

Sustainability Essentials: Take 8

**EVERYTHING YOU ALWAYS WANTED
TO HAVE DONE FOR SUSTAINABILITY
But Never Dared Hope For?**

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"1-15": EVERYTHING YOU ALWAYS WANTED TO HAVE DONE FOR SUSTAINABILITY But Never Dared Hope For?

M Bruce Beck has recently published his [Sustainability Concepts Paper](#). It took him nine years to complete, not to mention some 160 pages to express in writing. And yet ... this can all be distilled down to an essence of 15 line items on a single sheet of paper — as Table 1 demonstrates — hence the title "1-15" of this Take. Ironically, what might be most important about the *Concepts Paper* is not so much what needs to be thought about, but what has already been done in practice.

Thank goodness for the web and search engines! Imagine this: that thinking — by which to tame, frame, structure, chart, and assess the hugely rambling subject of Sustainability — has been organized sufficiently into just 15 “line items” ([Taking Stock: The 1-15 Template](#)). You have then the keys (in fact, the keywords) to seek out who — individual, government agency, business, non-governmental organization (and so on) — has achieved the very most for Sustainability. And these will be achievements in practice, not those as reported in any peer-reviewed, august, academic journal article. No “google scholar” here! People and businesses who have achieved practical successes in becoming less unsustainable rightly want to be noticed readily and familiarly by others, in the modern idiom of social-networking.

Suppose too it has taken some 130 pages and five chapters of dense, exhaustive,

conceptual argument to express a vision of the future Triple Bottom Line (TBL) — future sustainability for people, planet, and profit, that is. We should have (and do have; it is Chapter 5 of the *Concepts Paper*) a notional *TBL_{future}*, a bold prior conjecture about what might come to pass in reality. “1-15”, which is Chapter 6 in the *Concepts Paper*, is its companion empirical corroboration or refutation: the *TBL_{frontier}*, “out there”, in the vanguard, in the “real world” of the world wide web.

So how does the *TBL_{future}* stack up against the *TBL_{frontier}*? Most revealingly is the answer; and rather more successfully than could ever have been imagined.

We are simply not going to get Sustainability “right” once and for all, no matter the existence of any 160-page *Sustainability Concepts Paper*. Yet what we *can* do is to step out in practice, with some

prior conception, which itself embraces the express intent of learning from experience, hence to re-shape the concept with which the journey began ([Take 7](#)). This is practice as the engine of conceptual change. The [Yarra Valley Water \(YVW\)](#) company of Australia has taken the spirit of such “organizational learning” to heart. It invited [The Natural Step](#) into its offices, to infuse its staff with Systems Thinking.³ The results have been duly recognized by the International Water Association (IWA), through an [Award for Excellence in the Practice of Sustainability](#), and entirely deservedly so. As the *Sustainability Concepts Paper* puts it, this is YVW exemplifying the Topmost Line (TmL) of 1-15: leading to learn, beyond having learned to lead, and “always learning, never getting it right”; sustainability for the betterment of people — and their organizations.

There are places where the $TBL_{frontier}$ lags the TBL_{future} . For all the business speak in theorizing about the economics of natural capital and ecosystem services and the risk of service failure through loss of biodiversity ([Take 3](#)), water-sector businesses do not value these things in the calculi of their investment decisions. What gets built with hard materials and what is operated with active chemicals and energizing electricity are still the only things that count. This is sustainability for lower utility costs within the factory fence-line, if not yet profit for (and with) the planet, beyond this closed, confined frontier.

³ Much as the company could have availed itself of the [Cambridge Programme for Sustainability Leadership \(the Prince of Wales’s Business & Sustainability Programme\)](#), or the [Society for Organizational Learning \(SoL\)](#), for all see Systems Thinking as the key to achieving “sustainability leadership”.

Yet the *Sustainability Concepts Paper* was begun with a vision: of Cities as Forces for Good in the Environment. This was a vision driven by something more joined-up than just a water-centric outlook on the world. It was something conceived of in terms seemingly far more subtle and obscure than the city’s ecological footprint — the consequence of its appetite for consuming stuff — or its increasingly frenetic metabolism ([Take 4](#)).

The socio-economic life of the city has a rhythmic pulse or heart-beat, a spectrum of daily and weekly cycles, to which its infrastructure and life-support systems have become highly and intricately well attuned. The conceptual vision, seemingly a massive projection into the unknown hypothetical future, is that of re-tuning (re-orchestrating) the pulse of the city to sustain its own life-support system in the watershed and the world beyond: a trampling down of the mere conceptual fence-lines confining our imagination; the city, its people and its profit, all organized to do good for the planet ... in the form of nutrient supplements ([Take 5](#)).

Re-engineering of the [Soerendonk Wastewater Treatment Plant in the Netherlands](#) is:

- (i) Erasing the distinction between city and watershed;
- (ii) Employing part of the plant to cultivate and seed the receiving river, not with nutrient supplements, but directly with some of the flora and fauna integral to the wider watershed’s provision of ecosystem services; and

- (iii) Realizing a re-shaped frequency spectrum through a water harmonica, inducing rhythms (of life) through the spatial meandering of a “flowformcascade”.

There is yet more to surprise us, this time in North America. Using the Pearl® 500 fluidized bed system, newly invented by [Ostara Nutrient Recovery Technologies](#), phosphorus (P) is being recovered from the Durham, Oregon, wastewater treatment plant of the [Clean Water Services \(CWS\)](#) utility and marketed under the trade name of Crystal Green®. Bagged there and transported to British Columbia, this slow-release fertilizer is dosed to streams and rivers on Vancouver Island, Canada, by the [British Columbia Conservation Foundation \(BCCF\)](#). Nutrient supplements, then, are being issued to reconstruct the ecosystem services previously provided to salmon fry by the rotting carcasses of their parent fish, which no longer migrate to these streams in the numbers once observed historically.

The City as a Force for Good in Its Environment is no figment of any conceptual excess. Its practical realization by [DHV Engineering](#) — catalyzed by the Systems Thinking of [The Natural Step](#) (once more) — and by the private-public-nongovernmental partnering of Ostara-CWS-BCCF, is celebrated in the record of line (T13) of Table 1 (next page).

LINE ITEM	<i>TBL_{now}</i>	STEPPING OUT IN PRACTICE (<i>TBL_{frontier}</i>)	<i>TBL_{future}</i>
(T0) ORGANIZATIONAL LEARNING		Yarra Valley Water seeks change through organizational learning	"Always Learning, Never Getting It Right"; in pursuit of the self-transforming mind, which "leads to learn"; entertaining self-contradiction, including abandoning a line item, even "sustainability" itself
(T1) Personal Aspirations	Health and hygiene	Sulabh Sanitation & Social Reform Movement elevates women scavengers to the fashion catwalk at UN Headquarters	Towards a well-being sufficient for self-reflexive apprehension of the "big picture"
(T2) Citizen Participation	Individuals empowered to acquire and employ expertise and "know-how"	San Francisco Public Utilities Commission (SFPUC) is accountable to stakeholders from "cradle-to-cradle" in its planning processes	Deliberative democracy
(T3) Social Bonds	"Cultural acceptance", as in adoption of a given style of device or technology	Clean Water Services, Ostara, and the Clean Water Institute have evolved a tripartite, institutional synergy amongst public-, private-, not-for-profit sectors	Benefitting from multiple (four) wisdoms on how to live with one another and nature
(T4) Quality in Governance	Presence of institutional-regulatory framework <i>per se</i>	Nepal Water Conservation Foundation is pursuing a clumsy institutional process for restoring the Kathmandu-Bagmati system	Refurbished pluralist democracy of Dahl; adaptive community learning
(T5) Ethics and Equity		Sydney Water employs inter-generational equity as a matter of routine in screening projects	Variety of standpoints on the consequences of inappropriate behavior in man-to-man, man-to-nature, individual-to-group, present-to-future generation, seller-to-buyer, and other relationships
(T6) Valuation	Engineering economics; user/ service fees/revenues	Over 300 Water Health Centers signal private-sector business-model success for Water Health International	Plurality of what counts economically; bequests to the future ("final environmental wills and testaments")
(T7) Environment Within the Language of Business	Biodiversity		Natural capital, ecosystem services, and service providers; risks to "business as usual" through loss of biodiversity
(T8) Supply-Value Chains	None beyond "factory (treatment plant) fence-line"	50 cities committed to UN Global Compact; CH2MHill, Halcrow and other water businesses are signatories of Global Compact's CEO Water Mandate	Exercise of power ever further along ever more extended and intricately interwoven chains of commercial relationships
(T9) Commercial Sectors	Water ... alone	Veolia Water UK as "Multi-utility Services Company" (MUSCO)	Water sector ... and nutrient and energy sectors ... and more
(T10) Space	IUWM or IWRM; rarely both	DHV Group (Consulting Engineers) re-engineers Soerendonk Sewage Treatment Plant to blur distinction between sewage treatment and river habitat	From Earth Systems Analysis to individual agency (e.g., dietary preferences)
(T11) Life Cycle and Time	Expenditures and revenue streams over time	The Natural Step has worked with Yarra Valley Water on Life Cycle Analyses	From cradle to cradle analyses
(T12) Function	Adaptability; durability; robustness-vulnerability; reliability	Within IBM's Smarter Planet and Smarter City portfolio, Galway, Ireland is acquiring a SmartBay	Ecological resilience and biomedical self-repair
(T13) Gauging Environmental Benignity	Environmental degradation: pollution syndromes; eco-efficiency	Ostara, Clean Water Services and British Columbia Conservation Foundation partner to issue nutrient supplements to restore declining salmon stocks	Biomimicry: appetite; metabolism; pulse
(T14) Cycling of Materials	Man's appropriation/ consumption of resources (water, nutrients, energy, and land area)	Severn Trent plc acknowledges water-cycle and carbon-cycle policy antagonisms; Resources Centres on Urban Agriculture & Food Security (RUAF) promote Sustainable Urban Nutrient Management	Natural nutrient cycles and technical nutrient cycles; dematerialization; eco-effectiveness
Table 1 Triple Bottom Line (<i>TBL</i>) accounting for sustainability: a summary of contemporary usage (<i>TBL_{now}</i>), elements of water-sector practice in the vanguard (<i>TBL_{frontier}</i>), and what might be conceived of for the future (<i>TBL_{future}</i>)			

