Fernerkundung zur Erfassung und Analyse von Migration

Nationales Forum für Fernerkundung und Copernicus 2022

22.06.2022

Team „Stadt & Gesellschaft“

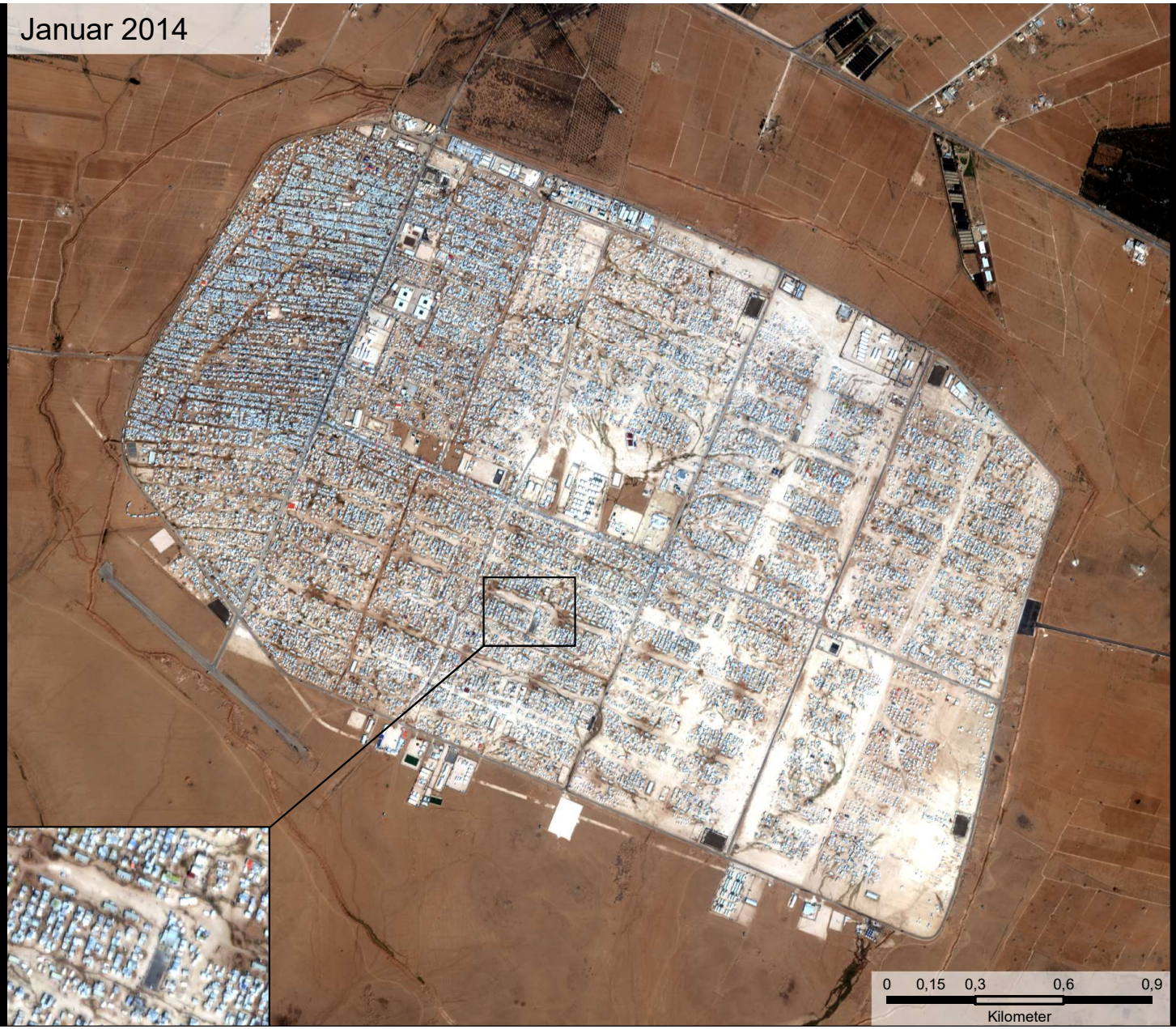
Deutsches Fernerkundungsdatenzentrums (DFD)
Deutsches Zentrum für Luft- und Raumfahrt (DLR)

DLR

EOC Earth Observation Center

Physischer Ausdruck von Migration

Beispiel: Al-Zataari



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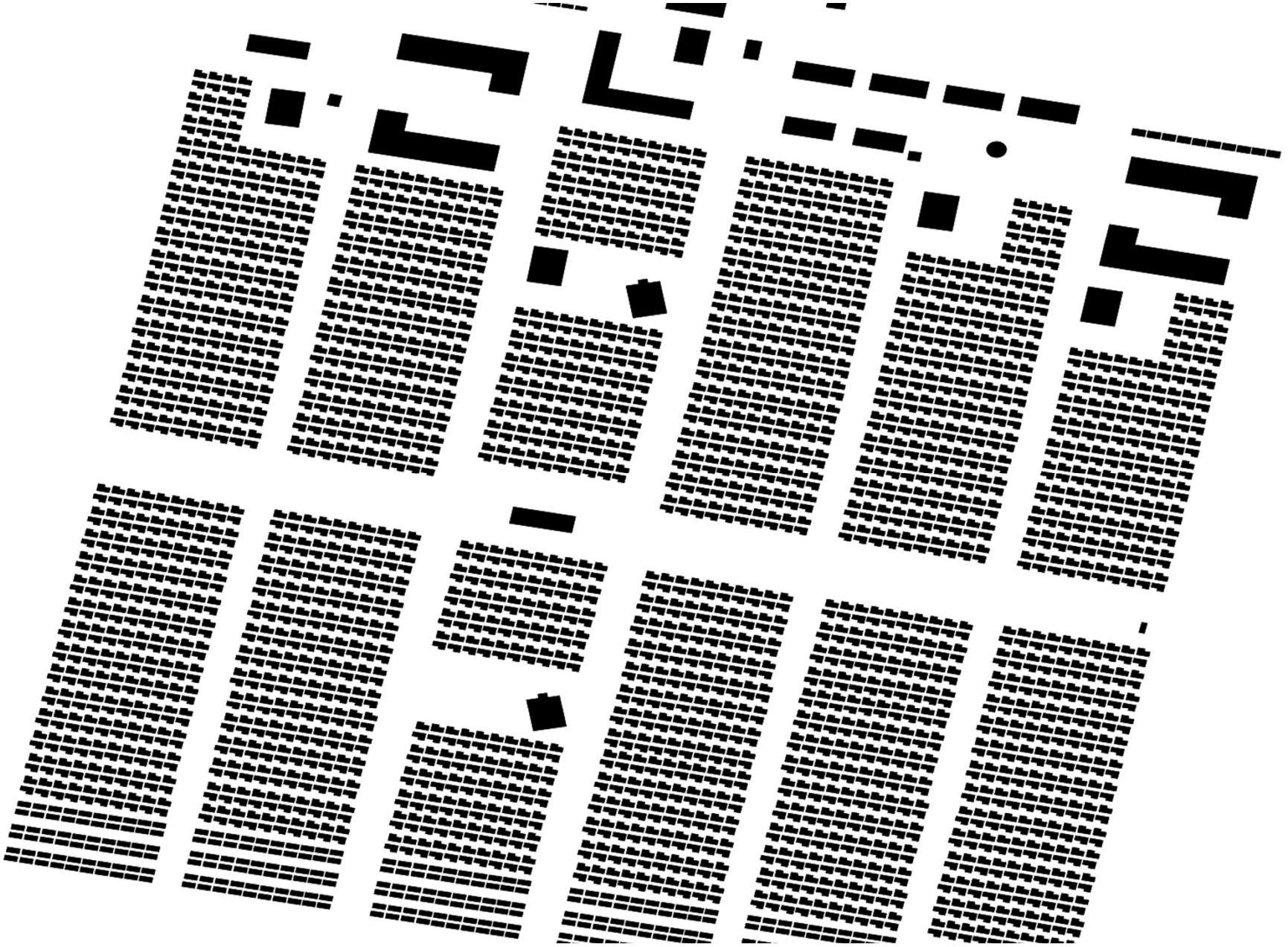
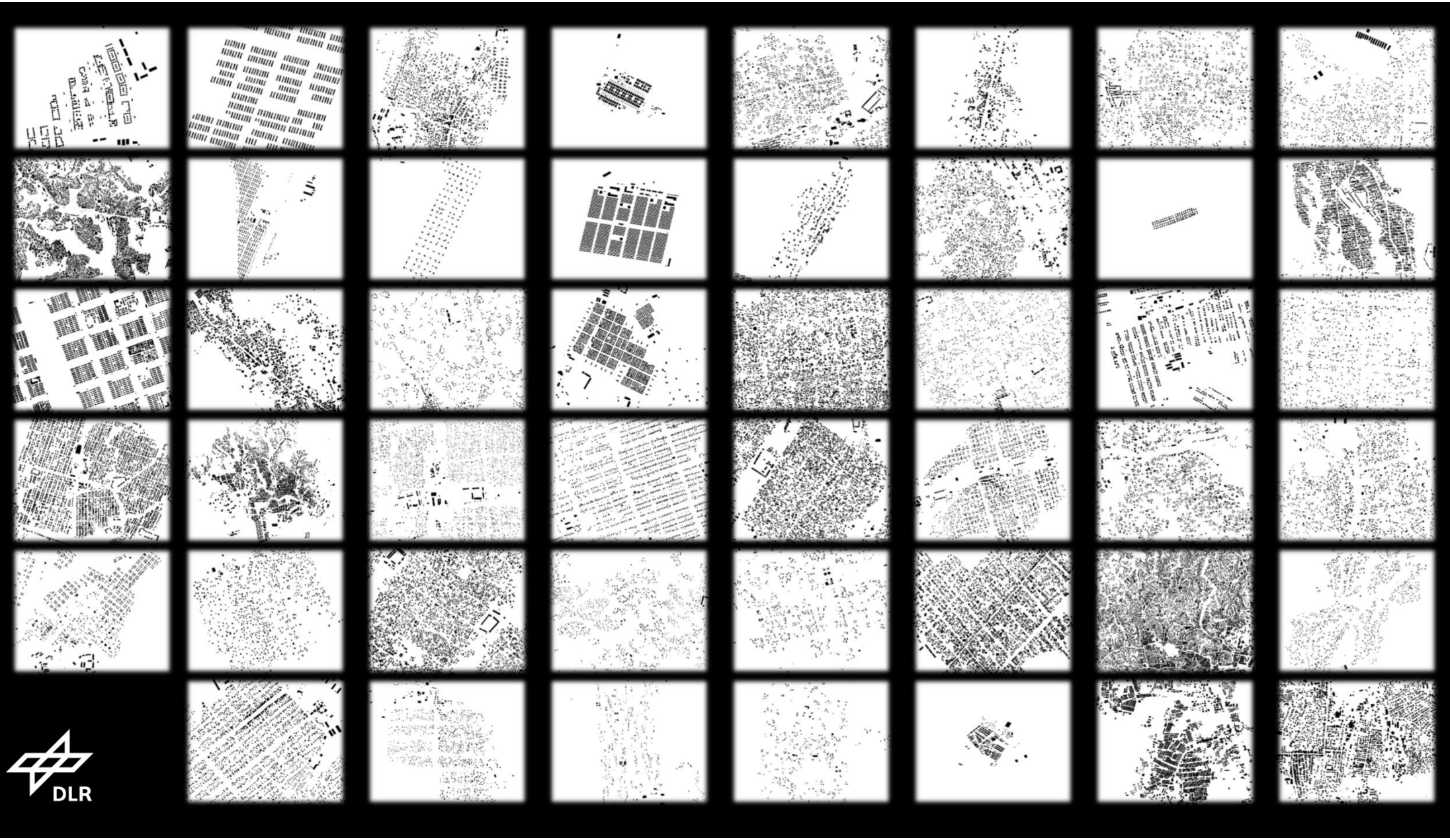
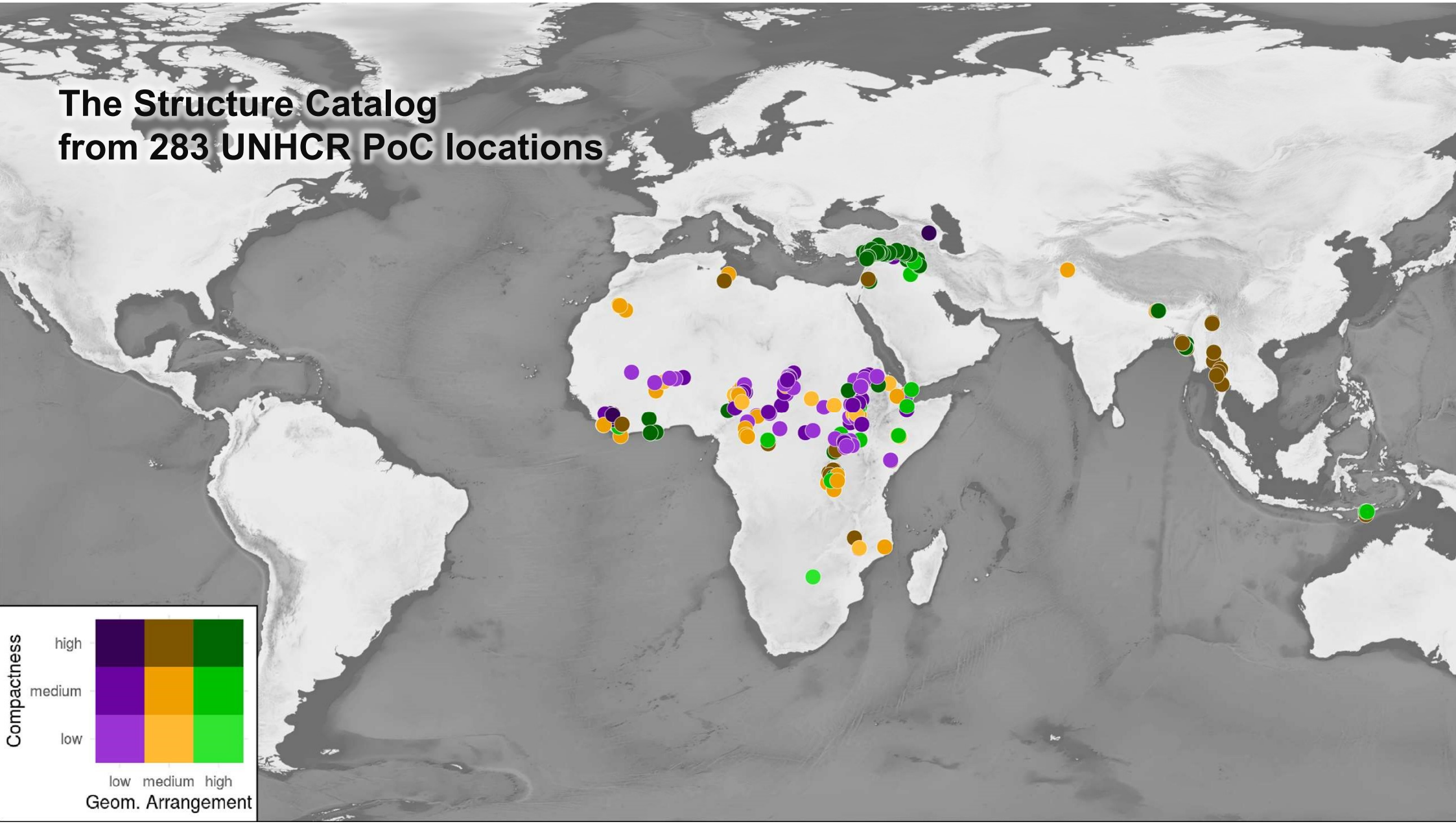

75 m

100 m


DLR


The Structure Catalog
from 283 UNHCR PoC locations
Compactness
high
medium
low
low
medium
high
Geom. Arrangement

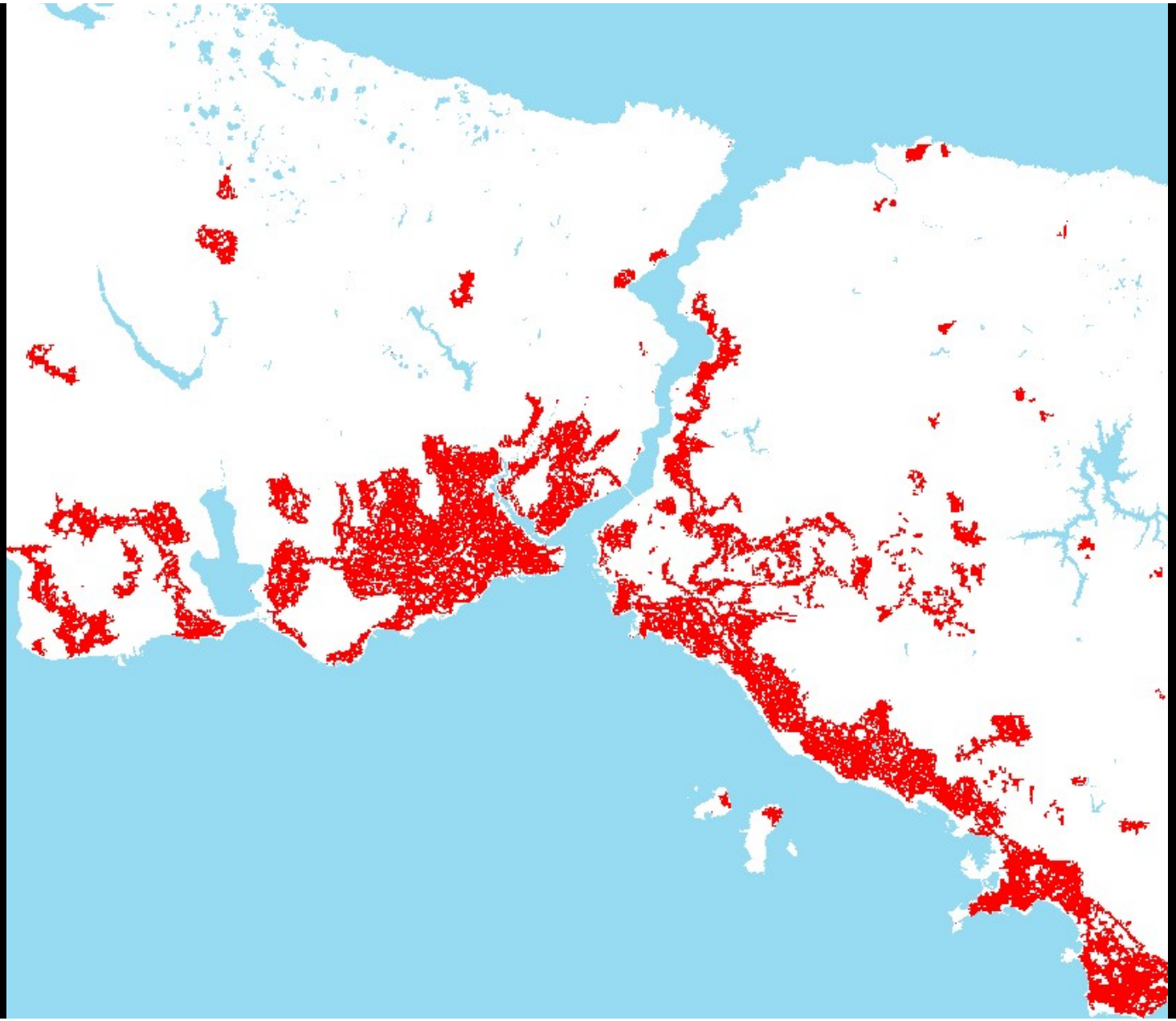
jede Woche migrieren

1.4 million

Menschen vom Land in die Städte

Physischer Ausdruck von Migration

Beispiel: Istanbul

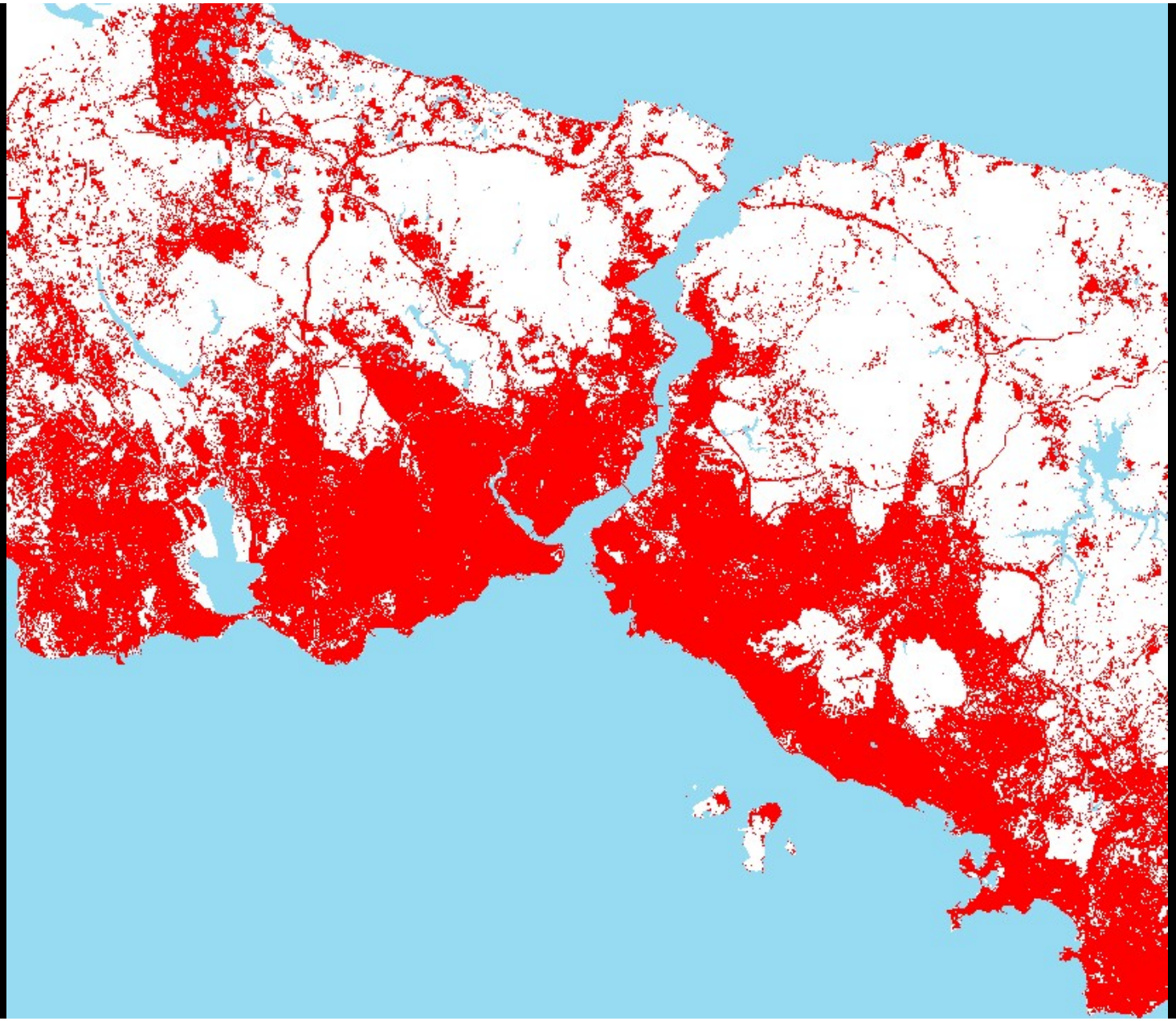


1975

Taubenböck et al., 2012

Physischer Ausdruck von Migration

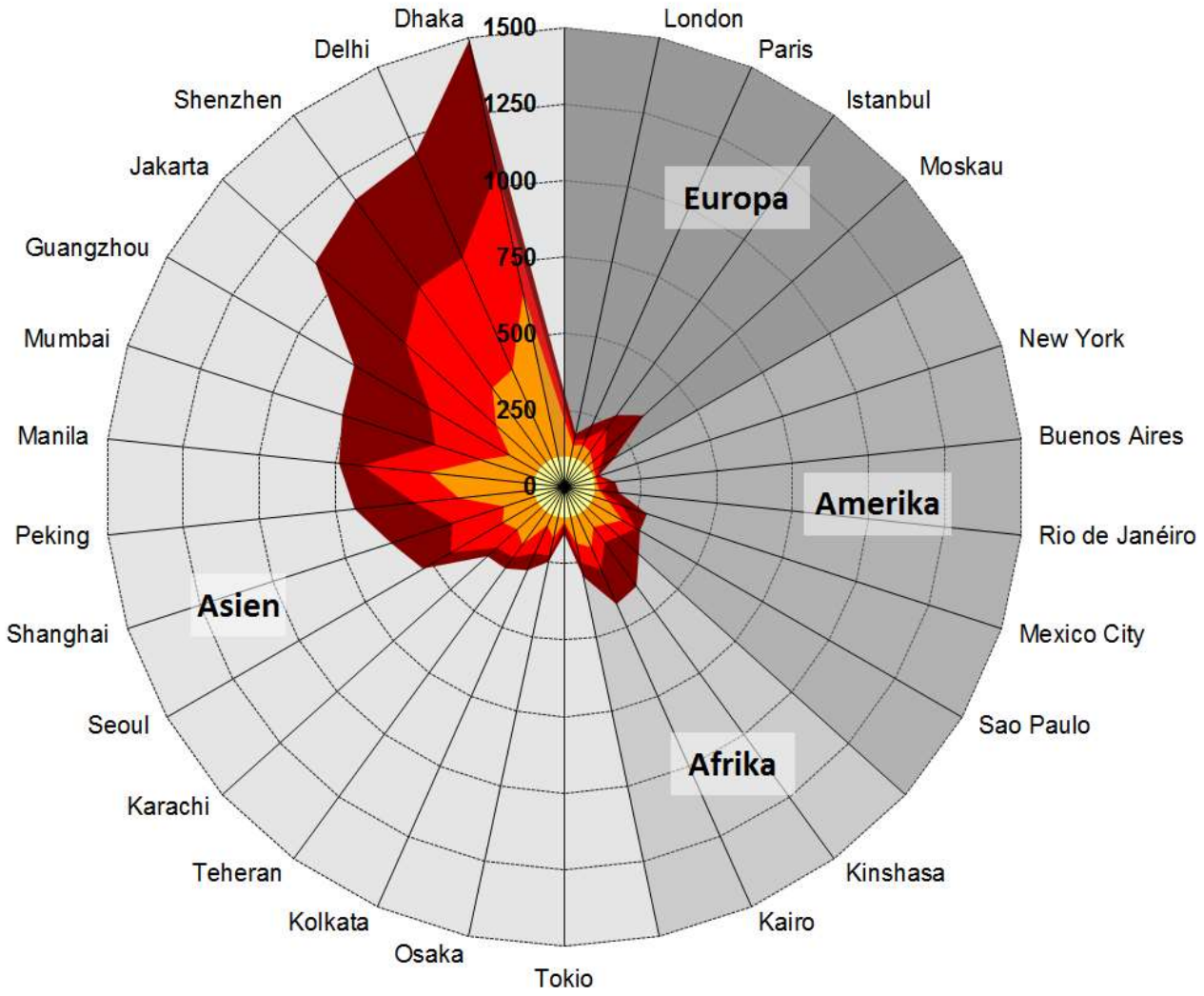
Beispiel: Istanbul



2015

Taubenböck et al., 2012

Relatives Flächenwachstum in Megastädten



Taubenböck H, Esch T, Felbier A, Wiesner M, Roth A & Dech S (2012): *Monitoring of mega cities from space.* Remote Sensing of Environment, vol. 117, pp. 162-176.

DLR

33%

der globalen Stadtbevölkerung lebt in Slums

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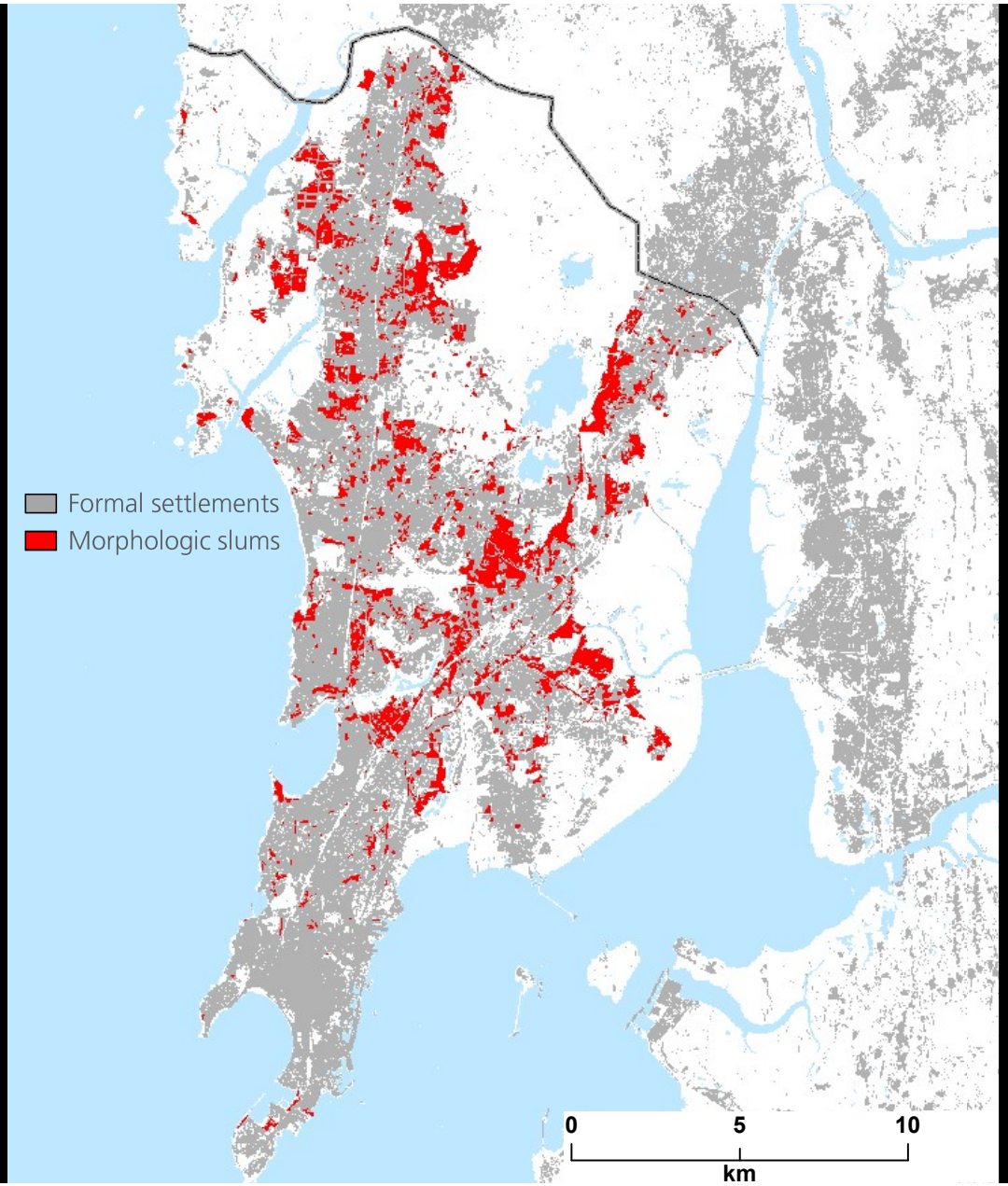
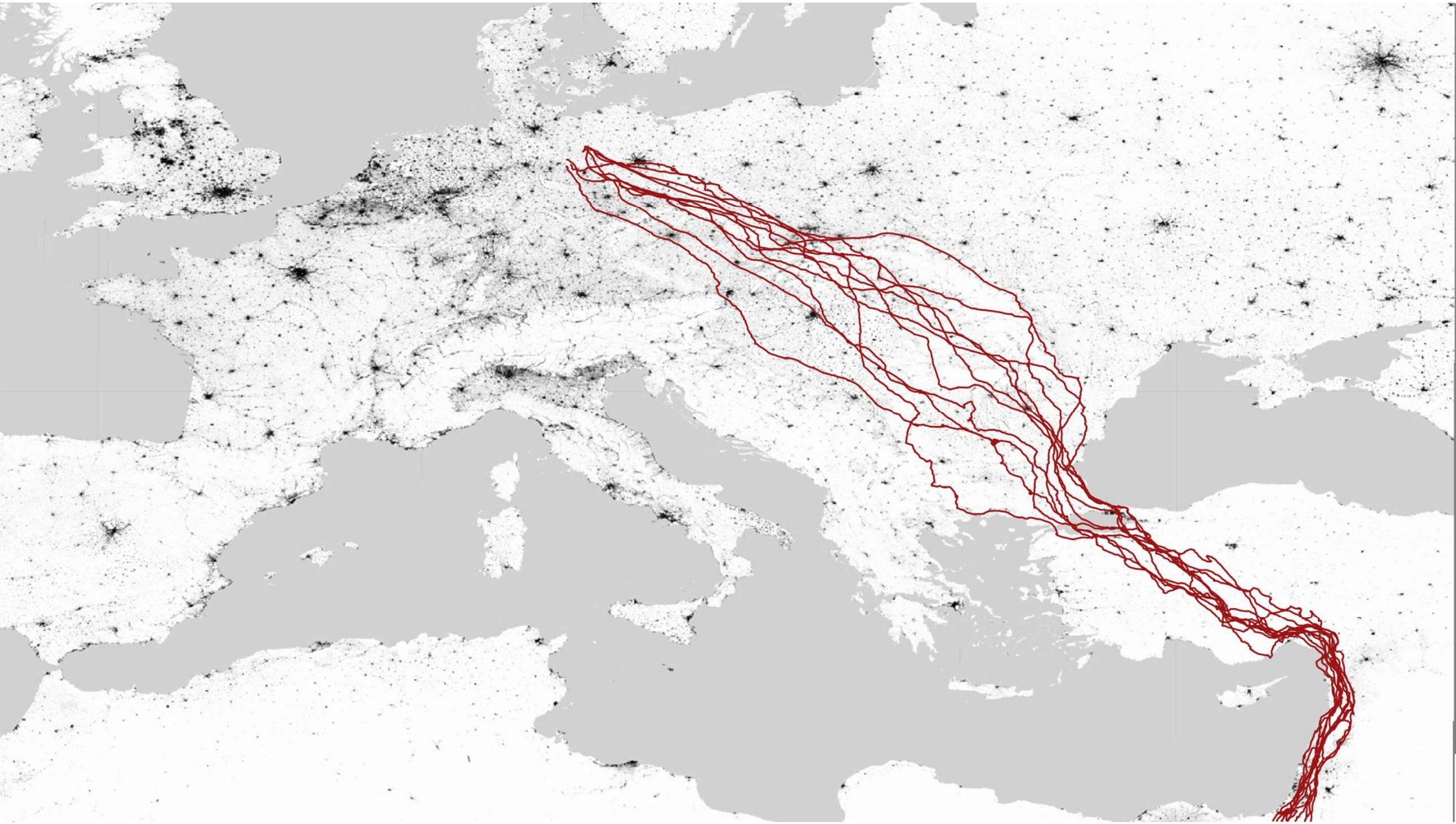
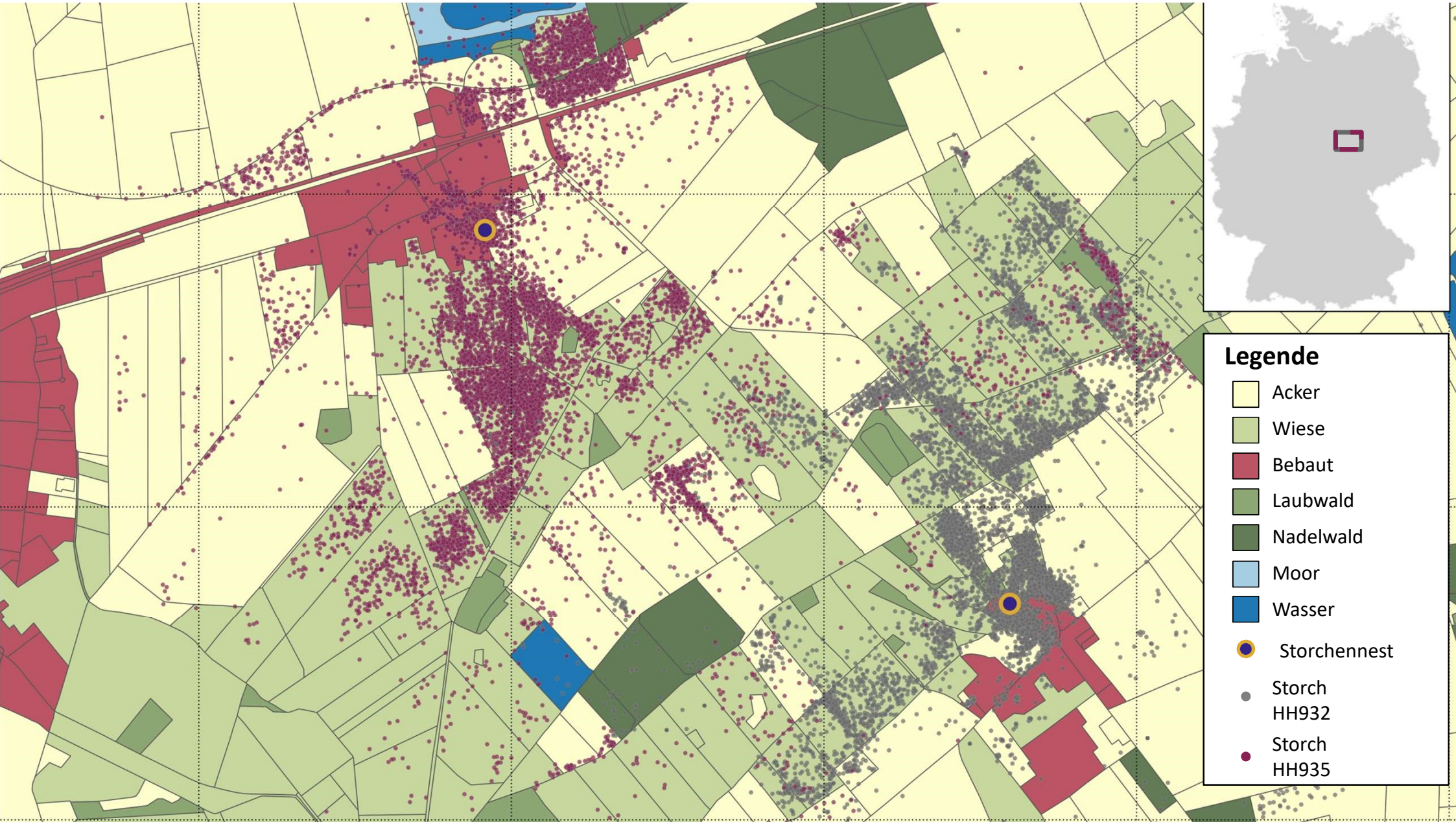
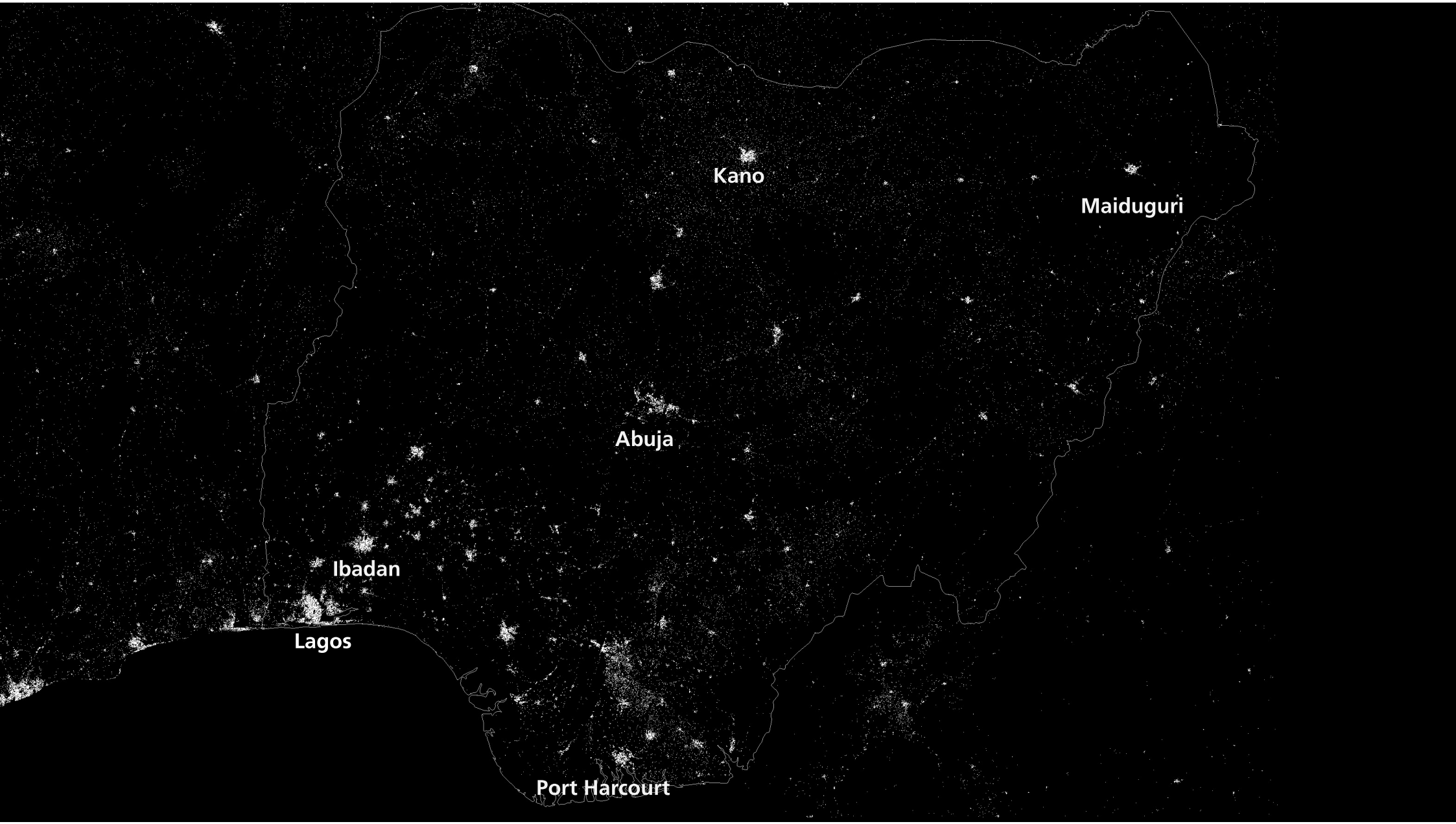
Mumbai, India

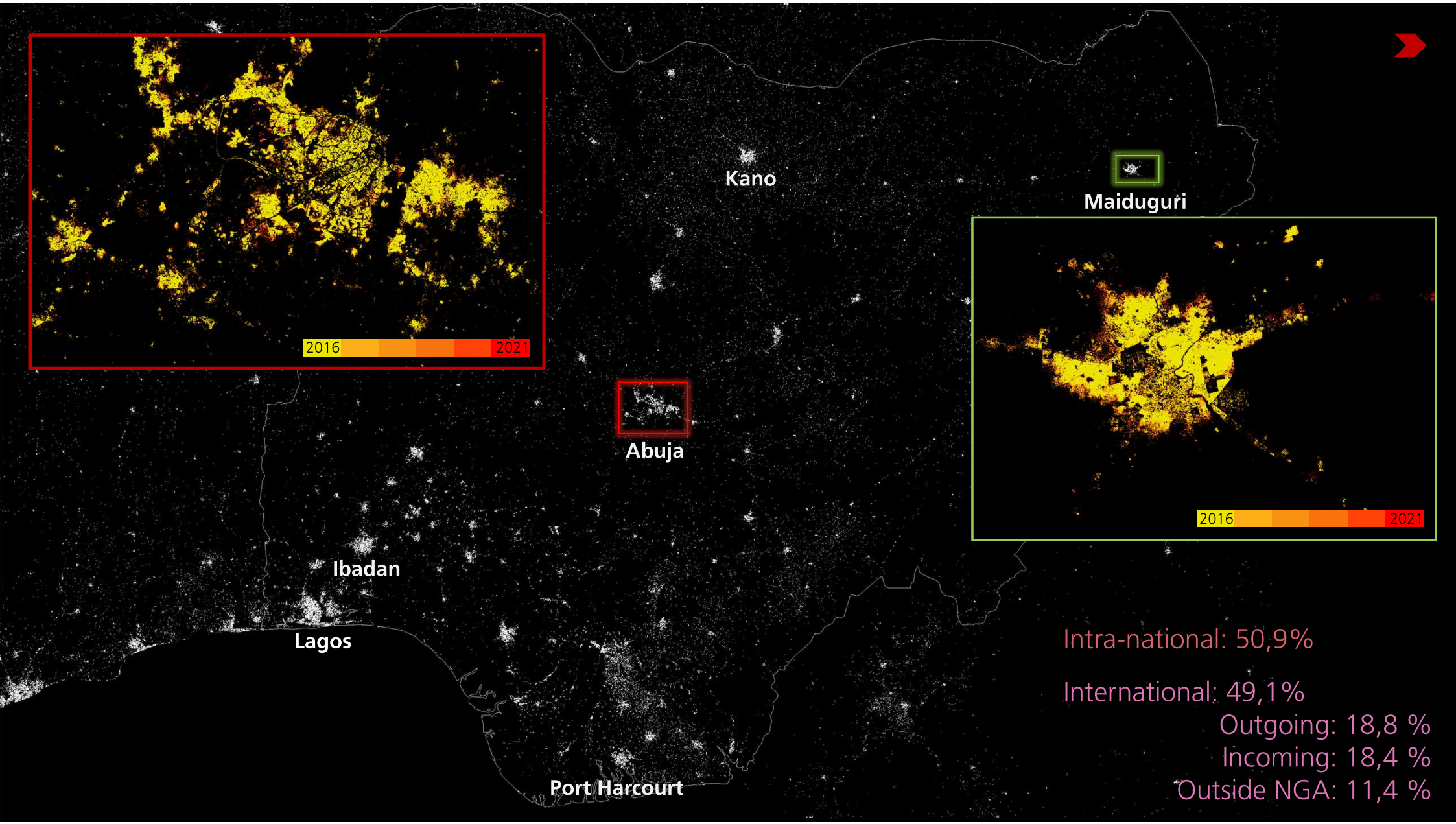




Storchennest


Legende
Acker
Wiese
Bebaut
Laubwald
Nadelwald
Moor
Wasser
Storchennest
Storch HH932
Storch HH935


Kano
Maiduguri
Abuja
Ibadan
Lagos
Port Harcourt


2016
2021
Kano
Maiduguri
2016
2021
Abuja
Ibadan
Lagos
Port Harcourt
Intra-national: 50,9%
International: 49,1%
Outgoing: 18,8 %
Incoming: 18,4 %
Outside NGA: 11,4 %

Referenzen:

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Wurm M, Stark, T, Zhu, XX, Weigand M, & Taubenböck H (2019): *Semantic segmentation of slums in satellite images using transfer learning on fully convolutional neural networks.* ISPRS Journal of Photogrammetry and Remote Sensing. vol. 150, pp. 59-69.

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