Water hub
From Guardian Sustainable Business

Is net positive feasible when it comes to water?

It is much more complicated to manage water than carbon and deserves more effort than simply transferring the same metrics

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Water is our most complicated natural resource and the way business manages it must reflect this. Photograph: Rodrigo Baleia/LatinContent/Getty Images

New business terms and trends come and go. Net positive impact (NPI) is one of these engaging concepts. It's a relatively simple idea – business impacts on the environment and society need to be positive, to the point that they outweigh the negative impacts. Business should do more to reduce its impact, and not do less by just being reductionist. The question is, does it stand up to scrutiny when we consider water?

Imagine a mining company that has to remove forest to access minerals. This would negatively impact biodiversity, carbon storage, some social benefits, possibly cultural impacts, and maybe even hydrology. It would all be at the scale and context of the forest. In its simplest form, to become net positive the company would need to replace more forest than was removed. Equally, it would need to assess what cultural and social impacts had occurred, and how they would be replaced. The logic is there but from the perspective of water the mechanism of NPI has to think differently.

Pepsi in India claims to be net positive across its manufacturing sites – meaning the volume of water that goes into bottles of Pepsi. But it does not include the water footprint of its feedstock to make Pepsi – where 98% of the water is required. This means that it is net positive for around 2% of the water it takes to produce each bottle. Is this net positive? Given irrigation efficiencies range from 30% to 70%, anything

grown with irrigation will have to be triple positive to deal with water consumption to produce the feedstock, the water that goes into each bottle, and the inefficiency of the technologies used. And still without any recognition of the opportunity costs of that water, the timing of its return, its nutrient load, etc.

Water is far more complex than carbon and deserves more effort than simply transferring carbon metrics into our most complicated natural resource.

Timing

With water we have to consider seasonality, where water moves at different times. Rainfall is variable – daily, monthly, seasonally, annually, inter-annually. How do you become positive on water when you find yourself in a drought or flood? Does the water you "put back" into the system go in at the same time of year you took it out?

Because water moves, and has immediate local context unlike carbon, how long do you take NPI "credit" for? The summer of last year? The spring of this? Can you legitimately go back and claim from 2008 for example? And what exactly do you count: the volume of water replaced, and from where, and for how long? How do you compare this with NPI activities in another river basin – are they the same? What is the baseline to use, and how long do you keep going to become positive? What does success look like for water – how have you improved the state of it?

Efficiency and technology

The quality of water is of the utmost importance to the environment and other water users. In many developing countries more than 70% of industrial wastes are dumped untreated into waters that are used for public water supply.

Drip irrigation, debated for years, has been scientifically shown in some cases to actually increase water use at the basin scale, rather than reduce it. The "saved" water that is created by any water intervention has to be allocated to another beneficial use in order for that water to have some value to another user – including leaving the water in the river or aquifer for environmental needs.

Efficiency of use is only part of the water management challenge. Unless you are polluting, or attempting to compensate for unsustainable abstraction, who then is NPI on water for? As rules are established for water management – why should a regulator care if a business is positive unless it could lever change at more than one site, in more than one business?

Relevance claims and geography

As the impacts of pollution and water availability are local, transferring the responsibility to manage these problems, both natural and human induced, to another part of the river basin, or another basin, will not work. There is logic to this "offset" approach where ecosystems are degraded, forests removed, wetlands drained.

But for water this is complex. Can you use all the water in one river, but none in the one nearby? Actions designed to mitigate water problems must focus where the impact occurs to make them relevant. This is the fundamental difference between carbon and water sustainability approaches.

Considerations and solutions

In the early days of water stewardship, and with the advent of the water footprint method, these ideas were tested at length. In order to make positive inroads in water and business challenges, we had to explore the management, social values, and policy regimes that manage water. These set the standards and allocate the water, and so they frame the underlying basis for mobilising stewardship of the resource.

So what solutions could business offer and how – using the concept of net positive impact in the complex world of water management? There are some suggestions:

1. Define the mission, clearly and transparently, and identify partners that can help you. Water management is no longer about infrastructure – it is about governance, accountability, equity, partnership, economics, and productive clean water services.

2. Set your strategic goals: your baselines, timelines, target claims, and comparable indicators and engrain this in your culture so it survives beyond your current CEO. Make it clear who will measure progress, at what business scale, and when – and disclose it.

3. Better understand the return on investment. The risk of water scarcity to a company's operations is material information that adds value to decision making. Commitments need to follow through targeted investment into the right areas, and not become a corporate advocacy tool.

4. Avoid projects and programmes – integrate approaches throughout the culture of your organisation to support behaviour change in business practices.

5. Invest in where the best water use efficiencies can be made, and where they will have positive and measurable impact. Focussing on water efficiency does not make you positive; it makes you efficient – that's all.

6. Understand and recognise your boundaries. Don't over claim. Water is a complex resource so focus on what you think you can do and deliver on it by understanding the wider water management, social and policy regime you operate in. Local relevance is everything.

6. Use, and learn from how water stewardship is framing the debate and then ask how you connect to the dominant narrative in business and water today – risk and response.

Ultimately, NPI, like shared value, is a term that resonates within business. For water, sustainability practices have to be relevant to people other than just business – because the challenges that really matter are not internal anymore. They are outside business borders in the river basins that provide you with water, and which you supply, operate and sell to.

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