

River Sunday: Rivers for Life

Today we celebrate rivers and their place in our lives and our ecosystem. We place importance on rivers and yet they only account for 1% of the freshwater on this planet while freshwater itself accounts for only 3% of the total water on the planet. So there is no shortage of water, it's a question of where it is and how good is the supply.

Water is special, as I hope to show, and on this blue planet of ours there is a lot of it.

Rivers hold a special magic for us that is reflected in literature and poetry. Their sparkle and bubble feature in music, some we will hear and sing today. In language we talk of bridges, - building bridges to link and join or burning our bridges, and a bridge too far.

And so rivers do join us, as we can think of transport on the great river systems like the Rhine, the Mississippi, the Nile and the Mekong.

Rivers divide States as between Germany and France, Vietnam and Cambodia, Brazil and Paraguay and Uruguay and Argentina.

And of course rivers continue to be the source of much of today's conflict over water rights and water use. What gets most of the attention are the visible rivers but the rivers that flow underground, out of sight, are really important. The extraction of water from aquifers in many countries is not sustainable including New Zealand and particularly Canterbury.

Yes, rivers are particularly important as a source of fresh water but also as a natural large drainage system. Flushing the waste to the sea.

Many of the great cities of the world are built by them or straddle them:

We can think of Baghdad and Bangkok; Belgrade and Berlin; Budapest and Buenos Aires; Cairo and Khartoum; Damascus and Delhi; Lisbon and London; Melbourne and Montreal; Paris and Prague; Saint Petersburg and Shanghai; Warsaw and Ouagadougou, Hamilton and Alexandra.

Here in Wellington, the Hutt River is our lifeblood – but Auckland, that is the issue. Built on a great harbour and the City of Sails but you can't drink salt water. The Bombay Hills stop the Waikato River flowing further North so it turns West and goes to the coast at Raglan. Auckland is built in the wrong place!

But the conflict for the water in rivers comes when the flows get low, either from over extraction, from building dams or through extra pollution: the latter partly because lower flows increase the concentration of the pollutant but also because of people pressure. Increased population brings increased demand for water – but it is our Western lifestyle that has really accelerated our use of water.

It is interesting to reflect that by the mid-19th century, the English urbanised middle classes had formed an ideology of cleanliness that ranked alongside such typical Victorian concepts, as Godliness, respectability and social progress. At the beginning of the 20th century, a weekly Saturday night bath had become common custom for most of the population.

After a half day's work on Saturday, factory workers allowed themselves some leisure to prepare for the Sunday day of rest. The half day off allowed time for the considerable labour of drawing, carrying, and heating water, filling the bath and then emptying it afterwards.

In the late 20th century, commercial advertising campaigns pushed new bath products that began to influence public ideas about cleanliness, promoting the idea of a daily shower or bath.

This rat race of gels and body washes, shampoos and conditioners, cleansers, toners, fresheners, tighteners, moisturisers has led to some of our American friends showering (and with fresh towels) 3 times a day. No wonder the rivers are running low!

Some of the issues of course are very close to home. In Ōwhiro Valley, there is real concern for the state of the Ōwhiro stream that sometimes can be so contaminated that is 400 times over WHO standards.

Sometimes cause and effect is not obvious. The planting of forests in the upper catchment of the Wairau in the Tasman District have had significant

downstream consequences leading to insufficient water in the rivers to irrigate the vineyards around Blenheim. With intensive dairying in Canterbury we have the contentious issue of water extraction effecting flows in aquifers further downstream and also the issue of polluting runoff.

Fresh water supply is connected to our daily water needs but also about food production and feeding the planet. Our bodies are over 60% water and our food over 90%. Our daily drinking needs are 2 litres /day and our simple sanitation needs about 50l/d. On average Wellingtonians use is 380l/d. (Includes washing our bodies, the dishes, clothes and car and watering the garden.

Again it's a lifestyle issue in terms of water for the food we eat. If we are vegetarians add 2000l/d but for meat eaters, 3000 to 5000l/d.

This is the issue. Is there enough fresh water to meet the demands? We need sufficient quantities and good quality at the right time.

The fresh water deficit is growing worldwide. It's certainly related in part to our lifestyle choices.

Deciding how we allocate and protect the water in our rivers is really important. It is our lifeblood. We need to care.