

A COMPARATIVE GLOBAL AND SPECIFIC RISK ASSESSMENT FOR THE THREE OUTBREAKS OF AVIAN INFLUENZA IN ROMANIA

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Avian influenza occurred in Romania in three waves: the first from October till December 2005, the second from January to April 2006 and the third from May to August 2006. It was demonstrated that the way of introduction of virus on the Romanian territory was migratory birds. This paper was conducted to perform the first three stages of risk analysis for avian influenza: risk identification, risk emission assessment and risk exposure assessment.

To clarify the global identification of risk elements we took into account the main migration corridors of wild migratory birds in the world (fig. 1) and those involving Romanian territory (fig. 2). The specific identification of risks involves the identification of risk origins: peri-Caspian see and along the Northern Part of Ural Mountains (fig. 3). After this we identified the risk traceability from both risk origin areas (fig. 4).

The risk emission and risk exposure assessment revealed that the Danube Delta is the main migratory staging point for wild birds (number and diversity of birds) (fig. 5). The exposure assessment is shown in fig. 6 and the corridors of micro migration on the Romanian territory are those in fig. 7. Almost 320 bird species live in the Danube Delta, 72 of them being migratory birds.

The influenza avian virus has been isolated from 19 wild bird species in the world. 13 of them are leaving in the Danube Delta and avian influenza virus has been isolated from 6 of them at National Reference Laboratory form Institute for Diagnosis and Animal Health from Bucharest – Romania.

Figure 1

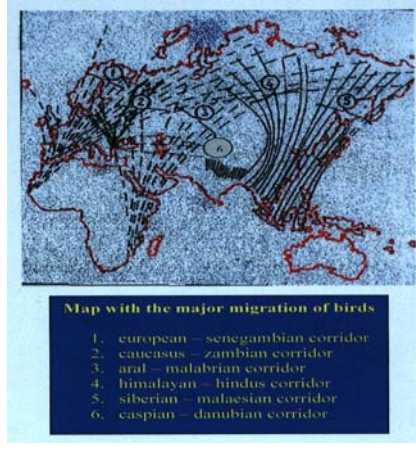


Figure 2 – The worldwide migration of birds involving Romanian territory



Figure 5

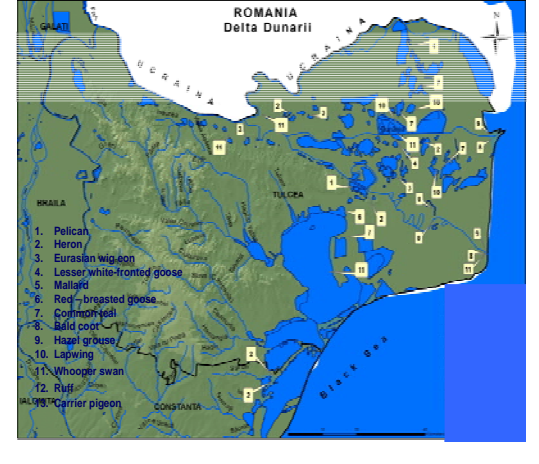


Figure 3



Figure 4



Figure 6

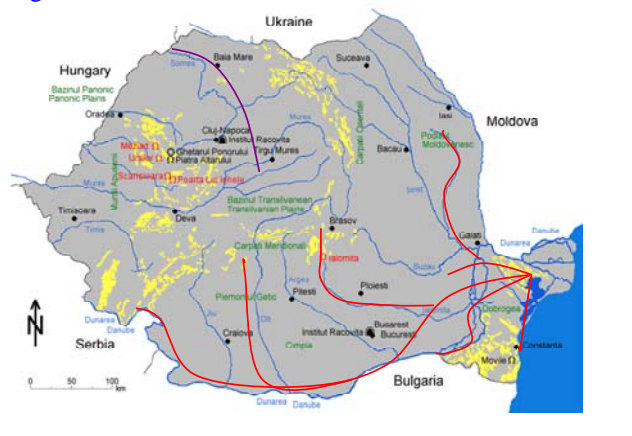


Figure 7	Common name	Scientific name
	Heron	<i>Ardea cinerea</i>
	Mute swan	<i>Cygnus olor</i>
	Whooper swan	<i>Cygnus cygnus</i>
	Greater white-fronted goose	<i>Anser albifrons</i>
	Lesser white-fronted goose	<i>Anser erythroropus</i>
	Red-breasted goose	<i>Branta ruficollis</i>
	Northern pintail	<i>Anas acuta</i>
	Eurasian wig-eon	<i>Anas penelope</i>
	Gadwall	<i>Anas strepera</i>
	Common teal	<i>Anas crecca</i>
	Mallard	<i>Anas platyrhynchos</i>
	Common pochard	<i>Aythya ferina</i>
	Bald coot	<i>Fulica atra</i>
	Hazel grouse	<i>Gallinula chloropus</i>
	Lapwing	<i>Vanellus vanellus</i>
	Ruff	<i>Phylomachus pugnax</i>
	Common Black-Headed	<i>Larus ridibundus</i>
	Herring gull	<i>Larus argentatus</i>
	Carrier pigeon	<i>Columba livia domestica</i>