This collection of research projects is dedicated to Sustainable Development Goal 15 — Life on Land. The core focus of the studies is the conservation of Kazakhstan's biodiversity and the restoration of degraded land ecosystems. In particular, the research includes examining the flora of the Black Irtysh River basin, preserving populations of wild hop (Humulus lupulus), and assessing the ecosystem health of the Zerendy region.

In addition, special attention is given to innovative biological methods of environmental remediation, such as phytoremediation and biodegradation. The effectiveness of using algae (Chlorella sp.) to clean environments contaminated with diesel fuel and applying horse chestnut (Aesculus hippocastanum) to remove heavy metals from soil has been scientifically demonstrated. These studies directly contribute to protecting terrestrial life and ensuring the sustainable management of natural resources.

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Title	Efficacy of Chlorella Sp. In Diesel Fuel Degradation in a Model Experimental Study
Authors	Bukharbayeva, Z.| Yernazarova, G.| Zayadan, B.| Turasheva, S.| Yeraliyeva, Z.| Shynybekova, S.| Mukasheva, D.| Ramazanova, A.| Keubassova, G.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85207314378&origin=resultslist
DOI	10.47278/journal.ijab/2024.147

2

Title	Ecosystem Health Assessment of the Zerendy District, Kazakhstan
Authors	Alipbeki, O.| Grossul, P.| Rakhimov, D.| Kupidura, P.| Alipbekova, C.| Musaif, G.| Turekeldiyeva, R.| Augambaev, K.| Begaliyeva, M.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85214499766&origin=resultslist
DOI	10.3390/su17010277

3

Title	Evaluation of tree species, Aésculus hippocastanum as a phytoremediator in conditions of artificial soil contamination
Authors	Mussina, A.| Baitasheva, G.| Rakhimova, Z.| Raimbekova, B.| Gubasheva, B.E.| Medeuova, G.| Baymurzina, Z.| Tynyshbek, D.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105013895895&origin=resultslist
DOI	10.22124/cjes.2025.8947

4

Title	ECOLOGICAL AND PHYTOCHEMICAL COMPOSITION OF GNAPHALIUM KASACHSTANICUM KIRP. & KUPRIAN
Authors	Ydyrys, A.| Molsadykkyzy, M.| Syraiyl, S.| Kidirbayeva, K.| Raimbekova, B.| Barun, S.| Aralbaeva, A.| Atanbaeva, G.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105005522718&origin=resultslist
DOI	10.54910/sabrao2025.57.2.35

5

Title	Biochemical analysis of the Caspian Sea sediments: Implications for environmental pollution and bioremediation
Authors	Mamataeva, A.| Kuatbayev, A.| Gartsiyanov, K.| Abdurashidovich, U.A.| Flora, A.| Ravshanbekovna, M.G.| Toshmamatovich, T.U.| Khakimboy Ugli, B.O.| Sapaev, I.B.| Mamasoatov, D.| Bakhtiyarovna, B.Z.| Mamatqurbonovich, E.N.| Kholmirzaev, M.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85215995593&origin=resultslist
DOI	10.22124/cjes.2024.8217

6

Title	Development of technology for biological treatment of wastewater contaminated with oil and oil products using aquatic plants and algae
Authors	Bukharbayeva, Z.| Zayadan, B.| Yernazarova, G.| Anuarova, L.| Aimukhanov, N.| Maimatayeva, A.
Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85207506119&origin=resultslist
DOI	10.26789/AEB.2024.01.006

7

Title	Evaluating the Status of Humulus Lupulus Populations in Kazakhstan: Implications for Conservation, Sustainability, and Forest Ecosystem Management
Authors	Yedilova, A.| Inelova, Z.| Zhamanbayeva, M.| Kiyekbayeva, L.| Yerubayeva, G.| Sarsembayeva, A.| Baitasheva, G.| Ashirova, Z.| Nazarbekova, S.| Satybaldiyeva, G.| Bauyrzhan, T.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105001679029&origin=resultslist
DOI	10.30919/ee1426

8

Title	Assessment of Plant Biodiversity and the Floristic Composition in the Black Irtysh River Valley (Kazakhstan)
Authors	Abitay, A.| Imanova, E.| Sumbembayev, A.

Year	2024
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-85207665533&origin=resultslist
DOI	10.3390/d16100641

9

Title	Development of a strategy for the conservation of rare and endangered species of medicinal plants in Kazakhstan
Authors	Yessenbayeva, J.| Duisenbekova, O.| Sharipov, G.| Dauletbayeva, M.| Zhumakhanova, R.| Toyzhigitova, B.| Sharipova, S.| Lessova, Z.
Year	2025
Abstract in Scopus	https://www.scopus.com/record/display.url?eid=2-s2.0-105006482735&origin=resultslist
DOI	10.22124/cjes.2025.8708