

INVASIVE ALIEN SPECIES IN BULGARIA

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04-06 June 2015,

Triglav National Park, Slovenia

GENERAL INFORMATION

- **National BD Strategy identifies IAS as one of the main threats to biological diversity in the country.**
- **The Ministry of Environment and Water (MOEW) are the principle institution responsible for formulation of policy to the IAS**
- **The main Scientific institutions involved in the work on IAS are the Institutes of Bulgarian Academy of Science (BAS), National Natural History Museum, Institute on Fish Resources, Forestry University and Sofia University**
- **Good cooperation exist between all institutions and scientific organisations**

Activities

- Bulgaria actively participates in the international efforts, within the European Union to limited the negative impact of invasive species.
- At the same time our country applies some special measures regarding the IAS with negative economic impact as well as provides investigations and regional cooperation.

GENERAL INFORMATION on IAS in BULGARIA

Assesement of IAS has been made in 2006.

Results:

- **Plants - 50 IAS**
- **Animals - 30 IAS**
- **Fungi - 20 IAS**

ANIMALS

- **Assessed – 50 species**
- **60% are IAS**
- **25% are potentially IAS**

- **Most vulnerable are Black Sea ecosystem and Inland water ecosystems**

ANIMALS – some examples:

Mussels

- **Dreissena bugensis**
- **Anodonta woodiana**
- **Curbicula fluminea**

Fish

- **Carassius gibelio**
- **Pseudorasbora parva**
- **Lepomis gibbosus**
- **Invasive Artropods**

Invertebrates

- **Harmonia axiridis**
- **Other Invertebrates (pests)**

PLANTS

- 30% of assessed 160 species are invasive and 70 % are potentially invasive
- For the last 20 years (1990-2010) - 40 new alien species are recorded
- For the last 5 years (2009-2013) - 28 new alien species are detected
- More than 1000 new localities of the alien species of vascular plants in the country have been gathered and located by a GPS-device

Fig. 1. Cumulative number of alien species in terrestrial ecosystems:

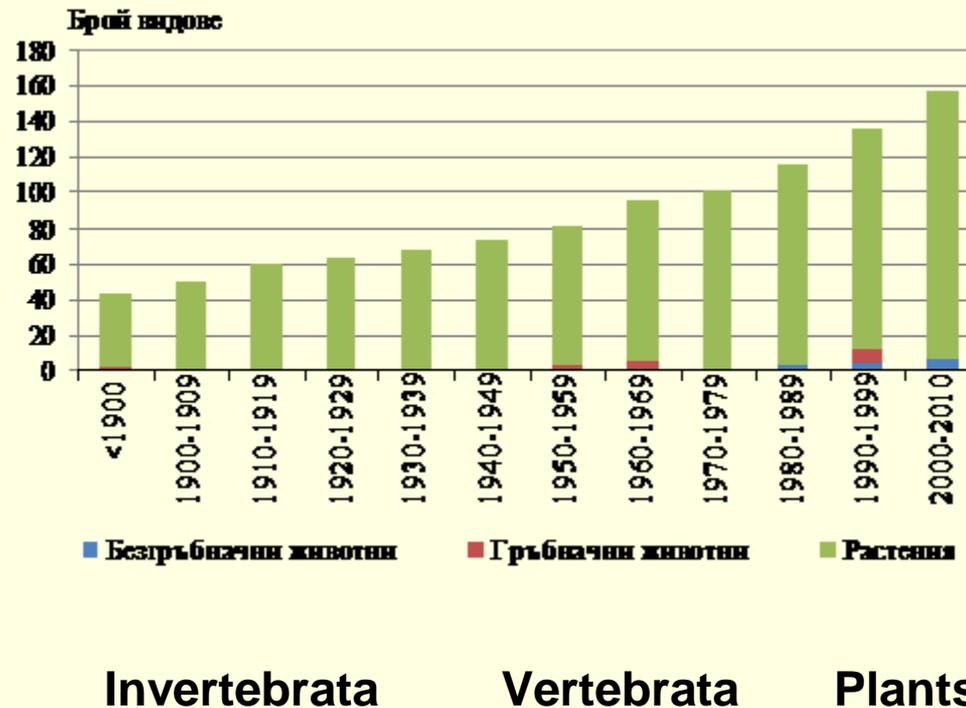
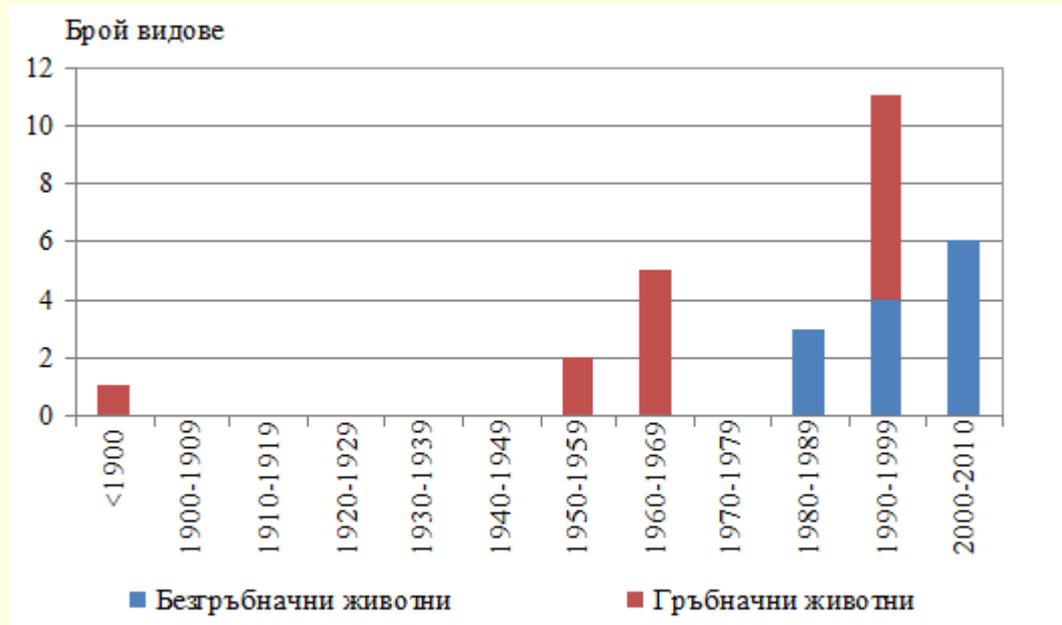


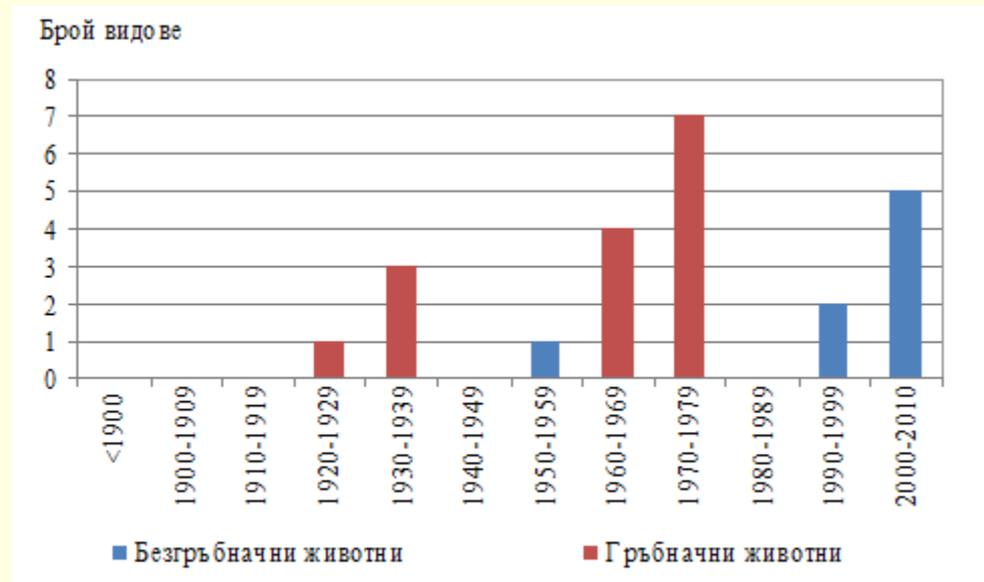
Fig. 2. Cumulative number of alien animal species in terrestrial ecosystems:



Invertebrata

Vertebrata

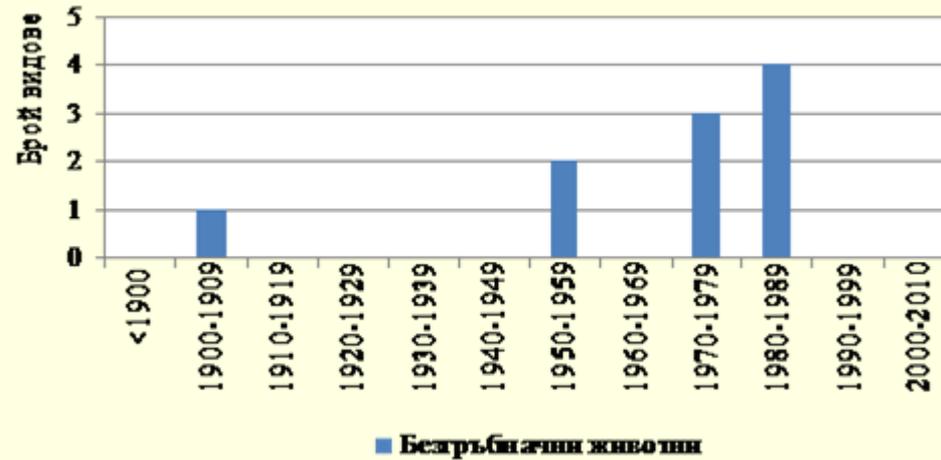
Fig. 3. Cumulative number of alien animal species in fresh water ecosystems:



Invertebrata

Vertebrata

Fig. 4. Cumulative number of alien invertebrata species in marine ecosystems:



Invertebrata

Investigation on IAS

Most them 20 projects on IAS in last 10 year are currently under way or have been are finalized related to the:

- **Plants**
- **Fish**
- **Artorpoda**
- **Moluscs and other marine IAS**
- **Balast water**
- **IAS and Climate change**
- **COST Activities European information System**
- **Regional cooperation (Ochrid Like)**

East and South European Network for Invasive Alien Species (ESENIAS)

- ESENIAS has been initiated and created in 2011 at Sofia, with the participation of all the countries in the region and the support of the European Environmental Agency and IUCN (<http://www.esenias.org>).

ESENIAS is a regional data portal for the exchange of information on IAS and early warning, with center in Bulgaria. The portal will be managed by the Bulgarian Academy of Sciences in cooperation with the Ministry of Environment and Water.

- Its aim is to facilitating access to and exchange of information relating to the identification, risk assessment, management, monitoring and control of invasive species, and also providing the methodological support (legislation, guidance, scientific references) related to IAS in the region

FUTURE STEPS

- 1. Implementation of Regulation (EU) No 1143/2014 concerning species included in the list of invasive alien species of Union concern – activities related to assessment of the situation in Bulgaria; preparation of action plans on the pathways control; taking measures to eradicate or managed the IAS etc.
- 2. Providing opportunities for financing of projects related to invasive species from Operational Program Environment 2014-2020;
- 3. Development the scientific base, regional cooperation and improving public awareness on IAS.



Thank you!