

## **Cooperative research project on “National health systems and spa treatments in Europe”**

### ***Prof. Elka N. Pentcheva***

- ❖ Bulgarian territory is very rich in thermal waters (more than 1000 sources and boreholes) of temperature in the range of 20°C-100°C. About 72% of the total discovered flow rate has temperature up to 52°C.
- ❖ The total dynamic flow rate of sub thermal and thermal waters run up to 4600 l/s, of which 3000 l/s is the flow rate of the revealed thermal waters of T>25°C. About 43% of the total flow rate are waters of temperature between 40°C-60°C.
- ❖ Established chemical water content (TDS) varies respectively, in:- Southern Bulgaria - from 0.1g/l up to 1.0 g/l (only for a few sites it is between 1 g/l to 15g/l) - Northern Bulgaria - from 0.1g/l up to (100g/l - 150g/l). About 70% of the thermal waters are slightly mineralized (<1g/l) with fluoride concentration ranging from 0.1 to 25mg/l, various metasilicic acid concentrations (up to 230mg/l) and of mostly high alkalinity.
- ❖ A number of large spa resorts had developed in places of old Thracian or Roman residential areas on the territory of the country. Bulgarian spa resorts nowadays (66 official registered) offer accommodation in 3 to 5 stars hotels and a built up structure of health centers controlled by the Ministry of Health. Experienced specialists working in spas offer treatment of a wide range of diseases.
- ❖ Currently operating health centers using thermal water sources (state-owned and municipal) amount to about 60. Mineral baths and swimming pools are common in them. Thermal waters in most of the spas also flow out of taps. This allows a free-of-charge and massive water use for drinking and disease prevention. Geothermal energy is currently used for space heating of buildings only in 12 spas as in 4 of them air- conditioning is providing in addition.
- ❖ Existing thermalist associations: “Balneology and spa centers” and “Balneotourism”, Regional groups of private spa proprietors.
- ❖ National health system does not pay for spa treatment! Only for invalids I-st group expenses for accommodation, 3 kinds of treatments and traveling (1 time in 3 months) are refunded, but from the side of the National Insurance Institute!
- ❖ Some rich private societies are covering the treatment and travel expenses of their own employees.
- ❖ Sickness funds and friendly societies existed in Bulgaria, but they are destroyed by the totalitarist government. National and regional register of thermomineral resources and spa are not existing. It is very important to create Bulgarian business organizations, contacting with European ones. And to create and impose directives from the side of the European organisms – to oblige the Bulgarian spa systems to operate at the European level.

**Major current barriers for hydrogeothermal development in the country are:**

- Lack of administrative and practical expertise in hydrogeothermal development under the new social and economic conditions in Eastern Europe after 1990;
- It is allowed non observance of the requirements and the norms by the documents application, especially in the case of protection and use of the natural curative resources. This is particularly valid in respect to the curative peloids, because of existing omissions in normative documents;
- The procedure for obtaining a concession for water use is very complicated and time consuming. In some cases, the investors have to finance complex preliminary geological and hydrogeological study without having guarantee for gaining the concession after completing the procedure;
- Local taxes and fees are important but very insufficient source of funds for the Municipalities budgets. The Municipalities are also not allowed to influence on the size of these taxes;