

Integrated intelligent system for environmental sustainability assessment - INTEL-GREEN

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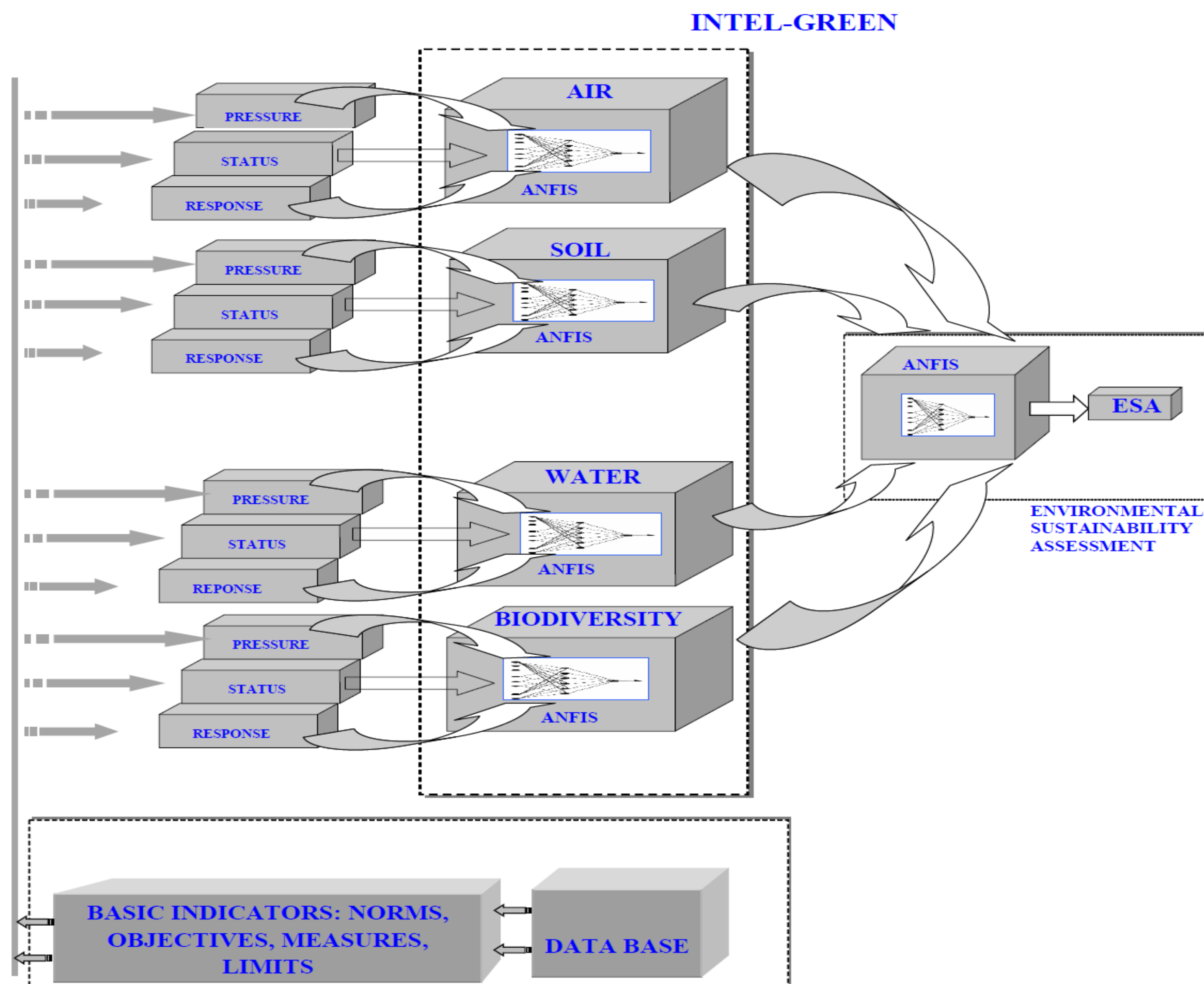
Authors: Florin DRĂGAN, Marius PÎSLARU, Larisa IVAȘCU

The research is focused to develop an *integrated neuro-fuzzy* based framework in order to generate and evaluate ecological scenarios based on data provided by environmental institutions, proposing concerted actions for improving ecological resilience at local, regional or national level and maximizing the benefits provided by the environmental policies to society and economy, respecting the ecological limits of the ecosystem.

As a consequence, the goal of this research is to develop an integrated framework for using fuzzy logic and neural networks with the purpose of determining the specific integrated system design parameters, and also of ensuring an increased adaptability of the environmental policies to the continuously changing environment.

In this field, the neuro-fuzzy modelling approach is very new and involves defining, delineating and analysing the system which will perform the pre-defined functions. These functions will result from the architecture of the proposed system of design support variant indicators.

The research originality consists in developing an integrated intelligent system that combines the advantages provided by different computational techniques (fuzzy techniques and neural networks) in order to develop specific solutions to support innovative policies for environmental sustainability assessment.



The proposed research theme represents a premiere at national level and it's addressing an up-to-date issue for the scientific community worldwide. The digital model (INTEL-GREEN) is the end result of a collective effort of multiple interdisciplinary research activities which will encompass the systematization, association, analysis and adaptation of existing knowledge applied in various scientific areas such as computational science, chemistry, engineering, environmental economics, and environmental management.

Contact: larisa.ivascu@upt.ro