

## O'ZBEKISTONDA HAYVONOT OLAMINING MILLIY MA'LUMOTLAR BAZASINI SHAKLLANTIRISH

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**Annotation.** *This article examines the current issues of systematization and digitization of information on the fauna of the Republic of Uzbekistan. The scientific, technological, institutional and financial problems encountered in the formation of a national database are analyzed. Also, proposals and recommendations are given to solve existing problems.*

**Annotatsiya.** *Ushbu maqolada O'zbekiston Respublikasi hududida hayvonot olamiga oid ma'lumotlarni tizimlashtirish va raqamlashtirishga oid dolzarb masalalar ko'rib chiqilgan. Milliy ma'lumotlar bazasini shakllantirishda uchrayotgan ilmiy, texnologik, institutsional va moliyaviy muammolar tahlil qilinadi. Shuningdek, mavjud muammolarni hal etish bo'yicha taklif va tavsiyalar berilgan.*

Kirish. Tabiiy resurslarning muhofazasi va ulardan oqilona foydalanish bugungi kunda global muammo sanaladi. Xususan, biologik xilma-xillik, shu jumladan hayvonot olamining monitoringi, ularning soni, yashash muhiti va holati to'g'risidagi ma'lumotlarning to'plami ekologik siyosatning asosiy tarkibiy qismlaridan biridir. Ammo O'zbekistonda haligacha hayvonot dunyosiga oid yagona, to'liq va interaktiv ma'lumotlar bazasi mavjud emas. Bu esa atrof-muhitni boshqarish, ekologik xavfsizlik va ilmiy tadqiqotlar jarayonida jiddiy to'siqlarga sabab bo'lmoqda.

O'zbekistonda hayvonot olamining milliy ma'lumotlar bazasini shakllantirishning asosiy muammolar:

1. Ma'lumotlarning yetishmasligi va tarqoqligi. Hayvonot olami bo'yicha mavjud ma'lumotlar ko'pincha ilmiy ekspeditsiyalar, institutlar yoki alohida mutaxassislar tomonidan yig'ilgan bo'lib, ularning formati, sifati va dolzarbligi bir-biridan farq qiladi. Ko'p hollarda bu ma'lumotlar ommaga ochiq emas, natijada yagona markazlashgan tizim shakllanmayapti.

2. Texnologik infratuzilmaning sustligi. Raqamlashtirish va zamonaviy ma'lumotlar bazalarini yaratish uchun zarur bo'lgan serverlar, dasturiy ta'minotlar va geoaxborot texnologiyalari (GIS) yetarli darajada joriy etilmagan. Bu holat real vaqtda monitoring olib borish imkoniyatlarini cheklaydi.

3. Monitoring tizimining zaifligi. Ko'pchilik hollarda hayvonlar soni va turlarining o'zgarishi faqat vaqti-vaqti bilan o'tkaziladigan kuzatuvlarga asoslanadi. Doimiy va avtomatlashtirilgan monitoring tizimlari, jumladan dronlar, sun'iy yo'ldoshlar yoki sensorlar yordamida nazorat qilish tizimi yo'q darajada.

4. Muvofiqlashtirilmagan institutlararo faoliyat. Ekologik muassasalar, ilmiy markazlar, universitetlar va davlat organlari o'rtasida ma'lumot almashinuvi zaif. Har bir tashkilot o'z faoliyat doirasida ishlaydi, biroq bu natijalar birlashmagan, umumiy bazaga kiritilmagan.

5. Moliyalashtirish muammolari. Hayvonot olamini o'rganish va monitoring qilish uchun zarur texnik vositalar va ilmiy ishlanmalar katta mablag' talab qiladi. Davlat tomonidan bu yo'nalishga ajratilayotgan mablag'lar cheklangan, xususiy sektor yoki xalqaro tashkilotlar esa yetarlicha jalb qilinmagan.

Taklif va tavsiyalar. Yagona raqamli platformani yaratish: "O'zBioData" yoki "Hayvonot.uz" nomli milliy interaktiv ma'lumotlar bazasini tashkil etish.

Ilmiy va texnologik integratsiya: Oliy ta'lim va ilmiy-tadqiqot muassasalarini GIS va sun'iy intellekt texnologiyalarini ishlab chiqishga yo'naltirish.

Jamoatchilikni jalb qilish: "Citizen Science" (fuqaroviy ilm) loyihalari orqali oddiy fuqarolarning kuzatuvlari va suratlari orqali bazani boyitish.

Huquqiy asoslarni kuchaytirish: Hayvonot olami monitoringi va ma'lumotlar bazasi yuritish bo'yicha aniq qonun va me'yoriy hujjatlarni ishlab chiqish.

Xalqaro hamkorlikni yo'lga qo'yish: IUCN, WWF va FAO kabi tashkilotlar bilan qo'shma loyiha va grantlarni yo'lga qo'yish.

O'zbekiston hayvonot olami milliy ma'lumotlar bazasining taklif etilayotgan struktura modeli

1. Bosh sahifa (Umumiy ko'rinish)

Loyihaning maqsadi va vazifalari

Yangi kiritilgan turlar / oxirgi yangilanishlar

Interaktiv xarita / real vaqtdagi kuzatuvlar

Foydalanuvchi uchun qo'llanma

2. Turlar to'g'risidagi bo'lim (Biodiversity Information)

Har bir hayvon turi uchun quyidagi ma'lumotlar kiritiladi:

Ilmiy nomi (lotin tilida)

O'zbekcha nomi

Turkum / oilasi / sinfi

Xalqaro holati (IUCN toifasi – VU, EN, CR)

Mahalliy holati (qizil kitobga kiritilganmi yoki yo'q)

Tarqalish hududi (xaritada ko'rsatilgan)

Populyatsiya dinamikasi

Fotosuratlar / audio yozuvlar / videolar

Ekotizimdagi o'rni

Tahdidlar (inson faoliyati, iqlim o'zgarishi va h.k.)

3. Geografik modul (GIS bo'limi)

Interaktiv xarita orqali:

Har bir tur tarqalish areali

Monitoring punktlari

Qorovul postlari va milliy bog'lar

Endemik va noyob turlar

Sun'iy yo'ldosh yoki dron orqali kelayotgan ma'lumotlarni integratsiya qilish

4. Monitoring va kuzatuvlar bo'limi

Yiliga / oyiga / mavsumga qarab aniqlangan turlar

Populyatsiya hisob-kitoblari

O'rganilgan hududlar va tekshiruvlar natijalari

Jamoaviy monitoring (fuqarolar kuzatuv, volontyorlar)

5. Ilmiy bazalar bilan integratsiya

Zoologiya instituti, Ekologiya vazirligi, universitetlar va xalqaro tashkilotlar ma'lumotlari bilan bog'lanish

Maqolalar va tadqiqotlar bazasi

PDF formatda ilmiy hisobotlar, ekspeditsiya natijalari

6. Qonunchilik va normativ hujjatlar bo'limi

“Qizil kitob”dagi turlar ro'yxati

Ekologik qonunlar va qarorlar

Ov qilishni taqiqlovchi hududlar va muddatlar

7. Foydalanuvchilar moduli

Ilmiy xodimlar, talabalar, jurnalistlar, ixtiyoriy foydalanuvchilar uchun kirish imkoniyati

Shaxsiy kabinet (ma'lumot qo'shish, fikr bildirish, savol berish)

Foydalanuvchi darajalari (Admin / Ilmiy ekspert / Kuzatuvchi)

8. Tahlil va hisobotlar bo'limi

Grafik va statistik ko'rinishlar (son, o'sish/kamayayotgan populyatsiyalar)

Faoliyat samaradorligi bo'yicha hisobotlar

Hududiy kesimda solishtirma tahlillar

9. Xavfsizlik va zaxira tizimi

Ma'lumotlar xavfsizligi (autentifikatsiya, zaxira nusxalar)

Tizimga noqonuniy kirishni oldini olish

Doimiy server monitoringi

10. Til va interfeys imkoniyatlari

O'zbek tili (lotin va kirill)

Rus tili

Ingliz tili

Ko'zi ojizlar uchun maxsus rejim

Xulosa

O'zbekistonda hayvonot olami bo'yicha to'liq, tizimli va zamonaviy ma'lumotlar bazasini shakllantirish nafaqat ekologik muhofaza, balki barqaror rivojlanishning ham asosi sanaladi. Yuqorida qayd etilgan muammolarni bartaraf etish orqali mamlakatda biologik resurslarni boshqarish sifati va samaradorligini oshirish mumkin. Bu esa O'zbekistonning xalqaro ekologik reytinglarda yuqorilashiga ham xizmat qiladi.

Foydalanilgan adabiyotlar ro'yxati.

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