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Words without meaning? Examining sustainable development terminology through small states and territories

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ABSTRACT: Small states and territories have plenty of examples to offer of sustainable development as well as for analysing the terminology used in sustainable development. This paper uses conceptual discussion supported by specific examples from small states and territories to explore these issues, demonstrating limitations and improvements to contemporary sustainable development terminology. The Sustainable Development Goals (SDGs) frequently illustrate the points, for which this paper examines water, waste, and energy. These three are built on for examining climate change through a slightly polemical discussion which mirrors the polemics of sustainable development terminology. Small states and territories are shown to contribute to indicating how and why sustainable development terminology can inhibit practicalities of sustainable development, through detracting and distracting from realities faced, pragmatic decisions which need to be made, and fruitful enactment of desired and desirable pathways.

Keywords: climate, climate change, development, energy, resilience, SDGs, sustainability, sustainable development goals, waste, water

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Introduction: Sustainability for small states and territories

Sustainable development research, policy, and practice have produced and worked through numerous paradigms over past decades from local to global levels (Bartlett, 2004; Clark, 2007; Crush, 1995; Glantz, 2003; Head, 1967; Roorda, 2021; Urry, 2007; WCED, 1987). Words, phrases, and labels wax and wane, sometimes with insightful interrogation regarding their origins, usefulness, useability, translatability, transferability, and meanings for the people and places aiming to implement sustainable development projects, programmes, and processes (Brown et al., 1987; Gatto, 1995; Lewis, 2013; Santillo, 2007). At other times, terminology appears with limited grounding or critique, generating populist buzzwords and buzzphrases which are defined and critiqued in widely diverse ways (Table 1). Buzzacronyms are also common, such as CSR (corporate social responsibility; Pisani et al., 2017), ESD (Environmentally Sustainable Design; Wijesooriya & Brambilla, 2021, or Education for Sustainable Development; Grosseck et al., 2019), ESG (Environmental, Social, and Governance; Huang, 2021), and TBL (Triple Bottom Line; Goh et al., 2020).

Table 1: Examples of problematic sustainable development terminology.

Word or phrase	Sample of scientific critiques
adaptation	Mercer (2010)
build back better	Kennedy et al. (2008)
capacity	Gaillard (2010)
resilience	Alexander (2013)
social capital	Levi (1996)
social contract	Dunfee (2006)
social-ecological systems	Clement (2013)
sustainable development	Robinson (2004)
transformation	Blythe et al. (2019)

One phrase with many definitions and which is often legitimately critiqued is "sustainable development" (Beckerman, 1994; Lélé, 1991). This phrase remains at the core of the international agenda towards 2030, aptly called Agenda 2030, as epitomised in the Sustainable Development Goals (SDGs; UNGA, 2015), also called the 2030 Agenda for Sustainable Development, which are filled with catchphrases that are not always defined. Other agendas on related topics have different legal statuses, are put forward and managed by different organisations, and sometimes use different definitions of terms, such as "mitigation". These include the Sendai Framework for Disaster Risk Reduction (SFDRR; UNISDR, 2015), the Paris Agreement on Climate Change (UNFCCC, 2015), the Addis Ababa Action Agenda (UN, 2015), and the Agenda for Humanity (World Humanitarian Summit, 2016). They all expand the vocabulary and verbiage of sustainable development endeavours.

One consequence is that these agendas can distract and divert from practicalities for sustainable development, such as the SDGs often failing to connect sectors (Waage & Yap, 2015). A specific example from the SDGs is Target 8.1 seeking "at least 7 per cent gross domestic product growth per annum in the least developed countries" which is the antithesis of sustainably developing economies and livelihoods according to numerous alternatives proposed to economic growth and the use of gross domestic product (GDP) as a metric (Bartlett, 2004; Bello, 2008; Kallis, 2018; Lacy et al., 2019; Raworth, 2017; Washington & Twomey, 2017). Small states and territories – as framed and scoped according to this journal's mandate (Baldacchino, 2018a) – choosing to rely on dominating global economic approaches can discover major problems including lack of sustainability, as shown for Jersey (Oliver, 2019) and Seychelles (Eriksen, 2020).

In fact, small states and territories have often led sustainable development endeavours, not just in contemporary times such as founding AOSIS (Alliance of Small Island States) in 1990, but also throughout human history. The latter is partly because the slow pace or absence of international trade for most of human history necessitated local sustainability and is partly because large states are a relatively recent phenomenon. Empires might arguably have counted as large states, although they were governed day-to-day and month-to-month at small-scale sub-Empire levels due to the slow pace of communications.

Within sustainability endeavours, for which the SDGs illustrate only one component, sustainable development has spawned extensive vocabulary, jargon, and nomenclature, such as those in Table 1. Others include adaptive capacity, consilience, panarchy, and vulnerability. Definitions are typically tailored to pre-conceived purposes, serving the industry more than

supporting people and places for improved lives and livelihoods, although for constructive and critiquing approaches to "vulnerability" see Campbell (2009), Lewis (1999, 2009), and Weichselgartner (2001). Small states and territories frequently reveal drawbacks to and inconsistencies in sustainable development terminology, yet also indicating ways of contextualising key concepts in order to keep them tangible, communicable, pragmatic, and applicable. This paper explores such examples from small states and territories which demonstrate limitations and improvements to contemporary sustainable development terminology.

The methodological approach is mainly conceptual discussion supported by specific examples, as has often been applied for sustainable development in contexts of small states and territories. As an example covering tourism, Graci & Dodds (2010) use "an illustrated case study approach" to examine the meaning and application of sustainable tourism in non-sovereign islands. Meanwhile, McLeod et al. (2017) also focus on tourism through a "state of play" and "regional spotlight" approach which they use to create a research and application agenda for Caribbean small states and territories. A final example is Scheyvens & Momsen (2008) applying a similar method for highlighting topics and directions in sustainable tourism, focusing on islands and pro-poor approaches. These methods accept that being comprehensive is not possible, so illustrative examples are used to highlight conceptual points, as is done here.

This method is applied in the paper's following sections examining water, waste, and energy. Key sustainable development phrases are examined in terms of their relevance to small states and territories, as well as through examples of what small states and territories are and are not doing. The final analysis section builds on ideas from these three areas for examining climate change. Examples of sectors and services not covered are food, health, shelter, and planning.

Water

Many aspects of sustainable development for water promote specific terminology which aims to represent intentions and activities. Examples from small states and territories demonstrate the challenges and opportunities emerging from on-the-ground experiences and pragmatic actions.

Barbados obtains around 90% of its drinking water from groundwater which used to be mostly untreated prior to distribution because the island is mainly coral terraces. Rainwater would seep through the limestone, be naturally filtered, reach the aquifers, and then be withdrawn after providing time for microorganisms in it die and chemicals to decay, so that it would be drinkable and useable, even if quite hard from calcium carbonate (Cashman, 2014; Chilton et al., 2006; Emmanuel & Clayton, 2017; Government of Barbados, 2008). Modern waste includes leaking batteries, household cleaners, pharmaceuticals, and agricultural products which coral cannot filter well, leading to increased aquifer water contamination (e.g. Edwards et al., 2019) which is augmented by salinisation due to seawater infiltration.

The sustainable development terminology of "integrated water resources management" is promoted by the Government of Barbados (2008) and SDG Indicator 6.5.1 which seeks quantification by "Degree of integrated water resources management implementation (0–100)". Prior to modern waste affecting the aquifers, the phrase for Barbados meant that water would not need to be treated prior to use because it was of high enough quality for drinking after it had been permitted to sit in the aquifer for a certain amount of time. Now, the same

phrase is tending to mean that the water requires some treatment in order to make it high enough quality for drinking. The terminology and effective meaning of "integrated water resources management" – that is, water which is of high enough quality for drinking – has not really changed, but the mechanisms for achieving it have changed substantially.

Integrated water resources management should also consider demand reduction, especially given how often Barbados is described as having water demand almost exceeding supply (Cashman, 2014; Chilton et al., 2006; Emmanuel & Clayton, 2017; Government of Barbados, 2008). Yet small states and territories demonstrate how sustainable development tends to entail increasing freshwater demand irrespective of available supply. Enacting "sustainable development" correctly promotes expectations of improved sanitation and hygiene, e.g. SDG 6 "Ensure availability and sustainable management of water and sanitation for all", which creates impetus toward flush toilets and at least daily showering for everyone. This desire and these expectations are entirely fair and appropriate, because cleanliness improves health, lowers premature mortality, and reduces time away from school and work. Even straightforward and much-needed steps such as not ostracising women who are menstruating, as well as providing them with products and facilities needed to unashamedly and hygienically deal with periods, significantly supports development, equity, uninterrupted education, and reliable contributions to jobs and income (Adams et al., 2021). All these actions increase water use, increase wastewater production, and require appropriate waste management and disposal. Nonetheless, they are needed and are embraced by "sustainable development" as shown by SDG 6.

"For all" in SDG 6 includes visitors. Tourists and business travellers have fair and apposite expectations of sanitation and hygiene, yet are recorded in many small states and territories – especially in the Mediterranean and Caribbean – as using far more water per capita than locals (Gössling, 2015). This contributes to "sustainable development" in terms of water supply and demand, supporting health and hygiene. It is also the opposite of "sustainable development" through potential resource overuse in creating visitor-related income opportunities which, in turn, overtax local resources (Dodds, 2007; Graci & Dodds, 2010). Gössling (2015) reports golf as being one of the most water-intensive tourist activities, with this game hardly being relevant for sustainable development. Overall, Gössling (2015) estimates that, depending on the specific activities undertaken, each tourist per guest night directly uses 84-2,425 litres of water and indirectly uses 460-12,000 litres of water. These figures provide an interesting comparison with humanitarian situations for which the minimum standard is 15 litres per person per day for everything, although "it is not appropriate where people may be displaced for many years" and "In an urban middle-income context, 50 litres per person per day may be the minimum acceptable amount" (Sphere Association, 2018, p. 107). "Integrated water resources management" should include income-generating opportunities such as tourism while avoiding the resource mismanagement documented for visitors to many small states and territories; this should apply to humanitarian situations as much as tourist situations.

Waste

A similar situation occurs with the phrase "solid waste management". SDG Target 11.6 has, for the context of cities, one focus as "municipal and other waste management" leading to Indicator 11.6.1. "Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities". It is unclear why the SDGs emphasise cities without considering solid waste management for all locations. Small states

and territories need "solid waste regularly collected" and "adequate final discharge" across their jurisdictions, tasks which have strong prospects but which are not always achieved. Feenstra & Alofs (2020) exemplify with Aruba, suggesting that only 2.4% of residential waste is recycled while a minimum of 23% of waste is dumped illegally.

For some of its islands, Tonga implements a charge for collecting household waste, executed by the government or a private company (Lal & Takau, 2006). Not everyone chooses to pay the charge or can afford it, so many people use previous practices of solid waste management by throwing their waste into mangroves where it is out of sight. For Tonga, such actions were not necessarily a problem when the tossed material was principally organic and local—frequently fish bones and coconut husks. They decay quickly and naturally, as an effective form of compost which then supports mangrove growth. Analogously with drinking water in Barbados, modern waste includes empty chemical containers, plastics, and batteries which release toxins and which do not decompose quickly. The idea underlying "solid waste management" has not changed, but the mechanisms to achieve it have.

Another form of solid waste becoming a bane of many small states and territories is electronic waste (e-waste) from laptops, mobile phones, and other devices. For "solid waste management" within sustainable development, a common mantra is "reduce, reuse, and recycle", with SDG Target 12.5 modifying it to "prevention, reduction, recycling and reuse". One contribution to sustainable development would thus seem to be through reusing and recycling e-waste which, by the time Agenda 2030 ends, could involve up to one billion computers (Rene et al., 2021). One implementation of e-waste management is trading waste or dumping it for payment; namely, giving a location money in order to take discarded items, irrespective of what is then done with it.

The islands of Wakatobi and Batam in Indonesia (being small islands within a large archipelago state) accept e-waste from the USA and Europe, recycling it in unsafe conditions, and then sometimes reusing it by exporting refurbished products (Panambunan-Ferse & Breiter, 2013). These actions miss out "reduce", but match the "reuse and recycle" ethos which does assist in avoiding environmental contamination from leakage. Although the resultant livelihoods are sustainable given the never-ending supply of e-waste, they are hardly sustainable from health and safety perspectives. The unsafe conditions and the hazards to which people are exposed is a major problem, questioning what is really meant by sustainable development for solid waste management. Even while this approach to dealing with e-waste matches SDG Indicator 11.6.1, it might contradict SDG 12 "Ensure sustainable consumption and production patterns".

Aiming for these sustainable "patterns" is poignant in the context of e-waste for small states and territories, considering the findings of Mohammadi et al. (2021) that Aruba, Barbados, Grenada, Jamaica, and Trinidad and Tobago produce roughly twice the e-waste per person per year as the world's average. Data from Rene et al. (2021) show that small states can be worse producers of e-waste than large states, such as Kuwait producing over 25% more e-waste per person than the USA. While some small states and territories such as a few of Indonesia's islands might suffer from larger countries dumping their e-waste, others are producers. Additionally, should Indonesia's government wish to prevent illegal e-waste transfer, it would undoubtedly be able to do so, nor is Indonesia itself immune from significant e-waste production (Rochman et al., 2017). Panambunan-Ferse & Breiter (2013) estimate that the country produces over 8.6 million kilograms of e-waste each year from mobile phones.

For solid waste management, many small states and territories are especially adamant that sustainable development means avoiding nuclear material, an item absent from the SDGs. (Ostensibly) nuclear-free New Zealand and Norway might or might not be considered to be small states. The Caribbean islands have long battled the USA over transporting nuclear waste through their region without asking permission or verifying the type of waste (Rodríguez-Rivera, 2010). With respect to sustainable development terminology, the purpose of transporting the nuclear waste through the Caribbean is to reach Japan for "transformation" to more innocuous substances. Meanwhile, many Pacific small states and territories still deal with the legacy of nuclear waste (mis)management from nuclear weapons testing (Gerrard, 2015).

As with water, sustainable development terminology with respect to waste suffers contradictions demonstrated by examples from small states and territories. Solid waste-related livelihoods and solid waste management in small states and territories are sometimes not fully compatible with the ethos espoused in sustainable development phrasings.

Energy

All societies require different forms of energy. Fuel or human power is needed for transport; solar heating can be used to warm water and heat indoor spaces; and electricity powers lights and electronics, and heats or cools food and indoor spaces. Such approaches to energy are covered in SDG 7 "Ensure access to affordable, reliable, sustainable and modern energy for all".

Small states and territories can face energy challenges leading to reliance on external sources. Diesel-powered electricity generation plants are frequently a mainstay, meaning that spare parts and the fuel supply require a supply chain typically extending far outside the location. Many which extract fossil fuels, such as Timor-Leste, do not have the in-country refining and processing facilities to provide for their own needs while, as noted by Doraisami (2018), the management of the resource has led to development and economic troubles. In many small states and territories where fossil fuels are extracted, they are exported as crude, followed by importing specialties such as diesel, airline fuel, and oil and petrol for cars (e.g. Raghoo et al., 2018). Even maintaining an electricity grid, such as through the mountains of Lesotho to make use of local hydropower (Taele et al., 2012), tends to necessitate external supplies for parts and external expertise for construction, maintenance, and decommissioning, even where the operations are run entirely in-country. After Hurricane Maria swept through Puerto Rico in 2017, external assistance was required for months afterwards to restore power (Kwasinski et al., 2019). Consequently, many small states and territories have long aimed to be innovators in energy systems on both the supply and demand sides (e.g. Lenzen et al., 2014; Raturi et al., 2016), with mixed degrees of success.

Surroop et al. (2018) provide an overview of energy systems for several small states and territories, punctuated by many examples of approaches which could fall within the sustainable development remit of SDG 7. For instance, regarding renewable energy for electricity, Belize generates 45.9% of its electricity by in-country hydropower and 14.1% of its electricity by in-country biomass and different forms of waste use. Similarly, 53.8% of electricity in Suriname is from in-country hydropower. Although these forms are renewable, hydropower can cause as numerous problems as non-renewable energy sources such as forced displacement and ecosystem damage (World Commission on Dams, 2000). Belizean dams have been controversial regarding environmental impact and design (Hershowitz, 2008) in addition to China's involvement (McDonald et al., 2009).

Geothermal is also investigated by Surroop et al. (2018). Mauritius plans to implement geothermal while many other small states and territories, from Vanuatu to St. Lucia, have potential for it. Disadvantages of geothermal energy include the infrastructure required, often in comparatively remote locations, as well as depletion of the resource, as shown for Iceland (Spittler et al., 2020). Another potential drawback is that locals might feel resource exploration and extraction from their land is against or interferes with their culture or livelihoods, as has occurred in Hawai'i (Edelstein & Kleese, 1995). Another renewable energy example from Surroop et al. (2018) is Cape Verde generating 30.7% of its electricity from wind power with no information found about bird kills from, noise monitoring for, or visual impact perceptions of the country's wind power infrastructure.

From these examples of energy systems from small states and territories, it is not clear that Goal 7 is necessarily met through renewable energy supply. Nordman et al. (2019) complete a thorough analysis of Cape Verde's goal to reach 100% renewable energy by 2025, demonstrating the advantages and limitations with respect to SDG Goal 7. Direct mention of energy demand reduction and energy conservation is a notable absence in the SDGs, although energy efficiency is mentioned in Targets 7.3 and 7.a.

A peculiarity of the sustainable development terminology of "affordable, reliable, sustainable and modern energy" is that "modern" does not necessarily cover energy systems involving types of passive solar and microhydro which have been used for millennia (Ring, 1996 for passive solar and Viollet, 2017 for microhydro). These approaches have been important energy sources for some small states and territories such as Rwanda for microhydro (Pigaht & van der Plas, 2009) and Israel for passive solar (Wegner et al., 1988). A variety of types is necessary to consider since modern approaches to microhydro do not always support sustainable development ideals (Premalatha et al., 2014).

Nonetheless, small states and territories have led the world for some sustainable development energy supply systems such as coconut biofuels, for both electricity generation and vehicles (Solly, 1980). Coconut biofuels have not yet succeeded at a large scale, partly because sustainable development concerns emerge (e.g. Cloin, 2007; Gardebroek et al., 2017). If coconut biofuels did succeed at a large scale, then coconut plantations would need to expand, exacerbating already existing problems of food-related land being taken over for commercial non-food purposes including in small states and territories (Bruckner et al., 2019). People's response is also important in that perceptions of coconut biofuel being (to use sustainable development terminology) local and eco-friendly could lead to an increase in consumption, especially if it were cheap. Promoting action through sustainable development terminology can diminish effectiveness.

Climate change

One context in which sustainable development is frequently framed – especially with respect to water, waste, and energy – is climate change (IPCC, 2013-2014). Within the SDGs, climate change has its own Goal 13, compared to other topics such as disaster risk reduction which are integrated throughout the SDGs. UNGA (2015) further separates climate change from other sustainable development endeavours through the footnote to SDG 13 stating "… that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change". As shown by discussion in IPCC (2013-2014), no scientific rationale exists for trying to

separate climate change as a separate topic from sustainable development. Given this situation, in line with Baldacchino (2018b) for small island developing states (SIDS), this section critically analyses how climate change and related concepts are presented, at times being somewhat polemical to demonstrate difficulties which can arise, but always based in illustrations from small states and territories.

Climate change has produced its own set of sustainable development terminology, listed in the glossary of IPCC (2013-2014), including (i) at least four different forms of "adaptation" (*ibid*., p. 1758); (ii) "resilience" (*ibid*., p. 1772) which does not fully incorporate scientific understandings (e.g. Alexander, 2013); and (iii) "transformation" as "A change in the fundamental attributes of natural and human systems" (IPCC, 2013-2014, p. 1774) without explaining why "change" alone would not be relevant to "fundamental attributes". "Sustainable development" (*ibid*., p. 1774) is taken as WCED's (1987) definition despite long-standing criticism (Beckerman, 1994; Lélé, 1991). The amount of confusing jargon makes it tempting to generate sustainable development phrases such as "Sustainable Holistic Integrated Transformation" for "Climate-Related Adaptation and Preparedness". These suggestions illustrate how to end up with terminology which is almost meaningless for communicating what is needed in sustainable development, especially regarding action.

Here are some examples from small states and territories:

- "Climate-Smart Technologies" has Filho et al. (2013) providing examples from numerous small states and territories, mainly in the Pacific and Caribbean. Unless the aim is to differentiate climate-smart (or smart climates?) from climate-dumb (or dumb climates?) technology (Glantz, 2005), "climate-smart" is a challengeable phrase. By definition, focusing on people to make technological interventions suitable for everyone (smart and dumb) supports sustainable development, including with respect to climate and climate change (which, from IPCC (2013-2014), are different). In fact, focusing on the environment (through climate) rather than on people contradicts knowledge of how to best implement technology and understand its societal impacts, although without succumbing to technological determinism (Ellul, 1964; Ogburn, 1938). "Climate-smart" might be an attention-grabbing buzzword, but it takes sustainable development approaches down an ineffective pathway.

- "Climate-proofing" Hong Kong is discussed by Lo et al. (2017). Considering that any location sits within a climate, making a place "proof" against climate would mean entirely avoiding its environment. Conversely, sustainable development means living with the environment, including long-term trends, while limiting harm. It does not mean protecting ourselves entirely from the environment or attempting to divorce ourselves from it. The concept of "living with climate" has been a tenet of sustainable development from its origins, including in earlier days of investigating human-caused climate change (Beltzner, 1976; Keitz & Berks, 1977; MIT, 1970, 1971).

- "Climate-informed development" is from Chirambo (2016) examining relations between China and Africa including for small states such as Tunisia and Mauritius. By definition, if it is not climate-informed, then it is not suitable as development, namely sustainable development: this has been shown by the discussion throughout this paper. Water and energy especially demonstrate that it would be difficult to enact sustainable development in a small state or territory without being informed by the climate and responding to the climate and changes in it. A further misdirection emerges in focusing on "climate-informed development" without considering other environmental phenomena, such as "earthquake-

informed development", "tornado-informed development", "virus-informed development", and others. It was telling that Haiti spent significant sustainable development focus on climate and climate change between 2004 and 2010, including the creation of a governmental climate change division, only to be shattered by an earthquake on 12 January 2010 (Government of Haiti, 2010; Shaw, 2011). Sustainable development, by definition, should mean being informed by all environmental aspects, and not just climate and climate change.

- "Climate governance" appears to be used interchangeably with "climate politics" by Carter et al. (2019) when examining small states in Europe. The real question is: Should we be governing the climate or governing ourselves? In comparison, "climate change governance" is about governing how humanity is changing the climate within the context of changing wider environmental aspects, and governing responses to these changes, as described by Scobie (2018) for Caribbean SIDS.

The challenge with these aspects of sustainable development terminology is to keep them realistic with climate change contextualised within sustainable development (unlike SDG 13). Otherwise, arguments could be made for "climate-smart earthquake resistance" and "climate-proofed weather". No dispute exists that climate change, especially as caused by human activities, must be part of sustainable development terminology, policy, and practice, as is evident from IPCC (2013-2014). The polemics in this section demonstrate the dangers of accepting the polemics of climate-focused terminology for sustainable development and of emphasising climate change. Dealing with climate and climate change nevertheless remains as one important component of sustainable development among many for small states and territories (Scobie, 2019). Regardless, human-caused climate change should not be taken as the most important component (Lewis, 1999; Moncada et al., 2022), especially considering that it is only one of 17 SDGs.

Conclusion

This paper makes no claim that small states and territories are particularly special, exceptional, or different from other locations regarding sustainable development. This robust debate continues (Baldacchino & Wivel, 2020; Briguglio et al., 2021). The focus here is that small states and territories contribute to indicating how and why sustainable development terminology can inhibit practicalities of sustainable development, through detracting and distracting from realities faced, pragmatic decisions which need to be made, and fruitful enactment of desired and desirable pathways. The SDGs – particularly through water, waste, and energy – alongside concerns about entrapment in the tunnel vision of a single topic such as climate change, have highlighted this issue, through illustrative examples from small jurisdictions.

Perhaps to achieve real transformative change (or even transformational change) in the socio-ecological systems (or even social-ecological systems) of small states and territories for adaptive resilience (or even resilient adaptation), the key might be for us to transform from a focus on nomenclature to a focus on reality. Lessons and advice from small states and territories can stop us from using words without meaning by seeking needed and successful action irrespective of terminology.

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