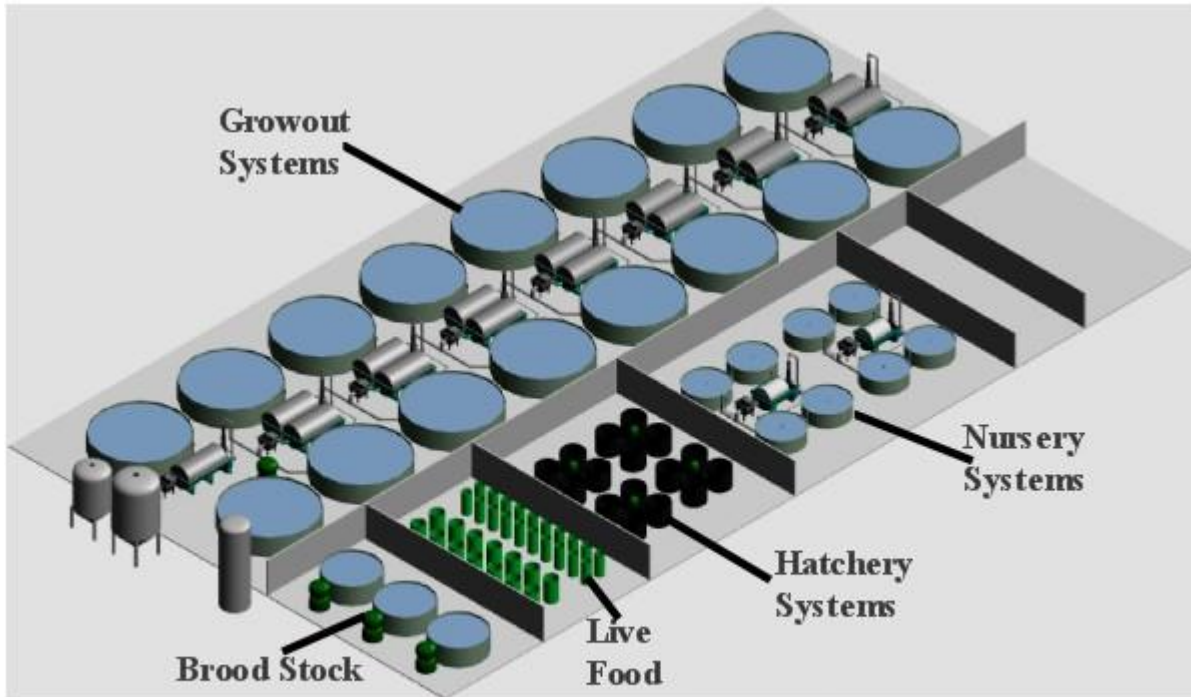


**Figure 4 | Projected directions of existing plans to derive more livelihoods from fisheries and aquaculture resources, and effects of climate change on these plans.** Projections are for the IPCC SRES A2 emissions scenario in 2035, 2050 and 2100, summarized as estimated increases (winners) or decreases (losers) in broad percentage categories. Oceanic (tuna) fisheries are separated into those east and west of 170° E. Projections for pond and coastal aquaculture (mariculture) are not relative to present-day production (which has potential for increase) and indicate estimated changes in production efficiency.

# Anthropocen – zalety i wady

## Zalety

- Wiedza
- Technika



**Complete Aquaculture Systems**

## Wady

- Zanieczyszczenie
- Zmiany klimatu
- Uprzemysłowienie
- Wymieranie gatunków



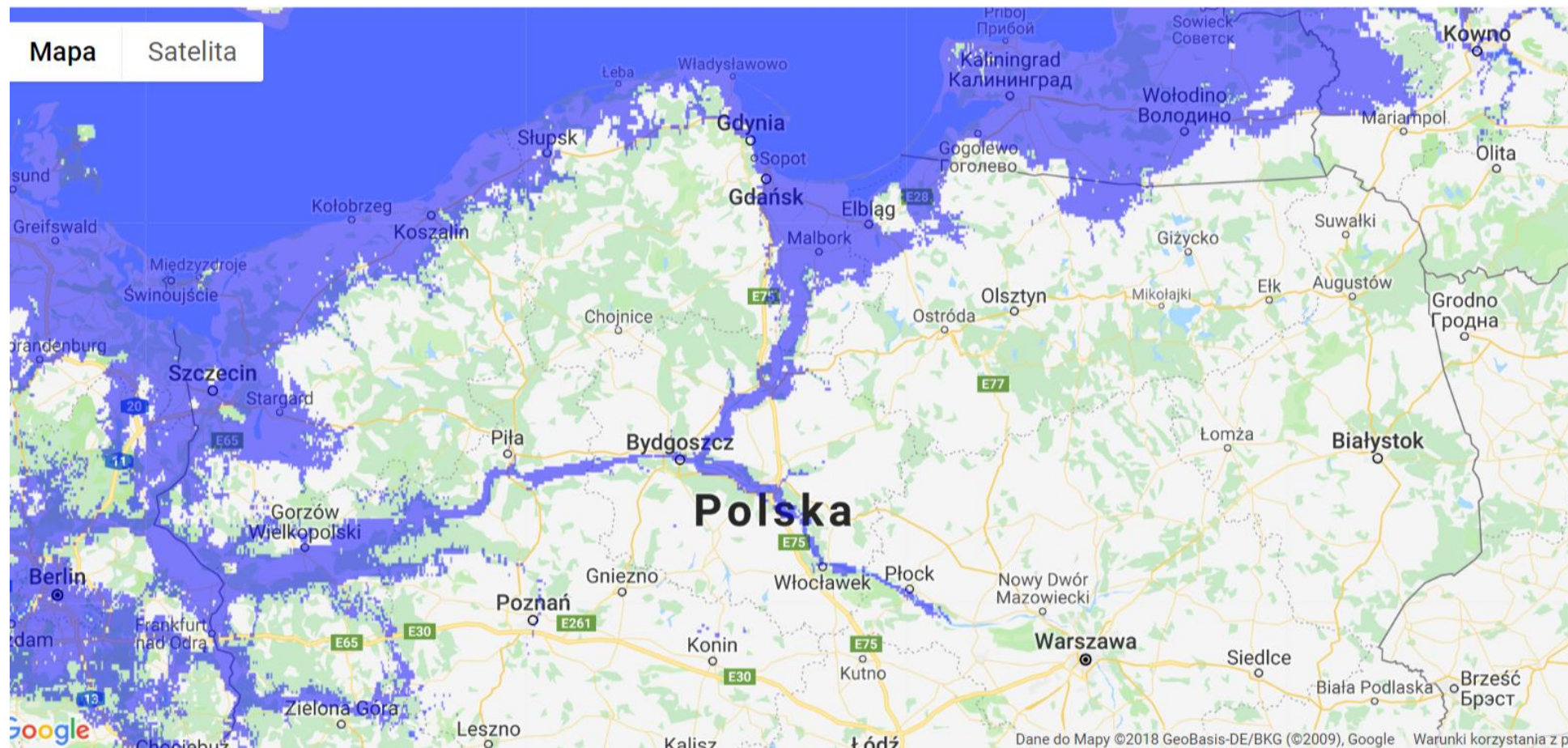
# Wymieranie gatunków a ludzki pęd ku ich ratowaniu



doris.ffessm.fr © Mickaël BEJEAN



# Wkrótce... nowe wody do odkrycia i wykorzystania (57m wzrostu poziomu morza)



Ryby to zdrowie (i do tego smaczne!)

