

Natural Water Policy in New Zealand

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“Water is a God-given gift”, - Winston Peters, New Zealand Acting Prime Minister.

Should we accept that our blue gold is underestimated? Do we really need policy for our natural mineral waters? Can their benefit for state economy be more substantial?

Our Blue Gold Resource

Most of natural mineral waters in New Zealand originate in magma chambers, which exist miles under the Earth's surface and which were formed by geological processes a hundred of millions years ago, during the pre-Ice era. Some of these waters are up to 50,000 years old. They have been recognised for the healing properties by Maori and the first European settlers in this country many years ago.

There are about 180 hot-baths and health resorts have been developed 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. Of these 180 thermal spas in New Zealand, about 50 are of national importance.

The national groundwater resource is valued at NZ\$8 billion and provides 35% of the nation's consumptive water use.¹

Most of them are unique, naturally-occurring thermal resorts with their own mineral water resources, and their waters contain varied and unique concentrations of minerals and trace elements of therapeutic value that cannot be artificially replicated by conventional methods. These resources have the potential for greater development, so as to attract local, interstate, and overseas visitors.

Natural Mineral Springs as One of the Major Contributors to State Economy

New Zealand is the best holiday spot in the world, according to Britain's *Daily Telegraph* newspaper.² The tourism industry is believed is on track to continue its position as one of the New Zealand's biggest export sectors, according to the Tourism Industry Association.³

Mineral water obtained from natural springs has long been an important commercial proposition.

¹ GNS Science, <https://www.gns.cri.nz/Home/Our-Science/Environment-and-Materials/Groundwater/Research-Programmes/Past-research-programmes/SMART-Aquifer-Characterisation/About>

² *NZ voted best country at Telegraph Awards*, Tourism New Zealand, 09 December, 2014; <https://www.tourismnewzealand.com/news/nz-voted-best-country-at-telegraph-awards/>

³ Ministry of Tourism, 2010 data.

Our clean and healthy waterbodies are vital to the growth and sustainability of New Zealand's \$36 billion tourism industry, which is projected to increase annual turnover to \$41 billion by 2025.^{4, 5}

Tourism is now New Zealand's largest export industry in terms of foreign exchange earnings. International arrivals to New Zealand normally double approximately every 10 years to reach about 5 million by 2024 as forecasted.⁶

Between the top 30 nature-based activities undertaken by international tourists, mineral water hot-pools attraction is the sixth most popular activity among other top-attractions with about 380,000 (or 17% participation) visitors annually after 'beaches' (860,000 visitors, or 39%), 'scenic boat cruise' (555,000, 25%), 'geothermal attractions' 500,000, 23%), 'lakes' (460,000, 21%), and 'scenic drive' (445,000, 20%) primary attractions for international tourists.

Where water impounds as hot pools, it too becomes a source of domestic tourism activity ranked the third with about 980,000 visitors (or 2.3% participation) behind 'beaches' (3.3 million, 7.5%) and 'fishing' (1.5 million, 3.5%) primary activities, making them one of the major contribution to ecosystem functions of domestic visitors attraction.⁷

Water Policy

The bath-health capital of our natural waters has not yet been properly recognised. A strong evidence of this is that among today's research studies on health effects of these springs there is not even one substantial scientific investigation, which would look into therapeutic effects of our blue gold.

Without this scientifically-evidence based analysis New Zealand businesses cannot promote their unique brands (e.g. water services, water products, hot-bath health services, etc.) legitimately with no violation of some laws such as e.g. the Consumer Guarantees Act 1993, Fair Trading Act 1986, and other related.

This country does not have a bath culture like Japan, Europe, or even like our neighbour Australia, where hot spring therapy is part of routine medical and therapeutic care, and is also a serious business.

These gaps preclude further development of national hot-bath thermal health industry, mineral drinking bottled-water industry, and as a consequence related economic investment in New Zealand as an international destination for top-quality geothermal health services.

New Zealand water has been indicated in international publications e.g. *The Economist*, *The Wall Street Journal*, *Al Jazeera* and *The Guardian* as degrading which contradict with New Zealand's overseas green and clean image.⁸ This international coverage may severely lessen /put down/undermine New Zealand reputation internationally.

⁴ 'Waters of National Importance for Tourism', The Ministry of Tourism's Report, 01 August, 2004.

⁵ 'Tourism Industry Support Stronger Freshwater Regulations', Tourism Export Council of New Zealand; <https://www.tourismexportcouncil.org.nz/tourism-industry-support-stronger-freshwater-regulations/>

⁶ Key Tourism Statistics, Ministry of Business, Innovation & Employment Report, May 31, 2018.

⁷ Ministry of Tourism, 2010 data.

⁸ 'Fresh start for water quality standards', Charlie Mitchell, 17 January, 2018; <https://www.stuff.co.nz/environment/100641348/fresh-start-for-water-quality-standards>

Currently, aquifers – underground water sources – are not adequately recognized or protected by national water policy documents (e.g. Resource Management Act 1991). The current national water policy does not properly include (or do not include at all) a greater focus on natural mineral waters, mineral drinking bottled-water, hot-bath health services, balneotherapy⁹, etc. Moreover, there is no policy (e.g. standards, guidelines, regulations) for use natural mineral water for human consumption in New Zealand.

Balneology which is the scientific study of the therapeutic benefits of naturally occurring mineral waters has lost value in the eyes of the country's national tourism and health programmes.

It fell out of attention of state organisations regulating the use of natural resources in order to improve the country's economic development and create health programs for the public. Investments in this sector is minimal.

None of the existing New Zealand water policies groundwater e.g. the 'National protocol for state of the environment groundwater sampling in New Zealand' (Ministry for the Environment, 2006) and 'Guidelines for Drinking-water Quality Management for New Zealand' (Ministry of Health, 2013), include policy (e.g. standards, guidelines, strategy and regulatory settings) for natural mineral waters and geothermally influences springs and their health impacts, their use for human consumption, mineral water treatment, hydro-thermotherapy etc.

Recently (2017), the New Zealand Green Party has proposed the Resource Management (Clean Groundwater) Amendment Bill¹⁰ as section 6 of the Resource Management Act 1991 to make the protection of water quality and quantity in aquifers and groundwater systems a matter of 'national importance'.

The Bill specifies that "protecting groundwater quality [...] in our aquifers is important [...] for public health", and also indicates that "the Resource Management Act 1991 omits any specific reference to aquifers or groundwater".

The Bill also proposes other amendments to protect aquifers and groundwater systems. This is a good start for further developing of national policy for natural mineral waters. This is a strong perception of geothermal water potential and its management in New Zealand, with both of the recent national healthy groundwater resource strategy highlighting the natural environment and aspects of sustainability.

We also do not have our own regulations for bottled water. We do have a microbiological quality compliance criteria for bottled water sold in retail store, the Ministry of Health's Microbiological Reference Criteria for Food (the water is also defined as 'food') which came into being in 1995, and the Australia-New Zealand Food Standards Code 2002 for bottled water manufacturers.

In New Zealand, we have adopted international quality standards for bottled water, such as the World Health Organisation/the Food and Agriculture Organisation CODEX Alimentarius regulations for natural mineral waters, and the standards for bottled/package drinking water jointly developed by WHO and UN's Food and Agriculture Organisation (FAO).

⁹ Balneotherapy is the mineral hot-water therapy.

¹⁰ Resource Management (Clean Groundwater) Amendment Bill, Draft for consultation;
<https://www.greens.org.nz/sites/default/files/policy-pdfs/Resource%20Management%20Clean%20Groundwater%20Amendment.pdf>

Standards for municipal tap water do exist in New Zealand, but using them for bottled water products is not a correct procedure.¹¹

Summary and Conclusions

The therapeutic value of natural mineral source waters are still not yet become a serious attention of the authorities which regulate natural resources in the country.

This sector – hot-bath spa culture has a good capacity to grow with no ecological limits, and mineral springs’ health tourism can become serious business in New Zealand. We need to use the natural mineral water resources effectively to explore their value in a full capacity.

There should be quite thorough research study into therapeutic effects of New Zealand natural water springs, so the water-processing and tourism industries could have solid scientific grounding to enhance New Zealand as an international destination for top-quality bottled-water brands and hot-bath health services and economic investment.

The control – namely a full-utilisation of natural mineral waters potential capacity - requires input from a wide range of organisations: central, regional and local government; water, health and tourism industries; and research community.

The country needs own policy (e.g. standards, guidelines, strategy and regulatory settings) for drinking bottled-water products, natural mineral water for human consumption, and related services, because current water regulations do not work properly. Healthy natural mineral waters may become one of the state economy’s major resource inputs in New Zealand.

¹¹ Kouzminov, A. ‘Waters of New Zealand: Inside the Bottle’. *NZ Today*, 2017, Issue 73: 84-91.