# Environmental Modelling for Radiation Safety (EMRAS II)

**2nd WG Meeting, IAEA, Vienna,**

**26-27 January 2010**

**EFFECTS GROUP**

**sub-group**

**on Population models and Alternative Methods (led. by Tatiana Sazykina, Russia)**

**15 participants of the sub-group Population Models and Alternative Methods.**

**Our first task was: Review of existing population models appropriate for adaptation in radiation effect assessment (non-human biota).**

We had a good progress having at least 8 population models, most of which were specially designed to describe radiation effects in populations, and some can be adapted to simulate radiation effects.

These models formed good basis for developing a generic population approach, which will be able to simulate main features of radiation effects in a population, and show the key parameters, responsible for the resistance of population to radiation damage.

**Main Task to be discussed at this meeting is:**

**3b. develop generic population model for radiological assessment**

**Six participants of the Population Modeling sub-group have developed generic models and will present their results at our meeting:**

Isao Kawaguchi (Japan) – two generic models:
 a) 3 species model with competing preys and a predator;
b) canonical model.

Luigi Monte (Italy) – generic predator-prey model with migration.

Fred Alonzo (France) –generic population model with 2 age classes (discrete).

Tatiana Sazykina  (Russia)– model of population in a limited environment, chronic radiation exposure

Alexander Kryshev (Russia)–model of population with recovery, influence of environmental factors.

Jordi Vives  (UK)– model with 2 age classes (young and adult).

In the following presentations the modelers will give detailed description of their results.