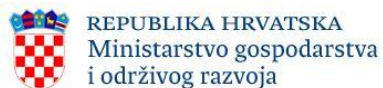


CHALLENGES IN ESTABLISHING THE ARKOD+ (plus) AND CROLIS (vector) LU LAYERS IN CROATIA

Mladen Majcen (APPRRR)

Visibility event - 03. listopada 2023. godine - NSK, Zagreb



REPUBLIKA HRVATSKA
Ministarstvo gospodarstva
i održivog razvoja



AGENCIJA ZA
PLAĆANJA U
POLJOPRIVREDI,
RIBARSTVU I
RURALNOM
RAZVOJU



HRVATSKE
ŠUME



EKONERG

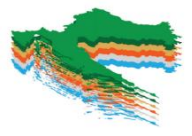


REPUBLIKA HRVATSKA
Državna geodetska uprava



FOND ZA ZAŠTITU OKOLIŠA I
ENERGETSKU UČINKOVITOST

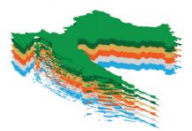




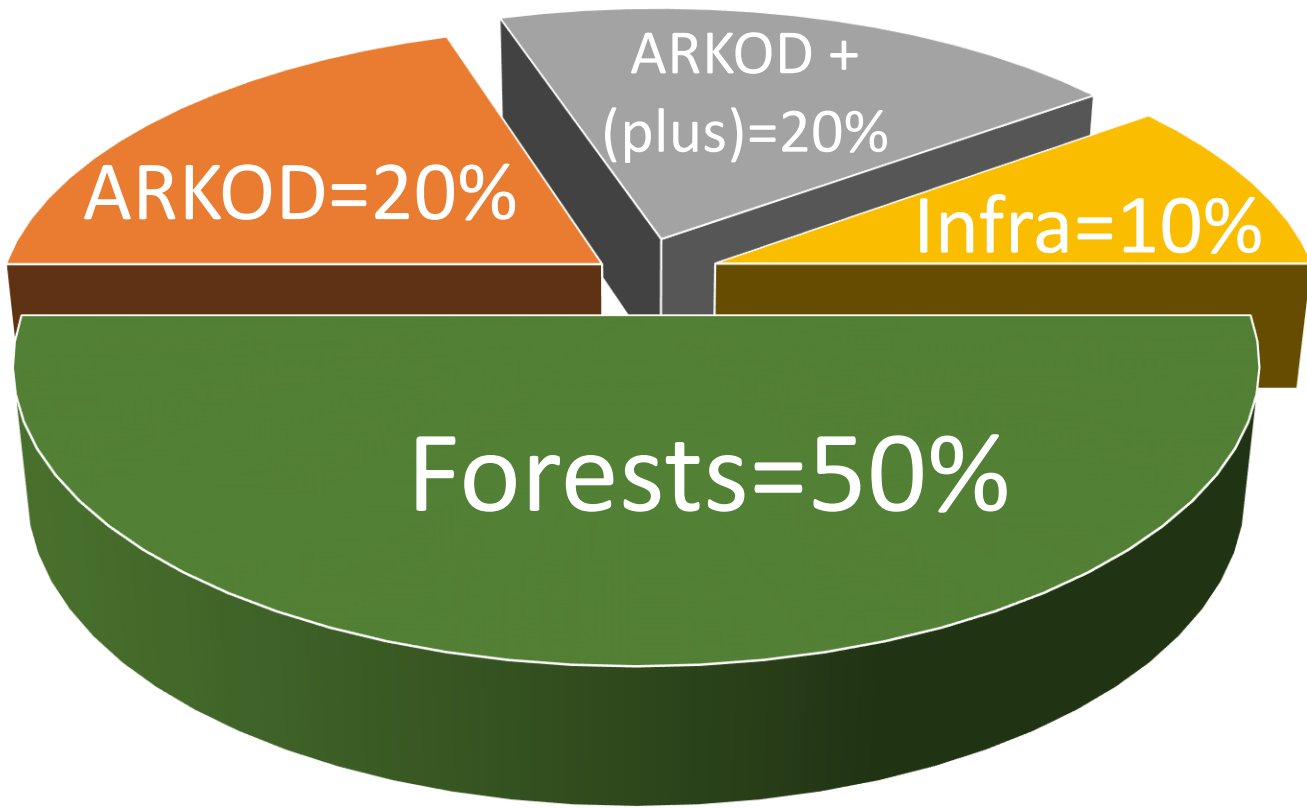
CONTENT

- **PAAFRD as a CROLIS partner?**
- **Legal basis**
- **CROLIS/CAP goals**
- **Implementation / Activities / Results**
- **Conclusion**





Total land area in CROATIA

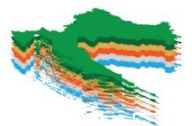


WHY IS THE PAYING AGENCY A CROLIS PARTNER?



AGENCIJA ZA
 PLAĆANJA U
 POLJOPRIVREDI,
 RIBARSTVU I
 RURALNOM
 RAZVOJU





PAAFRD - COMPETENCE



CAP implementation / IACS maintenance

ARKOD N° of polygons 1,3 mil / Area 1,2 mil ha

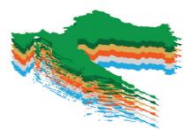
DOP5 data – since 2009 onwards

AMS / CBM – IACS agricultural subsidy

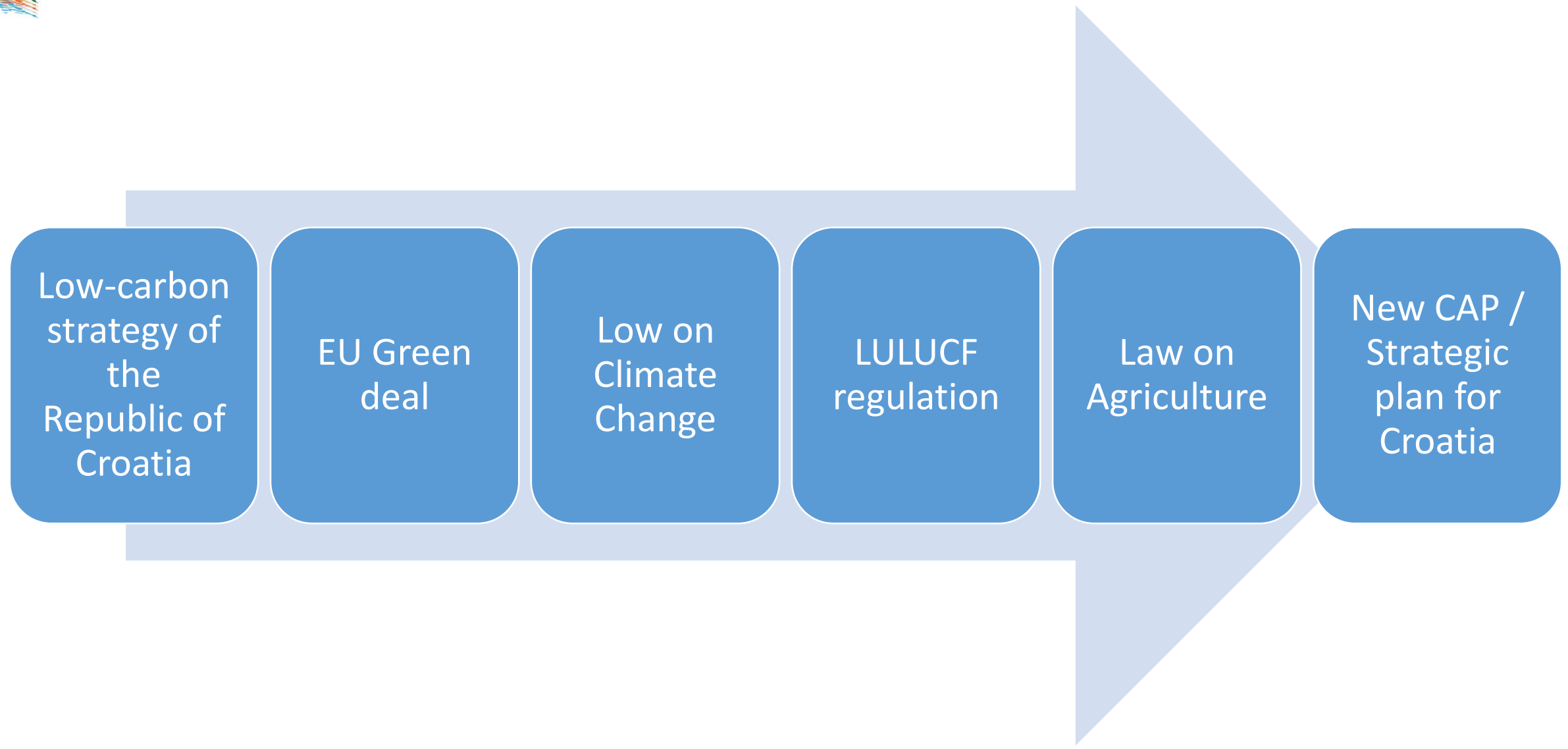
Tools for water protection, permanent grasslands, cross-compliance, green payments, climate and environmental and strategic plan for Croatia and eco-schemes

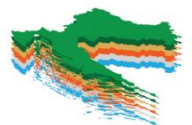
Key business processes of the PAAFRD from the IACS & ARKOD – necessary for the implementation of CROLIS LU & ARKOD+ (plus) CROLIS LU & ARKOD+ (plus)



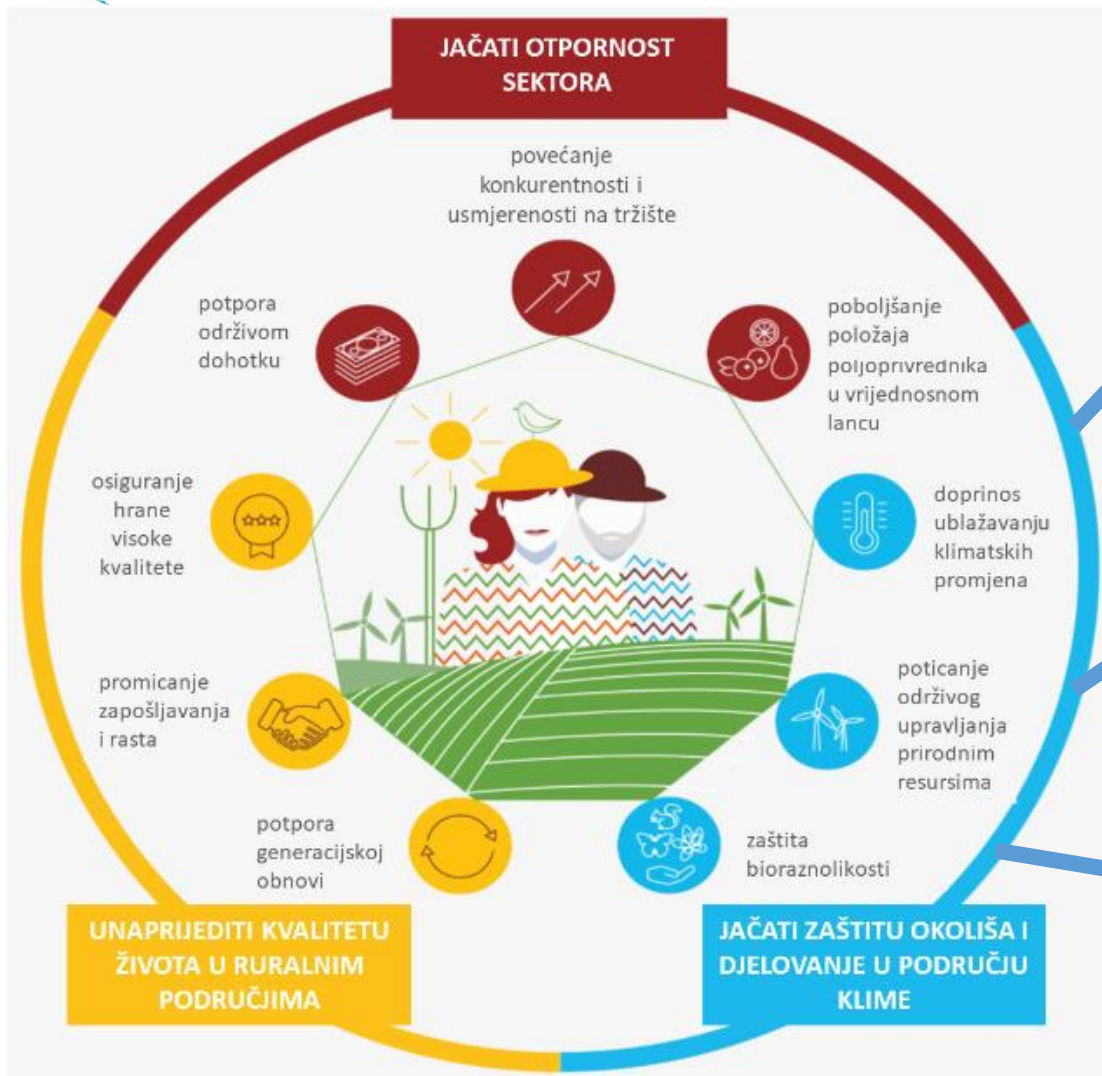


CROLIS LEGAL BASIS AND OBLIGATIONS





GOALS OF NEW CAP 2023/2027 FOR CLIMATE AND ENVIRONMENT

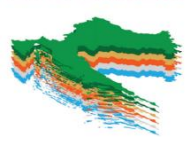


Mitigation of climate change

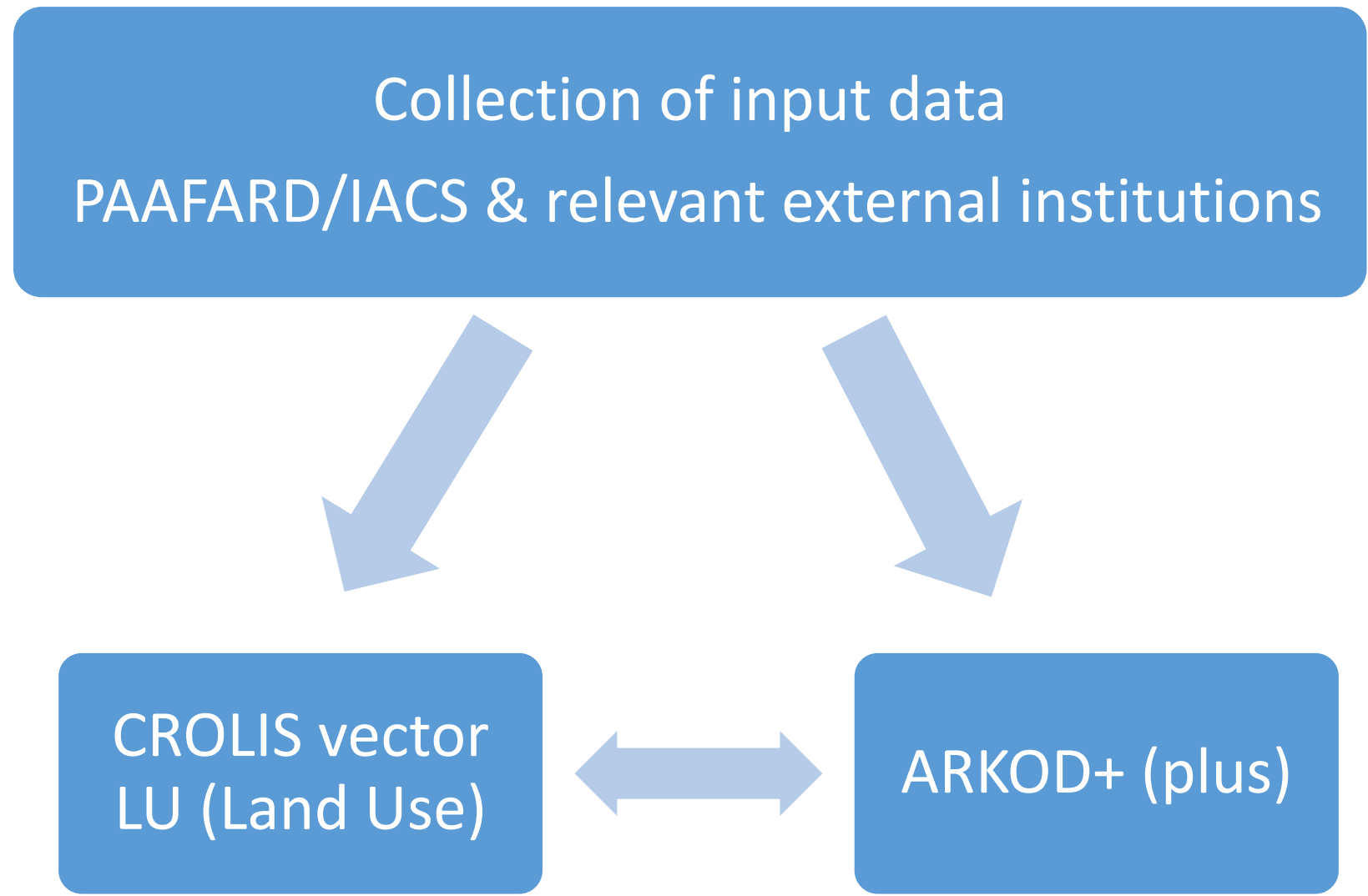
Sustainable management of natural resources

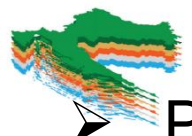
Biodiversity protection





PAAFARD – THE MAIN CROLIS ACTIVITIES

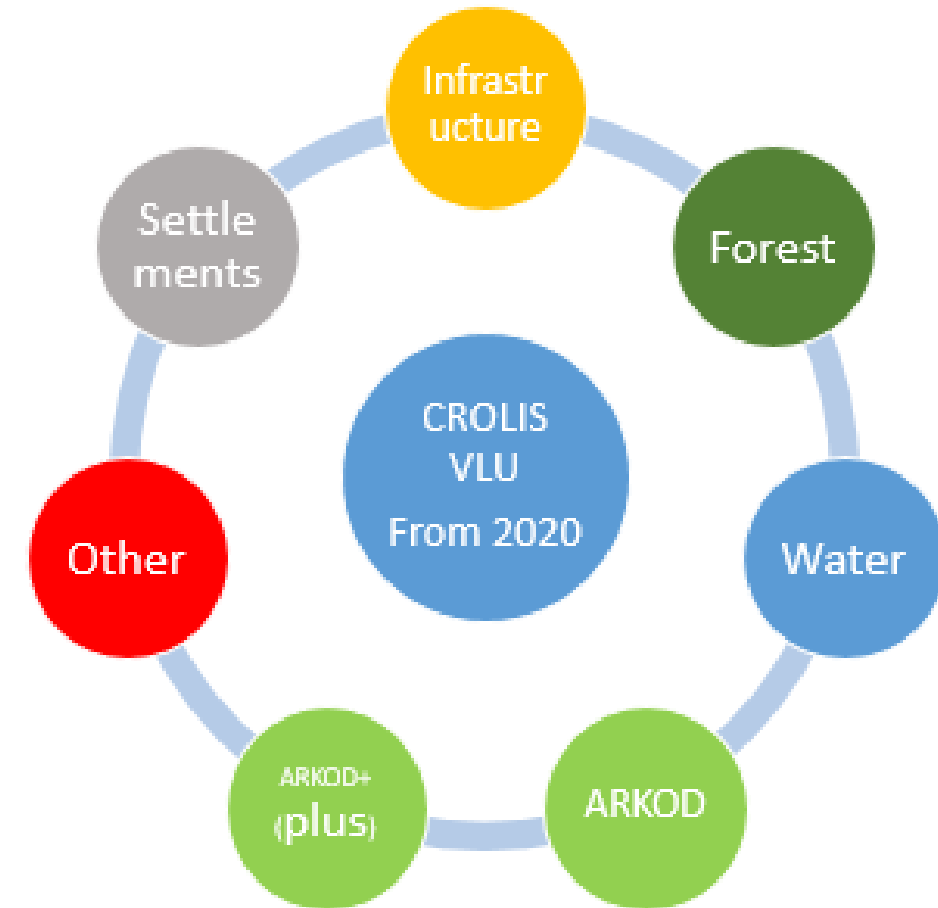


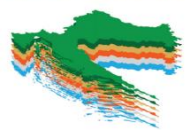


PAAFRD ACTIVITIES AND TASKS

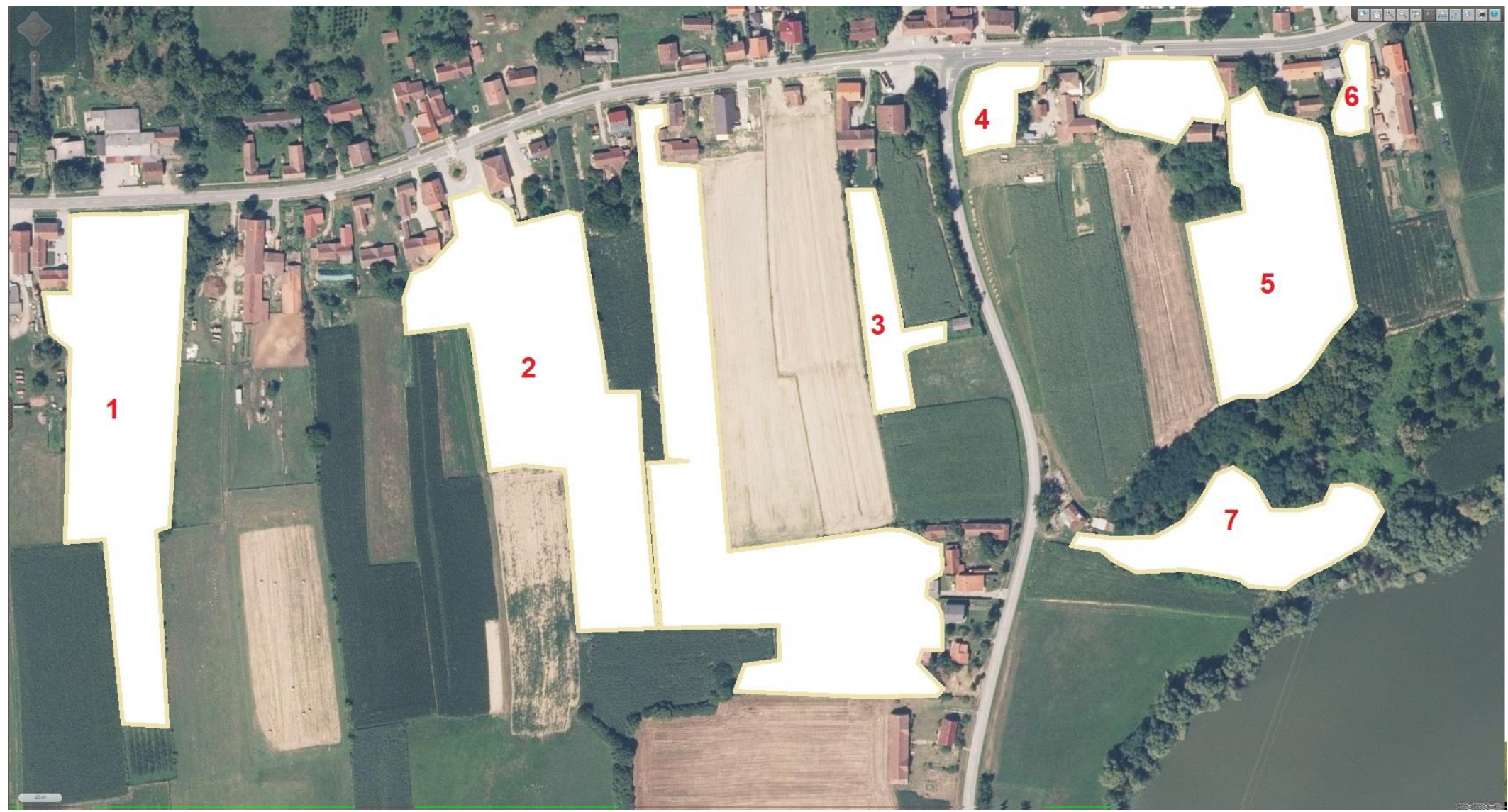


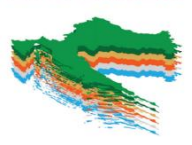
- Preparation of ARKOD+ (plus) layer – vectorization of agricultural areas outside of the existing ARKOD
- Creation of the ARKOD ALL layer aggregation of all agricultural areas ARKOD and ARKOD ALL layers
- Cooperation agreements as legal basis for the spatial data collection to CROLIS LU (land use)
- Quality control of the external institutions spatial data delivered
- Solving of the spatial overlaps and gaps between external institutions spatial data
- Harmonization of collected spatial data of external institutions with ARKOD ALL within CROLIS VLU (Vector Land Use) layer



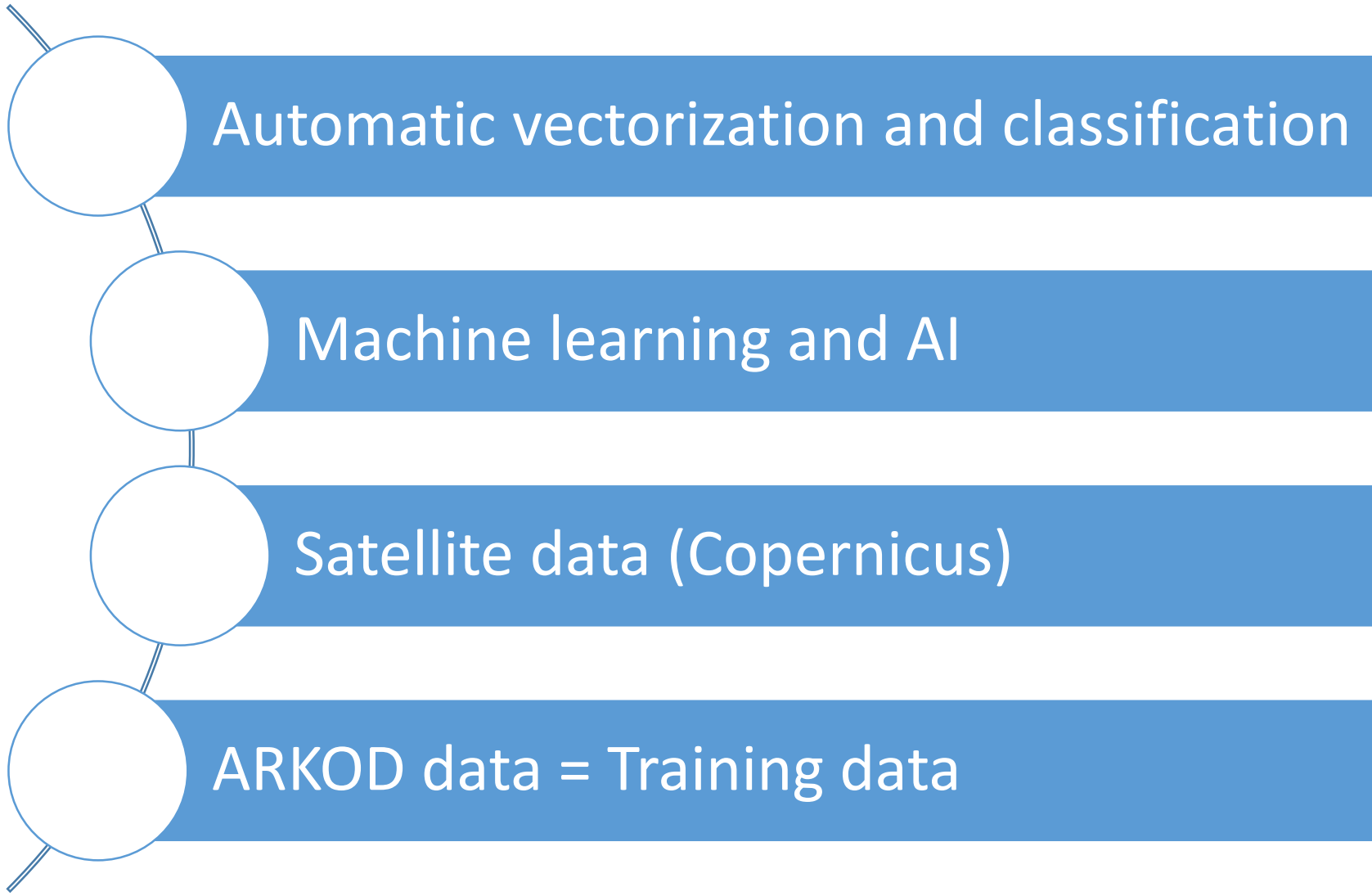


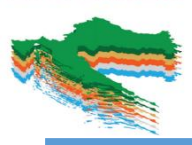
ARKOD+ (plus) AREA OF INTEREST





POSTULATES FOR ARKOD+ (plus) & CROLIS VLU ESTABLISHMENT SINCE 2020 AND FURTHER





THE BIGGEST CHALLENGES – ESTABLISHING THE ARKOD+ (plus) DATA

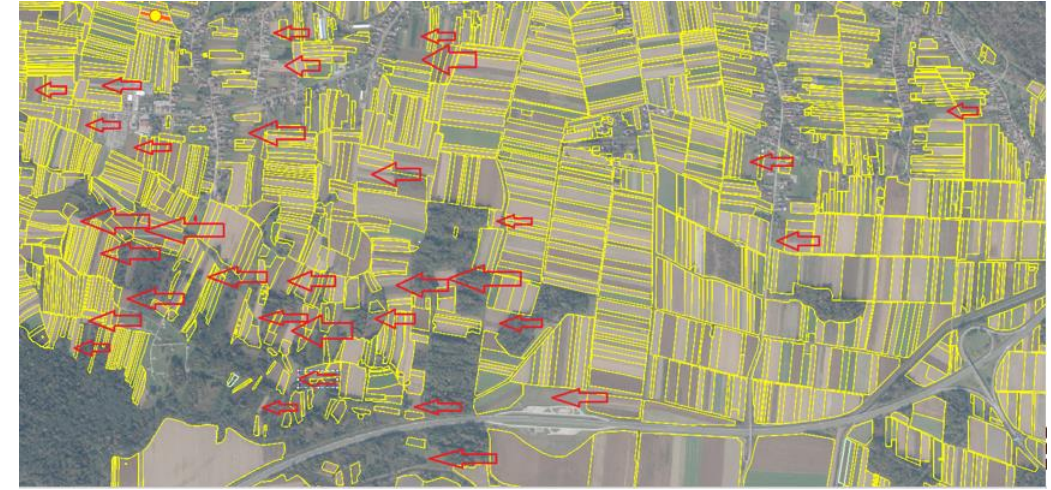
VECTORUZAZATION & CLASIFFICATION

Estimated area between 0,8 – 1,0 mil ha

Significant differences between north/south parts of the country

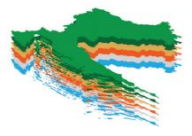
Karst pastures / abandoned agricultural land

The area near Varaždin

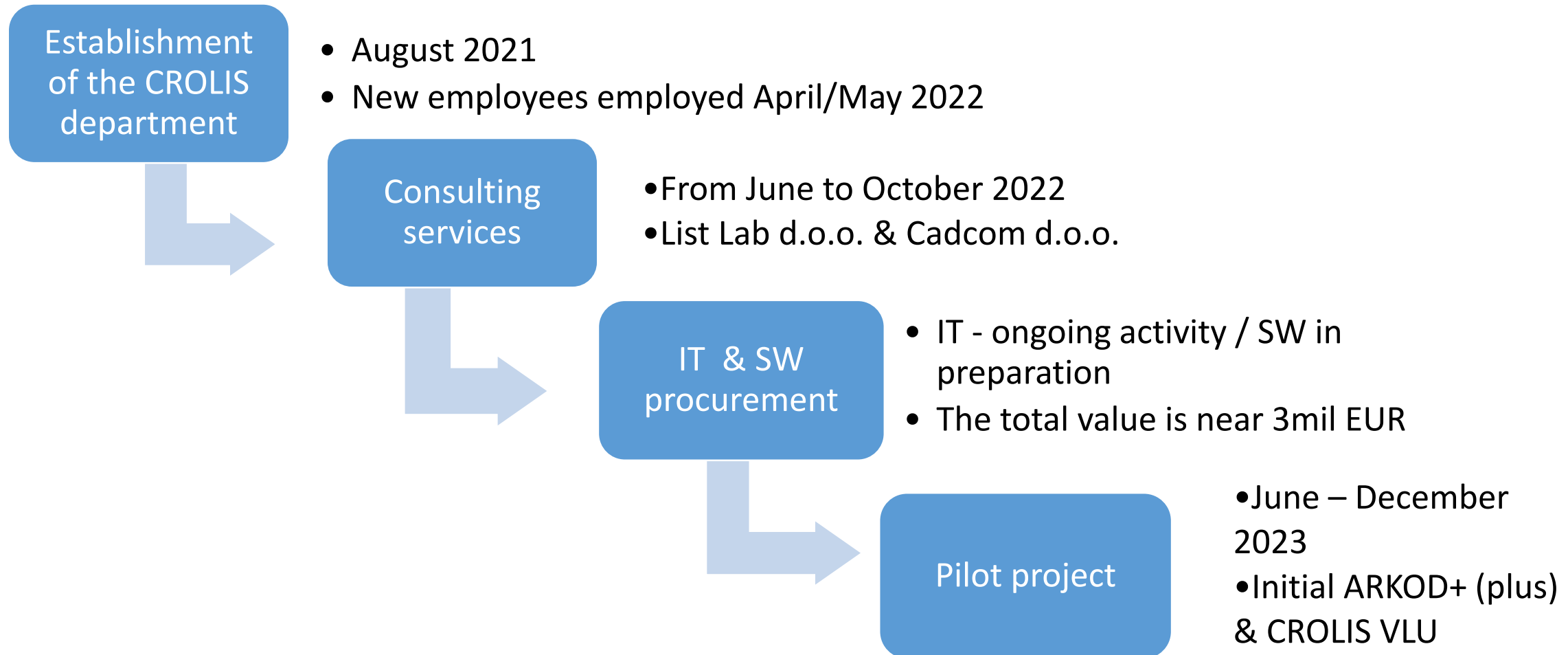


The area near Šibenik





IMPLEMENTATION ACTIVITIES - TIME FRAME



KEY PUBLIC PROCUREMENTS CONDUCTED BY „MOE” FOR THE PA NEEDS

Procurement of IT equipment – according to the PA sector for IT

- Server equipment
- 15 desktop computers + 5 laptops
- Printers / Monitors
- ArcGIS Pro licenses and educations

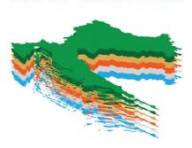
Waiting for The selection decision

Procurement of SW solution for PA needs ARKOD+ (plus) & CROLIS VLU

- SW solution (project task from consulting services)
- Monitoring and supervision services for SW solution
- FME license acquisition

Finalization of the public procurement documentation





THE MAIN COMPONENTS FROM THE PROJECT TASK DOCUMENTATION REGARDING PA CROLIS SW SOLUTION

- **Subsystem for Spatial data import**
 - ✓ Module for QC procedures
 - ✓ Module for spatial overlapping procedures
- **Subsystem for CROLIS VLU EO „Vector Land Use and Earth Observation”**
 - ✓ Initial classification
 - ✓ Continuous monitoring of ARKOD+ (plus)/ARKOD ALL /CROLIS VLU changes
- **Subsystem for mapping and information transfer**
 - ✓ Gaps resolving
 - ✓ Attributes relation management, compatibilities with classic ARKOD data
- **Subsystem for data archiving**
 - ✓ Metadata catalog
 - ✓ Administration module of CROLIS VLU system
- **Subsystem for INSPIRE & NIPP / SDI**
 - ✓ Standard OGC services – search, browse and download
 - ✓ Adapt data for national needs / compliance with INSPIRE standards

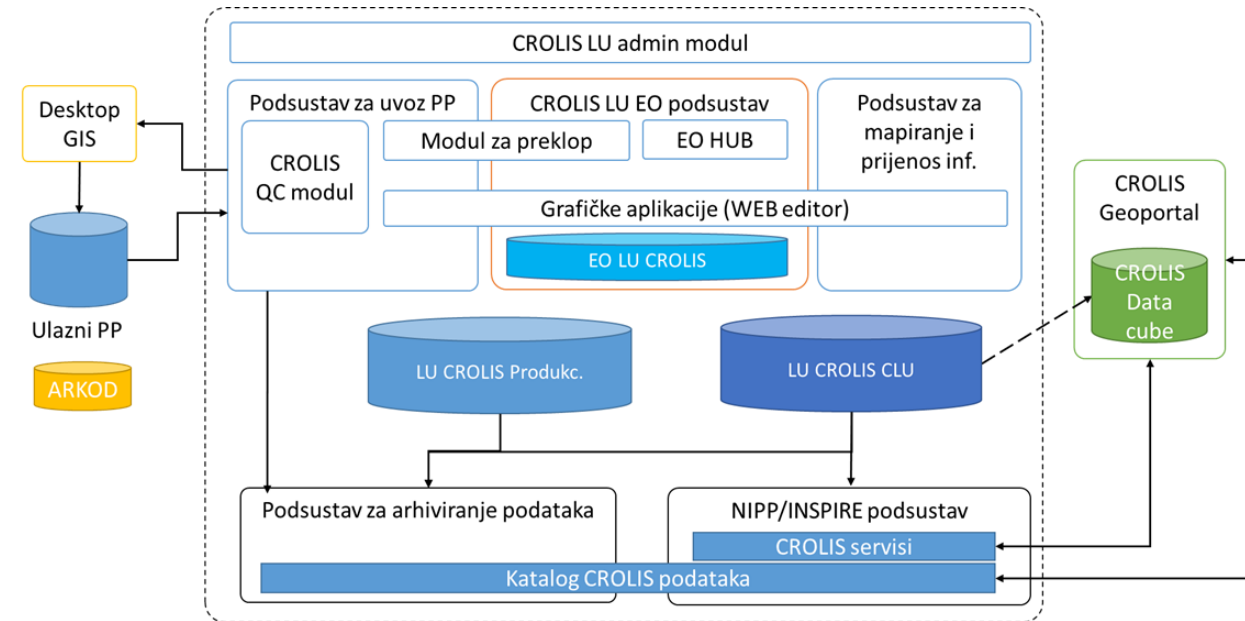
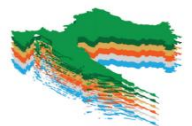


Diagram of the main components of the CROLIS VLU system

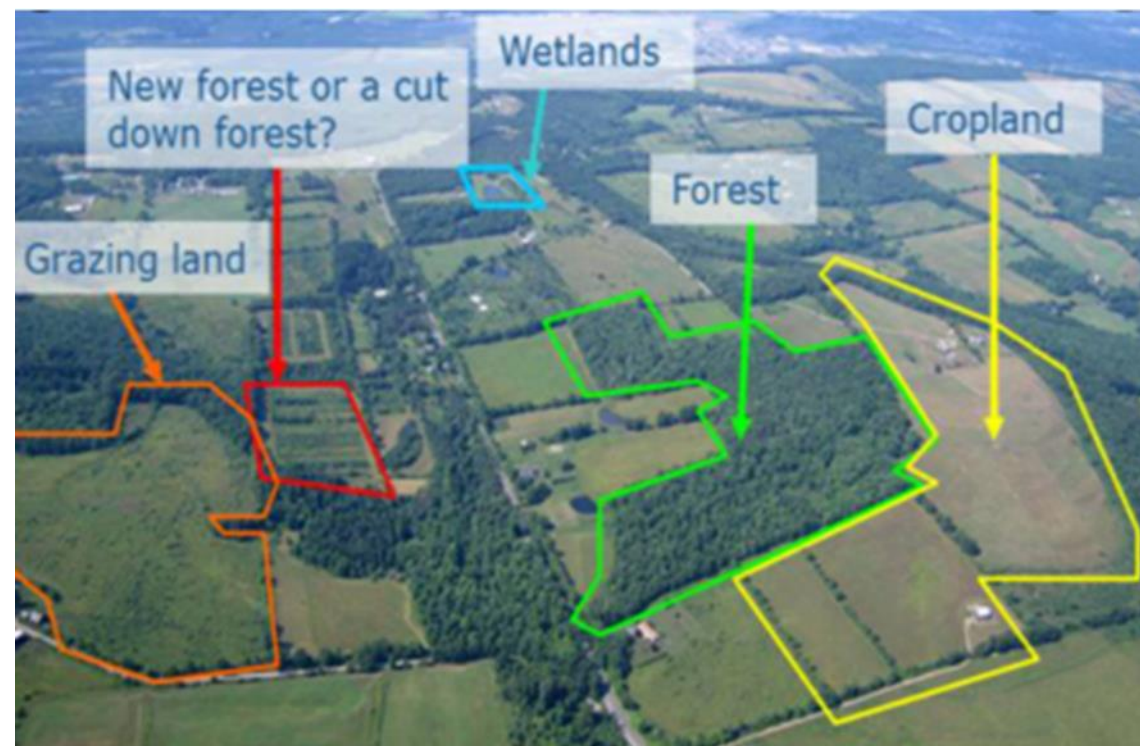


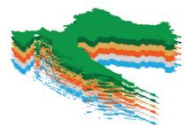


CONCLUSION 1



- Croatia must fulfil its climate report obligation
- Through CROLIS project PAAFRD contributes:
 - EU climate policies
 - National needs through necessary data for strategic decision-making
- Usage of the new technologies and satellite data
- Methods for ARKOD+ (plus) and CROLIS LU based on Machine learning and Artificial Intelligence

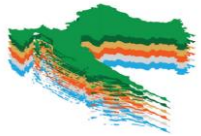




CONCLUSION 2

- **CROLIS is not cheap or simple for establishment, and requires synergy efforts from all internal/external institutions**
- **Partners, and especially PAAFRD because of complexity of the tasks for continuation activities as soon as possible following questions need to be resolved:**
 - **Croatian government Decision for CROLIS**
 - **Extension of the Project (until the end of 2025.)**
 - **Approval for employment of required staff**
 - **Legal background for LULUCF, ARKOD+ (plus) & CROLIS VLU ordinance**
 - **Ensure working space for CROLIS department**
 - **Obtain IT equipment + installation**
 - **Implementation of CROLIS SW public procurement**





Hvala !

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