

In Search of the Revival of a Tradition: Potential and Challenges of Domestic Air Transport Development in Albania _____

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Abstract

This paper analyzes the potential for the revival and development of domestic air transport in Albania, building on a historical tradition dating back to 1925, when domestic air routes such as Tirana–Vlora, Tirana–Shkodër, and Tirana–Korçë were established due to limited road infrastructure. In the current context, where road networks have significantly improved, domestic air transport is no longer a necessity but is proposed as a value-added service, primarily oriented towards tourism, emergency logistics, and regional development.

The study explores two development models: the operation of aeroclubs using small and ultralight aircraft for panoramic flights, training, and monitoring, and the use of seaplanes, leveraging Albania's coastline, lakes, lagoons, and artificial reservoirs. Seaplane transport is considered particularly transformative for tourism, offering access to remote and underdeveloped areas while enabling fast connections with regional destinations.

The paper concludes with a preliminary financial analysis indicating high profit potential, while emphasizing the need for strategic planning, public–private partnerships, environmental considerations, and regulatory alignment with European Aviation Safety Agency (EASA) standards.

Key words: Aeroclubs; seaplanes; domestic air transport; tourism development; EASA.

Historical context and potential

Albania has a long history of domestic civil air transport, demonstrating a significant geographical and natural potential for the development of this sector. In the 1920s and 1930s, domestic air routes such as Tirana–Vlora, Tirana–Shkodër, and Tirana–Korçë were established due to the absence of developed road infrastructure. Aircraft such as the three-seater “Albatros” were used for regular transport, replacing traditional means such as horse-drawn carriages.

During this period, domestic air services operated regularly and were widely used, making Albania one of the early adopters of internal air mobility. However, following World War II, civil aviation services were discontinued, and airfields were repurposed mainly for military and agricultural use.

In contrast to the past, Albania today has a significantly improved road network. Nevertheless, this development should not be viewed as a limitation, but rather as an opportunity to introduce domestic air transport as a complementary and value-added service. Potential applications include tourism, emergency logistics, and innovative transport solutions such as electric vertical take-off and landing (eVTOL) aircraft.

Tourism represents one of the primary areas of application, particularly through panoramic flights and seaplane connections to coastal destinations, especially during the tourist season. In addition, domestic air transport can support emergency logistics, including medical assistance, search and rescue operations, and rapid goods transport in mountainous areas. Furthermore, innovation in the sector may involve the adoption of small-capacity electric aircraft (eVTOL), which could contribute to sustainable transport solutions.

Development Models of Domestic Air Transport in Albania

The models that we will mention below are based on cases applied by countries that possess similar geographical-natural resources as Albania. In many developed countries of the world, but also in neighboring countries similar to us, there are alternative experiences for domestic flights with very positive economic and social-cultural effects, e.g. Greece on the islands of Crete and Rhodes and Montenegro have aeroclubs that offer tourist flights (“sightseeing flights”). Countries with mountainous terrain, such as Norway, Greece, and Switzerland, have successfully implemented short domestic flights to connect isolated areas and islands, demonstrating the economic and social benefits of such systems (Jones, 2020; Smith, 2021). Similarly, for Albanian conditions, the possibilities of

developing this type of service would have the character of light flights (with small aircraft) within the territory of Albania and not only, through two main pillars:

Through aeroclubs

The operation of Aeroclubs with small aircraft (ultralight, 3-6 passengers) is seen as the most rational and least expensive solution.

Main Advantages of Aeroclubs:

Infrastructure: Aeroclubs operate from small aerodromes (fields with short runways, not necessarily paved), which serve as domestic tourist flights, connections to difficult areas and training.

Human Capacity Building: Serve as training centers (elementary civil aviation school) for new pilots (PPL(A) license and a valuable resource for mechanics and maintenance specialists.

Secondary Functions: Can be used for monitoring deep mountain areas, forests (fires), coastline, as well as for search and rescue (SAR) service.

Gradual Development towards Commercial Aviation: They constitute a fundamental transitional phase between sports and commercial aviation, from which small airlines (air taxi, charter flights, etc.) can be developed.

Through seaplane

Albania possesses considerable water resources, a coastline of about 650 km long and large lakes (Shkodra 391km², Ohri 358 km², Prespa about 259 km², etc.), which offer potential for the development of water and air transport (Wikipedia contributors, n.d.; World Bank, 2022).

It also possesses artificial reservoirs (over 150 artificial lakes), some of which have a considerable surface area (such as Koman, Fierza, etc.), as well as a rich river network (Drin, Buna, Vjosa, Shkumbini, etc.).

All this real potential of water reserves can serve without any doubt as a natural platform for domestic air transport service by seaplanes.

Seaplanes as a Catalyst for Albanian Tourism

Access to Unique and Protected Destinations

Discovering hidden gems: Albania has a rich coastline with small bays, virgin beaches and small islands that are difficult to reach by traditional land or sea means. Seaplanes can offer direct access to these areas, turning them into attractive destinations for tourists seeking exclusivity and untouched nature. Tourism

lake and river: Lakes such as Ohri, Prespa, Shkodra, as well as large rivers, can become new centers for tourism, offering panoramic trips and access to coastal communities that are currently isolated. This can help diversify tourism beyond the traditional coastal regions.

Exclusive and High-end Tourist Offer

- Panoramic trips: Seaplane flights offer spectacular aerial views of the Albanian landscapes – the Alps, the coastline, lakes, historic cities. These can be premium tourist products, attracting a higher-income segment of the market.
- VIP and personalized transport: For tourists seeking luxury and efficiency, seaplanes offer a fast and elegant way to move between destinations, avoiding traffic and delays.
- Water events and activities: Seaplanes can connect tourist destinations with specific water activities, facilitating the organization of sporting events, festivals or trips personalized.

Connecting Regions and Economic Diversification

- Connecting the coast to the interior: Fast lines can be created between coastal cities and mountain or lakeside tourist areas, making it easier for tourists to explore Albania's geographical diversity within a single trip.
- Development of underdeveloped areas: Areas that are currently isolated due to a lack of road infrastructure can come to life through seaplane-enabled tourism, creating jobs and boosting local development.

Practical Advantages for Tour Operators

- Flexibility: Seaplanes offer flexibility in planning itineraries, adapting more easily to customer demands and weather conditions.
- Attractive Marketing: A unique offer such as seaplane transport can be a strong marketing point, distinguishing Albania for its originality compared to other destinations.

Reducing the Load on Road Infrastructure

Existing roads, especially those connecting coastal and mountainous areas, can often be busy, especially during the tourist season. By shifting part of the transport to seaplanes, the pressure on the road network can be reduced, thus reducing fuel consumption and pollution from land vehicles.

Economic Development and Employment

The creation of a seaplane transport network would generate new jobs in sectors such as piloting, aircraft maintenance, operational operations from land and water, destination management and the tourism industry. It can also boost the economic development of smaller and more isolated areas.

More Efficient and Cost-Effective Transport for Specific Sectors:

- Transport of small and high-value goods: For fresh produce from remote areas (e.g. fish from lakes, fruit from mountainous areas) to main markets or for export. This can reduce losses and increase quality.
- Emergency services: Rapid medical transport to islands or isolated areas. Critical time can be saved in emergency situations.
- Investment in water landing points: Creating the necessary infrastructure (small stations) will generate construction and maintenance jobs.
- Job creation: Pilots, mechanics, qualified air personnel, destination managers, sales operators, etc. Hundreds of new jobs can be created depending on the extent of the network.

Reducing Transportation Costs

Compared to building new roads over difficult terrain, seaplane transport can be faster and less expensive to connect specific areas. For example, building a kilometer of mountain road can cost 1-3 million euros, while purchasing and operating a small seaplane for several years can be much more affordable to connect specific communities.

- Landing/take-off points (Water Aerodromes): These do not require a concrete or asphalt runway. A sufficient area of calm water (sea, lake, wide river) is sufficient for safe landing and take-off.
- Simple piers/docks: Compared to large airport terminals, seaplanes require simpler docks or platforms for passengers and cargo. These can be floating or raised structures, minimizing interference with the environment.
- Mooring areas: These are designated areas of water where seaplanes can moor, requiring less investment than airport hangars.
- Small terminals: Small facilities can be built for passenger reception, simple checks, and necessary services, which are cheaper than building airport terminals.
- Environmental Benefits: Reduced pollution by reducing reliance on land transportation in environmentally sensitive areas, pollution and damage to ecosystems can be reduced.

From the above, we can conclude in advance that a well-organized seaplane transport network, connecting major tourist destinations and major coastal/lake cities, can generate millions of euros in annual tourism and transport revenue, becoming a profitable investment for the Albanian economy. Concrete examples of the many advantages of seaplane transport can also be found in neighboring countries such as Croatia, which has a consolidated network organized to connect various tourist destinations on the Adriatic (Argophilia Travel News, 2023) or Italy, where, among others, Aeroclubs based on Lake Como and Garda in northern Italy are alive. In conclusion, it can be confirmed that the development of domestic seaplane transport in Albania represents a great potential to transform the way people and tourists move, offering improved access, promoting tourism and adding a new attractive dimension to the country.

This development, of course, requires detailed strategic planning, feasibility studies, initial investments and government support, to turn into reality any progressive idea that would turn the country's geographical and natural potentials into factors of Albania's economic and tourist development. However, some preliminary calculations can be made based on similar models. Below we present an approximate table of expenses and income to initiate the organization of domestic air transport through the use of aeroclubs and seaplanes in modest minimal conditions¹ with a tendency for further development in the future.

Preliminary Financial Assessment and Challenges

Establishing an aeroclub is a relatively low-cost business model as it relies mainly on minimal infrastructure. Let's calculate the costs and potential revenues for a hypothetical aeroclub in Albania, which focuses on small and ultralight aircraft and with the option of using a seaplane.

Initial investment costs

- Purchase of aircraft: Two two-seater ultralight aircraft. These types of aircraft have a relatively low cost in the market.
- The cost for one aircraft ranges from 50,000 - 80,000 euros, where the price depends on the configuration and equipment of the aircraft (Pilot Institute, 2024).
- Total cost for 2 aircraft: 100,000 - 160,000 euros
- Seaplane (Optional): To offer flights over lakes and the coast.
- Cost for a small seaplane: 150,000 - 250,000 euros
- Optional costs: 150,000 - 250,000 euros
- Infrastructure: A simple landing field (can be flat and clean land) and a hangar for maintenance/parking.

- Hangar construction and field arrangement: 50,000 - 70,000 euros
- Safety and communication equipment: Radio, navigation equipment, etc.
- Cost: 5,000 - 10,000 euros
- Licenses and permits: Permits from the Civil Aviation Authority.
- Cost: 15,000 - 30,000 euros
- (Calculations refer to data for small aircraft such as Cessna 172 (modified) or ICON A5. A minimum operating depth of 1.0 to 1.5 meters (about 3-5 feet) is required, sufficient for landing and takeoff).
- Total initial investment (without seaplane): ~ 180,000 - 270,000 euros
- Total initial investment (with seaplane): ~ 330,000 - 520,000 euros
- These figures can be significantly reduced if the flying club initially purchases only one aircraft and chooses an existing hangar.

Monthly operating costs

- Aircraft maintenance: Fixed and variable costs depending on flight hours.
- ~ 1,500 - 2,500 euros/month
- Salaries: One trained pilot and one maintenance technician.
- ~ 3,000 - 4,500 euros/month
- Fuel: Varies according to flight hours. An ultralight aircraft consumes about 15-20 liters/hour. If you fly 50 hours/month, the consumption is about 1,000 liters.
- Cost: ~ 1,800 - 2,500 euros/month
- Insurance and fees: Annual fee, aircraft and personnel insurance.
- ~ 500 - 800 euros/month
- Total monthly operating costs: ~ 6,800 - 10,800 euros

Potential income

- Tourist flights: A 30-minute panoramic flight, for example over the Alps or the southern coast.
- Average price per person: 80 - 150 euros (for 20-30 min)
- If 100 flights are made per month: 8,000 - 15,000 euros/month
- Pilot training: Training of new pilots.
- Cost for one hour of flight with an instructor: 150 - 250 euros
- If 50 hours of training are done per month: 7,500 - 12,500 euros/month
- Charter flights: Fast connections between cities.
- E.g., Tirana-Saranda with 2 passengers.
- Price per flight: 250 - 400 euros
- If 20 flights are made per month: 5,000 - 8,000 euros/month
- Total potential monthly income: 20,500 - 35,500 euros

These figures show a high profit potential, especially in the elite tourism sector. Importantly, there are some optimistic situations in the Balkan region that should be exploited:

There are documents, projects and partner networks that have modeled the concept of a seaplane network in the Adriatic (aac.gov.al News). Operational demonstration tests have been carried out in several ports/islands, landings and test flights have been carried out (including recent tests in the Ionian/Adriatic region), which make the assessment of hydrodynamic conditions and operational procedures realistic. Montenegro is promoting the return of seaplane aviation through the “MontAdria” initiative and various seaplane promotion activities on the coast (MONTADRIA 2025 News). In Greece there are initiatives and the return of seaplane flights (operators such as Hellenic Seaplanes are conducting test flights and planning traffic networks between the islands and the coast (hellenic-seaplanes.com news). In Croatia there have been previous attempts (European Coastal Airlines) and more recent local projects such as ACI/ACI Air that have planned seaplane services to Adriatic destinations (EX-YU Aviation news). In Albania there is a more effective commitment to advance the implementation of the Adri-Seaplanes project which was assessed and supported as an activity within the IPA/ADRION programme since 2013 (ADRI-SEAPLANES Project, n.d.; European Commission, n.d.). Through this project, Vlora becomes a potential seaplane connection point with Bari/Corfu/the islands etc. (ATA News, n.d.). The new Vlora airport also serves as a connecting infrastructure and a multimodal element that can be used in conjunction with the seaplane port as an added capacity in coordinating air routes from the sea and land. The discussion about a “seaplanes port” in Vlora (report/public communication, July 2024), shows that there is interest from local institutions in the district for the development of water-air infrastructure (ATA News).

Challenges to be Addressed

- **Regulatory Aspects:** A clear legal framework for general aviation and commercial panoramic flights needs to be reviewed in full compliance with EASA (European Aviation Safety Agency) regulations (European Commission, 2023).
- **Environment & Biodiversity:** Sensitive areas, such as the Narta Lagoon near Vlora, are subject to concerns from environmental organizations, which may delay or reconsider projects (EuroNatur Foundation, n.d.).
- **Operating Costs:** The service has significant operating costs (fuel, maintenance), so a sustainable business model is needed (premium tickets, PPP, subsidies).

- Safety: Mandatory pilot training and standard maintenance are required, as well as emergency plans for the aquatic environment.

Conclusions and Recommendations

A small network of aeroclubs and seaplane services is a more sustainable and attractive solution than domestic airline-type flights. With small aircraft, modest landing fields and the use of lakes/lagoons, Albania can offer a unique experience for tourists. The success of the ideas and initiatives mentioned would depend first of all on the adaptation of the legal framework, the management of environmental impacts and business models that will exploit the tourist season. It would also depend on the efficient combination of market needs with new aircraft technology and on the degree of awareness of supporting policies by the interested parties of the State-Private binomial. The State and Authorities: Can help by simplifying bureaucratic procedures and the legal framework, by offering initial subsidies and by cooperating on public services (monitoring).

Private Business can be the main investor thanks to the potential for profit and possesses the expertise and flexibility for efficient management of operations.

Concrete steps for the realization of the project:

- Pilot Phase: Launch a pilot project (for example 1–2 tourist lines Tirana-Shkodër-Vlora) with a commercial operator for the first season, to test the real demand and measure the market.
- Multimodal Planning: Coordination between the Port of Vlora, Vlora Airport and road transport to ensure rapid passenger flow.
- Equipment and Regulation: Obtaining permits and certifications of the water aerodrome from the civil aviation authority and preparing port equipment for seaplanes.
- Environmental Transparency: Open and regular communication with the community and environmental NGOs on environmental studies and compensatory measures.

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