Izmir Institute of Technology (IZTECH)

Biodiversity Conservation Strategy Plan (2025–2050)

1. Introduction

As part of its institutional sustainability strategy, Izmir Institute of Technology (IZTECH) has developed a comprehensive Biodiversity Conservation Strategy Plan to protect, secure, and restore the biodiversity and genetic resources within its rural and forested campus. The plan outlines policies, actions, and monitoring strategies to ensure the conservation and restoration of native flora and fauna, freshwater and coastal habitats, as well as agricultural genetic materials and traditional ways of life.

2. Objectives

- To protect native plant and animal species, including endemic and vulnerable populations;
- To establish medium and long-term conservation infrastructure;
- To designate and manage conservation areas within the campus;
- To integrate conservation into research, education, and community awareness efforts;
- To conserve at least 100 species and ensure active monitoring by 2050.

3. Governance: Conservation Steering Committee

A multidisciplinary Conservation Steering Committee has been formally established and includes faculty members from:

- Architecture: Sustainable campus and ecological design
- City and Regional Planning: Ecosystem planning and protected zones
- Civil Engineering: Water resources and coastal ecosystems
- Energy Systems Engineering: Sustainable energy integration for conservation infrastructure
- Environmental Engineering: Pollution monitoring and prevention
- Food Engineering: Plant-based, biodiversity-friendly foods
- Molecular Biology and Genetics: Genetic material conservation and biodiversity analysis
- Plant Science and Technology Application and Research Center (PSTAR): Plant genetics and breeding,
-Students from ecology and biotechnology clubs: Student-led biodiversity actions.

The committee oversees all policy, coordination, implementation, and annual reporting of the conservation program.

4. Current Conditions and Protected Assets

- **Campus Area:** 3500 hectares, including forest, maquis, wetlands, agricultural land, landscaped areas, freshwater sources and coastal areas.
- **Protected Areas:**
  - Natural forest zone: 2218 hectares
  - Freshwater resources (ponds, streams, wetlands)
- **Biodiversity Inventory:** Ongoing

5. Monitoring and Reporting

- **Biodiversity Monitoring:** Surveys of diversity on flora and fauna populations, remote wildlife observation, GIS-based mapping of habitats, shall be performed.

- **Infrastructure-based Tracking:** A greenhouse has already been established in 2019 for landscape plants. Besides, PSTAR will supervise the surveys of plant biodiversity, store genetic resources of endemic species as needed, while maintaining catalog with students from ecology and biotechnology clubs.

- **Reporting:** A "Biodiversity and Conservation Annual Report" will be published each year by the Committee and shared internally and with regional stakeholders.

6. Education, Research, and Community Involvement

- **Academic Engagement:** 11 graduate theses and multiple undergraduate research projects on plant/animal biodiversity were completed between 2023–2024.
- **Photography Contest:** In 2025, a campus-wide *Nature and Wildlife Photography Contest* was organized to engage students and staff in observing and capturing the rich biodiversity of the campus. The winning photographs were exhibited publicly and used in conservation awareness campaigns.
-**External Partnerships:** PSTAR collaborations with Ege University Agricultural Research Institute, national genebank, under auspices of General Directorate of Agricultural Research and Policies (TAGEM). Also, IZTECH has agreement with TAGEM for research & education collaboration. Applications to EU funding schemes (Horizon, LIFE+) are ongoing.

7. Funding and Resources

- Annual conservation budget: approx. 13,000,000 TL (Turkish Lira).
- Human resources: 19 dedicated professors, 6 research assistants, about 20 undergraduate students from student clubs, 2 technical staff as of 2025.
- Budget covers: conservation infrastructure, scientific equipment, field monitoring, educational materials, and outreach.

8. Implementation Phases

WP No	WP Title	SWP No	SWP Title	2025-2030						2031-2040					2041-2050				
				25	26	27	28	29	30	32	34	36	38	40	42	44	46	48	50
1	Conservation Steering Committee	1,1	Conservation Steering Committee has been formally established																
2	Current Conditions and Protected Assets	2,1	Identify protection zones in the campus																
		2,2	Biodiversity Inventory																
		2,3	Establish growth boundary based on ecological analysis																
3	Monitoring and Reporting	3,1	Biodiversity Monitoring																
		3,2	Infrastructure-based Tracking																
		3,3	Reporting																
4	Education, Research, and Community Involvement	4,1	Academic Engagement																
		4,2	External Partnerships																
									MS1					MS2					MS3

9. Roadmap Summary

Timeframe	Milestones
Short-Term (2025–2030)	Establish governance, initial infrastructure, inventory complete
Mid-Term (2030–2040)	50+ species under conservation, seed bank functional, monitoring begins
Long-Term (2040–2050)	100+ species monitored, conservation zones expanded, full reporting loop active

Conclusion

IZTECH's Biodiversity Conservation Strategy Plan is a robust, cross-disciplinary, and well-resourced strategy. It reflects a deep institutional commitment to biodiversity preservation and contributes directly to sustainable campus development, research, and ecological resilience in the region.