

Exit strategy: From lockdown to green zones

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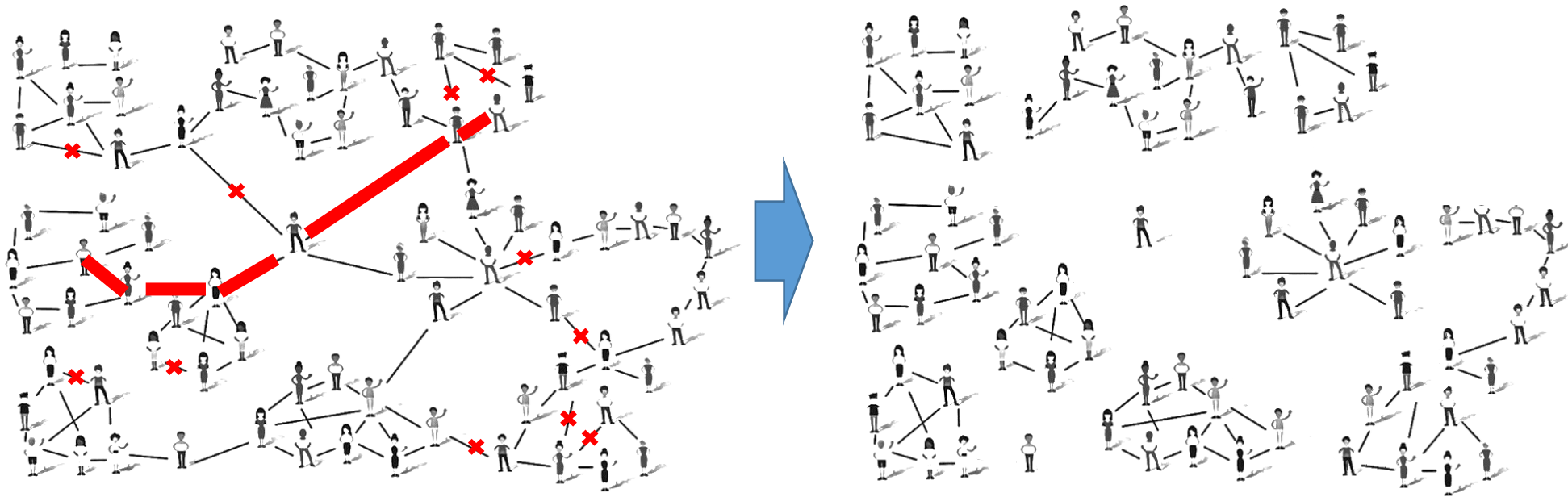
27 May 2021

What is green zoning?

The Green Zoning strategy is an alternative to blanket lockdowns. It is based on four key principles that can be applied to a single country or a group of countries:

- **Divide each country into smaller zones** (for example, states, regions, provinces, or economic commuting zones).
- **Label zones green or red based on common, objective criteria**, depending on whether the virus is under control or not.
- **Adopt public health measures depending on the colour** of the zones (and finer differentiations).
- **Allow travelling between green zones, but limit other travel** as much as possible (for example, require a vaccination, negative test or a seven-day quarantine when travelling from a red to a green zone).

Zoning: The partition into independent components



By creating separate components the problem is reduced:

- **Desynchronization:** stochastic nature of transmission naturally leads to different course of events in independent components → reduction of overall transmission
- **Economic/social:** Green zones can open earlier, thus avoiding 'worst-in-class' logic

Connecting and protecting green zones

Green zones:

- No undetected community transmission
- Operational track and trace system
- Operational hospital system

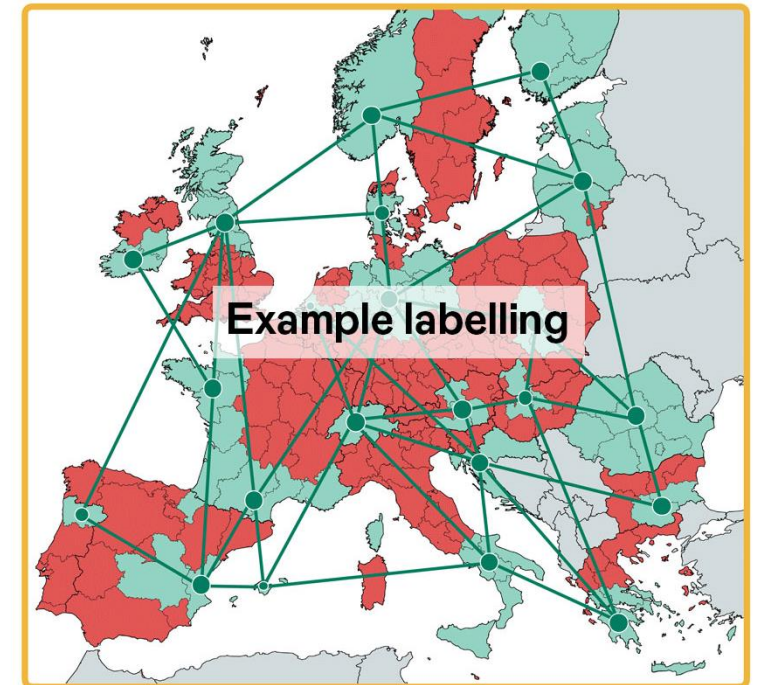
To protect green zones from reimportation and a resurgence of the virus:

- Travel restrictions from and to red zones (for example, require a vaccine, negative test or a seven-day quarantine when travelling from a red to a green zone)

Preventive:
If in doubt, label red.

Proposed to adopt Green Zoning in FR/ES and the EU

- We published our first policy article on 8 April 2020
- Proposal to adopt Green Zoning in the European Union (30 April 2020)
- Vulgarization:
 - We translated our two policy proposals into Europe's main languages
 - Short policy commentaries: [OECD Forum](#), [OECD Forum \(2\)](#)
 - Op-eds: [El Mundo](#), [Le Monde](#), [Le Monde \(2\)](#), [El Pais](#), Les Echos



Policy and media

Policy contacts

- Fortuitously the *Conseil d'Analyse Economique* (reporting to the Prime Minister) got aware of our study and supported it
- With France and Spain being 'aware' of us we were able to propose our ideas to the relevant ministries in these countries and the European Commission
- The European Commission was less fond of the idea with a 'funny' letter in June, explaining the European idea of freedom of movement

International press coverage popularizes the idea of EU network of green zones:

- **France.** [BFM TV](#), [The Huffington Post](#), [La Tribune](#), [France 24](#), ...
- **Germany.** [Frankfurter Allgemeine Zeitung](#), [Süddeutsche Zeitung](#), [SR \(Radio\)](#), ...
- **Italy.** [la Repubblica](#), [L'Espresso](#), [Il Sole 24 Ore](#), [Corriere della Sera](#), ...
- **Spain.** [El Pais](#), [ABC](#), [El Confidencial](#), [La Vanguardia](#), [TVE1](#), ...
- **UK.** [The Times](#), [Financial Times](#), Sky News UK, [The Naked Scientist](#), [Daily Mail](#), ...
- **Europe (other).** [Euronews](#); [Neue Zürcher Zeitung](#) (CH); [Der Standard](#), [ORF](#) (AUT); ...
- **USA.** [TIME](#), [The New York Times](#), [The Atlantic](#), [CNN](#), MSNBC, ...
- **Other.** [TVNZ1](#) (NZL); [欧洲时报](#) – Oshi, [Chinanews](#), [Sina](#) (CHN); [9News](#) (AUS); [BFM 89.9 \(Radio\)](#) (Malaysia); [BBC Mundo](#)



Academic support

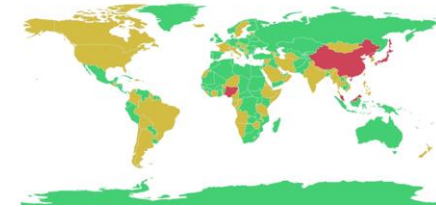
- New England Complex Systems Institute (president: Yaneer Bar-Yam) started international network <https://endcoronavirus.org>
- German group of academics proposing ZeroCovid/Green Zoning: Melanie Brinkmann (Virology), Clemens Fuest (Economics, head of IFO Institute), ...
- Positive evidence from epidemiology: Kraemer et al (Science 2020), Tian et al. (Science 2020), Hellewell et al (Lancet 2020)
- Positive evidence from economics: Giannone et al (2020), general effects of international trade known since Kahnemann: economies of scale and differentiation (1978, 1979)



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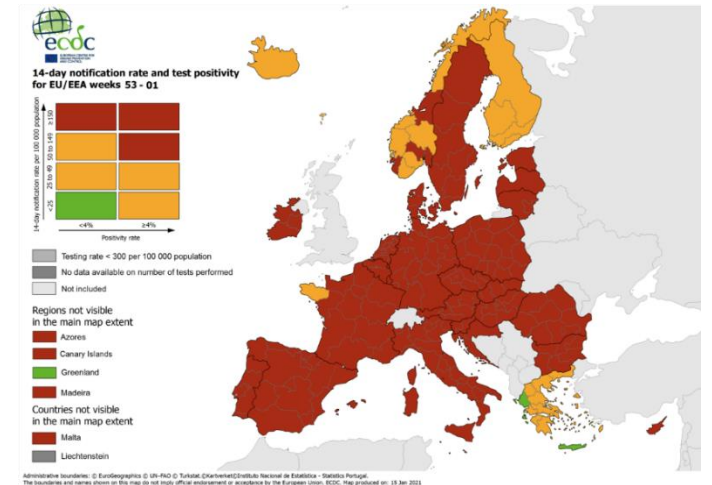
GREEN ZONES

GREEN ZONE EXIT STRATEGY: OPEN UP AREAS THAT HAVE ZERO COMMUNITY TRANSMISSION AND PROTECT THEM WITH TEMPORARY RESTRICTIONS AND QUARANTINES ON NON-ESSENTIAL TRAVEL



Where does Green Zoning stand today?

- Italy, Spain, Australia, etc. are using zoning
- Europe introduces harmonized zoning (13 October 2020)
 - Despite commitment, lack of joint definitions is not upheld
 - No enforcement of restrictions of travel to/from red zones
- Local lockdowns are increasingly becoming the norm
 - Portugal managed to end the latest wave like this
 - The UK has just decided to introduce local lockdowns in face of the Indian variant



When should a zone be labeled green?

THE LANCET Log in

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SARS-CoV-2 elimination, not mitigation, creates best outcomes for health, the economy, and civil liberties

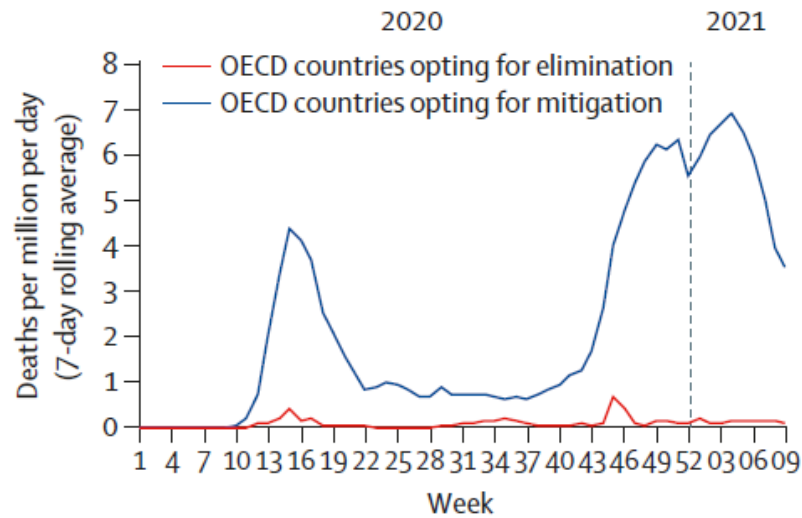
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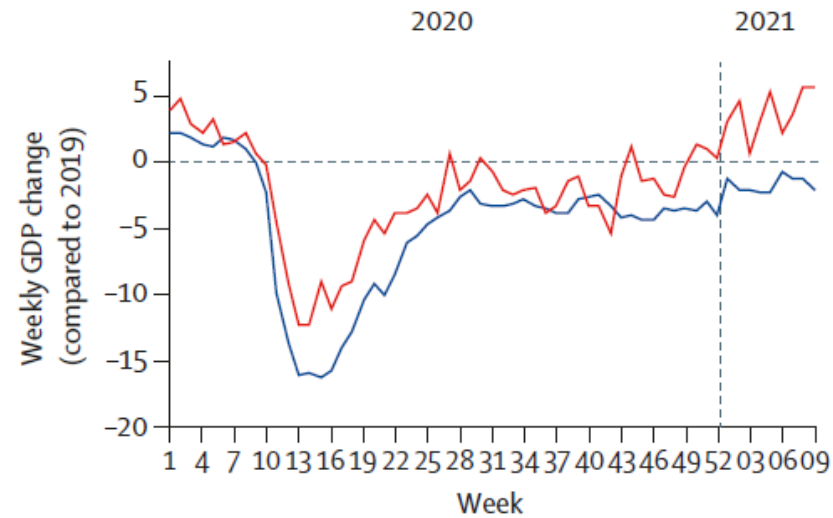


One year of the pandemic shows that aiming for elimination is the superior strategy

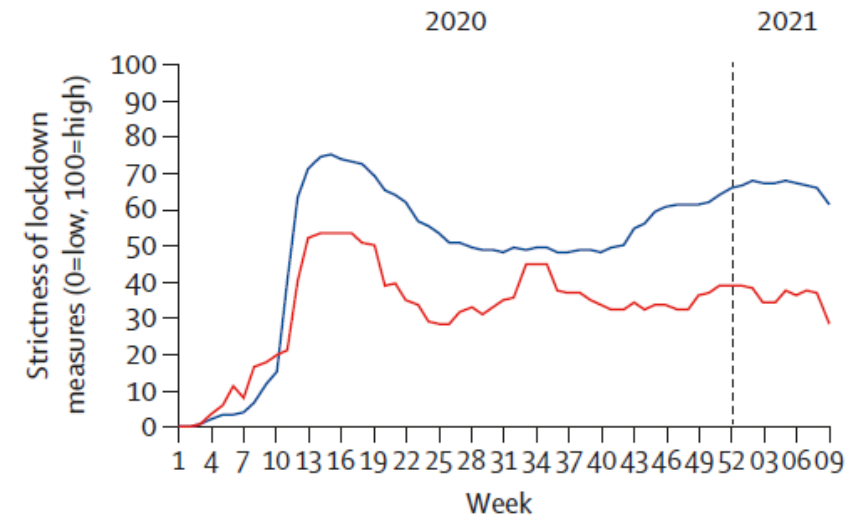
COVID-19 deaths



GDP growth



Strictness of lockdown



OECD countries opting for elimination are Australia, Iceland, Japan, New Zealand, and South Korea.

OECD countries opting for mitigation are Austria, Belgium, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the UK, and the USA.

What can we learn from the past?

- **Vaccines alone do not suffice**, they are an essential tool to combat an infectious disease, but alone cannot beat it.
- **Define a scientifically founded aim** (e.g. elimination/strong suppression) and base all strategic and tactical choices on that aim.
- **Act fast and decisive**, waiting for conclusive evidence (e.g. on VoCs) will inevitably lead to being one step behind.
- **Adapt measures to local realities**; Green Zoning can contribute to halt the spread of a virus, reduce economic and social harms. Further it can create positive incentives.
- **Create cross-disciplinary teams** as the implications are relevant across disciplines (life sciences, public health, economic and social sciences, ethics, etc.)
- **Communicate and involve the public**, all democratic countries who managed to control the pandemic relied on civic solidarity.

Thank you!

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Key publications:

- [Europe in the Time of Covid-19](#) with Miquel Oliu-Barton, chapter 11, edited by A. Bénassy-Quéré and B. Weder di Mauro, *CEPR Press* (2020).
- [SARS-CoV-2 elimination, not mitigation, creates best outcomes for health, the economy, and civil liberties](#) with Miquel Oliu-Barton, Philippe Aghion, Patrick Artus, Ilona Kickbusch, Jeffrey V. Lazarus, Devi Sridhar, and Samantha Vanderslott, *Lancet* (online first, 2021).
- [Green zoning: an effective policy tool to tackle the Covid-19 pandemic](#) with Miquel Oliu-Barton, *Health Policy* (forthcoming, 2021).