

LITHUANIA

BALTIC AQUATIC WARBLER (LIFE09 NAT/LT/000233) – WETLAND RESTORATION

Success stories case area

Baltic Aquatic Warbler project successfully carried out habitat restoration works, restoring abandoned fenmires and annually flooded meadows in western and southern Lithuania and western Latvia (see example in Figure 2). Such specific wetlands are Aquatic Warbler breeding grounds, which is endangered and the rarest songbird in whole Europe. Aquatic Warblers are not adaptive and therefore they breed only in very specific environment and the presence of this species indicates good habitat conditions. Its habitats are mostly floodplain meadows, calcareous fens, wet or brackish meadows and fenmires, where permanently high water levels and the limited weight carrying capacity of loose, water saturated peats prevent tree growth. Aquatic Warblers are so called umbrella species, such habitats are important for many more endangered plant and animal species, such as the Great Snipes (*Gallinago media*), Short-eared Owls (*Asio flameus*), Wood Sandpipers (*Tringa glareola*), etc.



Figure 1. Aquatic Warbler. Source: Ž. Morkvėnas

Moreover, restoring and maintaining Aquatic Warbler habitats brings additional benefits, since it is well known that wetlands are valued carbon sinks and filters, improving water quality by slowing down water flow and providing good habitat conditions for a diversity of plants reducing erosion and consuming nutrients. During this project strong focus was maintained on involvement of farmers in habitat restoration and species conservation and the sustainability of the restored habitats in the long-term.



Figure 2. Restored wet sedge meadow in Nemunas Delta, Lithuania. Source: Ž. Morkvėnas

Location and date

The project was implemented in several areas in western and southern Lithuania (Tulkarage, Sysa, Tyrai and Zuvintas) and western Latvia (lake Pape and lake Liepaja) covering in total 1400ha (see Figure 3). The Baltic Aquatic Warbler project lasted for 5 years and project was implemented from September, 2010 to September, 2015.

Main tasks/goals

Specific project objectives and 4 main project focus directions were as follows:

- 1) ensure favourable conservation status of the Aquatic warbler by restoration of unfavourably managed or abandoned habitats in most important known sites in Lithuania and Latvia and forming favourable habitat conditions for species conservation;
- 2) establish and promote favourable and sustainable conditions for farmers/landowners to implement conservation measures by renewed agro-environmental schemes and supported by alternative economic solutions;
- 3) define a clear long-term strategy for appropriate Aquatic warbler and other globally threatened birds' conservation in Lithuania and Latvia and set up a basis for its implementation by filling capacity gaps, set up needed machinery and infrastructure, demonstrating conservation measures in practice and creating cooperative dialogue with key-stakeholders and society;
- 4) raise public awareness and acceptance about Aquatic warbler and other globally threatened bird species conservation needs and appreciation for the conservation measures implemented by local communities and nature conservation related authorities.

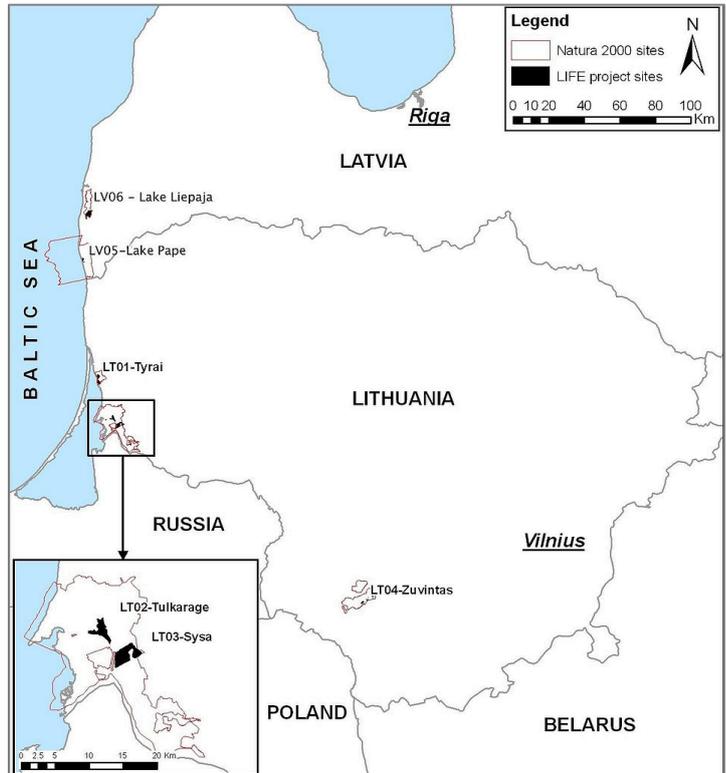


Figure 3. Restored fen mires or wet meadows in Lithuania and Latvia.
Source: Baltic Aquatic Warbler Final Report

Measures

1. Development of specific agri-environmental measures for important Aquatic warbler sites in Nemunas delta (start – Sept. 2010; end – Jan. 2012)

Since the very beginning of the project, the negotiations were carried out with the Ministry of Agriculture regarding implementation of new agri-environmental measures for Aquatic Warbler conservation. The description of the agri-environmental measure was drafted while maintaining intensive consultation process with competent authorities, Ministry of Environment and farmers themselves in the concerned region. After the agri-environmental measure was developed and long negotiations process among Ministry of Agriculture and European Commission, the measure was approved and implemented. The approved and implemented agri-environmental measures included compensations for

restoration of abandoned habitats (i.e. wetlands such as flooded meadows, fen mires, etc.) by removal of bushes, mowing reeds and redundant biomass. Also, it included compensation for habitat maintenance by postponing mowing to avoid bird nesting period, fully mowing the territory once in 2-year period and adhering to stricter grazing rules in order to maintain specific biotope.

This action turned to be one of the key project actions, which delivered opportunity to support further habitat restoration initiatives through “non-productive investments” measure and maintain the aquatic warbler habitat in relatively large scale through agri-environmental measure, which occurs to be a key precondition to stimulate farmers applying necessary conservation measures.

2. Development of the recommendations on the solutions for landowners to manage Aquatic Warbler habitats properly, ensuring sustainable economic benefit (start- Sept. 2010; end – Dec. 2012)

The second focus area of the project was to provide necessary support and knowledge for the farmers involved in habitat maintenance and species conservation. First of all, the research was carried out to collect necessary information of good farming practices in similar habitat types. Then, the economic feasibility study was carried out to analyse the opportunities for farmers to maintain economic integrity while maintaining habitats and provide recommendations for most economically-sound conservation farming practices. The recommendations and findings then were communicated and carefully discussed with farmers to ensure their relevance. Then the specific publication was made and distributed to farmers farmers/landowners providing information on conservation farming practices and recommendations related to conservation, economic and technological aspects.



Figure 4. Publication for farmers regarding technological and economic aspects of maintaining wet meadows and conservation of aquatic warblers

3. Restoration of flooded meadows in Tyrai, fens in Zuvintas Biosphere Reserve and management of grasslands in Sysa polder.

The flooded meadow restoration works started with consultations with machinery experts and as a result specific machinery for mowing, raking and baling biomass under wet conditions was purchased. Purchased machinery on the field confirmed to be a good solution for the habitat restoration. It worked much faster, consumed less fuel and was more flexible to move around. In order to ensure further recovery of the habitat and maintain its favourable conservation status for Aquatic Warbler, ABKretingaSFE has setup conservation agreement with external organization, which is going to perform farming ensuring favourable habitat conditions for Aquatic Warbler conservation as well as removing and utilizing biomass from the area.



Figure 5. Mowing of reeds was a key restoration measure in Tyrnai, Lithuania

In Zuvintas fen mires were restored also by firstly purchasing machinery fit to work under wet conditions in Zuvintas Biosphere Reserve. Part of the site under restoration plan was an island, which could not be reached by any machinery, therefore, prescribed burning was applied as a restoration measure. In addition, in order to regulate water level dynamics, the old channel was cleaned and as a result, the water dynamics improved, creating appropriate wetland conditions for Aquatic Warblers.



Figure 6. Habitat restoration with purchased machinery in Zuvintas Biosphere Reserve

Different to the sites in Tyrnai and Zuvintas, landownership of the project area in Sysla was mainly private or rented and managed by farmers. Besides implementing primary objectives to perform and

demonstrate habitat restoration and maintenance in 60 ha of the project area, actions were adapted to the local situation and developed into wider scope addressing rather critical situation on conservation of Aquatic Warbler populations in this area. In particular, the project reacted to the circumstance that population of Aquatic warbler in Lithuania drastically declined and urgent efforts ensuring conservation of practically each single brood was crucially important to the whole population survival. All measures had to be taken to prevent destruction of Aquatic Warbler broods. Therefore, approach of selecting areas for demonstration mowing was based on following considerations:

- a) late mowing shall be performed in the locations where Aquatic Warbler singing males observed and farmer agrees to perform late mowing but requires help of actually doing mowing and
- b) areas which need habitat restoration and are important breeding grounds or having potential to reduce habitat fragmentation.

Considering the urgent situation with the bird population and specific needs for habitat restoration, it was decided to negotiate with each landowner aiming that mowing of an area around each singing male Aquatic Warbler would be postponed to August. Thus, this helped to ensure maximum breeding success in the area. For this purpose, coordinating beneficiary team mapped all farmers in the project area. This was done by “old fashioned”, but, at the same time, very effective approach. Negotiation team walked in the villages door-to-door and visited houses to establish conversation with locals and eventually locating persons farming in the project area. Relevant plots were marked on the map and farmers linked project team to other houses further indicating persons farming in other plots. In several days bigger share of the project area was mapped and data was supplemented in the upcoming years. Further land ownership structure was mapped on the internal profile of coordinating beneficiary on the “ArcGIS online” platform, where placing data on singing males’ location provided a very convenient spatially explicit tool. Negotiation team were able to know immediately what is the location of singing males and get into contact with relevant farmers.

Such approach was later recognized as very good practice and it is still maintained in Aquatic Warbler conservation initiative. Contacted farmers were individually informed about observed singing males in their farming plots and were kindly asked to postpone mowing until mid-August. Such personal dialogue was maintained until the end of the project. During 2012 and 2013 breeding season, all contacted farmers agreed to postpone mowing on a good will (without paying compensations), thus allowing successful breeding of Aquatic Warblers. Some farmers were agreed to postpone mowing under the condition that project team would perform late mowing later in the season, since mowing in August has higher risk to have wet conditions, which requires special machinery. Also, such late mowing would become an economically loss as biomass would not be suitable for feed anymore and obtained mowing costs would not pay off.

Moreover, a special event was organized gathering local farmers and local authorities to demonstrate possibilities of special mower designed to work under wet conditions and very suitable for abandoned sites, so that farmers would have more possibilities to carry out late mowing. Mowing territories included land plots managed by local farming school. Demonstrating management based on agri-environmental principles and discussing conservation needs of Aquatic Warblers provided a good demonstration opportunity to administration of school and its teachers as well as reaching students as well. Project team maintained good dialogue with the school transferring them site management and conservation knowledge.



Figure 7. Screenshot from short movie demonstrating mowing with special mower

4. Demonstration of the innovative usage of late-cut biomass (start– Jan. 2011; end – Aug. 2015)

Since the utilisation of late-cut biomass turned out to be a burden and economic loss for farmers, there was a need to address this issue. Therefore, the preparation process of the biomass processing facility included awareness raising among local farmers about action plans, consultation with biomass processing specialists, learning from other experiences and synthesizing gathered knowledge into feasibility study.

It was concluded to setup a biomass pelleting line in Zuvintas Biosphere Reserve. Practical experience of the facility operation turned out to be very successful in terms of being part of self-sustaining habitat management system. ABZUVINTAS purchased a special heating boiler operating on grass pellets (outside project budget costs) and shifted biosphere administration and visitor centre house heating purely on grass pellets. Biosphere reserve administration received relatively low heating costs from local material having side ecological benefits. The experience of Zuvintas was shared with municipality of Silute (where other habitat restoration works were carried out) as a good practice example and perspective to use this type of biofuel for municipal heating and at the same time support use of grasslands in the region in line to the nature conservation needs.

Processed pellets from biomass harvested during habitat restoration in Tyrai project area was distributed to local community and other stakeholders as an example of potential product from the late-cut biomass.

Focus groups

As described in previous section, the project was successfully implemented due to close cooperation and consultation with experts, involvement and intensive door-to-door communication with local farmers and local farming school as well as close communication with local authorities and biosphere reserve directorate.

Close collaboration with local farmers revealed their needs and main barriers restricting possibilities for environmentally friendly habitat management practices which were mainly economic or technological. For instance, the farmers experienced economic loss due to the fact that late-cut biomass was no longer valuable and could not be sold, or used as animal feed. Also, there were lack of possibilities to properly utilise the late-cut biomass and lack of technological possibilities to mow later because the conditions on the field usually become very wet and conventional mowing machinery cannot access the fields anymore. Once these barriers were addressed, the farmers were capable to collaborate and this produced very positive results, lasting in the long term.

Recommendations

- 1) Involve local farmers/landowners into conservation and wetland management/maintenance actions
- 2) Listen to the farmers, identify and address main barriers burdening the farmers and restricting necessary behavioural changes
- 3) Think about and act to realise the long-term self-sustaining mechanisms supporting conservation and wetland maintenance (in this case it was agri-environmental measures that compensate farmers' losses and biomass pellet facility, that provides the possibility to take care of late-cut biomass)
- 4) Maintain the dialogue with local businesses to maintain the necessary habitat maintenance or conservation actions in the long-term
- 5) Maintain close contact and dialogue with local authorities
- 6) Adapt to local conservation needs to balance the prosperity of the biodiversity and local farming needs
- 7) Demonstrate good practice solutions to the local community and local authorities