Panel discussion: strategic planning for Aquatic Warbler conservation

Opportunities and challenges for designing a **<u>stepping-stone network</u> of Aquatic Warbler breeding, stagging & wintering habitats**

Co-funded by the European Union

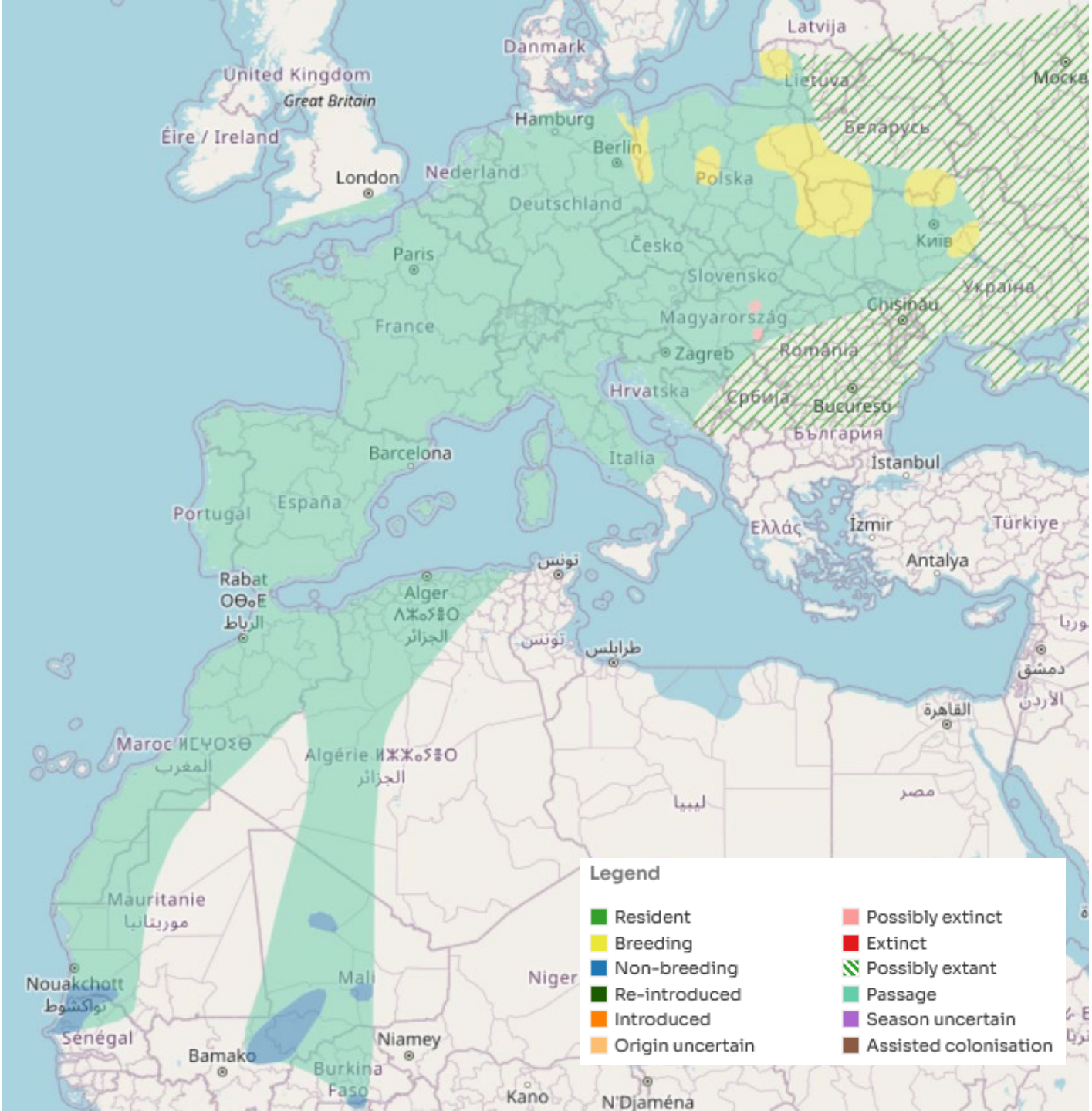
LIFE4AquaticWarbler

Conservation of Europe's Rarest Continental Passerine:
A Transboundary Initiative for Aquatic Warbler Population Recovery

LIFE AWOM

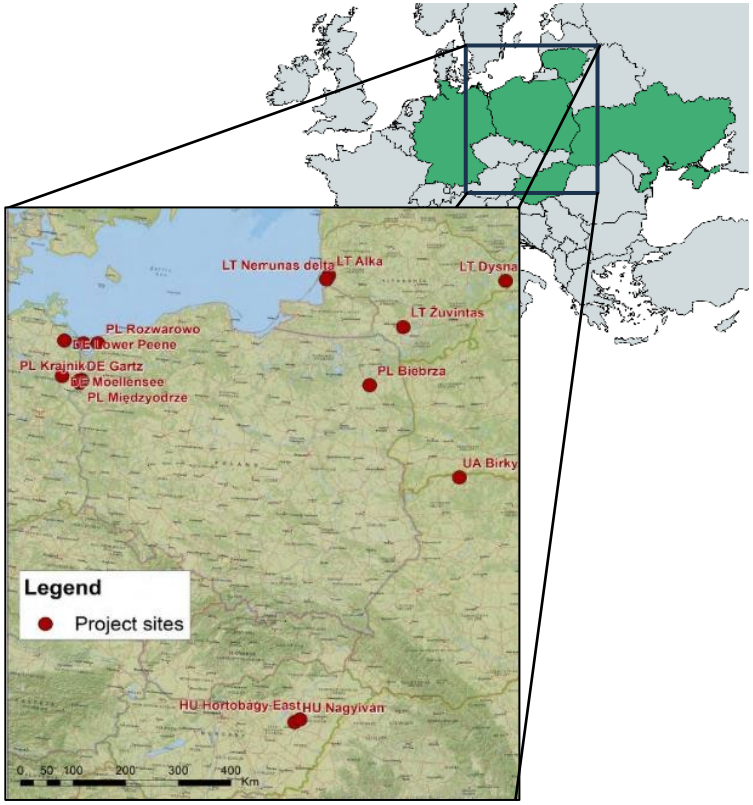
Aquatic Warblers on the Move

Aquatic Warbler (*Acrocephalus paludicola*)
Photo: Z. Morkvenas



Source: BirdLife DataZone

LIFE4AW: Network of breeding sites



Stepping stone sites?

>> Robust metapopulation?

LIFE4AquaticWarbler

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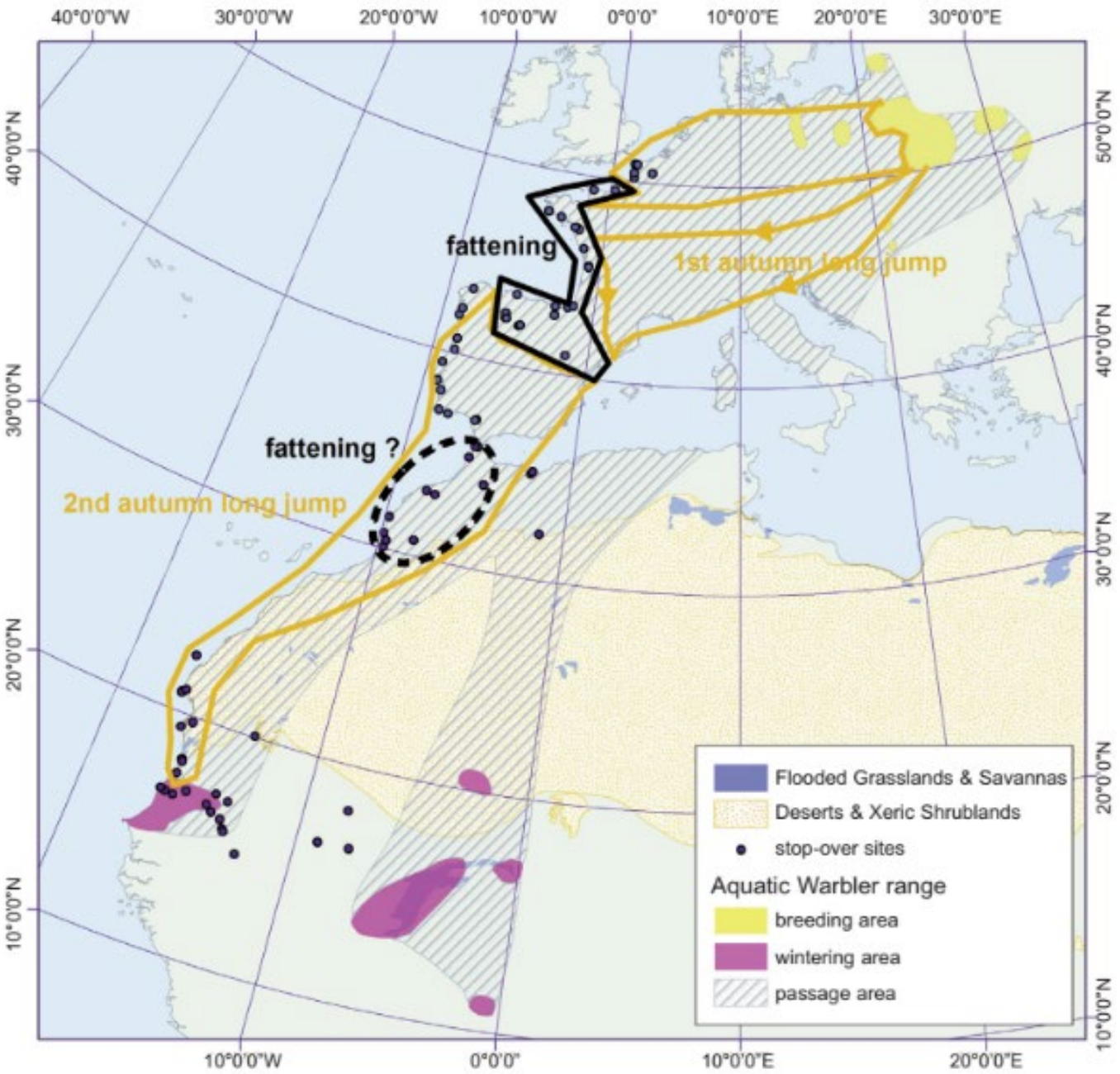
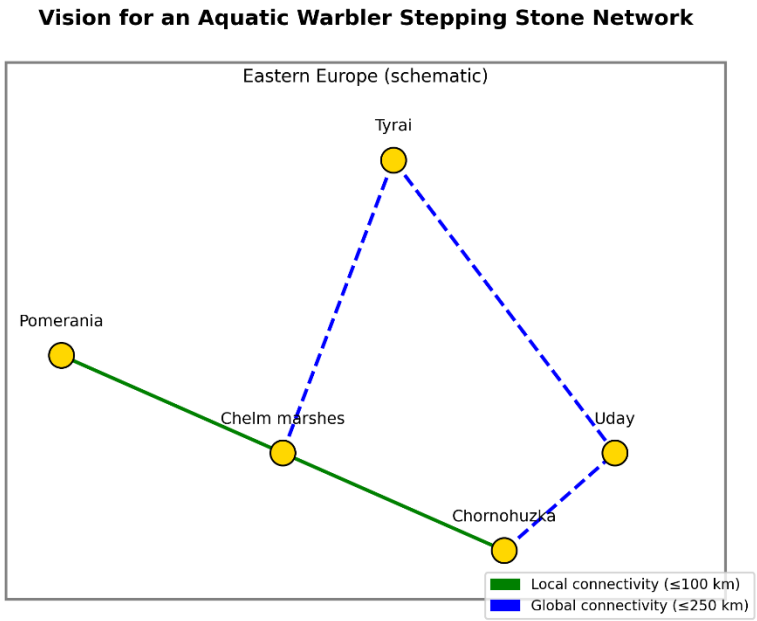
LIFE AWOM: Network of stagging and wintering sites



Jakubas & Lazarus 2020

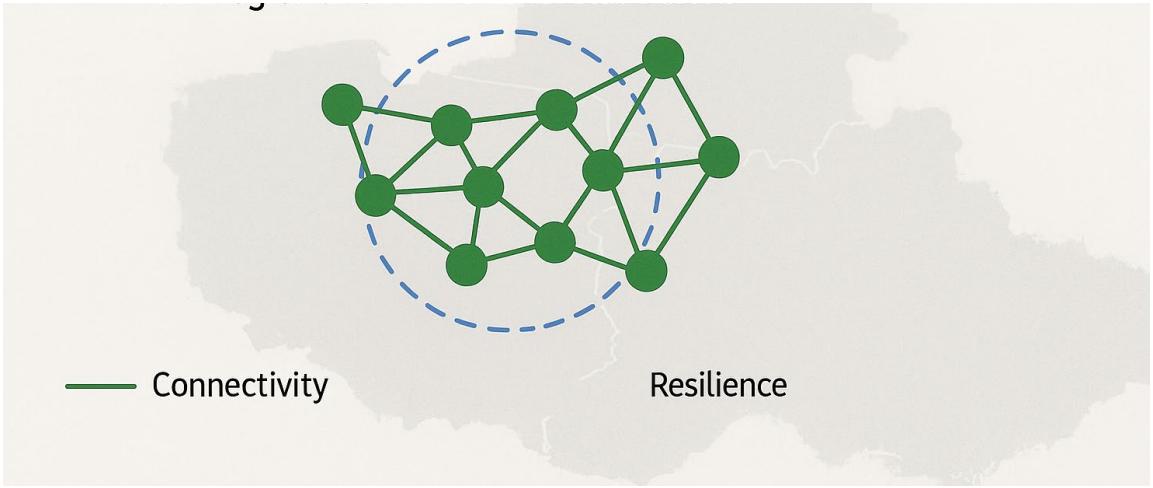
Martin Flade

"A seamlessly connected network of Aquatic Warbler habitats, where every breeding site is linked within 100 km, no gaps exceed 250 km across the global range, and with permanent population exchange and gene flow across the whole AW breeding range."



Žymantas Morkvėnas

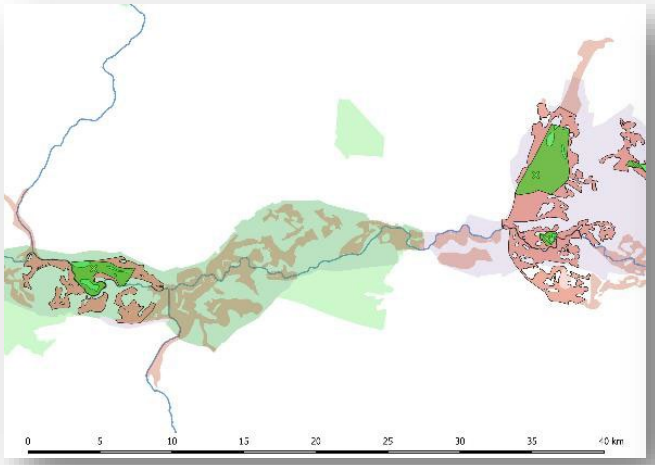
"A resilient, science-driven network of Aquatic Warbler habitats—legally protected, ecologically connected, and delivering benefits beyond biodiversity. This stepping stone system safeguards species survival, supports climate mitigation, and unites conservation, socio-economic interests, and national strategies under one umbrella vision."

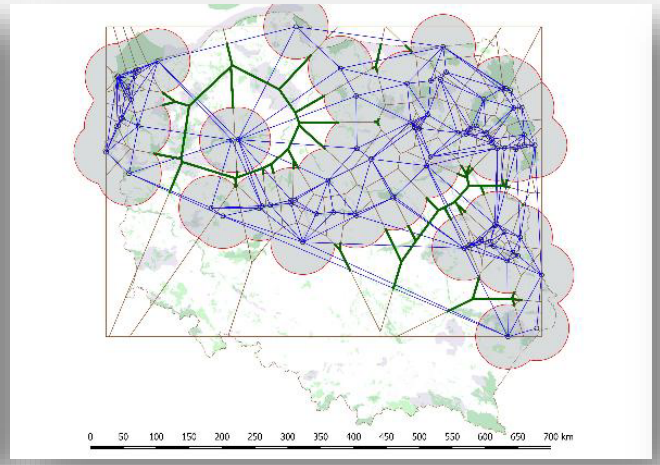


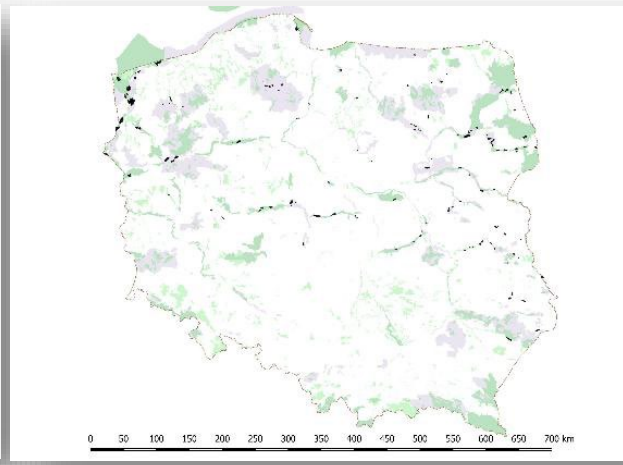
Jaroslaw Krogulec & Krzysztof Stasiak

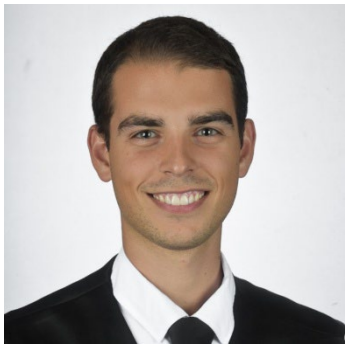
Protecting the aquatic warbler

"A science-driven network of Aquatic Warbler stepping stones—functionally connected, adaptable, and protected—linking core and peripheral habitats through verified models and field evidence. Managed for species needs, embedded in conservation plans, and designed to secure resilience and biodiversity."

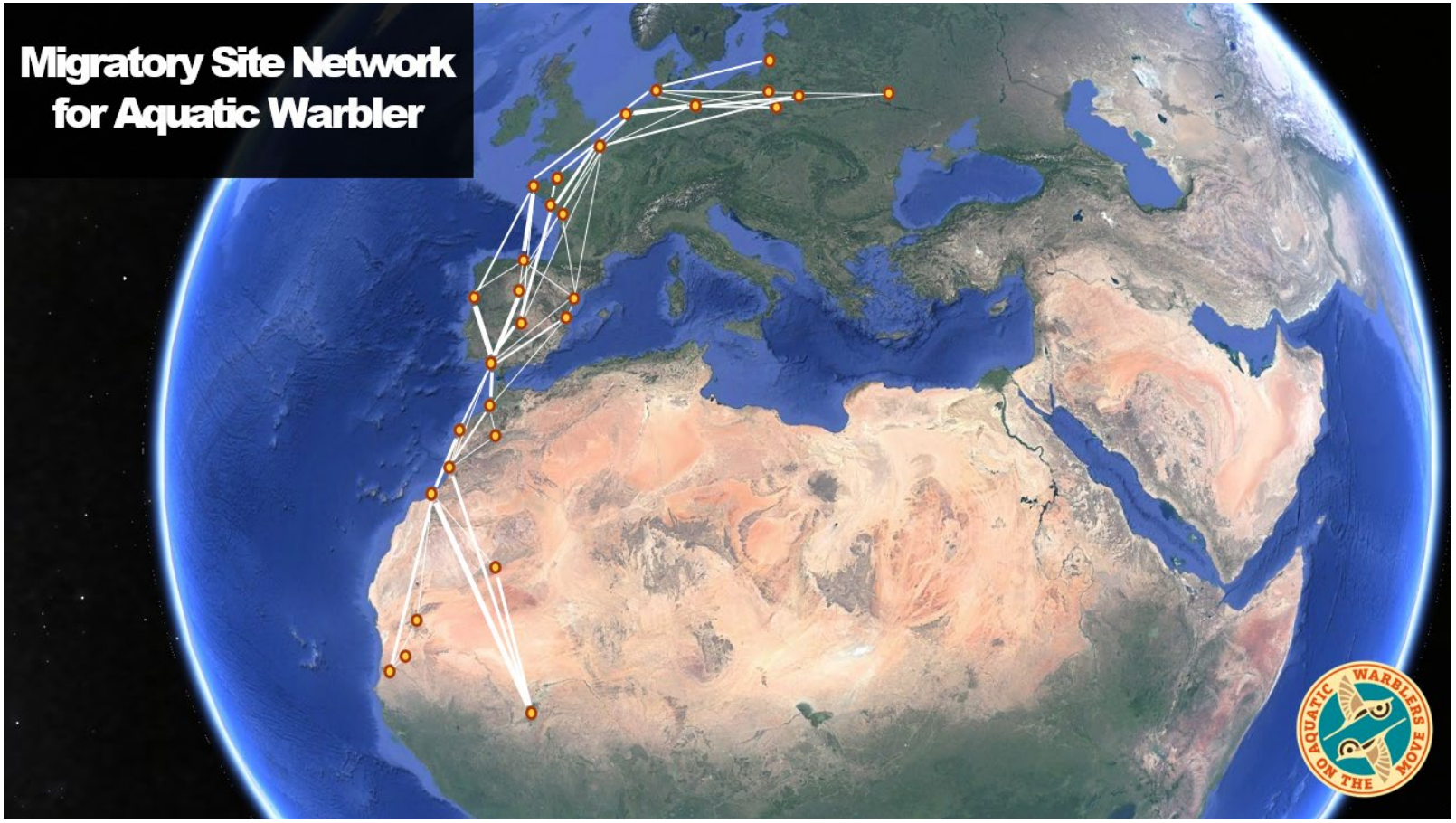








Bernat Espluga



Aquatic Warbler stepping stone network

Summary: attributes of a stepping-stone network

- **Connectivity & Range**
  - All Aquatic Warbler (AW) breeding sites have at least two neighboring sites within a 100 km radius.
  - No gaps larger than 250 km occur between regular breeding sites across the global range (Tyrai → Pomerania → Chelm Marshes → Chornohuzka → Uday).
  - Permanent population exchange and gene flow are guaranteed throughout the global AW breeding range.
- **Functional Network**
  - Stepping-stones form a functional network of habitats suitable for AW.
  - Connectivity ensures links between core populations and peripheral or ephemeral sites.
  - Sites can be managed according to AW needs (e.g., agri-environmental schemes).
- **Scientific Foundation**
  - Network creation is based on model-driven analysis, verified by field data.
  - Criteria for ecological connectivity are scientifically proven and continuously refined.
- **Legal & Policy Framework**
  - Sites should be primarily within protected areas (e.g., Natura 2000) and integrated into conservation plans.
  - All key network sites have legal protection.
  - Network concept is embedded in national strategies (nature restoration plans, land-use planning).
- **Resilience & Umbrella Role**
  - Network supports viable populations and is resilient to catastrophic climatic events.
  - AW acts as an umbrella species; the network benefits other species.
- **Socio-economic & Climate Benefits**
  - Network contributes to climate change mitigation (peatland rewetting).
  - Delivers national security and socio-economic benefits.
- **Funding & Governance**
  - Enlargement uses diverse instruments: biodiversity and carbon credits, private funding, local authority support.
  - Strong political backing ensures implementation and maintenance.

Draft unified vision statement

"A legally protected, science-based **network of Aquatic Warbler habitats** that ensures ecological connectivity, population resilience, and compliance with national and international conservation frameworks. This **stepping-stone system** integrates climate mitigation socio-economic benefits, and multi-source funding into national strategies, delivering measurable outcomes for biodiversity and sustainable land use."

Thank you for your attention!

Aquatic Warbler (*Acrocephalus paludicola*)
Photo: Z. Morkvenas