



## **RESEARCH INSTITUTE FOR BUILDING MATERIALS, JSC**

**Ing. RENÉ ČECHMÁNEK, deputy for Applied research and development**  
**Hněvkovského 30/65, 61700 Brno, Czech Republic**  
**tel.: +420 543 529 260, e-mail: [cechmanek@vustah.cz](mailto:cechmanek@vustah.cz)**

**Specialized laboratories** - analytical and physical chemistry, ecotoxicity, radioactivity

**Technological laboratories** - aggregate, binders, concrete, composite materials

**Pilot plant production** - glass fibre reinforced concrete, laboratory sieves, special lime

# Ecologic utilization of industrial by-products

Present trend in developed countries is utilization of secondary raw materials in bulk as possible.

An insufficient utilization in the Czech Republic in last years was caused mainly due to lower price of waste deposition in comparison to recycling cost.

Nevertheless high volumes of industrial waste materials in our country represent a great potential, which is not adequately exploited so far.

Main sphere of the waste materials utilization is estimated in a building industry.

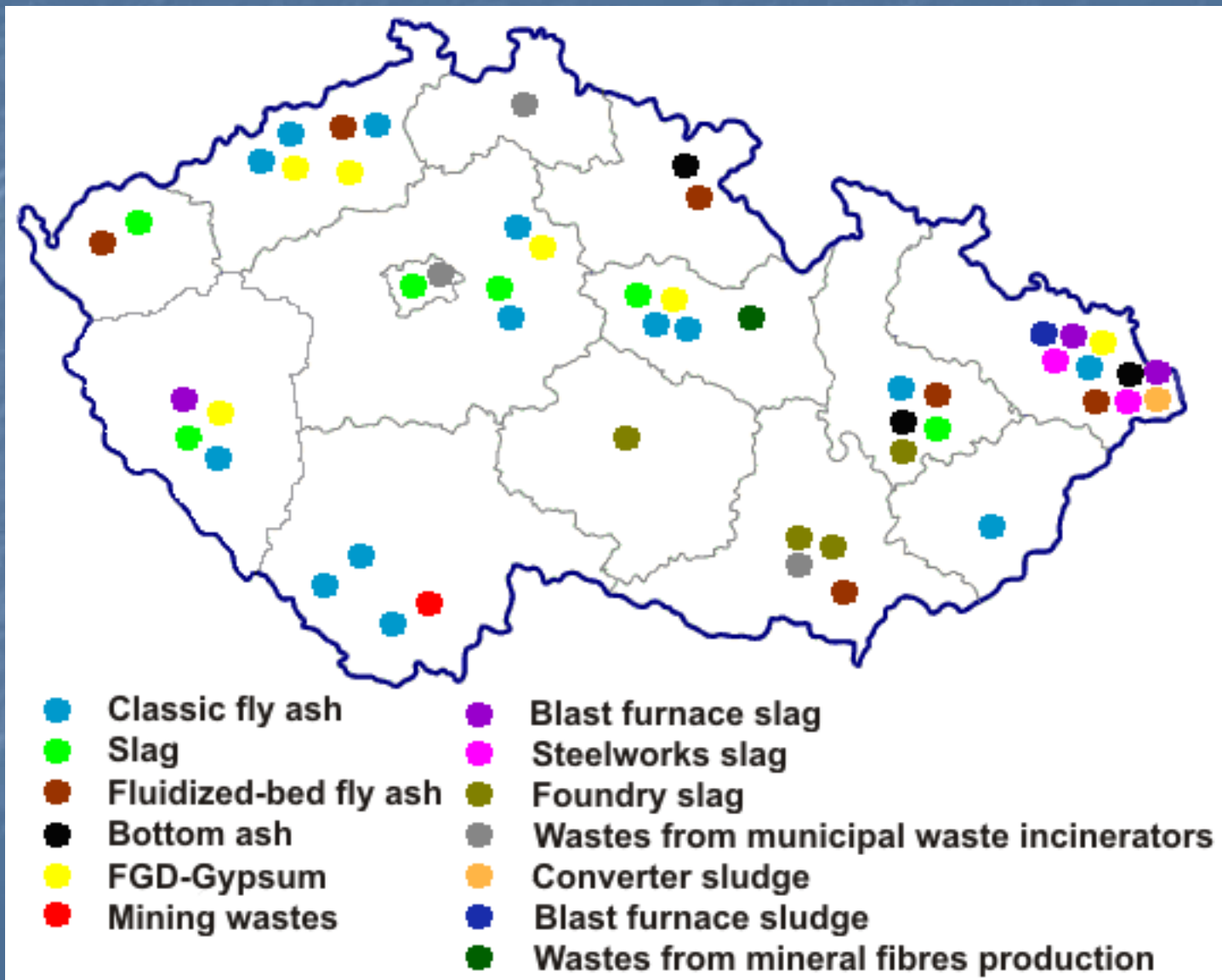
## **Main Objectives:**

- Non-waste technology implementation
- Substitution of natural raw materials
- Introduction of additional ecotoxicologic tests

## **Main Activities:**

- Updating of database of industrial waste producers
- Involving of selected producers
- Modification of standard mixture compositions

# Producers of waste materials in the Czech Republic





# Ecotoxicologic tests

Ecotoxicologic tests serve to determination of a possible negative influence of tested materials to organisms.

Selected organisms are exposed to a water leach from individual materials.

Representatives of the ecosystem are:

vertebrates - *Poecilia reticulata*

invertebrates - *Daphnia magna*

superior plants - *Sinapis alba*

unicellulars - *Scenedesmus subspicatus*

Necessity to include additional organisms.

