PREDICTING SUITABLE HABITAT FOR DALMATIAN PYRETHRUM (*TANACETUM CINERARIIFOLIUM* /Trevir. / Sch. Bip.) IN CROATIA
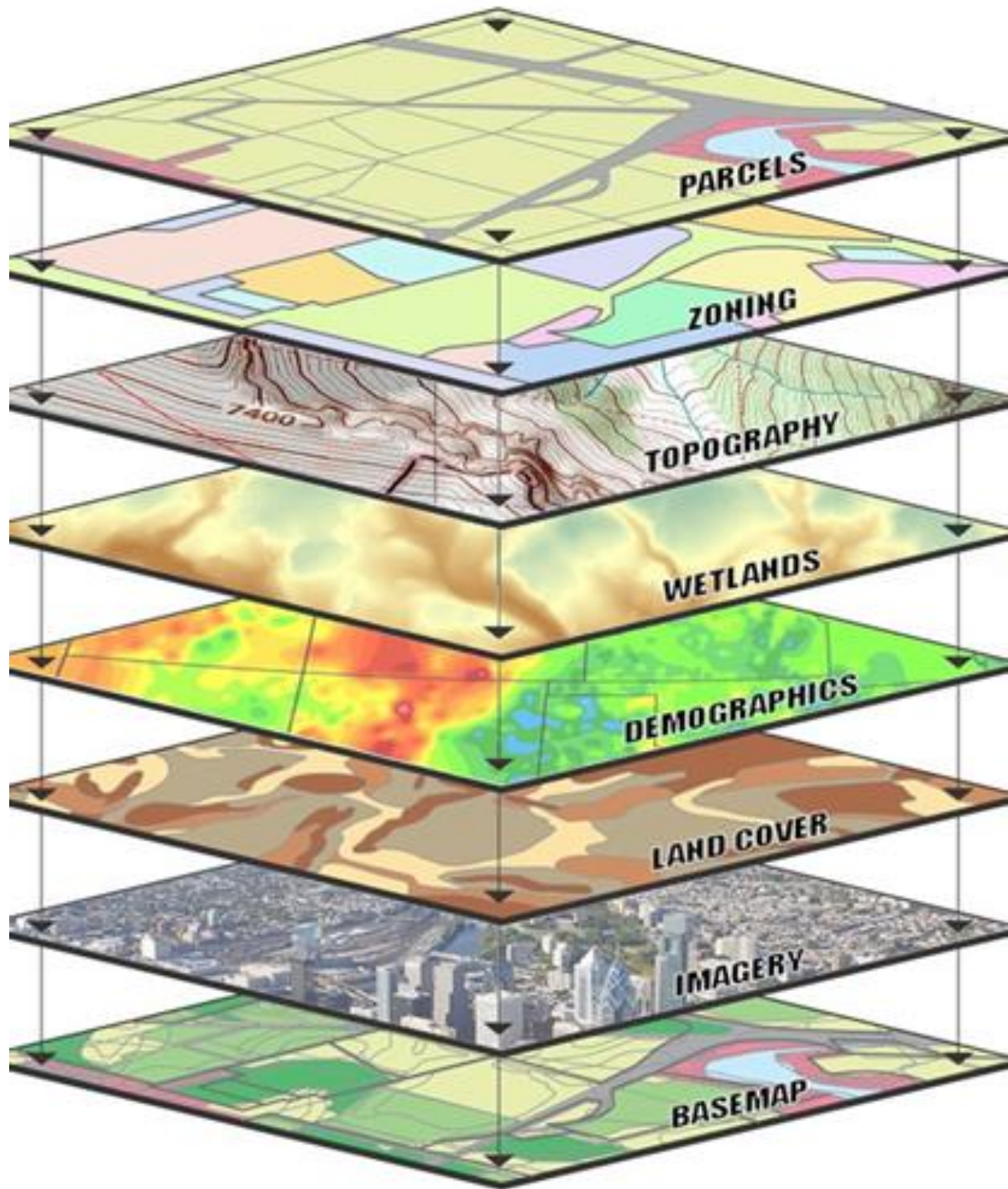
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Suitable Habitat Modelling

- Predict the potential distribution of a species based on finding suitable habitat

- Different for each species based on habitat requirements

Dalmatian pyrethrum

Data

- Herbarium collections
- Literature
- Field studies
- **871** recorded locations
- Sample size: **224**

- Annual Mean Temperature
- Mean Diurnal
- Isothermality
- Temperature Seasonality Max
- Temperature of Warmest Month
- Temperature Annual Range Mean
- Temperature of Wettest Quarter
- Mean Temperature of Driest Quarter
- Mean Temperature of Warmest Quarter
- Mean Temperature of Coldest Quarter
- Annual Precipitation
- Precipitation of Wettest Month
- Precipitation of Driest Month
- Precipitation Seasonality
- Precipitation of Wettest Quarter
- Precipitation of Driest Quarter
- Precipitation of Warmest Quarter
- Precipitation of Coldest Quarter
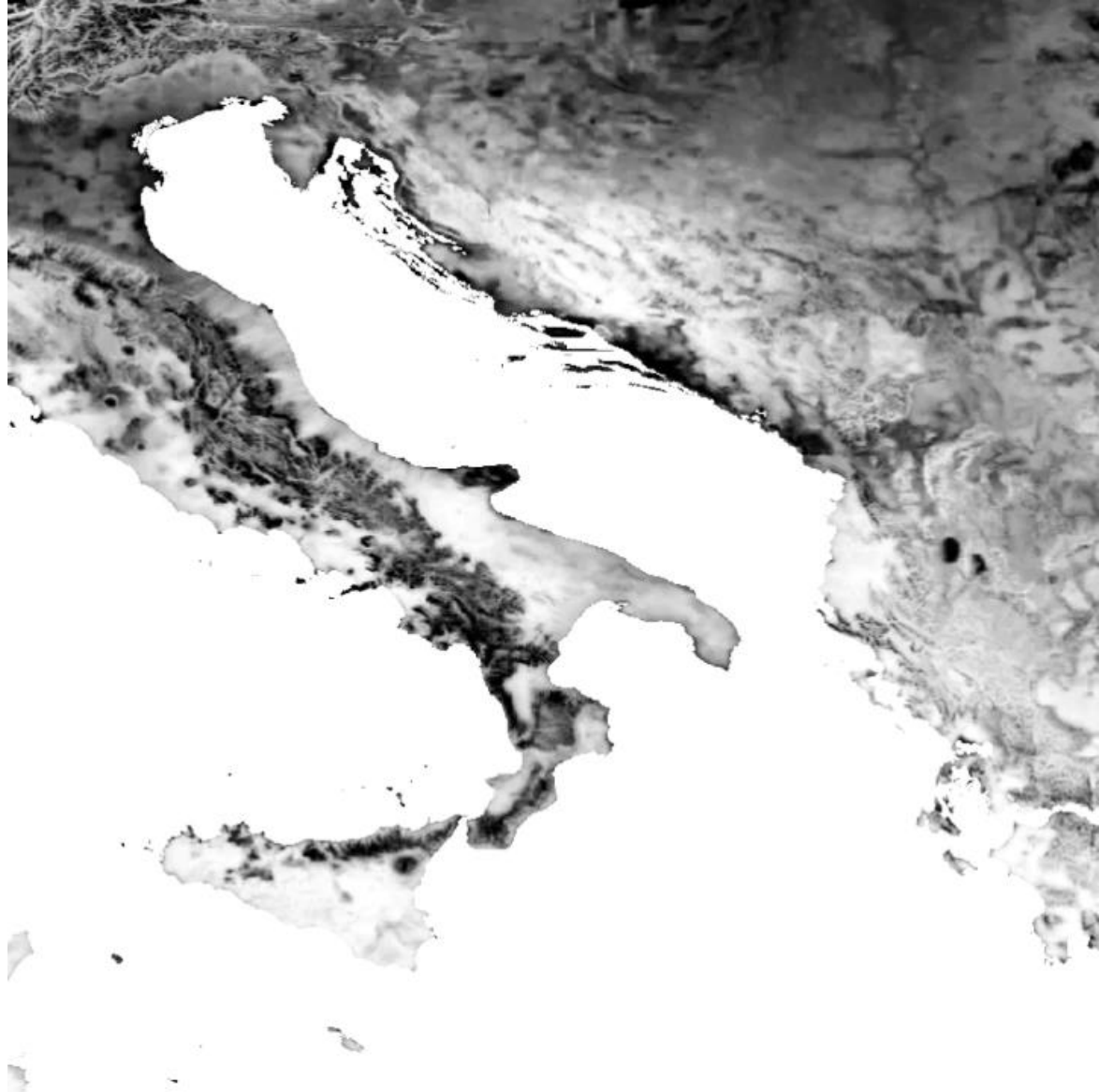
Bioclimate Variables

Variable selection

01
CORRELATION BETWEEN VARIABLES

02
BUILDING CANDIDATE SETS OF VARIABLES (90)

03
GENERATING AND COMPARING MODEL PERFORMANCE (MAXENT)

04
SELECTING THE BEST MODEL BASED ON AIC$_C$ (ENMTOOLS)

Best Model

| VARIABLE	% CONTRIBUTION	PERMUTATION IMPORTANCE
Isothermality	39.5	11.5
Mean Temperature of Driest Month	37.7	54.2
Precipitation Seasonality	11	18.2
Temperature Seasonality	5.9	12.8
Precipitation of Wettest Month	3.8	3
Mean Temperature of Wettest Month	2.1	0.3

Best Model

- **Suitable areas in Croatia:**
- ❑ Istria
- ❑ Islands
- ❑ South of Dalmatia

- **Neighboring countries**
- ❑ Bosnia and Herzgovina
- ❑ Montenegro
- ❑ Albania
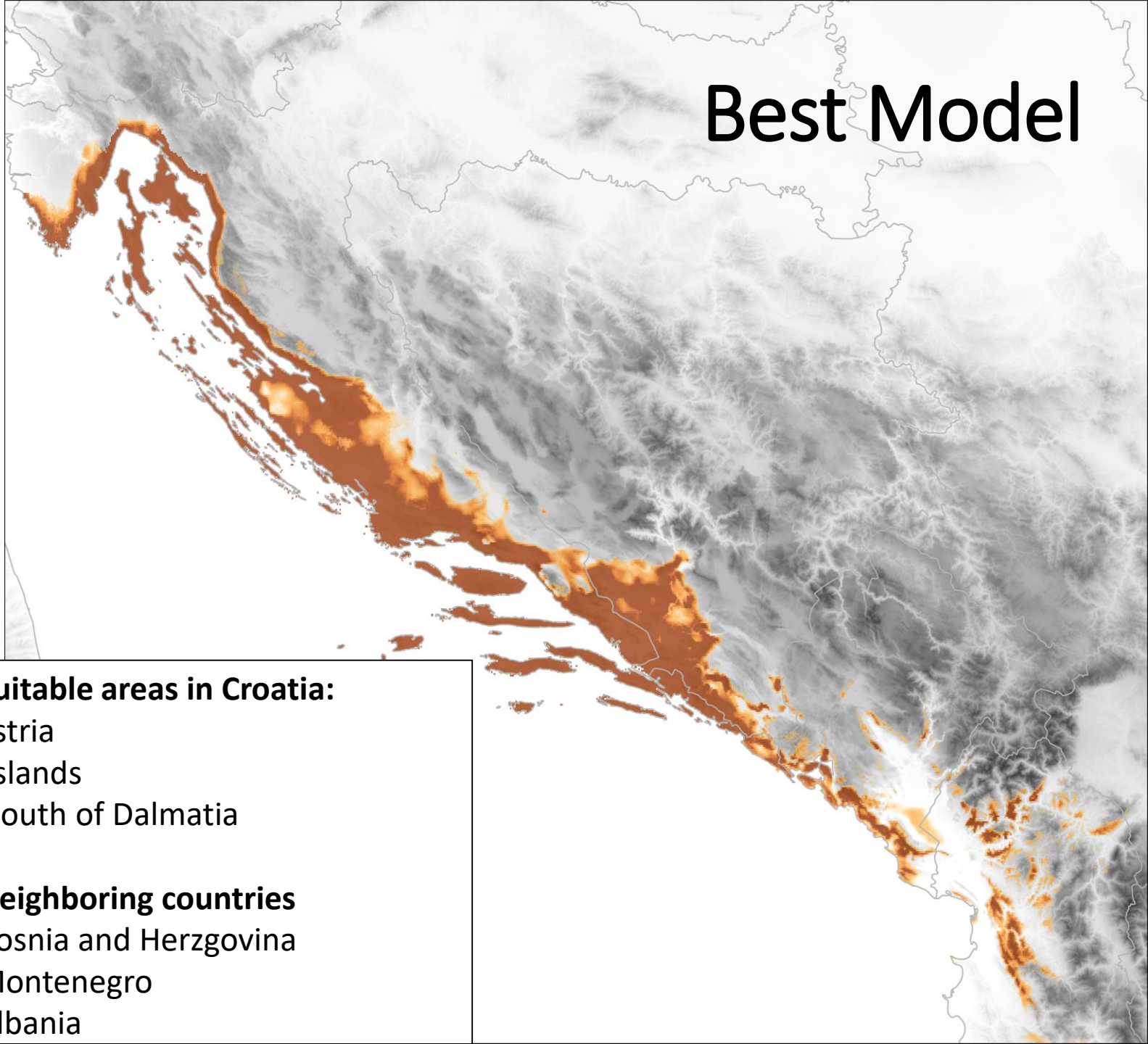
Future Research

- ☐ **Upcoming field studies**

- ☐ **Expanding the Model**

- ☐ **Change in distribution due to climate change**

- ☐ **Incorporation of genetic data**

Genetic background of Dalmatian pyrethrum (*Tanacetum cinerariifolium* /Trevir./ Sch. Bip.) insecticidal potential (PyrDiv) (IP-06-2016-9034)