COMMUNICATING WATER SECURITY ON SANTORINI IN THE 21ST CENTURY

LINKING PROFITABILITY WITH SUSTAINABILITY

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The history of water management is deeply imbedded in the civilization, culture, and identity of Santorini where residents of this semi-arid island have used cisterns to harvest rainwater since ancient times.¹ In the 1990s, the use of private and public cisterns was largely suspended with the introduction of public desalinized water, and these ancient technologies now remain in disuse and disrepair throughout the island. Newly installed desalinization plants and imported bottled water from the mainland have replaced cisterns in supporting a significant percentage of the island’s water needs, but the massive depletion of groundwater reservoirs through unfettered private drilling, coupled with the absence of (1) sufficient water-use regulations (2) the promotion of water conservation methods and practices and (3) awareness of the island’s inherent water security concerns among the hundreds of thousands of tourists who visit the island during the peak seasons, have resulted in the inevitability of water scarcity on Santorini in the future.

Despite the mounting need for water conservation measures, pervasive fears that such efforts would have deleterious consequences on the tourism industry have stalled necessary actions towards sustainable water management and practices. Tourism is Santorini’s “heavy industry” and conservation measures, such as water-saving signage and

sustainability-focused services, believed by local businesses to place “undue” restrictions on tourists, who are then discouraged from returning, have consequently been met with firm resistance. The local government has similarly been reluctant to pursue measures that it believes may prove disruptive to the development of the island’s critical industry and primary source of income. The close alignment of political and economic interests in preserving existing practices and attitudes towards water poses a significant challenge to efforts towards conserving this rapidly dwindling resource on Santorini; but the coupling, nevertheless, provides an opportunity to convert both interests towards profitable conservation simultaneously. Santorini’s politics and economy are ultimately responsive to the tourism industry, and thus, long-term water security hinges upon changes in both the perception and behavior of the industry towards conservation. Achieving these changes requires the cooperation and genuine investment of two categories of actors: internal agents (local residents, businesses, and the government) and external agents (tourists).

Among the political and economic interests on Santorini, there persists the belief that the obstacles to addressing water security on the island stem from external agents, who are widely believed to be resistant to any potential restrictions on their behavior. The obstacles, however, are situated within the local sphere of the island’s businesses and government and overcoming these challenges will require a change in the perception of the internal agents that consequently cascades into changes in behavior. The local understanding of what the modern tourist wants is informed by an antiquated attitude that is now in steady decline, and consequently, water conservation efforts, driven by contemporary values, have fallen short of long-term success and effectiveness. The personal values and expectations of international travelers and vacationers have evolved markedly from that of the previous century, but as long as the island’s businesses continue to remain wedded to the assumptions
of traditional tourism, public campaigns and awareness raising efforts for water conservation will continue to fall short of their desired outcomes.

And while long-term water security remains the core objective, it will prove difficult to achieve without full commitment from all agents, both internal and external, who have been convinced of the value of forward-cost conservation and sustainability measures. To do so requires linking profitability to sustainability of the island’s water resources. The changing dynamics of tourism in the 21st Century is driving the criticality of this linkage in a world of rapidly changing values of a consumer base that is increasingly committed to environmentally conscious and socially responsible travel. The tourism industry is primed for sustainability.

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2 Traditional tourism (or mass tourism) is characterized by a massive saturation of a location by tourists that often results in the degradation of the environment and local economies in the process of creating immense economic growth through rapid development and industrialization. Sopheap Theng, Xiao Qiong, and Corina Tatar. “Mass Tourism vs Alternative Tourism? Challenges and New Positionings.” Études caribéennes, 31-32 (December 2015).
Generation Y or “Millennials,” born between 1981 and 2000 has currently surpassed Generation X as the largest population segment and generational consumer base. In the United States, over 73 million people between the ages of 18 and 34 belong to this generation, and by 2020, it will account for one-third of the adult population and three-quarters of working-age people with an aggregate purchasing power of $1 trillion. In comparison, Generation Xers, currently at the peak of their purchasing power (in their 40s to 50s), account for only about $125 billion in consumption annually. Markets and industries have begun to feel the impact of Millennial consumers who project a distinct generational set of attitudes and values that demands critical examination and a responsive transformation of the modern business model. The following are two key developments that hold considerable relevance for pursuing water security on Santorini.

**SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY**

According to the World Tourism Organization (UNWTO), the number of international tourists is forecasted to reach 1.8 billion in 2030, almost double the number from 2012, and tourism ranks as one of the top five exports earned in four out of five

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6 Ibid.
countries around the world. As the volume of international travel reaches unprecedented numbers, responsible travel, involving economic benefits to host communities, the minimization of negative impacts, and the preservation of cultural and natural resources, has acquired growing social and economic significance. A 2015 Nielsen global online survey reports that almost three-quarters of Millennial responders expressed willingness to pay extra for sustainable products, an increase from approximately 50 percent the year before. Attributes such as a company’s commitment to environment-friendly operations, social values, and products made from fresh, natural and/or organic ingredients emerged as the top price-drivers, as personal values increasingly precede personal benefits, such as cost or convenience, in the determination of a purchase.

This trend is particularly relevant for the hospitality industry, which in recent years has utilized the triple bottom line, of people (society and culture), planet (environment), and profits (economics), as the holistic model for sustainable development. Reputable hospitality businesses, such as the Sandal and Starwood Hotels, are consequently employing corporate social responsibility (CSR) strategies aimed at boosting customer loyalty, environmental conservation, and the reduction of social problems, and contributing to the development of communities that facilitate innovation and competitive advantage in a growing demographic of environmentally conscious consumers. Corporate social responsibility (CSR) is defined as a

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8 Ibid.
10 Nielsen, “Green Generation: Millennials Say Sustainability is A Shopping Priority.”
12 Ibid.
“business approach that contributes to sustainable development by delivering economic, 
social and environmental benefits for all stakeholders” and addresses a broad range of 
concepts such as human rights, corporate governance, health and safety, environmental 
effects, working conditions, and contributions to economic development that ultimately 
drive towards sustainability.\textsuperscript{13} Studies by the University of Chicago and Vanderbilt University 
among others have revealed that companies that practice CSR are more likely to financially 
outperform competitors that are deemed less ethical and socially responsible as a result of 
improved brand image, lower operating costs, and increased visibility and customer loyalty as 
well as staff morale.\textsuperscript{14}

AUTHENTICITY

\begin{quote}
“Sustainable development of tourism meets the needs of current tourists and local residents, 
while at the same time preserving resources for future development. Such development entails 
resource management so that basic economic, social and aesthetic requests are met, with the 
concurrent preservation of cultural integrity, basic ecological processes and biological 
diversity.”\textsuperscript{15}
\end{quote}

The modern tourist is increasingly affluent and educated, sustainability-conscious, 
and culturally aware and thus seeks more than the leisure and relaxation offered by 
traditional tourism.\textsuperscript{16} The growing demand for “Participation, Creation and Identity” involves 
interactions with local communities that create opportunities for meaningful experiences,

\begin{footnotes}
\item Financial Times, “Definition of corporate social responsibility,” \textit{Financial times Lexicon}, accessed 
\item Arlene Garrick, "Corporate Social Responsibility in the Hospitality Industry," \textit{Linkedin}, 
April 17, 2015, https://www.linkedin.com/pulse/corporate-social-responsibility-
hospitality-industry-arlene.
\item Ibid.
\end{footnotes}
peer-to-peer connections, immersion in local indigenous cultures, understanding of local issues, and off-the-beaten-path destinations over a more traditional experience at a popular, well-traversed tourist attraction, in which the traveler remains disconnected from “the locality.” The growing number of highly educated tourists also encourages higher demand for destinations rich in art, cultural historic heritage, natural beauty, spirituality, and ecological and social sustainability, which are becoming key factors for economic competitiveness as ecological preservation and cultural authenticity of a destination are closely linked to the richness of an experience as well as benefitting the well-being of the local community.

17 Ibid.
18 Ibid.
COMMUNICATING WATER SECURITY ON SANTORINI

What does this all mean for Santorini?

Santorini is an island of rich water heritage and natural water resources that are largely disregarded or are currently being exploited with inadequate consideration for the long-term consequences of such actions. Water conservation efforts aimed at local businesses have failed as a result of political and economic resistance to what are believed to be measures detrimental to the growth of the tourism industry, upon which the island’s economy heavily relies. However, changing trends in the tourism industry indicate promising incentives for a green-driven economy and business model that value cultural and ecological preservation. Generation Y, which is rapidly gaining influence as the most powerful consumer base, has begun to shift the global perceptions of and behaviors in consumption towards sustainable practices that have proliferated in the form of ecotourism, geotourism, pro-poor tourism, responsible tourism, and sustainable tourism, which emphasize the core value of conservation and positive benefits to the host community. Water security and environmentally sustainable growth has never been more economically profitable.

Taking into account the fixed perception towards water conservation that continues to inform the behavior and attitude of internal agents on Santorini, attaining long-term water security on the island will require a process that involves three phases in linking profit to sustainability: (1) promoting and marketing the legacy of water on the island as a cultural and historical treasure, (2) the rehabilitation or reinstatement of “water sites” for tourism, and (3)

19 Ibid.
conservation efforts aimed at long-term water security and the preservation of what will have become economically profitable and culturally significant water resources.

**PHASE ONE: PROMOTING AND MARKETING THE LEGACY OF WATER**

Phase one involves linking profitability with the conservation of water resources through awareness-raising and smart marketing of the cultural and historical legacy of water on the island and the creation or designation of “water sites” as tourist destinations. Because local perceptions pose significant challenges to implementing water security and conservation policies in the immediate present, promoting the legacy of water on Santorini by bridging a cultural heritage that is environmentally and ecologically critical to the island with the economic benefits of their preservation is the necessary first step to raising awareness of the value of water and laying a foundation for conservation efforts in the future. Santorini is the site of numerous ancient cisterns as well as walking trails that are in disuse and disrepair and poorly marked. Inspiring excitement and constructing a cultural identity around the cisterns, hot springs, and walking trails leading to these “water sites” that dot the island will cement their economic and experiential value as authentic tourist destinations, critical to their eventual reinstatement.

Engaging the local and international communities in promoting awareness and garnering public attention and excitement around these cultural treasures will require four separate strategies: public engagement (aimed at mobilizing local residents and cultural identity), business engagement (aimed at identifying and incentivizing economically and ecologically beneficial ventures), international engagement (aimed at promoting a cultural identity, experience, and value abroad), and information pooling (aimed at creating an information source to share knowledge and developments).
PUBLIC ENGAGEMENT

- Organize an island-wide celebration or festival of water that is both recreational and educational
- Organize local volunteer projects to restore or clean up culturally or historically significant areas
- Organize a regional, national, or international conference on island water security
- Organize community fundraisers or auctions from which the proceeds will go towards a project or initiative
- Provide government funding or grants for local initiatives related to water security or sustainability
- Establish a recognition award for citizens who are promoting water security or leading a sustainability effort
- Emphasize the legacy of water in island education

BUSINESS ENGAGEMENT

- Provide information on “water sites” and the legacy of water (i.e. walking tours) in airports, cabs, and local businesses and hotels
- Provide government funding and/or support for businesses engaging in “water tourism”
  - Organize competitions for businesses with the best ideas for “water tourism”
  - Organize conferences and roundtables

INTERNATIONAL ENGAGEMENT

- Partner with organizations, businesses, institutions interested in Santorini’s water legacy
- Partner with tourism sites to highlight “water sites” on their websites
- Organize service projects for foreign volunteers

INFORMATION POOL

There is an absence of an information source for water-related history, efforts, and topics in Santorini. The following is information recommended to be included in a “Water in Santorini” website

- About: information on the rich legacy of water, the Mayor and Water Board authorities and their efforts, places and water-related things to do
- Current efforts and initiatives: cisterns, walking tours, water museum, springs
- Engagement: public, business, and international
- Information: upcoming and past events, projects, programs, and interesting articles related to water on Santorini
- Conservation: findings of the Cornell University Santorini Water Harvesting Project team, indicating the critical need for immediate water conservation practices, methods for conserving water as locals, businesses, visitors, individual agents of conservation
PHASE TWO: REHABILITION AND REINSTATEMENT

Growing awareness of the legacy of water and the economic value of the “water sites” in tourism will begin to transform the perception of water as both culturally and economically beneficial into actionable behavior. Phase two is the middle step between changing perception and changing behavior as water resources become increasingly integrated into the tourism economy. The rising trend in sustainable tourism and the demand for authentic experiential travel provide immense economic incentives for the revival of the island’s rich water culture. As the local industry and residents begin to recognize the multidimensional value of sustainability linked to the preservation of the authentic local culture and environment and act upon these changing dynamics of tourism, the need to rehabilitate and preserve the island’s “water sites” will become economically and environmentally crucial. The cisterns, hot spring, and walking trails will need to be reinstated in a manner that will provide the most immersive, hands-on, and authentic “frontier” experience.

PHASE THREE: CONSERVATION EFFORTS TOWARDS LONG-TERM WATER SECURITY

Phase three is the culmination of an industry transformation and a movement towards long-term water security that began in phase one. By this stage, the preservation of water resources as cultural and economic capital will have become well integrated into the island’s economy and cultural identity. Water conservation efforts and awareness-raising campaigns implemented at this stage close the loop in reinforcing the crucial place of water in Santorini’s cultural heritage and economy by mobilizing proactive behavior to conserve water. The cultural pride towards the value of water, which has been instilled through phases one and two, is gradually absorbed by the individual agents both internal and external, and
will begin to translate into conscious actions that resonate with and stem from personal values. The emphasis on promoting the rich legacy of water (the past) on Santorini should, at this stage, be shifted to promoting conservation practices and policies (the future) through island-wide campaigns aimed at raising awareness of Santorini’s dwindling natural water supply as well as sharing information on how to conserve water in order to mobilize local residents, businesses, the government, and tourists, for whom water conservation values now hold personal meaning.

For the tourist, how powerfully the “water sites” symbolize the island’s cultural heritage will translate into how authentic the experience of engaging in these sites will be. Authenticity heavily depends on the traveler’s sense of deep immersion and experience as “one of the locals” – their culture, their story, and their aspirations – so the closer the legacy of water is to the locals, the deeper the conservation of the resource will resonate with the traveler. The clear articulation and conveyance of Santorini’s water legacy to tourists is critical to instilling a respect and appreciation for the island’s resources, which in turn inspire changes in individual and collective behavior towards conservation. Through the celebration of the Santorini’s “legacy of water” and the linkage of sustainability and profitability in “water tourism,” the implementation of successful water conservation campaigns and awareness raising efforts that translate into policy in the future will be made possible.

Consistent, reliable, and meaningful engagement and relationship-building within the island community of residents, businesses, and authorities will be critical to the future of water security on the Santorini, and it falls to the island’s authorities to catalyze the difficult but necessary dialogue. Convening leaders from the community, businesses, local government, and international organizations and partners, to share information, discuss the economic and environmental potential and benefits of water conservation measures through preservation
and sustainable use, identify conservation practices and methods that can be pursued as a community, and foster mechanisms of support for initiatives and industry innovation, will serve to directly engage and empower stakeholders to work together and take action. Such councils or forums will act as a transparent and trust-building means to understand the issues and the impact of water security from a myriad of perspectives and mobilize the community towards a common objective.

As attitudes towards water resources evolve and a culture of water conservation is instilled in the locality, Santorini can begin a concerted effort to engage the hundreds of thousands of visitors, who are not only receptive but consciously seeking authentic immersion into and participation in sustainable practices and experiences of the island; but the first challenge will be to unify the island’s local residents, businesses, and government in recognizing their shared accountability and begin a movement towards forward-cost water conservation measures that will prove fundamental to the future of water security on the Santorini. Heeding the call of a powerful generational transformation of values towards ecologically and socially sound business and industry models has never been more critical to long-term, sustainable growth and prosperity for Santorini and the cost of not doing so, never higher.
REFERENCES


Center for Responsible Travel. *The Case for Responsible Travel: Trends and Statistics.*


