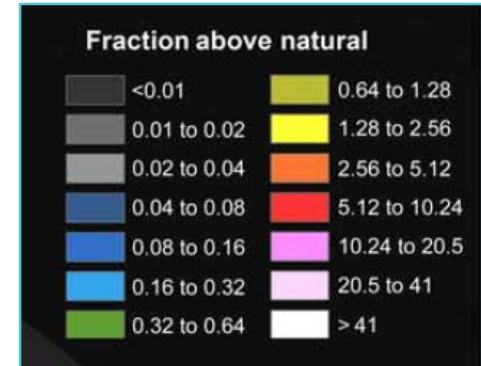
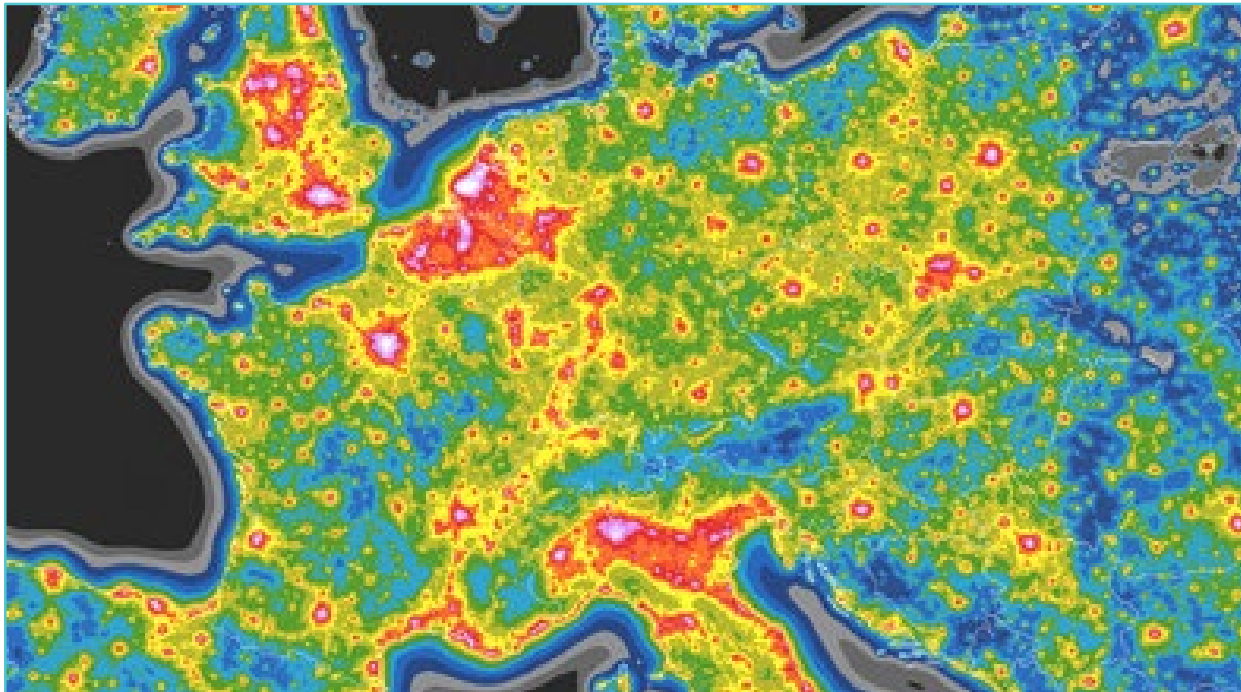


## Artificial night sky brightness – Central Europe



Source: FALCHI et al. 2016:5

## Presentation of the ‘OpenSpaceAlps’ project

*“Spatial planning instruments for the safeguarding of open spaces in the European Alps”*

# Agenda

1. Project definition of open spaces
2. Safeguarding open spaces using different planning instruments
3. Lessons learned and shortcomings
4. Intended project outputs

# 1. Project definition of open spaces

# 1. Definition - open spaces comprise:

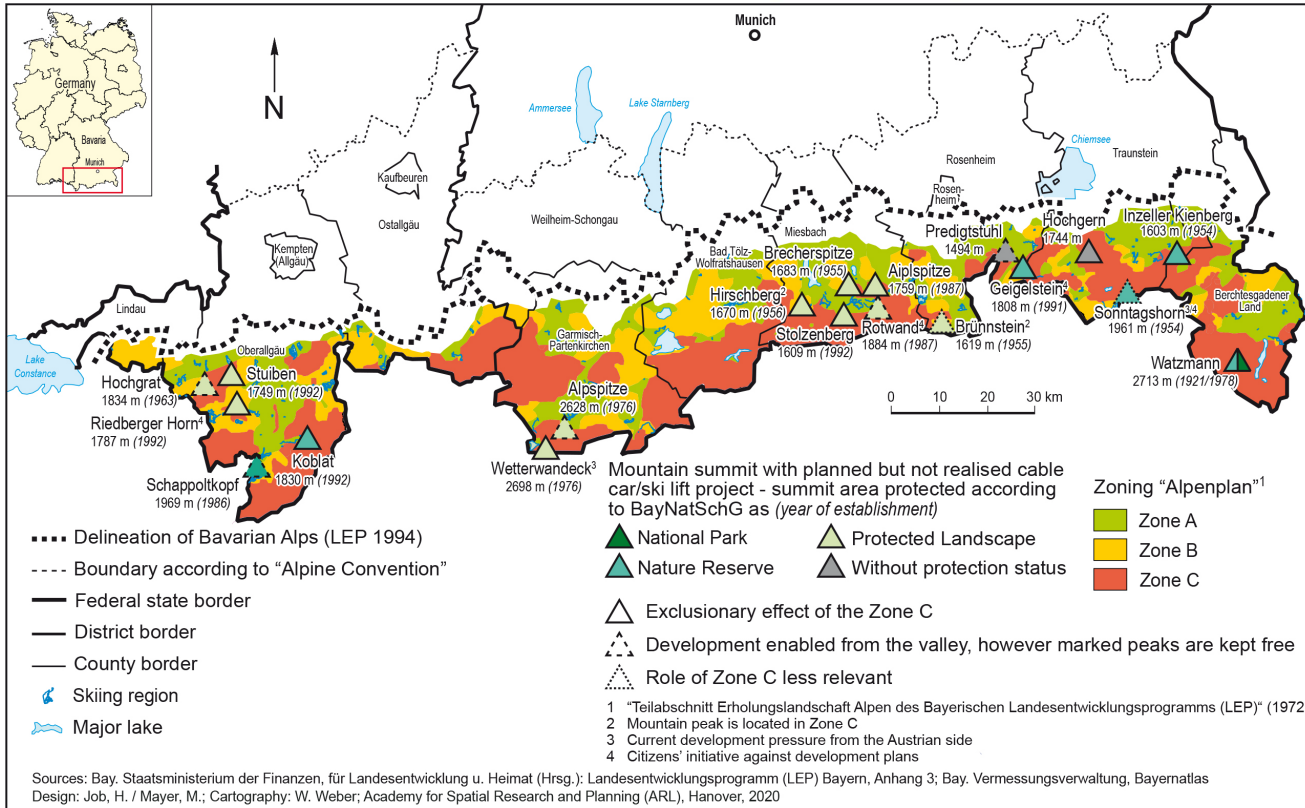
Land outside housing/settlement areas, commercial/industrial areas and other special designated areas (e.g. golf courses) kept free from building developments of any kind,

which is not predominantly developed (punctual, linear or planar infrastructure) and widely free of soil sealing,

ideally free of traffic or largely reserved for non-motorised traffic and thus noise-free;

technical infrastructures are non-existent or hardly to find.

## 2. Safeguarding open spaces using different planning instruments



# Alpenplan (Bavarian Alps, DE)

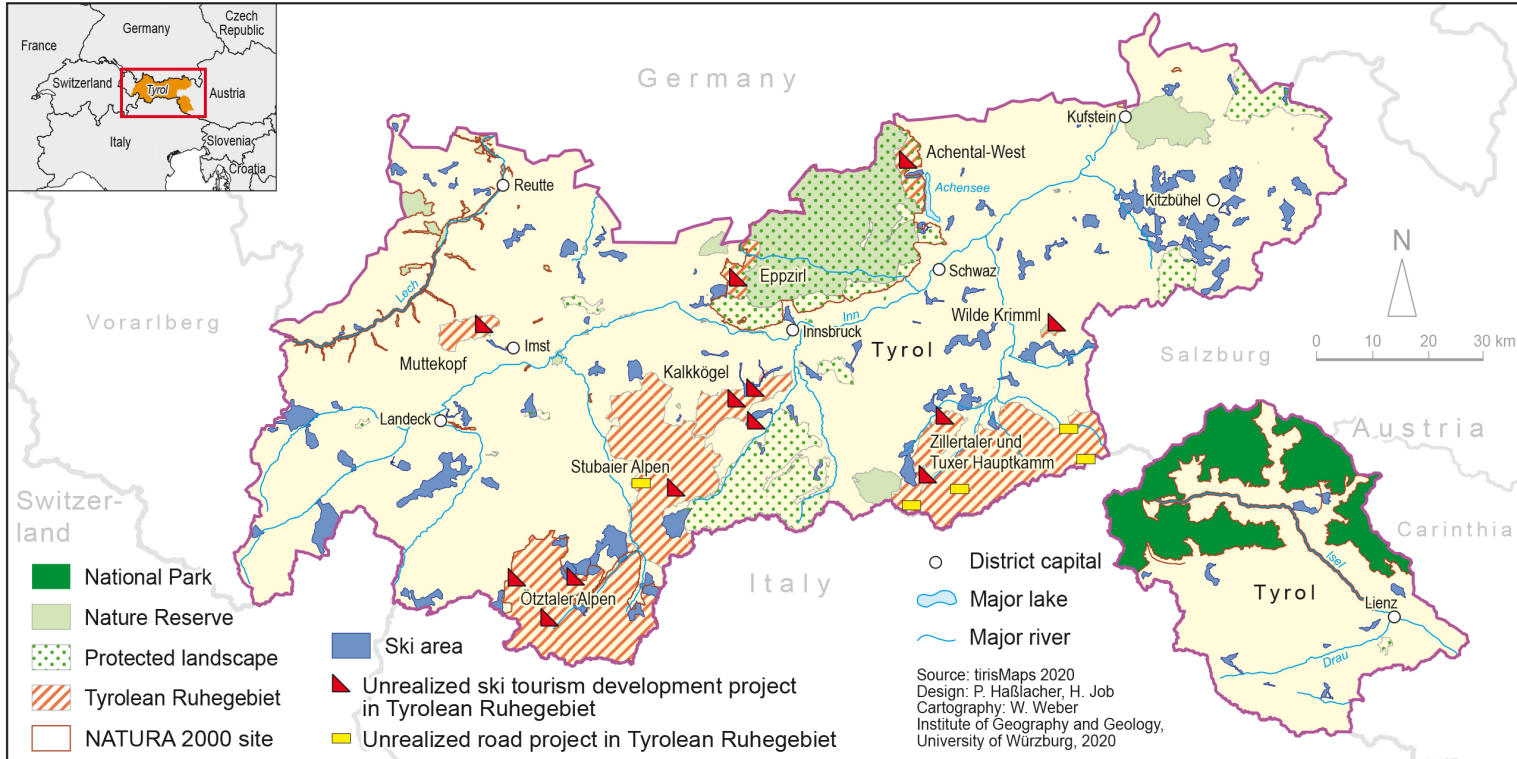
Source: JOB et al. 2020

## Alpenplan (Bavarian Alps, DE)

- The *Alpenplan* covers the Bavarian Alps based on a morphological delimitation.
- The underlying delimitation concept is based on safeguarding and separating previously undeveloped near-natural areas from those that feature a high degree of infrastructural development (“decentralized concentration”).
- It regulates the development of transport projects, such as cable cars, ski lifts, ski runs, public/private roads or airfields
- As part of the Bavarian State Development Programme (LEP Bayern) subordinate planning processes and approval procedures must comply with its binding regulations.
- It divides the Bavarian Alps into three zones, each with a different status of protection according to the requirements of each zone (Zones A, B, C).

Source: JOB et al. 2017





# Quiet Areas/ *Ruhe-* gebiete -Tyrol, AT

Source: JOB et al. 2020

## Quiet Areas (Ruhegebiete) (federal state of Tyrol)

- This protection category (based on the Tyrolean Nature Conservation Act) was established in order to preserve large-scale undeveloped landscape entities as a response to the intense development of (touristic) infrastructures
- The designation of Quiet Areas refers to areas outside settlements which are particularly suitable for outdoor recreation because they are characterised by a high degree of quietness due to the absence of certain infrastructures
- In Quiet Areas certain (construction) measures (e.g. cableways, roads, aircraft landing or take-offs, noisy businesses, power supply lines) are prohibited or require a special permission

Source: JOB et al. 2017

## Crop rotation areas (*Fruchtfolgefleichen*) (example: northwest of lake Thun, canton Bern, CH)



Fruchtfolgefleichen

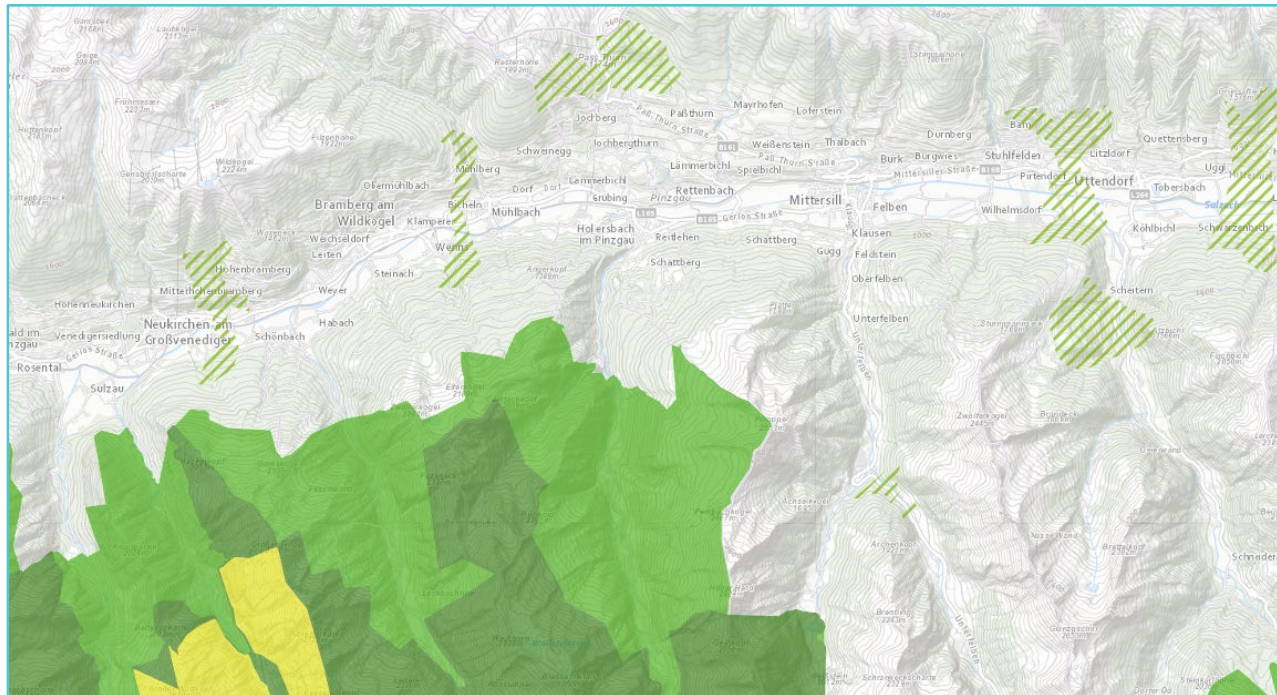
Source: Fruchtfolgefleichen © Amt  
für Gemeinden und Raumordnung  
des Kantons Bern 2020

## Crop Rotation Areas (*Fruchtfolgeflächen*) (CH)

- The Swiss federal government determines a minimum amount of Crop Rotation Areas for the entire Swiss territory, based on an analysis on the necessary food supply in case of disrupted food imports/supplies
- The federal level also determines how they are distributed among the cantons. On the subordinate level, the cantons determine and identify the exact location, size and quality of the Crop Rotation Areas
- Crop Rotation Areas need to meet specific criteria such as e.g. location within a suitable climate zone or a minimum continuous size of 1 ha
- The exact implementation procedure depends on cantonal legislation. In cantonal/municipal spatial planning land consumption within Crop Rotation Areas is only possible in exceptional cases, while the overall amount must remain constant.

Source: Bundesamt für Raumentwicklung (ARE) 2020

# Ecological Corridors (*Lebensraum-/Grünkorridore*) example: Oberpinzgau (Salzburg, AT)



Ecological corridor  
(*Lebensraumkorridor*)

**Hohe Tauern National Park**

special protection area

core zone

buffer zone

Source: Land Salzburg,  
SAGISonline 2020

## Ecological Corridors (*Lebensraum-/Grünkorridore*) (example: Oberpinzgau, AT)

- The designation of corridors is supposed to avoid conflicts between the interests of nature conservation, the agricultural use of the area, the settlement activity and the use as tourist areas
- The assignment and delimitation of the corridors is based on the scientific study “Lebensraumvernetzung Pinzgau 2012” and modified by consultation with the affected municipalities.
- The functionality of the corridors is not considered to be impaired by appropriate agriculture, forestry, hunting, fishing and nature-based recreational activities
- The Oberpinzgau Regional Development Programme designate (regional and supra-regional) green space corridors that must be kept free in municipal spatial planning from any developments, which impair their permeability.

Source : Snizek + Partner Verkehrsplanungs GmbH et al. 2013

# 3. Lessons learned and shortcomings

### 3. Lessons learned: Different planning instruments are suitable for different purposes, depending on the scale and structure of open spaces.

#### open space structure

Large-scale continuous open spaces in high-altitudes areas

Open spaces in the valleys in proximity to settlements and infrastructures

#### example

- *Alpenplan* (Bavarian Alps, DE)
- Quiet Areas (*Ruhegebiete*) (Tyrol, AT)
- Crop rotation areas (*Fruchtfolgeflächen*) (example: canton Bern, CH)
- Ecological corridors (*Lebensraum-/Grünkorridore*) (Oberpinzgau planning region, Salzburg, AT)



### 3. Shortcomings

- Tyrolean Ruhegebiete as well as the Alpenplan C-zone are mostly situated in high alpine locations; safeguarding of open spaces is accordingly rare in valleys.
- The cross-border coordination of these planning instruments is not good either.
- Suisse Fruchfolgeflächen only care for most fertile agricultural soils (general exclusion of alpine pastures and forests).
- Lebensraum-/Grünkorridore are only designated for a pilot region of the federal state of Salzburg so far.

## 4. Intended project outputs

## Intended project outputs:

- Alps-wide visualisation, supporting transnational governance of planning strategies
- Strategic recommendations, contributing to coordination of efforts to preserve open spaces at the national and transnational level
- Planning handbook for open spaces, proposing new integrated approaches and planning instruments for the Alps
- Permanent transnational network of spatial and sectoral planning experts and practitioners, enabling a continuously exchange and informing decision makers: “AlpPlan network”

# References

Bundesamt für Raumentwicklung (ARE) (2020): Sachplan Fruchtfolgeflächen. Sachpläne und Konzepte des Bundes (Art. 13 RPG). Bern.

European Environment Agency (EEA) (2019): Fragmentation status and trends. GIS Map Application. URL: <https://www.eea.europa.eu/data-and-maps/explore-interactive-maps/fragmentation-status-and-trends> (20.10.2020).

FALCHI, F., CINZANO, P., DURISCOE, D., KYBA, C.C.M., ELVIDGE, C.D., BAUGH, K., PORTNOV, B.A., RYBNIKOVA, N.A., FURGONI, R. (2016): The new world atlas of artificial night sky brightness. *Science Advances* 2 (6): 1-25. DOI: 10.1126/sciadv.1600377.

JOB, H., MAYER, M., HABLACHER, P., NISCHIK, G., KNAUF, C., PÜTZ, M., ESSL, J., MARLIN, A., KOPF, M., OBKIRCHER, S. (2017): Analyse, Bewertung und Sicherung alpiner Freiräume durch Raumordnung und räumliche Planung (= Forschungsberichte der ARL 7). Hannover.

JOB, H., WILLI, G., MAYER, M., PÜTZ, M. (2020): Open Spaces in Alpine Countries – Analytical Concepts and Preservation Strategies in Spatial Planning. *Mountain Research and Development* (accepted, forthcoming).

Snizek + Partner Verkehrsplanungs GmbH, Horwath HTL GmbH, Büro Dr. Paula ZT-GmbH (2013): Erläuterungsbericht zum Regionalprogramm RV Pinzgau und zum Regionalprogramm RV Oberpinzgau. Endbericht.