

Assessment of regenerative hospitality

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ABSTRACT: This article addresses the lack of practical tools for assessing regenerative hospitality in hotels. The study provides a systematic approach to developing a practical tool to assess and promote regenerative practices in the hospitality industry. The literature review identified seven components as potential drivers of regenerative hospitality: *regenerative mindset, interconnectedness, place integration, localised impact, well-being, co-creation* and *dynamism*. Results of pilot testing showed the first five as central to regenerative hospitality, while the latter two are perceived to be less supported and will require further refinement. The tool enables systematic assessment and improvement of regenerative practices and offers practical insights for hotel managers. At the same time, the moderate inter-rater reliability indicates that some criteria might require further specification. It is further recommended to test the tool in a wider set of hospitality settings and refine the assessment by engaging different stakeholder perspectives.

KEYWORDS: content validity, instrument construction, pilot testing, reliability

Introduction

In recent years, regenerative hospitality has emerged as a potential evolutionary step for the industry, questioning the efficacy of conventional sustainability tools (Ateljević & Sheldon, 2022). Rooted in regenerative development, this paradigm envisions tourism and hospitality as interventions surpassing sustainable practices to enhance places, communities and guests. This under-researched field sparked a personal interest as it presented an opportunity to explore a more holistic and impactful approach to hospitality.

Amidst a societal shift in social-ecological consciousness, "regeneration" symbolises a commitment to fostering respectful relations between humans and nature (Dredge, 2022). Critiques of the UN-led sustainable development agenda focus on its growth imperative and negative impacts, urging a shift from "me" to "we" (Pollock, 2015; Higgins-Desbiolles, 2018). Despite sustainable development efforts, critics argue that merely reducing harm is insufficient (Chassagne & Everingham, 2019). Regenerative hospitality emphasises deeper connections with local ecosystems and communities, advocating for hospitality to actively enhance the well-being of its surroundings rather than simply avoiding harm. Thus, hotels, crucial in the destination ecosystem, are seen as regenerative cornerstones (Inversini et al., 2023).

Challenges to the hospitality industry's conventional model arise from its degenerative effects, such as overexploitation of resources and community displacement, prompting calls for alternative approaches prioritising community and place over industrial growth (Hall, 2019; Pollock, 2019; Cave & Dredge, 2020). As the hospitality sector grapples with these challenges, regenerative hospitality offers a vision where the industry

transcends its role as a mere economic driver and becomes a source of well-being for both the environment and the people who live there. To realise this vision, this study seeks to tackle a central design challenge: How can a tool be constructed and evaluated to assess regenerative hospitality practices in hotels? In response to this question, the research focuses on four primary objectives: identifying the main drivers of regenerative hospitality, operationalising these drivers into measurable indicators, addressing the practical aspects of administering the tool, and ensuring the tool's reliability and validity.

The literature highlights concerns about the lack of scientific evidence on the impact of practical measures in regenerative hospitality (Lindell et al., 2021; Zaman et al., 2022), with questions persisting about the idealisation and implementation challenges of this approach (Thurrow, 2023). Definitions of regenerative tourism and hospitality vary, complicating the issue even further. Despite growing interest in regenerative tourism, research on regenerative hospitality remains limited, with recent insights from Inversini et al. (2023) indicating an underexplored research landscape. To address this gap, a prototype assessment tool for regenerative hospitality was designed to facilitate self-reflection for hotels, encouraging contributions to the ecosystem and nurturing regenerative hospitality from within rather than promoting an individualistic or competitive mindset (Dredge, 2022).

In designing an assessment tool, reliability is an essential criterion for its usefulness and effectiveness. Since the current hospitality industry may not be considered fully regenerative, the prototype's development and accompanying research are aimed at moving the conversation from idealism toward actionable interventions to facilitate practical discourse on regenerative hospitality.

Literature review

This literature review focuses on key drivers of regenerative hospitality derived from the current academic discourse on regenerative hospitality. Due to the scarcity of specific literature on regenerative hospitality, it draws insights from the related field of regenerative tourism. The focus is the interaction of hospitality businesses with the local ecosystem, while distinguishing regenerative hospitality from the broader scope of regenerative tourism (Inversini et al., 2023).

Regenerative hospitality

Regenerative hospitality is defined as a framework that not only mitigates harm, but also actively contributes to the restoration and regeneration of the environments and communities in which it operates. In the literature, this is referred to as net positivity, where the goal is to enhance and improve the social and natural ecosystems surrounding the hospitality establishment, rather than merely sustaining them (Inversini et al., 2023). Pollock (2019) highlights that success in this context involves fostering adaptation, resilience, creativity and collaboration, thus providing greater meaning for guests and hosts.

A systemic approach, advocated by Hahn and Tampe (2020), views regenerative hospitality businesses as integral components contributing to the health of social-ecological systems. This framework sets the stage for delving into the dimensions of regenerative hospitality in the subsequent sections of this literature review.

Drivers of regenerative hospitality

Regenerative mindset

The regenerative mindset shifts from viewing humans as separate from nature to recognising a partnership with it, prioritising purpose over profit and emphasising long-term gains (Pollock, 2019; Dredge, 2022; Inversini et al., 2023). This mindset also affects guests, whose experiences should be transformative, inspiring them to flourish both during and after their stay (Pollock, 2019; Major & Clarke, 2022). For guests, finding purpose on holiday by contributing to environmental quality enhances well-being, resulting in transformative experiences (Pollock, 2019; Thurow, 2023).

Interconnectedness

Regenerative hospitality emphasises the interconnectedness of all elements, fostering a reciprocal relationship between managers and the environment as living systems. Well-being arises from connections to nature, community and oneself, enhancing the overall living system (Whiteman & Cooper, 2000; Reed, 2007; Major & Clarke, 2022; Inversini et al., 2023; Thurow, 2023). This holistic approach views guests as having complete experiences, but living beings playing specific roles in particular places and times, and not just segments to be targeted (Pollock, 2019).

Place integration

The harmonious blending of ecological embeddedness, community integration and preservation of local wisdom defines place integration in regenerative hospitality. This approach underscores the business's need to integrate seamlessly with the local environment, incorporating local knowledge and fostering a sense of interconnectedness (Whiteman & Cooper, 2000, cited in Inversini et al., 2023; Inversini et al., 2023).

Localised impact

Regenerative hospitality emphasises creating localised impacts by thoroughly understanding stakeholders and living systems in specific locations. Community-based practices at a micro-scale tend to have more significant effects than global initiatives, promoting sustainability and pro-environmental practices (Reed, 2007, cited in Inversini et al., 2023; Duxbury et al., 2020; Inversini et al., 2023).

Co-creation

Co-creation involves integrating context-specific knowledge from local actors with scientific knowledge, fostering meaningful exchanges between travellers and the community. This dynamic interplay, highlighted by Inversini et al.'s (2023) proposed framework, emphasises collaboration over individualism, establishing meaningful connections through co-creation (Boluk & Panse, 2022; Major & Clarke, 2022; Rockström et al., 2023).

Well-being

Regenerative hospitality strongly emphasises stakeholders' well-being, which is interconnected across guests, stakeholders, the community and nature. Active engagement in natural settings and a shift in mindset toward eco-consciousness contribute to overall well-being, aligning with the primary goal of a tourism experience as well-being rather than a mere activity or destination (Pollock, 2019; Lindell et al., 2021; Zaman et al., 2022; Rockström et al., 2023).

Dynamism

Regenerative hospitality is dynamic, adaptive and innovative, creating fertile conditions for life to thrive. This characteristic, described as flourishing or thriving, involves continuous adaptation, recognising the complexity of the system for long-term flourishing (Pollock, 2019; Matunga et al., 2020; Dredge, 2022; Mathisen et al., 2022; Inversini et al., 2023).

Design challenge

The disparity between theoretical concepts and the practical implementation of regenerative hospitality presents a challenge. This leads to the following design challenge: Constructing and evaluating a tool for assessing regenerative hospitality in hotels. To design and test the assessment tool, the following issues need to be addressed:

- (1) Determining the main drivers of regenerative hospitality;
- (2) Operationalising the drivers and selecting appropriate indicators;
- (3) Understanding the practicalities regarding administering the tool and processing the data; and
- (4) Assuring the reliability and validity of the tool.

Method

The study aimed to construct and evaluate an assessment instrument for regenerative hospitality in hotels, guided by seven drivers identified through a literature review. These seven drivers formed the foundation for the prototype of the assessment tool. Inter-rater reliability was tested using quantitative data to evaluate the agreement between assessors of regenerative hospitality, checking for potential interpretational differences.

This was crucial due to the instrument's novelty, as it helped promote consistency and reduce subjectivity.

Content analysis was conducted to ensure the validity of the prototype's content, determining if academics agreed with the selected drivers and how they were included in the tool, with a survey with a five-point scale and some open-ended questions for additional insights.

The inter-rater reliability test participants were given consent forms and assessment questions in advance. During prototype testing and interviews, two dedicated assessors were assigned to each hotel and briefed on completing the assessment based on observed or reported practices. Depending on availability, four interviews were conducted in person and one online, with assessors posing questions and one filling in the assessment form based on responses.

Data analysis utilised SPSS and Excel. Inter-rater reliability was measured using Cohen's kappa for overall agreement and significance. Experts rated the relevancy of indicators as high, moderate, or low, as was the overall relevancy of the assessment tool.

Sampling

Convenience sampling was used, with participants contacted via email and telephone based on the authors' connections and internet searches. To ensure geographical representation, the sample included a diverse selection of privately owned hotels or smaller organisations, such as bed and breakfasts, resorts and retreats in the Netherlands, Indonesia and Thailand. Six hotels participated, represented by owners or sustainability-focused employees. Three assessors participated: two knowledgeable non-experts and one non-expert with limited knowledge of regenerative hospitality, ensuring diverse perspectives. Additionally, four academics in sustainability or regenerative-related subjects participated.

Instrumentation

The instrumentation outlines a systematic approach, including mapping the drivers of regenerative hospitality through related literature, breaking down the drivers into specific indicators relevant to the regeneration context, and formulating assessment questions, which are both open-ended and closed-ended, based on the indicators.

Table 1 shows the mapping of the drivers of regenerative hospitality and their corresponding indicators, serving as a

comprehensive instrument for assessing regenerative practices in the hospitality industry. The table outlines seven key drivers: *regenerative mindset*, *interconnectedness*, *place integration*, *localised impact*, *co-creation*, *dynamism* and *well-being*. Each driver is associated with specific indicators that reflect essential aspects of regenerative hospitality. For instance, the regenerative mindset includes indicators such as a *holistic world view*, *systems thinking* and being *purpose-driven*, while *ecological embeddedness*, *social-ecological connection* and *community inclusivity and involvement* highlight interconnectedness. The systematic approach detailed in Table 1 provides a foundational structure for assessing regenerative practices in hospitality.

Results

This section presents the findings from implementing the assessment instrument and evaluating the proposed prototype for measuring regenerative hospitality in hotels. Building upon the conceptual and methodological framework outlined in the previous sections, the results are organised to provide insights into the four main issues of the design challenge.

Determining the main drivers of regenerative hospitality

The main objective of this study was to validate the seven main drivers of regenerative hospitality. This section presents the results from surveying four sustainability academics from a university in Friesland, focusing on the relevance of the seven main drivers' indicators for regenerative hospitality.

Table 2 shows the relevance of various indicators associated with the key drivers of regenerative hospitality. The overall results indicate that 66% of the indicators were considered "highly relevant", demonstrating substantial support for the importance of these indicators in fostering regenerative hospitality. Among the drivers, the *regenerative mindset* performed particularly well, with highly regarded indicators such as *holistic world view* with 100% of responses rating it as "highly relevant". Similarly, the *place integration* and *localised impact* drivers also demonstrated strong performance, especially with indicators like *community engagement* and *local sourcing*, which were rated as "highly relevant".

On the other hand, the *dynamism* and *co-creation* drivers showed more varied results, with a significant portion of their indicators rated as only "moderately relevant". For example, indicators like the *adaptive social capacity* and *proactive*

TABLE 1: Regenerative hospitality assessment tool

Drivers	Regenerative mindset	Inter-connectedness	Place integration	Localised impact	Co-creation	Dynamism	Well-being
Indicators	Holistic world view	Ecological world view	Ecological embeddedness	Social licence & consent	Intelligence & source diversity	Adaptive social capacity	Well-being hospitality experience
	Systems thinking	Social-ecological connection	Community engagement	Local sourcing	Proactive knowledge Exchange	Adaptive environment Capacity	
	Purpose-driven	Community inclusivity & involvement	Community resilience	Nature regeneration	Cultural integration	Complexity management	
	Collaborative mindset Leadership		Local tradition for community impact				

TABLE 2: Relevance of regenerative hospitality indicators

Drivers	Indicator(s)	Low relevance	Moderate relevance	High relevance
Regenerative mindset	Holistic world view	0%	0%	100%
	Systems thinking	0%	25%	75%
	Purpose-driven	0%	25%	75%
	Collaborative mindset	0%	37.5%	62.5%
	Leadership	0%	0%	100%
Interconnectedness	Ecological world view	0%	25%	75%
	Social-ecological connection	0%	25%	75%
	Community inclusivity & involvement	0%	33%	67%
Place integration	Ecological embeddedness	0%	25%	75%
	Community engagement	0%	0%	100%
	Community resilience	9%	46%	45%
	Local tradition for community impact	12.5%	12.5%	75%
Localised impact	Social licence & consent	0%	37.5%	62.5%
	Local sourcing	0%	0%	100%
	Nature regeneration	0%	25%	75%
Co-creation	Intelligence & source diversity	25%	50%	25%
	Proactive knowledge exchange	25%	50%	25%
	Cultural Integration	0%	25%	75%
Dynamism	Adaptive social capacity	50%	50%	0%
	Adaptive environment capacity	0%	37.5%	62.5%
	Complexity management	25%	50%	25%
Well-being	Well-being hospitality experience	0%	33.3%	66.6%
Total		7%	28%	66%

knowledge exchange indicators under these drivers did not receive any ratings in the "highly relevant" category, with some being marked as "not relevant" or "slightly relevant". This result clearly differentiates how the various drivers and their indicators are perceived for their relevance to regenerative hospitality practices.

Operationalising the drivers and selecting appropriate indicators

The process was designed to ensure each indicator reflects theoretical constructs and is practical within the hospitality industry. It involves several key steps, from conceptual breakdown to practical application. Academic validation was sought after prototype creation.

Development of indicators

The selection of indicators began by identifying seven main themes of regenerative hospitality from the literature: *regenerative mindset*, *interconnectedness*, *place integration*, *localised impact*, *co-creation*, *well-being* and *dynamism*. Each theme was dissected into smaller, more manageable concepts or keywords, forming the basis for formulating operational indicators.

Example of indicator development

Regenerative mindset: Smaller concepts such as *systems thinking* and *holistic world view* were identified from the broader theme. An example of an operationalised question derived from these concepts is: How do you evaluate the potential impact of a new policy or initiative on various stakeholders, departments, and the overall guest experience before implementation?. This question aims to gauge the depth of consideration given to all aspects of operations and their interconnected effects.

Operationalisation of concepts

For each smaller concept, questions were developed with specific indicators to ensure relevance to the hospitality context. These questions (both structured and open-ended questions) were designed to divide responses that could be categorised into three levels: *conventional*, *sustainable* and *regenerative*. This categorisation helps differentiate the extent to which practices are embedded in the regenerative approach versus demonstrating a traditional or sustainable approach.

Distinction among levels

The distinction among the three levels (conventional, sustainable and regenerative) was defined for each indicator or question to aid in the practical assessment of responses. In general, the distinction is:

- Level 0 (conventional): Practices operate independently of their surroundings with minimal or no impact on the local ecosystem (all the living and non-living beings of the place: nature and the residents or the community);
- Level 1 (sustainable): Involves policies and practices that consider the interaction with the ecosystem to some extent, focusing on reducing harm and incorporating sustainability principles; and
- Level 2 (regenerative): Represents policies and practices that actively enhance and improve the ecosystem, demonstrating a commitment to leaving the environment better than before.

Another type of question in the assessment, close-ended, does not require the assessor to fill in the three levels. For example: Have you collaborated with other hotels, local businesses, or community organisations to create mutual benefits and support local development?. The participant answered yes or no. If yes, they must highlight specific practices, allowing assessors to identify regenerative hospitality's main and secondary drivers.

Administering the tool and processing and reporting the data

This section of the design challenge evaluates the effectiveness of the administration process for the regenerative hospitality assessment tool. Although regenerative hospitality is supposed to encompass the perspectives of guests, the local community and the hospitality provider, the prototype of the assessment tool focused on assessing regenerative hospitality practices with the hospitality provider as the primary unit of analysis.

Prototype testing and administration process

The assessment tool was tested for effectiveness and applicability through a well-structured administration process to ensure comprehensive understanding and accurate execution by participants. Hotel representatives participated by answering assessment questions via in-person or online interviews, or by filling in the assessment form following an introduction to the prototype testing. Participants engaged with the tool through in-person sessions, recorded interviews, or pre-filled forms, allowing flexibility and enhancing feedback quality. Two dedicated assessors were assigned to each participating hotel, with three assessors involved in the testing, who were briefed on completing the assessment based on observed or reported practices. Additionally, participants received documentation explaining the prototype, assessment criteria and regenerative principles, ensuring effective alignment of hotel practices with the specified regenerative themes.

Reporting of data

A report of the results from a participating company shows varied performance across different drivers of regenerative hospitality. The percentages reflect the extent to which the company meets the criteria for each driver. As shown in Figure 1, the company scores highest in *place integration* with 63% out, followed by *co-creation* at 50% and *interconnectedness* at 47%. The *regenerative mindset* and *localised impact* drivers both stand at 44%. The company scores lower in *well-being* and *dynamism*, with 32% and 25% respectively.

Observations from pilot-testing

During the testing phase, several key observations were made that influenced the effectiveness of the tool's administration. The responses to close-ended questions specifying hotels' practices often incorporated multiple regenerative drivers, reflecting the holistic approach of their sustainability practices. This complexity posed challenges in aligning responses with just one or two drivers in close-ended questions. Academic feedback further emphasised the necessity for clearer and more specific indicators, particularly in defining terms like "local", to effectively measure community integration indicators across different geographical and cultural contexts.

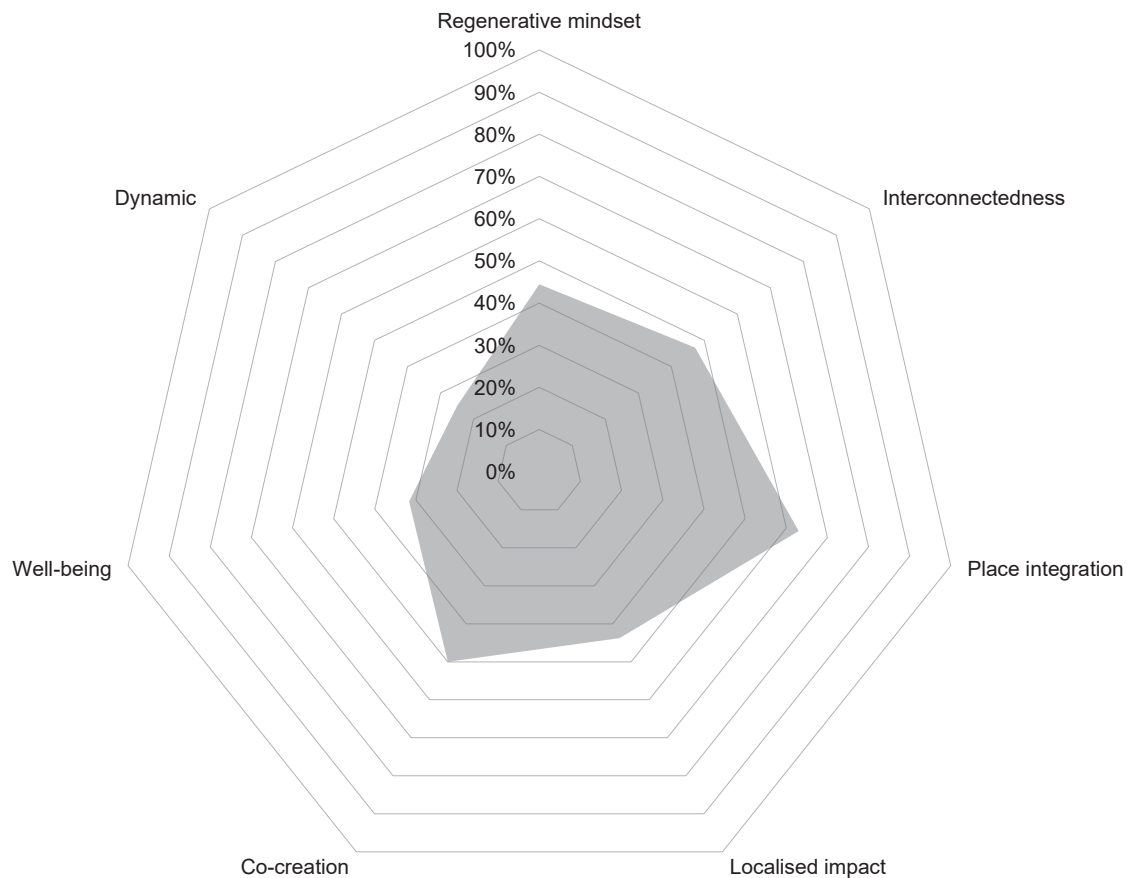


FIGURE 1: Reporting results of one of the participating companies

Reliability and validity of the tool

Content validity

The survey with academics, as shown in Table 2, provides an indication of the relevance of indicators for each of the seven drivers used to evaluate the validity of the assessment tool for measuring regenerative hospitality practices. Table 2 presents the combined relevance scores from four experts on these indicators. The results indicate that 66% of the indicators were rated with high relevance, 28% moderate relevance and 7% low relevance. Most of the indicators fall into the "relevant" and "highly relevant" categories, suggesting that the assessment tool is generally well-aligned with its intended purpose, although there are areas where the tool could be refined or adjusted to better capture the themes of regenerative hospitality.

Inter-rater reliability

Cohen's kappa measured inter-rater reliability, divided into two analyses due to variable differences. The first analysis involved the assessment of six hospitality companies using 21 open-ended questions, requiring two assessors to categorise responses as L0 (conventional), L1 (sustainable), or L2 (regenerative). The second analysis involved close-ended questions (16 questions), where assessors chose the main regenerative hospitality drivers.

Inter-rater test for open-ended questions

The inter-rater agreement using the kappa coefficient was 0.497, which is generally interpreted as indicating moderate agreement between raters (Table 3). The significant *t*-value lends statistical weight to the tool's reliability; however, the moderate value of kappa also points to opportunities for improving the tool to achieve a higher degree of inter-rater reliability, specifically regarding the separation of criteria that defines conventional (L0), sustainable (L1) and regenerative (L2).

Inter-rater test for close-ended questions

Each of the 45 valid cases represents an assessment of six hotels by two assessors, focusing on instances where the hotel participants answered "yes" to the closed-ended questions and

TABLE 3: Cohen's kappa for open-ended questions

Rater 1	Rater 2			Total
	L0	L1	L2	
L0	33	6	2	41
L1	12	40	7	59
L2	2	11	13	26
Total	47	57	22	126

TABLE 4: Cohen's kappa for close-ended questions

Rater 1	Rater 2							Total
	Regenerative mindset	Inter-connectedness	Place integration	Localised impact	Co-creation	Well-being	Dynamic	
Regenerative mindset	3	5	1	0	0	1	1	11
Interconnectedness	1	3	1	0	0	0	1	6
Place integration	1	1	11	1	0	0	0	14
Localised impact	1	0	1	5	0	0	0	7
Co-creation	3	0	1	0	1	0	1	6
Well-being	0	0	0	0	0	1	0	1
Total	9	9	15	6	1	2	3	45

described their practices. Cases where participants answered "no" were excluded. The kappa analysis was conducted to evaluate the agreement between assessors on assigning the drivers based on the responses to the closed-ended questions and the descriptions of practices provided by the participants.

The inter-rater agreement using kappa was 0.414, which is generally interpreted as indicating moderate agreement between assessors (Table 4). This level of agreement highlights some consistency among assessors, particularly in responses related to *place integration*, where there was a higher level of agreement and, to some extent, *localized impact*. However, the moderate kappa value also suggests discrepancies in thematic alignment, especially in *regenerative mindset* and *interconnectedness*. The lower agreement on categories like *co-creation* also indicates potential areas for refining the tool to enhance inter-rater reliability.

Observations and interpretational variability

Several factors contributed to the variability in agreement among assessors:

- Ambiguity in definitions: The definitions of the seven main regenerative hospitality drivers were hard to distinguish, leading to different interpretations when assessors applied these drivers to specific hotel practices; and
- Breadth of hotel practices: In some cases, hotel responses were broad and encompassed several aspects of regenerative hospitality. This breadth made it difficult for assessors to determine which regenerative drivers were most strongly represented in each response, particularly when evaluating closed-ended questions.

Discussion

This section includes a reflection and evaluation of the design and pilot testing of the regenerative hospitality assessment instrument. To what extent did we accomplish the design challenge of developing a tool to assess regenerative hospitality in hotels? First, we will synthesise the theoretical and conceptual insights from the literature review with the empirical findings to propose a new framework that identifies and evaluates the main drivers of regenerative hospitality. Secondly, we will provide some recommendations for further research and development of the assessment tool.

Assessing regenerative hospitality

The research suggests that regenerative hospitality is multifaceted. Of the seven tested drivers of regenerative hospitality, specific drivers have demonstrated greater relevancy

and/or inter-rater reliability, establishing them as integral to the framework, while others may require refinement. This study supports five main drivers of regenerative hospitality from the initial seven drivers: the *regenerative mindset*, *interconnectedness*, *place integration*, *localised impact* and *well-being*. These drivers are foundational to achieving regenerative outcomes in hospitality establishments.

The main drivers

Regenerative mindset

The survey findings underscore the importance of adopting a regenerative mindset among academics, identifying it as essential for fostering commitment to regenerative practices. This mindset prioritises purpose over profit, a key indicator highlighted by Inversini et al. (2023). It also aligns with the broader framework of regeneration, which calls for a collective ecological consciousness (Dredge, 2022). While the *regenerative mindset* is undeniably significant, its close association with *interconnectedness* suggests a need for a clearer distinction between the two.

Interconnectedness

Interconnectedness is considered important, especially social-ecological connection, which aligns with emphasising the importance of holistic thinking and ecological embeddedness (Dredge, 2022). In terms of inter-rater reliability, similar refinement is needed as a regenerative mindset.

Place integration

Place integration is highlighted as a significant driver in the alignment with local environments and communities, particularly through *ecological embeddedness* and *community engagement* indicators. These indicators demonstrate that understanding the systemic relationship between nature and community is essential for businesses to integrate effectively with local landscapes (Inversini et al., 2023). However, the proposed indicators, such as *local tradition for community impact*, appear less relevant and may require further refinement, while literature emphasising that a holistic well-being approach, deeply rooted in indigenous traditions, asserts that human well-being is cultivated through connections to nature, relationships within the community and self-awareness (Major & Clarke, 2022).

Localised impact

Localised impact is a crucial driver, particularly through indicators like local sourcing. Sustainable local food production is seen as a foundational element for community well-being, which, in turn, can enhance food experiences that positively affect travellers' well-being (Fountain, 2022). This underscores the importance of place-based practices and a deep understanding of stakeholders' needs (Reed, 2007). Such an approach differentiates regenerative efforts from broader sustainability initiatives by emphasising the significance of micro-scale interventions (Duxbury, 2020).

Well-being

Well-being is a relevant driver, aligning with the notion that tourism (hospitality context applicable) experiences should prioritise holistic well-being (Liu et al., 2023). While well-being is the overarching goal, it can also function as a by-product or secondary driver, contributing to community cohesion and transformative learning (Thurow, 2023).

Drivers requiring refinement

Co-creation

The role of *co-creation* as a driver is less supported than anticipated. The expected backing for the *proactive knowledge exchange* indicator was not as strong despite its acknowledged importance (Boluk & Panse, 2022; Major & Clarke, 2022). Similarly, the intelligence and source diversity indicators did not perform as well as expected. While Rockström et al. (2023) emphasise that effective knowledge co-production requires blending context-specific insights from local actors with scientific knowledge, the findings did not fully reflect this. Additionally, there are areas for improvement in inter-rater reliability. This driver might be more relevant in regenerative tourism than in regenerative hospitality, given the higher level of stakeholder interaction involved (Bellato et al., 2022a; Cave et al., 2022).

Dynamism

The dynamism driver, particularly the *complexity management* indicator, proved to be less relevant than anticipated. This was unexpected, considering the literature emphasises the importance of flexibility in navigating complex challenges (Dredge, 2022), though these insights primarily apply to regenerative tourism. There is potential to refine this assessment for better applicability within the hospitality context. Conversely, the *adaptive environment capacity* indicator is recognised as relevant, resonating with the idea that regeneration involves fostering conditions conducive to life. This approach is rooted in the understanding that life and living systems are inherently self-organising, continuously adapting, evolving and changing (Pollock, 2019). However, this relevance does not fully extend to the adaptive capacity of social indicators.

Complexity and flexibility in assessing regenerative hospitality

Challenges in measurement

Current methods struggle to precisely measure the extent of ecosystem enhancement by regenerative practices. While the commitment to regenerative drivers is prioritised, evaluating tangible outcomes remains elusive. Lindell et al. (2021) advocate for a diverse growth agenda that transcends traditional metrics, emphasising the need for nuanced measurement approaches.

Developing assessment tools for regenerative hospitality presents a challenge: finding a balance between clarity and flexibility. While clearer definitions and specific metrics are beneficial, overly restrictive frameworks can hinder innovation in regenerative practices, which inherently resist standardisation and require adaptability to local environmental and cultural contexts (Inversini et al., 2023). Thurow (2023) emphasises the uniqueness of each living system, warning against uniform approaches. The distinction between conventional, sustainable and regenerative hotels is particularly blurred regarding community involvement and ecosystem integration. Conventional hotels focus on profit maximisation with little regard for environmental and social impacts, while sustainable hotels aim to reduce harm through practices like energy conservation and waste management without necessarily fostering active regeneration. In contrast, regenerative hotels go beyond sustainability by actively restoring ecosystems and deeply engaging with local communities, prioritising holistic well-being and resilience. However, despite these conceptual differences, practical distinctions are often difficult to enforce due to overlapping practices and regeneration's complex, context-dependent nature.

Geographical and cultural variations necessitate flexible assessment criteria. Factors such as distance from local communities influence the feasibility of certain regenerative practices, challenging standardised assessments. Questions and indicators must be formulated generically to accommodate diverse scenarios, allowing adaptation to different hotel types and locations.

Effectiveness of the administration process

The administration used a flexible multi-modal approach, facilitating broader participation and convenience. However, diverse methods may have introduced variability in the quality and depth of responses, highlighting the need for standardisation.

Hotel participants often implemented practices spanning multiple regenerative themes, complicating categorisation and indicating a need for more flexible assessment tools. Clearer definitions, especially of "local", are crucial for uniform interpretation across contexts. Addressing these nuances enhances the tool's applicability and effectiveness.

Moderate agreement among assessors suggests reasonable consistency in applying the assessment tool. However, variability in interpretation, particularly in subjective themes like *dynamism* and *co-creation*, underscores the need for enhanced assessor training and clearer criteria. Revising questions with lower agreement levels can improve reliability.

Enhancing assessor training is crucial for clarifying subjective themes and standardising assessment criteria. Incorporating flexible response options, such as scaling systems, acknowledges the interconnected nature of regenerative practices and provides a nuanced analysis. Effective training strategies include didactic and practical learning approaches and video or audio recordings for skill assessment, increasing inter-rater reliability by ensuring a shared understanding of criteria and consistent application across diverse contexts (Mwenge et al., 2022).

Theoretical contributions

The research contributes to regenerative hospitality's theoretical understanding by distinguishing it from sustainable practices. The concept of regenerative hospitality is explored through definition and operationalisation, providing a framework for further exploration and implementation.

The study enriches existing frameworks by integrating concepts from broader sustainability and regenerative development literature. This interdisciplinary approach enhances the theoretical foundation of regenerative hospitality, fostering a deeper understanding of its principles and implications. Moreover, the identification and validation of five key drivers — *regenerative mindset*, *interconnectedness*, *place integration*, *localised impact* and *well-being* — creates a robust theoretical framework for understanding how regenerative principles can be effectively operationalised in the hospitality sector. This framework advances the discourse by highlighting key differentiators between sustainability and regeneration, offering a dynamic approach that emphasises active contributions to environmental and social well-being.

Using a prototyping method to develop the assessment tool introduces a novel approach to research in regenerative hospitality. This methodology bridges the gap between theory and practice, ensuring that theoretical constructs are grounded

in practical reality. It also facilitates empirical testing and validation of theoretical concepts, enhancing the credibility and applicability of the research findings. Additionally, the real-world testing of the tool provides further validation, demonstrating that regenerative hospitality principles can be effectively implemented and assessed in operational contexts.

Identifying and validating key drivers of regenerative hospitality contribute to the concept's theoretical underpinnings. Understanding these drivers not only advances theoretical knowledge, but also provides practical insights for industry practitioners. This foundational knowledge guides further research and development in regenerative practices in the hospitality sector, ensuring the theoretical framework remains adaptable and relevant across various contexts.

Practical implications

The primary practical contribution of the research is developing an assessment tool for evaluating regenerative practices in hospitality establishments. This tool enables hotel managers to assess their current practices, identify areas for improvement, and take tangible steps toward becoming more regenerative. The real-world testing of the tool adds practical validation, demonstrating its effectiveness and utility in day-to-day hotel operations.

By providing a clear distinction between sustainable and regenerative practices, the research helps elevate industry standards in the hospitality sector. Moving beyond mere sustainability, the emphasis on regenerative practices encourages hotels to actively enhance their local communities' environmental and social fabric, thereby contributing to broader regenerative goals. Additionally, the tool's adaptability across different types of hospitality settings — such as urban, rural, and luxury or budget accommodations — highlights its potential for broad scalability and application in the industry.

The assessment tool developed through this research fosters deeper engagement among various stakeholders, including hotel owners, local communities and guests. By involving these groups in the assessment process, the tool builds a shared understanding and commitment to regenerative practices, ultimately leading to more impactful outcomes. Engaging these stakeholders aligns with participatory sustainability practices and strengthens the regenerative impact by incorporating diverse perspectives and needs.

Limitations

This research faces several limitations, including the scarcity of literature on regenerative hospitality, which necessitates reliance on related fields such as regenerative tourism. The sample is also restricted, predominantly consisting of participants from the Netherlands and a single university, which may affect the generalisability of the findings. Moreover, the content validation process may be biased due to the limited response categorisation options, potentially influencing the perceived relevance of assessment criteria and impacting the tool's validity. A notable limitation in inter-rater reliability is the moderate agreement among assessors, as indicated by Cohen's kappa values (0.497 for open-ended questions and 0.414 for close-ended questions). This reflects inconsistencies in how assessors categorised practices as conventional,

sustainable, or regenerative, underscoring the need for clearer distinctions between these categories. Discrepancies were particularly evident in subjective areas like *interconnectedness* and *co-creation*, where lower assessor agreement highlighted the necessity of refining definitions, guidelines and training to enhance the tool's consistency and reliability in future evaluations.

Recommendations for further research and development

Future research should focus on expanding the validation process by testing the assessment tool across a more diverse range of hospitality settings. This would help to establish the tool's effectiveness and reliability, ensuring its applicability across different contexts, including varying geographical and cultural environments. Such testing will ensure the tool's adaptability and its ability to address the unique challenges faced by different types of hotels, from urban resorts to eco-lodges in rural areas.

Another recommendation is that future research should focus on developing tailored assessment methodologies that consider the specific context of each establishment's geography. These methodologies should integrate with local environments and cultures, allowing for accurate and meaningful evaluation of regenerative practices. Additionally, refining the indicators in the tool to better capture localised conditions and community dynamics will improve its precision and relevance for different hospitality contexts.

Also, incorporating community feedback into assessment processes is essential for verifying claims of regenerative impact. Future research should explore strategies for effectively engaging local communities in the assessment process, ensuring alignment with their needs and aspirations. Another stakeholder to assess is guests, to explore if an establishment has created a transformative experience. Evaluating guest satisfaction in relation to their experience of regenerative practices could offer valuable insights into how hotels can enhance both customer experience and their broader regenerative goals.

Continuous refinement of the assessment tool based on iterative feedback and additional empirical testing is essential. This approach will help ensure the tool remains relevant and accurate in assessing regenerative practices within the dynamic hospitality field, maximising its impact and utility. Furthermore, developing more precise metrics to measure tangible outcomes — such as nature regeneration or community well-being — will enhance the credibility of regenerative practices and provide long-term evidence of their success.

Conclusion

This study has developed and evaluated an innovative assessment tool to measure regenerative hospitality practices in hotels. The research addressed the pressing need for practical instruments that can effectively discern and foster regenerative practices beyond the conventional scope of sustainability.

The study successfully identified and validated the key drivers of regenerative hospitality, which include a *regenerative mindset*, *interconnectedness*, *place integration*, *localised impact* and *well-being*. These drivers are pivotal for the hospitality sector's evolution from merely sustainable to genuinely regenerative practices, which seek to minimise harm and actively contribute to environmental and community enhancement.

This research contributes significantly to the theoretical understanding of regenerative hospitality, providing a solid framework for future academic inquiry and practical application. The assessment tool developed through this study offers a valuable resource for hotel managers and stakeholders, facilitating a deeper understanding of their current practices and guiding significant improvements towards regenerative outcomes. The real-world testing of the tool not only validates its practical utility, but also shows that regenerative practices can be feasibly integrated into day-to-day hotel operations, reinforcing the tool's effectiveness.

Looking forward, the implications of this research extend beyond the academic realm into practical applications in the hospitality industry. Hotels can use the findings and the tool to critically evaluate and enhance their operational strategies, ensuring they contribute positively to their local ecosystems and communities. The tool's adaptability for various settings promises scalability, paving the way for widespread adoption and impact.

As the hospitality industry evolves, the insights garnered from this research will undoubtedly play a crucial role in shaping future practices. We encourage ongoing refinement of the assessment tool and further exploration of regenerative practices, ensuring the industry can meet sustainability challenges with innovative and effective solutions.

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