

NZTODAY **Hot Springs**

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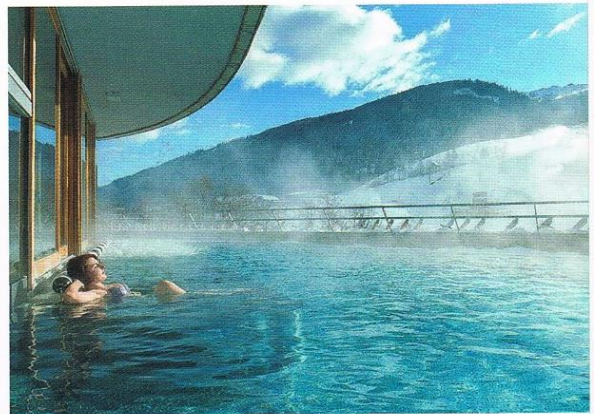


The hidden aquatic gems of Aotearoa

"Tuto, celeriter, et jucunde curare" -to treat safely, quickly and pleasantly – an ancient Greek asclepiad about hot-bath mineral water treatment therapy.

New Zealand has been recognised for the healing properties of its natural mineral springs for more than 150 years. The following commendations from satisfied customers of yesteryear are nostalgic and prophetic:

"Before I went to the springs I suffered for more than a month the most excruciating pain from rheumatic gout, had to be lifted in and out of bed, in fact was unable to walk without the use of two sticks. After getting to the springs, I bathed twice a day and drank freely of the mineral waters, at least a pint each day, and after six days I felt quite well, free from pain, and can walk as well as ever I did. It is now eleven days since I left and have had no return of pain..."



Geothermal zone in New Zealand.



The Rotorua bath house in 1909. Photograph by Muir and Moodie, by kind permission of the Rotorua Museum.

A realistic scene:
natives cooking
food in the artificial
hot springs in the
exhibition grounds
Photographer L.
Hinge, Auckland
Weekly News,
15 November
1906. Source:
Sir George Grey
Special Collections,
Auckland Libraries,
AWNS-19061115-
14-2.



the gouty man regains his health...".

"The water has been pronounced the most remarkable healing water in the world, and effected the most wonderful cures..."

These superlative acclamations refer to the healing qualities of the geothermal springs at Waiwera and Rotorua.

Some older New Zealanders may remember the time when injured American and New Zealand soldiers were rehabilitated and treated at the geothermal centre or 'sanatorium' in Rotorua after World War II.

During those years, the Ministry of Tourism was called the Department of Tourist and Health Resorts. This was the time when 'taking the waters' was for medical purposes, 'health

"In the interests of those who may be similarly afflicted, and in recognition of the benefits I derived at the hot springs, a desire to record the efficacy of the baths and water in the cure of dyspepsia, from which I had suffered many months. Thanks, however, to the virtue of the mineral waters, I was relieved of the distressing symptoms, and have since enjoyed the best of health..."

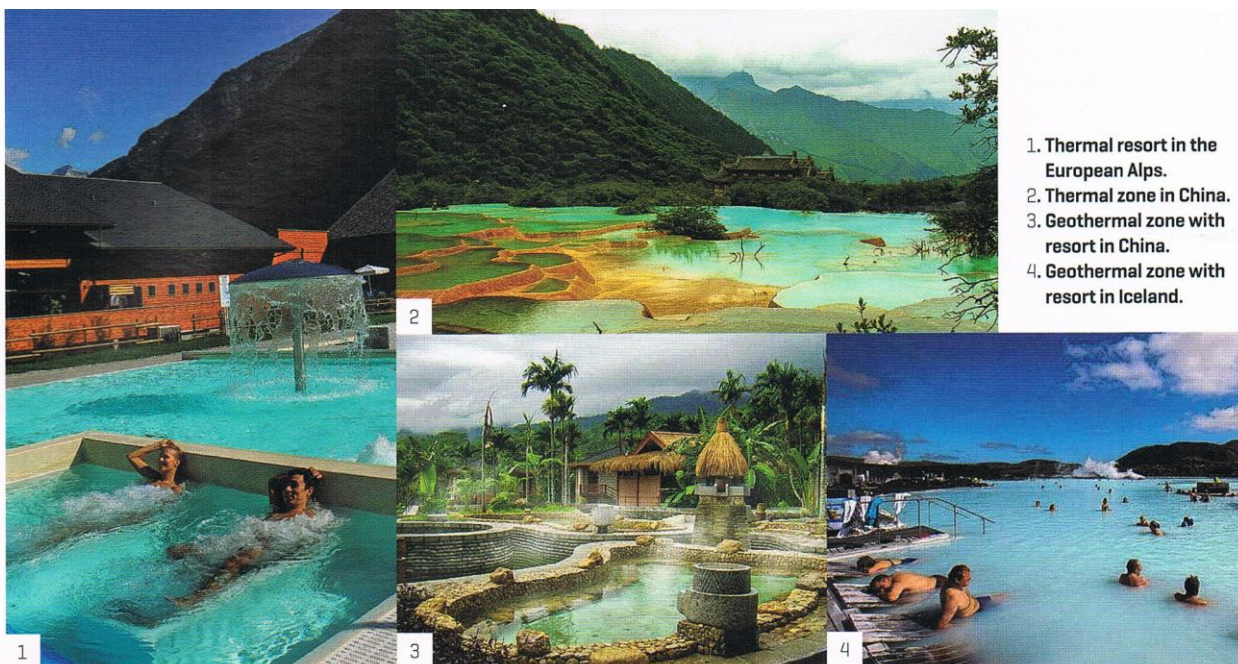
"The healing virtues of these famous springs border on the miraculous, scores of persons

afflicted with paralysis, rheumatism, eruptions, contracted and stiff joints, gout, lumbago, skin diseases, sore heads, and varieties of painful diseases have been restored to perfect health through bathing in these marvellous springs, and drinking the mineral water, who gratefully bear testimony to the fact..."

"These 'living waters' are responsible for many a wonderful cure. Cripples throw away their crutches after a few weeks' bathing,



One of the thermal zones in Tauranga, New Zealand.



1. Thermal resort in the European Alps.
2. Thermal zone in China.
3. Geothermal zone with resort in China.
4. Geothermal zone with resort in Iceland.

resorts' were serious practices, and visiting spas often required a medical certificate.

In New Zealand at the time, a branch of medical science called balneology, which is concerned with the therapeutic value of mineral baths, was being actively developed, but the concept is actually much older.

Hot springs soaking has been an ancient cultural tradition in many countries. The indigenous North American native tribes, Japanese samurais, New Zealand Maori and many others considered hot springs to be nature's 'power spots' coming from the heart of the earth. These populations utilised the natural waters for healing, purification ceremonies, and sacred gatherings.

Interestingly, in the Middle Ages, hydro-thermotherapy was almost forgotten, however, by the 18th century, it was once again revived because of the efforts of eminent medical doctors in England, Germany, and Austria. They promoted the health benefits of baths, carried out studies and even created a scientific school on hydrotherapy.

In the 19th century, many hot-bath resorts were opened across Europe. In Russia the mineral water-health resorts were combined together in one network and each patient

could receive treatment according to his or her specific needs. At the dawn of the 20th century, methods of mineral water treatment and hydrotherapy were legalised by the governments of Austria and Germany. The International Federation of Health Resorts was organized in 1937, which exists today as does the World Federation of Hydrotherapy and Climatotherapy, one of the most representative association of spa and health organisations in the world.

Iceland, the United States, Japan, Russia, and New Zealand are the countries with the largest geothermal resources in the world. The latter four are part of the 'Ring of Fire', a string of volcanoes that encircles the Pacific Ocean.

The origin of most mineral waters in New Zealand goes back to the pre-Ice-Age era. Heated by magma chambers, which exist miles under the earth's surface and which were formed by geological processes during the Jurassic time, geothermal mineral water resources are naturally pure products. Some of them are 15,000 to 50,000 years old. They contain varied and unique concentrations of minerals and trace elements of therapeutic value, which cannot be artificially replicated by conventional methods.

The history of Aotearoa's

geothermal springs lives on in Maori legends. Maori were the first to discover therapeutic effects of hot mineral waters. For example, the water spring gushing from the rocks in Waiwera was named 'Te Rata' (the 'Doctor') by Maori, who discovered its curative value more than 500 year ago. Maori used to choose routes over the Southern Alps that passed hot springs, using the warm water for bathing and also cooking.

They would walk for days to reach thermal "pools" or holes in the ground filled with hot water. The first European settlers in New Zealand were surprised at the longevity of those Maori, who regularly used these natural waters.

The first pakeha to appreciate and assess the beauty of geothermal springs was a Scottish immigrant named Robert Graham, who came to New Zealand with the first British settlers in 1842. He was a pioneer of medical tourism in New Zealand. Having found self-healing powers of natural mineral waters, he was so convinced of their benefits that he developed the Hot Springs Health Resort at Waiwera in 1845. Since then, Waiwera has been officially recognised as the first geothermal health resort in the southern hemisphere.

Over the next 32 years, Robert Graham developed the primary infrastructure for hot bath houses in the style of a German sanatorium. These became a series of tourist health resorts in Taupo and Rotorua in the 1870s. The health effects of the hot baths at Wairakei Sanatorium were recommended for eczema, obesity and other ailments in Willis' Guide Book of the 1890s.

The healing properties of these miracle geothermal sources started spreading internationally. People flocked to New Zealand in pursuit of wellbeing and health. The government soon realised that this business could bring significant economic revenue for the country.

In 1870, the premier William Fox announced - "*they [geothermal resources] prove a source of great wealth to the colony*". The year 1881 became one of the key milestones in the geothermal health resorts' development. The New Zealand government, following the example of the United States, preserved under protection some of these valuable geothermal areas from land speculators with a special act of parliament, entitled the Thermal Springs District Act, 1881. Under this act, large areas of the country, starting from the Hot Lake region (which contained all the important springs), were reserved for the government. Since then, all "mineral waters, hot springs, and streams" have been under this Act and are "vested in the Crown."

In 1897, the Premier of New Zealand, Richard Seddon discussed with the New Zealand Agent-General William Pember Reeves in London, the possibility of increasing the number of visitors to New Zealand's hot springs. As a result of this discussion, Pember Reeves, who was also enthusiastic about the economic opportunities of thermal springs for New Zealand, produced a memorandum in 1897 for the Premier entitled 'Our Thermal Springs and Their Development - the opportunity for the New Zealand government to be involved in the development of the hot springs'. Following this, private companies and the government developed the

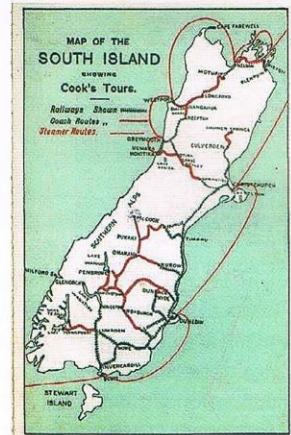
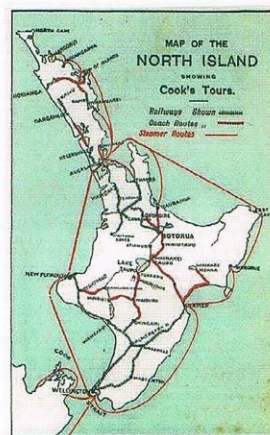
Hotel with 40 rooms at Waiwera Hot Springs Health Resort, - the first geothermal health resort in the Southern Hemisphere which opened in 1863.



A GROUP OF SCENES - AT THE HOTEL WAIWERA.

Photo by G. P. Bell.

The first map, advertising and showing geothermal spa health resorts in New Zealand. Source: New Zealand as a Tourist and Health Resort, 5th ed., published by 'Thomas Cook & Son', 1905.



necessary tourism infrastructure. This included railway lines, roads, and steam-boat routes to Waiwera Hot-Bath Resort, Te Aroha Sanatorium and the Rotorua, and Hanmer Springs Spas.

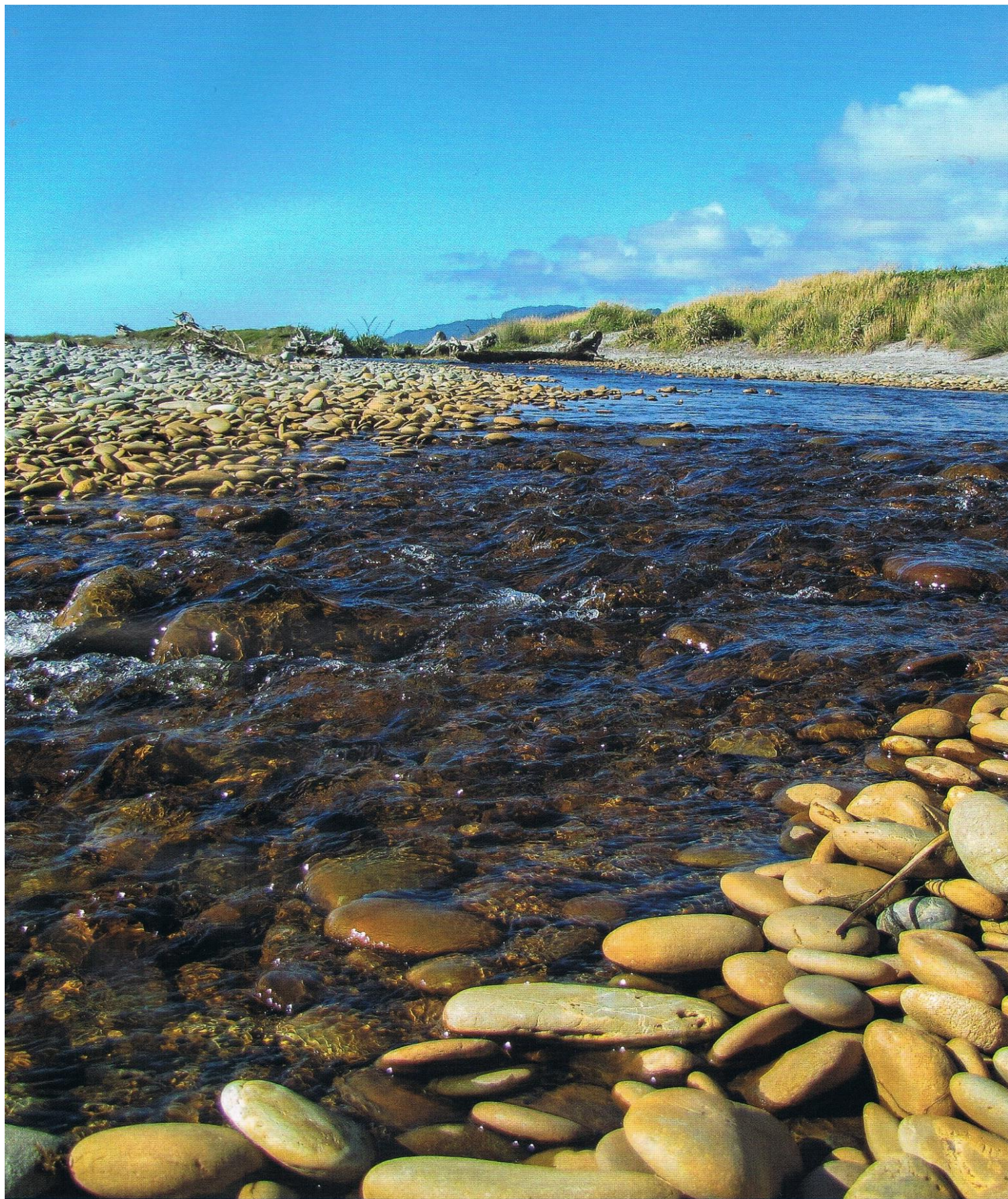
Along with the development of this infrastructure and efforts to attract mass tourism from all over the world, there was also the development of scientific knowledge and research. The first analysis of the properties of mineral springs was started in 1886. New Zealand medical researchers made the first attempt to group together all known mineral springs to contrast or compare them with those in Europe. They analysed about 70 New Zealand springs, which were known and which operated as hot-baths and spas.

National balneology was born in 1901 along with the creation of the Department of Tourist and Health Resorts. The first official government balneologist was Arthur Stanley Wohlmann, a medical doctor from England who held the position for 17 years.

Picture 14 of Dr Wohlmann with the text 'Arthur Stanley Wohlmann - The New Zealand's first Government Balneologist. Source: The New Zealand Illustrated magazine, October 1902'.

In his numerous publications, he proclaimed the benefits of hot spas and mineral water treatment for several disorders. In his writings, Wohlmann recorded major health improvements in rheumatic cases, and for infections such as gonorrhoeal or tubercular arthritis, as well as diseases of the nervous system, including neurasthenia. He also used the hot springs and mineral water therapy for rehabilitation of soldiers who returned home after World War I. For his services he was awarded an OBE.

Wohlmann considered that New Zealand thermal springs "would suffice not for ourselves but for a continent... in the extraordinary variety of mineral water... they would easily eclipse any others in existence."



South Island.



His book *Mineral waters and spas of New Zealand* has been reprinted four times, - the latest edition was in the year 2012.

Seventeen geothermal reserves were under Government control by 1906. By the 1950s, the department had established a network of tourism facilities at major tourist areas, a government booking service (Government Tourist Bureaux), coach tours (Tiki Tours) and a campaign of overseas promotion. A former British Prime Minister and his wife Lady Eden, visited Waiwera Hot Springs and stayed here for a month while Sir Anthony recovered from an illness.

Hot-bath spa culture and health tourism were serious businesses in New Zealand at the turn of the 20th century, however, the movement



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1. A natural hot pool with a scenic view.
2. A hot-bath health resort.
3. People bathing in a blue water pool.

Some balneologists have noted that benefits derived from spa therapy can extend 10 to 12 months after treatment

soon lost impetus. From the mid 1950s, the interest in balneology became weak, perhaps because government health authorities became sceptical about some of the claims of medicinal value of natural mineral waters.

International studies of nature's impact on the health of human beings were pushed aside by the pharmacological industry. The era came when tablets, drugs, pills, and new artificial products promised quick recovery. As a result, the position of the government balneologist was disestablished in 1957 and the "Health Resorts" title vanished from the government department's name. Now it is the Ministry of Tourism. From the start of 1960s, there was an end to the development of balneology and balneotherapy. Even the actual meaning behind the title "balneology" was forgotten.

Today however, more and more people are beginning to value natural products and services, and are ready to pay for them. Wouldn't it be great if we could restore the tradition of spa treatment in New Zealand and remember the effective therapeutic substance which is mineral water?

The Robert Graham Institute for Natural Waters of New Zealand has initiated a programme entitled 'Unlocking geothermal water

potential for further development of hot-bath health tourism in New Zealand'. The programme's key objective is to enhance a long-term shift in further developing New Zealand as a destination for top-quality geothermal health spas. As a first step in this direction, the institute, in collaboration with the University of Auckland, conducted an extensive literature review on the health effects of geothermal waters on humans. The study involved the analysis of more than 4,000 research publications from around the world on the topic of balneology.

There are a lot of modern medical studies, which show that regular soaking in, and drinking of, mineral water may assist in the normalisation of endocrine glands and possibly help the rheumatic and central nervous systems. Studies have also shown mineral waters may improve a wide variety of conditions such as skin infections, respiratory problems, arthritis, post-traumatic and post-operative disorders, orthopaedic issues and gynaecological disease. Some balneologists have noted that benefits derived from spa therapy can extend 10 to 12 months after treatment.

In Hungary, hot mineral baths are considered one of the most effective for the treatment for spinal disorders. In the neighbouring tiny Slovenia,

there are 15 geothermal resorts or sanatoriums. In Russia, kidney stone problems are treated in specialised resorts, where sufferers drink mineral water for their condition. In Bulgaria, there are around 1,600 mineral streams where 102 health resorts are based. In Poland, there are even underground sanatoriums which have salt lakes, formed more than 2000 years ago. Serious respiratory conditions are treated with these rich mineralised waters. The more famous thermal health resorts are Baden-Baden in Germany, Vals Hot Springs in Switzerland, Vichy in France, Karlovy Vary in the Czech Republic and Bath in the United Kingdom. These attract thousands of tourists wanting to undergo health rehabilitation and rejuvenation.

Patients arrive to these resorts upon recommendation from doctors. Each resort specialises in the treatment and prevention of certain health disorders.

"It is not an easy job to choose what kind of mineral water suits a patient; this approach requires knowledge of waters and knowledge of what kind of disease each patient is experiencing" – said the famous Russian balneologist professor Smirnof. The establishment of sanatoriums requires specially trained practitioners.

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Among today's research studies on the topic of balneology and balneotherapy, not one contemporary scientific investigation could be found which looked at the therapeutic effects of New Zealand's geothermal springs. Although there is some evidence of such research from the mid 1800's, - it doesn't have solid scientific grounding, and barely touches upon the health impacts. This further supports the fact that balneology is forgotten, and has lost value in the eyes of the country's national tourism and health programmes. New Zealand doesn't have a bath culture like Japan or Europe, where hot spring therapy is a part of routine medical care.

There are about 180 hot-bath spas and houses, which have been built around naturally occurring mineral springs in New Zealand, - springs, which are commercially and non-commercially operated. These range from luxury mineral spas, bubbling mud and soda pools, to natural lakeside pools and historic bath-houses. Many minor springs are

located across the country.

Health resorts or rehabilitation clinics could be developed around some of our major mineral springs. It would be desirable to have a location around one hour's drive from an international airport, say, Auckland or Christchurch. This creation of a boutique thermal health facility where visitors would drink and bathe in the mineral water, hopefully will generate strong support from a variety of major industry partners. Airlines and major hotel groups may want to develop additional infrastructure nearby and will see value in the quality of the natural mineral waters and the high quality build environment which supports it. Fly Emirates have developed a 6-star resort and spa facility called Wolgan Valley, located about two hours from Sydney which they promote on all flights coming into Australia. This provides an example of the type of relationship which could be grown with an inbound airline wishing to associate with a 5-6 star world class health spa facility.

Attracting and meeting the needs of high value tourists requires top-end products and experiences. It is not enough just to have hotels, casinos, restaurants and recreational centres close to hot-bath spa facilities; - it would need a well-coordinated national network of top class resorts, scientifically based hot-bath culture and treatments for the needs of each client.

Increasing demand for authentic health and lifestyle experiences would provide economic opportunities for New Zealand. If geothermal resources are used effectively it could potentially improve longevity and enrichment, from an economic and health perspective. ☺

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