# UNDERSTANDING SUSTAINABLE TOURISM-BUILDING A CASE FOR STUDYING GOTLAND

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## Abstract

Global tourism is estimated to account for roughly 8% of the total Greenhouse Gas (GHG) emissions, and close to half of that comes from travel. Studies indicate that a dollar earned by tourism produces 25 percent more GHG emissions in comparison to dollar earned in other sectors. Tourism is energy intensive and by default leaves a large carbon footprint. Sustainable tourism within the context of this reality is both an overarching idea and an urgent need for local communities connected to tourism. This paper seeks to understand sustainable tourism from the vantage point of three Sustainable Development Goals (SDGs): SDGs 13 (Climate), 14 and 15 (biodiversity on land and sea). As part of that effort, the paper explores the key principles of responsible tourism put forward by United Nations World Tourism Organisation (UNWTO) and the Framework of Sustainable Development of Sustainable Development Solution Network (SDSN) and the Framework of Strategic Sustainable Development (FSSD). Further, the paper utilises the exploration to build a case for studying Gotland as Sustainable Tourism destination. It does so by providing initial thoughts on how a research study could use the principles of responsible tourism along with two frameworks of Sustainable Development to locate and analyse the existing tourism industry and as part of the Regional Strategy Document 'Gotland 2040'. Finally, the paper will articulate the need for longer research study to articulate a change management strategy for Gotland to move towards a sustainable tourism economy with a low to no-carbon footprint by 2040.

**Keywords:** Sustainability; Tourism; Gotland; Carbon Footprint; SDGs; TNS; FSD framework

## 1. Introduction

Global tourism represents slightly over 10% of world's Gross Domestic Product (GDP) and employs close to 120 million people directly, while estimates of the number of indirect beneficiaries of tourism range from 350-475 million people depending on the methodology used (UNWTO, 2020, 2021). Tourism also contributes US$1.3 trillion annually to various businesses, communities, and groups, and is often the most viable source of livelihood for many regions. Further, tourism is powerful enabler and amplifier of human development: for instance, women constitute over 54 percent of the workforce and 23 of tourism ministers in the world are women, the most for any positions of power that have direct connection to governance and regulatory systems (World Bank, 2018). Yet, global tourism also puts a tremendous amount of stress on environmental and ecological resources, the impacts of which range from massive soil erosion, increased air, water and habitat pollution, deforestation, and pressure on endangered species. Much of global tourism, ironically, depends on the same ecological resources that it is destroying rapidly: for instance, the amount of water used by the global hotel industry per hotel night during peak tourism season is close 500 litres per day per tourist, and amount of fuel used by a cruise ship, which is 150 tonnes of day, releases as much Sulphur into the atmosphere and the marine ecosystem as a million cars (McVeigh, 2017, Vidal, 2016, World Counts, 2021). Global Tourism is estimated to contribute about 8% of the total GHG emissions, with slightly less than 50 percent attributable to global air travel. The estimations are still considered preliminary due to debates on the methodology, which changed in 2015, and some of the calculations that were corrected in the key paper by Lenzen et.al. (2018).

Till about 2015, the emissions estimate of global tourism was at approximately 4%, but the deployment of a different methodology in 2018 to start measuring indirect emissions - as part of GRI's Scope 2 emissions framework -- led to the use of the Life Cycle Assessment (LCA). Several authors contend that as more datapoints are incorporated in the LCA methodologies and tools, and as Scope 3 emissions are also brought within the assessment framework, the true extent of GHG emissions of global tourism would be revealed with "...it being as much as twice the current emissions." (Pei-Chun et.al., 2021). Climate scientists from University of Sydney in an ongoing study of tourist activities in 189 countries mapping over one million businesses directly involved in tourism in their preliminary findings found that the amount resources used to clean one hotel room per hotel room night is three times than previously estimated and the resource requirements for fulfilling the true demand for global tourism is "effectively outstripping the decarbonisation of tourism-related technology". Global tourism is truly at cross-roads today, caught up as it is in a seemingly vice-like grip of an extensive carbon footprint that it needs to drastically reduce, while fulfilling its key role of providing livelihoods, often to the extent of being the main engine of growth and prosperity for many areas and regions. It is within this difficult context that Sustainable Tourism needs to be located, studied, analysed, and understood. As a problem statement, then, the key challenge that confronts Sustainable Tourism can be possibly articulated in the form of a following overarching question: "How can tourism continue to and deepen its critical contribution to local communities and the global economy, while reducing its carbon footprint drastically by 50% by 2030 and Net Zero emissions by 2050?"

The most natural starting point for getting into the domain of Sustainable Tourism requires a robust definition of what Sustainable Tourism is and how its overall contribution to the local economies, communities and climate action can be accurately measured. It is a good starting point and to begin exploring this question requires an understanding of what sustainable development and sustainability mean. Isaksson and Hallencreutz (2008) suggest that leading change, in this case leading sustainable tourism development requires communication, which

means we must be able to measure which is based on defining sustainability and sustainable development in the tourism context and in order to define sustainable tourism, we need to have a common understanding in the context of what we mean. In this work we will study the Swedish island of Gotland, one of the main Swedish tourist attractions with about a million yearly visitors. Since Sweden is one of the richest countries on the world with practically no people living in absolute poverty it could be argued that SDG 1 – No Poverty - is not relevant. However, about one third of Gotland's economy is based on tourism, which still makes tourism revenues important for the overall economic health. Climate and biodiversity are the most important impacts for the region. Specifically, we will explore key principles of responsible tourism from the vantage point of the SDGs: 13 (Climate Action), 14 and 15 (land and marine biodiversity). We will then use these principles and frameworks to locate and analyse the existing tourism industry in Gotland and how it can be utilised to measure sustainability within tourism as part of the regional strategy document 'Our Gotland 2040' that describes plans for a sustainable island. Finally, we will clarify a set of approaches that may be used in longer term studies for change management strategies to achieve a low to no-carbon footprint sustainable tourism economy on the island of Gotland by 2040. Chapter 2 reviews and discusses the current literature on sustainable tourism and its relationship to sustainability and the SDGs. Chapter 3 describes the methodology used in this study. Chapter 4 describes the main findings of the study. These discussions, and key points thereof are summarised in the Chapter 5.

## 2. The relationship between SDGs and sustainable tourism

Sustainability and sustainable development are widely used expressions that often are unclear and not well defined in the context. One source of general support for understanding sustainable tourism is provided by the SDGs. The 2030 Agenda for Sustainable Development outlines 17 goals and 169 related targets for achieving sustainable economic, social, and environmental development results, several of which recognise the contribution of tourism (Movono and Hughes, 2020). The 2030 Agenda positions tourism as a means of promoting economic growth, including it in SDG 8, which aims to promote "sustained, inclusive and sustainable economic growth"- decent work and economic growth (8.9), SDG 12 responsible consumption and production (12b) and as a means of "increasing the economic benefits of small island developing states" (SDG 14.7) .The SDGs "have become the focus of research on the contribution of tourism to sustainable development and the overall sustainability of tourism" (Hall, 2019, p. 1045). The SDGs stress the five P's: People, Planet, Prosperity, Peace and Partnership, and makes it clear that all stakeholders need to work together to create a sustainable world (Ghosh and Rajan, 2019). Since then, an increasing number of research papers on tourism have shown the correlation between tourism and several SDGs, such as the distribution of tourism benefits and the employment and well-being of community residents (Robinson et al., 2019). These findings highlight the increasingly important role of the tourism industry in creating a more sustainable world where SDGs are but one set of milestones for moving towards achieving a net zero carbon footprint and a circular economy.

### 2.1. The key principles of responsible tourism

The regulatory bodies that represent global tourism are grappling with the increasing pressure on them to reduce their GHG emissions and overall resource use by suggesting frameworks and approaches to make the carbon footprint of their collective activities progressively smaller and more ecologically relevant. The key initiative in that regard is The One Planet Vision for a Responsible Recovery of the Tourism Sector, developed by UNWTO as a set of global guidelines "with an objective to support tourism to emerge stronger and more sustainable from

the COVID-19 crisis... for the transformation of the tourism sector to ensure its resilience" (UNWTO, 2020). The vision is as much a clarion call to completely change the paradigm of tourism as it exists today as it is an urgent acknowledgement of tourism's deeper connection to local communities, groups and ecology. The key recommendations, released on World Environment Day last year, in the form of "key lines of action represent[ing[]several key elements capable of guiding a responsible tourism recovery for people, planet and prosperity" (UNWTO, 2020) are:

1. public health
2. social inclusion
3. biodiversity conservation
4. climate action
5. circular economy
6. governance and finance

The One Planet Vision's "lines of action" brings an integrated socioeconomic perspective for the first time to the various inter-related activities of global tourism and its connection to local economies, communities, ecological and human wellbeing, and livelihoods. In doing so, the global tourism industry is seriously addressing both the conceptual and definitional quagmire that hangs over any discussion on Sustainable Tourism by directly linking it to People, Planet and Prosperity. The 3Ps of People, Planet and Prosperity (also depicted as Profit) are the foundations of Triple Bottom Line (TBL or 3BL) and the cradle-to-grave approach (Elkington, 1998). TBL is the cornerstone of all contemporary Environmental and Social Governance (ESG) standards, frameworks, and measurement systems. Global Tourism for the first time by closely linking itself to the recent regulatory moves to expand and standardise ESG standards and metrics, moving towards a mandatory disclosure regime of benchmarking sustainability reports to sector specific and industry focused Science Based Targets (SBTs) and to timebound low carbon targets and net-zero ambitions can break out the definitional quagmire that has bogged down Sustainable Tourism. Attempts to approach tourism as one of the means to move towards a circular economy and SDGs has proved difficult till now. This, first, is due to the vagueness of the concepts of sustainable development and sustainable tourism. As Colin & Norman (1997) states: "sustainable development, this dominant paradigm has been criticised as being too parochial, or tourism-centric, in so far as it fails to provide a conceptual vehicle for policy formulation which explicitly connects the concerns of tourism sustainability with those of sustainable development more generally (Wall, 1997, 2007). When it comes to the context of sustainable livelihoods, Scheyvens & Hughes (2019) criticised it for ignoring the multidimensional nature of sustainable livelihoods and impeding tourism's potential as a driver of sustainable development. Tourism scholars, therefore, called on the attention to SDG agenda localisation to the potential of the regional tourism development (i.e., to promote the local tourism development to realise the potential of SDG goals), advocating "critical thinking" thoughtful, including beyond the current dialogue, how to contribute to the local sustainable development for tourism (Boluk et.al., 2019).

In attempting to address the challenges and issues surrounding sustainable tourism, there is merit to first approach and analyse what sustainable tourism is, at the ground level, and what it could be in the future. Within the global economy, tourism is a growing sector. In 2019, the Travel and Tourism sector contributed 10.4% to global GDP (WTTC.org, 2020); a share which decreased to 5.5% in 2020 due to ongoing travel restrictions related to the Covid-19 pandemic (WTTC.org, 2020). The sustainability of tourism has received extensive attention from scholars over the past decade, as regional tourism influences local and global environmental, economic, and social processes. An example is climate change and global warming to which tourism contributes by the way of the greenhouse gases (GHG) emissions. Carbon emissions from tourism are expected to increase by at least 25% by 2030, according to the UNWTO/ITF study

released at UNFCCC COP25 in December 2019. There is a growing consensus among stakeholders in the tourism industry on how their ability to survive and grow in the future will depend on the tourism industry's ability to adopt a low-carbon approach and reduce emissions by 50 per cent by 2030 (UNWTO, 2021). From airplanes and boats to souvenirs and accommodation, all kinds of activities contribute to the carbon footprint of tourism (Lenzin, et. al. 2018). The carbon footprint for earning a dollar of tourism income is 25 percent higher than footprint generated for earning a dollar of income from all other sectors. This means that attracting more tourists has a higher opportunity cost to the environment than developing other potential sectors (Sustainability in Travel 2021: Quantifying Tourism Emissions for Destinations, 2021). The important role that tourism could potentially play in sustainable development of global and local economies has been acknowledged quite early, with Colin & Norman (1997) pointing out that "given the likelihood that tourism will become the largest single sector of world trade early in the next century, the potential of tourism to contribute to sustainable development (however defined) from local to global scales is substantial." From a definitional viewpoint, then, sustainable tourism could possibly refer to any socioeconomic and cultural activity directly or indirectly connected to the global or local tourism economies that makes a long lasting contribution to the protection and promotion of the environment, natural and social resources, cultural values, and the integrity of local communities (Colin & Norman, 1997). However, as of today, and by all measures and indicators, tourism is energy intensive and leaves a large carbon footprint. Within this context of a noble intent for sustainability at one end and the harsh reality of an expanding carbon footprint at the other end, sustainable tourism becomes both an overarching concept and an urgent need for the local communities to survive and combat climate change. Although tourism has often been seen as a potentially transformative vehicle for a positive change, little progress has been made in bringing out innovations in business and operating models to make them sustainable and lower their carbon footprint (Crnogaj et al., 2014).

Isaksson (2019) postulates that all businesses need to address climate change, loss of biodiversity and poverty, with focus on extreme poverty. This is based on a logic of focusing on the globally most unsustainable impacts. By extension, we should also view tourism through the same lenses. The context, however, plays a crucial role. For poorer countries, the relevance of tourism is higher for drastically reducing poverty, whereas richer countries need to focus on mitigating climate change. For both rich and poor countries focus on preserving biodiversity is important. We can view all activities in terms of eco-efficiency or more specifically in terms of value-per-harm (Isaksson et al. 2015). An example of this is the dollar spent per carbon footprint, which by one conversative estimate for an average American is approximately US$50 per ton of carbon generated. More than 60% of this footprint arises from spending on electricity, natural gas, gasoline, flying and food, but these things account for just 15% of spending, a typical variation of the Pareto principle that is referred to as the 80-20, which means that out of 100 causes, 20 explain 80% of the effect. The key challenge for sustainable tourism, then, lies in increasing wealth where needed while decoupling it from the carbon footprint. In addition to the ratio of tourism revenue compared to the carbon footprint, there is also the question of who takes part of the tourism revenue and by extension becomes a stakeholder. When poor people benefit from the outcomes generated in the form of poverty reduction it should also be adequately acknowledged and accounted for in the measurement frameworks and resultant calculations. This means that there could be a difference in how sustainable tourism is understood depending on who benefits from it. At one end of the spectrum, in a way then, we have space tourism and at the other end we have eco-tourism, which for a developing country can be critical and possibly the only enabler to pull people out of extreme poverty in a sustainable and permanent manner. The eco-tourism should also preserve bio-diversity and in

the best of cases increase it as has partly been done in Costa Rica that has invested in recreating tropical forests as part of their tourism initiatives.

### *2.2 Twin frameworks of FSD & FSSD: Understanding Sustainable Development*

Since the Brundtland Report (World Commission on Environment and Development [WCED], 1987) introduced the concept of sustainability into the global political agenda, the idea of sustainable development has received widespread recognition in the field of tourism. Sustainability, Brundtland defines as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, pp. 43). The concept of sustainable development is malleable and thus applicable to different world views and different situations (Colin & Norman,1997). Since tourism's contribution to the world GDP is increasing every year, and as also its contribution to the negative impact on the planet and its resources, the business and social imperative for of tourism to become more sustainable, lower its carbon footprint and transform the global tourism economy into a cleaner and greener version cannot be overstated. If this imperative is seen as a problem statement, there two specific requirements that crop up. First, there is a need to at least quantify, if not qualify, sustainable development. Second, such a quantification would need a robust yet flexible framework that is able to account for contexts and multiple scenarios. There is ready reckoner for the quantification of sustainable development provided by the 2012 Framework for Sustainable Development (FSD) (SDSN, 2012) in the form of specific questions (and concrete and illustrative answers) that needs to be addressed for any sector or industry wanting to define sustainable development for its context. This ready reckoner of questions is quite relevant and useful in approaching the broader issue of sustainable development of tourism within the specific context of sustainable tourism. The FSD puts across its key points thus:

"Sustainable development requires quantification. At what pace should de-carbonization occur? How much water use is feasible in a particular location? How should ecology and economy be protected at the same time? What are the implications of the growth of cities? What do different demographic pathways imply for countries' sustainable development prospects? Which are the most effective techniques for reducing and managing disaster risks? These questions, and many others like them, require a quantitative assessment that combines Earth systems with human systems, and does so at many scales, from local to global (Framework for Sustainable Development", SDSN, 2012, pg 10).

If the FSD makes an overall planetary case for quantifying sustainable development, the Framework for Strategic Sustainable Development (FSSD), also called The Natural Step after the Swedish non-profit NGO 'The Natural Step', makes a strong strategic and business case for sustainable development. The FSSD (2014, last update in 2019) locates and positions sustainable development from a scenario modelling perspective that is connected to a decision tree for helping stakeholders make decisions. In doing so, the FSSD quantifies sustainable development as strategic imperative with a possibility of creating pathways to achieving sustainability milestones as part of a large complex system. The FSSD is based on system conditions or principles which were first presented by Robèrt (2000) as: "In order for society to be sustainable, nature's functions and diversity are not systematically subject to:

I. increasing concentrations of substances extracted
from the Earth's crust;
II. increasing concentrations of substances produced
by society;
III. physical impoverishment by over-harvesting or
other forms of ecosystem manipulation; and

IV. resources are used fairly and efficiently in order
to meet basic human needs worldwide."
These four principles could be interpreted as the circular life on earth. Principles I to III describe how nature was before the arrival of humans – fully circular. The challenge is to provide humanity with its needs in what could be seen as a circular economy.


## *2.3 The different ways of approaching sustainable tourism*

First locating and then looking at Sustainable Tourism from the vantage points of the FSD and the FSSD, gives a new perspective and life to the contemporary definitions of Sustainable Tourism. Sustainable tourism, the World Tourism Organization (1999, pp. 21) states, is that which "meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future … leading to management of all resources in such a way that economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems." The case for concretising Sustainable tourism, which is viewed as one of the vital approaches to achieve the goal of sustainable development and (McKercher,1993, Cole, 2017), by crystallising its definition at a functional and practical level for both local and global tourism communities through the use of the two frameworks mentioned in the paper holds some merit and requires further research. Such an approach also takes into account the three pillars of economy, environment and community, and provides "a holistic, integrative and long-range planning" approach (Moyle et al., 2014, pp. 3), while building an institutional framework that addresses specific issues relevant to the destination and the tourism system in the locality (Burns, 2003; Yang, 2012).

Understanding sustainable tourism in a real context is not as simple as putting the concept of "tourism" above the concept of "sustainable development". The challenge is first and foremost down to sustainability and the nature of tourism. Sustainability is an issue that is interconnected or interlocking (WCED, 1987), while tourism system is a complex, self-adaptive, system. This means that the issue of sustainable tourism is not easily separated in scientific terms, while solutions to those issues impact on social and economic policy (Hall 2009). When understanding sustainable tourism, its ontological nature should be considered. As (Hall 2009) states the terms 'human impact' or 'tourism impact' ontologically position tourism and tourists as 'outside' the system under analysis, as outside of nature from a realist material ontology of classical empiricism. This approach is not appropriate for understanding complex and dynamic social environmental systems (Hamann, Biggs & Reyers, 2015). Following, the concept of sustainable tourism is undefined and is not interpreted well. It is common to come across publications where sustainable tourism (or tourism's sustainability) is mentioned but never explained as if, according to Colin & Norman (1997), "the reader must have an intuitive understanding of what is meant, or the meaning is so obvious as to render any elaboration unnecessary"  As Colin & Norman (1997) states: "… sustainable tourism is addressed in vague, headline form as tourism development which is integrative, harmonious, compatible, balanced, or synergistic in its relationship with the environmental resource base." In this light, and in our research, we attempt to understand sustainable tourism from an empirical and practical perspective, departing from how local areas can achieve regional goals through sustainable tourism development and then contribute to the SDGs, and focusing on SDGs 13, 14 and 15. As Colin & Norman (1997) also argued that "perhaps the most appropriate way to perceive sustainable tourism is not as a narrowly-defined concept reliant on a search for balance, but rather as an over-arching paradigm within which several different development pathways       may       be       legitimised       according       to       circumstance."

*2.4 Sustainable tourism and stakeholder needs*

The main sustainability impacts for tourism generally could be those that are identified as critical such as extreme poverty, climate effects and loss of biodiversity. All economic activity comes with a footprint. However, we cannot only focus on minimising footprints we need also to view the value created. Isaksson et al. (2015) argue that we need to regard the value-per-harm ratio and use relative indicators, but with absolute values to assess the magnitude of problems. The value-per-harm idea is anchored in the value-based quality perspective (Garvin, 1984). In Quality Management another perspective is important. This is the user-based perspective. It is the user that determines what quality is. This is highly applicable to tourism where quality is assessed by the tourist. Most tourist will also apply the value-based perspective – "What do I get for the money". Isaksson (2019) suggests that the future license to operate for any company will relate to their ability to satisfy the main stakeholder needs. This could be a challenge for tourism, which is not a basic need but one that could be construed as part of a higher set of human needs. This leads us to a question: Who are the stakeholders in sustainable tourism and what are their needs? The Planet needs seems obvious and straightforward, which is lower greenhouse gases and preservation and enhancement of biodiversity. What are the needs of the people as key stakeholders? There is a certain personal and individual value for the traveller in learning and broadening horizons, but this might appear to be of a limited value compared to the societal impact of high carbon footprints that come from flying, which is normally needed for any activity connected to tourism. A stakeholder, however, needs satisfaction and that could be the monetary value that tourism brings to those needing it. In the simplest assessment we can compare revenue generated per footprints. In a more complex analysis, we would need to study the distribution and trickle down of the tourism revenues to the different stakeholders, with the trickle down of the revenues to the poorest stakeholders possibly being accounted for in an impact measurement framework that statistically weighs it in different manner since the on ground impact on human development outcomes on the poorest of poor population is the difference between stuck in poverty or coming out of it in a sustainable manner. How many jobs are created and how are these jobs helping those in economic need is also a question that needs to be answered and accounted for in an impact measurement framework for sustainable tourism. Tourism could also contribute to retaining and improving biodiversity. For example, if nobody visits the national parks of Tanzania then the lack of money will lead to less incentives for the country and for local people to preserve nature. Poaching will potentially increase as will settlements and agriculture in the natural parks. Similarly, cultural heritage might lose the chance to be preserved in a systematic way for future generations if there is no tourism. It is unlikely that Stone Town of Zanzibar can be preserved if tourists are not helping the economy. Theoretically, then, the level of sustainability for tourism could be understood as the aggregated stakeholder value creation compared to the aggregated carbon footprints. Only focusing on carbon footprints, as is often the case, is akin to only focusing on costs cutting when wanting to save money in a business. To reiterate that point in simple manner, and at the risk of oversimplification, the best way to save 100% of the costs is to close the business. This is often advocated in rich countries, for example with flying. We should not fly, which is translated as being sustainable. We can ground all flights and save carbon emissions, but we will lose all the value created in the process. There is a good case for us to understand our activities and the activities connected to tourism from the perspective of value-per-harm with a focus on identifying the stakeholders clearly, their needs and the value that is created by an integrated set of socioeconomic and cultural activities and transactions.

## 3. A potential approach and methodology to study Gotland

This chapter is based on understanding sustainable tourism in the context of Gotland. In this chapter, Gotland's background will be first stated, and then its tourism development situation will be discussed. After that, key visions and problem statements arising from Gotland 2040 will be listed. Finally, we will describe the potential approach to the FSSD framework and possible steps towards evolving a methodology.

Gotland's farms produce beef, lamb, pork, poultry, and horses, shaping the island's unique agricultural landscape. Many of the island's agribusinesses also have operations outside of traditional production, often having service lines related to energy, contracting, tourism and internal processing and marketing. Gotland is a prominent summer tourist destination in Sweden. The number of people who live and work on Gotland all year round is around 60,000 with roughly 24,000 living in the capital city of Visby (Region Gotland, 2017). Agricultural and agro-products are important for Gotland, with about 80-85% of such being exported to the mainland Sweden (Region Gotland, 2017). One of main reasons for Gotland's fame as a tourist destination in Sweden has been the UNESCO heritage status granted to its capital of Visby in the year 1995.

The peak season occurs during the summer, but efforts are being made to extend the season to other times of the year. Over 2.6 million passengers travelled to and from Gotland by either air or ferry (Region Gotland, 2017), and as many as a million plus overnight stays at Gotland's commercial accommodation facilities have been recorded (Region Gotland, 2017). Close to 80 percent of the tourists who visited Gotland used ferry (Region Gotland, 2017). There are also almost 4,500 active entrepreneurs directly connected to tourism on Gotland (Region Gotland, 2017). It should, however, be noted that Gotland's seasonal nature of tourism also means that many Gotland's tourism companies will close or move to other destinations in the mainland during the non-peak seasons. Gotland sees both Swedish and foreign tourists. The share of foreign guest nights, however, has remained constant in recent years, accounting for around 11% of the total guest nights (Region Gotland, 2017). A substantial number of foreign tourists come from Germany and that number increased in 2018 when Gotland built a new cruise terminal with the purpose of transporting more tourists to Gotland during the summer

To put Gotland on the pathway to sustainability and sustainable development, Region Gotland proposed its development goals for 2040 through a Gotland 2040 Vision (Region Gotland, 2021). The key goals are:
1. Gotland becomes safe & inclusive society where everyone enjoys a quality life
2. Gotland becomes an example of energy and positive climate change
3. Gotland becomes an innovative growth area with development momentum.

The document also includes action strategies that are expected to track Gotland's development impact goals, implementation forms, follow-up actions, evaluation, and learning. The core of this document is that well-developed sustainable development work and good cooperation conditions are the keys to a successful road to Gotland 2040. Gotland's 2040 development goals reflect and provide detailed development indicators at the regional level, and provide a valuable basis for the exploration, tracking and evaluation of the ways to localise the SDG agenda for this research.

## 4. A potential research approach to study sustainable tourism in Gotland

This section will seek to understand how the key principles of responsible tourism and the frameworks of sustainable development and strategic sustainable development can be used to understand and study sustainable tourism in the context of Gotland. We will use the first steps of an Opportunity Study, which has the steps Diagnosing, Analysing and Solving (Isaksson et.al., 2015). Diagnosing consists of defining the context and identifying improvement potential. Analysing consists of understanding the causes for the potential. Solving is about

proposing solutions. In the case that there is a significant improvement potential where we can understand the causes and where solutions can be found there is an opportunity for improvement. This is on the condition that there is no ongoing work that will realise the detected improvement potential. Here, we will here focus on understanding and diagnosing qualitatively. We will use a Process Based System Model (PBSM) to describe the main tourism processes in Gotland. Our approach toward a possible research study focussing on Gotland as a site of sustainable tourism is based on existing public information., we will look for how tourism and sustainable tourism has been defined in Gotland. We will interpret existing documentation of the current carbon footprint from tourism. The level of information availability will help us analyse the level of how tourism sustainability is understood in Gotland. We will also look for information on effects on biodiversity and we will study information on tourism revenue and its distribution.

## 4.1. The potential for using FSD & FSSD as frameworks for analysis

The key principles of responsible tourism provide a readymade set of imperatives for what sustainable tourism could and should achieve as a set of social, economic. and environmental outcomes in the future. The FSD & FSSD come with a good set of conceptual and practical tools that could potentially be used to respond to the problems and challenges encountered in a research study that seeks to understand and analyse sustainable tourism within the broader umbrella of sustainable development and SDGs. Both FSD & FSSD have the capability to utilised to simultaneously analyse issues, events, scenarios, and data at the global, regional, national, and local levels. Additionally, a study of this nature, especially within the specific context of Gotland, must be conscious that there is no one size fits all the solutions. Thus, the research study needs to be applicable by considering region-specific nuances. Additionally, some key questions must be considered, including the following context agnostic questions:
1. How can sustainable tourism contribute to ending extreme poverty?
2. How can sustainable tourism lead to a reduction in unemployment?
3. How can sustainable tourism help in reducing disparities?
4. What is the local and available renewable energy sources?
5. How does potential future population growth affect the prospects?

Both the FSD and FSSD, with FSSD specifically bringing in a strategic and business model dimension, provide for a ready methodological framework to study the following dimensions that are critical for sustainable tourism:
1. Economic Development & Ending Poverty
2. Social Inclusion
3. Environmental Sustainability
4. Good Governance and Personal Security
5. Synergies & trade-offs: Four dimensions of sustainable development.

The listing of some of the key priorities above, which is also in consonance with the principles of responsible tourism, create a concreteness for framework and helps articulate sustainable tourism as a series of the business and uses case connected to sustainable development and a measurable lower carbon footprint connected to energy use, travel and food supply and the leisure economy

## 4.2. Focussing on FSSD as the key framework for analysis

FSSD provides a robust methodological approach to move towards sustainable development in a concrete manner. It allows for sustainable tourism to be approached from the consideration

of "who benefits where and how", bringing into a stakeholder and customer centric perspective, and a capability to start looking at business model that is focussed on people, planet and prosperity. FSSD can serve as a framework that can guide researchers exploring the various dimensions of sustainability and sustainable development with the context of tourism industry transformation. Researchers could possibly consider, as set of priorities, and key research questions, that could include the following dimensions:

1. Preserving ecological diversity of natural resources connected to tourism.
2. Maintaining and increasing the well-being of local people and all communities thereof including the usually marginalised groups of immigrants, women, and the elderly
3. Promoting the interpretation and learning of experiences to exchange knowledge, evidence, and data. [*Given that sustainable tourism is an interdisciplinary field, universities and region-led organisations should actively exchange and learn from the experiences of other organisations, both internally and externally*].
4. Educating tourists on sustainable tourism to encourage responsible behaviours.
5. Supporting and encouraging micro, small, and local enterprises and businesses.
6. Reducing consumption of non-renewable resources in tourism and take relevant measures of measurement, supervision, and feedback.
7. Encouraging local participation, stakeholder ship, and newer business models.

FSSD provides an opportunity for researchers to clarify and identify the basic causes of the global, regional and local socioeconomic issues connected to tourism as a complex system and arrive at a deeper understanding of the challenges and answer the fundamental question of "what issue needs to be solved and for whom" for finding solutions (Broman and Robèrt, 2017) that are oriented to a stakeholder/customer-focussed business model. The FSSD framework facilitates the support of scientific estimates of the sustainability potential of various materials and practices and enables the setting of system boundaries to achieve guidance for sustainability purposes. Sustainability discussions are often accompanied by arguments about where to draw the boundaries of a system, i.e. "Do you mean the factory, or do you include the customer? The supply chain? Other stakeholders? The whole world?" (Broman and Robèrt, 2017). By making strategic trade-offs, FSSD enables decision makers to model alternative pathways based on total success, rather than evaluating snapshots based on good and bad within the constraints of current reality, which facilitates cross-disciplinary and departmental collaboration and allows the framework to be further propagated by finding "early adaptors" in a uniform and easy-to-understand language. Broman and Robèrt (2017) took funnel as a metaphor for its operating mechanism. In this funnel model, the smaller the cross section, the smaller the point position. The skewed funnel implies self-interest (who needs what) in working towards a vision for sustainable tourism, while the funnel wall represents the systemic nature of the challenge. According to Broman and Robèrt (2017), the declining potential is the inevitable result of the current basic design and operating model of society (which violates the basic sustainability principle), converting the business model into an unsustainable one.

**Figure 1. The funnel metaphor of the FSSD**
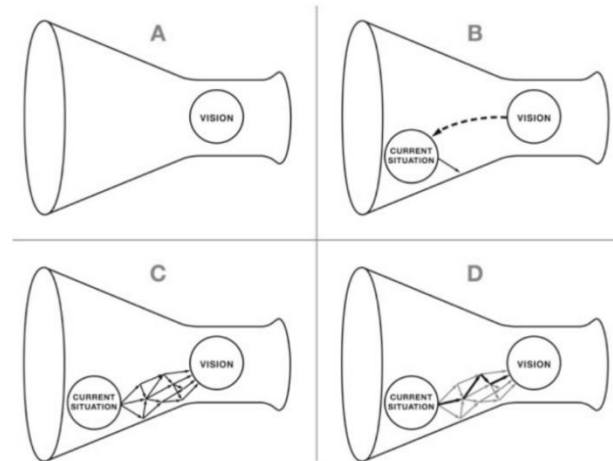
Source: Goran and Karl-Henrik (2017)

When the unsustainable basic design and social mode of operation is resolved (which means that it no longer violates the principle of sustainability), the funnel becomes a cylinder, indicating sustainability and a sustainable business model. The search for sustainable development, and by extension sustainable tourism, is not a search for an eternal utopia, but a search for a systematic set of design and operating principles that organises the foundations of human civilisation and increases its resilience.

## 5. Discussion

Even though the volume of literature in the subject of sustainable tourism is increasing, a lack of understanding of how to prioritise and how to measure the issues is hindering its qualitative progress (Boluk, Cavaliere, & Higgins-Desbiolles, 2019). Tourism research recognises that ensuring economic, cultural and environmental sustainability requires effective governance processes that are tailored to specific purposes and contexts (Rasoolimanesh, Ramakrishna, Hall, Esfandiar, & Seyfi, 2020). Tourism governance is an important issue to ensure that the implementation of tourism strategies is truly sustainable and responsive to the needs of stakeholders and destination communities, as well as means of monitoring and evaluation, and to align tourism with existing governance arrangements (Hall, 2009), while effective governance often requires appropriate institutions, decision-making frameworks, planning processes, and codes of conduct (Bramwell & Lane, 2011). The formulation of sustainable development related governance goals highlights the importance of common but differentiated governance in successfully implementing sustainable development initiatives of all sizes, inducing an urgency to design common but differentiated indicators and establish monitoring and evaluation mechanisms for tourism of different special and institutional scales to make this implementation strategy effective(Meuleman & Niestroy, 2015). Therefore, it makes sense that we ought to align to a more accurate and systematic means of measuring how sustainable tourism contributes to local economies, communities, environment, and climate action in general. It is also useful, however, to acknowledge that even though both subjective and objective indicators have their utility in sustainable tourism and its development, the United Nations World Tourism Organization (1999) reminds that "sustainability indicators are not always quantifiable and may necessarily be somewhat subjective", (p. 7). In view of this, when considering utilizing SDGs, we should consider "what, where, how, for whom and why?" For example, when considering SDG14, the first question that needs to be considered is which habitats and/or species need attention and how connected is it to the local communities and the tourism economy, which is of course related to the question of where, within the national maritime jurisdiction, the 10% of the protected area is allocated (Neumann, Ott & Kenchington,

2017). The nature of sustainability as a policy problem has been recognised for a long time. Little progress, however, has been made in making sustainability in tourism easier to be solved (Hall, Gossling & Scott, 2017). This may be since environmental change and related economic, social and political changes occur faster than the corresponding changes in the policy system, and thereby government decisions may constantly seek to "catch up" on sustainability issues (Hall, Gossling & Scott, 2017). However, the growing contribution of tourism to global and local change clearly demonstrates the need for appropriate and responses at the framework level that converts to specific strategic and tactical solutions and roadmap for regions and local communities to achieve sustainability.

Therefore, in the methodology section, we are advocating a mixed approach, using systematic opportunity research steps for qualitative understanding and diagnosis to gain a deeper understanding of the institutional reasons that can give an insight into Gotland's tourism economy. In learning about Gotland's tourism economy in all its dimension, the question of sustainable tourism can be approached in a more concise and precise manner from the twin perspective of stakeholder and customer focus of 'what, for whom and where' and the key prioritisation that emerge that from the principles of responsible tourism. We seek to articulate and quantify a range of approaches and methods that can be used in long-term research to articulate change management strategies that contribute to the goal of achieving a low-carbon or no-carbon footprint sustainable tourism economy in Gotland by 2040. The framework is flexible enough to accommodate multiple scenarios and contexts. The framework also accommodates the possibility to include 'uncertainty' as a key methodological principle since several aspects of sustainability are often characterised by "general uncertainty", which makes it difficult to determine the effectiveness, impact and socio-economic impact of policy measures (Hall, Gossling & Scott, 2017). When applying the FSSD framework, it is also worth noting that prediction may leads to path dependence in which decisions are locked in as result of which the tourism economy and its associated ecosystem are unable to innovate sufficiently and adapt to changing circumstances or scenarios. For a long-term view of tourism destinations or other complex systems, forecasting needs to be mixed with a more retrospective approach that considers current trends, while exploring different development pathways for of sustainability that is tied directly to the principle of responsible tourism and the prioritisation thereof. The FSSD's set of sustainability principles open up the possibility for a standardised definition of sustainable tourism that is connected to key principles that are anchored to protecting and preserving the ecology and environment, while contributing to and amplifying local stakeholder focused and driven business models. The authors, however, would like to re-emphasise that the purpose of exploring and suggested the use of FSSD is not to crowd out or replace other sustainability paradigms, but rather to provide a structured and easy-to-understand language to clarify its strengths and help decision makers integrate it within a particular context or other paradigms. It should be acknowledged that learning the sustainability principles of FSSD is easy but not every destination or decision maker will end up becoming a skilled user. Mastering it will require their quantification, measurement, evaluation, monitoring, feedback and adjustment of the processes connected to sustainable tourism.

## 6. Conclusion

The SDGs or other multilateral goals are a phased milestone that demonstrates global commitment and consensus towards achieving long-term value that contributes positively to people, planet and prosperity. There is also an additional possibility for Gotland to emerge as a platform of interesting stories and case studies that truly and concretely helps the community of academics and practitioners alike to understand how sustainable tourism can be directly and measurably linked to the achievement of SDGs, as Hall (2009) suggested, "the notion of

sustainable tourism must be regarded as one of the great success stories of tourism research and knowledge transfer". To extend that thought for Gotland can become the foundation to inject new theoretical and practical perspectives and vitality into sustainable tourism.

Tourism development faces a wide range of sustainability issues. These issues include challenges around participation and empowerment, environmental protection, the notion of "freedom" and cultural exclusivity. Community participation is a prerequisite for the sustainability of tourism projects. The participation and ownership of local communities in development projects is influenced or restricted by the locking of institutional pathways in the past, an issue that may affect Gotland less than in other developing countries. Sustainable development is seen as interdisciplinary, and its nature is seen as arising out of the nature of "real world" problems. The word "intre-" is a dangerous word because it implies a "dangerous nexus" of trying to reconcile irreconcilable people and things, with the consequent "semantic confusion". It has been used and universally accepted as if it had "universality and temporal validity," but at the same time it is difficult to pinpoint what that is and how to measure it. Key issues include how to quantify the impact of tourism on destinations and what meaningful and good local tourism governance are. Moreover, there is a recognition that tourism will help to ensure a sustainable future for the community and thereby improve the living standards of the locals. In this process, tourism should play its role in highlighting local specific architecture, traditions, crafts and marketing of agricultural products and nature. Ecological education of tourists is important, which means that ecological and cultural education should be carried out to improve the satisfaction of tourists so that they can play the role of "ambassador" to influence other potential tourists. A final consideration is how the Gotland case can generate grant theories to provide practical support for sustainable tourism literature and the use of our framework and methodology for other tourism destinations.

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