



Measures to Be Taken against Invasive Alien Species in Japan

I Present Status and Problems

1. Fundamental Knowledge

- 1) Alien species refers to the species (including lower taxon) that might survive and subsequently reproduce beyond their natural distribution through artificial introduction. Species introduced from a certain area to another area in Japan are also regarded as alien species.
- 2) According to existing literature, a large number of alien species, including 108 species of vertebrates, 246 species of insects and 1,553 species of vascular plants, established their new ranges in Japan at present.
- 3) Because scientific knowledge on taxonomy has been accumulated since 1870s (after the Meiji era), alien species refers to a species introduced after the time.
- 4) Invasive alien species means the alien species which threatens biological diversity by bringing an adverse impact which could not arise under natural conditions.

2. Problems Caused by Invasive Alien Species and Examples

1) Adverse effect on biological diversity

a: Predation of native species

Predation of the Amami rabbit *Pentalagus furnessi* and other endangered animals by the small Asian mongoose *Herpestes javanicus* in Amami and Okinawa Island

b: Grazing and trampling of natural vegetation

Goats in Ogasawara Island

c: Competitive expulsion of native species

2) Adverse effect on human properties (agriculture, forestry, fisheries, etc.), on human lives and bodies

- * Once alien species have established, spread out and reproduced, the eradication would be very difficult.



Fig.1. The small Asian mongoose *Herpestes javanicus* (the upper) preys on the Amami rabbit *Pentalagus furnessi* endemic to Amami Is. (the lower).

3. Introduction Process of Alien Species

- Some invasive alien species are released intentionally by people. Others escape owing to their keepers' negligence, or others are introduced unintentionally by the movement of persons and things.

4. Current Trends of Measures against Alien Species in Japan

- Under the New National Biodiversity Strategy adopted in March 2002, the issue of alien species is identified as one of the crises of biological diversity which requires immediate action. The Three-years Plan for Promoting Regulation Reform, decided upon by the Cabinet in March 2003, indicates that law-regulation of invasive alien species should be also considered.
- The 2001 public opinion survey carried out by the Cabinet Office suggests that public concern in the issue of alien species is growing.

5. Present Status of Measures against Alien Species

- The existing laws restricting plants and animals brought in from abroad meet the Plant Protection Law and the Infectious Disease Law. The Protection and Keeping of Animals Law stipulates matters related to the handling of pet animals in Japan. Nevertheless, these laws aim to protect human health and promote industry.

6. Problems concerning Alien Species Measures

- There is no law related to alien species with the purpose of the biodiversity conservation.
- The public and business sectors do not fully understand the problem of alien species.

II. Measures to Be Taken against Invasive Alien Species

1. Fundamental Principles

A large number of alien species have been introduced into Japan over a long period of time. While some of them have been able to coexist with native species over time, others affect the local biological diversity. Institutional measures should be studied with regard to those invasive alien species, which arouse problems owing to their adverse effects.

Prevention of the introduction of invasive alien species, early detection and prompt action, eradication (mitigation of adverse effects) shown in guiding principles adopted at the 6th meeting of the Conference of the Parties to the Convention on Biological Diversity can be a basis for the invasive alien species measures in Japan.

Preventing the introduction and establishment of invasive alien species is the most desirable measure environmentally as well as from the viewpoint of cost-effectiveness. If they invaded, prompt eradication will be effective.

2. Recommended Matters for Institutionalization

- 1) The fundamental principle of the law designed to cope with alien species and the approach for promoting such measures should be presented to the public in an easy-to-understand way.
- 2) Persons intending to bring a new alien species into Japan are required to submit the fundamental information on its ecology, so that the government can assess the potential impact on biological diversity based on expert opinions. Assessment is also carried out on those alien species whose presence is already confirmed in Japan. The importing of species judged to have adverse effects should not be authorized except by those who are officially allowed to.
- 3) For species judged to have adverse effects, those intending to use such species should have the facilities and ability to control the species properly. This should be checked officially and a mechanism of confirming the state of use should be also created. In this case, individuals are identified by the appropriate methods.
- 4) The conditions of introduced alien species should be monitored, consequently early action, such as urgent eradication, would be taken if a problem arises. A study is carried out on the monitoring methods in areas into which the invasive alien species are highly likely to be introduced.
- 5) In order to cope with alien species which have already established in the field and are causing problems or are likely to do so, a mechanism that allows systematic eradication, is formulated. Action plans for the eradication are developed by the government from a nationwide point of view, and by local government according to actual local circumstances in the respective areas.
- 6) For particular areas requiring the prevention of alien species' impact from the view point of biological diversity, for example, because a number of endemic species live there, measures enabling one to regulate the release of alien species into these areas, and to specially manage their eradication, should be considered.
- 7) The importance of alien species measures is widely enlightened the public on. In association with various educational institutions, educational materials should be developed and human resources should be secured.
- 8) Basic research on establishment and ecological characteristics of alien species are promoted, while techniques on the eradication and monitoring should be developed.

3. Matters to Be Considered for Institutionalization and Implementation of Measures

- 1) Efforts are directed toward budgetary issues and institutional improvement, and measures are to be urgently taken from higher prioritized alien species considering with present scientific knowledge and the feasibility of implementation systems.
- 2) While paying attention to alignment with the existing laws concerned, liaison/cooperation systems are built to hasten actions to deal with alien species problems and comprehensive and effective measures are promoted. The government gives necessary assistance to local government so that alien species measures can be promoted in accordance with actual circumstances in the respective areas.
- 3) It should be fully recognized that once eradication becomes necessary, lives that otherwise should not have been lost if they were properly managed, will be lost.

Development of the system and law is studied based on the precautionary approach.

- 4) When an import-related system is discussed, attention is paid to its relationship with the Marrakesh Treaty (WTO Treaty) for the establishment of the World Trade Organization to govern trade relations among the member countries.

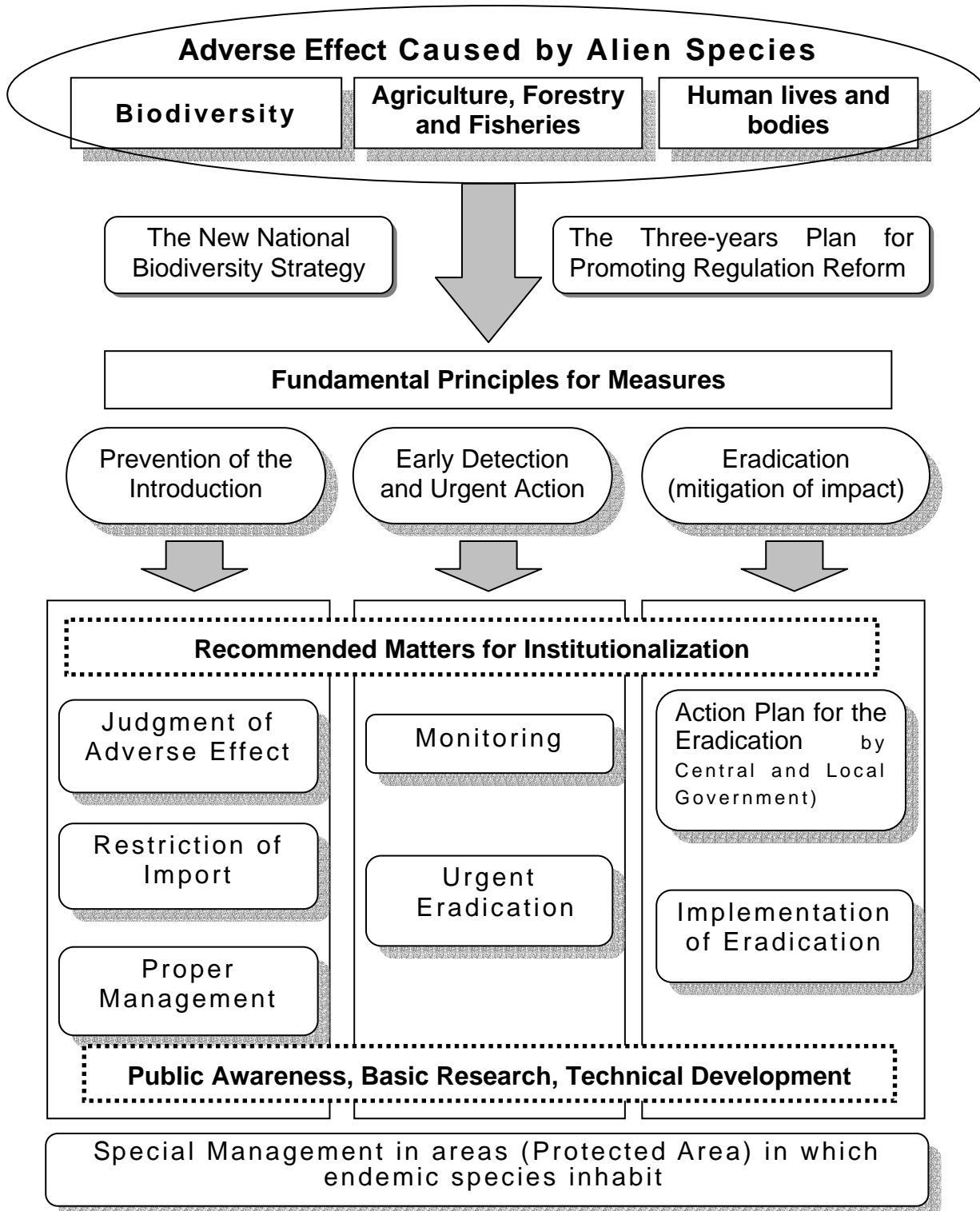


Fig.2.Measures against invasive alien species.