



|| AQUA PARK ||

|| GATA ||



Before written history

The use of mineral water for curing begins even before written history. Since ancient time the springheads were considered as seat of god so bathing in springheads or drinking water were taken as religious acts that leads to healing. Various gifts were given to the springhead's god, and it was in a practice for a long time. In ancient Greece and Rome on springheads people have been establishing votive plates, monuments and altars. In folk medicine, the mineral and thermal springs have been used since prehistoric times until today.

The use of natural healing (curing) factors of soil, mineral waters and curative mud is called balneology. The word balneology comes from Latin word balneum, which means bath and Greek word logos, science. Balneology is a branch of physical medicine. Place with natural healing (curing) properties is called natural spa resorts, while in region of Croatia, B&H and Slovenia, term used for this kind of place is spa.

Curative effect of mineral water started to be interpret by various mysterious elements

At the end of Middle Ages the number of visitors began to rise, the construction of the pool for officials in buildings began, and the old outdoor pools were left to the poor population. For water which needed to be heated, were used wooden bath tube placed in join (common) room. Mineral baths were used as treatment for various disease but it was also known when the mineral baths have harmful effects. In the 16th and 17th centuries, due to the rapid spread of syphilis and because of religious reaction, the use of pools, especially public pools, was dramatically reduced, but mineral water was used for drinking more and more, especially sorrel on springheads, and more interesting that water was bottled and exported .At the end of the 18th century beside drinking, baths in thermal water were again more and more in practice as well as baths in cold water, rivers and sea.

At the beginning of the 19th century first quantitative chemical analysis of mineral water were published. In this period was attempt to make artificial mineral water, but analyses showed that artificial mineral water do not have same curative effects as natural ones.

Than curative effect of mineral water began to be interpret by different mysterious elements. During the 19th century physiological understanding entered the Balneology, which is still relevant. In recent times it has been found out that in the region of thermal springs occurs distinctive flora, which is characteristic just for thermal resorts. However, despite all efforts to interpret the action of mineral waters , especially the baths, still has not been found satisfactory answer .

Find health in natural spa resorts

Today in the European countries balneology is recognized as branch of medicine, which develops parallel with physical medicine. In natural health resorts with natural healing (curing) factors including climate and a whole row of other factors, like changes in the environment, food, special spa regime, and also the psychological impact caused by the natural beauty of the region in which lies spa. Spa with the right equipment, is also used for recreation of healthy people. Today, the accelerated pace of life, prolonged life duration, rapid growth of urban population as well as rapid growth of population employed in industries, caused a large increase in ailments and diseases for which cure maybe achieved in natural spa resorts.

Geographic and climatic characteristics

By geography Gata is located in a very favourable position, whether it is about the movement of tourist routes or climatic influences. It is known that the Bihac valley is characterized by air spa, surrounded with Plješevica from the south and Grmeč massif from east side. Just climate may give us the range of possible uses of this area.

Gata



Based on the name itself is possible to predict what was going on in this area during history. It is not strange that in this region the first spa resorts were formed by Romans BC. At the nearby SPAs in Croatia and Slovenia ON thermal springs were found altars in honour of healing. From the studies developed by the Mining Institute Tuzla can be concluded that the water in springs and wells is suitable for spa tourism and spa resorts, and water composition by itself is ideal for the treatment of various diseases. Thermo – mineral water of Gata is sulphate - chloride - hydrocarbon - calcium - Natrium Magnesium type that represents a type of genetic deeper water. Water with itself brings SO₄ and Cl, which it is an important indicator that this is a deeper water from greater depths, which migrates by crack system and faults to the surface.

In terms of the formation for us, next to the type of water, can be used significant temperature of 36 - 37°C. Taking into account the average annual temperature during a year of Gata's area of 10 °C and geothermal degree of 20 m for 1 °C water does not come from the depths less than 400 m. So taking in consideration all of this we may say that existing drilling depth is still small and insufficient for realisation of primary collector.

Water belongs to nitric type with the presence of noble gases and the radioactivity from 1.39 MJ to 4.27 MJ.

By comparing these analyses with analyses that are on the objects and phenomena of thermo-mineral water in Gata, which carried out during the previous researches we can conclude that the chemical and temperature characteristics of these waters are constant in time, or we may say that these waters have a constant balneological value with indications on:

- chronic rheumatic diseases,
- neurological diseases,
- chronic gynaecological diseases,
- diseases of the locomotor system,
- heart and blood vessels diseases,
- Respiratory organs diseases.

Bacteriological contamination of these waters is not tested during drilling wells SB - 1 , because the environment was bacteriological polluted by usage of surface water in the process of drilling and usage of various equipment and tools .

Based on previous studies (from 1979 to 1984) all phenomena and objects of thermo-mineral waters were completely bacteriological correct (some even sterile so the bacteriological high quality of this water can be taken as fact.

So considering all of this, conclusion is that these waters may have multi use in balneology and energetic purposes. Possible applications of thermo – mineral water in Gata Ilidža are: Baths, bathtubs, basins, showers, drinking, inhalation, Peloids (curative mud), Energy applications (district heating).

Population

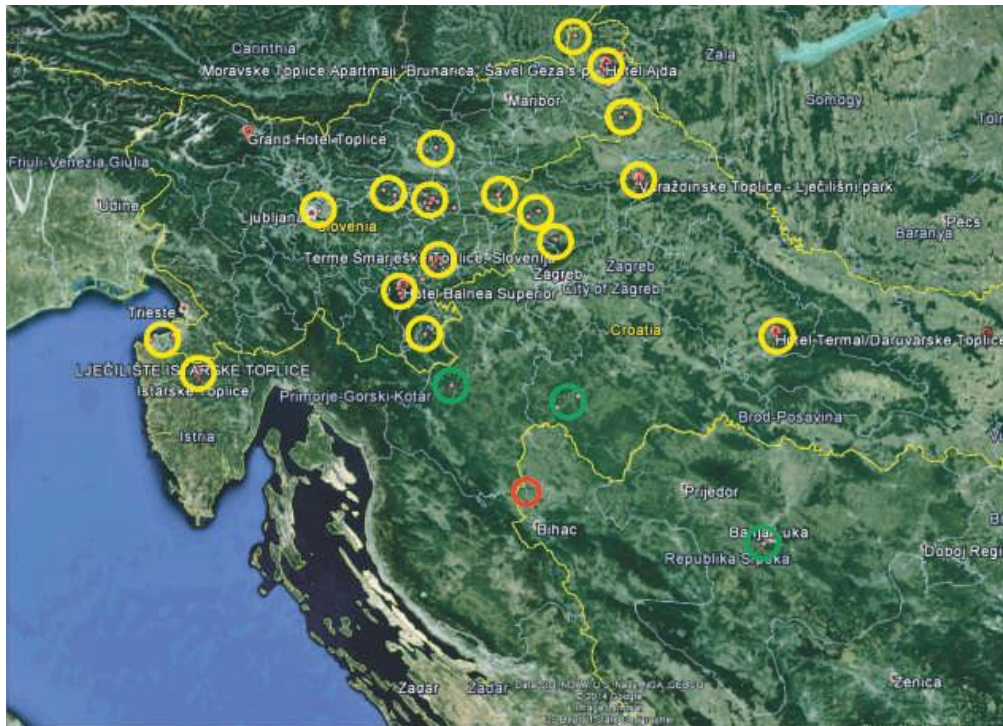
Una-Sana Canton, which would be the basis of development of the centre, has about 289,000 inhabitants and from that population centre could work throughout the year.

With marginal (boarder cross) parts of the canton are districts and municipalities that do not have similar curative – touristic centre. Karlovac County has about 128,900 inhabitants, Sisak- Moslovac around 172 439 inhabitants, while Lika- Senj has about 50,927 inhabitants.

The total population of this catchment area is around 640,000 inhabitants and when along that number binds annual migration of tourists, it is easy to see that the accommodation capacity has to be respectable

Centre

The basis of the city beside the tourist should be rehabilitative and curative nature. From the analysis of centres which has similar nature can be said that we have spa centres in the surrounding area, in Topusko and Glinina, however these centres are not developed and modernized according to market needs, and their character is purely in tourist nature.



Spa centres - macro location

Such centre in its development should have the support of the whole community in terms of binding centres of medical, educational, tourism and various other institutions. An approach to the organization of such a centre should be done very meticulously. It is necessary to include IPA European funds for cross border cooperation modelled as the Varazdin spa and cooperation Hungary and Croatia.

Centre functions

1. *Rehabilitation (Therapy) Centre:*
 - a) Hydrotherapy Centre (36-38°C pools, hot baths 40-42°C),
 - b) Electrotherapy centre,
 - c) Kinesiotherapy centre (gym and gymnastic halls),
 - d) Clima therapy (suitable environment for climatherapy)

2. *Touristic Centre:*

- a) Pedestrian (walking) routes,
- b) Bike routes,
- c) Baths (indoor and outdoor pools),
- d) Excursions (Una, Plješevica etc),
- e) Sport tourism

3. *Accommodation facilities:*

- a) Hotels,
- b) Medical Centre (Department of Rheumatic Diseases and Rehabilitation),
- c) Restaurants, Business Centre,
- d) Bungalows,
- e) Eco Village (involvement of the local community food and accommodation),
- f) Fitness Centre,
- g) Gym (with min approximately 2000 spectators),
- h) Outdoor sports facilities,
- i) The trails for hiking and biking,
- j) Swimming pools (indoor and outdoor) with the appropriate locker rooms,
- k) Administration, Parking lots and storages.

Hotels

From the studies and researches it was concluded that the optimum number of beds for this kind of centres is around 1000. These hotel units will form the hotels with about 200 beds as the optimum number for the hotel privacy and functioning of the hotel itself.

Hotels functionally would gravitated toward primary functions of the centre (medical, tourism, mixed, etc.). Each hotel in addition to its basic functions would have to have a swimming pool, conference halls, apartments and all other facilities for hotels with a 4 or 5 stars, dimensioning of rooms, apartments and other content should be standardized for hotels of this category. Within hotels wellness centre with saunas and various forms of cold baths type of Turkish bathroom, etc., and various forms of cosmetic content could be organized.

Medical Centre

As Gata has a long tradition in banleological ways of healing (curing) people, a logical step would be establishing (forming) on this area a strong major health centre for health, with much larger capacity compared to the existing one, whether it was on the reception or profession.

All other medical centres in the area that gravitates towards Bihac would be able to connect to this centre. Medical Centre would necessarily must contain various types of swimming pools and baths, as follows: rehabilitation pools, tubs for hydrotherapy, clinic for thermotherapy, a laser therapy room, space for magnetic therapy, a physiotherapy halls, gym, Hubbard baths, space for staff, etc.

Restaurants

In addition to the restaurant within the hotel, centre would necessarily have independent large restaurant for visitors, who are not guests of the hotel, with approximately 500 seats. In the worldwide trend is in organic food with this restaurant and all restaurants in the centre we will bind the local community with home grown food. There is a possibility whiten centre area to make domestic farm and in that way close a whole cycle.

Business centre

Big Business centre could be characterized as an additional form of income in the periods when centre is not at its full capacity. This centre should have been connected to the hotel capacities, and it is necessary to have a large conference halls, an amphitheatre which could serve for both the educational program of the centre, cafe, toilets and things like that.

Eco Village

The motivation for ecovillages appeared as a commitment to respond to today's socially culturally destructive condition, however it is the attempt as in the Renaissance, a man tries to approach the nature. Eco Village is an attempt to answer one way of life, which for itself includes a huge mechanism of human needs. Because of that exhausting industrial overloading, the planet is on the edge of existence. Man has to learn how to live sustainable way of life and just get through these forms a matrix of future life ways.

The social element of eco-villages is that it provides a deep sense of belonging to one community. As part of eco-villages may appear different workshops, pulling a study and seminars as seminars of Permaculture * etc. Of course, this eco-village would have its own farm but it would involve the local community as well.



Bungalow



Eco villages

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Fitness centre

Recreation is use of time on unprofitable way that in its own way renews the soul and body. During weekends many people spend free time by active or passive recreation. In the Judeo Christian and Islamic culture Sabbath falls on a weekend, and the Sabbath means „rest day. " The holidays are also the time for recreation. So it seems like necessity to form one large centre with all the facilities that are necessary for this form of exercise. It is necessary to include professional staff. Of course some of fitness facilities should occur also in hotel units

Sports hall

For such a centre is necessary to have a sports hall for all types not depending on if we are talking about team or individual sports. Hall would connect the hotels and a medical centre and would be suitable for the preparation of various team or individual sports. Of course there is a way of inverse usage of the hall, or medical centre that uses the hall for physiotherapy and the like. The hall is connected with the external courts for different sports types.

The trails for hiking and biking

It would be necessary to make and plan routes on the principle of preparing for the final stage climate therapy, plains below 300 m / SI, medium Highlands 300-1000 m / SI, highly Highlands 800-1800 m / Nv, and sea air (thalassotherapy) which indicates the suitability of the site. Since Gata is geographically located at 250 m / SI, and Pješevica is 1657 m / SI we can clearly define that the location is suitable for this type of therapy.

Pools

Pools inside the Centre are divided into tourist, recreational and medicinal pools.

Tourist pools: wave pool, children's pool with water slides and water cannons, children's pool for younger swimmers with water toys and sprinklers (snake sprayer, happy clown, aquatic turtle, water duck and slide), relaxation pool with water geysers, waterfalls, underwater massage, a slide with five lanes for launching and other water attractions.

Recreation indoor swimming pool: swimming pool 25 m, children's pool, therapeutic pool with underwater speakers and reflectors for sound therapy and colours, whirlpool with massage effects, wellness pool with attractive water effects - whirlpools, waterfalls, underwater massage beds, water and air massage, geysers, and one part of the pool comes out into the open, pool for winter swimming in the open air, various types of Jacuzzi

Medical pools: Rehabilitation pools, tubs for hydrotherapy, Hubbard tubs, Jacob pool (40°-42°C), diagnostics.

Phase one

Construction of the first part of the centre is already in an advanced stage, and it provided for a facility with indoor and outdoor pools, a 4 star hotel, a home for the elderly, and the areas for various kinds of recreation (sports fields, walking trails and an adrenaline park).

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