

Cross-marking Central Vietnam: a biodiversity corridor for Vu Gia Thu Bon Watershed based on tree species data

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Watch a short movie (Vietnamese and English version) about our research project at:
<http://www.lucci-vietnam.info/videos/project-overview-video>



Outline

- Objectives Project/Biodiversity group
- Vu Gia Thu Bon Watershed
- Methods
- Preliminary results
- Outlook

Overall goal LUCCi project

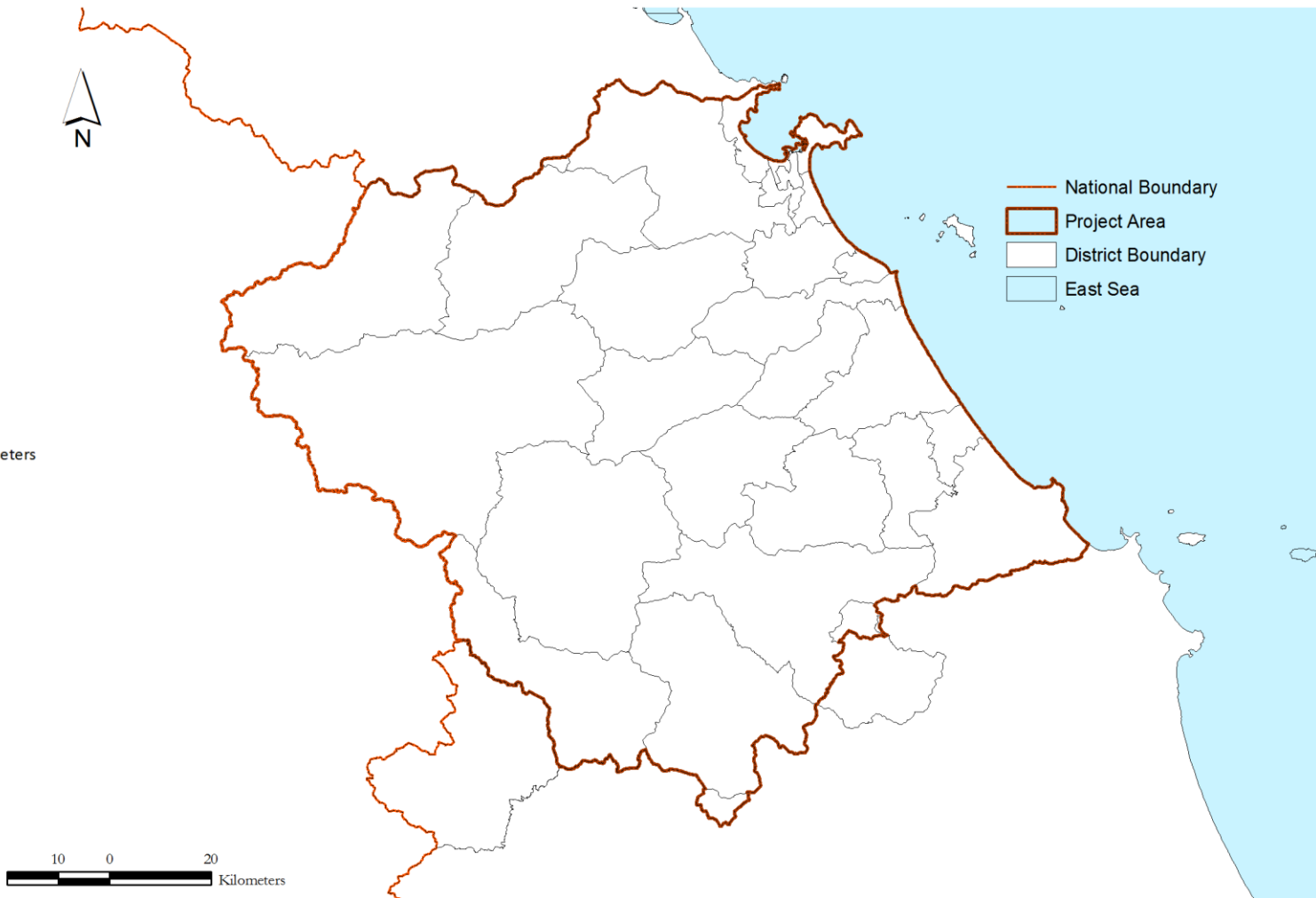
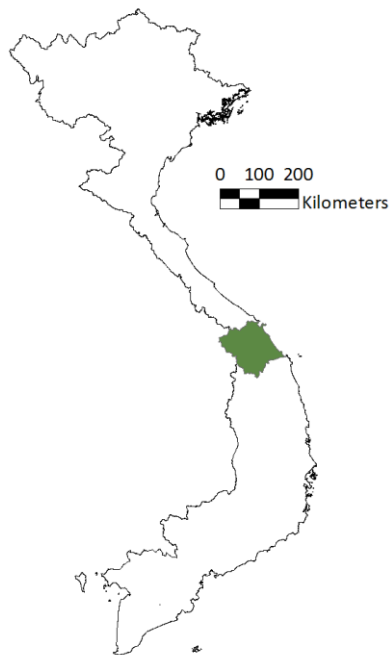
Provide a sound future land and water use management framework that considers socio-economic development, population growth and expected impacts of climate change on land and water resources.

Main objective of the biodiversity group

- Design of a biodiversity corridor for VGTB
 - Based on tree species distribution patterns
 - Based on matrix characteristics

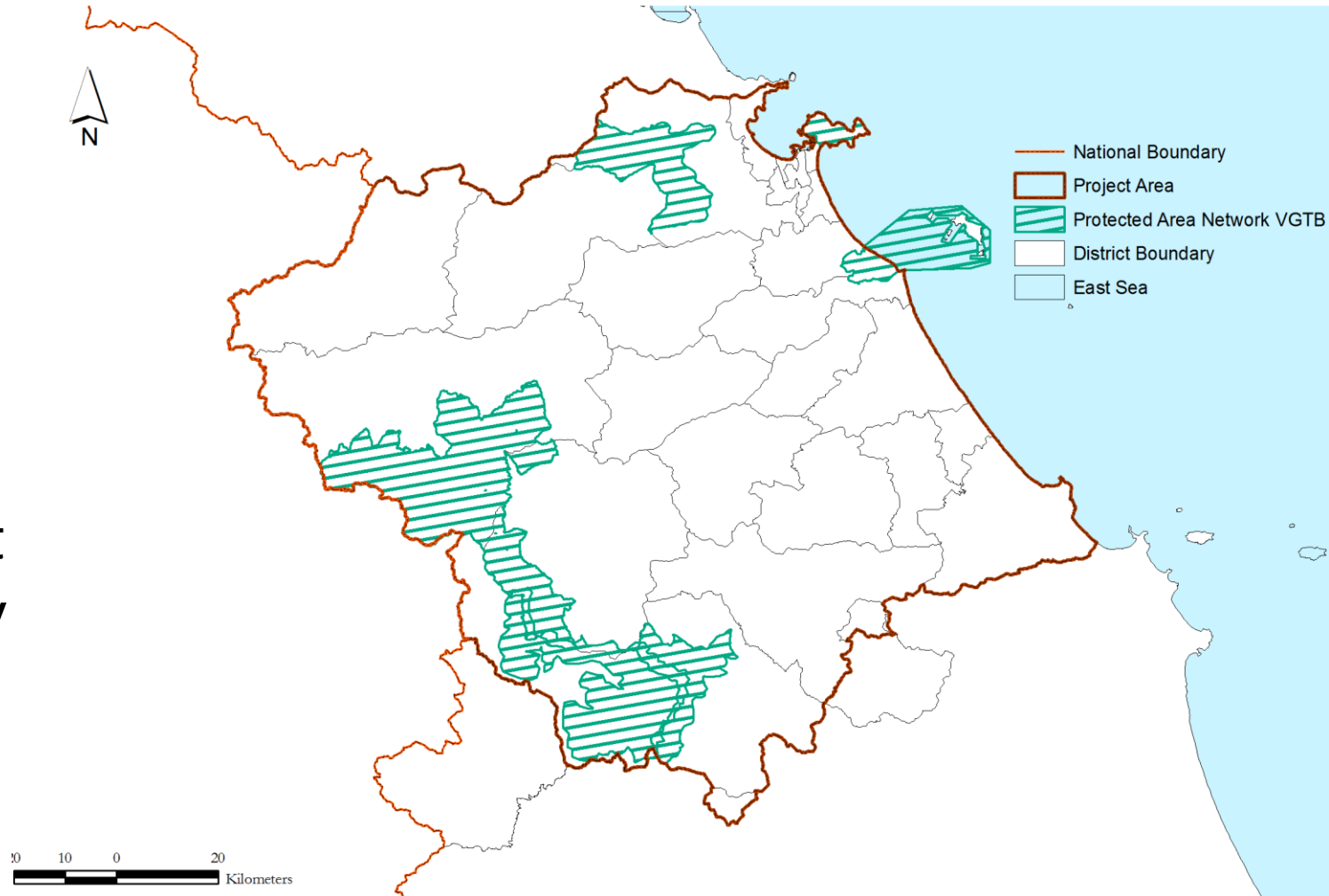


Vu Gia Thu Bon Watershed



Vu Gia Thu Bon Watershed

Protected
areas (core
areas for the
establishment
of biodiversity
corridors)

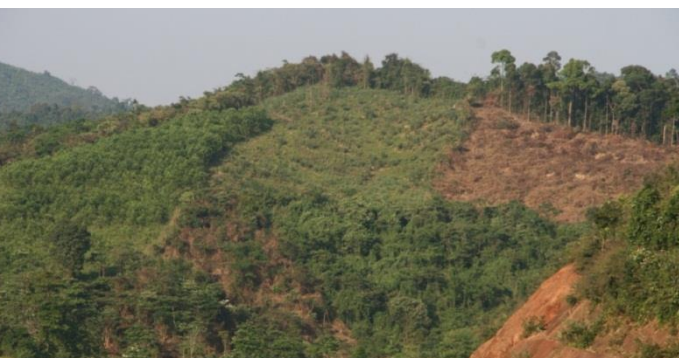


Legal context

- Biodiversity Law No. 20/2008/QH12: 8 chapters, 78 articles:
... „8. **Biodiversity corridor** means an area connecting natural ecological regions in which organisms living in these regions can interact.” ...
- No explicit legal status that states how the biodiversity corridors should be managed

Challenges for conservation in VGTB

- Population increase
- Poverty in rural areas
- High rate of land conversion (nature-near forests to non-forest or plantations)



Methods: overview

- Mapping of tree species distribution patterns in VGTB
- Mapping of land use systems in VGTB
- Combination of results in aggregated biodiversity maps



Mapping of tree species distribution patterns in VGTB

- Tree species identification
- Species distribution modelling SDM

Guide for R-Package 'sperich'

How to use the R-Package 'sperich' to interpolate species ranges based on species occurrences and to estimate centers of biodiversity

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February 6, 2013

Species distribution modelling SDM

- Mapping of key species with relevant functions in ecosystems
 - Related to ecosystem service(s), e.g. pollination
 - Related to ecosystem state, e.g. pioneer species
- Mapping of climate change impacts

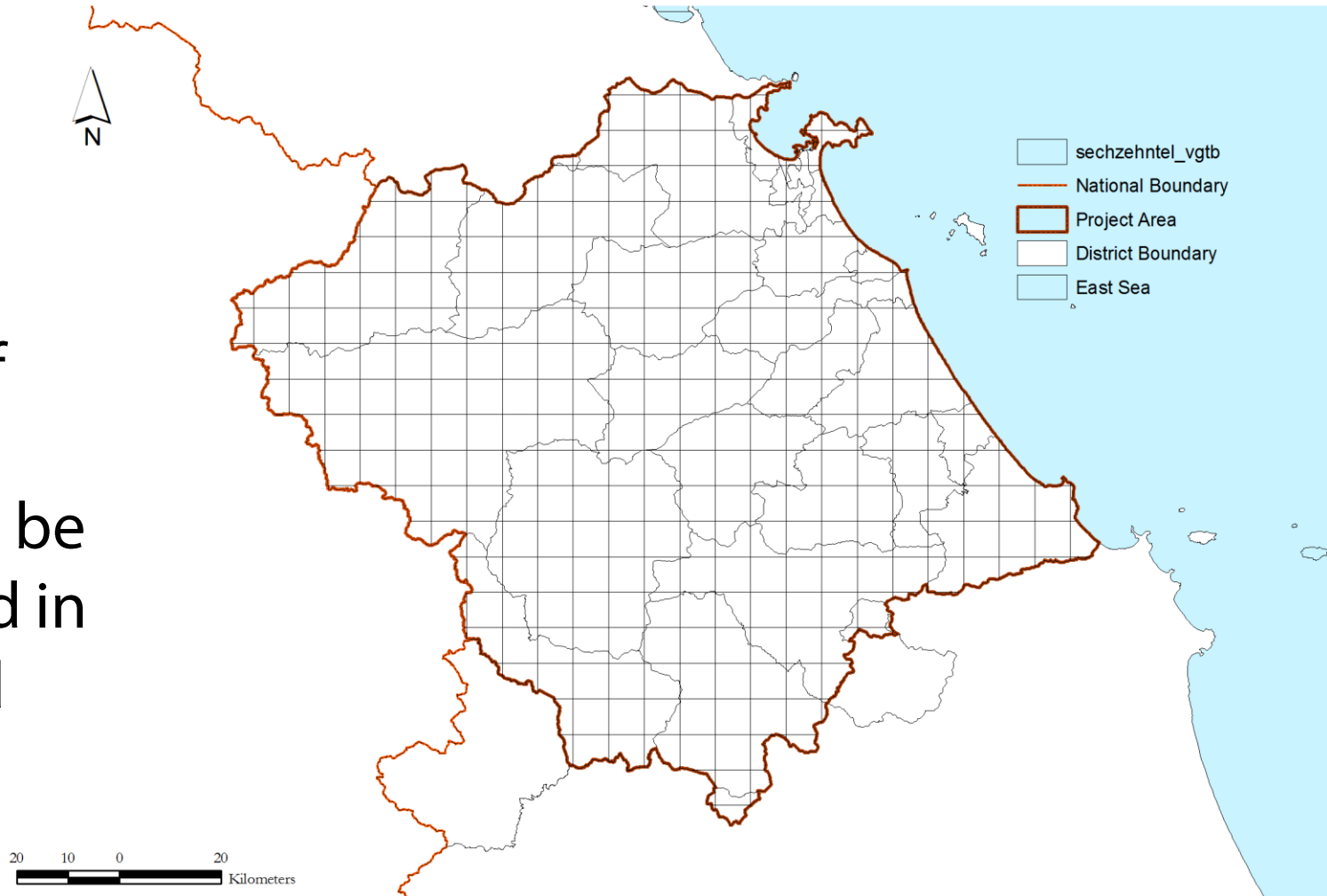
Mapping of land use systems in VGTB

- Land use systems identification
- Collection of socio-economic data

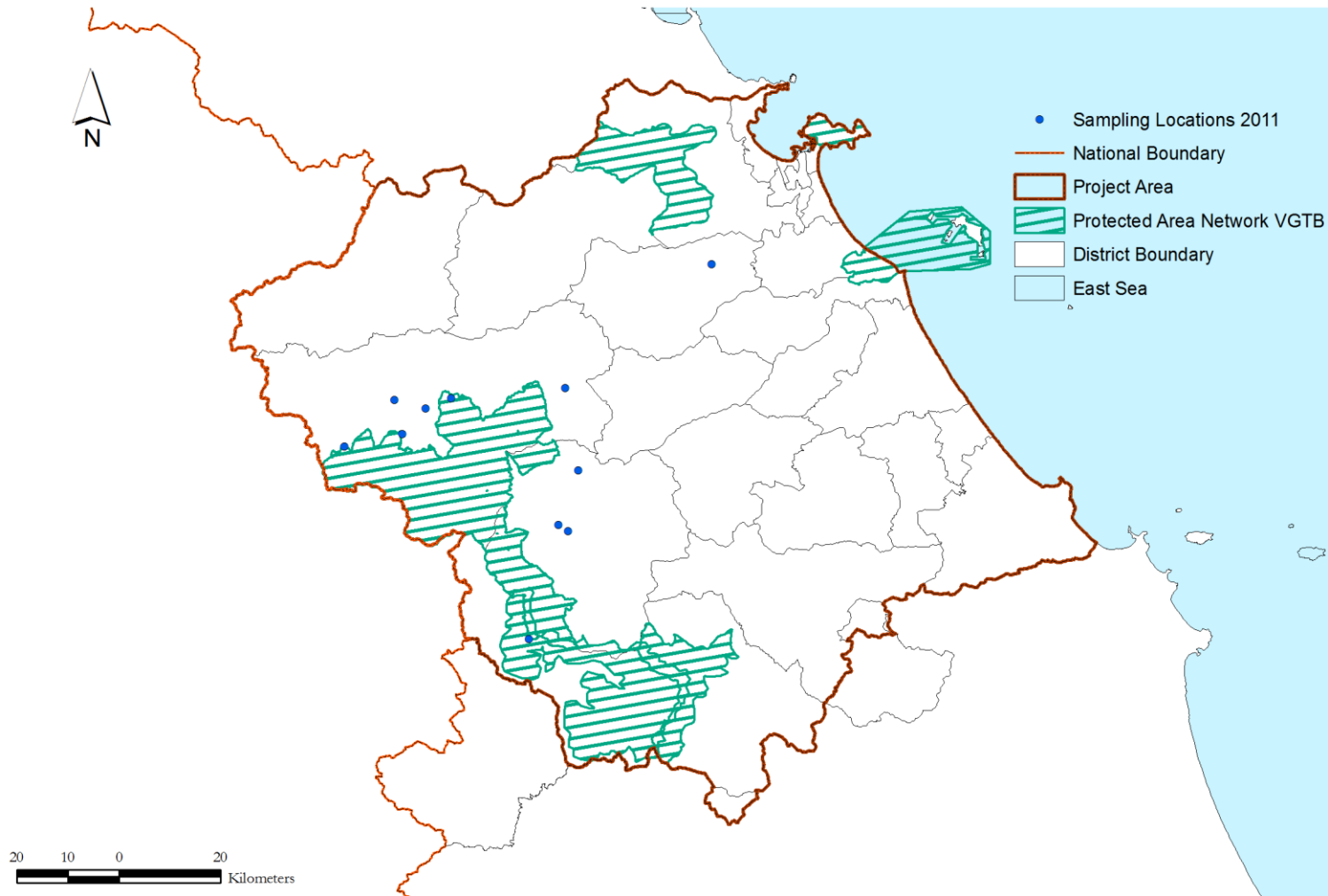


Methods: Aggregated biodiversity maps

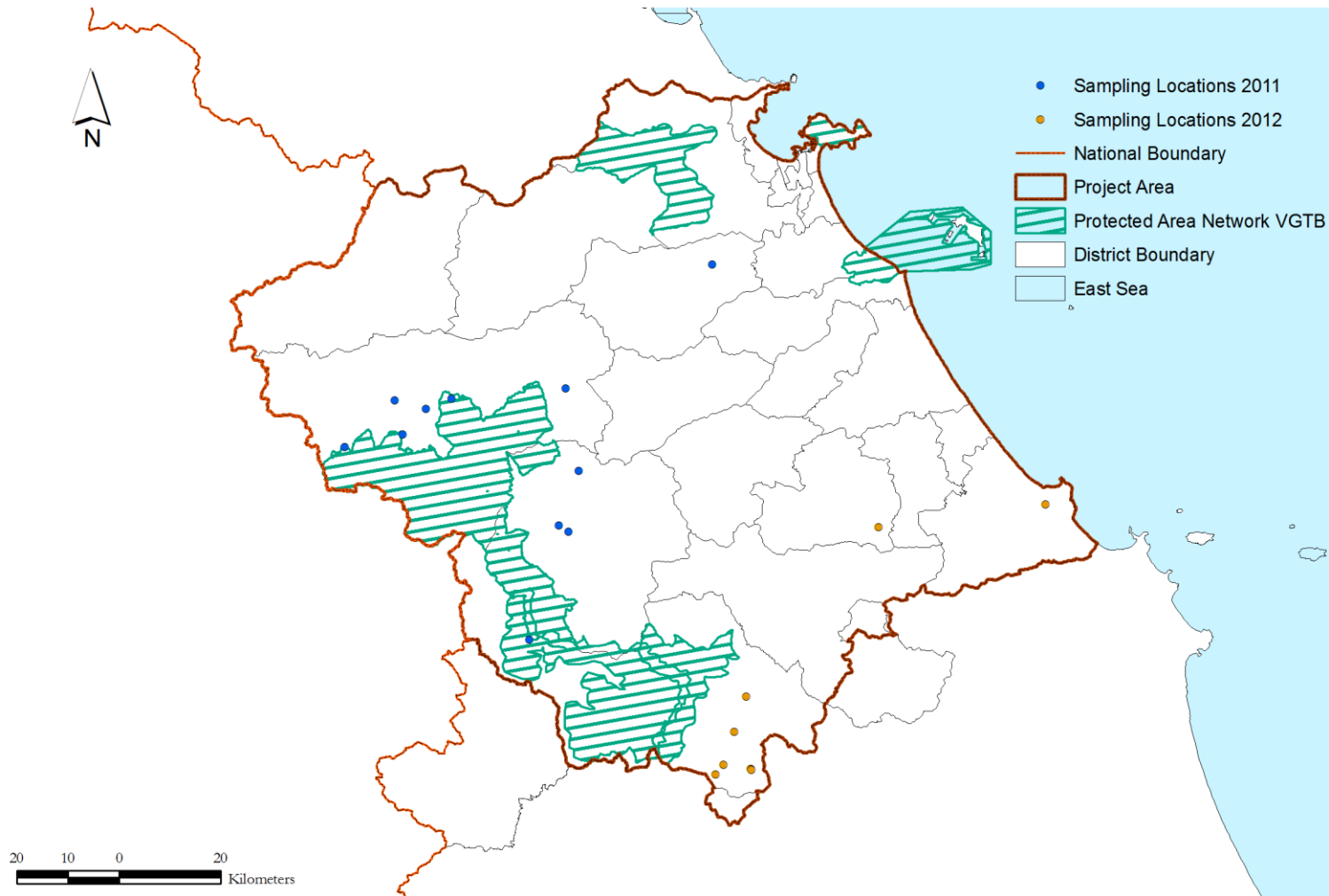
- Results of different maps will be combined in a gridded scheme



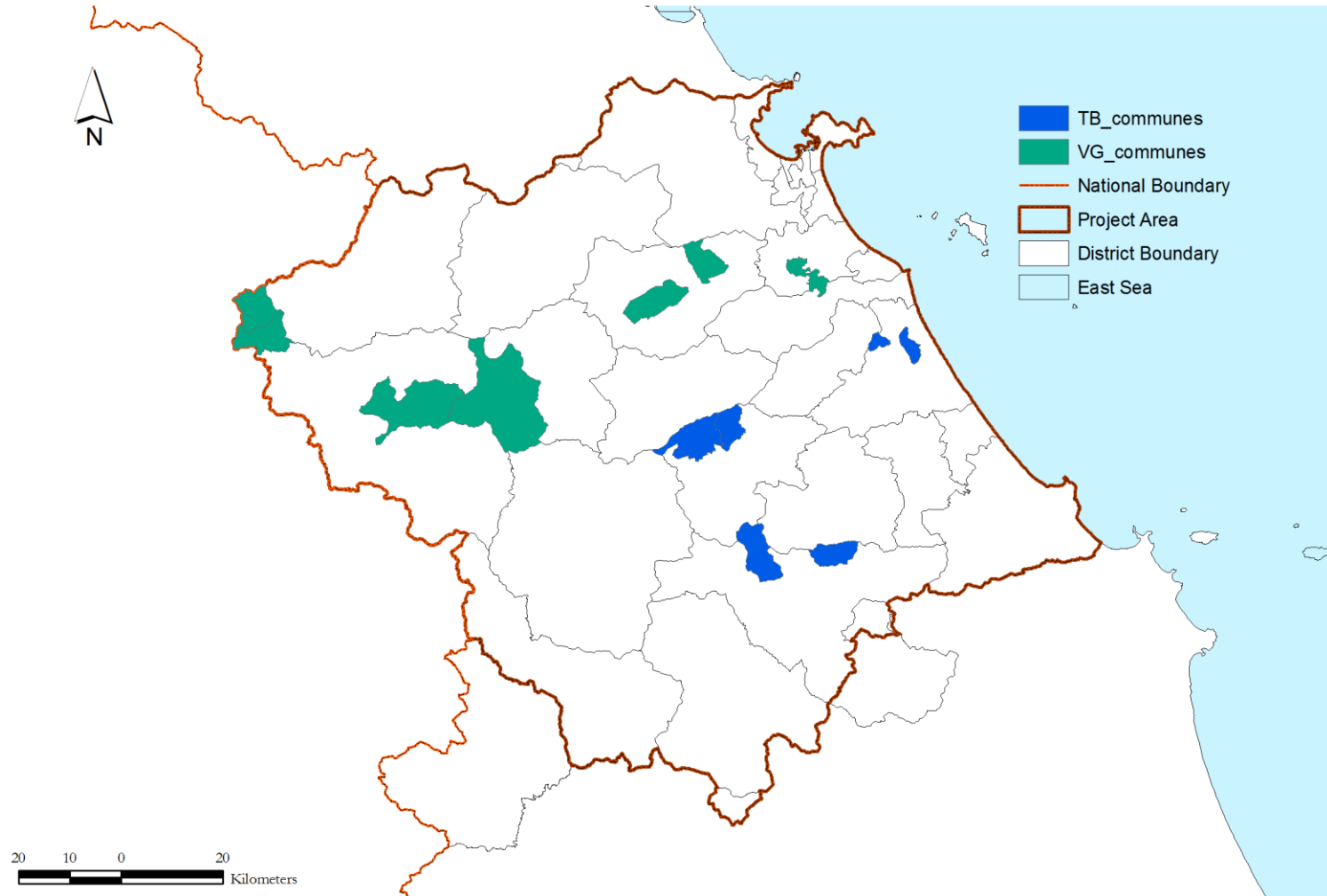
Vu Gia Thu Bon Watershed Sampling sites 2011



Vu Gia Thu Bon Watershed Sampling sites 2011, 2012



Vu Gia
Thu Bon
Watershed
Districts
where 700
interviews
were carried
out



Ongoing and Planned Activities 2013

- Third field campaign May-June 2013
- Selection of key tree species
- SDM
- Construction of maps of ecosystem functions
- Construction of matrix maps
- Aggregation of the different gridded maps to find areas most suitable for a biodiversity corridor

THANK YOU FOR YOUR ATTENTION!!

