Safer destinations, healthier staff and happier tourists: Opportunities for inclusive water, sanitation and hygiene in tourism

Abstract

Sustainable tourism development, including tourism's COVID-19 recovery, requires a holistic view of environmental and community benefits, including access to water, sanitation and hygiene (WASH). This study presents a system-wide Inclusive WASH in tourism framework for destinations. Using a qualitative approach including interviews and focus groups, the framework is applied at three system scales: hotels, the community and wider destination to assess the current WASH situation in Mandalika, Lombok, Indonesia, a water-scarce destination earmarked for rapid development. Findings highlight differences in Inclusive WASH practices between hotels and communities, the potential for conflict and gendered inequalities. Barriers linked to system elements, structure and the enabling environment are identified. Addressing inequitable planning processes, improving stakeholder engagement and creating tools for hotels to improve Inclusive WASH can contribute to improving destination value. Findings are relevant for practitioners, government and community organisations integrating Sustainable Development Gaols 5 and 6 into tourism development and recovery.

Key Words: water, sanitation, hygiene, inclusion, tourism-recovery, sustainable development

1. Introduction

Tourism has been dramatically affected by COVID-19 (UN, 2020). The movement of people, including tourists, has contributed to the spread of the virus, at great cost to host communities (Qiu et al., 2020). For the tourism sector to recover, it must focus on health and hygiene practices to decrease potential COVID-19 infections in order to rebuild visitor trust (WTTC, 2020; Zheng et al., 2021). Due to the nature of the pandemic, as well as sustainability and equity concerns around water and access to safe sanitation, improved practices need to extend beyond tourism businesses to consider staff and their families, supply chains and the wider community. This creates a need to not only reflect on business practices but to take a holistic, destination wide view to improving water, sanitation and hygiene (WASH) practices in tourism. Such holistic approaches have previously been demanded in tourism for issues such as climate change, responsible development and water (Cole & Browne, 2015; Farrell & Twinning-Ward, 2004; Loehr, 2020), and general reviews of post-colonial narratives in Indonesia (Nessel, 2021). Nevertheless, existing research on tourism and water lacks considerations of gender equality, disability and social inclusion (GEDSI) issues (hereafter referred to as 'Inclusion' and 'Inclusive'). Inclusive tourism development follows Scheyvens and Biddulph's

(2018) definition, moving beyond Inclusive economic growth and economic criteria to consider the broader welfare of socially marginalised groups. Despite the promotion of tourism's potential to contribute to the Sustainable Development Goals (SDGs) (UNWTO, 2015), there is a complete lack of tourism studies relating to SDG 6 - Clean Water and Sanitation For All - that also considers Inclusion (Cole et al., 2020). More work is needed to address SDG 5 – Achieve Gender Equality and Empower All Women and Girls (UNWTO, 2019); this study addresses the lack of Inclusive in WASH in tourism destinations.

Tourism's contribution to destination-wide outcomes, including sustainable development, has been questioned in previous studies (e.g. Sharpley, 2020) and there is a call for change from practitioners and experts to more effectively utilise this often strong economic sector to enhance the well-being of host communities (Higgins-Desbiolles, 2020; Pollock, 2019). The pandemic induced stand-still of international tourism has been identified as a moment in time to take stock, reflect, and rethink prevailing tourism practices to overcome existing shortfalls, including sustainability challenges, economic inequalities and social vulnerabilities (Higgins-Desbiolles, 2020; Lew et al., 2020). It is in the interests of host communities, governments and development agencies, who invest in tourism as a tool for economic development, to ensure the sector delivers net benefits to all members of society, including the most vulnerable.

Tourism can play a role in delivering Inclusive benefits such as access to safe WASH in tourism destinations. Inclusive WASH programs may involve policy, public sector capacity building, community education and awareness (Rozaa et al., 2013) as well as protection of water sources within the destination. In addition, Inclusive WASH can lead to significant gains in health outcomes (WaterAid Canada, 2017). Despite the opportunities, and recognition that knowledge is created through sense-making narratives from localised ways of being in Indonesia, which are framed by 'national' post-colonial histories that legitimate Indonesia as a coherent nation-state (Nessel, 2021), our knowledge about how such outcomes may be recognised, implemented and achieved through Inclusive WASH in tourism, remains limited (Cole et al., 2020).

To address the abovementioned shortcomings and knowledge gaps, inform future investment in tourism and development, and support destinations' recovery from COVID-19, this study aimed to assess how the tourism sector, through hotels, can contribute to improving Inclusive WASH outcomes for the wider destination. To do so, the paper's research objectives are to:

- Develop an Inclusive WASH in tourism framework for destinations that takes a holistic system view.

- Apply the framework to assess the current Inclusive WASH practices at different tourism system scales (hotels, communities and the wider destination) at a case study destination, i.e. Mandalika, Lombok, Indonesia.
- Identify barriers and opportunities to implement Inclusive WASH-at-Work in hotels and its contribution to drive holistic destination outcomes in Mandalika.

2. Literature Review

2.1.   Tourism, sustainable development and Inclusive WASH

The SDGs are often used synonymously for sustainable development and have become increasingly popular to frame tourism. Various tourism specific sustainability frameworks and programs map best practice criteria against the SDGs to highlight how businesses and destinations may contribute to each of them (GSTC, 2019; EarthCheck, 2018). Despite these advances, a report by UNWTO and UNEP (2017) mapped corporate social responsibility (CSR) initiatives of tourism businesses against the SDGs. Most tourism CSR initiatives map poorly or not at all against SDG 6, despite well-documented evidence of the impact of tourism on freshwater resources, particularly in water scarce destinations. Hotels often use much more water per guest night than local people, adding pressure on public infrastructure, water resources and local households (Becken et al. 2013; Gössling & Peeters, 2015). For example, in Bali, Indonesia, tourism consumes 65% of local water resources (Cole, 2012). The UNWTO and UNEP (2017) report noted that those CSR initiatives that do address SDG 6 are of operational nature and mainly focus on water, e.g. they are linked to sustainability certification, norms and standards, new equipment and technology as well as security and preventative health programmes. None of the mapped tourism initiatives explored the provision of clean water and sanitation services to surrounding local communities nor address the specific needs of women and socially marginalised groups.

To achieve sustainable development through tourism, SDG 5 gender equality, is critical (Alarcon & Cole, 2019). Gender is a critical cross-cutting element for improving access to WASH and to realise water as a human right (UN Women, 2018; Women for Water Partnership, 2018). Women and girls suffer the most from poor WASH access with impacts on educational and workplace participation, work burdens, health and psychosocial well-being, highlighting the need to integrate work on SDG 5 and 6 (GWTF, 2006). This is particularly relevant to tourism, as the sector often operates in lower- and middle-income countries, areas of unequal access to WASH services within and between communities and users and is also a significant employer of women (UNWTO, 2019). Many studies examine the unequal gendered power relations embedded in the tourism industry (Duffy et al, 2015; Ferguson, 2011; Gentry, 2007; Schellhorn, 2010), but few investigate the unequal impacts of WASH

in tourism, and tourism generally. In Indonesia, women are often responsible for the sourcing and management of household water (Cole, 2017). However, because women's work is often unpaid, unrecognised and 'naturalised', women live with water privation. Moreover, women are usually excluded from public discussions, which inform water policy, and from the attention of powerbrokers who influence decision-making. In such contexts, increasing water cost is a consequence of the tourism industry competing for water supplies (Cole, 2017), which negatively impacts the households in which women function.

Incorporating GEDSI into project design, planning and implementation can shape reflection about Inclusive WASH in tourism. For example, people with disabilities can be the most vulnerable in communities due to social stigma, social marginalisation and discrimination. WASH inaccessibility compounds existing vulnerabilities (such as girls and women with disabilities) and denies a basic human right. WASH access enables people with disabilities to experience improved health outcomes and safety, increased opportunities for education, gender equality, protection and livelihood, and enhances opportunity to become full members of society (WHO 2013; WVI, 2014).

SDG 6 encompasses not only safe water and sanitation services and encouraging hygiene at all levels but also acknowledges the broader hydrological system, including issues of water scarcity, wastewater discharge and water resources management (UN, 2015). Specific targets (6.1 and 6.2) include provision of adequate and equitable safely managed water and sanitation for all, an end to Open Defecation and access to hygiene facilities for all (UN, 2015). The integrated and collaborative approach to water management promoted through SDG 6 (UN, 2015) strengthens the case for the adoption of water stewardship and to facilitate destination-wide approaches to water management. To be a water steward means being a proactive champion and custodian of the natural and cultural assets of the destination (Dwyer, 2018). While May (1991) highlighted the need for destination management to avoid environmental degradation associated with rapid tourism development more than 30 years ago, many destinations still suffer from poor environmental conditions. In new and emerging tourism destinations, planning for and adoption of water stewardship by all stakeholders can help avoid problems that will ultimately reduce the sustainability of tourism. While collaboration and trust are critical to ensuring that water stewardship approaches can deliver on their objectives (Fraser & Kunz, 2018), sustainability requires GEDSI initiatives to ensure that nobody is left behind (Alarcon & Cole, 2019).

A holistic approach to achieving destination-wide Inclusive WASH, involving local government and tourism stakeholders adopting water stewardship ideals, can provide a tourism destination with the capacity to ensure that development is not to the detriment of the local environment, people or

places (Briassoulis, 2002). Where tourism businesses treat wastewater there are additional benefits to the destination and living conditions of the local population. This in turn improves the value of land and generates conditions that can then lead to further infrastructure and economic growth (ADB, 2018). Similarly, there is evidence from the Philippines that improved faecal sludge management led to a rise in tourist numbers as well as tourism businesses, who were then willing to pay more for the services (Ram et al., 2018). Poor sanitation in the community and public spaces reduces the attractiveness and competitiveness of destinations (WEF, 2019), can lead to visitor sickness and thereby impact arrival numbers, incurring economic costs in form of revenue loss and failure to exploit potential tourism capacity (Hutton et al., 2008). In Indonesia, poor sanitation was estimated to incur an economic loss of US$215 million in the tourism sector and the holiday sickness episodes of tourists including daily welfare losses were estimated at an economic cost of US$ 25.5 million (Hutton et al., 2008). Increased health impacts and risks linked to the pandemic will further worsen these figures. Furthermore, as climate change continues to place increasing stress on water resources and sanitation infrastructure, destination-wide approaches will be critical to reducing health risks and ensuring the sustainability of the tourism sector in climate-vulnerable destinations (Hadwen et al., 2015).

Tourism relies on effective water and wastewater management and the provision of these services requires sufficient infrastructure and water security as well as the institutional capacity, technical expertise and policy frameworks to support their management. The WASH sector refers to these conditions as the 'enabling environment', which can be defined as a set of interrelated legal, regulatory, organisational, fiscal, informational, political and socio-cultural conditions (SWA, 2020; UNICEF, 2016). For example, in Indonesia, private sectors/industries are obliged to provide WASH services as an element of industrial hygiene for a healthy work environment (MoH, 2016). The MoH regulations (2016) stipulate environmental health quality standards, including standards for good WASH in the workplace. Further, the Presidential Instruction No. 9 of 2000 mandates that gender mainstreaming strategies be implemented throughout the national development process in order to improve women's position, role, and quality of life, as well as to achieve gender equality and justice in family, community, national, and state life (Government of Indonesia, 2000).

Inclusive WASH-at work in tourism

To improve Inclusive WASH in destinations, tourism businesses such as hotels are important because they have access to resources and employ local people, including women, thereby providing a critical link to the community. Existing WASH-at-Work frameworks (e.g. UNICEF, 2019; ILO, 2016) consider the role of employers in providing sufficient access to Inclusive WASH services in the workplace, as well as staff training and education to safeguard guests and staff. The frameworks also

consider the role of businesses to ensure adequate Inclusive WASH services in supply chains and within surrounding communities. This wider view expands the scope of traditional standard hotel operating procedures focused on issues such as food and personal hygiene. In addition to destination wide benefits discussed above, businesses profit from investment in Inclusive WASH via increased productivity (WaterAid Canada, 2017) and improved social license to operate (USAid, 2017).

Despite the benefits, the uptake of holistic WASH-at-Work frameworks in private businesses, including the tourism sector, is incredibly low, with only a handful of companies having signed the CEO Water Mandate (CEO Water Mandate, 2012). The high number of tourism workers employed in the informal sector (ILO, 2020) raises further questions over safe WASH practices at work, as regulations and standards are often not enforced (Sommer et al., 2016), and access to social protection and health care is low (ILO, 2020). Many tourism businesses are small, may lack understanding, resources or capacity to implement standards and, as the recent experience responding to COVID-19 highlighted, are likely to miss out on support programs or schemes (IFC, 2020). In addition, considerations of Inclusive WASH-at-Work in tourism and elsewhere remain relatively unexplored, particularly in relation to engagement and decision-making. This is especially problematic for women who comprise 60 to 70% of the hotels' catering and tourism workforce and are overrepresented in low-skilled and informal work arrangements (Baum, 2013), making them vulnerable to poor WASH conditions in the workplace. According to Sommer et al. (2016), menstrual hygiene management (MHM) is a neglected issue within workplaces in low- and middle-income countries, with many shared water and sanitation related barriers such as not having access to appropriate facilities. This creates significant economic losses due to additional sick or missed workdays (World Bank, 2008), plus negative impacts on women's health and well-being (Sommer et al., 2016). These impacts create potentially negative flow-on effects to women's families and the wider community.

2.2.   Framework for this study

Systems approaches are applied to complex problems because they holistically consider the problem's impacts and its underlying structures (Meadows, 2008). Socio-ecological systems consist of human and environmental elements (Ostrom, 2007), a critical interface for environmental sustainability challenges (Etkin & Ho, 2007). This study conceptualises tourism destinations as socio-ecological systems comprising tourism businesses, employees, local communities, governance arrangements and the environment that function at multiple scales (Farrell & Twining-Ward, 2004). The interconnectedness, flows and feedbacks within the destination system elements are recognised, leading to system outcomes (Meadows, 2008).

Building on existing WASH-at-Work frameworks and literature referenced above, a multi-tiered framework was developed to map pathways of how Inclusive WASH-at-Work in hotels can positively contribute to tourism destinations (Figure 1). The framework provides a conceptual view and vision of an integrated destination system. Through the workforce, hotels can teach and train staff on safe Inclusive WASH behaviours with the flow-on benefit of these messages reaching 'over the fence' as staff take messages and learnings home to their families and extended community. Conterminously, improved Inclusive WASH conditions within staff households and their wider community will create positive health and wellbeing benefits to the workforce with positive feedback to hotels, as staff illness and absenteeism is reduced. At a higher system scale, an integrated approach will see this model replicated in other hotels in the same destination and beyond, thereby increasing awareness, and improving Inclusive WASH practices and cleanliness while also promoting water conservation, waste management and reduced environmental impacts. Every tourist destination system, including all sub-systems, operates within a broader enabling environment, with hotels, staff and government actors working within various policy, regulatory, organisational, fiscal, informational, political, socio-economic and cultural conditions.
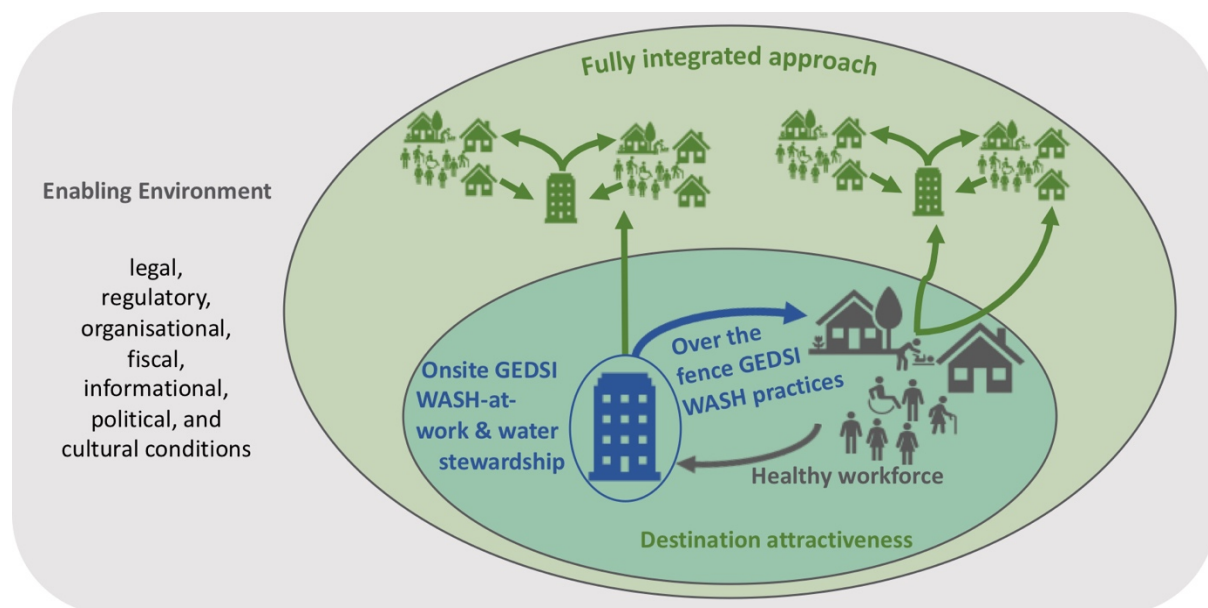

Figure 1 Multi-tiered Inclusive WASH in tourism framework for destinations.

2.3. Case study destination: Mandalika

Mandalika, West Nusa Tenggara (NTB) Province, has been designated by President Joko Widodo to be one of ten "super premium destinations" to be developed in Indonesia (Figure 2).
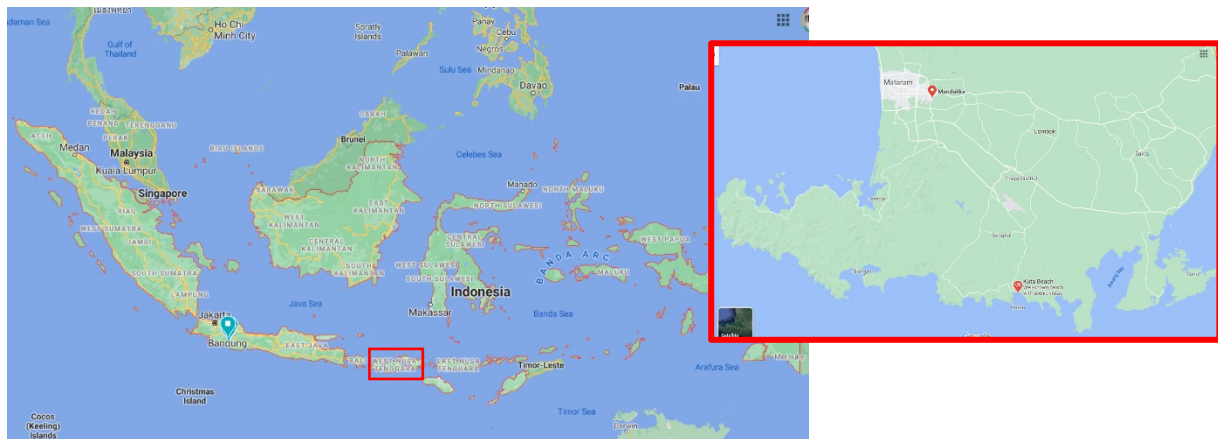
Figure 2 Mandalika, NTB, Indonesia (Source: Amended from Google Maps, 2021).

Mandalika is a popular alternative tourist destination to Bali due to its natural beauty, uncrowded beaches, ocean diving, and world-class surfing. For the period 2015-2019, domestic tourists to NTB increased by 35% and international tourists doubled in number (Tourism NTB, 2020). A US$3 billion initiative called the Mandalika Project is being developed along 16km of pristine coastline. With the support of the government-backed Indonesian Tourism Development Corporation (ITDC), the project aims to develop various facilities, roads, and infrastructure supporting over 10,000 luxury hotel rooms. Mandalika's current tourist accommodation is primarily medium-sized resorts (guesthouses and villas), with smaller options (homestay lodges) and a few high-end luxury resorts (Tourism NTB, 2020).

Lombok and NTB Province are water scarce regions that receive tropical rain from November to May while experiencing a dry season throughout the rest of the year. Average rainfall ranges from 75.55 to 158.58 mm in Central Lombok (BPS, 2015). Piped urban water supplies in Mandalika and southern Lombok primarily rely on springs and groundwater, despite groundwater discharge rates being much lower on the southern coast of Lombok than in North and East Lombok (AECOM Indonesia, 2019). Impoverished people rely on wells have reported poor water quality and wells running dry in September-October (Sjah & Baldwin, 2014).

Increasing pressure on water resources from agricultural, economic and tourism activities is raising local concerns about equitable water allocation and security, especially for vulnerable rural households. Water users in Lombok are aware of conflict over water management in Bali (Sjah & Baldwin, 2014) and the potential for these to be repeated in southern Lombok. In Bali, the tourism sector's water consumption is estimated to be twice the rate of local households (Sjah & Baldwin, 2014), and can be expected to be similar in Lombok.

Water quality and quantity are already major issues and are expected to become more critical under future tourism development if not appropriately addressed. Rainfall patterns are shifting and concerns have been raised about future droughts. A water desalination plant is proposed as a solution for future hotel development, which reflects recognition of water scarcity in relation to proposed development projects (ITDC, n.d.).

3. Methodology

This study applied a multi-method qualitative formative research design to engage with a wide range of stakeholders to understand the current WASH situation in Mandalika across the three system scales. Hotels were deemed the most suitable tourism sub-sector as they are a critical component of the tourism value chain in most tourism destinations globally, important employers with a direct link to the local workforce and community, and require WASH practices to be directly relevant to their service. Participating hotels ranged from small, family owned businesses to large, high-end hotels to reflect the range of types in Mandalika and elsewhere.

21 semi-structured interviews and 7 focus group sessions were conducted by male and female local research assistants, using research tools (detailed in Appendix) adapted to local customs and gender norms. Interviews were conducted with key informants (local government representatives from tourism, health, and public works, and a disability association) (n=6), hotel managers or owners (n=6), and local community representatives (n=9). The seven focus groups were conducted with staff of the participating hotels, (2 -7 participants per group). Semi-structured interviews help explore complex issues and enable broader discussion with interviewees about their experiences and perceptions (Brinkmann & Kvale, 2015). Interviewees were selected based on their knowledge and involvement in WASH in tourism, following a snowball sampling technique (Liamputtong, 2013). Interviews and focus groups were conducted in Bahasa Indonesia, following participants' informed consent, and later translated into English. Field work activities were conducted in accordance with relevant Indonesian research permits.

Three workshops were conducted with key stakeholders, with the first (n=20) to introduce the project, gain stakeholder input and support into research design. Following data collection and analysis, two half-day workshops were conducted to present and validate research findings (n= 45).

Transcripts of interviews and focus groups were analysed in NVivo12, using a combination of deductive (framework and literature driven) (Elo & Kyngäs, 2008) and inductive (data driven) techniques (Braun & Clarke, 2006). The initial deductive codes were identified from national and provincial policies and existing WASH-at Work frameworks (UNICEF, 2019). The codes were extended and revised following inductive data analysis. The combined approach acknowledges the

influence of the literature and research questions as well as the emergence of new data driven themes (Fereday & Muir-Cochrane, 2010). Codes were regularly reviewed and discussed by research team members, further refined and combined as the analysis progressed (Bazeley, 2007). The authors comprise a multi-disciplinary team of specialists. To minimise bias in analysis and interpretation of results, data analysis by one team member was cross-checked by another. The close involvement in data collection, translation, analysis and manuscript preparation of the two Indonesian co-authors reduced the subjectivity of non-Indonesian team members.

Certainly, a focus on Inclusion and WASH can be read as 'post-colonial' in nature, particularly as the research was funded by the Australian government, and the specific Water for Women Fund required that its Inclusion and WASH agenda be met. The research also can be critiqued as working to spread the hegemony of powerful nations to nations with emerging economies via its engagement with the tourism sector; itself a Western business model that has effectively re-colonised local people into global economic relations and constraints. And the methodology, the mixed research team across Australian and Indonesian (local/Indigenous) cultures, the methods and interpretation, could be read as being dominated by Western academic requirements. However, the team worked to create a bridge between 'Western' and 'Indonesian' ways of thinking and being. The research design and implementation were locally-led; strong, collaborative, working relationships within the team were developed; and active listening by the local research teams who, in turn, adjusted their field approaches to local norms, was undertaken. Also, initial formative research was followed by action research via which stakeholders' needs were articulated and contributed to the co-design process. All Inclusive WASH issues were discussed and agreed with a range of stakeholders who opted into the knowledge creation activities. The stakeholders recognised that in Mandalika, tourism WASH infrastructure development was lagging behind broader Indonesian ideas of 'progress' and 'improvement', particularly those required to benefit local communities.

Lack of available water resources and hydrological data in the case study location limited the study. Future research could combine qualitative analysis with quantitative measurements.

4. Results

Respondents' vision for tourism in Mandalika was that it contributes to improving the situation for local people, by becoming an internationally-recognised sustainable and safe destination. Respondents envisioned tourism as holistic, having destination-system wide effects by contributing not only to an improved economy but community welfare, including improved public and environmental health. Results of this study cover key themes relevant to achieving this vision, including water, sanitation, hygiene, GEDSI, governance and policy, COVID-19, engagement and

collaboration, culture and the value proposition for improving Inclusive WASH through hotels. The themes are relevant across the different system scales and are presented for hotels, the community and wider destinations, with links and feedbacks between system elements and scales identified.

4.1. Inclusive WASH in hotels

Respondents provided an overview of existing Inclusive WASH practices in Mandalika hotels, the smallest system scale in this study (Figure 1). These practices are more advanced than in surrounding communities, potentially due to hotels' greater financial capacity. Several factors crucial to hotels' success and image were identified as relating to good WASH standards and their uptake, including "cleanliness of the environment and lodging rooms" (Operator_ITT06), environmental soundness, good facilities, comfort, safety and friendliness of staff.

Access to water varies among hotels of different sizes and locations. Hotels located in the ITDC complex are served by ITDC, a state-owned enterprise that specialises in the development and management of integrated tourism complexes. Hotels outside the complex either rely on ground water or utility (*Perusahaan Daerah Air Minum*, PDAM) water supplies, a local government owned utilities company. Larger hotels have access to deep bore wells extracted with electric pumps, whereas smaller homestays access water from shallower wells, with water filtered before use. Hotels have water permits stating discharge quantities, but in most cases, there is no water meter installed to measure actual extraction, limiting monitoring and thus enforcement of permit limits. Water quality is monitored, sometimes not regularly, and declines during the rainy season when treatment action is taken.

Several smaller homestay operators noted the high cost of water, which "is the largest expenditure together with expenditure for electricity" (Operator_2). When wells run dry and homestays are forced to buy water from tankers, costs can become prohibitive, a situation that can last for up to three months a year. There is a general awareness among hotel owners and staff that water should be conserved, and they often "directly advise guests not to use water excessively" (n=4), or "print a guide to water saving in the room" (n=6).

Sanitation facilities in hotels are also considered to be more sophisticated than those in the community. Participants view toilets in hotels as accessible, safe and comfortable, and note that handwashing facilities with soap are available. Hotels generally provide Western-style toilets, which comprise a riser and dry floor. However, staff are often more familiar with the squat toilets they have at home. Large hotels provide gender-specific staff toilets but smaller guesthouse toilets may be shared with the owner's family. Disabled facilities are almost non-existent, especially in public

areas such as restaurants or the lobby; one hotel operator mentioned providing a disabled-accessible toilet.

Hotels also practice more effective wastewater management than host communities. In small hotels the blackwater from toilets is usually treated in a septic tank before it is discharged into the environment. In some hotels, grey water is collected in an infiltration tank and slowly percolates into the ground, thereby avoiding drainage problems and stagnant water. However, not all small hotels have this facility. Staff in a homestay noted that the capacity of the infiltration tank was limited, and improvement is needed. Most staff and operators were aware of the need to keep a safe distance between the wastewater facilities and water sources/ground water wells. They were also aware of an emptying service required to maintain septic tanks; however, the service was called when the septic tank was already full rather than following a regular emptying schedule. In larger hotels, wastewater is treated with more effective treatment systems and reused in gardens, with designated personnel and a clear maintenance system.

Hygiene practices are also front of mind in hotels. Handwashing with soap at critical times, such as after using the toilet, before preparing food and when starting and finishing work, is standard operating procedure for staff and handwashing facilities are provided, although not always disability accessible. Many references were made about staff hygiene practices, linking these to providing a high level of service to the guest:

> *"The most important practices for personal hygiene in hotels are bathing and washing hands with soap, because the employees clearly become fresher and confident in carrying out their work and most importantly make guests comfortable to be served, not disgusted."*
> *(Staff_ITT07)*

As such, hygiene practices are considered part of a hotel employees' role. As a result of COVID-19, staff and operators reported an increase in sanitation and hygiene awareness, including:

- Increased hand washing;
- Wearing masks;
- Social distancing;
- Increased provision of soap and hand sanitiser;
- Hygiene, social distancing and hand washing with soap signage around hotel;
- Improved care to ensure cleanliness of sanitation and kitchen facilities;
- Checking people's temperature when entering the hotel;
- Laminated menu sheets which can be sanitised;

- Introduction of new Ministry of Tourism accreditation on cleanliness, healthy, safety and environment (CHSE) standard for hotels.

Hotel environmental health and hygiene are verified by a relevant authority, such as the Central Lombok District Health Office.

4.1.1. *Gaps and priority needs*

Despite the practice of personal hygiene in hotels and awareness created through COVID-19, staff lacked the reasoning behind Inclusive hygiene practices. Participants recognised the importance of washing hands with soap to stop transmission of pathogens but not that hygiene practices stop disease transmission between tourists (work) and the community (home). There was also low awareness and implementation of government policies and their requirements for providing Inclusive public/community and hotel WASH facilities, particularly the specific needs of the disabled.

Respondents explained the significant economic impacts the COVID-19 associated tourism downturn has had on hotels, creating a range of negative flow-on destination-wide effects on workers, their families, the wider community and suppliers. Many operators identified improving WASH practices to address COVID-19 risks and assist with the sector's recovery as a key priority. Not all operators knew how to respond to COVID-19. Their lack of knowledge to enable forward-planning indicates the need for education and capacity building initiatives, not just in response to COVID-19 but more generally to address Inclusive WASH issues in tourism.

Both female and male respondents want increased training and education within the tourism sector in Mandalika to improve the operation and functionality of existing WASH infrastructure and practices. Training provision, for example on water use, MHM or social inclusion at the workplace, is currently limited, illustrated by 5 out of 7 hotel staff focus groups stating they had not received any training. Respondents did not identify MHM as a problem, although smaller hotels do not provide MHM products or facilities.

4.2.   Inclusive WASH in workers' homes and the community

Local communities in Mandalika differentiate between water sources for drinking, personal hygiene and sanitation, and other purposes. While bottled water is often used for drinking, water sources for other purposes comes from shallow and deep groundwater and municipal supplies.

The sanitation coverage in communities fall well short of that within hotels: "Around 60% of the community still does not have toilets." (Community IJZ08). Whilst this figure differs from MoH (2018) data, reporting coverage ranging from 63% to 93% in villages and sub-districts surrounding Mandalika, it demonstrates that the community is concerned about households without latrines.

"How can there be a change in the behavior of residents while there are no private or public latrines, many residents still defecate in the open." (Community_ITT10). Whilst some community members perceived open defecation to be a safe practice if conducted far from residential areas, others identified the links between maintaining safe sanitation and high water quality.

In the Mandalika community, sanitation and hygiene practices are linked to the availability of water, soap, facilities and hygiene awareness, knowledge and beliefs. Community handwashing is practiced at some (but not all) critical times, and not always with soap; facilities for disabled persons in the home can be non-existent. Cultural gatherings when handwashing practiced before eating are unsafe, i.e. water is in a communal handwashing bowl, not running water. Respondents described a positive impact of COVID-19 as increasing hygiene practices at home, especially hand washing with soap.

4.2.1. *Community needs and priorities*

There is an urgent need to improve water access in the community during the dry season and ensure that everyone has access to safe water quality. Community awareness needs to improve, including the consideration of GEDSI issues. Key informants indicated the need to support the community by providing WASH facilities and implementing behaviour change programs. The data highlighted a number of problems related to Inclusive WASH infrastructure in the community: a lack data on the number of disabled people in the village restricting infrastructure planning; low affordability of community facilities; limited availability of gender separated and disability-accessible public sanitation facilities; and lack of disabled persons and community inclusion in destination planning processes. The local population stated they felt left out of, and representatives of disability organisations were never invited to, planning sessions.

4.3. Inclusive WASH in the wider destination: Interconnection between system elements

Mandalika's development into an international destination is bringing new practices, social, cultural and economic change and increasing tourist expectations. One hotel owner mentioned the issue of social equality, wherein "…generally those who do not have access to sanitation are the poor." (Operator_ITT06). As development progresses, there are other vulnerable groups within the community at danger of being left behind (and, by extension, potentially becoming more vulnerable to COVID-19 and other health issues), which signals missing or weak links in an equitable and sustainable system.

> *"Opportunities for women and minority groups to talk with community leaders are open, but there are not many women's groups, disabled or other marginal groups who dare to talk with leaders and the government including to discuss water and sanitation issues."*
> *(Community_IJZ09).*

Water scarcity and competing demands between hotels and the community is another important issue. Three respondents noted that, "So far there has never been a conflict in the community due to lack of water" but also cautioned that "jealousy may occur" in the future should conditions worsen. Community members and staff thought hotels have a responsibility to extend their Inclusive WASH practices beyond the business itself to manage the negative consequences operational activities can create for the community. Health Office staff stated there is no significant positive influence from present tourism operators in Mandalika to the surrounding communities and beyond, noting that the involvement of the tourism sector in water and sanitation development is limited. While some hotels engage in CSR initiatives by donating school uniforms and clothes to disadvantaged children, community members agree that there should be more involvement of tourism businesses in addressing Inclusive WASH issues within the wider destination. CSR contributions would benefit not only their community, but also hotels, especially if tourists would be more comfortable when staying in a clean destination. This view illustrates the potential to create a positive feedback loop from hotel investment in Inclusive WASH beyond their property boundary.

On the other hand, there is evidence that WASH-at-Work practices specifically, and tourism development more broadly, have a positive lasting impact and influence on community WASH behaviour. Staff_IJZ07 reports how the difference in WASH practices at the hotel and at home has vanished over time as learnings from work are being applied at home: "[They were] very different initially, but our habits at the hotel turned out to become usual acts at home". Further, households tend to improve their sanitation facilities if they become homestays for tourists.

At the destination level, local community customs draw tourist interest. Culture and traditional events such as *bau nyale, nyongkolan* and *jaran kamput* are key attractions of Mandalika. Traditional ceremonies are usually performed on the beach, where there is no toilet access for local communities and no water to wash hands during the performance. The conditions exacerbate the potential for disease transmission, particularly during COVID-19 type pandemics, as social distancing is not practiced. These raise concerns that the lack of public hygiene/ environmental health in communities will impact tourism.

There is general agreement that WASH, as well as the preservation of culture, is the responsibility of the local government, due to existing regulations, whereas tourism development is driven by the

central government through ITDC. However, results suggest that government agencies work in silos. For example, the current ITDC plan only addresses water supply for luxury hotel complexes, whereas the provincial government plans the water supply systems to support the surrounding villages, and hotels located outside the ITDC complex. While ITDC engages the surrounding community in initiatives such as beach clean-ups, collaboration between local government and ITDC on WASH infrastructure is lacking.

Aside from siloed responsibilities, other barriers to creating successful system wide Inclusive WASH outcomes were identified. Participants were not happy with the way tourism development is managed with key informants reporting a lack of cooperation and collaboration between communities, government and tourism operators. The absence of synergy between parties limits effective tourism development. One key informant stated that the relationship between parties was: "Still under construction" (Informant_IJZ02), but also noted that there were no best practice models of how to improve the management of this multi-party relationship. Respondents stated that improved collaboration would contribute to improving human capacity to manage tourism development and foster wider engagement. Importantly, participants noted that, "The vision of developing tourism is in harmony" (Informant_IJZ06), "where all parties will be fully involved in developing the region" (Informant_IJZ01), referring to the importance to address the needs of the multiple destination stakeholders.

5. Discussion

5.1. System gaps and barriers

Using the Inclusive WASH in tourism framework for destinations presented in Figure 1, the analysis of the current state of Inclusive WASH in Mandalika hotels, the community and wider destination revealed barriers to enhancing destination wide Inclusive WASH outcomes within each of the system scales (Table 1). Examples include hotels lacking Inclusive WASH-at-Work frameworks, limited financial capacity of the community to invest in water and sanitation infrastructure (especially for disabled persons), and low capacity of the local government to manage tourism. Jarvis et al. (2010) identified barriers to the implementation of voluntary sustainability initiatives in tourism businesses, such as perceived costing, time requirements and lack of understanding of sustainability as a concept. Consequently, tourism businesses often consider voluntary sustainability initiatives as peripheral activities, rather than integrating them into daily operations (Tzschentke et al., 2008). Further, tourism bodies and authorities were traditionally tasked with marketing and selling a destination rather than managing complex problems (McKinsey & Company, 2020), pointing to a gap

in skills and experience addressing environmental sustainability and destination health concerns, and restricting beneficial Inclusive WASH outcomes.

Since Indonesia's independence, encounters between Indonesia and the 'West' have been shaped by past experience of colonisation and by political nation-building within Indonesia (Nessel, 2021). The tourism sector is a specific encounter which highlights the numerous constraints and gaps in the Mandalika destination system structure. Certain links between system elements, such as the hotels and community, government and community and between government agencies are weak or non-existent, limiting information flow and the opportunity to create positive flow-on effects. While these findings are new in a tourism WASH context, a lack of cross-sectoral government agency cooperation has been identified as a problem in tourism and climate change research (Tam, 2019). Previous studies have raised the concern of low density and limited connectivity of knowledge networks in destinations (Raisi et al., 2020), which reduces awareness and affects the potential for knowledge co-creation on complex problems such as environmental degradation (Loehr & Becken, 2021).

There are also barriers across the legal, regulatory, organisational, fiscal, informational, political and cultural elements of the WASH enabling environment which effect system elements and their connectivity, such as cultural factors which have implications for COVID safe practices. More intractably, the current regulatory and political environment fosters unbalanced power relationships between actors and thus restricts the implementation of an integrated development benefitting all stakeholders. Indeed, the enabling environment is geared towards supporting the tourism industry, particularly luxury hotels located in the developing state-owned ITDC complex where systems such as water supplies, including desalination, and waste management facilities will be provided by ITDC. However, WASH concerns including access to freshwater, management of sewage, and hygiene of staff extend beyond the geographic boundary of such complexes. Communities and smaller hotels outside the ITDC complex rely on local government to provide water infrastructure. Whilst the national Public Works Ministry has developed a master plan for bulk piped water supply to Mandalika, no stakeholder mentioned this future development during interviews. This asymmetry of power structures between stakeholder groups is not unique to Mandalika; it has previously been observed in Bali (Cole & Browne, 2015). While no conflicts over water have yet been recorded in Mandalika, there is evidence of these conflicts in other destinations in Indonesia (Cole & Browne, 2015; Sjah & Baldwin, 2014; Yusuf & Purwandani, 2020). The extensive growth plans for tourism coupled with the likely impacts of climate change, which increase the vulnerability of marginalised groups (Rao et al., 2019), indicate that water demands from tourism will significantly increase in the future.

Table 1 Existing gaps and barriers to creating Inclusive WASH through tourism.

System element	Gap or barrier
Hotels	- Hotels currently do not have frameworks in place to implement Inclusive WASH-at-Work programmes. - Awareness of WASH and Inclusion policies is low.
Community	- Low financial capacity to implement Inclusive WASH. - Knowledge gaps in safe and Inclusive WASH practices.
Local government	- Capacity to manage Inclusive tourism is low.
Links between hotels and community	- Anecdotal reports from staff that hotels had a some positive, but not consistent, impact on WASH behaviour at home. - Lack of awareness of the shared resources and environmental impact (?)
Connectivity of smaller hotels within system	- The capacity of smaller businesses to implement Inclusive WASH-at-Work and extend benefits to community is restricted due to limited financial and human capacity.
Links between government agencies and the community	- There is very limited inclusive community engagement in tourism planning, meaning many voices, especially those of women, the disabled/elderly and youth, are not considered in policy making and planning.
Links between government agencies	- There is limited communication and collaboration between governments at different system scales, i.e., the local government and national agency supporting ITDC. - There is limited horizontal communication and collaboration between government agencies representing different sectors.
Regulatory and political enabling environment	- The national government, through ITDC, influences planning and regulation of WASH infrastructure provided to hotels (mainly luxury) within the ITDC complexes, whereby hotels and the community outside the complex rely on infrastructure provided by the local government, creating very different conditions for tourism businesses. - The scope of large tourism development projects, such as those of ITDC, focuses on the tourism complex, but considerations of the wider destination are limited.
Cultural enabling environment	- Certain social norms, habits and cultural practices promote unsafe behaviour within the community, especially during COVID-19.

5.2. Opportunities and recommendations

Opportunities to address the barriers to facilitate Inclusive WASH outcomes, support tourism's recovery and meet respondents' vision for the sustainable development of the industry are discussed below.

5.2.1. Inclusive WASH-at-Work in hotels

While limited, some signs of synergies between system levels, such as feedback between hotels and the community, already exist. For example, hotels can create WASH awareness and contribute to changed staff behaviours. This may be linked to the higher sanitation coverage in Kuta Mandalika, the tourism hotspot in Mandalika, than in surrounding villages (MoH, 2020). Nevertheless, more work is needed to ensure households have the facilities and means to implement and maintain Inclusive WASH behaviours learnt and practiced at work.

The COVID-19 pandemic has raised questions of vulnerability and intersections with inequality. For example, low paid tourism jobs mainly held by women are being disproportionately affected (Gössling et al., 2020), and a lack of accessible infrastructure for disabled persons in communities increases risk. Results of this study show that many hotel staff have maintained personal hygiene primarily for the benefit of hotel guests, indicating a lack of awareness of the benefits of hygiene practices to stop a spread of disease between tourists (work) and the community (home) and vice versa. These concerns may be addressed by strengthening existing system links. Many hotels already implement WASH practices but there is an opportunity to expand their influence to support a destination-wide approach, e.g. by improving staff training on Inclusive WASH to encourage staff behaviour change at home. Research on changing WASH behaviours highlights the importance of addressing both the external environment (e.g. access to a handwashing stations), and behavioural determinants which influence how the brain and body interact with that environment (Aunger & Curtis, 2016; Martin et al., 2018). Increasing the use of evidence-based behaviour change approaches, such as environmental cues or 'nudges' (Dreibelbis, 2016), can improve the effectiveness of interventions. Hotels can use such methods to develop targeted messages for staff to practice effective hygiene and sanitation at work and at home. Linking the benefits of personal hygiene practices to that of family members and broader social norms will enhance the uptake of practices at home more consistently.

Supplying water is a shared responsibility of local government, PDAM, community and household depending on the location. Creating demand for improved sanitation and then ensuring safe sanitation service provision is also a joint responsibility shared across local government, households and private sector. Recognising that addressing WASH gaps is not only the responsibility of tourism businesses, it is worth highlighting that hotels can contribute to improving the contextual environment (water and sanitation access) of staff at home through CSR initiatives. In so doing hotels help reinforce positive feedback loops which enhance destination health and cleanliness. The capacity to implement CSR initiatives may vary between hotels, especially given the economic

impact COVID-19 has had on the sector, and thus may take different forms. Examples include supporting existing government-endorsed initiatives, such as *Sanitasi Total Berbasis Masyarakat* (Community Based Total Sanitation), by providing cash or in-kind donations to help subsidise household latrines or water treatment, allowing staff to volunteer in communities, encouraging tourists to make a financial contribution, and ensuring disabled people are included.

5.2.2. Policy and planning

To avoid the water stress experienced by other highly developed tourist destinations across South-East Asia (Becken et al., 2013), water infrastructure should be built in line with the scale of resort developments, community needs and rights, and total water resource availability. Tourism development can contribute to Inclusive water and sanitation infrastructure development (Wall & Mathieson, 2006). The secure supply of freshwater to the community needs to be integrated as a central goal of infrastructure development, and feedback loops should be created which support the sustainable and equitable use of scare resources to meet the breadth of targets associated with SDGs 6 and 5. As household water stress disproportionally affects women (Cole, 2017) community representatives should encompass the breadth of inclusion and be engaged in community needs assessments and development planning.

Keller (1987) notes that tourism development leads to external control and management and suggests that to avoid conflict, decision making should remain with local authorities, as these are likely to understand and act upon the priority needs of the local community. The situation in Mandalika requires efforts to enhance vertical collaboration across government decision making levels to synergise policies from central and local government and ensure top-down development considers the needs of local people and small tourism businesses. Further, cross-sectoral issues require integration of policies across sectors. For example, there is specific mention of the obligations of the private sector/industry to provide WASH in the regulations of the MoH (2016), and there is a need for tourism policies and plans to translate what this means for tourism businesses to enhance policy awareness. These should be integrated in the Ministry of Tourism's new accreditation for tourism businesses which is developed in preparation of the reopening of tourism in Indonesia (Ministry of Tourism and Creative Economy, 2020). Feedback loops may be created through verification of compliance with regulations by supporting agencies, a lack of which has also been observed elsewhere in Indonesia (Yusuf & Purwandani, 2020).

In other destinations, which have experienced rapid tourism growth, such as Fiji, system links were purposefully created to ensure tourism development contributes to the community. This includes the provision of community piped water supplies with household connections, by making it part of

development and land leasing agreements or paying for it from lease money (Scheyvens & Russell, 2012). Whilst such models may not directly translate to Indonesia (which does not have the same customary land ownership arrangements), the principle of hotels taking on a stewardship role and contributing to improving the inclusivity of water and sanitation conditions of host communities should be integrated into tourism plans in Mandalika and policies at a broader scale to inform development of new tourism destinations in Indonesia. The Community-Centred Tourism Framework developed by Higgins-Desbiolles et al. (2019) provides a mechanism to place tourism in the context of society and could be used to inform an inclusive tourism development process: by involving community in planning and decision making, developing a mechanism for tourism businesses to seek social contracts to conduct business, and helping tourism agencies, associations and bodies shift their mindset from servicing guests to servicing the community and framing tourists as guests instead of consumers.

5.2.3. Engagement and collaboration

Previous research on destination systems found that gathering decision makers from different sectors can enhance their holistic understanding of the problem (Loehr, 2020). Helping stakeholders see problems through the lens of others may enhance their holistic understanding of the Inclusive WASH potential and the broader physical, social, cultural and economic context of Mandalika.

To achieve the benefits of Inclusive WASH across all scales, the willingness for collaboration needs to be improved by all stakeholders. This applies to the tourism authority which needs to engage with local government, industry and the community for inputs into policy making, but also to industry (hotels may support or encourage activities organised by hotel associations, potentially in collaboration with the local government, such as beach clean-up days), and importantly to the community, which should be an active partner in planning processes. Opportunities to enhance collaboration exist vertically, across system scales, but can also operate horizontally, between community groups or government agencies. For example, existing multi-stakeholder platforms could be expanded to include representatives of the tourism sector. In Mandalika, the Working Group of Drinking Water and Environmental Health, a multi-stakeholder platform in the WASH sector, could expand to include ITDC, tourism agencies and hotel representatives. Conversely, tourism associations could invite WASH stakeholders to their meetings. Such forums would provide a platform for discussion, prioritisation and implementation of destination-wide Inclusive WASH initiatives concerning WASH risks and needs of all stakeholders, water stewardship, commercial challenges and health risk assessments, COVID-19 responses and recovery, climate change risks and impacts, and actions required to maintain Mandalika as a desirable tourist destination. As part of

such discussions, sector specific Inclusive WASH-at-work tools should be developed drawing on existing frameworks (ILO 2016; UNICEF 2019). These tools should contextualise Inclusive WASH-at-work requirements and best practices and be accessible to accommodation providers.

6. Conclusion

The research demonstrated that the tourism sector's implementation of an integrated, destination-wide approach to Inclusive WASH-at-Work can contribute to SDGs 5 and 6 and improved workplace WASH practices can support tourism's recovery from COVID-19.

The examination of existing WASH practices in hotels in Mandalika, Indonesia, across several destination system scales, highlighted gaps and barriers in system elements, system structure and the enabling environment. Three opportunities to address these and to deliver improved, destination-wide Inclusive WASH outcomes through hotels are provided. First, to develop a coordinated and inclusive destination-wide approach that identifies hotels' responsibilities and facilitates engagement and collaboration between stakeholders. This approach can reduce the negative gendered impacts of increasing water scarcity and tourism downturn on women's work burdens and economic independence. Second, to protect human health through improved Inclusive WASH-at-Work programs. These benefit tourists and communities because hygiene practices break disease transmission pathways, thereby contributing to destination value and attractiveness. Hotels that implement Inclusive WASH-at-Work programs also can deliver benefits 'over the fence' to local communities and the environment. And third, to adapt the conceptual framework to address Inclusive WASH issues across destination scales. For example, the opportunities identified may inform the integration of Inclusive WASH into tourism development and recovery in other South-East Asian destinations experiencing water stress.

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